



FIRE SERVICES DEPARTMENT

FIRE SAFETY REQUIREMENTS FOR E-WASTE DISPOSAL LICENCE (OPEN GROUND)

A General Requirements

1. Emergency Vehicular Access (EVA) should be provided for Fire Service appliances to reach the waste recycling site. Where vehicular access cannot be provided within 30m of the site boundary, additional wheeled-type dry chemical fire extinguishers (20-35kg) shall be provided in every 500m² of storage area.
2. Structures (including shed) on the same site are regarded as adjoining structures if they are less than 1.8 m apart. The Gross Floor Area (GFA) of adjoining structures shall be jointly calculated.
3. All maintenance, alteration and addition works of fire service installations and equipment (FSI) shall be carried out by a Registered Fire Service Installations Contractor (RFSIC) who shall issue Certificate(s) of Fire Service Installations and Equipment (FS 251) to the owner with copies forwarded to the Director of Fire Services within 14 days after completion of the works. A certificate of compliance (FSI/314A, FSI/314B or FSI/314C as appropriate) shall also be submitted by the responsible RFSIC to the Director of Fire Services for the alteration and addition works.
4. All fire service installations and equipment provided shall be :
 - 4.1 kept clear from any obstruction;
 - 4.2 clearly indicated as regard to their locations and methods of operation;
 - 4.3 maintained in efficient working order at all times; and
 - 4.4 inspected at least once every twelve months.
5. Water supplies (e.g. street fire hydrant) for fire-fighting is required to be available within 400m from the site. Should the street fire hydrant (SFH) be situated exceeding 400m from the site, the following sizes of street fire hydrant tanks have to be provided in the site:-

Distance of the available SFH from the site (m)	401-750m	751-1000m	1001-2000m	>2000m
SFH tank size	60m ³	80m ³	160m ³	245m ³

6. A modified hose reel system supplied by a 2m³ Fire Service (FS) water tank shall be provided. There shall be sufficient hose reels to ensure that every part of each structure can be reached by a length of not more than 30m of hose reel tubing. The FS water tank, pump and hose reel shall be clearly marked on plans.
7. Fire alarm system shall be provided throughout the entire structure with one actuation point and one audio warning device to be located at each hose reel point. This actuation point shall include facilities for fire pump start and audio warning device initiation. Fire alarm system shall be in compliance with BS 5839: Part 1:2002 + A2:2008 as required under the FSD Circular Letter No. 1/2009.
8. The installation of interconnected stand-alone fire detectors (either wired or wireless) is required for enclosed structure, provided that activation of any single detector will simultaneously trigger all interconnected alarm devices within the structure.
9. Portable fire-fighting equipment of the approved type shall be provided at the following scales:
 _____ x 9L water type extinguisher (FE) at _____
 _____ x 5 kg dry powder type fire extinguisher (FE) at _____

Portable fire extinguishers shall be provided based on the formula:

- Number of extinguishers = Storage area (m²) × 0.003 (rounded up).
- A Wheeled-type dry chemical extinguishers (20-35kg) shall be provided in every 500m² on every floor of the premises and shall be provided to ensure that every part of the premises can be reached by wheeled type dry chemical fire extinguisher from a distance of not more than 30m.

B Additional Requirements for enclosed structures with a total floor area exceeding 230m² -

10. Sufficient directional and exit sign(s) shall be provided and clearly indicated on plans. Direction and exit sign(s) shall be in compliance with BS 5266: Part 1 as required under FSD Circular Letter No. 5/2008.
11. Emergency lighting shall be provided throughout the entire structure of the waste recycling site and shall be clearly indicated on plans. Emergency lighting shall be in compliance with BS 5266-1:2016, BS EN 1838:2013 & FSD Circular Letter No. 4/2021.
12. A sprinkler system shall be provided to the enclosed structure with the classification of occupancies and capacity of sprinkler tank clearly stated. The sprinkler tank, sprinkler pump room, sprinkler control valve group shall be clearly marked on plans. The sprinkler system shall be in compliance with BS EN 12845:2015 as required under FSD Circular Letter No. 5/2020.

13. Upon the completion of sprinkler system installation, the applicant shall appoint a Registered Structural Engineer (RSE) to certify the structural safety of the sprinkler system.
14. Smoke extraction system shall be provided to enclosed structures with compartment volume exceeding 7,000m unless the aggregate area of openable windows of the compartment exceeds 6.25% of the floor area of the compartment.

Remarks

Should the applicants have insurmountable difficulties in complying with the prescribed requirements, they can submit alternative proposals for FSD's consideration. For example, applicants can adopt the Fire Engineering approach, or submit a study report to explain how they will tackle problems of fire suppression, smoke control, evacuation and access of fire services etc.

GOOD PRACTICE
E-WASTE DISPOSAL LICENCE (OPENGROUND)

Storage methods

1. Internal access not less than 4.5m should be provided for fire appliances within the waste recycling site.
2. Recycling materials should be stored at a location more than 2m from the lot boundary of the waste recycling site.
3. A distance of at least 4.5m should be maintained between batches of recycling materials, and between recycling materials storage location and other structures.
4. Combustible material should not be stacked to a height over of 3m.
5. When the combustible materials are storing in batches, each batch should be less than 40m x 40m.

Fire safety precautionary measures

6. Maintain high degree of fire safety alertness. Never smoke outside the designated smoking area. Moreover, cigarette ends should be entirely extinguished before discard into the trash.
7. Keep away from the accumulated wastes and combustible articles whilst smoking.
8. Avoidance of naked flames in waste recycling site as far as possible. Naked flame should be kept away from combustible materials.
9. Naked flame must be completely extinguished before leaving.

Proper use of electrical appliance and maintenance of electrical installation

10. Avoid overloading of electrical installation.
11. Repair, maintenance or installation of new electrical appliances must be carried out by registered electrical contractors/workers.
12. Waste batteries and waste electronic parts should be stored properly and avoid contacting each other or contacting water which may cause the outbreak of fire.

Precautionary measures during welding and cutting process

13. Adequate ventilation should be provided to prevent any flammable gas from accumulating in the workplace.

14. Particular attention should be drawn to the wind direction during welding or cutting operations to prevent slag or sparks from being carried away by wind and igniting combustible materials in the vicinity.

Check before ending the day's operation

15. The waste recycling site should be checked thoroughly to ensure that the extinguishment of fire source before ending the day's operation.

16. Turning off the main switch of the electricity supply if possible or at least turn off the switch of electrical wiring, the fuel supply valves and various engines.

Storage of Dangerous Goods

17. No storage of any dangerous goods in excess of the exempt quantity within the meaning of the Dangerous Goods (Application and Exemption) Regulation 2012, Chapter 295E, Laws of Hong Kong is permitted, except with a licence or approval granted by the Director of Fire Services. For relevant details, please refer to “A Guide to Application for Dangerous Goods Licence and Approval” (<http://es.hkfsd.gov.hk/dg/en/licence/guide>).