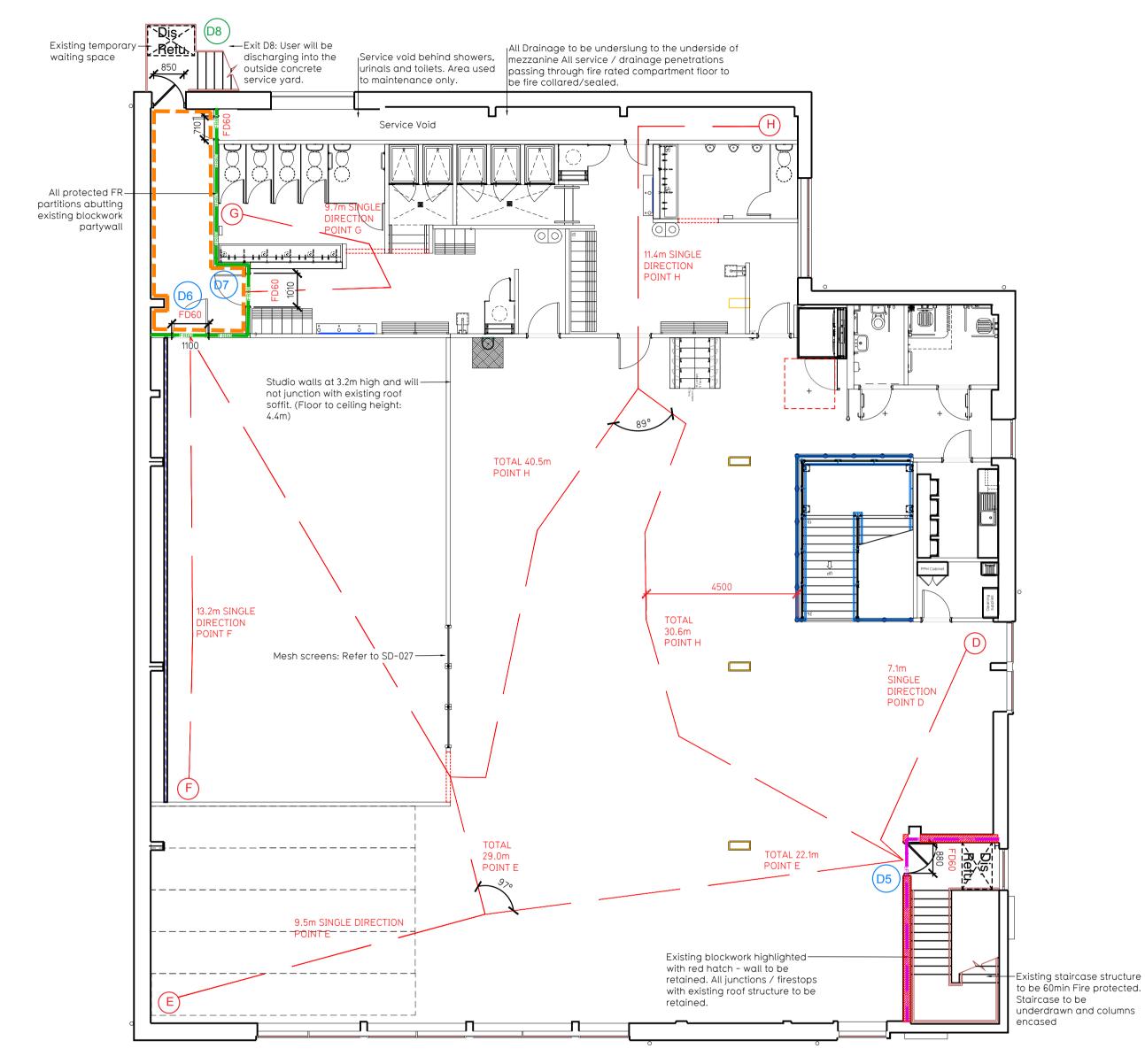
· Proposals must comply with all acoustic, fire & building regulation

No dimensions are to be scaled from this drawing. The contractor is responsible for checking all dimensions on site



Proposed Mezzanine Floor Plan



Plant room is a place

of special fire risk as it contains 3 x gas boiler each uses 40kW.

All protected FR partitions abutting existing blockwork

partywall

In line with Section 2.9.8 of the Technical Handbook - Non Domestic, the aggregate unobstructed width in mm of all escape routes from a room, or storey, should be at least 5.3 x the occupancy capacity of the room or storey.

— All server and plant room walls to be 60min FR. 60min FR ceiling membrane also required

All mezzanie columns to be

encased using Rockliner Panel

which archives FR min.60 mins.

15.0m SINGLE

DIRECTION

POINT B

Proposed Ground Floor Plan

Aggregate Clear Opening Width of Escape Routes Calculation:
Final Fire Exit D1 clear opening width = 1300mm but is limited by D2 clear opening width = 1060mm
Final Fire Exit D4 clear opening width = 850mm (allows max.225 persons to escape)

Total Aggregate Width for Ground Floor (Less Largest Opening Width of 1060mm from D2) = 850mm
Ground Floor Maximum Occupancy Capacity = 225 people (based on Scotland Building standards technical handbook 2022: non-domestic 2.9.8)

Aggregate Clear Opening Width of Escape Routes Calculation: Final Fire Exit D3 clear opening width = 850mm but is limited by D5 clear opening width = 880mm (allows max. 225 persons to escape)
Final Fire Exit D8 clear opening width = 850mm but is limited by D6 clear opening width = 1100mm (allows max.225 persons to escape).

Total Aggregate Width for Ground Floor (Less Largest Opening Width of 1110mm from D6) = 850mm Mezzanine Maximum Occupancy Capacity = 225 people (based on Scotland Building standards technical handbook 2022: non-domestic 2.9.8) Combined Occupancy Provision

Ground floor maximum occupancy: Total occupancy provision:

approx. 50% lower than peak hour occupancy.

The Milngavie Pure Gym is designed for an average peak occupancy of 207 which s smaller than the max. no of 450 persons (see calculation above). Therefore thought to meet with the Section 2.9 of Technical Handbook - Non Domestic. It is important to note that 207 people is the peak occupancy figure, Pure Gym Milngavie's average occupancy during everyday operation will likely be

The average peak occupancy operational occupancy of 207 people derives from the vast amount of data collected via 340+ Pure Gyms of comparable size; data collection is conducted through access control ironmongery at turnstiles and can be viewed on Pure Gym app and website.

Escape Distance and Angle of Divergence

-Existing Exit D6: Users will be

discharging onto pavement.

TOTAL 26.9m POINT B

<u>Position A</u> Total escape to nearest Final Exit **D8 = 15.0**

Dashed orange line indicates protected areas

using 2 x 12.5mm Gyproc Fireline to underside

of existing mezzanine floor which achieves FR

SINGLE DIRECTION 15.0m

——All existing columns to be encased by FR60

— All server and plant room walls

ceiling membrane also required

All protected FR

partitions abutting

existing blockwork

mezzanine to be appropriately fire stopped to create compartment floor and protect mezzanine structure

Exit D1 & D2 can be used to serve as

part of PureGym

Fire Escape

mezzanine floor will be discharging

-Existing staircase structure to be 60min

Fire protected.

Staircase to be

-Existing blockwork highlighted

with red hatch - wall to be

retained.

underdrawn and

columns encased

into concrete service yard.

partywall

to be 60min FR. 60min FR

Lining: 1 x 15mm Glasroc F Firecase

xisting Exit D4: User will be discharging into the outside

oncrete service yard.

<u>Position B</u> Total escape distance to nearest Final Exit **D1 = 24.8**m Distance before divergence is 15m A.O.D to be > $(2.5 \times 15) + 45 = 82.5^{\circ}$ Drawn A.O.D = 91° thus complies

<u>Position C</u> Total escape to nearest Final Exit **D4 = 15.0**

Total escape to nearest Final Exit **D5 = 7.1** m The total escape distance is less than 15m and thus complies.

<u>Position E</u> Total escape distance to nearest Final Exit D5 = 22.1m Distance before divergence is 9.5m A.O.D to be > $(2.5 \times 9.5) + 45 = 68.75^{\circ}$ Drawn A.O.D = **89°** thus complies

<u>Position F</u> Total escape to nearest Final Exit **D6 = 13.5** m The total escape distance is less than 15m and thus complies.

<u>Position G</u> Total escape to nearest Final Exit **D7 = 9.7** m The total escape distance is less than 15m and thus complies.

Total escape distance to nearest Final Exit **D5 = 30.6**m Distance before divergence is **11.4** m A.O.D to be > $(2.5 \times 11.4) + 45 = 67.8^{\circ}$ Drawn A.O.D = 89° thus complies

<u>Sprinklers</u> System design and installed in compliance with BS EN 12845:2015 & LPC Technical Bulletins

Fire Alarm Fire Alarm designed and installed to BS 5839. Smoke & heat detection / emergency lighting by specialist. Please refer to M&E engineer's

Escape Lighting
Emergency escape lighted designed and installed in accordance with BS 5266: Part 1. Please refer to M&E Engineer's drawings for final layout and specification. Smoke Extract
Smoke Extract System to be designed and installed in accordance with BS 7346: Part 8. Please refer to M&E Engineer's drawings for final layout

Fire Stopping
All perimeter edges of mezzanine to be appropriately fire stopped to create compartment floor and protect mezzanine structure. All services/drainage penetrations passing through fire rated compartment floor to be fire collared/sealed. Escape Signage and emergency lighting is CDP under the M&E specification. Details of contractors proposals to be provided to Building Control Approved Inspector and Fire Officer within the Contractors Proposals Package, Clause 1.4

Drawn/ Checked Milngavie 110-112 Main St, Milngavie, Glasgow G62 6JN Fire Evacuation Plan Ground and Mezzanine Floor Plans 1:100 @ A1 CONSTRUCTION Pure Gym Ltd Town Centre House The Merrion Centre

Fire Evacuation Key

		· 		
_	eFR30	Existing wall to achieve min 30 minute fire rating (suitability of wall to be confirmed on site by Pure Gym Main Contractor		———— Fire Escape Route
_	eFR60	Existing wall to achieve min 60 minute fire rating (suitability of wall to be confirmed on site by Pure Gym Main Contractor	1050 min	Minimum Clear Widths
_	FR30	New wall to achieve min of 30min fire rating	0	Exit No.
_	FR60	New wall to achieve min of 60min fire rating		Shared Escape Route
		Protected areas: walls, floors, ceilings and doors to achieve 30minute fire resistant construction.	FDXX	Fire Door Rating
		Protected areas: walls, floors, ceilings and doors to achieve 60 minute fire resistant construction.		