

SINGAPORE CIVIL DEFENCE FORCE

Our Ref. : CD/FSSD/12/02/03/01

Your Ref :

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President, Singapore Institute of Architects (SIA)
President, Institution of Engineers, Singapore (IES)
President, Association of Consulting Engineers, Singapore (ACES)

Dear Sir/Mdm

AMENDMENTS TO THE FIRE CODE - REVIEW OF OCCUPANT LOAD FACTORS FOR ROOF GARDEN/ROOF TERRACE/SKY GARDEN/SKY TERRACE

In recent years, more and more rooftops are being designed for use, some with and others without recreational facilities. Currently, the Fire Code does not stipulate the occupant load factors for roof garden, roof terrace, sky garden and sky terrace. As a general rule, the occupant load factors of these areas are calculated basing on 1.5 sqm/person. This usually results in high occupant load and leading to waiver applications owing to inadequate exit provision.

2. The issue was deliberated by both the Fire Code Review Committee and the FSSD Standing Committee. The committees agreed that:

a) For Purpose Group I buildings

(1) No calculation of occupant load is required for the private roof garden/terrace of residential unit.

b) For Purpose Group II buildings

(1) No calculation of occupant load is required for the private roof garden/terrace of a residential unit; and

(2) Calculation of occupant load is required for the common roof garden/roof terrace accessible to residents and guests. The occupant load factor shall be 1.5 sqm/person unless otherwise stated under para 2d).



c) For Purpose Group III to VIII buildings

(1) Calculation of occupant load is not required for roof that is accessed for maintenance only; and

(2) Calculation of occupant load is required if the roof garden or roof terrace is accessible to staff or other members of public. The occupant load factor shall be 1.5 sqm/person unless otherwise stated under para 2d).

See Annex A for the table of illustration.

d) Occupant load factors for specific areas

(1) Occupant load factors for planter boxes (permanent/fixed structure)

- (a) All sunken planting areas shall be based on 3 sqm/person;
- (b) For elevated planter boxes less than 300mm in height (regardless of whether the planter box is covered with trees/shrubs), the occupant loads of the planter boxes areas shall be calculated based on 1.5 sqm/person;
- (c) If the height of a planter box is from 300mm to 500mm and the planter box is covered fully with trees/shrubs, there is no need to calculate the occupant load of the planter box area;
- (d) If the height of a planter box is from 300mm to 500mm and the planter box is not covered with trees/shrubs, the occupant load of the planter box area shall be calculated based on 1.5 sqm/person; and
- (e) If the height of a planter box exceeds 500mm (need not be covered with trees/shrubs but must be without access by steps/ramp), there is no need to calculate the occupant load of the planter box area.

Note: Roof without public access (i.e. for maintenance only) can be exempted from occupant load calculation.

See Annex B for the table of illustration.

(2) Occupant load factors for sunken/elevated water feature (permanent/fixed structure)

- (a) If the depth/height of a sunken/elevated water feature is less than 300mm, the occupant load of the water feature area shall be calculated based on 3 sqm/person; and

- (b) Where the sunken/elevated water feature is 300mm or more in depth/height, there is no need to calculate the occupant load of the water feature area.

See Annex C for the table of illustration.

(3) Occupant load factors for other areas

- (a) Jogging track/designated foot path not exceeding 3m in width, occupant load shall be calculated based on 3 sqm/person; and
- (b) For children playground (with playground equipment), the occupant load shall be calculated based on 5 sqm/person.

See Annex C for the table of illustration.

3. A reprint of the relevant pages of the Fire Code incorporating the changes/amendments, are attached as Annex D & Annex E.

4. Other areas not covered under para 2d) shall be included in the occupant load calculation basing on 1.5 sqm/person. For those areas which had already been assigned with occupant load factors, eg M&E plant room, gymnasium, multi-purpose room, the occupant load shall be calculated basing on the occupant load factors stipulated in the Fire Code. When A/A works are carried out at an existing roof garden, roof terrace, sky garden, sky terrace, regardless whether the A/A works increase the occupant load, QP shall submit plans to SCDF for approval. For example, if building owner converts an approved 500mm planter box to 300mm high water feature, he has to engage a QP to re-assess the occupant load and submit plans for approval.

5. This circular shall take immediate effect. Please convey the contents of this circular to members of your Institution/Association/Board. The circular is also available in CORENET-e-info: <http://www.corenet.gov.sg/einfo>.

6. For any inquiry or clarification, please contact: MAJ Choh Choon Jin at Tel: 68481454 or Email: Choh_Choon_Jin@scdf.gov.sg.

Yours faithfully,

(transmitted via e-mail)
Poon Keng Soon
Secretary, FSSD Standing Committee
for Commissioner
Singapore Civil Defence Force

cc

All members of FSSD Standing Committee

President, REDAS

President, IFE

President, SISV

CEO, BCA

CEO, URA

CEO, HDB

CEO, PSA

CEO, JTC

CE, LTA

CE, TUV SUD PSB – (Attn: Ms Emily Mok/ Mr Lau Keong Ong)

CE, SPRING Singapore – (Attn: Mr Kenneth Lim)

President, FSMAS

Honorary Secretary, SPM

Calculation of Occupant Load

Type of building	Calculation of occupant load		Remarks
	No	Yes	
Purpose Group I	Private roof garden/terrace of residential unit		
Purpose Group II	Roof garden/terrace of a residential unit	Common roof garden/roof terrace accessible to residents & guests	Occupant load factor to base on 1.5 sqm/person (except areas covered in para 2 d))
Purpose Group III - VIII	Roof access for maintenance only	Roof garden/roof terrace accessible to staff or other members of public in the building.	Occupant load factor to base on 1.5 sqm/person (except areas covered in para 2 d))

Occupant load factors for planter box (permanent/fixed structure)

Planter box	Occupant load factor
(a) Sunken planting area	3.0 sqm/person
(b) Height (Ht) of planter box above floor finished level	
(1) Ht < 300mm (regardless of whether planter box is covered with trees/shrubs)	1.5 sqm/person
(2) $300 \text{ mm} \leq \text{Ht} \leq 500\text{mm}$ (planter box must be covered fully with trees/shrubs)	-
(3) $300 \text{ mm} \leq \text{Ht} \leq 500\text{mm}$ (planter box not covered with trees/shrubs)	1.5 sqm/person
(4) Ht > 500mm (need not be covered with trees/shrubs but must be without access by steps/ramp)	-

Note: Roof without public access (i.e. for maintenance only) can be exempted from occupant load calculation.

Occupant load factors for sunken/elevated water feature (permanent/fixed Structure)

Depth/height of water feature	Occupant load factor
Depth/height < 300mm	3 sqm/person
Depth/height \geq 300mm	-

Occupant load factors for other areas

Other areas	Occupant load factor
Jogging Track /designated foot path (width not exceeding 3m)	3 sqm/person
Children playground (with playground equipment)	5 sqm/person

OCCUPANCY LOAD- PURPOSE GROUP-II BUILDING TYPES -	SCHEDULE 2 OTHER RESIDENTIAL APARTMENTS, MAISONETTES
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FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Gross Floor Area	calculated on habitable areas	15.0
Private roof garden/terrace of a residential unit	non-simultaneous	—
Children playground (with playground equipment)		5.0
Common roof garden/roof terrace accessible to residents and guests		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 3.1
PURPOSE GROUP-III	INSTITUTIONAL
BUILDING TYPES -	HEALTH-CARE OCCUPANCY (HOSPITAL, CLINIC & POLYCLINIC)

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/Corridors	non-simultaneous	—
Waiting Area/ Visitors Lounge		3.0
Out-patient Waiting Area		1.5
Admin Offices		10.0
Doctor's Offices		10.0
Nursing Station		10.0
Staff Lounge		3.0
Consultant/Treatment/ Examination Room		5.0
Therapy Centre		10.0
Operation Theatre		7.5
Surgical Viewing Gallery		3.0
Patient Accommodation	Intensive Care	20.0
	Room (max 2 beds)	10.0
	Ward	10.0
Laboratories		20.0
Pharmacy		20.0
Kitchen/Housekeeping		10.0
Laundry*(1)		10.0
Toilet/Locker/ Changing Room	non-simultaneous	—
Storage		30.0
Canteen		1.5
Restaurant		1.5
Shop		5.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

*To refer to (1) (2) or (3) of notes at the end of Schedule 8

OCCUPANCY LOAD-	SCHEDULE 3.2
PURPOSE GROUP-III	INSTITUTIONAL
BUILDING TYPES -	STUDENT HOSTEL, DORMITORY, OLD FOLK'S HOME, ORPHANAGE, CHILDREN'S HOME, DAY-CARE CENTRE, KINDERGARTEN, INFANT CARE, ARMY CAMP, DETENTION/CORRECTION CENTRE

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/Corridors	non-simultaneous	—
Waiting Area/ Visitors Lounge		3.0
Admin Office		10.0
Staff Office		10.0
Library/Reading Room	Stack Area	10.0
	Reading Area	5.0
Common Room		1.5
Multi-purpose Room		1.5
Student Bedroom		10.0
Warden's Accommodation		15.0
Sleeping Quarters/ Dormitories		3.0
Detention Room		3.0
Sick Room	non-simultaneous	—
Toilets/Bath/ Changing Rooms	non-simultaneous	—
Indoor Games/Hobby Room		1.5
Classroom		1.5
Kitchen/Housekeeping		10.0
Laundry*(1)		10.0
Service Area		10.0
Storage Area		30.0
Dining/Canteen		1.5
Shop		5.0
Mechanical Plant Room		30.0
Roof access for maintenance		----

only
Roof garden/roof terrace
accessible to staff or other
members of public in the
building.

1.5 (except areas covered in
Annex E)

*To refer to (1) (2) or (3) of notes at the end of Schedule 8

OCCUPANCY LOAD-	SCHEDULE 3.3
PURPOSE GROUP-III	INSTITUTIONAL
BUILDING TYPES -	SCHOOLS, COLLEGES, COMMERCIAL SCHOOLS, VOCATIONAL INSTITUTION, POLYTECHNIC, UNIVERSITY

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Admin Office		10.0
Staff Office		10.0
Class Room		1.5
Computer Classroom	Commercial School	1.5
	Others	3.0
Seminar Room		1.5
Lecture Room		1.5
Library	Stack Area	10.0
	Reading Area (Sch)	5.0
	(Others)	5.0
Multi Purpose Hall	Sch/Colleges	1.0
	Others	1.5
Stage Area		3.0
Viewing Gallery		1.5
Design Studio		5.0
Laboratories		5.0
Workshop		5.0
Club/Society Room		1.5
Sick Room	non-simultaneous	—
Storage Area		30.0
Kitchen/Service Area		10.0
Toilets/Changing Room	non-simultaneous	—
Canteen		1.5
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 4
PURPOSE GROUP IV-	OFFICE
BUILDING TYPES -	OFFICES, BANKS, PUBLISHERS, STOCK BROKERS

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby	non-simultaneous	—
Corridors		3.0
Waiting Area/Visitors Lounge		3.0
Admin Office		10.0
Business Centre		10.0
Meeting/Seminar Room		1.5
Archive/Library	Stack Area	10.0
	Reading Area	5.0
Filing Room/Store		10.0
Computer Room		5.0
Design Studio		5.0
Drafting Office		5.0
Trading Floor		2.0
Trading Gallery		1.5
Banking Hall		3.0
Deposit/Strong Room		30.0
Machine/Printing Room*(2)		10.0
Restaurant		1.5
Canteen		1.5
Staff Canteen		1.5
Shop		5.0
Toilets	non-simultaneous	—
Storage Area		30.0
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

*To refer to (1) (2) or (3) of notes at the end of Schedule 8

OCCUPANCY LOAD-	SCHEDULE 5
PURPOSE GROUP V-	SHOPS
BUILDING TYPES -	SHOPS, SHOPPING CENTRES & ARCADES

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby	non-simultaneous	—
Fixed Corridors		3.0
Waiting Area/Visitors Lounge		3.0
Atrium Floor/Concourse		3.0
Exhibition/Promotion Area		1.5
Shop Floor		5.0
Showroom		5.0
Supermarket/Bazaar		5.0
Department Store		5.0
Restaurant		1.5
Canteen		1.5
Cafeteria		1.5
Fast Food Outlet		1.0
Admin Office		10.0
Toilets/Staff Rest Room	non-simultaneous	—
Storage		30.0
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 6
PURPOSE GROUP VI-	FACTORY
BUILDING TYPES -	FACTORIES, FLATTED FACTORIES, INDUSTRIAL PLANTS

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Admin Office		10.0
Meeting/Seminar Room		1.5
Library	Stack Area	10.0
	Reading Area	5.0
Workshop		10.0
Laboratories		5.0
Exhibition		1.5
Production Area*(2)		10.0
Packing/Distribution Area		10.0
Material/Product		30.0
General Storage	non-simultaneous	—
Multi-purpose Area		1.5
Staff Recreation Room	non-simultaneous	—
Staff Rest Room	non-simultaneous	—
Staff Canteen		1.5
Toilets/Changing/ Locker Room	non-simultaneous	—
Sick Room	non-simultaneous	—
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

*To refer to (1) (2) or (3) of notes at the end of Schedule 8

OCCUPANCY LOAD-	SCHEDULE 7.1
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT
BUILDING TYPES -	HOTELS, HOLIDAY RESORTS, BOARDING HOUSES, SERVICE APARTMENTS, CONVENTION CENTRES, PRIVATE CLUBS

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/ Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Atrium Floor/Concourse		3.0
Hotel Bedroom/guestroom/hotel suites	4 to a room Each room (based on gross floor area)	15.0
Backpacker hotel	Subject to a maximum of 20 persons per room. Maximum area of a backpacker room shall not exceed 60sqm.	3.0
Service Apartment	Per unit	15.0
Bar/Pub	Gross area	1.0
Discotheque	Gross area	1.0 (including dine & dance area)
Night Club	Gross area	1.5 (including dine & dance area)
Restaurant		1.5
Exhibition/Multi-purpose area		1.5
Function/Ball Room		1.5
Pre-function Room	non-simultaneous	—
Business Centre		10.0
Admin Office		10.0
Conference Room		1.5
Meeting/Seminar Room		1.5
Library	Stack Area	10.0
	Reading Area	5.0
Shop		5.0
Health Club/Centre/SPA*(3)		5.0
Swimming Pool Deck		10.0
Swimming Pool		—
Squash Court	2 per court	

Staff Rest Room	non-simultaneous	—
Staff Canteen		1.5
Toilets/Changing/ Locker Room	non-simultaneous	—
Kitchen/Service Area		10.0
Laundry*(1)		10.0
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

*To refer to (1) (2) or (3) of notes at the end of Schedule 8

OCCUPANCY LOAD-	SCHEDULE 7.2
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT
BUILDING TYPES -	COMMUNITY CENTRES

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby /Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Concourse		3.0
Admin Office		10.0
Multi-purpose Hall		1.5
Meeting Room		1.5
Library	Stack Area	10.0
	Reading Area	5.0
Health/Fitness		5.0
Room/SPA*(3)		
Games Room		1.5
Canteen/Cafeteria		1.5
Kitchen		10.0
Toilets/Changing Room	non-simultaneous	—
Storage Area		30.0
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

*To refer to (1) (2) or (3) of notes at the end of Schedule 8

OCCUPANCY LOAD-	SCHEDULE 7.3
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT
BUILDING TYPES -	MUSEUMS, PUBLIC ART GALLERIES, EXHIBITION CENTRES

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area	Reading Area	3.0
Lobby/ Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Concourse		3.0
Admin Office		10.0
Archive/Library	Stack Area	10.0
	Reading Area	5.0
Exhibition Area		1.5
Auditorium/Theatrette		1.5
Storage Area		30.0
Shop		5.0
Restaurant		1.5
Canteen/Cafeteria		1.5
Kitchen		10.0
Staff Rest Room	non-simultaneous	—
Toilet/Changing Room	non-simultaneous	—
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 7.4
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT
BUILDING TYPES -	THEATRES, CINEMAS, CONCERT HALLS

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/Foyer		3.0
Corridors		3.0
Waiting Area/Visitors Lounge		3.0
Admin Office		10.0
Ticketing Office		10.0
Seating Gallery	by numbers or	1.5
Stage	non-simultaneous	—
Back Stage		3.0
Orchestral Pit		1.5
Changing Room		3.0
Lighting/AVA Room		5.0
Projection Room		5.0
General Storage		30.0
Restaurant		1.5
Canteen/Snack Bar		1.5
Kitchen		10.0
Toilets	non-simultaneous	—
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 7.5
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT
BUILDING TYPES -	PUBLIC LIBRARIES

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Foyer	Loan Counter Area	3.0
Lobby /Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Admin Office		10.0
Library Area	Stack Area	10.0
	Reading Area	5.0
Audio Visual Area		3.0
Auditorium/Theatrette		1.5
Multi-purpose Room		1.5
Book/General Storage		30.0
Cafeteria/Snack Bar		1.5
Kitchenette		10.0
Toilets	non-simultaneous	—
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 7.6	
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT	
BUILDING TYPES -	RELIGIOUS BUILDINGS	
FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Foyer		3.0
Lobby/Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Admin Office		10.0
Meeting/Seminar Room		1.5
Class Room		1.5
Prayer Hall/Gallery		1.5
Choir Gallery		1.5
Crematoria		1.5
Mortuary		30.0
Refreshment Area		1.5
Kitchenette		10.0
Staff Quarter		15.0
General Storage		30.0
Toilets/Changing Room	non-simultaneous	—
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 7.7
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT
BUILDING TYPES -	PUBLIC SPORTS COMPLEX, STADIUM, PUBLIC SWIMMING COMPLEX.

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/ Corridors	non-simultaneous	—
Concourse/Foyer		3.0
Waiting Area/Visitors Lounge		3.0
Admin Office		10.0
Meeting/Seminar Room		1.5
Multi-Purpose Sports Hall		3.0
Gymnasium		3.5
Training Area		3.0
Grandstand/Seating Area		1.5
Squash Court	2 per court	
Swimming Pool Deck		5.0
Swimming Pool		2.5
Restaurant		1.5
Cafeteria		1.5
Fast Food Outlet		1.0
Kitchen		10.0
General Storage		30.0
Toilet/Changing Room	non-simultaneous	—
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 7.8		
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT		
BUILDING TYPES -	RECREATIONAL CENTRES	BUILDINGS,	AMUSEMENT
FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)	
Reception Area		3.0	
Lobby/Corridors	non-simultaneous	—	
Waiting Area/Visitors Lounge		3.0	
Admin Office		10.0	
Meeting/Seminar Room		1.5	
Bowling Alley	exclude bowling lanes	1.0	
Amusement Park	exclude machine areas	1.0	
Billiards Room		5.0	
Skating Rink	Rink Area	3.0	
	Spectator Area	1.5	
Discotheque	Gross area	1.0 (including dine & dance area)	
Pub/Bar	Gross area	1.0	
Karaoke Lounge	Gross area	1.5 (including dine & dance area)	
Night Club	Gross area	1.5 (including dine & dance area)	
Health Club/Centre*(3)		5.0	
Restaurant		1.5	
Cafeteria/Snack Bar		1.5	
Fast Food Outlet		1.0	
Kitchen/Service Area		10.0	
Toilet/Changing Room	non-simultaneous	—	
General Storage		30.0	
Mechanical Plant Room		30.0	
Roof access for maintenance only		---	
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)	

*To refer to (1) (2) or (3) of notes at the end of Schedule 8

OCCUPANCY LOAD-	SCHEDULE 7.9
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT
BUILDING TYPES -	EATING HOUSES, RESTAURANTS, COFFEE SHOPS, HAWKER CENTRES, FAST FOOD OUTLETS

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/Corridors	non-simultaneous	—
Waiting Area		3.0
Admin Office		10.0
Meeting/Seminar Room		1.5
Dining Area	Hawker Centres	1.5
	Fast Food Outlets	1.0
	Others	1.5
Bar/Pub	Gross area	1.0
Lounge		2.5
Kitchen/Service Area		10.0
Storage Area		30.0
Toilet/Changing Room	non-simultaneous	—
Staff Rest Room	non-simultaneous	—
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 7.10
PURPOSE GROUP VII-	PLACES OF PUBLIC RESORT
BUILDING TYPES -	BUS TERMINAL, TRAIN STATION, AIRPORT, FERRY TERMINAL

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Concourse		3.0
Admin Office		10.0
Meeting/Seminar Room		1.5
Ticketing Office		10.0
Business Centre		10.0
Passenger Arrival/ Departure Areas/Foyers	Bus Terminal Others	1.5 3.0
Restaurant		1.5
Cafeteria		1.5
Fast Food Outlet		1.0
Kitchen/Service Area		10.0
Shop		5.0
Staff Rest Room	non-simultaneous	—
Storage Area		30.0
Toilets/Changing Room	non-simultaneous	—
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

OCCUPANCY LOAD-	SCHEDULE 8
PURPOSE GROUP VIII-	WAREHOUSE, GODOWNS, PUBLIC CAR PARK
BUILDING TYPES -	WAREHOUSE, GODOWNS, CAR PARKS

FUNCTIONAL SPACES	REMARKS	OCCUPANCY LOAD (m ² /person)
Reception Area		3.0
Lobby/Corridors	non-simultaneous	—
Waiting Area/Visitors Lounge		3.0
Admin Office		10.0
Meeting/Seminar Room		1.5
Packaging Area		10.0
Goods Storage		30.0
General Storage		30.0
Loading/Unloading Area		4 per Bay
Staff Rest Room	non-simultaneous	—
Toilets/Changing Room	non-simultaneous	—
Staff Canteen		1.5
Kitchen/Service Area		10.0
Mechanical Plant Room		30.0
Roof access for maintenance only		----
Roof garden/roof terrace accessible to staff or other members of public in the building.		1.5 (except areas covered in <u>Annex E</u>)

Note:

- a) Car Parking Areas - occupancy calculated on the basis of 30 m² per person.
- b) For building types not included in the above tables, occupancy load calculation shall be based on the figures established for buildings within the same purpose group, or as otherwise determined by the Relevant Authority.
- * (1) Laundry Areas equipped with machine operation, occupancy may be calculated at 15.0sq m per person.
- * (2) Production Area whether automated or not , shall be calculated on the basis of 10.0m² per person.
- * (3) Health/Fitness Centres/SPA include areas for weight training, aerobics, massage, sauna/steam bath and whirlpools.

Occupant Load Factors for Roof Garden/Roof Terrace/Sky Garden/Sky Terrace

<u>FUNCTIONAL SPACES</u>	<u>REMARKS</u>	<u>OCCUPANCY LOAD</u> (m ² /person)
Sunken planting areas		3.0
Planter boxes less than 300mm in height (regardless of whether the planter box is covered with trees/shrubs)		1.5
Height of planter box from 300mm to 500mm and covered fully with trees/shrubs		—
Height of planter box from 300mm to 500mm and not covered with trees/shrubs		1.5
Height of planter box exceeds 500mm (without access by steps/ramp)		—
Depth/height of sunken/elevated water feature (permanent/fixed structure) less than 300mm		3.0
Depth/height of sunken/elevated water feature (permanent/fixed structure) 300mm or more		—
Jogging track/designated foot path not exceeding 3m in width		3.0
Children playground (with playground equipment)		5.0
Roof without public or occupants access (i.e. for maintenance only)		----

Note: When A/A works are carried out at an existing roof garden , roof terrace, sky garden, sky terrace, regardless whether the A/A works increase the occupant load, QP shall submit plans to SCDF for approval.