



CONTENTS

REFER TO AN BORD PLEANÁLA INSPECTOR'S REPORT DATED 20.09.2019

SECTION A: Response to topics discussed at Section 5 pre-planning consultation meeting 11.09.2019

1.0. BUILDING HEIGHT

- 1.1 Introduction
- 1.2 Comparison with extant scheme
- 1.3 Block D height studies
- 1.4 Context: building heights
- 1.5 Photographic sequence: from Luas stop to Beacon South Quarter
- 1.6 Urban Design considerations
- 1.7 Justification for adopted height (to be completed)

3.0. DEVELOPMENT STRATEGY

- 3.1 Housing Mix
- 3.2 Amenity
- 3.3 Residential Support facilities/ services/amenities & Childcare
- 3.4 Car parking

SECTION B: Issues to be addressed

2.0 PART V PROVISION

Response by Sandyford GP Ltd and drawings by Henry J Lyons

4.0. PROPOSED MATERIALS

Response by Henry J Lyons

5.0 SITE LAYOUT PLAN

Response by Henry J Lyons

6.0 PROPOSED OPEN SPACES

Response by Henry J Lyons

7.0. PHASING

Response by Sandyford GP Ltd and drawings by Henry J Lyons



INTRODUCTION

This report was compiled by Henry J Lyons on behalf of Sandyford GP Limited acting in its capacity as general partner for the Sandyford Central Partnership (the Applicant) dealing specifically with the architectural aspect of An Bord Pleanála's 'Notice of Pre-Application Consultation Opinion' dated 20th September 2019 following a Section 5 Pre-Application Consultation meeting and should be read in conjunction with all documents submitted with the Applicant's response.

Sandyford GP Limited (acting in its capacity as general partner for the Sandyford Central Partnership) intend to apply to An Bord Pleanála for permission for a strategic housing development at a 1.54 ha site at the former Aldi Site, Carmanhall Road, Sandyford Business District, Dublin 18.

The development, which will have a Gross Floor Area of 49,342 sqm will principally consist of: the demolition of the existing structures on site and the provision of a Build-to-Rent residential development comprising 564 No. apartments (46 No. studio apartments, 205 No. one bed apartments, 295 No. two bed apartments and 18 No. three bed apartments) in 6 No. blocks as follows: Block A (144 No. apartments) is part 10 to part 11 No. storeys over basement; Block B (68 No. apartments) is 8 No. storeys over basement; Block C (33 No. apartments) is 5 No. storeys over lower ground; Block D (103 No. apartments) is part 16 to part 17 No. storeys over lower ground; Block E (48 No. apartments) is 10 No. storeys over semi-basement; and Block F (168 No. apartments) is 14 No. storeys over semi basement.

The development provides resident amenity spaces (1,095 sqm) in Blocks A, C and D including concierge, gymnasium, lounges, games room and a panoramic function room at Roof Level of Block D; a crèche (354 sqm); café (141 sqm); a pedestrian thoroughfare from Carmanhall Road to Blackthorn Drive also connecting into the boulevard at Rockbrook to the west; principal vehicular access off Carmanhall Road with servicing and bicycle access also provided off Blackthorn Drive; 285 No. car parking spaces (254 No. at basement level and 31 No. at ground level); 21 No. motorcycle spaces; set-down areas; bicycle parking; bin storage; boundary treatments; hard and soft landscaping; lighting; plant; ESB substations and switchrooms; sedum roofs; and all other associated site works above and below ground.

SECTION A: Response to topics discussed at Section 5 Pre-planning Consultation Meeting 11.09.2019

REFER TO ABP INSPECTOR'S REPORT DATED 20.09.2019

1.0 BUILDING HEIGHT

1.1 Introduction

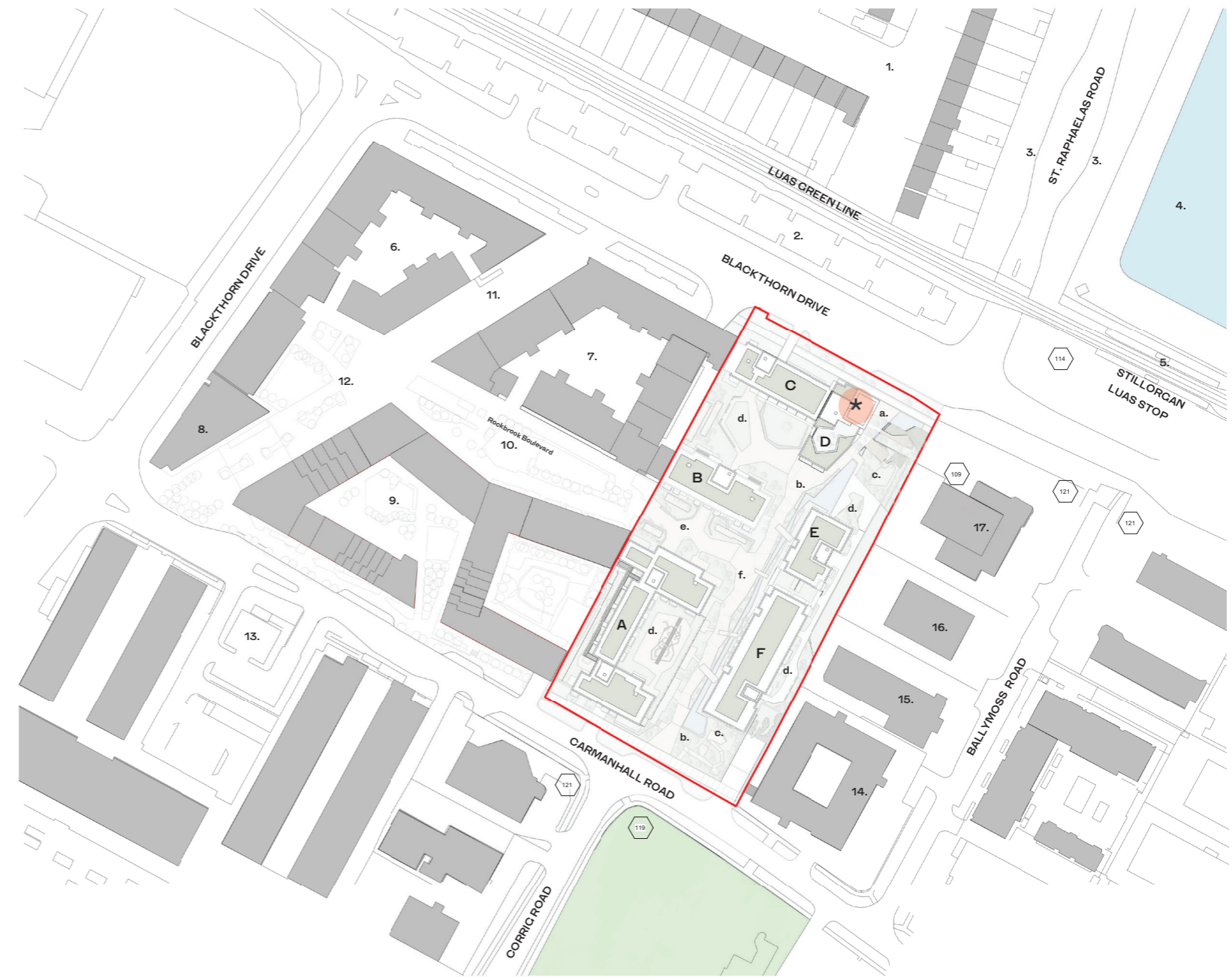
The proposed scheme which is guided by current national, regional and local policy will appropriately assimilate into the surrounding context to provide a sustainable residential development. Having regard to the location of the lands in close proximity to public transport and a wide range of services and facilities in close proximity, it is considered that the design response provides a contemporary architectural solution that maximises the development potential of the subject lands.

The aspiration of the promoter is to recognise and retain the positive aspects of the extant scheme (Reg. Ref. ABP- 301428-18) while overlaying the opportunities and directives of the latest guidelines introduced since the extant scheme was designed, namely:

- Sustainable Urban Housing: Design Standards for New Apartments (2018)
- Urban Development and Building Height Guidelines for Planning Authorities (2018).

The design has sought to respond to the locational characteristics of the site, in particular Rockbrook Phase I (constructed) and II (permitted) and the opportunities presented by a strategically located large underutilised plot.

The layout of the scheme has fully considered the site's surrounding context (Fig.1) by positioning the highest form (Fig.1*) at the most appropriate location, fronting Blackthorn Drive and the Green Luas line and acting as a physical marker of the entrance to the Boulevard that connects the Luas via the subject lands to the Beacon South Quarter mixed use development.



Proposed Site Plan - Context
1:1000

SANDYFORD CENTRAL SITE REFERENCES

- A. Proposed Block A
- B. Proposed Block B
- C. Proposed Block C
- D. Proposed Block D
- E. Proposed Block E
- F. Proposed Block F

- a. Entrance Steps
- b. Public Open Space
- c. Playground
- d. Communal Amenity Open Space
- e. Boulevard
- f. Pedestrian link

CONTEXT REFERENCES

- 1. Lakelands housing estate
- 2. Luas park & ride carpark
- 3. Bus stop
- 4. Reservoir
- 5. Stillorgan Luas Stop
- 6. Rockbrook Grande Central
- 7. Rockbrook South Central (Block D)
- 8. The Sentinel
- 9. Proposed RB Central (ABP Ref. PL06D.304405)
- 10. Rockbrook Boulevard
- 11. Pedestrian Link to Blackthorn Drive
- 12. Public Open Space
- 13. Beacon South Quarter - Retail Centre
- 14. Ballymoss House (The Hive)
- 15. Silverstone House
- 16. Grafton House (planning permissionDLRCC Reg. Ref. D18A/1210)
- 17. Siemens Site

SUFF 2016-2022 OBJECTIVES

- 119 To develop a Sandyford Business District Civic Park at the corner of Corrig Road and Carmanhall Road.
- 109 To seek the provision of a use that animates the street corners e.g. Hotel/Apart Hotel at north western end of Ballymoss Road at the junction with Blackthorn Avenue (Map 1). Building to be of notable design (Map 3).
- 114 To provide a Public Transport Interchange adjacent to the Stillorgan Luas Stop.
- 121 To ensure the provision of pocket parks and civic spaces in accordance with locations specified on Map 1 and Drawing no.10.

FIG.1 Site context

Building on the lessons learned from the extant Tivway scheme (fig.2), Henry J Lyons carried out preliminary massing and density studies in line with current design standards and planning policies adopted since the grant of the previous scheme. The key objectives of the initial studies are outlined below:

- To increase the density and mix in line with the Build to Rent nature of the proposed new scheme;
- To provide more and better communal facilities for the residents;
- To provide an enhanced quality to the public realm;
- To provide an attractive, robust elevational treatment, including revisions to height and materials where considered appropriate

While the location and height of Blocks B and C was considered to be fixed in order to complete the gables of the existing Rockbrook development, the other blocks were subject to massing studies in an effort to balance the desired density and maximise the resident's amenity.

Massing study 1 (fig. 3) proposed to maintain the heights of the extant scheme and extend the footprint of block E and F to include more apartments per floor plan as a response to the revised guidelines allowing up to 12 units per core. This option was deemed inappropriate as it would have overshadowed the open amenity spaces and compromised the amenity of the residents.

Massing study 2 (fig.4) proposed to maintain the footprint of the extant scheme with additional height to blocks C, D and F. This option was deemed viable (with the exception of the additional height in block C) and further developed with revisions to the plan configuration of blocks E and F, so the gap between the blocks would be aligned centrally on axis with the east / west Boulevard, providing a superior relationship between the blocks and the boulevard and improving the daylight and sunlight penetration into the amenity spaces within the proposed development.



Fig.2 Initial massing studies: Baseline scheme (as permitted)



Fig.3 Initial massing study 1: No additional height and extended footprint



Fig.4 Initial massing study 2: Additional height to blocks C, D and F; same footprint

1.2 Comparison with extant scheme

As indicated in the accompanying figure 5, when compared with the extant “Tivway” scheme the proposed massing revisions include a height increase to Blocks D and F and a height decrease in Blocks A and E as a result of the substitution of a 1.1m deep transfer slab with a 250mm floor slab and the reduction of all floor to floor heights by 50mm in the new proposal.

The accompanying CGI images (fig. 6) illustrate the proposed part 17-storey compared with the permitted 14-storey schemes, suggesting an enhanced slenderness ratio in favour of the proposed scheme.

The revised massing configuration was tested with the microclimate consultants to assess the impact on Daylight/ Sunlight and Wind, and the conclusions are summarised below:

Sunlight & Daylight

The Daylight & Sunlight Report prepared by O’Connor Sutton Cronin Consulting Engineers (enclosed as part of this application as a separate document) demonstrates that the reconfiguration of height does not result in adverse daylight and sunlight results when compared with the extant scheme.

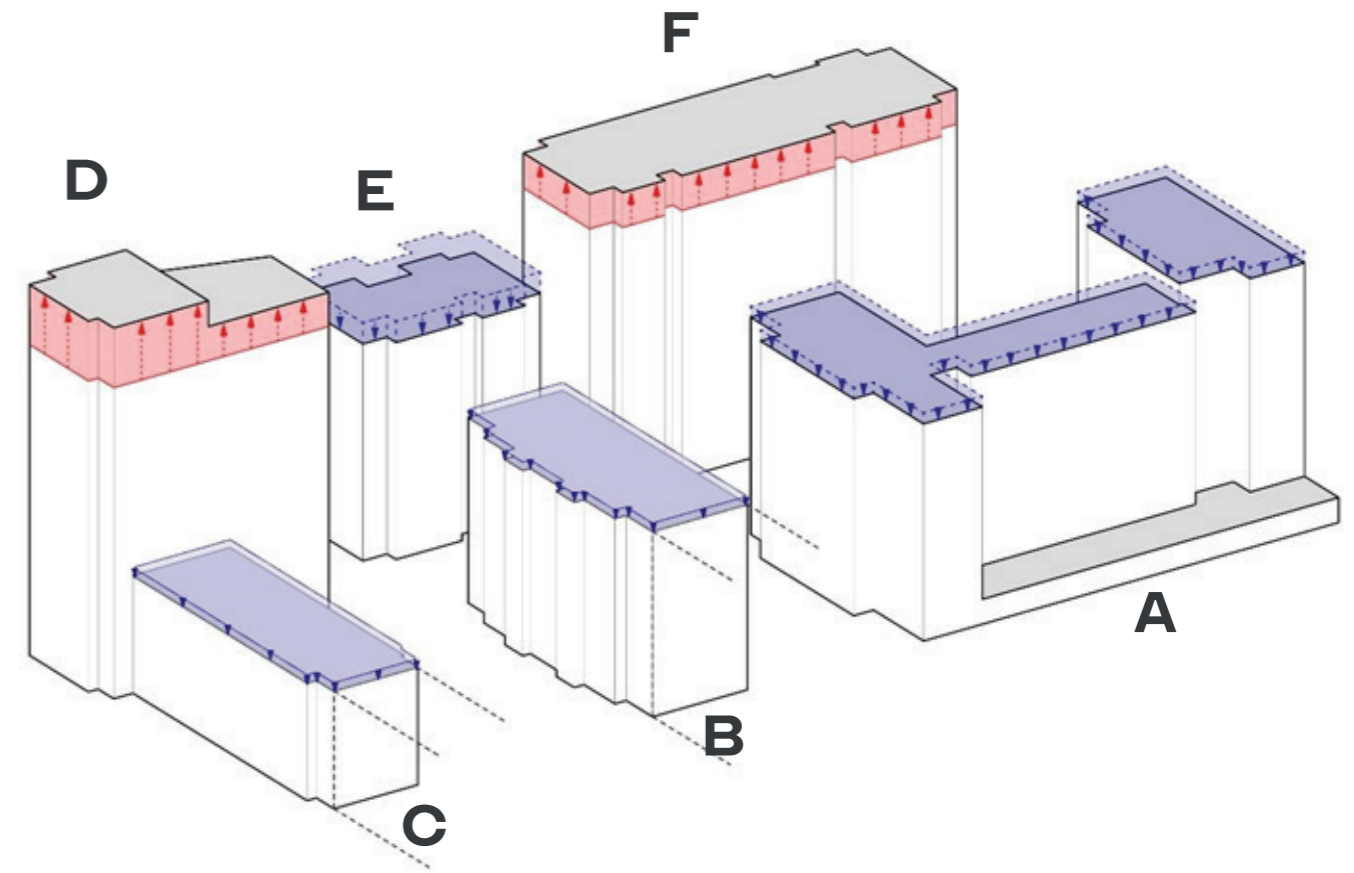
Furthermore, the revised footprint with the gap between blocks E and F provided an enhancement in the sunlight availability along the Boulevard, and the addition of a rooftop open amenity space increases the available sun-lit open spaces for the residents’ amenity.

Wind microclimate

Wind studies prepared by B-Fluid (enclosed as part of the application as a separate document) suggest that the additional height in Block F could affect the wind pattern in a positive way when compared with the extant permission.

The increased height of block F provides additional shielding and reduces the risk of downdraft effects along the face of Block D.

In conclusion, the proposed new massing when compared to the extant scheme presents some opportunities to improve upon the many positive aspects of the extant scheme.



Block	Tivway		Sandyford Central		Height difference (mm)
	Storeys	Parapet height (mm)	Storeys	Parapet height (mm)	
A	11	121,000	11	119,925	-1,075
	10	117,950	10	116,925	-1,025
B	8	111,300	8	110,925	-375
C	5	102,500	5	101,925	-575
D	14	132,000	16	134,925	2,925
			17	137,682	5,682
E	10	117,400	10	116,925	-475
F	12	123,500	14	128,925	5,425

Fig.5 Comparison of heights between Sandyford Central and the extant (Tivway) scheme



Fig.6 CGI Images showing the proposed Block D and the extant scheme seen from the same viewpoint at the crossing of the Luas railway.

The red line indicated the outlines of the extant scheme, suggesting an enhanced slenderness ratio in favour of the revised proposed scheme.

1.3 Block D height studies

The provision of an appropriate height to Block D has been an important consideration throughout the design development stages. It is desired to provide a slender vertical structure at this location which ‘announces’ the urban quarter from the transport node, in line with the aspirations of the Urban Development and Building Height: Guidelines for Planning Authorities (December 2018), complementing the presence of height at the Sentinel Building which is located at the other end of the pedestrian thoroughfare (fig. 7).

The consideration of alternative height strategies for Block D are detailed and illustrated in figures 8,9,10 in the following pages.

Option No. 1 – 14 No. storey

An option with Block D with 14 storeys (which complies with the recommended height provided in the Sandyford Urban Framework Plan 2016) was initially analysed but was later discarded as a fundamental principle of the renewed design approach is to provide architectural interest and an exciting entry to the scheme. It was considered that providing a 14 No. storey building at Block D would result in relatively monotonous building heights across the scheme which would fail to avail of the opportunity to appropriately announce the main access point to the urban quarter from the high capacity public transport interchange at the Luas.

As a result of this study it was decided to increase the height to 16 levels of residential accommodation and a multi-function room with roof garden on Level 17, creating a major entry point into the neighbourhood and providing a strong urban edge on Blackthorn Drive.

Option No.2 – Part 16, Part 17 No. storey

As discussed with Dún Laoghaire – Rathdown County Council on the 30th April 2019 and 18th June 2019 (Section 247 meetings), the Design Team presented a scheme with increased heights of 16 No. storeys at Block D, and later to part 17 No. storeys at Block D with the addition of the multi-function space (presented at the second Section 247 pre-planning meeting).

The decision to increase the height to part 17 No. storeys was informed by the relationship with the (unfinished) Sentinel building located diagonally opposite at the south western extreme corner of the Rockbrook neighbourhood, which marks the entrance to the Beacon South Quarter retail core.

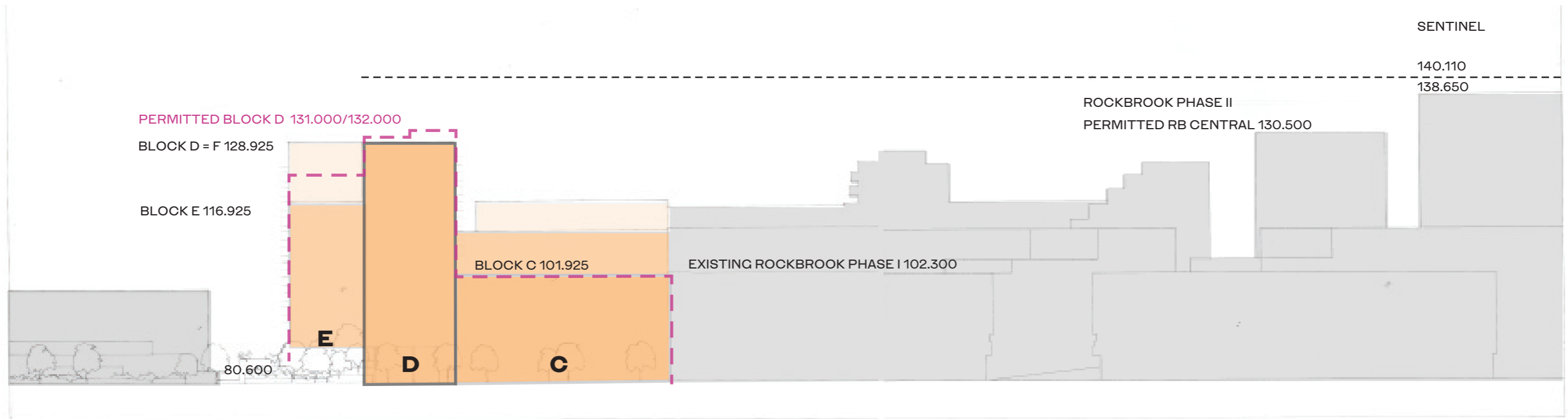
From an urban design point of view, it was considered appropriate to match the height of the Sentinel building with a similar “twin” structure at the other end of the pedestrian thoroughfare. The two blocks would impart a character and identity to the neighbourhood which is appropriate to the scale and density aspired to in the SUFP and assists with orientation and place making by marking major entry points and routes into and through the neighbourhood.



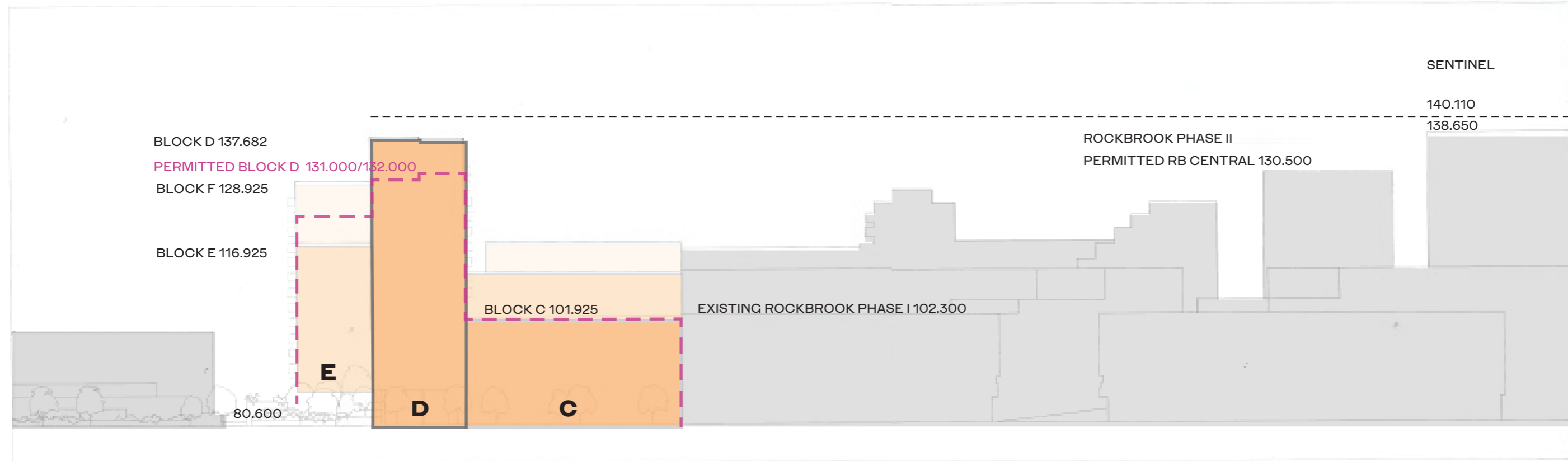
Fig.7 Photo of scale model showing block D seen from the corner of the Luas stop. The outline of the Sentinel can be seen in the background

(C) Enda Cavanagh Photography

1.3.1 Comparative Elevations - Blackthorn Drive



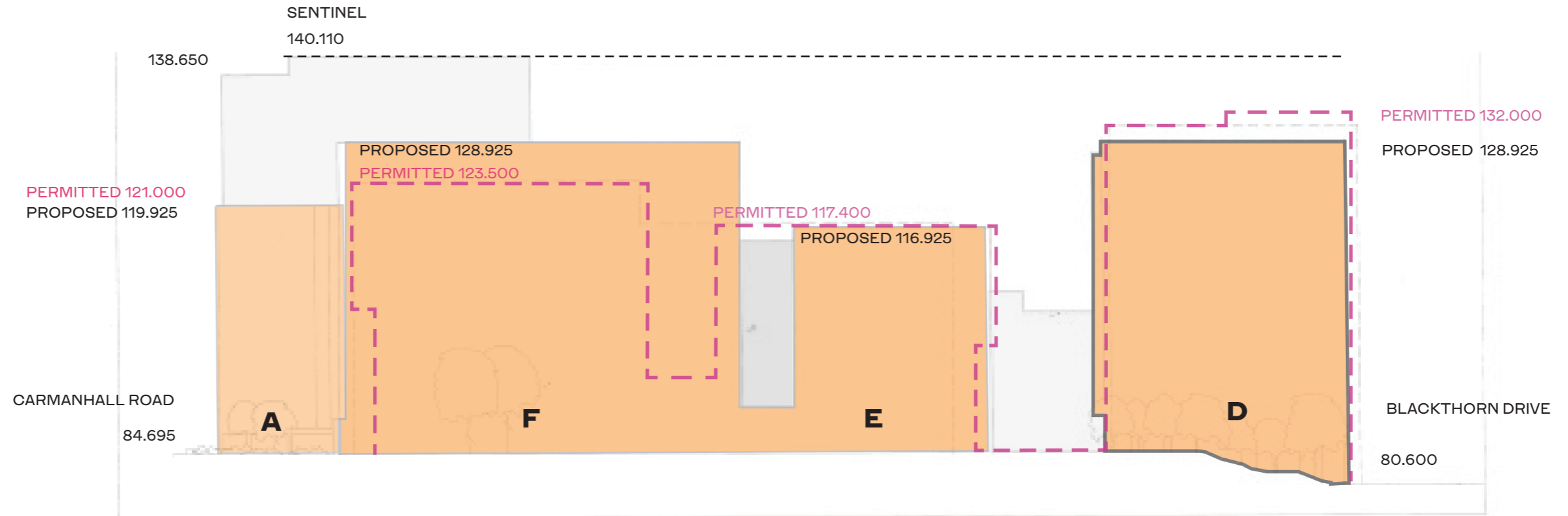
Option 1 - Elevation to Blackthorn Drive



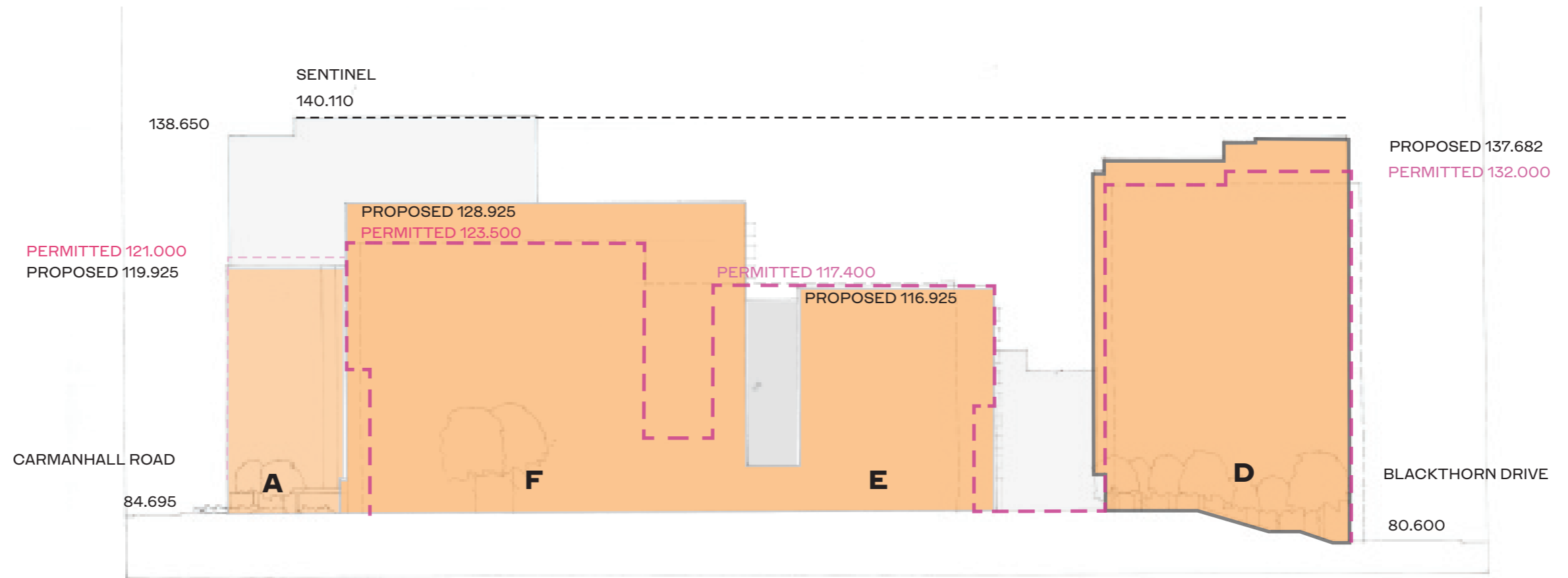
Option 2 - Elevation to Blackthorn Drive

Fig.8 Comparative Elevations - Blackthorn Drive

1.3.2 Comparative Elevations - East Elevation



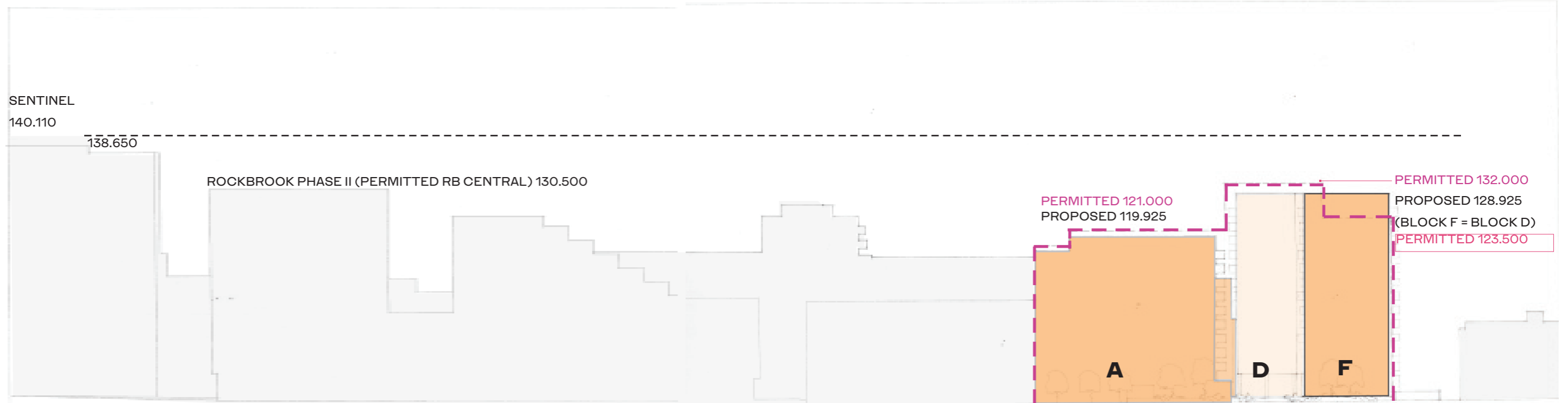
Option 1 - East Elevation



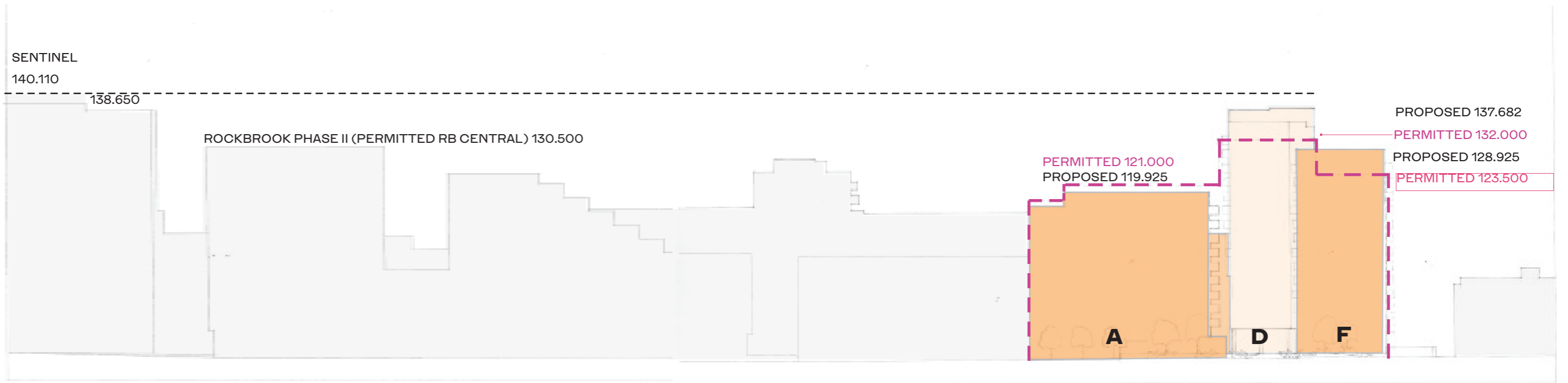
Option 2 - East Elevation

Fig.9 Comparative Elevations - East Elevation

1.3.3 Comparative Elevations - Carmanhall Road



Option 1 - Elevation to Carmanhall Road



Option 2 - Elevation to Carmanhall Road

Fig.10 Comparative Elevations - Carmanhall Road

1.4 Context: building heights

In line with the aspirations of the Sandyford Urban Framework Plan 2016-2022, a significant number of buildings have been granted planning permission and/or built in recent years (fig. 11).

Below is a list of some relevant buildings in the immediate context of the subject site and their number of storeys:

1. Rockbrook Phase 1 (residential) 5-8 storeys
2. The Sentinel (offices, unfinished) 14 storeys
3. Rockbrook Phase 2 (permitted) 8-14 storeys

Beacon South Quarter:

4. BSQ The Edges (mixed use w/retail) 7-8 storeys
5. BSQ The Cubes 4/5/6 (residential) 9 storeys
6. BSQ (tower at The Plaza) 14 storeys
7. BSQ The Cubes 1/2/3 (residential) 10 storeys
8. The Arcs (residential) 11 storeys

These buildings present a relatively high skyline with a new established average or “shoulder” height of ca. 10 storeys and “peaks” marked by the Sentinel (2) and the 14-storey over podium Beacon South Quarter (6), (fig. 12).



Fig. 11 Aerial view of context with subject site outlined in red. Source Google Maps (c) 2019



Fig.12 Photo from Kilmacud Luas stop entrance on Benildus Avenue showing the unfinished Sentinel building (1) and the 14 storey Beacon South Quarter residential building (2). Source: Henry J Lyons, August 2019



Fig. 13 Image showing the recently completed 11 storey residential development in the foreground and the Sentinel building in the background

Originally designed in 2005 as the tallest structure in the vicinity at the corner of Carmanhall Road and Blackthorn Drive, the Sentinel was intended as an urban marker to signify the pedestrian entrance to the Rockbrook opposite Beacon South Quarter. The economic downturn of 2008 meant this building could not be completed and has remained as an unfinished structure for over a decade (fig.14).

The Sentinel was intended to provide 14 storeys of office accommodation with floor to floor heights of 3.75m and plant at its top. Over 14 storeys, this amounts to 54.8m height over the Boulevard level.

As presented in the previous height studies, Block D aims to **complement, re-signify** and provide **meaning** to the Sentinel (fig.15).

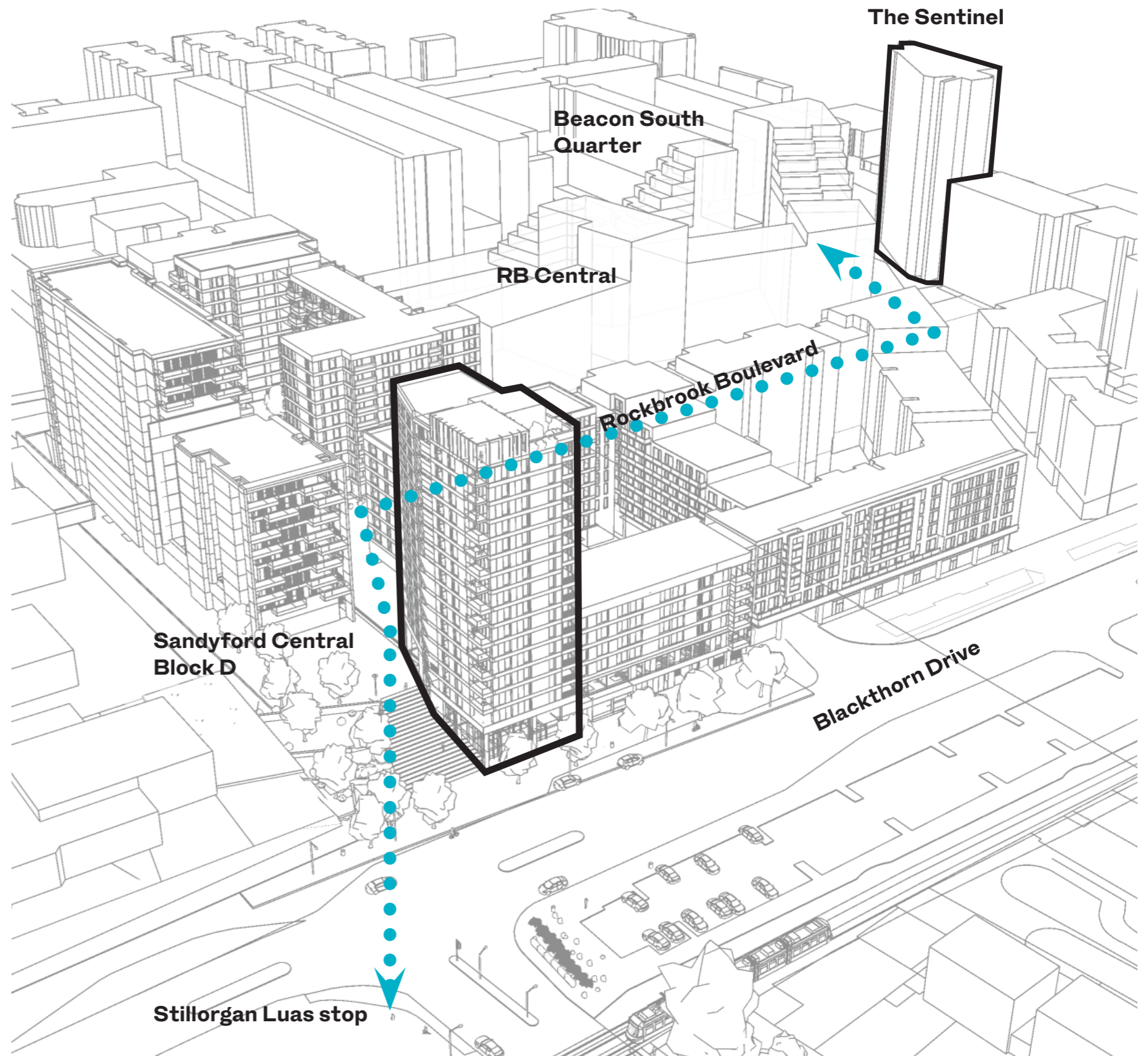


Fig. 15 Diagram: relationship of Block D and Sentinel building

Fig. 14 The Sentinel building at the corner of Carmanhall Road marks the entrance to Rockbrook on Blackthorn Drive

1.5 Photographic sequence: from Luas stop to Beacon South Quarter

A sequence of images is presented in the following pages illustrating the imaginary journey of a resident going from the Stillorgan green line Luas stop to the Beacon South Quarter mixed use development through the Rockbrook boulevard.



1



Fig. 16 Photo from Luas stop looking into subject site with the unfinished Sentinel building in the background.

Source:
Henry J Lyons, August 2019



2

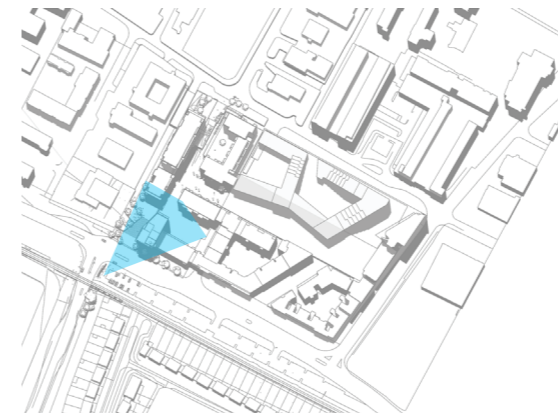


Fig. 17 Photo from Blackthorn Drive at the traffic light looking into subject site. The Sentinel is no longer visible and the 14 storey element of Beacon South Quarter becomes visible.

Source:
Henry J Lyons, August 2019



3

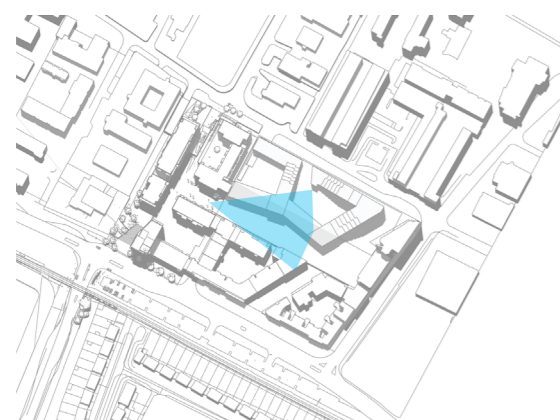


Fig. 18 Photo from the Rockbrook Boulevard from the subject site hoarding looking towards the unfinished Sentinel building in the background.

Source:
Henry J Lyons, August 2019



4

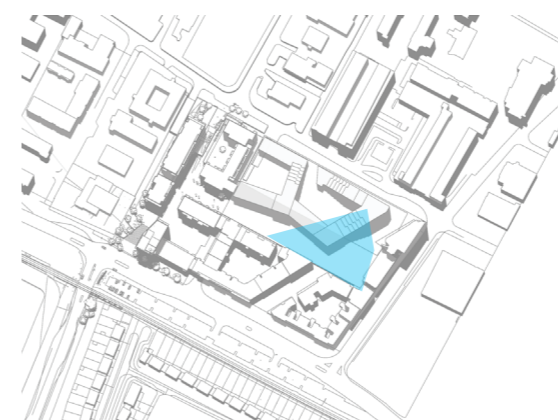


Fig. 19 Photo from the Rockbrook Boulevard from the subject site hoarding looking towards the unfinished Sentinel building in the background.

Source:
Henry J Lyons, August 2019



5

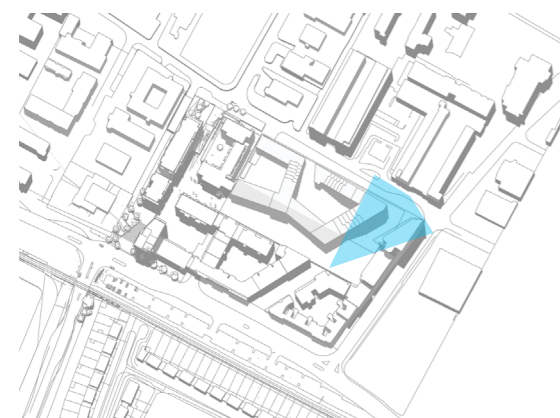


Fig.20 Photo from the Rockbrook Boulevard looking towards Beacon South Quarter with the unfinished Sentinel building in the background.

Source:
Henry J Lyons, August 2019



6

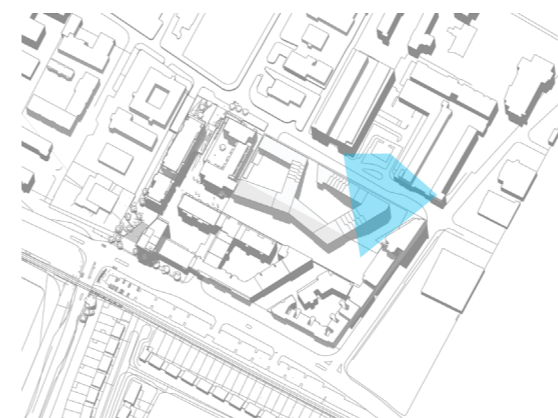


Fig. 21 Photo in front of the Sentinel building looking towards Beacon South Quarter.

Source:
Henry J Lyons, August 2019

1.6 Urban Design considerations

The Applicant acknowledges that a 17 storey building exceeds the maximum height of 14 storeys set out in the Sandyford Urban Framework Plan 2016. The justification for additional height is further elaborated in the *Material Contravention Statement prepared by Thornton O'Connor* which is submitted with this application.

However, it is our opinion that the height studies presented clearly demonstrate that the building height of block D should be driven by **urban design principles**.

As stated in Urban Development and Building Height: Guidelines for Planning Authorities (December 2018):

Furthermore, while taller buildings will bring much needed additional housing and economic development to well-located urban areas, they can also assist in reinforcing and contributing to a sense of place within a city or town centre, such as indicating the main centres of activity, important street junctions, public spaces and transport interchanges. In this manner, increased building height is a key factor in assisting modern placemaking and improving the overall quality of our urban environments.

Some key urban design considerations driving Block D height are summarised below and illustrated in the scale model photos shown in fig. 22:

- 1. Located opposite the Stillorgan green line Luas stop, Block D assists with a wayfinding strategy as singular, memorable building of architectural interest.**
- 2. At the end of Raphaela's Road, Block D marks the gateway entrance to the Sandyford Business District on approach from Stillorgan.**
- 3. Block D provides a bookend to the monotonous 5&6 storey building height along Blackthorn Drive.**
- 4. Seen from Corrig Road, it provides a focal point at the axis of the pedestrian link, complementing the objective for a future park the corner of Carmanhall Road and assisting with wayfinding towards the Luas.**



1.



2.



3.



4.

Fig. 22 Photos of scale model (c) Enda Cavanagh, 2019

1.7 Justification for adopted height

In conclusion, while the Applicant acknowledges the proposed part 16 and part 17 storey height proposed for Block D would be a material contravention of the maximum heights set out in the Sandyford Urban Framework Plan 2016-2022, the height studies presented with this application in line with the aspirations of the Urban Development and Building Height Guidelines for Planning Authorities (2018) clearly demonstrate that the adopted height for block D is appropriate for the scheme.

The mentioned Height Guidelines encourage the provision of height in well-located urban areas, considering increased building height a key factor in assisting modern place-making and improving the overall quality of urban environments.

The reasons and justification for the adopted height of block D are summarised below:

- Block D is located at an ideal spot for height at the intersection of two wide urban arteries and diagonally across the Stillorgan Luas stop, acting as an urban marker from different directions, reinforcing and contributing to a sense of place-making.
- Block D indicates the gateway to the residential quarter and the location of the transport interchange and the public spaces as provided in the Height Guidelines.
- At the end of Raphaella's Road it boldly announces the Sandyford Urban District as a modern, contemporary neighbourhood on approach from Stillorgan
- It provides a focal point of urban activity at the end of the pedestrian link from Carmanhall Road / Corrig Road, assisting in the wayfinding strategy to mark the location of the transport interchange.
- The proposed block D height complements and re-signifies the unfinished Sentinel building. While still lower than the Sentinel, these "twin beacons" at either end of the pedestrian Boulevard mark the start and the end of the pedestrian journey to and from the Luas stop.
- The established context height including existing and proposed 14-storey buildings in the immediate vicinity would see a similar structure blend with in the background, losing an opportunity to make a bold statement to the Sandyford skyline.
- A 14 No. storey option analysed at early design stages was considered to be monotonous in heights across the scheme, failing to avail of the opportunity to appropriately announce the main access point to the urban quarter.
- The footprint of the 17th storey occupies less than half the building footprint, reducing the height impact when compared with the extant scheme. Furthermore, the revisions to the building massing and materiality improve its slenderness ratio.
- The addition of a rooftop multifunction room adds architectural interest to block D, reinforcing its urban presence in its most visible corner.





Fig. 24 CGI of Block D seen from the transport node at the Stillorgan Luas stop

3.0. DEVELOPMENT STANDARDS

Following the Section 5 Pre-Application Consultation meeting with An Bord Pleanála and the Local Authority held on the 11th September 2019, the Applicant reviewed some aspects of the scheme taking the inspector’s report into consideration.

The topics to be addressed are treated under the following headings:

- 3.1 Housing Mix
- 3.2 Quantum and quality of open Space and Amenity Areas
- 3.3 Residential support facilities / services / amenities & childcare
- 3.4 Car parking

3.1 HOUSING MIX

In response to the concerns raised by An Bord Pleanála in respect of the undersupply of larger units, the Applicant proposes a revised unit mix increasing the quantum of 3-bedroom apartments as illustrated in the key plan (fig. 25) and comparative tables attached (fig.26).

3.2 OPEN SPACE AND AMENITY AREAS

The Applicant proposes a revised landscaping layout, increasing the quantum of Public open Space and providing details and clarification in respect of play areas.

Please refer to the schedule of open spaces (point 6 of section B in this report) and the landscape report and drawings prepared by Bernard Seymour Landscape Architects.

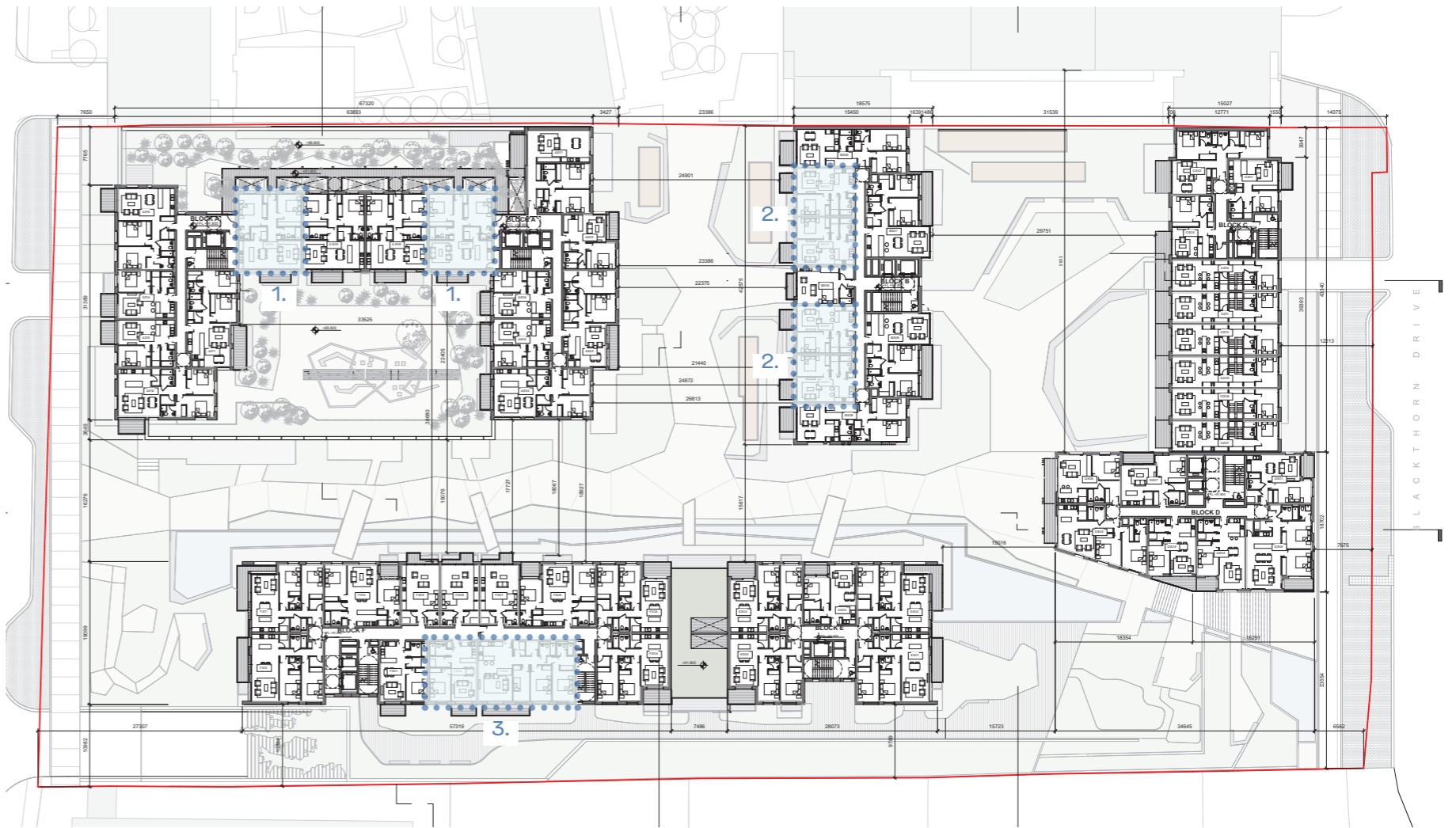


Fig. 25 KEY PLAN (third floor plan) - SUMMARY REVISIONS

- 1. Replace 4no. studio units for 2no. 2B unit in Block A (levels 2-5)
- 2. Replace 4no. 1B units for 2no. 3B units in Block B (levels 1-2)
- 3. Replace 2no. 2B units for 1no. 1B and 1no. 3B in block F (levels 1-14)

S.5 Pre-Application consultation

UNIT MIX	Qty	Avg	%	Dual Aspect	Area sqm.
Studio Units	62	37.8645	10.78%	16	2,348
1B Units	195	48.6759	33.91%	58	9,492
2B Units	316	78.1582	54.96%	250	24,698
3B Units	2	105.4	0.35%	2	211
Total	575			326	36,748

Proposed

UNIT MIX	Qty	Avg	%	Dual Aspect	Area sqm.
Studio Units	46	39.1	8.2%	16	1,798
1B Units	205	48.7	36.3%	58	9,973
2B Units	295	78.5	52.3%	250	23,147
3B Units	18	100.7	3.2%	2	1,812
Total	564			326	36,731

Fig. 26 Comparative tables indicating the unit mix for the S.5 pre-application consultation submission and the proposed amendments

3.3 RESIDENTIAL SUPPORT FACILITIES / SERVICES / AMENITIES & CRÈCHE

As requested by the Authority, the Applicant reviewed the provision of Communal Facilities and on site support services for the residents in Blocks C/D and Block A as summarised below and illustrated in the accompanying floor plans (fig.26, fig.27).

A revised crèche layout of increased size is provided (at the expense of 2no previously proposed residential units), increasing its size from 215 sqm to 354 sqm.

BLOCK C/D

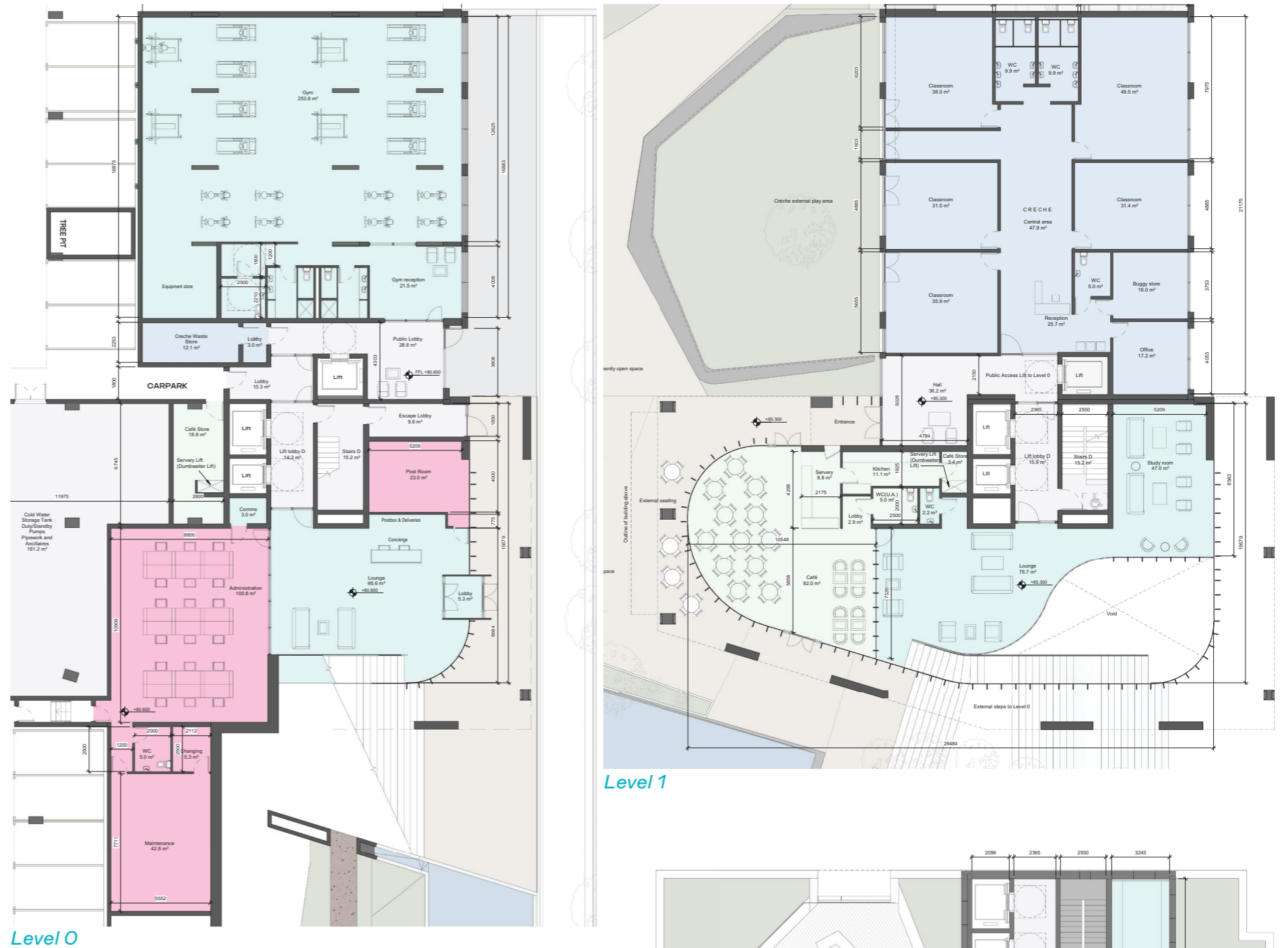
- Increased Gym size and sanitary facilities in Block C/D
- Revised gym entrance layout via shared lobby fronting to Blackthorn Drive
- Proposed new post / parcel room for deliveries in block D
- Increased size of administration rooms (resident support)
- Proposed new maintenance room (resident support) including changing facilities for personnel, linked to carpark
- Revised layout of communal multi-purpose room and associated open amenity space on level 17, including a kitchen.

CHILDCARE / CRÈCHE

- Increased crèche size on Level 1 from 215 to 354 sqm.
- Increased external play area

PUBLIC & RESIDENTS' ACCESS LIFT

- Revised Level 0 ground floor lobby layout with shared entrance to gym with enhanced visibility
- Revised Level 1 Boulevard ground floor lobby with shared entrance to crèche, and block D communal facilities



Level 0

Level 1

Level 17

Fig. 26 Block C/D resident amenities : Level 0, Level 1 and Level 17



The Applicant reviewed the internal layout of the Communal Facilities to improve its visibility and presence to animate the Carmanhall Road entrance of the scheme.

The following high-level revisions are now proposed:

BLOCK A

- Multi purpose lounge in lieu of gym in Block A
- Revised layout of resident amenities entrance including enhanced visibility (double height space)
- Relocation of games room along Carmanhall Road to animate street elevation
- Enhanced connection to Level 2 communal open space
- Revised Communal Amenity open Space design (refer to Landscape Architects' report)
- Revised material and elevational treatment introducing back-painted glass to the entrance space

A scaled version of the revised layouts in submitted with the planning application.



Fig. 27 Block A resident amenities: Level 1 and Level 2

3.4 CAR PARKING

The Applicant proposes to increase the quantum of car parking spaces from the previously proposed ratio of 0.47 cars per unit to a revised proposed ratio of 0.505 cars per unit (fig.28).

The proposed changes (fig. 28) include a revised footprint of the basement car park with a level change (level with Blackthorn Drive) to accommodate 36no. stacked car parking spaces and provide easier and better service access; the provision of 21no. motorcycle spaces; and revisions to the bicycle parking provision comprising of a mix of Sheffield stands and stacked bicycle parking.

A scaled version of the proposed car parking plans on Level 0 and Level 1 are provided with this planning application.

In addition, a key plan and tables with the summary changes since the Section 5 pre-application meeting are presented herewith.

01. Issued for S.5 Pre-Application consultation

CARPARKING	L0	L1	
Carparking Spaces Provided	241	31	272
TOTAL CARPARKING AREA incl Block A	Sqrm		9,997

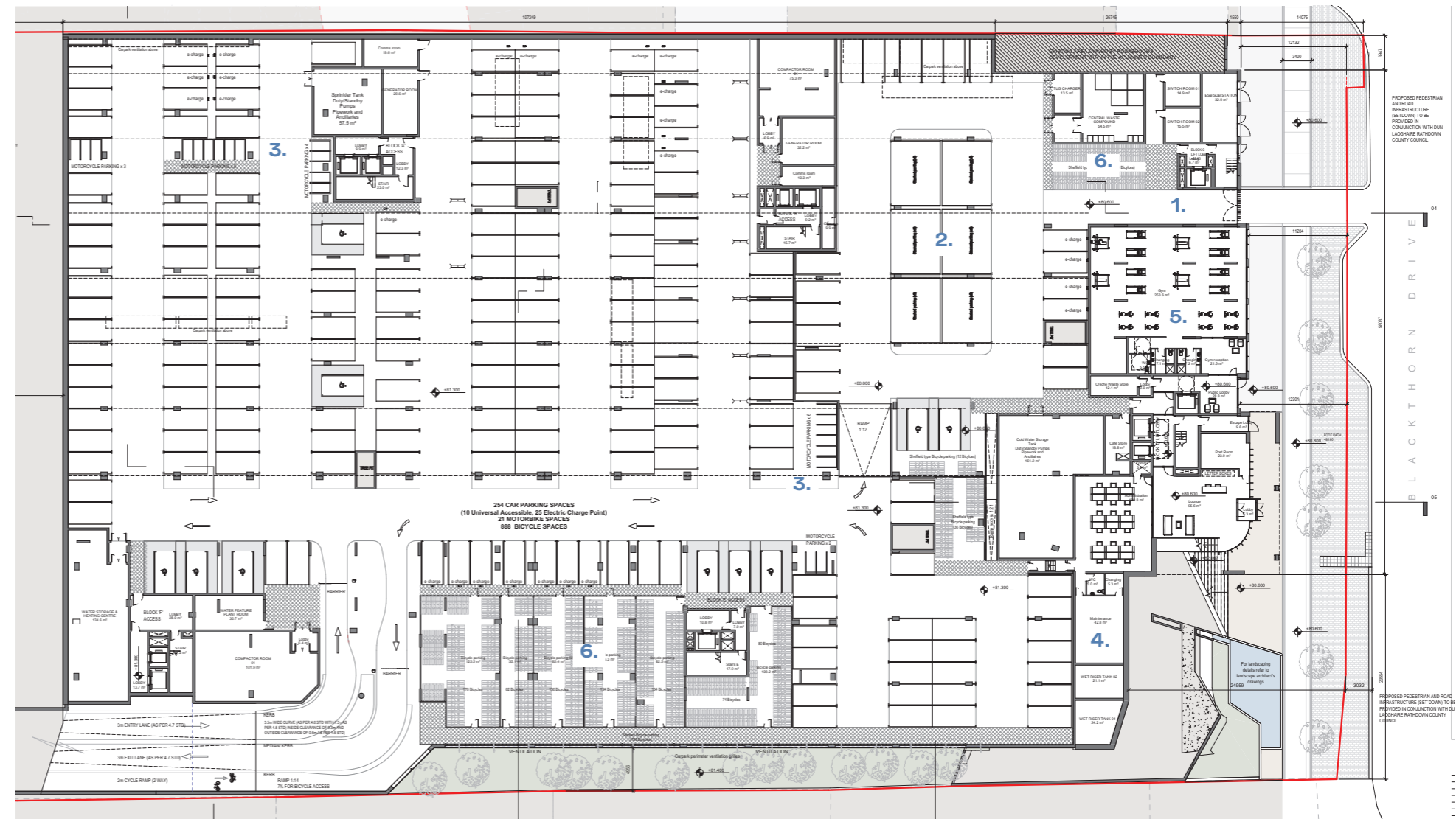
BICYCLE PARKING		
Bicycle parking spaces required	1 per bedroom	895
Visitor bicycle spaces	1 per 2 units	288
Total Bicycle Spaces required		1,183

02. Proposed for planning application

CARPARKING	Standard	Stacked	e-car	U.A.	Subtotal	PROVIDED
Level 0	183	36	25	10	254	285
Level 1	29			2	31	
CARPARKING RATIO						50.5%
CARPARKING AREA	L.0	8,088	L.1	1,502		9,590

BICYCLE PARKING			
Requirement: 1per Bed + 1/2 units:	Residents: 895	Visitors : 282	1,177
PROVIDED SPACES	Stacked parking	Sheffield	Subtotal
Level 0	786	102	888
Level 1	110	30	140
Public Realm		150	150
Total provision	Residents: 896	Visitors: 282	1,178

Fig. 28 Summary tables comparing the parking provision as submitted for the S.5 pre-planning consultation and the proposed provision for the planning application



Level 0 - Lower Ground Floor SUMMARY REVISIONS:

1. Provide level service entrance at Blackthorn Drive. Removal of ramps and addition of bicycle spaces
2. Provide 36no. stacked car parking spaces
3. Provide 21no. motorcycle spaces
4. Maintenance room / resident support
5. Revisions to resident amenities
6. Revisions to location and types of bicycle parking provision

Fig. 28 Level 0 car park plan with annotated revisions

This page is intentionally left blank

SECTION B: Issues to be addressed by the Applicant

REFER TO ABP INSPECTOR'S REPORT DATED 20.09.2019



2.0 PART V PROVISION

The Applicant proposes to offer 56no apartments to comply with Part V as detailed in the attached scheme and schedule (fig. 29, 30)schedule and floor plans (fig.30).

A scaled version of these drawings is being submitted with this planning application.

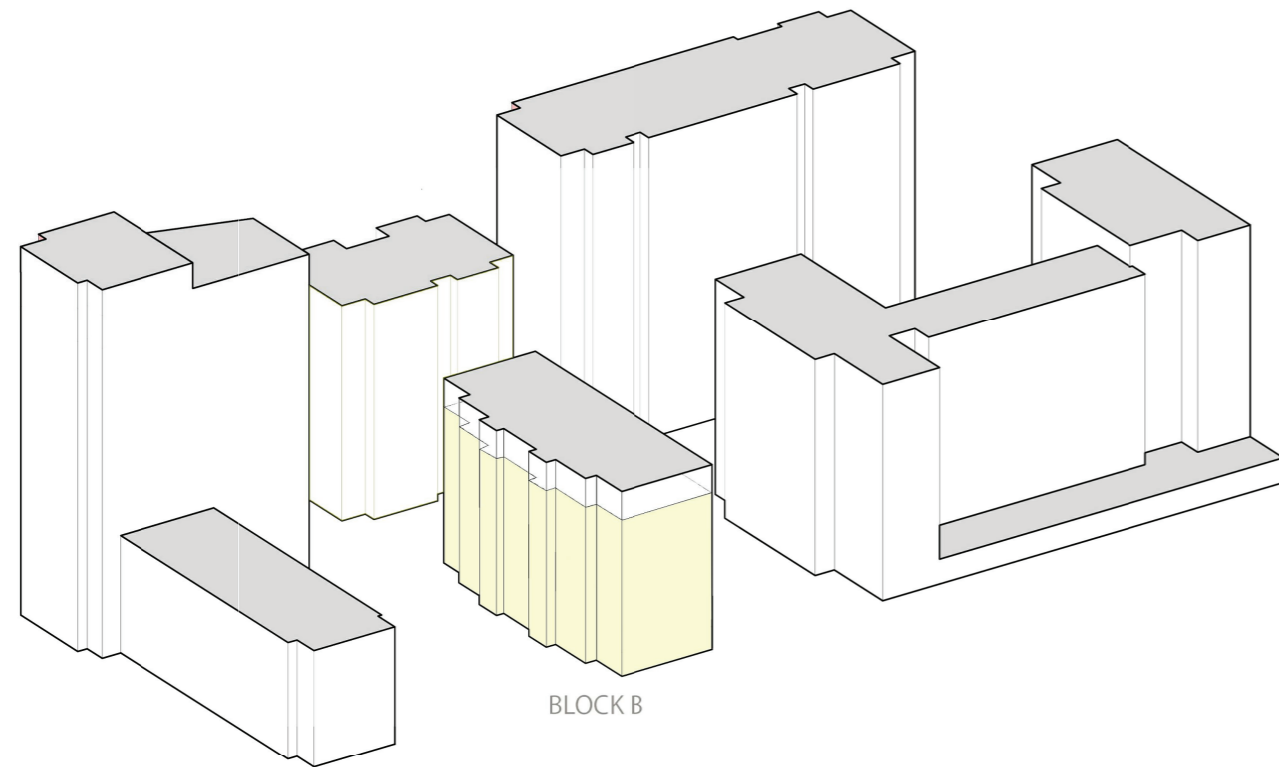
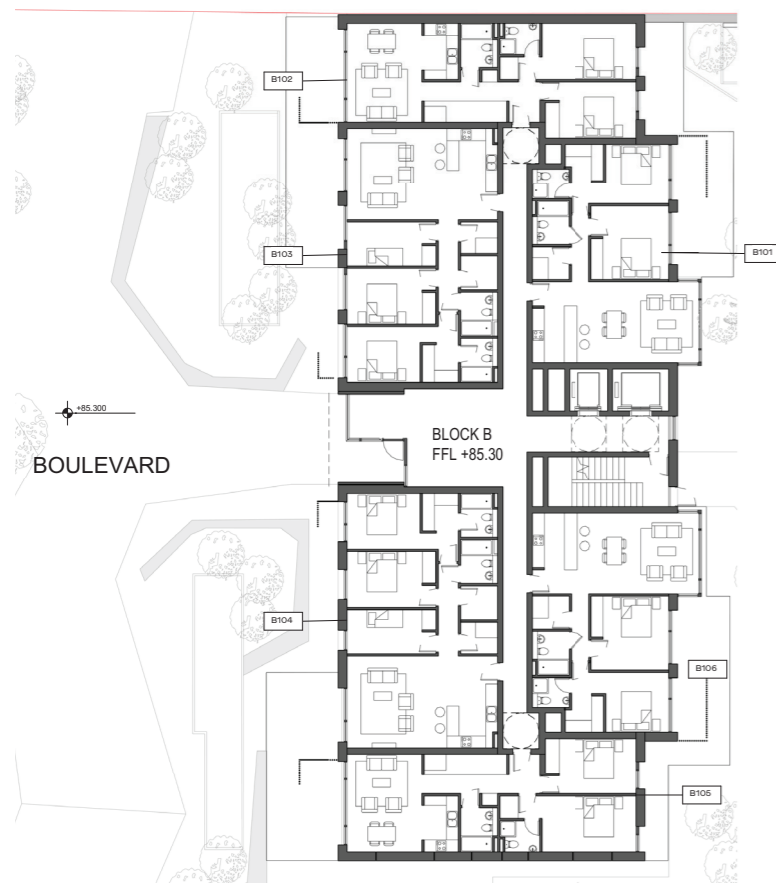


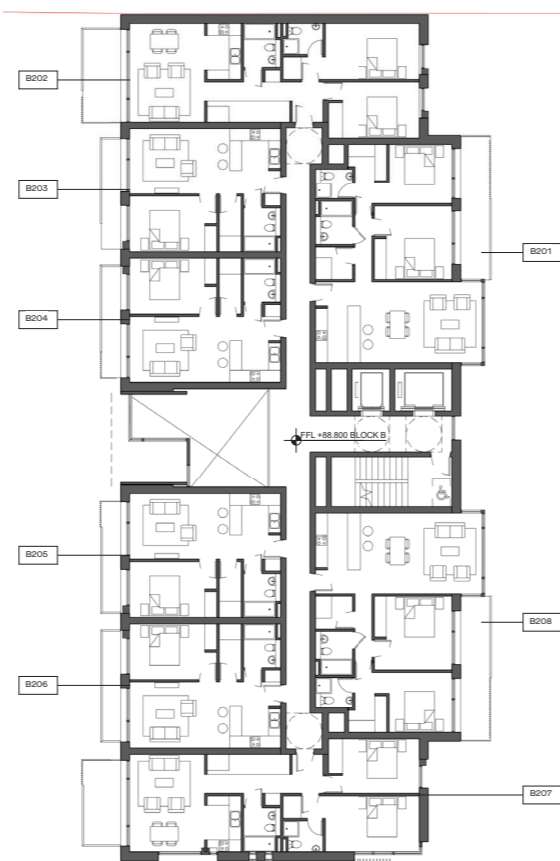
Fig. 29 Indicative sketch showing location of Part V apartments within proposed development

54_ApartmentGroups_HQA_Part 5_Sheet View									
Apartment Block	Level	Unit Number	Unit Type	No. of Bedrooms	Total Apartment Area	Required Apartment Area	Apartment Aspect	Apartment Orientation	Part V Allocation
B	01 - BOULEVARD - GRD. FLOOR	B101	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
B	01 - BOULEVARD - GRD. FLOOR	B102	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	01 - BOULEVARD - GRD. FLOOR	B104	B-3B-i	3	96.4	90.0 m ²	SINGLE	SW	Yes
B	01 - BOULEVARD - GRD. FLOOR	B104	B-3B-i	3	96.4	90.0 m ²	SINGLE	SW	Yes
B	01 - BOULEVARD - GRD. FLOOR	B105	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	01 - BOULEVARD - GRD. FLOOR	B106	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
01 - BOULEVARD - GRD. FLOOR: 6					503.2				
B	02 - SECOND FLOOR	B201	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
B	02 - SECOND FLOOR	B202	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	02 - SECOND FLOOR	B203	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	02 - SECOND FLOOR	B204	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	02 - SECOND FLOOR	B205	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	02 - SECOND FLOOR	B206	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	02 - SECOND FLOOR	B207	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	02 - SECOND FLOOR	B208	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
02 - SECOND FLOOR: 8					498.4				
B	03 - THIRD FLOOR	B301	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
B	03 - THIRD FLOOR	B302	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	03 - THIRD FLOOR	B303	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	03 - THIRD FLOOR	B304	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	03 - THIRD FLOOR	B305	B-ST-i	1_ST	37.6	37.0 m ²	SINGLE	SW	Yes
B	03 - THIRD FLOOR	B306	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	03 - THIRD FLOOR	B307	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	03 - THIRD FLOOR	B308	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	03 - THIRD FLOOR	B309	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
03 - THIRD FLOOR: 9					536.0				
B	04 - FOURTH FLOOR	B401	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
B	04 - FOURTH FLOOR	B402	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	04 - FOURTH FLOOR	B403	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	04 - FOURTH FLOOR	B404	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	04 - FOURTH FLOOR	B405	B-ST-i	1_ST	37.6	37.0 m ²	SINGLE	SW	Yes
B	04 - FOURTH FLOOR	B406	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	04 - FOURTH FLOOR	B407	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	04 - FOURTH FLOOR	B408	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	04 - FOURTH FLOOR	B409	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
04 - FOURTH FLOOR: 9					536.0				
B	05 - FIFTH FLOOR	B501	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
B	05 - FIFTH FLOOR	B502	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	05 - FIFTH FLOOR	B503	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	05 - FIFTH FLOOR	B504	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	05 - FIFTH FLOOR	B505	B-ST-i	1_ST	37.6	37.0 m ²	SINGLE	SW	Yes
B	05 - FIFTH FLOOR	B506	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	05 - FIFTH FLOOR	B507	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	05 - FIFTH FLOOR	B508	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	05 - FIFTH FLOOR	B509	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
05 - FIFTH FLOOR: 9					536.0				
B	06 - SIXTH FLOOR	B601	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
B	06 - SIXTH FLOOR	B602	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	06 - SIXTH FLOOR	B603	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	06 - SIXTH FLOOR	B604	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	06 - SIXTH FLOOR	B605	B-ST-i	1_ST	37.6	37.0 m ²	SINGLE	SW	Yes
B	06 - SIXTH FLOOR	B606	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	06 - SIXTH FLOOR	B607	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	06 - SIXTH FLOOR	B608	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	06 - SIXTH FLOOR	B609	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
06 - SIXTH FLOOR: 9					536.0				
B	07 - SEVENTH FLOOR	B701	B-2B-i	2	79.8	73.0 m ²	SINGLE	NE	Yes
B	07 - SEVENTH FLOOR	B702	B-2B-ii	2	75.4	73.0 m ²	DOUBLE	SW & NE	Yes
B	07 - SEVENTH FLOOR	B703	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	07 - SEVENTH FLOOR	B704	A-1B-i	1	47.0	45.0 m ²	SINGLE	SW	Yes
B	07 - SEVENTH FLOOR	B705	B-ST-i	1_ST	37.6	37.0 m ²	SINGLE	SW	Yes

Fig. 30 Part V schedule



Level 1 - Boulevard



Level 2



Level 3 to 6



Level 7

Note: The apartments shown grey on Level 7 and the apartments on Level 8 do not form part of the Part V provision

Fig. 31 Floor plans of Block B indicating apartments offered for Part V compliance.

4.0 PROPOSED MATERIALS

The materials specified are simple, thoughtful and robust bringing a new dynamic of materials to the Sandyford neighbourhood. The predominant material used within the scheme is brick in an array of shades. The material palette (fig. 35) is designed to create a unified 'neighbourhood' feel, with brick in complementary tones. Visual interest and a sense of individual building identity is created through subtle changes in brick colour from block to block. Brick is used due to its durability, robustness and grounds the scheme within its residential context.

The brick façades work in contrast to the window frames, balustrades, copings and gates which are in tonal greys to tie these elements into the wider material strategy for the scheme. The ground floor of the scheme is generally clad in a glass reinforced concrete (GRC) panelling system finished with a satin charcoal grey colour coating. This offers residents and visitors an element of way-finding through the scheme. The cladding has been introduced at key nodes within the development (balcony fascia and soffits, set-backs ground floor units) due to its robustness and ease of maintenance. The foyer and reception areas are designed as bright and welcoming spaces with glass, metal and brick being used due to their robustness.

At ground floor level, the water-based landscape proposal together with virtual enclosures in polyester powder coated metallic screens 'popping out' of the building envelope, defines the private open space and provides privacy and screening for the ground floor apartments. The material selection has been chosen with care to enhance the soft landscape elements and to create a distinctive neighbourhood within Sandyford. The public and communal amenity spaces provide different character areas for varying age groups in the development. The material palette chosen for the landscaping elements is robust and durable and is described in detail in the landscaping section.

All materials outlined above will help create buildings that resist deterioration over time. The building and open space elements can be easily maintained and managed by the future operators of the scheme.

Details of all materials proposed for buildings, open spaces, paved areas, boundary and retaining walls are described in the following pages and illustrated in the drawings and reports as part of this application.



Fig. 34 CGI image of proposed development seen from Rockbrook Boulevard continuing into Sandyford Central Boulevard

BRICK



BLOCK A - LIGHT RED BRICK

Light coloured mortar joint to match , raked

Image reference: www.olivier.be. KARMA-WF7-MOKKA_6148



BLOCK B - WHITE / SAND BRICK

White/sand mortar joint, raked

Image reference: KARMA-White



BLOCK D - LIGHT GREY BRICK

Light grey / white mortar joints - raked

Image reference: KARMA-Grey-VB-WF



BLOCKS C,E,F - MEDIUM DARK GREY BRICK

Light grey mortar joint - raked

Image reference: KARMA Grey-VB-EF

RAINSCREEN CLADDING - GLASS REINFORCED CONCRETE PANELING SYSTEM



Code CL-1

Polar White / Gloss finish

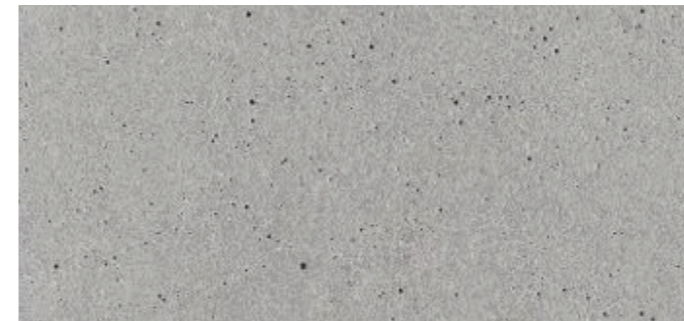
Block E/F gable ends. Refer to elevation & finishes drawings. Image references: <https://www.rieder.cc>



Code CL-2

Off White / Matt finish

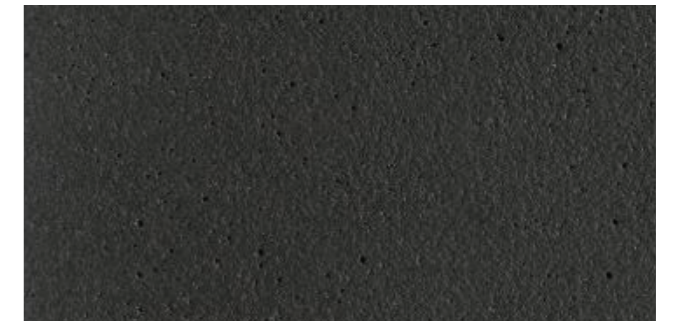
Selected locations. Refer to elevation & finishes drawings



Code CL-3

Ivory / Ferro Light

Balconies generally. Refer to elevation & finishes drawings

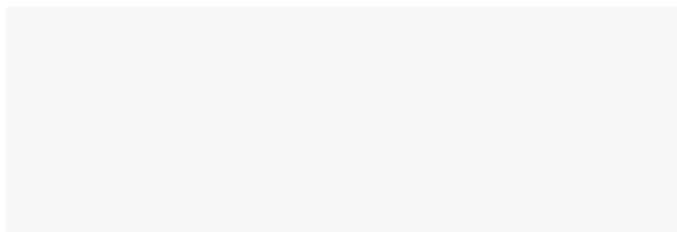


Code CL-4

Liquid Black / Ferro Light

Ground Floor. Refer to elevation & finishes drawings

WINDOWS & METALWORK



Code MW-1

Polyester powder coated finish to aluminium windows, metallic railings & fins in a gloss white finish.

Refer to drawings



Code MW-2

Anodised aluminium in a Satin Silver Clear finish to aluminium windows, spandrel panels and opening sections.

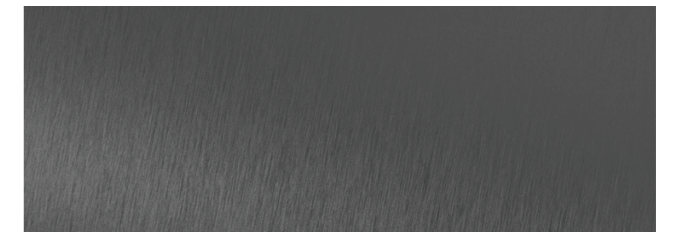
Refer to drawings



Code MW-3

Anodised aluminium in a Satin Silver Grey finish to selected windows, railings

Refer to drawings



Code MW-4

Anodised aluminium in a Satin Charcoal Grey finish to selected windows, railings

Refer to drawings

Fig. 33 Proposed material palette

4.1 BUILDING MATERIALS

Materials proposed for the individual blocks are illustrated in the following pages.

For ease of reference, 3D views of the different building blocks are provided along with the proposed material palette and reference images of similar materials, to be read in conjunction with the scaled elevation drawings provided with this planning application.

Details pertaining to the elevational strategy and the rationale for elevational treatment are further elaborated in the Architectural Design Statement as part of this planning application.

BLOCK A

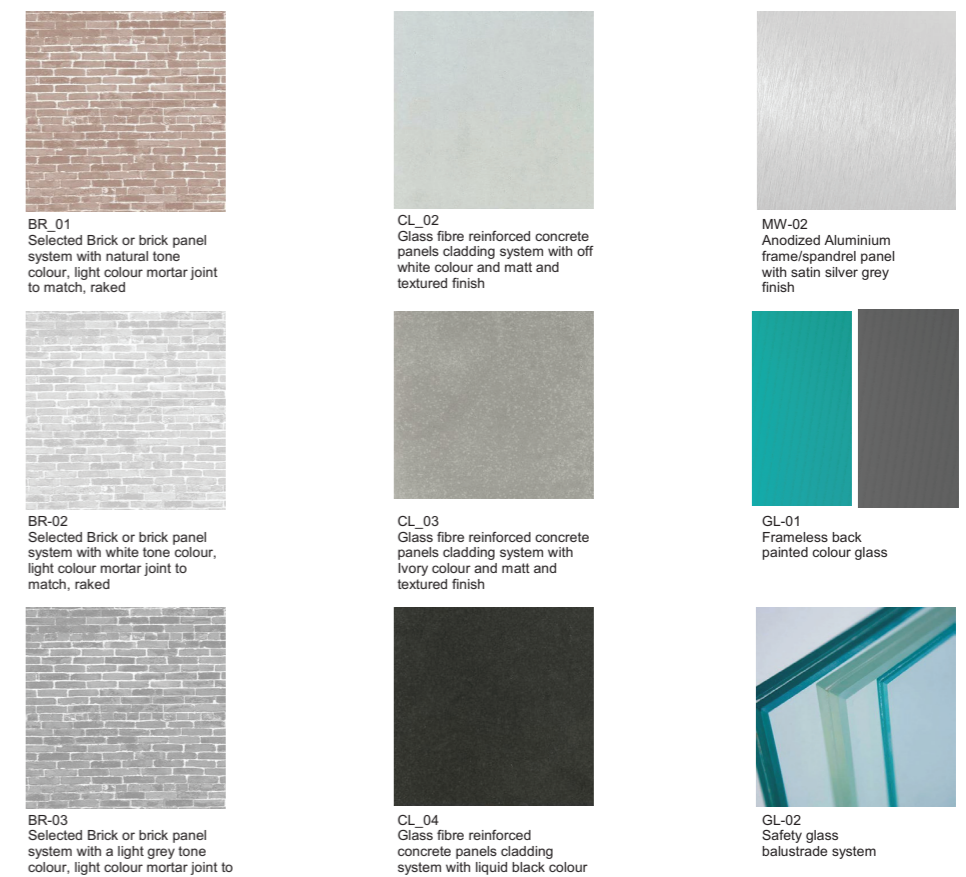
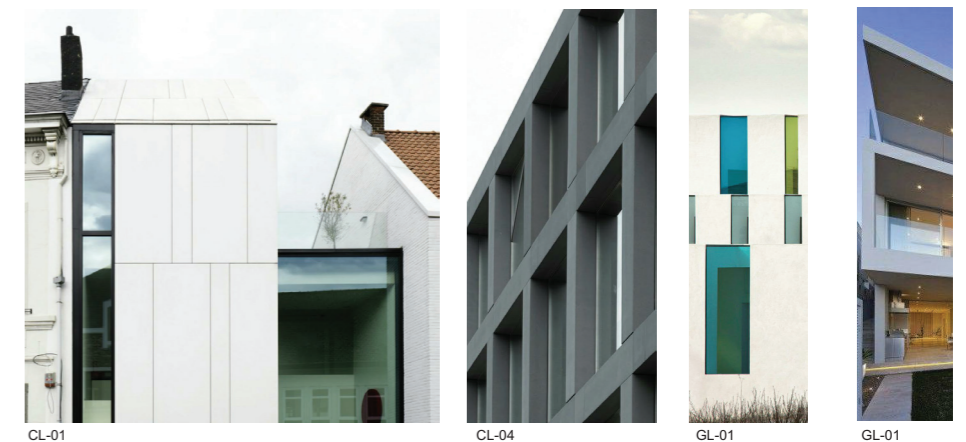
The material palette proposed for block A comprises a pale-red brick as the principal material along its southern elevation, with the internal courtyard (East/West) and part of the elevation facing the Boulevard (North) in a light coloured brick in order to maximise the availability of natural daylight.

As the main structure facing Carmanhall Road (with the objective for a future park), the red brick was considered an appropriate response as a material traditionally associated with residential buildings.

The ground floor hosting the resident amenities feature a toggle-glazed curtain wall system with elements of dark grey back-painted glass to its entrance.

The residential units along the pedestrian link road are clad in a GRC dark grey rainscreen cladding system.

Fig. 35 3D visualisation of proposed Block A with material key and image references



4.1 BUILDING MATERIALS - BLOCK B



VIEW 01



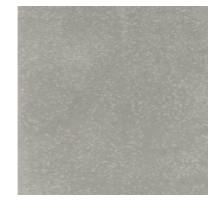
VIEW 02



VIEW 03



BR-02
Selected Brick or brick panel system with white tone colour, light colour mortar joint to match, raked



CL_03
Glass fibre reinforced concrete panels cladding system with Ivory colour and matt and textured finish



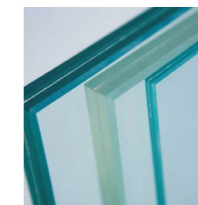
MW-02
Anodized Aluminium frame/spandrel panel with satin silver grey finish



GL-01
Frameless back painted colour glass



CL_04
Glass fibre reinforced concrete panels cladding system with liquid black colour and matt and textured finish



GL-02
Safety glass balustrade system

BLOCK B

Located along the Boulevard as a continuation of the existing Rockbrook Phase 1 development, Block B was conceived in a light coloured brick in response to its location in the centre of the proposed scheme.

The light coloured walls assist in reflecting natural daylight and sunlight to the surrounding open spaces.

The ground floor comprises of a dark grey coloured GRC rainscreen cladding.

Fig. 36 3D visualisation of proposed Block B with material key and image references

4.1 BUILDING MATERIALS - BLOCK C-D



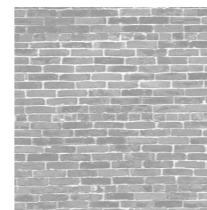
VIEW 01



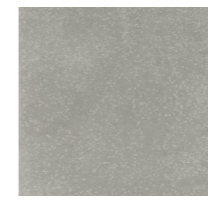
VIEW 02



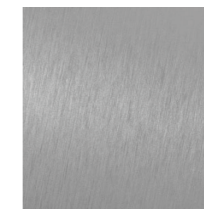
VIEW 03



BR-03
Selected Brick or brick panel system with a light grey tone colour, light colour mortar joint to match, raked



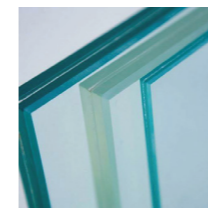
CL-03
Glass fibre reinforced concrete panels cladding system with ivory colour and matt and textured finish



MW-02
Anodized Aluminium frame/spandrel panel with spanish satin silver clear finish



GL-01
Frameless back painted colour glass



GL-02
Safety glass balustrade system



MW-03
Anodized Aluminium frame/spandrel panel with satin charcoal grey finish

BLOCK C-D

While the mass of block C is conceived as a continuation of the existing Rockbrook phase 1 development, the part 17 storey Block D provides a clear break in the streetscape, announcing the presence of the Sandyford Central development with main entrance to the resident amenity suite at its base.

A dark brick is proposed for block C as a transition between the Rockbrook phase 1 development and the proposed Block D.

Block D in the other hand is proposed to be treated in a lighter shade of brick with selected indentations clad in a darker shade of GRC rainscreen cladding to emphasise its verticality.

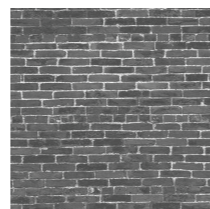
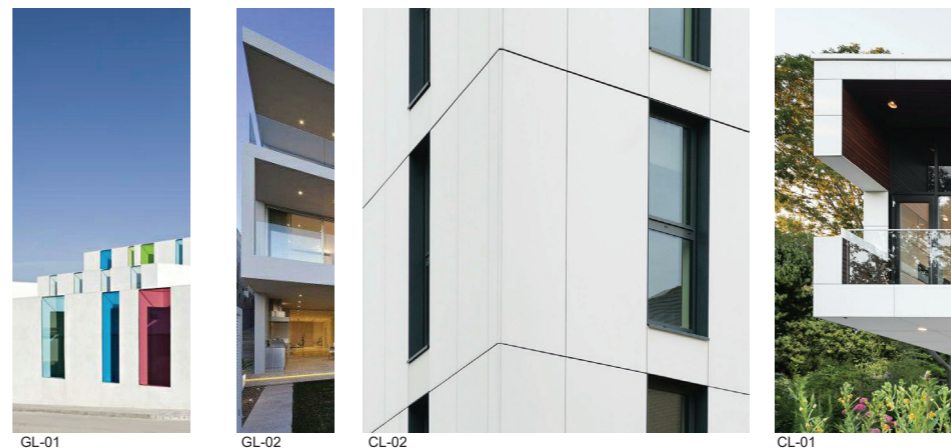
The South elevation facing the pedestrian thoroughfare will feature a metallic cladding system with frameless glass, with metallic fins placed in an apparently “random” pattern to emphasise its verticality in contrast with the repetitive horizontal arrangement of the balconies.

The ground floor level hosting the café and the resident amenities are proposed to be floor to ceiling glazing in a curtain wall system with deep mullions in anodised aluminium.

The proposed rooftop multi-function room will be provided with a floor to ceiling curtain wall system and deep metallic feature fins in a glossy dark grey finish. The external soffit cladding will be designed to provide a sharp edge detail.

Fig. 37 3D visualisation of proposed Blocks C-D with material key and image references

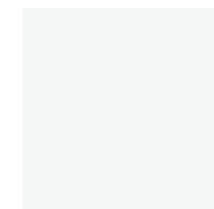
4.1 BUILDING MATERIALS - BLOCK E & F



BR-04 Selected Brick or brick panel system with dark grey tone colour, light colour mortar joint to match, raked



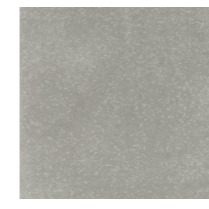
CL_01 Glass fibre reinforced concrete panels cladding system with polar white colour and matt and textured finish



MW-01 Anodized Aluminium frame / spandrel / fins panel with powder coated RAL 9003



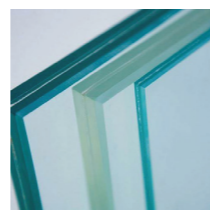
GL-01 Frameless back painted colour glass



CL_03 Glass fibre reinforced concrete panels cladding system with Ivory colour and matt and textured finish



MW-02 Anodized Aluminium frame / spandrel / fins panel with spanish satin silver clear finish



GL-02 Safety glass balustrade system



CL_04 Glass fibre reinforced concrete panels cladding system whit liquid black colour



CL_02 Glass fibre reinforced concrete panels cladding system with off white colour

BLOCK E-F

The overall mass and proportions of Block F suggest that the facade treatment for block E and F should avoid a repetitive horizontal composition and be expressed as a solid wall framing the distinctive gables, as further elaborated in the Architectural Design Statement.

Brick in a dark grey colour is proposed for the East and West walls, with recessed indentations clad in a light grey coloured GRC rainscreen.

The proposed gable ends of block E and F provide an opportunity to present the main public spaces with a “special” facade that contrasts with the brick walls and are treated with a high gloss, off-white rainscreen cladding system.

At ground floor level along the Boulevard (levels 1 and 2), the apartments feature a double height GRC cladding system in a dark grey colour to ‘stitch’ the blocks together.

The private open space for the ground floor residential units is screened by metallic fins in a matching dark grey colour.

Fig. 38 3D visualisation of proposed Blocks E&F with material key and image references

4.1 BUILDING MATERIALS - BLOCK E & F GABLES & BUILDING ENTRANCES

The fascia and soffit of the proposed balconies on the South elevation facing Carmanhall Road will be clad in an off-white cladding system and a feature glazed balustrades and fins provided for privacy where required.

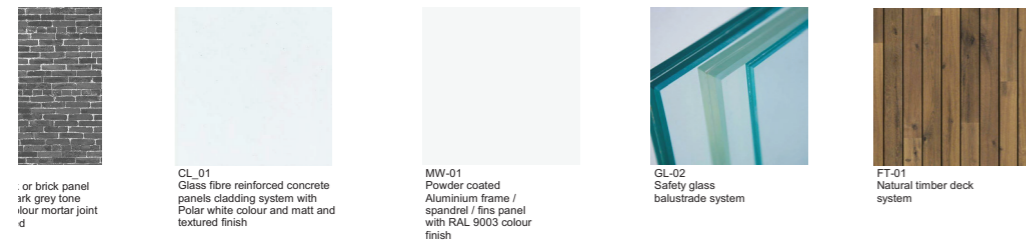


Fig. 39 3D visualisation of block F balconies with material key

The residential block entrance spaces are generally double height spaces with floor to ceiling curtain wall glazing in an anodised aluminium finish.

The walls and soffit framing the entrances are clad in back-painted glass, introducing colour, feature lighting and signage (“branding”) to assist in the overall wayfinding strategy.



Fig. 40 3D visualisation of block F entrance space with material key and image references

4.2 BUILDING MATERIALS - LANDSCAPING



Figure 57: Material reference plan

1 Residential courtyards:

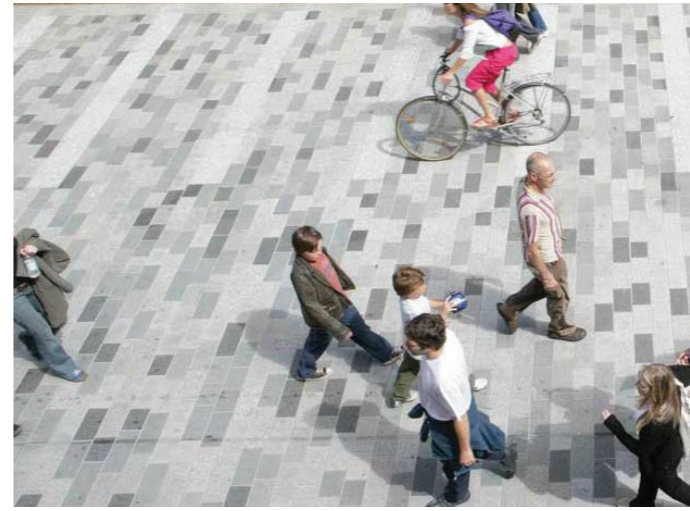


Figure 62: Imported grey granite in 3 different shades



Figure 63: Raised concrete edge for deeper planting

3 Metal works for Screening/Planting edges



Figure 58: Cor-ten steel laser cut panels for screening or railing



Figure 60: Cor-ten steel planter edge

2 Boulevard:

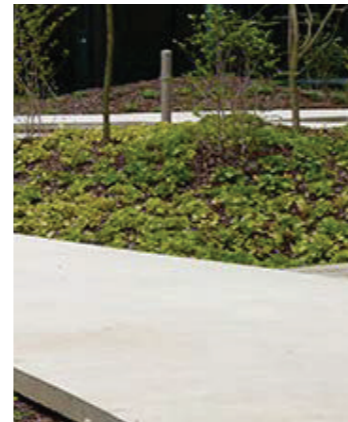


Figure 64: Smooth concrete light mix



Figure 65: Exposed aggregate concrete mixes

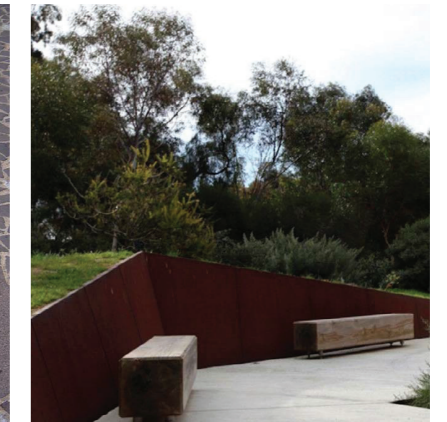


Figure 66: Raised metal edges for deep planting

4 Main entrances steps

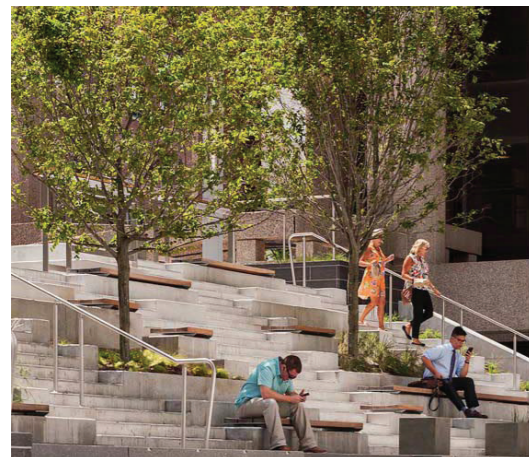


Figure 59: Steps as seating and tree planting

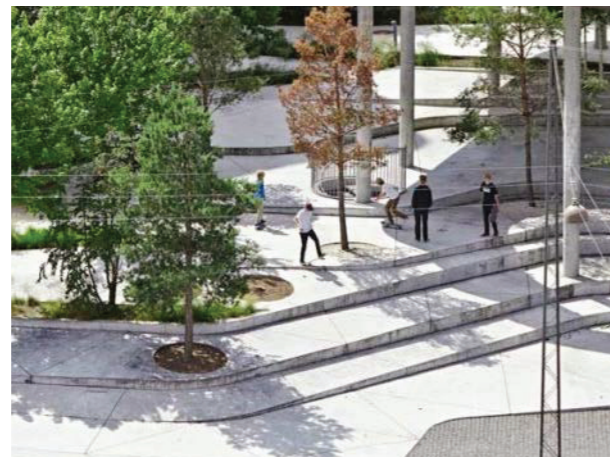


Figure 61: Big organic shaped steps and tree planting

5 Public realm



Figure 67: Composition of lighting, trees and seating



Figure 68: Dublin, mature Gleditsia trees and paving as per DCC standards. BSLA project

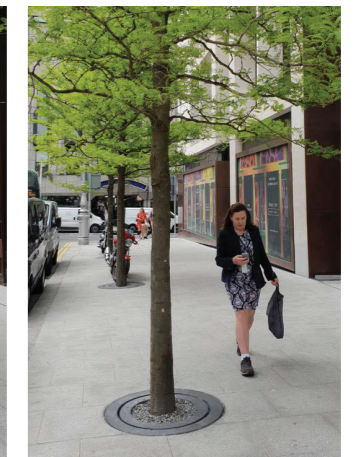


Fig. 41 Landscape materials: source Bernard Seymour Landscape Architects

Bernard Seymour Landscape Architects

Planting/Materials:
Hard Landscape

Division treatment to private terraces & soil mounding strategy for deep planting



Figure 69: Roughen treatment to reduce accessibility



Figure 70: Soil mounding and rocks to screen private terraces in salvaged paving and exposed aggregate concrete



Figure 71: Precast concrete elements for soil mounding & seating

Paving



Figure 72: Paving transition public to private



Figure 73: Long span bespoke concrete paving with light colour pigments



Figure 74: Composition of paving and low scrub type planting to create routes

Fig. 42 Landscape materials: source Bernard Seymour Landscape Architects

Bernard Seymour **Landscape Architects**

Planting/Materials:
Soft landscape



Figure 75: Boulevard flowering trees in a simplistic setting



Figure 76: Naturalistic private courtyards



Figure 77: Strips of semi aquatic planting

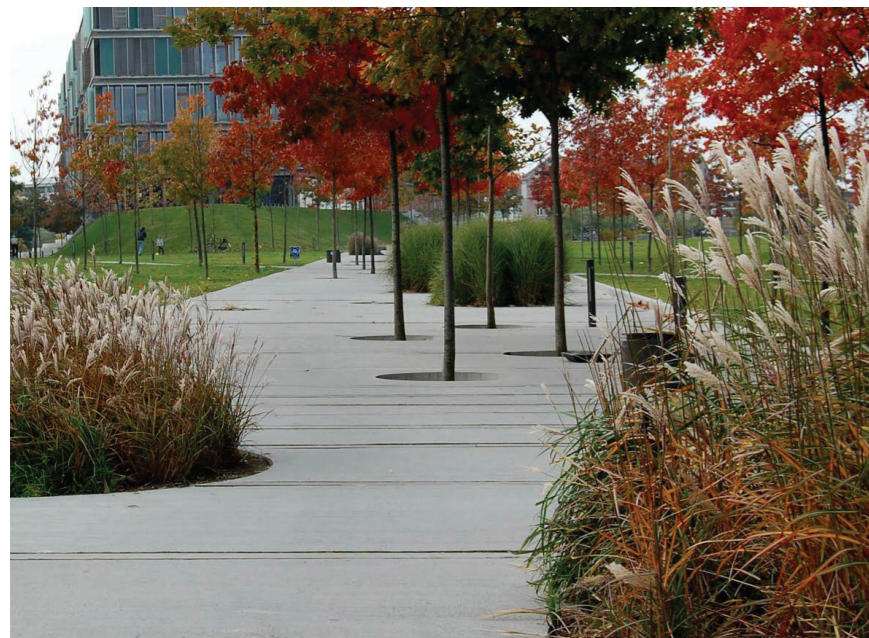


Figure 78: Composition of smooth ornamental grasses and autumn colour trees



Figure 79: Mix of multistem and single stem trees and herbaceous perennials



Figure 80: Naturalistic planting in raised concrete planters

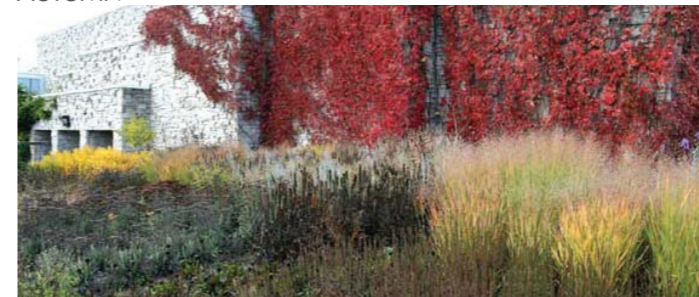
SPRING



SUMMER



AUTUMN



WINTER

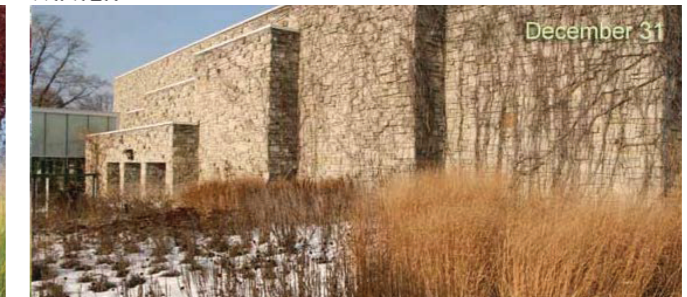


Figure 81: Planting Palette: proposed mix of native and non native drought tolerant and nectar rich plants through the seasons for visual interest and biodiversity

Fig. 43 Landscape materials: source Bernard Seymour Landscape Architects

Bernard Seymour Landscape Architects

4.3 BOUNDARY TREATMENT

Bernard Seymour Landscape Architects

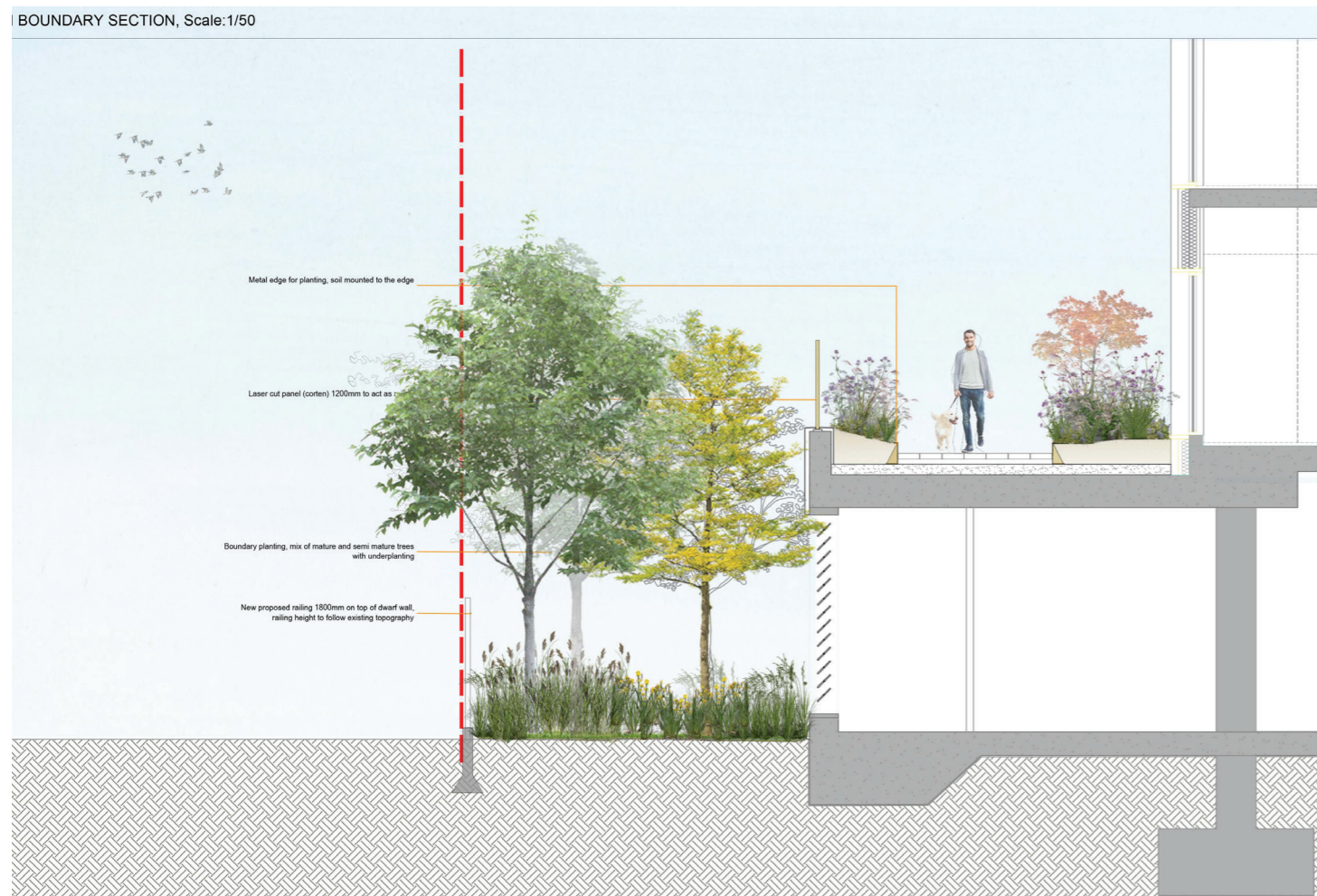


Fig. 44 Proposed boundary treatment: Eastern boundary. Source Bernard Seymour Landscape Architects



Fig. 45 Proposed boundary treatment: Western boundary. Source Bernard Seymour Landscape Architects

5.0 SITE LAYOUT

A scaled site layout plan drawing showing existing and permitted residential blocks showing separation distances between blocks and between opposing windows and balconies is provided as part of this application.

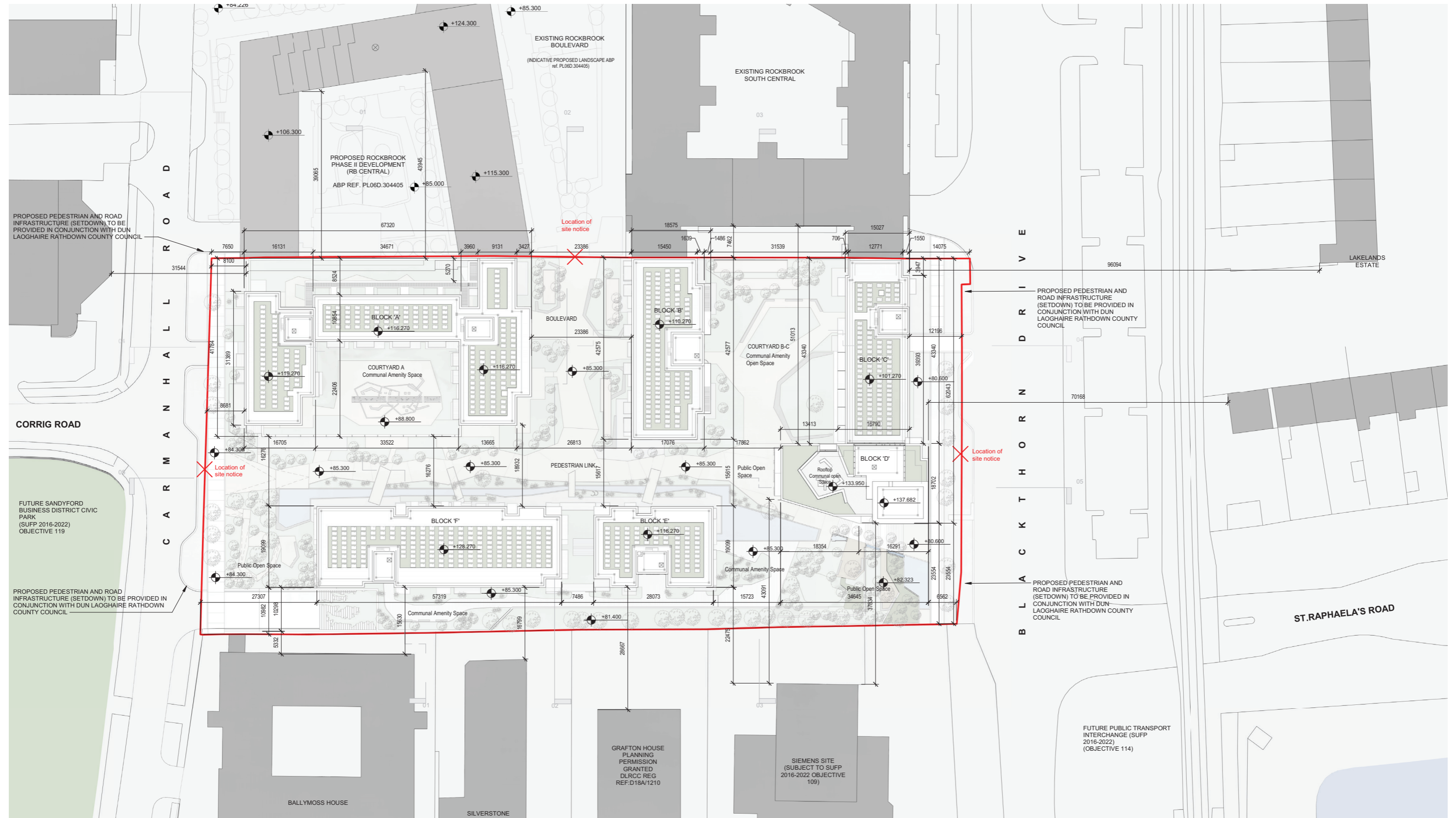


Fig. 46 Extract from proposed site plan

6.0 OPEN SPACE

A scaled plan and schedule of proposed open spaces within the site clearly delineating public, semi-private and private spaces is provided as part of this application

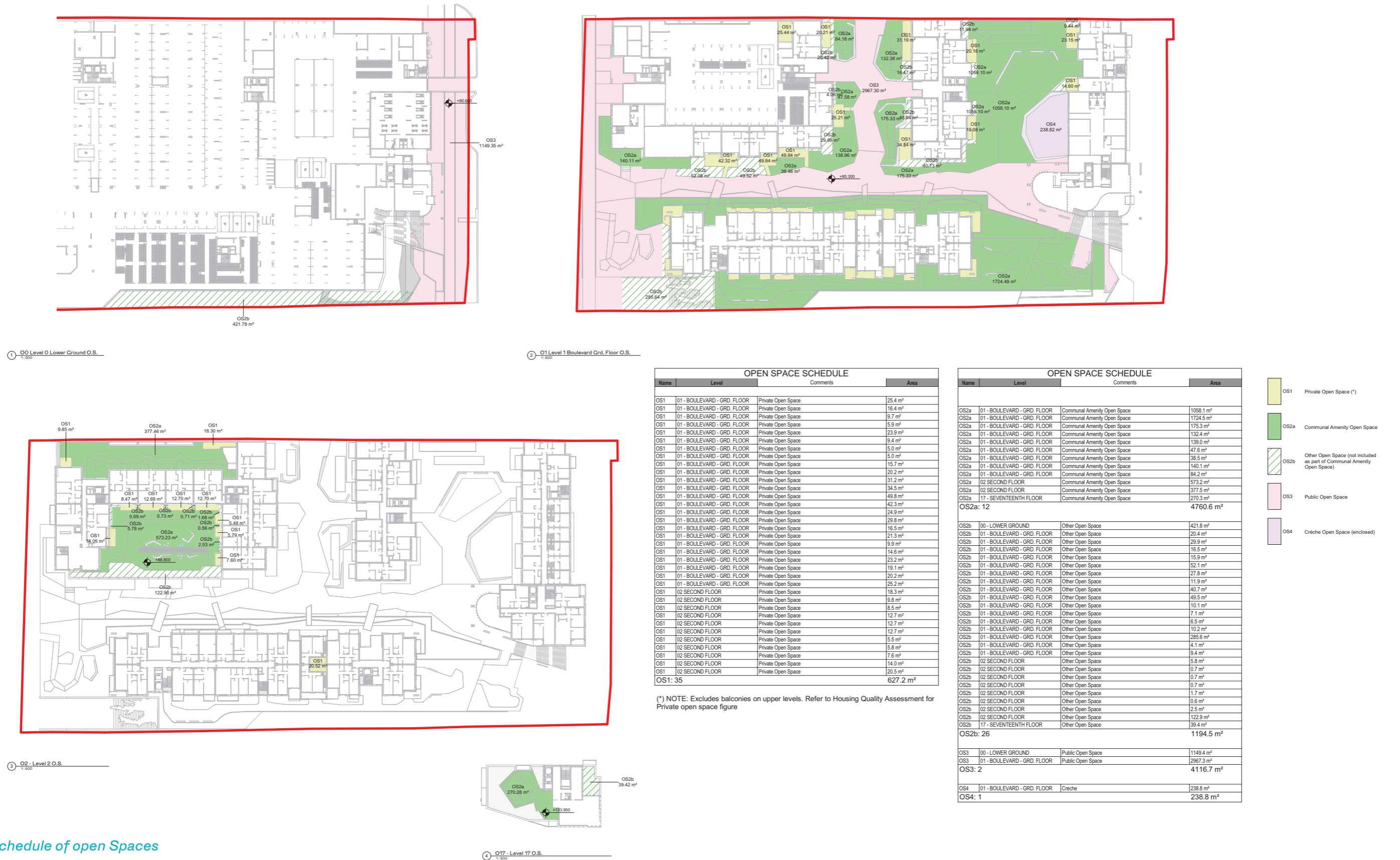


Fig. 47 Schedule of open Spaces

7.0 DETAILED PHASING PLAN

A detailed phasing plan for the proposed development is provided as part of this application

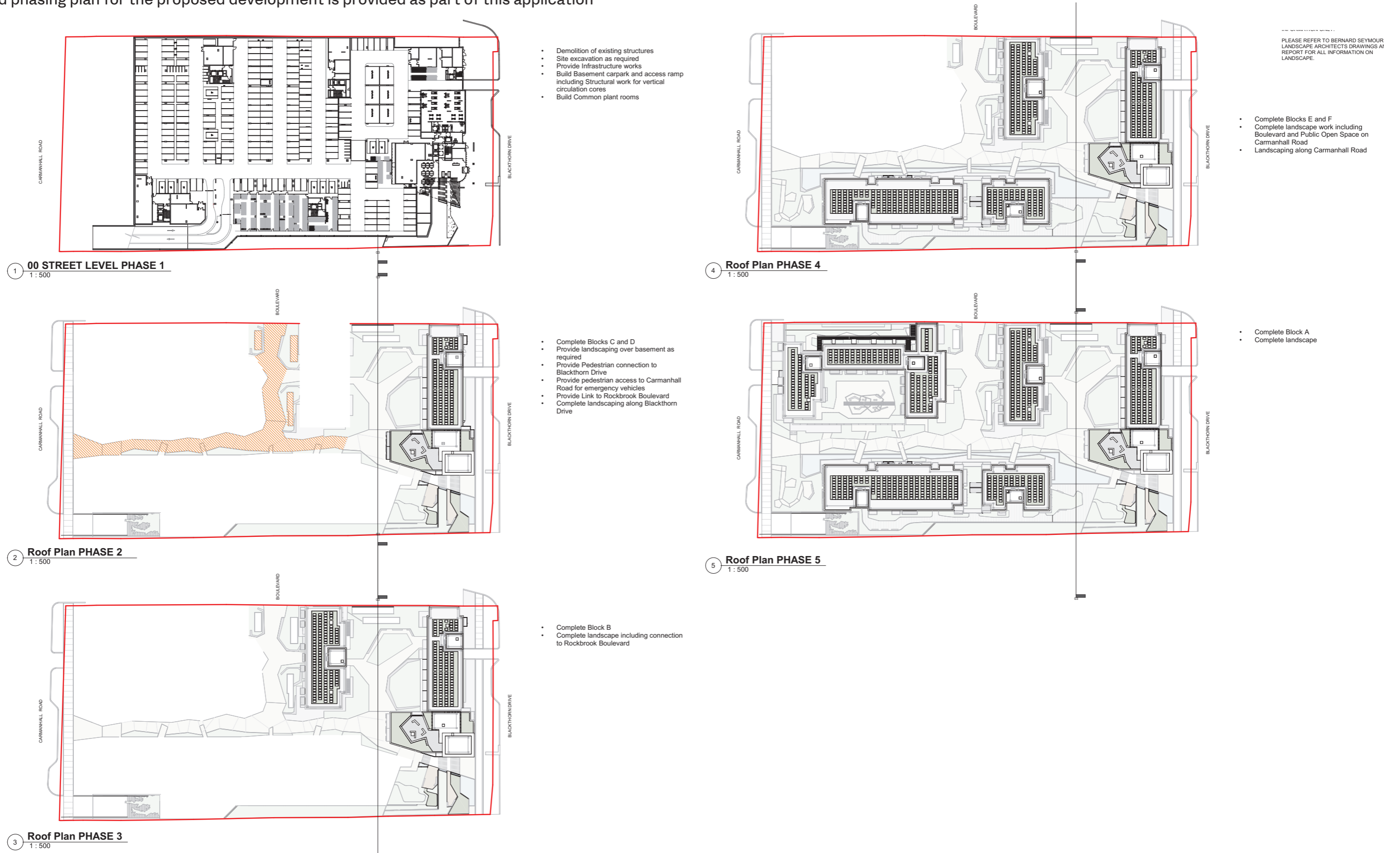


Fig. 47 Proposed phasing plan