



Head Office

The Anchorage
Charlotte Quay
Dublin 4
Tel: 01 661 8086
Fax: 01 685 2347

Letterkenny Office

Unit 265 Colab, Port Road,
Letterkenny, Co. Donegal
Tel: 074 9194012
Fax: 074 9194013

Cork Office

Watergold, Douglas,
Cork
Tel: 021 242 7107
Fax: 021 458 0508

Web: www.mjp.ie

Email: info@mjp.ie

Preliminary Fire Safety and Access & Use Strategy

For

The Proposed Construction of a Residential Development

At

**The former Avid Technology International Site, Carmanhall Road,
Sandyford Industrial Estate, Dublin 18**

CLIENT : Atlas GP. Ltd.
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Directors:

Maurice Johnson
BE, CEng, MStructE, MIEI
MSFPE

Luke Fegan
BA, BAI, PDip FSP, MA, MSc(FireEng)
CEng, MIEI

Stefan Hyde
BA, BAI, PDip FSP, MA, CEng, MIEI

Maurice Johnson & Partners Ltd
Registered in Ireland
Company Reg No: IE 470005



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1.0 INTRODUCTION

1.1 SCOPE OF REPORT

This Report is submitted in support of a planning application for the proposed construction of a residential development at the former Avid Technology International Site, Carmanhall Road, Sandyford Industrial Estate, Dublin 18.

The Fire Safety and Access & Use Strategy is being submitted with the Planning Application to demonstrate that the proposed design is in substantial compliance with Part B (Fire Safety) & Part M (Access & Use) of the Building Regulations and that it will be possible in due course to obtain a Fire Safety and Disability Access Certificate without giving rise to changes that would require planning permission.

1.2 OUTLINE DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development comprises the following:

- (i) construction of a Build-To-Rent residential development within a new part six, part eight, part nine, part eleven storey rising to a landmark seventeen storey over basement level apartment building (40,814sq.m) comprising 428 no. apartments (41 no. studio, 285 no. one-bedroom, 94 no. two-bedroom & 8 no. three-bedroom units) of which 413 no. apartments have access to private amenity space, in the form of a balcony or lawn/terrace, and 15 no. apartments have access to a shared private roof terrace (142sq.m) at ninth floor level;
- (ii) all apartments have access to 2,600sq.m of communal amenity space, spread over a courtyard at first floor level and roof terraces at sixth, eighth and ninth floor levels, a 142sq.m resident's childcare facility at ground floor level, 392sq.m of resident's amenities, including concierge/meeting rooms, office/co-working space at ground floor level and a meeting/games room at first floor level, and 696sq.m of resident's amenities/community infrastructure inclusive of cinema, gym, yoga studio, laundry and café/lounge at ground floor level. The café/lounge will primarily serve the residents of the development and will be open for community use on a weekly/sessional basis;
- (iii) provision of 145 no. vehicular parking spaces (including 8 no. mobility parking spaces, 2 no. club-car spaces and 44 no. electric charging spaces), 5 no. motorcycle parking spaces, bin stores, plant rooms, switch room and 2 no. ESB sub-stations all at ground floor level; provision of bicycle parking (752 no. spaces), plant and storage at basement level; permission is also sought for the removal of the existing vehicular entrance and construction of a replacement vehicular entrance in the north-western corner of the site off Carmanhall Road;
- (iv) provision of improvements to street frontages to adjoining public realm of Carmanhall Road & Blackthorn Road comprising an upgraded pedestrian footpath, new cycling infrastructure, an increased quantum of landscaping and street-planting, new street furniture inclusive of bins, benches and cycle parking facilities and the upgrading of the existing Carmanhall Road & Blackthorn Road junction through provision of a new uncontrolled pedestrian crossing; and,
- (v) All ancillary works including provision of play equipment, boundary treatments, drainage works - including SuDS drainage, landscaping, lighting, rooftop telecommunications structure and all other associated site services, site infrastructure and site development works. The former Avid Technology International buildings were demolished on foot of Reg. Ref. D16A/0158 which also permitted a part-five rising to eight storey apartment building. The development approved under Reg. Ref. D16A/0158, and a subsequent part-seven rising to nine storey student accommodation development permitted under Reg. Ref. PL06D.303467, will be superseded by the proposed development.

1.3 BASIS OF COMPLIANCE

The proposed development will be subject to Fire Safety Certificate and Disability Access Certificate applications based on the below design guidance documents:

Purpose Group	Design Guidance (Fire Safety / Access & Use)
Residential	BS 9991: 2015 (in conjunction with TGD-B 2006 Reprint 2020) & BS 9999: 2017 / TGD-M 2010, BS 8300: 2018 & UK ADM
Resident Amenities and Community Infrastructure Facilities	BS 9991: 2015 & BS 9999: 2017 / TGD-M 2010, BS 8300: 2018 & UK ADM
Car Park & Ancillary Accommodation	BS 9991: 2015 & BS 9999: 2017 / TGD-M 2010, BS 8300: 2018 & UK ADM

The aforementioned guidance proffers prescriptive design solutions which are considered prima facie compliance with Parts B & M of the Building Regulations, alternative solutions are acceptable based on a fire engineering approach as set out in Technical Guidance Document B 2006 (Reprint 2020) to the Building Regulations. Accordingly the Fire Safety and Access & Use Strategies being adopted make provision for the acceptance of substantiated deviations from some of the prescriptive solutions in these codes, based on the use of the enhancement measures.

2.0 FIRE SAFETY STRATEGY

2.1 MEANS OF ESCAPE IN CASE OF FIRE

The residential Cores 1, 2, 3 & 4 are designed to include ventilation to the common corridors on each of the residential floors which include a push-pull ventilation system designed to provide for extended travel distances of up to approx. 25m measured from the furthest apartment entrance door to the lift lobby door.

Core 4 on the eighth, ninth and tenth floors will either be provided with a push-pull ventilation system or alternatively an extract smoke shaft system venting the corridors supplemented with inlet air from the adjacent lift lobby with travel distances in this instance limited to max. 15m in each vented corridor measured from the furthest apartment entrance door to the lift lobby door.

The above travel distances are based on the proposed sprinkler protection to all apartments and the ventilation strategy to the relevant ventilated corridors.

The internal layout of the open plan apartments will be designed in line with Section 1.6 and Diagram 9A of TGD-B 2006 (Reprint 2020) which will include ensuring the cooking is located at least 1.8m away from the internal escape route and apartment entrance door (unless otherwise agreed with Dublin Fire Brigade) and also ensuring a max travel distance of 20m within each apartment measured from the furthest point within the unit to its entrance.

Each of the residential Cores will be provided with disabled refuge provisions on each upper floor, at ground floor level where there is a change in floor level with the external ground/street level, (i.e. Core 2), and also at basement level. It is noted that the disabled refuge provisions on the upper floors will be located within each Core's lift lobby which provides direct access to its stair and where no apartments open into the lift lobby in accordance with Section 1.4.15 of TGD-B 2006 (Reprint 2020).

The ground floor resident's amenities and community infrastructure facilities are each provided with their own independent entrances/exits discharging directly to the external air at ground/street level.

The ground floor car park will be served via 4 no. escape routes via Cores 1, 2, 3 & 4 whilst the basement will be served via 3 no. escape stairs (i.e. Cores 1, 2 & 3 which extend to basement level).

2.2 INTERNAL FIRE SPREAD (STRUCTURE)

The proposed development structure will be designed to achieve minimum 90/120-minutes fire resistance (stability, integrity and insulation) noting the building height exceeds 30m above ground level – note the structural fire rating of the development will be subject to agreement with the Fire Officer as part of the Fire Safety Certificate application process.

The basement level, the ground floor car park and also the own door entry resident amenities/community infrastructure facilities will all be sprinkler protected to IS EN 12845: 2015 whilst the individual residential units will be sprinkler protected in accordance with BS 9251: 2014.

Each of the ground floor units will be constructed as standalone compartments whilst similarly each of the individual apartments will also be designed as separate compartments.

The basement level and the ground floor car park will be compartmented from all upper floors and adjacent accommodation whilst their ancillary accommodation will also be enclosed in their own separate compartments.

2.3 EXTERNAL FIRE SPREAD

The external walls and roof of the proposed development will be so designed and constructed that they afford adequate resistance to the spread of fire to and from neighbouring buildings as per the external fire spread requirements of BRE 187.

2.4 ACCESS & FACILITIES FOR THE FIRE SERVICE

The external site access routes serving the proposed development will be so designed such that there will be adequate provision for Fire Brigade appliance access to its fire-fighting shafts whereby vehicular access will be provided along the North and East Elevations via Carmanhall Road and Blackthorn Road respectively thus serving Cores 1, 2 & 4 whilst also noting part Fire Brigade access will be provided along the West Elevation via the roadway accessing the car park whereby Core 3 will be accessed via an externally accessed stair connecting to basement level.

Cores 1, 2, 3 & 4 will each be constructed as fire-fighting shafts, (noting their topmost floors are greater than 18m above ground level), whereby it is proposed to provide a fire-fighting lift lobby as part of the Core design vis-à-vis the design provisions of Section 5.3 of TGD-B 2006 (Reprint 2020). Each fire-fighting shaft will comprise a fire-fighting stair, a fire-fighting lift, a fire-fighting lobby and a fire main which will provide Fire Brigade personnel access and internal fire-fighting facilities.

Dry riser inlet valves will be provided externally to Cores 1, 2 & 4 to allow Fire Brigade personnel to connect fire hose reels from the Fire Brigade appliances to serve the dry risers within these Cores whilst it is proposed to provide a wet fire main in Core 3 to supplement fire-fighting in this Core noting its location and access.

It is proposed that the ground floor car park will be provided with minimum 2.5% permanent natural ventilation for smoke and heat ventilation whilst the basement floor is proposed to be provided with a mechanical extract system.

3.0 ACCESS & USE STRATEGY

3.1 EXTERNAL ACCESS ROUTES

It is noted that each of the residential Cores 1, 2 & 4 will be provided with Part M access directly from the external street/footpath along Carmanhall Road and Blackthorn Road whilst it is proposed that Core 3 will be accessible via the concierge or main entrance at external street level to Core 4 with internal vertical access therein to the external podium/courtyard which then provides direct access to Core 3 at first floor level.

Each of the residential Cores will be provided with an accessible entrance to facilitate wheelchair/disabled access either at ground floor level and/or at podium level.

Similarly each of the ground floor resident's amenities and community infrastructure facilities will be provided with their own door entry accessible entrances accessed directly from Carmanhall Road and Blackthorn Road.

The external site landscape including the footpaths, steps and gently sloped/ramped access routes along Carmanhall Road and Blackthorn Road and also the first floor podium/courtyard and the associated external stepped access route serving same will be designed to be Part M compliant. Whilst it is noted the podium is designed to be wheelchair accessible via Cores 1, 2 or 4 only, it is nevertheless noted that the primary access to the residential Cores will be at ground floor/street level in any event thereby alleviating the need for an external ramp or lift access to the courtyard.

The ground floor car park will be accessed via the roadway along the West Elevation whereby the car park will be provided with 8 no. designated disabled car parking spaces thus satisfying the minimum 5% design provision of TGD-M 2010.

3.2 CIRCULATION WITHIN BUILDINGS

At ground floor entry level in Core 1, it is noted that an accessible gently sloped route will provide wheelchair user access to the lifts serving the upper floors whilst Core 2 will be provided with an accessible platform lift and adjacent ambulant disabled steps within its entrance lobby which will facilitate vertical access between its entry level and the stair/lift landing level.

The residential Cores serving the basement and each of the upper floors will be provided with accessible passenger lifts and ambulant disabled stairs designed in accordance with TGD-M / BS 8300 / UK ADM as appropriate.

The circulation corridors to the residential floors are designed to comprise a minimum clear width of 1,800mm thus affording wheelchair users to pass by each other uninterrupted within the corridors.

The external communal rooftop gardens/terraces located on the sixth, the eighth and the ninth floors will be provided with level access thus facilitating access for wheelchair users.

3.3 GROUND FLOOR RESIDENT'S AMENITIES & COMMUNITY INFRASTRUCTURE FACILITIES

The ground floor resident's amenities and community infrastructure facilities will be subject to future fit-outs requiring their own Disability Access Certificate applications whereby the proposed fit-outs shown are indicative only.

To comply with Part M (Access & Use) of the Building Regulations, it is noted that accessible sanitary facilities will be required to be provided within each unit as appropriate to the Building Regulations whereby the extent and provision of same will be dependent on the facilities being provided for able bodied persons, (e.g. an accessible WC will be provided where toilets are provided, an accessible shower/changing room will be provided where shower/changing room facilities are provided etc.).

3.4 RESIDENTIAL UNITS

The internal layout of each of the residential units will be designed in accordance with TGD-M 2010 such to include accessible entrance doors, visitable WCs and access to a habitable room (i.e. the kitchen/living area).