



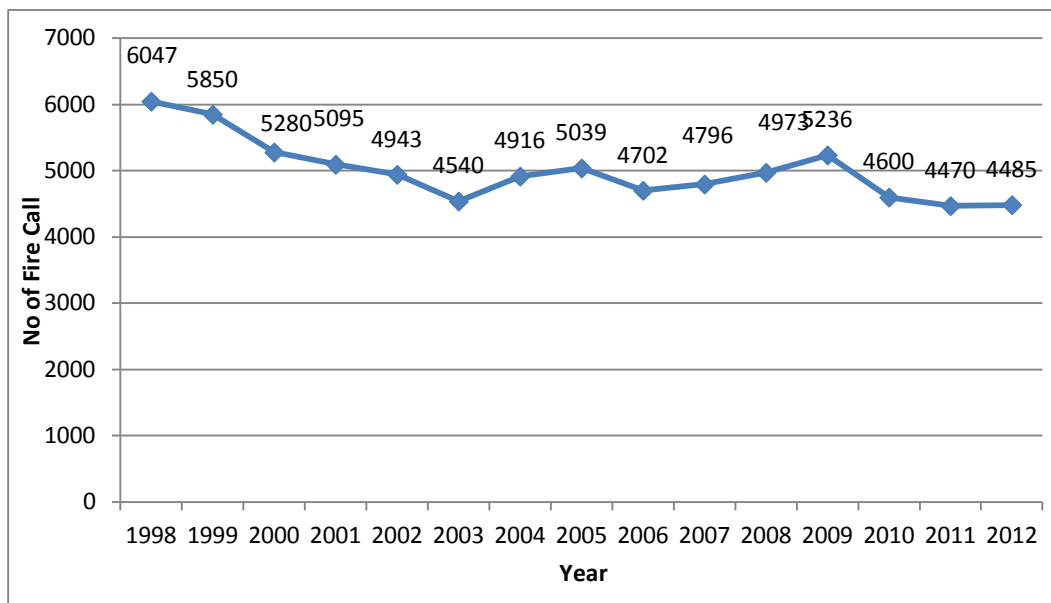
## SINGAPORE CIVIL DEFENCE FORCE FIRE, AMBULANCE AND ENFORCEMENT STATISTICS

### TOPIC A

### FIRE INCIDENT STATISTICS (JAN – DEC 2012)

#### TOTAL NUMBER OF FIRES REMAIN RELATIVELY LOW

SCDF responded to a total of 4,485 fires in 2012, a marginal increase of 15 cases (0.3%) from the 4,470 fires in 2011. Of the 4,485 fires, 2,062 (46.0%) involved rubbish and discarded items in residential premises. The total number of fires responded in 2012 remains relatively low when compared to the yearly average over the last 15 years. The average number of fires attended by SCDF over the last 15 years (1998 to 2012) is 4,998. The number of fires attended by SCDF for the last 15 years is shown in **Graph A1** below.



**Graph A1: Year-to-Year comparison of fire incidents (1998 - 2012)**

## BREAKDOWN OF FIRES IN PREMISES

2. The breakdown of fire calls by type of premises is shown in **Table A1** below. Of the 4,485 fires, 3,184 (71.0%) involved residential premises while 582 (13.0%) involved commercial, industrial, social and communal premises. Non-buildings fires, e.g. vegetation and vehicle fires, contributed to 719 cases (16.0%).

Type of Premises	Jan-Dec 2011	Jan-Dec 2012	Absolute Change	% Change
Residential Premises	3,254	3,184	-70	-2.2%
Non-Residential Premises (Commercial, Industrial, Social & Communal)	565	582	17	3.0%
Non-Building (e.g. vegetation, rubbish in open space, vehicles)	651	719	68	10.4%
Total	4,470	4,485	15	0.3%

**Table A1: Breakdown of fires by type of premises**

## DROP IN NUMBER OF RESIDENTIAL FIRES

3. Fire outbreaks in residential premises fell by 70 cases (2.2%) to 3,184 in 2012. In fact, the number of residential fires dropped to a 5-year low in 2012 as shown in **Table A2** below.

Description	2008	2009	2010	2011	2012
Residential Premises	3,385	3,549	3,267	3,254	3,184

**Table A2: Number of fires in Residential Premises over last 5 years (2008 – 2012)**

## RUBBISH FIRES DRIVING UP FIRE CALLS

4. About 4 in 10 of residential fires are caused by fires in rubbish chutes and rubbish bins. As shown in **Table A3** below, the number of rubbish fires in residential premises went up by 46 cases (3.5%).

Description	Jan-Dec 2011	Jan-Dec 2012	Absolute Change	% Change
Rubbish Fires (Rubbish chutes & rubbish bins)	1309	1355	46	3.5%
Discarded Items Fires	708	707	-1	-0.14%
Unattended Cooking Fires	500	460	-40	-8.0%

**Table A3: Breakdown of fires in Residential Premises (top 3 types)**

5. Rubbish fires in residential premises include fires in rubbish chutes and rubbish bins. Although such fires do not pose a serious threat to residents or cause significant damage to property, the resultant smoke emitted can be a source of irritation to other residents. Attending to such fires also places unnecessary strain on scarce emergency resources.

*Fire Safety Advisories for Rubbish Fires in Residential Premises:*

- a. *Completely extinguish lighted cigarettes before disposal;*
- b. *Douse charcoal embers with water before disposal; and*
- c. *Avoid throwing flammable substances like paint, oil or kerosene into rubbish chutes/bins.*

### **NUMBER OF FIRES INVOLVING DISCARDED ITEMS STILL A CONCERN**

6. Another area of concern is fires involving discarded items at common areas in HDB estates such as corridors, lift lobbies, staircases and void decks. They form the second biggest component of residential fires, accounting for almost a quarter of the total number of residential fires in 2012 (22.2%). Such fires have the potential to be more serious in nature due to the high fire load present and proximity to dwellings. A total of 18 persons sustained injuries from the 707 fires involving discarded items in 2012.

7. Leaving discarded items at the common areas, especially combustible items such as furniture and newspapers, can easily fuel fires when lighted materials such as cigarette butts are indiscriminately thrown onto them. Cluttered common areas can seriously hamper fire-fighting efforts, fire evacuation and conveyance of patients during a medical emergency.

*Fire Safety Advisories to Prevent Fires Involving Discarded Items in Residential Premises*

- a. *Do not leave discarded items at common areas such as corridors, lift lobbies, void decks and staircases;*
- b. *Arrange with Town Councils for the removal of bulky items such as cupboards, sofas, etc;*
- c. *For the placement of items such as shoe racks, residents should adopt the guidelines on the use of common areas in HDB estates (see **Annex A1**); and*
- d. *Anyone who observes items being discarded at common areas should report them to the Town Council.*

### **PUBLIC CUM MEDIA CAMPAIGN ON FIRES INVOLVING DISCARDED ITEMS AT HDB RESIDENTIAL HEARTLANDS**

8. To generate greater public awareness on the dangers of discarding items at common areas in HDB estates, SCDF has embarked on a public education cum media campaign themed "Discarded Items Attract Fires", from

January to March 2013. SCDF is working closely with our community partners namely, the National Fire & Civil Emergency Preparedness Council (NFEC), HDB, Town Councils, the People's Association (PA) and the Community Emergency and Engagement Committees (C2E) to implement the various initiatives.

9. One of the key initiatives of the campaign includes lift door stickers with fire safety advisory messages. From mid-February 2013, over 200 such stickers carrying pictorial fire safety advisories will be put up at the lifts of selected HDB flats. (see **Annex A2** for the artwork for the lift door sticker).

10. There will be an unveiling of the lift door stickers during the Tampines Emergency Preparedness (EP) Day on Sunday 24 February 2013. The Guest-of-Honour for the EP Day event is Mr Masagos Zulkifli Bin Masagos Mohamad, Senior Minister of State for Home Affairs and Foreign Affairs. To further reinforce the message on the dangers of leaving discarded items at common areas, the Vertical Stretcher Challenge<sup>1</sup> would also be organised during the EP Day.

11. Another key initiative of the campaign is a radio message on fire safety advisory for discarded items. The message has been aired from 21 January to end February during the morning and evening rush hours over four Mediacorp radio stations: 93.8FM Live (English), 95.8FM Capital (Chinese), Warna 94.2FM (Malay) and Oli 96.8FM (Tamil).

## **INCREASE IN NUMBER OF FIRES IN COMMERCIAL PREMISES**

12. The number of fires in commercial premises (e.g. offices, hotels, shopping complexes and places of public recreation/entertainment) went up by 11.6%, from 294 to 328 cases, as shown in **Table A4**.

Description	Jan-Dec 2011	Jan-Dec 2012	Absolute Change	% Change
Fires in Commercial Premises	294	328	34	11.6%
Fires in Industrial Premises	176	145	-31	-17.6%
Fires in Social/Communal Premises	95	109	14	14.7%
Total	565	582	17	3.0%

**Table A4: Number of fires in Non-Residential Premises (Commercial, Industrial and Social & Communal)**

<sup>1</sup> The Vertical Stretcher Challenge involves competing teams comprising secondary school students and C2E members where each team carries a mock casualty on a stretcher and races through clear passageways as well as obstructed and cluttered corridors. Five such events have been conducted during the Emergency Preparedness Day events since 2012 at Cheng San-Seletar, Kampong Chai Chee, Bukit Batok, Radin Mas and Pasir Ris West constituencies.

## FIRES AT EATING ESTABLISHMENTS AND MULTI-STOREY CARPARKS ARE MAIN CONTRIBUTING FACTORS FOR INCREASE IN COMMERCIAL PREMISES FIRES

13. Fires at eating establishments (restaurants, coffee shops, canteens and hawker centres) increased by 14 cases (18.2%) and accounted for 27.7% of the total fires in commercial premises in 2012. These fires mainly involved unattended cooking and cooking appliances, stoves and ovens in the kitchen area. 12 people sustained injuries from the 91 fire incidents at eating establishments in 2012. **Table A5** below shows the top five types of fires in commercial premises.

Description	Jan-Dec 2011	Jan-Dec 2012	Absolute Change	% Change
Eating Establishments (canteens/coffee shops/hawker centres restaurants)	77	91	14	18.2%
Multi-Storey Car Parks (MSCP)	44	54	10	22.7%
Offices	40	43	3	7.5%
Shopping Complexes	27	34	7	25.9%
Hotels/Hostels/Boarding Houses	13	14	1	7.7%

**Table A5: Breakdown of fires in Commercial Premises (top five types)**

### *Fire Safety Advisories to Prevent Fires at Eating Establishments/Canteens/Coffee Shops/Hawker Centres/Restaurants*

- a. *Do not leave cooking unattended;*
- b. *Turn off cooking appliances when not in use or whenever you need to attend to other matters, even for a short while;*
- c. *Avoid wearing clothes with long loose sleeves when working near heat sources; and*
- d. *Do not place or store combustible items/materials near stoves.*

14. Fires at multi-storey car parks (MSCP) contributed to 54 cases (16.5%) of the total fires in commercial premises. Most of the MSCP fires (32 cases) involved rubbish and discarded items. The other major component of MSCP fires involved vehicles, contributing to 15 cases.

15. There was also a slight increase in the number of fires in office buildings, shopping complexes and hotels/hostels/boarding houses. One of the major commercial fires in 2012 was the fire that broke out at the East Village Hotel on 16 July 2012. A total of 11 casualties were conveyed to the hospital by SCDF ambulances. The probable cause of the fire was accidental due to hot works being carried out within the premises.

## **DROP IN NUMBER OF FIRES IN INDUSTRIAL PREMISES**

16. Fires in industrial premises registered a drop of 31 cases (17.6%), as shown in **Table A4**. Owners and management should continue to ensure that all measures are taken to prevent fires in such premises at all times as any fire outbreak could translate into valuable losses in man-hours and property damage for the affected businesses.

17. For example, a fire that broke out at No. 141 Kallang Way on 6 September 2012 caused damage to three factory units. The contents involved reels and drums of industrial cables and printing products. Fire fighters had to conduct forcible entry into the burning units and the fire was extinguished in four hours.

18. The number of fires involving social and communal premises rose by 14 cases (14.7%). Most of these fires involved rubbish and discarded items caused by lighted materials and embers from cigarette butts.

## **IMPLEMENTATION OF CERT FOR PUBLIC AND INDUSTRIAL BUILDINGS**

19. The mandatory Company Emergency Response Team (CERT)<sup>2</sup> scheme was launched in 2005 for industries dealing in large quantities of petroleum and flammable materials. The CERTs are subject to an annual audit by SCDF to ascertain their competency level. Early intervention by CERTs prior to the arrival of SCDF has proven to be very effective in preventing incident escalation and injury to occupants of the premises. In 2012, there were 13 cases of CERTs successfully extinguishing fires prior to SCDF's arrival or had assisted to effectively prevent incident escalation.

20. To further enhance the preparedness level of commercial and industrial premises, SCDF will extend the mandatory CERT scheme to include Public and Industrial Buildings (PIBs)<sup>3</sup> with high numbers of occupants or large floor area such as hotels, hospitals, offices, shopping complexes, and factories. The mandatory CERT for the PIBs is targeted for implementation later this year.

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<sup>2</sup> CERT is a small group of trained personnel appointed from within an organisation to deal with any emergencies in the company's premises. CERT's primary role is to mitigate any fire incident and to prevent an escalation prior to the arrival of SCDF.

<sup>3</sup> **Public Building**

(i) is of 9 storeys or more (including any basement) in height; (ii) is used, constructed or adapted to be used as a hospital; (iii) has a floor area of 5,000 square metres or more; or (iv) has an occupant load of 1,000 persons or more.

**Industrial Building**

(i) has a floor area or site area of 5,000 square metres or more; or (ii) has an occupant load of 1,000 persons or more.

## INCREASE IN VEHICLE FIRES

21. The number of vehicle fires in non-building premises increased by 14 cases (7.4%), from 188 in 2011 to 202 in 2012. Of the 202 vehicle fires in 2012, car fires contributed to 100 cases (49.5%). The top five types of vehicle fires are shown in **Table A6** below. Most of the fires occurred while the vehicle was travelling on the road and were caused by ignition sources such as overheating and electrical origin within the engine compartment.

Description	Jan-Dec 2011	Jan-Dec 2012	Absolute Change	% Change
Motorcar (including taxi)	82	100	18	22.0%
Lorry/crane	30	28	-2	-6.7%
Motorcycle/Scooter	26	23	-3	-11.5%
Van/Pickup	18	22	4	22.2%
Bus	18	16	-2	11.1%

**Table A6: Breakdown of Vehicle Fires (top five types)**

## INDISCRIMINATE DISPOSAL OF LIGHTED MATERIALS MAIN CAUSE OF FIRES

22. "Dropped light", which refers to the indiscriminate disposal of lighted materials, remains the highest contributing cause of fires in 2012, contributing to 53.5%, or 2,400 out of 4,485 cases of fires in 2012. "Dropped light" includes lighted cigarette butts that were not completely extinguished, embers from charcoal, lighted incense sticks and matchsticks.

## FIRE INJURIES/FATALITIES

23. There was one fatality due to fire incidents in 2012, arising from a residential fire at 18, Jalan Sultan Road on 28 April 2012. The fire involved the contents of a living room. The number of fire injuries increased by 34 persons, from 165 in 2011 to 199 in 2012, as shown in **Table A7**. The 199 fire injuries arose from 132 incidents.

Description	Jan-Dec 2011	Jan-Dec 2012	Absolute Change	% Change
Number of fire injuries	165	199	34	20.6%
Fatalities	4	1	-3	-75.0%

**Table A7: Number of Fire Casualties**

**FIRE SAFETY GUIDELINES ON THE USE OF COMMON AREAS IN  
HDB ESTATES**

There are hundreds of fires in HDB common areas every year. Obstruction to common corridors and fire fighting equipment (e.g. dry risers & hose reels) can seriously hamper fire fighting efforts and smooth evacuation in a fire emergency, endangering your lives. Following the guidelines will help create a safer living environment for you, your loved ones and your neighbours.

**Guidelines on usage of common corridor**

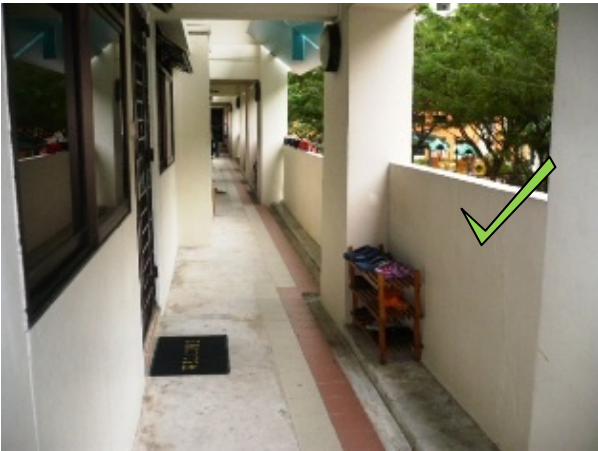
While SCDF does not permit the storage of combustible materials along common corridors, we can allow for the placement of shoe racks, provided:-

- a. It is for the sole purpose of keeping shoes, whereby, it would not constitute a substantial fire load,
- b. A minimum clear escape passage of 1.2 m clearance is to be maintained from the parapet wall where the shoe rack is to be allowed.
- c. No objects are to be placed along common corridors less than 1.2 m wide.
- d. No placement of items such as clothing racks unless they can be easily folded or removed in times of emergency so that they do not obstruct the escape route.



## GUIDELINES ON USAGE OF COMMON CORRIDOR

### PERMITTED



Small shoe rack for the purpose of keeping shoes



Clear width of 1.2 m with placement of foldable/removable clothing rack



Ambulance crew and wheel chair bounded person requires at least 1.2m clear width for access

### NOT PERMITTED



Excessive storage of combustibles



Installation of fixed laundry rack at common corridor



Obstruction to emergency crew access due to constricted corridor

## GUIDELINES ON STAIRCASES AND ITS LANDING

Strictly no placement/storage of objects at staircases and its immediate landing is allowed.

PERMITTED



Clear staircase and landing at all times

NOT PERMITTED



Excessive storage/obstruction at staircase landing



Obstruction to means of escape (staircase)



Obstruction at staircase landing

## GUIDELINES ON MAINTENANCE OF FIRE SAFETY/FIGHTING PROVISIONS

Fire safety/fighting provisions are to be regularly serviced and to ensure its operational readiness at all times. Access to the fire safety/fighting provisions should not be impeded at all times.

- a. No placement/storage of items within dry/wet riser compartment.
- b. No placement/storage of items within hosereel compartment.
- c. Access to dry/wet landing valves and dry/wet riser breeching inlet at common areas should not be obstructed.
- d. Lugs to the landing valves are to be checked regularly to ensure that it is present. If found to be missing, to replace the missing pieces as soon as possible.
- e. Fire Alarm System is to be 'ON' and operationally ready at all times.
- f. Smoke or heat detectors must be properly and regularly maintained.

**PERMITTED**



No storage within dry/wet riser compartment

**NOT PERMITTED**



Excessive storage within dry riser compartment



Obstruction to landing valve and missing landing valve lug



PERMITTED



No obstruction to breaching inlet

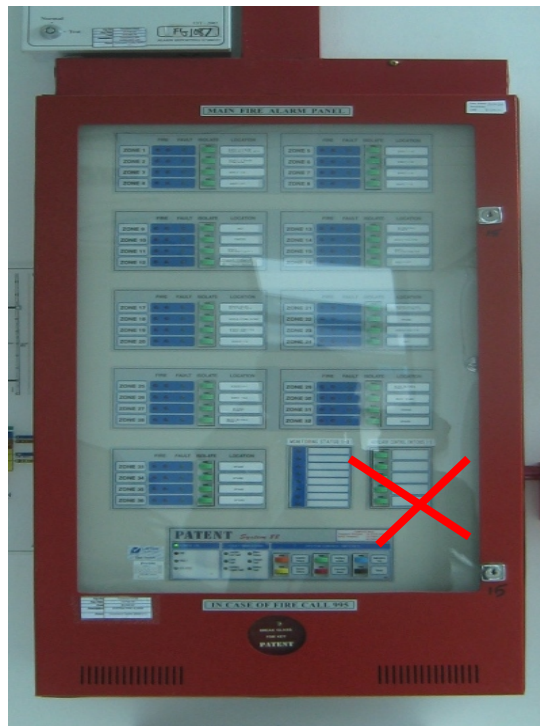
NOT PERMITTED



Non maintenance to the breaching inlet cabinet



Operational ready fire alarm panel with key in break glass panel



Isolation of fire alarm panel and missing key in break glass panel



No obstruction to hosereel within hosereel compartment



Storage of items within hosereel compartment

**DESIGNS FOR THE LIFT DOOR FIRE ADVISORY STICKERS**



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