

CHARACTER AREA 1



SECTION W-W

CHARACTER AREA 1

CHARACTER AREA 5

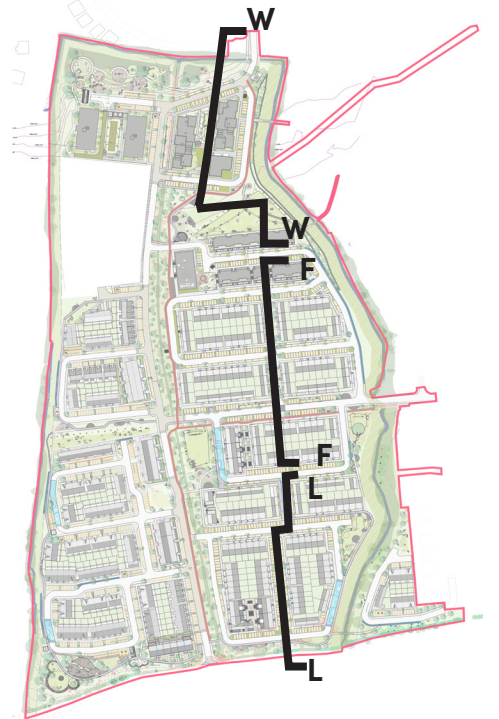


SECTION F-F

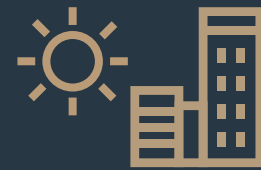
CHARACTER AREA 5



SECTION L-L



4. SUNLIGHT, DAYLIGHT & OVERSHADOWING



ARCHITECTURAL AND URBAN DESIGN STATEMENT
BOHERBOY LRD

DAVEY + SMITH
ARCHITECTS

M[•]CORM
ARCHITECTURE
AND URBAN DESIGN

4.1 SUNLIGHT, DAYLIGHT & OVERSHADOWING ASSESMENT

For detailed assessment of Sunlight, Daylight & Overshadowing Assessment, we refer to the report prepared by Digital Dimensions which accompanies this application.

4.1.1 Impact on neighbouring buildings

As part of the report a preliminary assessment of neighbouring dwellings was carried out. Only one area on the site identified a potential impact on any existing dwellings. These being 18-28 Corbally Glade. As a result of this, and in compliance with BRE Guidelines BR209:2022 9th edition), a detailed assessment of these buildings was carried out. As a result of this assessment, it was shown that all but one window retain a Vertical Sky Component (VSC) in excess of 27% or are not reduced below 80% of the existing VSC value. Similarly in relation to the sunlight, it was shown that the majority of windows assessed exceed the target values set out for annual and winter probable sunlight hours. Only two number windows could be seen to have a minor impact and in both of these dwellings other windows achieved the target values for sunlight. Similarly, an assessment of the amenity spaces to these buildings showed that all of the private amenity spaces to the properties were assessed for sunlight in accordance with the recommendations set out in BR209:2022.

As a result of this assessment, it can be shown that the proposed development meets the recommendations for sunlight and daylight of the BRE Guidelines BR209:2022 (third edition).

4.1.2 Daylight within the proposed development

All habitable rooms within the units were assessed for daylight provision by illuminance method. The Illuminance method assesses the daylight levels over at least 50% daylight hours in the year and uses a weather file data set. These methods take into account the orientation of the space. They provide an accurate representation of the daylight provision to a specific room in the context of the proposed environment.

To demonstrate compliance, the proposed development was assessed in accordance with both BS EN 17037:2018+A1:2021 section NA1 for daylight provision (as recommended by BR209:2022 and against IS/BS EN 17037:2018).

As outlined in the Digital Dimensions Report, the results indicate a high level of daylight provision, with 98% of habitable rooms in the apartment and duplex units achieving Minimum Illuminance and 92.8% achieving Target illuminance. As a result, the rooms will be bright and pleasant spaces.



Figure 4-2. Radiation map of amenity within the proposed development, showing available sunlight on 21st March. The scale represents the sunlight received from 0-8 hours

4.1.3 Sunlight with proposed development

The report prepared by Digital Dimension details that the scheme is well designed for sunlight, 100% of the houses will achieve the minimum target sunlight hours to a habitable room (1.5hrs on 21st March). In the apartment and duplex units, 96.7% have a habitable room which achieves the minimum recommended 1.5 hours of direct sunlight. This is in line with the BRE Guidelines where 4 in 5 achieve the target sunlight hours.

4.1.4 Sunlight to amenity within the proposed development

The BRE Guidelines BR209:2022 (third edition) indicate that for an amenity area to have good quality sunlight throughout the year, 50% of the ground, should receive in excess of 2 hours sunlight on the 21st of March. As a result of the analysis carried out by Digital Dimensions, it is shown that all of the proposed amenity spaces are well oriented for sunlight. All achieve 2 hours of sunlight on the 21st of March over in excess of 50% of the Area. The proposed development meets he recommendations for sunlight in the BRE Guidelines BR209:2022 (third editon).

Sunlight Hours Summary Table								
Apartment & Duplex Units	Total Units	Habitable room with a window within 90° south		Below recommendation <1.5 hours	Minimum >1.5 hours	Medium >3 Hours	High >4 Hours	Number meets criteria
		No.	Ratio					
Habitable Rm	305	233	76.4%	10	54	40	201	295
								96.7%

Figure 4-4. Sunlight hours Summary

Daylight provision Illuminance Method IS EN 17037:2018						
Apartment and Duplex Units		Below Target	Minimum	Medium	High	Percentage of rooms achieving Target
Overall total	Target Illuminance	7.2%	34.9%	31.7%	26.1%	92.8%
	Minimum Illuminance	2.0%	35.3%	36.3%	26.3%	98.0%

Figure 4-5. Daylight provision illuminance method IS EN 17037:2018

Sunlight on the Ground - Public & Communal Amenity			
ID No.	Details	% Area receiving 2 hours sunlight on 21st March	Meets criteria if >50% area receiving 2 hours sunlight on 21st March
S1	POS	100.0%	Y
S2	POS	100.0%	Y
S3	COS	99.7%	Y
S4	COS	89.4%	Y
S5	POS	99.1%	Y
S6	POS	71.9%	Y
S7	COS	100.0%	Y
S8	POS	100.0%	Y
S9	COS	99.0%	Y
S10	POS	100.0%	Y
S11	POS	100.0%	Y
S12	POS	100.0%	Y
S13	POS	100.0%	Y
S14	POS	100.0%	Y
S15	POS	100.0%	Y
S16	POS	100.0%	Y
S17	COS	80.1%	Y
S18	POS	100.0%	Y
S19	COS	73.1%	Y
S20	POS	100.0%	Y

Figure 4-6. Sunlight on the ground - Public & communal amenity



Figure 4-3. Shadow diagrams 21 March 13:00 UTC

5. OTHER DESIGN PARTICULARS

ARCHITECTURAL AND URBAN DESIGN STATEMENT
BOHERBOY LRD

DAVEY + SMITH
ARCHITECTS

M[•]CORM
ARCHITECTURE
AND URBAN DESIGN

5.1 SCHEDULE OF ACCOMODATION

HOUSES	
House Type	No. of Units
2 bed	30
3 bed	241
4 bed	28
4 bed / 5 bed	7
Total No. Units	306
Total Floor Area (m ²)	34,943.00

DUPLEX	
Unit Mix	Total No.
1 Bed / 2 Person	11
2 Bed / 4 Person	46
3 Bed / 5 Person	76
Total No. Units	133
Total Floor Area (m ²)	13,354.00

APARTMENTS	
Unit Mix	Total No.
1 Bed / 2 Person	47
2 Bed / 4 Person	123
3 Bed / 5 Person	2
Total No. Units	172
Total Floor Area (m ²)	12,436.00

Unit Type	1 bed	2 bed	3 bed	4 bed	Total No.	% Mix
Houses	0	30	241	35	306	50%
Duplexes	11	46	76	0	133	22%
Apartments	47	123	2	0	172	28%
Total No.	58	199	319	35	611	100%
% Mix	9%	32%	54%	5%	100%	

Unit Type	EVARA	KELLAND	TOTAL
Houses	129	177	306
Duplexes	60	73	133
Apartments	80	92	172
Total No.	269	342	611
20% Part V	52	71	123

Unit Type	Total Unit No.	Total Residential Floor Area (m ²)
Houses	306	34,943.00
Duplex	133	13,354.00
Apartments	172	12,436.00
Total	611	60,733.00

Figure 5-1. Overall Summary of Accommodation.

5.2 DETAIL OF BIN STORE & SUBSTATION

An Operational Waste Management Plan was prepared by Synergy Environmental Limited and the bin storage has been designed to accomodate same. All houses will have individual waste storage within their curtilage with duplexes and apartments availing of communal bin stores as indicated on the site plan. Below illustrates requirement for apartment block A & B. Drawings below show examples of same.

		Waste Types to be Generated								Total Storage Volume Required per WSA
		Glass		Organic (food) Waste		Dry Mixed Recyclables (DMR)		Mixed Municipal Waste (MMW)		
WSA ID	Total No. of Units	Bin Capacity (l)	No. bins required	Bin Capacity (l)	No. bins required	Bin Capacity (l)	No. bins required	Bin Capacity (l)	No. bins required	
Block A	40	140	2	140	4	1100	3	1100	2	6340
Block B	40	140	2	140	4	1100	3	1100	2	6340



Figure 5-4. Key plan of bin store & substation for the apartment blocks.

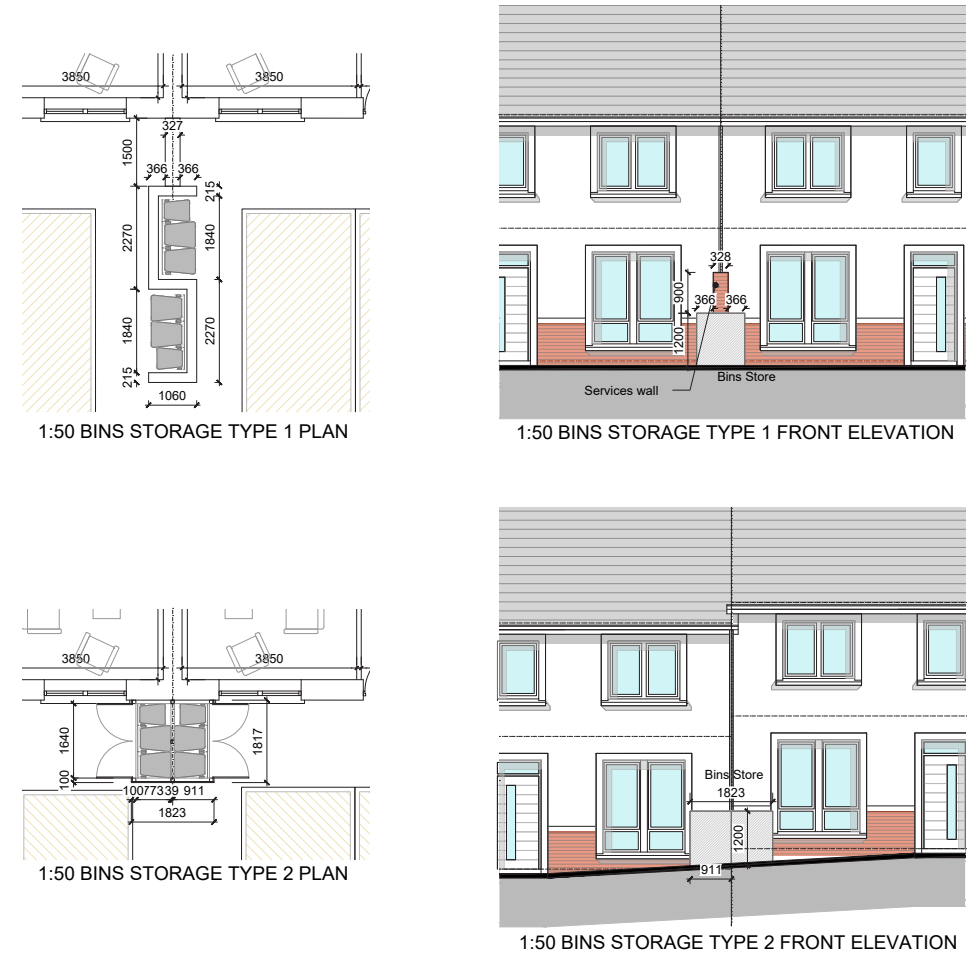


Figure 5-2. Example of bin store for the houses.

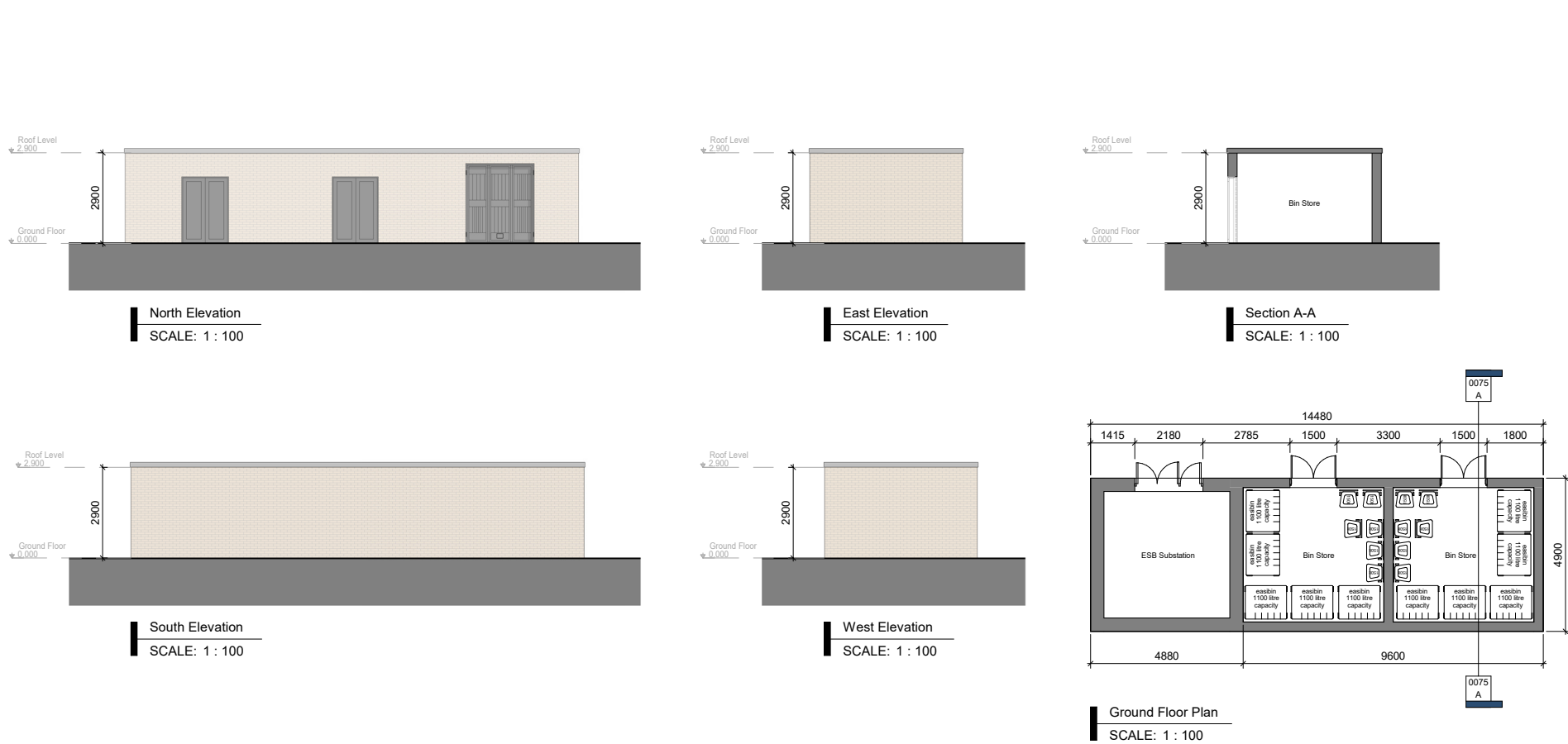


Figure 5-3. Example of bin store & substation for the apartment blocks.

5.3 DETAIL OF BIKE STORE

- Apartment blocks A & B:
126 long term & 40 short term spaces
- Duplexes:
Block A – 26 long term & 13 short term spaces
Block B1 – 30 long term & 6 short term spaces
Block B2 – 30 long term & 6 short term spaces
Block B3 – 30 long term & 6 short term spaces
Block D – 24 long term & 2 short term spaces

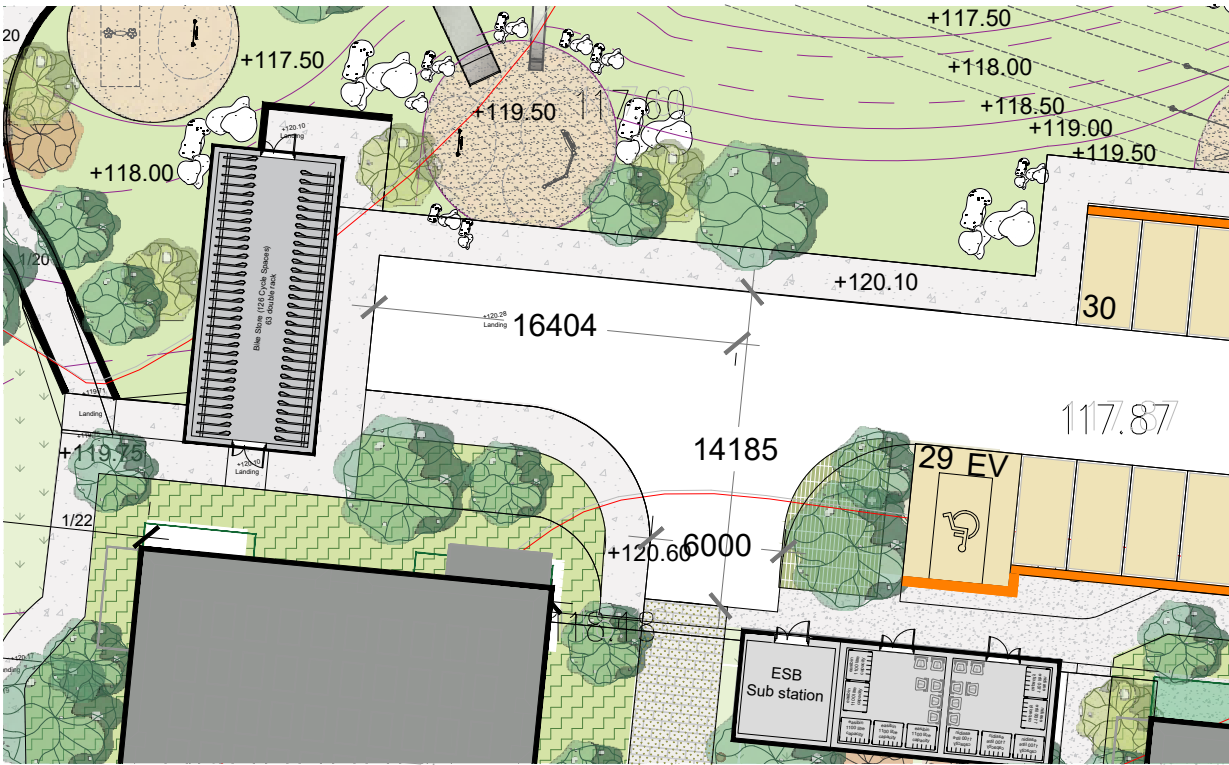


Figure 5-6. Key plan of bike store for the apartment blocks.

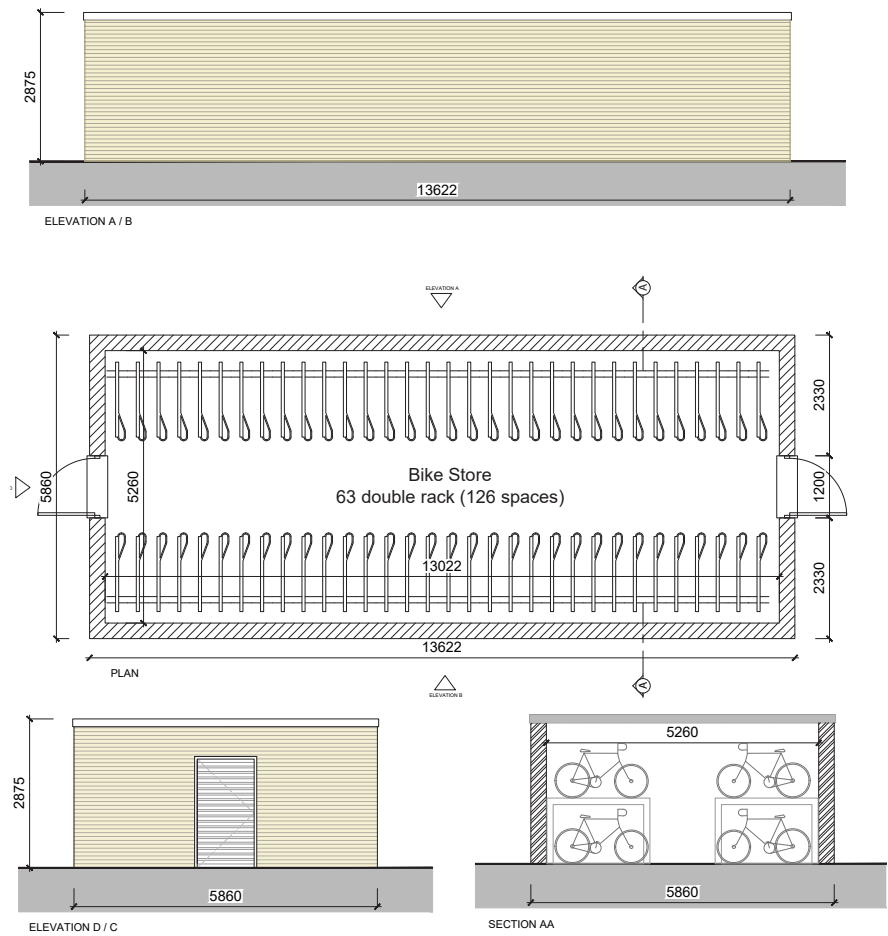


Figure 5-5. Example of bike store for the apartment blocks.

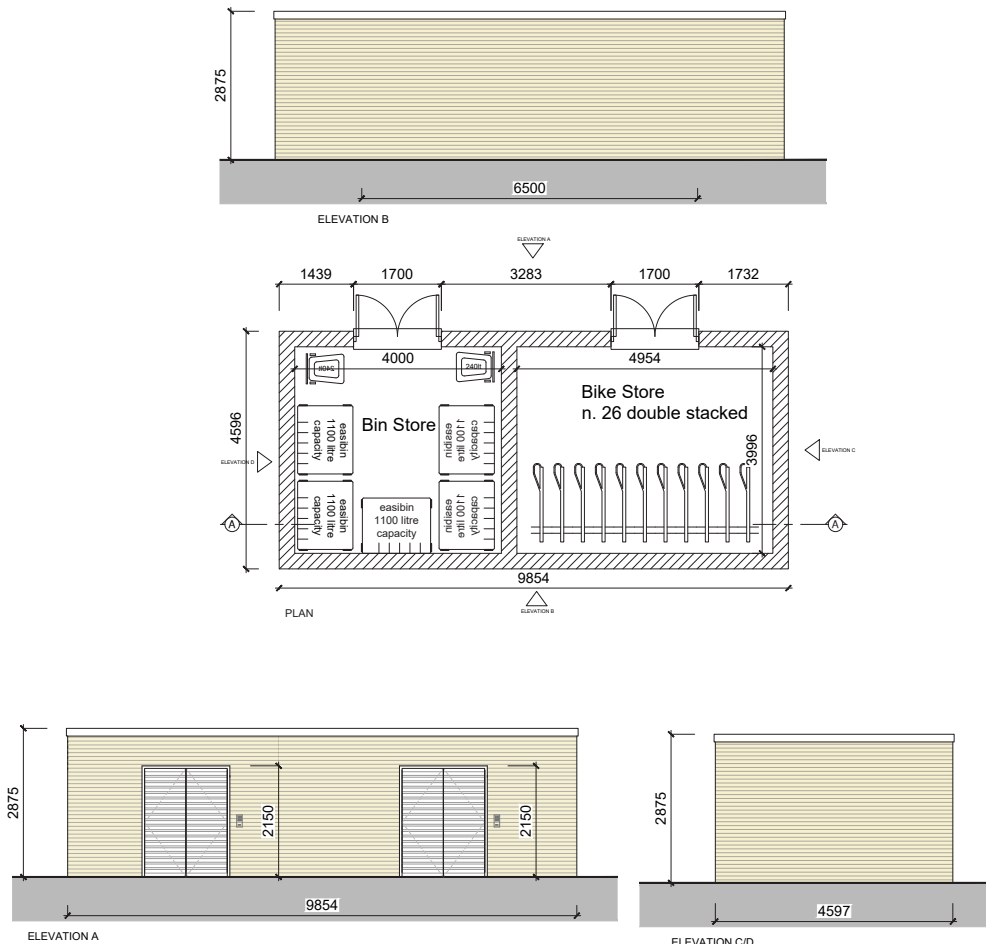


Figure 4-7. Example of bin and bike store for the apartment blocks

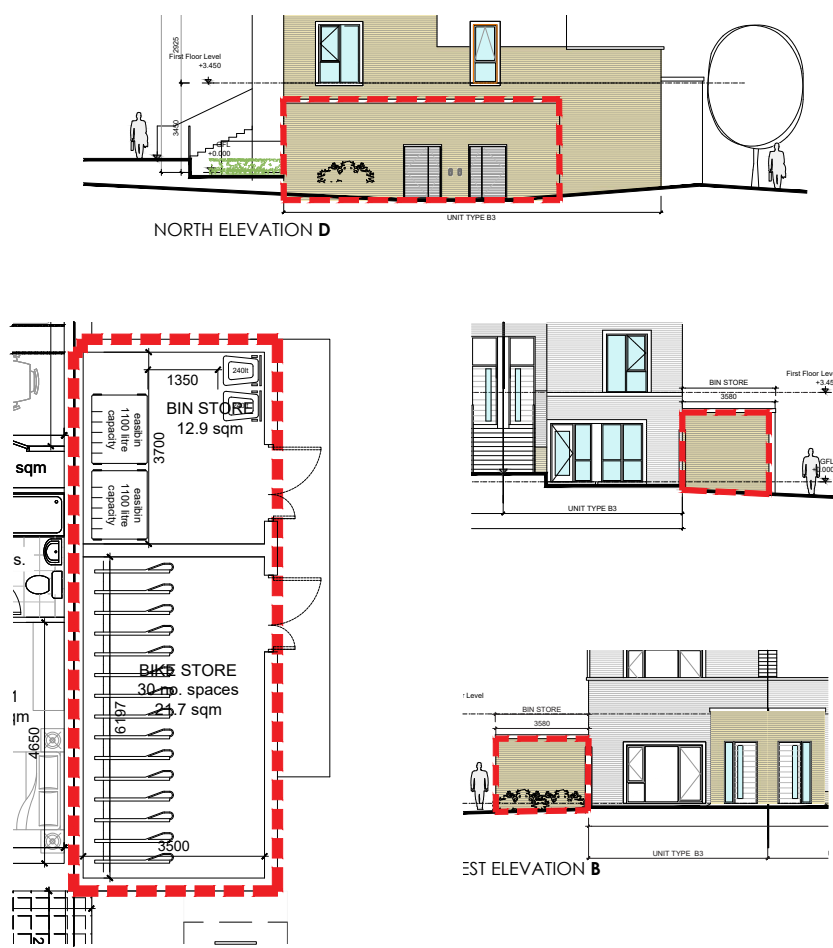


Figure 4-8. Example of bin and bike store for the duplexes