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Project

Clongriffin Wider Lands – Phase 2

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BICYCLE DESIGN REPORT

CLONGRIFFIN WIDER LANDS – PHASE 2

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1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by the Land Development Agency (LDA) to prepare a Bicycle Design Report (BDR) for the masterplan-led development of LDA lands at Clongriffin, Dublin 13.

In preparing this report, CS Consulting has made reference to the following:

- Dublin City Development Plan 2022–2028
  (including Strategic Flood Risk Assessment)
- Cycle Design Manual 2023
- Design Manual for Urban Roads and Streets 2019

The BDR has been developed with input from the project architect (Henry J Lyons), the landscape architect (The Paul Hogarth Company) and the Mechanical & Electrical Engineer (EDC). The BDR is to be read in conjunction with the engineering drawings and documents submitted by CS Consulting and with all other relevant documentation submitted by other members of the project design team.

2.0 SITE LOCATION

The overall site comprises zoned development lands in Dublin 13. It is an undeveloped site of 3.47ha at Main St, Clongriffin, Dublin 13. The site is bound by Main St to the south, Friar St to the west, Park St and the under-construction Blocks 5 & 6 and Market St to the north and Station Square and Clongriffin Road to the east. The subject site is in the administrative jurisdiction of Dublin City Council (DCC), adjacent to the City Council's boundary with Fingal County Council.



Figure 1 – Location of subject lands
(sources: EPA, OSi, OSM Contributors, Google)

The location of the subject lands is shown in **Figure 1**; their extents and environs are shown in more detail in **Figure 2**.



Figure 2 – Subject lands extents and environs
(sources: NTA, GoCar, Toyota, OSi, OSM Contributors, Microsoft)

2.1 Proposed Development

The development will consist of the construction of a residential development set out in 3 no. blocks (identified as Zone 7, 8 & 9), ranging in height from 5 to 10 storeys, to accommodate 711 no. apartments including café/restaurant/retail units, community/cultural spaces, a standalone creche building and the completion of Market St.

The 3 no. residential buildings are arranged around podium courtyards accommodating communal amenity spaces for future residents. Zone 7 is a 5 to 7 storey block onto Main St, Friar's St, Park St and Market St containing 280 apartments. Zone 8 is a 6 to 8 storey block between Main St and Market Street containing 263 apartments. Zone 9 is a 6 to 10 storey block located on Main St, Station Square and Market Street containing 168 units.

Car and cycle parking for both residents and visitors is provided below podium and at surface level throughout the scheme. The proposed development includes all site landscaping works, open space, green roofs, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.

The proposed development sits as part of a Masterplan for a wider Clongriffin landbank which includes the under-construction Block 5 & 6 to the north of Market Street.

For a more detailed description please refer to the Statutory Notices.

2.2 Existing Cycle Environment

The existing cycle network within the vicinity includes limited cycle lanes on secondary streets and a shared pedestrian/cycle path on Market Street/within Belltree Park. Off-road cycle paths are present on Main Street along the frontage of Father Collins Park to the west of the proposed development. On-road cycle lanes are in place on Marrsfield Avenue only, terminating where this becomes Lake Street. There are no existing cycle facilities along Main Street along the southern boundary of the proposed development site.



Figure 3 - Existing and proposed cycle links
(source: Henry J Lyons)

3.0 MULTIDISCIPLINARY DESIGN TEAM

The responsibilities of each member of the design team as they relate to cycle facilities is outlined in section 3.1 to 3.4 below.

3.1 Architect

The responsibilities of the Architect include;

- Provision of high-quality cycle storage within building layouts.
- Compliance with apartment design guidelines regarding cycle storage provision.

3.2 Transportation Engineering

The responsibilities of the Transportation Engineer include;

- Design of cycle routes, widths, surface types and junction arrangements.
- Road safety audits and compliance with Cycle Design Manual standards.
- Integration of cycle facilities into wider transportation network.
- Coordination with bus and pedestrian infrastructure to minimise conflicts.

3.3 Landscape Architect

The responsibilities of the Landscape Architect include;

- Design of landscaped cycle streets (Market Street) with integrated planting, paving, and lighting.
- Ensuring clear visual separation between cycle and pedestrian flows where appropriate.
- Aesthetic integration of external cycle storage facilities into the built environment.

3.4 M&E Engineer

The responsibilities of the M&E Engineer include;

- Provision of power and charging infrastructure for e-bikes.
- Design of street lighting for cycle routes.

4.0 DUBLIN CITY COUNCIL LRD OPINION

4.1 ITEM 4(3a) OF THE LRD OPINION

The Bicycle Design Report has been prepared in response to LRD Opinion item 4(3a) which states;

The applicant is requested to prepare a Bicycle Design Statement (BDS). The BDS should outline all details on how all bicycles, including the universal design bike can safely and with ease access the proposed bicycle parking from the public road. The BDS should also address the following specific requirements:

i. Information on the expected number of staff of both the retail and CCA shall be provided in support of the quantity of staff cycle parking. Further detail regarding arrangements for retail and CCA staff and visitor access to dedicated cycle parking facilities should be provided.

ii. Separate secure access to staff cycle parking shall be provided.

iii. 5% of visitor cycle parking shall be designed to accommodate larger non-standard cycle parking equipment, in accordance with Section 6.5 of the Cycle Design Manual (2023). These non-standard visitor spaces should generally be located in proximity to the proposed community / cultural uses.

iv. Detailed scale drawings of all cycle parking areas should be included as part of the application outlining type and quantum per store/area. It should be ensured that adequate separation distances between racks and internal access corridors for ease of use and functionality and without conflict with landscaping proposals or walls is achieved (refer to the Cycle Design Manual, 2023). Ensure bicycle stores are located at the most convenient areas close to stairs/lifts in the undercroft area. Ensure the access doors to these stores are appropriately located.

v. There is a concern that the proposed cycle connection at the northwest of the site and its tie into the existing road network in terms of overall cycle links and priority at the junction. The applicant is requested to investigate the potential for improvements in the design in this regard.

vi. In terms of the proposed shared cycle path to the north of the site, the tie into the existing Lake Street lacks clarity in terms of the expectation for cyclists when they reach the east side of Lake Street. The applicant is requested to clarify this.

vii. *The applicant is requested to investigate the pinch point along the shared cycle route adjacent to the community culture area. This appears to reduce to c1.4m.*

4.2 RESPONSE TO ITEM 4(3a) OF THE LRD OPINION

i. The anticipated number of staff for both the retail and CCA has been outlined within section 6.4 of this document.

ii. The retail and CCA spaces are spread throughout the proposed development site with no central provision. As such, it is preferable to provide staff bicycle parking in proximity to the final destination. The retail and CCA staff parking shall be specifically allocated within the development bicycle stores. 2no. CCA staff spaces shall be provided in Zone 7, 2no. CCA staff spaces shall be provided within Zone 8, 6no. retail staff spaces shall be provided within Zone 9. This meets the standards required by the DCC Development Plan 2022-2028 which are described in more detail in section 6.4.

iii. 5% of bicycle parking spaces within the internal bicycle stores shall be suitable for use by non-standard cycles (58no. non-standard, 1,133 total internal spaces). In the external areas, 5% of the required quantum shall be suitable for non-standard bicycles. The non-standard spaces shall be spread throughout the development site in proximity to community and cultural uses. Please refer to landscape architect information

iv. Section 6.3 of this document provides detail on the proposed bicycle storage rooms including a typical breakdown of cycle storage types provided. The routes between bicycle stores and building cores/entrances are shown in Figure 8 and Figure 9.

v. The proposed cycle connection at the northwest of the site has been redesigned in order to promote a regularised cycle environment which clearly indicates priority between road users. Please refer to CS Consulting drawing no**. L106-CSC-XX-XX-DR-C-0108** which indicates the proposed bicycle crossing at the junction of Market Street and Lake Street. The proposed junction design aims to tie in with the permitted shared street which is currently under construction. Please refer to CS Consulting drawing no. **L106-CSC-XX-XX-DR-C-0128** for details of existing active travel facilities in the vicinity of the proposed development. However, it is considered that segregation of pedestrians and cyclists at this location and provision of separate crossing facilities is in the interest of the safety of both pedestrians and cyclists at this location. The crossing is an uncontrolled crossing similar to TL601 of the Cycle Design Manual. Cyclists shall give way to motor vehicles at this location. Please refer to Figure 4.

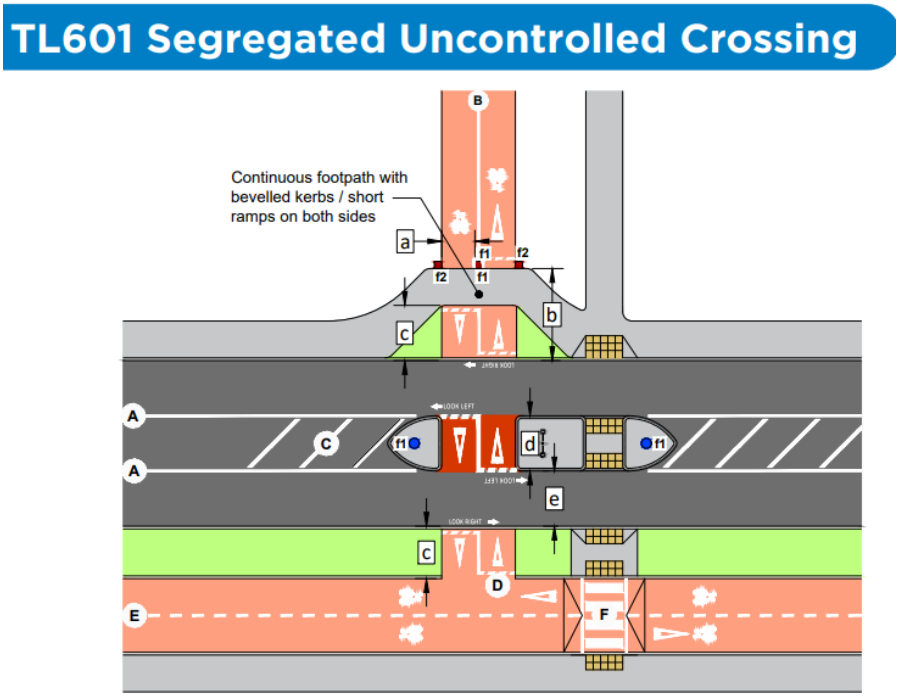


Figure 4 - Extract from TL601 of Cycle Design Manual

vi. The proposed cycle crossing of Lake Street has been redesigned as discussed in response to item v. Cyclists, when reaching the east side of Lake Street westbound are informed that they are approaching a junction where motor vehicles have priority. When travelling eastbound cyclists are informed that they are entering a shared facility with pedestrians.

vii. The apparent pinch point has been removed in proximity to the creche. The shared facility has a width of 4.0m from start to finish. Please refer to **L106-CSC-XX-XX-DR-C-0102** for details.

5.0 PROPOSED CYCLE FACILITIES

Within the subject development significant focus is placed on active mobility, including the integration of high-quality cycle facilities. The proposal aims to:

- Enhance connectivity through dedicated cycle routes.
- Provide sufficient, safe, and accessible cycle parking.
- Encourage modal shift away from private cars.
- Support the overall sustainability credentials of the project.

Cyclists approaching the site from the public road can access bicycle parking from the following routes which tie into existing infrastructure. Please refer to CS Consulting drawing no. **L106-CSC-XX-XX-DR-C-0128_Existing Active Travel Facilities** which describes existing cycle infrastructure with reference to the Cycle Design Manual.

5.1 Market Street

5.1.1 Proposed cycle route width

The required width of the shared pedestrian cycle route on market Street has been calculated with reference to the Cycle Design Manual.

Table 2.2 - Width Calculator

A. Inside Clearance	
Feature	**Additional width required (m)**
Flush or near-flush surface including low and splayed kerbs up to 60mm high	0.00
Kerbs 61mm to 150mm high	0.20
Vertical feature from 151mm to 600mm high	0.25
Vertical feature above 600mm high	0.50

B. Central Width			
Type of Facility	**Flow (cycles per peak hour)**	**Desirable minimum width (m)**	**Absolute minimum width (m)**
One-way cycle track	<300	2.00	1.50*
	>300	2.50	2.00
Two-way cycle track	<300	3.00	2.00
	>300	4.00	3.00
Cycle lane	All	2.00	1.50
Shared Active Travel Facility	<300	4.00	3.00
	>300	5.00	4.00

*May not cater for comfortable overtaking or cycling two abreast

C. Outside Clearance	
Feature	**Additional width required (m)**
Flush or near-flush surface including low and splayed kerbs up to 60mm high	0.00
Kerbs 61mm to 150mm high	0.20
Vertical feature from 151mm to 600mm high	0.25
Vertical feature above 600mm high	0.50

D. Buffer Width	One-way cycle track		Two-way cycle track	
Speed limit (kph)	**Desirable min buffer (m)**	**Absolute min buffer (m)**	**Desirable min buffer (m)**	**Absolute min buffer (m)**
≤30	0.00	0.00	0.50	0.30
40/50	0.50	0.00	0.50	0.30
60	1.00	0.50	1.00	0.50
80	2.00**	1.50**	2.00**	1.50**
100	3.50***	1.50***	3.50***	1.50***

Figure 5 - Cycle Design Manual Width Calculator - Market Street

In accordance with Figure 5, Market Street is proposed as a shared pedestrian-cycle route, 4m in width. There is no requirement for a buffer as motor traffic shall not be permitted to use market street (with exception of emergency vehicles).

The street has been designed as a landscaped street with integrated greenery, seating, and lighting. Market Street shall be surfaced with high-quality, durable materials ensuring slip resistance and shall incorporate clear markings and wayfinding to define shared use. In accordance with the Cycle Design Manual, Market Street shall have a maximum gradient of less than 5% to ensure comfortable cycling conditions.

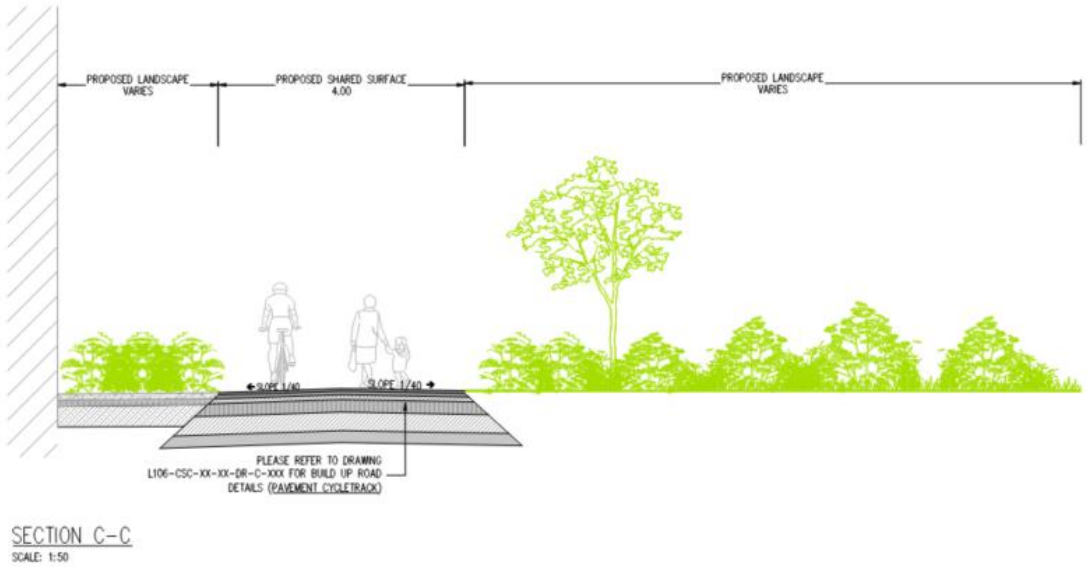


Figure 6 - Proposed Shared Pedestrian/Cycle Path Cross-section on Market Street

5.1.2 Main Street

Main Street is proposed to remain as a shared bus lane with cycle markings which shall include cycle symbols to improve visibility and reinforce cycle priority on this road link.



Figure 7 - Example of Shared Bus Lane at Merrion Road, Dublin
(source: Cycle Design Manual)

5.1.3 Internal Streets

Cyclists shall share road space with vehicles on internal roads within the subject development including Lake Street and Market Lane. Connections to the proposed active travel route on Market Street shall be provided by means of a dropped kerb.

6.0 CYCLE PARKING TYPES AND QUANTUM

6.1 Long-Stay Storage Locations

Long-stay bicycle parking spaces are located within segregated, secure internal stores for development residents and employees. Access to the internal bicycle stores shall be controlled via key fobs or digital entry systems. Bicycle stores have been located in proximity building cores where possible. Please refer to Henry J Lyons drawing no. **CWL-HJL-Z7-00-DR-A-1010** and **CWL-HJL-ZZ-00-DR-A-1020** for details. Internal bicycle stores for Block 7 and Blocks 8 & 9 are shown in Figure 8 and Figure 9.



Figure 8 - Zone 7 Bicycle Storage Rooms and Routes to Building Cores



Figure 9 - Zones 8 & 9 Bicycle Storage Rooms and Routes to Building Cores

6.2 Bicycle Storage Types

It is proposed to provide a mix of bicycle storage types for the proposed development. These shall include the following;

- Sheffield stands for both short-stay and long-stay use.
- Two-tier stackers for efficient use of space in long-stay stores.
- Cargo bike stands provided for larger cycles.
- E-bike charging docks integrated within secure stores.

6.2.1 Sheffield Stands

Sheffield stands shall be provided for visitor bicycle parking spaces and for a portion of long-stay bicycle parking spaces. In accordance with the Cycle Design Manual, a minimum clearance of 0.6 m shall be provided between the stand and any adjacent wall or kerb, and a clear space of 1.0 m shall be maintained in front of each stand to

enable users to wheel their bicycles into position. A minimum spacing of 1.0 m between parallel stands shall be provided to ensure accessibility, while a 2.0 m lateral spacing may be used where provision is required for larger or adapted bicycles such as tricycles or those fitted with child seats or panniers.

	Recommended	Minimum
Bay length (length of cycle parked on a stand)	2.0m	2.0m
Bay length (tandems, trailers and accessible cycles)	3.0m	2.5m
Access aisle width (for bicycles only, pushed into position by user on foot)	2.0m	1.5m
Access aisle width (bicycles ridden to stand, larger cycles use the end bay only)	3.0m	1.8m
Access aisle width (all cycles ridden to stand, large cycles use internal bays)	4.0m	3.0m
Spacing between stands	1.0m	0.8m
Gap between stand and wall (part of bay width)	600mm	600mm

Table 1: Layout dimensions for simple cycle stands.
(sources: Cycle Design Manual Table 6.1)

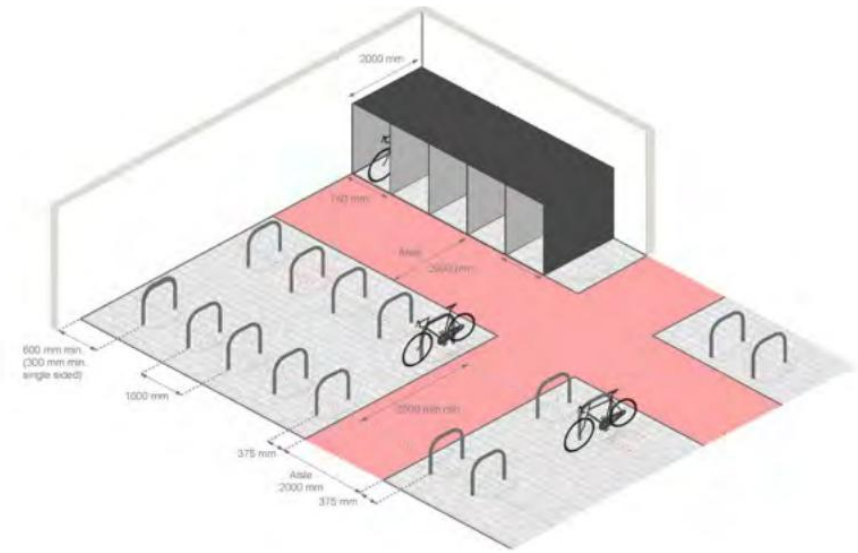


Figure 10 -Cycle parking dimensions.
(sources: Cycle Design Manual Figure 6.11)

6.2.2 Two-tier stackers

Two-tier stackers shall be utilised within long-stay bicycle stores to ensure efficient use of available space. As outlined in the Cycle Design Manual Section 6.5.2, a clear space of 2.0 m to 2.5 m shall be maintained in front of each stand to allow bicycles to be positioned safely and conveniently. Racks may be installed either at 90° or 45° to the aisle, with a minimum aisle width of 2.0 m to 2.5 m depending on the rack design. A

minimum ceiling height of 2.7 m is required to accommodate the full movement of the upper rack.

6.2.3 Cargo/non-standard bicycles

Cargo bicycles stands shall be provided for both visitor and residential use in accordance with Cycle Design Manual which states dimensions of 2.0m-2.5m length and up to 0.85m wide for cargo bikes. These spaces will be clearly marked, easily accessible, and conveniently located.

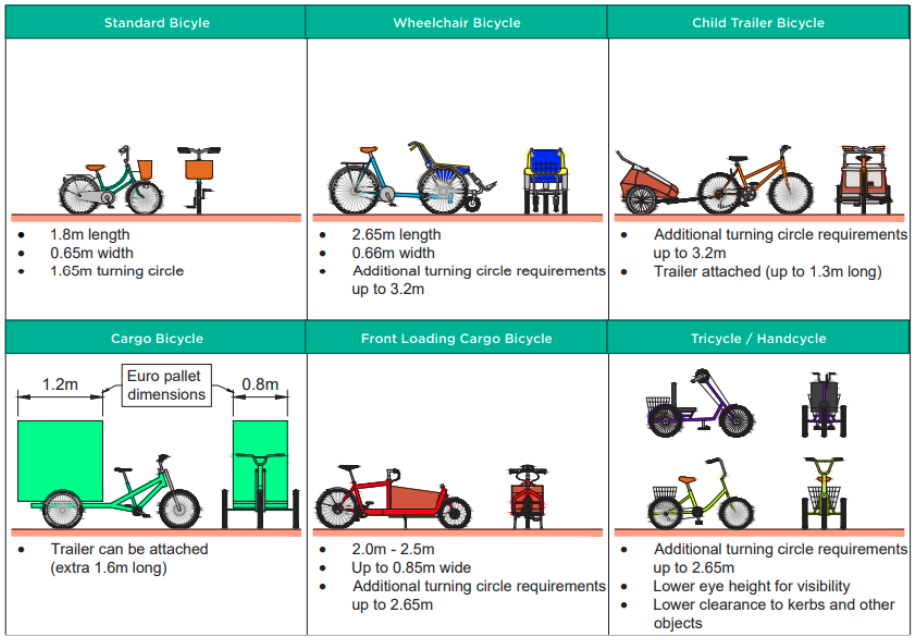


Figure 11 - Typical types and dimensions of cycle vehicles.
(sources: Cycle Design Manual Figure 2.8)

6.2.4 E-bike charging

E-bike charging shall be accommodated within the internal bicycle stores for use by development residents.

6.2.5 Bicycle repair facilities

Dedicated bicycle repair and maintenance facilities will be provided within the internal bicycle stores/undercroft car park areas for the use of residents.

6.3 Bicycle Storage Rooms

As noted in section 6.2, each of the proposed bicycle storage rooms shall include a number of bicycle storage types. Please refer to HJL architects drawings nos. **CWL-HJL-Z7-00-DR-A-1010** and **CWL-HJL-ZZ-00-DR-A-1020** for details. To illustrate the proposed strategy, an example of the proposed bicycle storage rooms is shown in Figure 12.

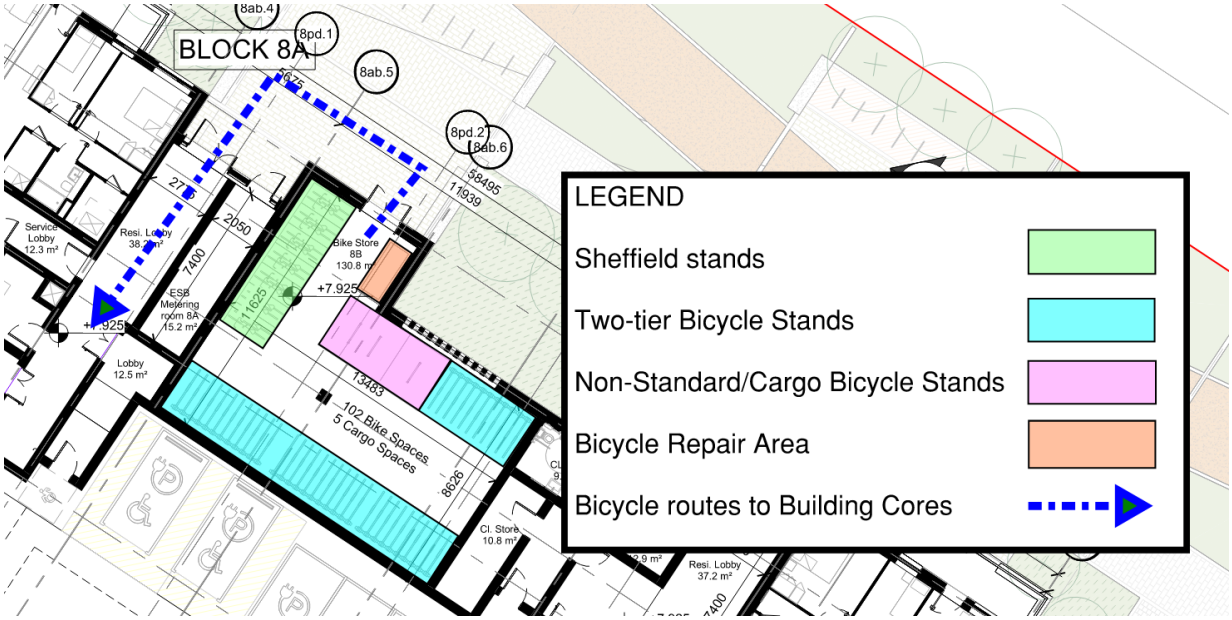


Figure 12 - Typical Bicycle Storage Room including provision for multiple bicycle types

6.4 Bicycle Quantum

The proposed development provides a comprehensive level of cycle parking in accordance with the requirements of the Traffic and Transport Assessment (TIA) and the Cycle Design Manual (NTA, 2023).

In total, 1,605no. of parking spaces are proposed for residents and visitors. 1,193no. long-stay and an additional 412 no. short-stay bicycle parking spaces will be provided.

The proposed development's bicycle parking provision has been assessed with respect to the *Dublin City Development Plan 2022–2028*, which defines the minimum standard bicycle parking provision for new developments by land use type. Table 2, shows the standards applicable to the proposed development, illustrating that the proposed bicycle parking provision for the development meets the requirements of the Local Authority development plan. These bicycle parking standards are the same as those given in the *Design Standards for Apartments, Guidelines for Planning Authorities*.

Land Use	Dev. Plan Minima	Quantum	Min. Parking Provision	Proposed Provision
Long Term Bicycle Parking				
Residential Apartment	1 space per bedroom	1,074 bedrooms	1,074 spaces	1,178 spaces
Crèche	1 space per 5 staff	24 staff [1]	5 spaces	5 spaces
Retail/Café	1 space per 5 staff	30 staff	6 spaces	6 spaces
CCA	1 space per 5 staff	20 staff	4 spaces	4 spaces
Short Stay Bicycle Parking				
Residential Apartment	1 space per 2 apartments	711 apartments	356 spaces	370 spaces
Crèche	1 space per 10 children	120 children	12 spaces	18 spaces
Retail/Café	1 space per 100 sqm	622.3sqm	6 spaces	10 spaces
CCA	1 space per 100 sqm	1328 sqm	13 spaces	14 spaces
Total Bicycle Parking				
TOTAL			1,476 spaces	1,605 spaces

Table 2 – Bicycle Parking Provision

The proposed development has a total bicycle parking provision of 1,605no. spaces. These include:

- 512no. standard residents' spaces in secure dedicated bicycle stores at ground floor (undercroft) level within Block 7.
- 25no. residents' oversized cycle spaces in a secure dedicated bicycle store at ground floor (undercroft) level within Block 7.
- 384no. standard residents' spaces in secure dedicated bicycle stores at ground floor (undercroft) level within Block 8.
- 21no. residents' oversized cycle spaces in a secure dedicated bicycle store at ground floor (undercroft) level within Block 8.

[1] Provisional figure derived from Tusla Quality and Regulatory Framework standards

- 234no. standard residents' and retail staff spaces in secure dedicated bicycle stores at ground floor (undercroft) level within Block 9.
- 12no. residents' oversized cycle spaces in a secure dedicated bicycle store at ground floor (undercroft) level within Block 9.
- 5no. spaces within the proposed creche building.
- 412no. standard visitor spaces provided externally within the Block 7, Block 8 and Block 9 (in the form of 206no. Sheffield stands).

The design and layout of the development's long term and short-stay bicycle parking is consistent with the guidance given in the NTA *Cycle Design Manual*.



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