CROWN TRADING CENTRE
CORE ARRANGEMENTS

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INTRODUCTION

This project involves development of six new residential blocks in Hayes, London set across two separate buildings, 'the Perimeter building' and 'the Linear building'. The Linear building will consist of two residential blocks (Block A and D) rising above a shared car park at ground floor and podium landscape at First Floor. The Perimeter building will consist of four residential cores (Block, B, C E and F, with shared car parking at Ground and Mezzanine Level, with a podium landscaped area at First Floor.

Each residential block will be served by two stairs, with flats which are accessed via an enclosed common corridor.

The number of floors (including mezzanine levels) and approximate top floor height above ground of each residential Block is given below:

Block	Number of Storeys	Top Floor Height
A	GF + mezzanine + 9 floors above	30.3m
B	GF + mezzanine + 9 floors above	30.3m
C	GF + mezzanine + 9 floors above	30.3m
D	GF + mezzanine + 7 floors above	23.8m
E	GF + mezzanine + 7 floors above	23.8m
F	GF + mezzanine + 7 floors above	23.8m

Table 1: Building Height

This technical note describes the proposals of the core arrangement, and is intended to provide more background information regarding the changes and to support the NMA submission. The principles described in this technical note applies to all 6 blocks.

SMOKE CONTROL AND CORE ARRANGEMENT ON TYPICAL LEVELS

In the previous design, the 2 stairs serving the building are accessed from 2 separated smoke vented lobbies. One will be a firefighting lobby with access to a firefighting stair, a firefighting lift and an evacuation lift; while the other lobby will have access to an escape stair only with no access to lifts.

It is proposed to provide each Block with one firefighting lift alongside the firefighting stair and an additional core which will be provided with an evacuation lift and a protected escape stair.

Boris Tang
boris.tang@jensenhughes.com
O: +44 20 7202 8484

In the revised design, the 2 stairs serving the building are still accessed from 2 separated smoke vented lobbies. However the lift arrange is revised such that the firefighting lobby with access to a firefighting stair and a firefighting lift; while the other lobby will have access to an escape stair and an evacuation lift. This arrangement is shown in figure below.

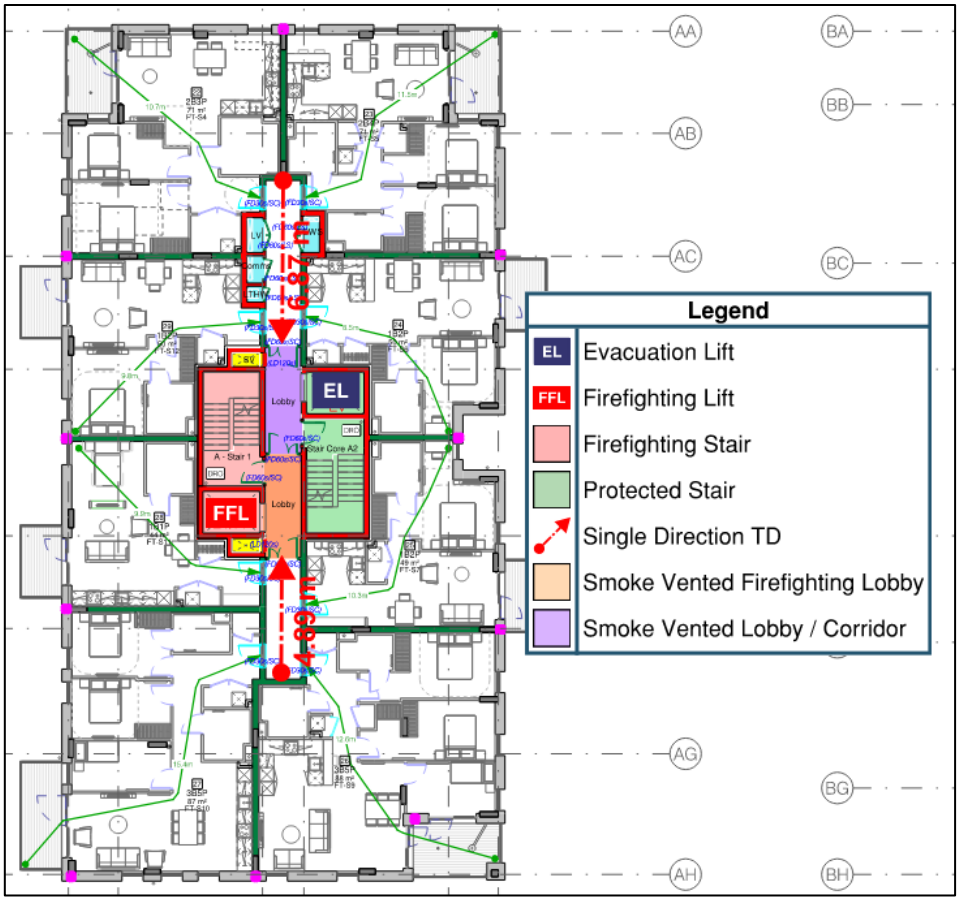

Figure 1: Smoke Control Provision

This revised arrangement allows one lift to be associated with one stair, such that each lobby has access to one lift. This gives better distinction between firefighting and evacuation cores and additional options for disabled occupants in case one lift lobby is affected by smoke while they need to wait for an evacuation lift (e.g. smoke follows the occupant into the lobby when they escape but it takes time for smoke ventilation system to clear the smoke so that lobby is temporary affected).

The arrangement fully complies with BS 9991 Building Regulations guidance.

Smoke venting to the lift lobbies of each block will be provided via a mechanically assisted smoke shaft as shown in the figure below. Both lobbies are designed to be fire sterile, the lobby only gives access to stair, lift and common corridor, there are no access to apartments and service risers from the lobbies.

This will be subject to specialist supplier design but would typically be 0.6-0.8m^2 with an extract rate of 3-5m^3.

Smoke venting is not needed in the dead-end sections of corridors which the travel distances are less than 7.5m as per BS 9991. Any smoke getting into the lift lobby will get extracted quickly, and if in case the lobby is affected by smoke then any disabled occupants waiting for an evacuation lift can move to another lift lobby, both lobbies are smoke vented.