

**ENVIRONMENTAL PROTECTION DEPARTMENT
PRACTICE NOTE FOR PROFESSIONAL PERSONS**

Potentially Hazardous Installations

It is common practice in many countries to single out those installations which can give rise to major accidents and to impose on them special requirements. In Hong Kong, such installations are referred to as Potentially Hazardous Installations or PHIs.

2. PHIs in Hong Kong are involved mainly with the storage or use of large quantities of dangerous goods and include chlorine stores for water treatment works, gas production plants and gas holders, LPG/oil terminals, LPG stores, explosive depots and liquid oxygen store. The distribution of existing PHIs in Hong Kong is given in Figure 1.

3. The Government's policy is to control the risks associated with PHIs within an acceptable level by requiring the installations themselves to be constructed and operated to the highest possible standards and by controlling the land use within their vicinity.

New Potentially Hazardous Installations

4. For all new PHIs, the proponent is required to carry out a detailed Hazard Assessment which demonstrates that the associated risks are acceptable and to define the engineering and management control measures needed to achieve the required level of safety. Advice on which installations are deemed to be PHIs can be obtained from the government offices given in Annex I.

5. The acceptability of risks associated with a PHI is evaluated against a set of Risk Guidelines which are expressed in terms of individual and societal risk. Individual risk is defined as the predicted chance of death per year for an individual who lives or works at a particular place near to a PHI. Individual risk should not exceed 1 in 100,000 (i.e. 10^{-5}) per year. Societal risk is a measure of the likelihood of hazardous incidents that could give rise to a particular total number of deaths of people who live or work near a PHI. The societal risk guideline is expressed as a graph of frequency of event versus total number of deaths in the event, the so-called F-N curve illustrated in Figure 2.

Developments near Potentially Hazardous Installations

6. The government's risk management strategy includes limiting the population living near PHIs. This is achieved by control over new developments within "consultation zones" surrounding the PHIs. Information on these zones, which can extend up to 1,000 metres from some PHIs, is available from the relevant District Planning Office.

Further Information

7. Further information and guidance on the above is available from the Government contacts listed in Annex I.

8. The Risk Guidelines and planning controls applicable to PHIs are published in Chapter 11 of the Hong Kong Planning Standards and Guidelines which is available from Planning Department.

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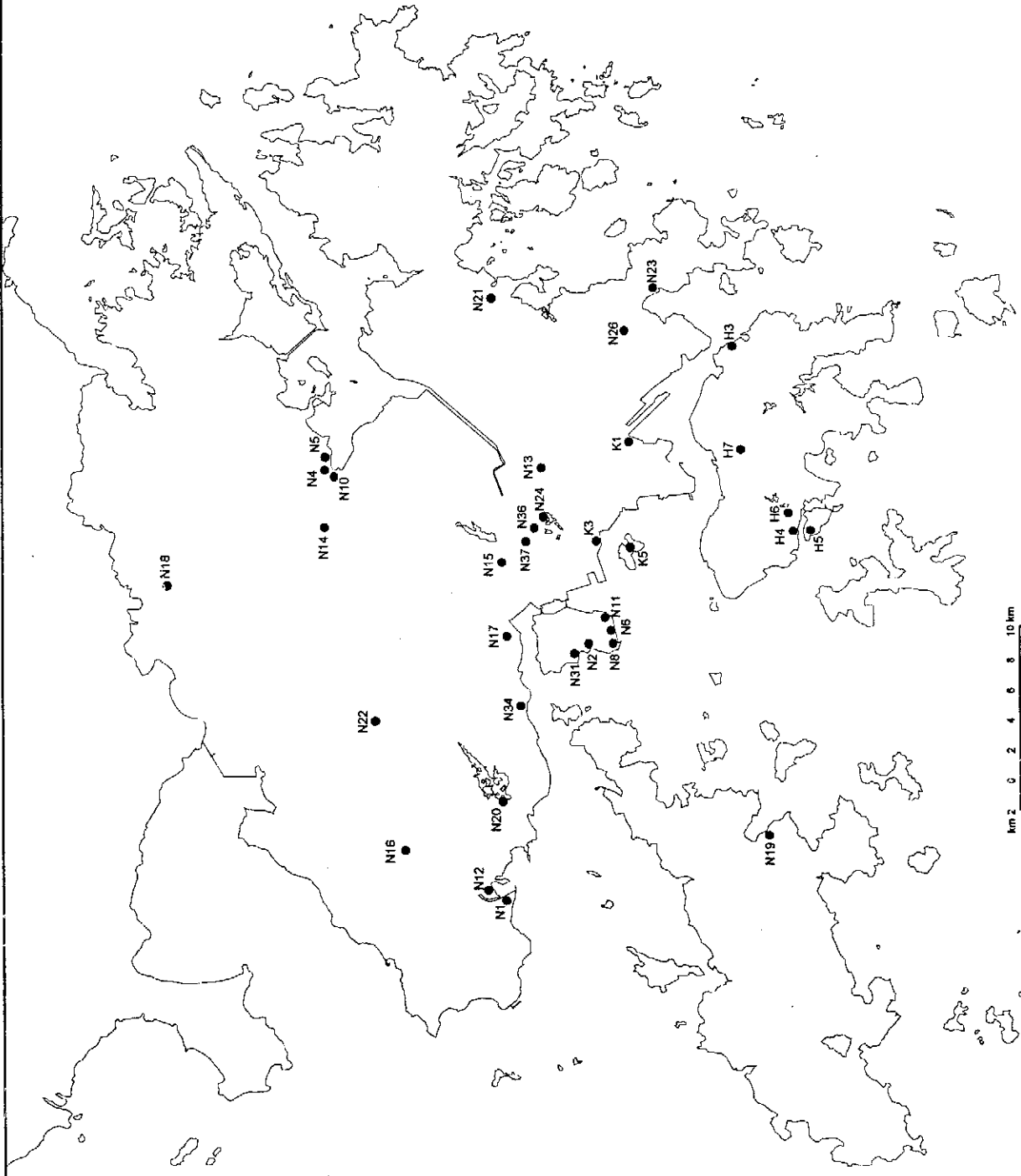
Government Contacts for Further Information

There are existing 34 PHIs in Hong Kong. They include the larger LPG storage facilities, gas works, chlorine stores at water treatment works and explosives factories and depots. Their location and reference numbers are shown in Figure 1.

For enquiries, please contact:

Department	Installation	Telephone
Fire Services Department	N23	733 7746
Water Supplies Department	H6, H7, N19 N13, N14, N18 N15, N36, N37 N16, N17, N20, N22 N21	880 2555 (CE/HK) 399 4228 (CE/MNE) 399 4171 (CE/MSW) 399 4328 (CE/MNW) 399 4338 (CE/MSE)
Gas Standards Office, Electrical & Mechanical Services Department	H3, H4, H5, K1, K3, N1, N2, N4, N5, N6, N8, N10, N11, N12, N31, N34	895 8683
Civil Engineering Department	K5, N24, N26	762 5307
Environmental Protection Department	Risk advisor on: H6, H7, K5, N13, N14, N15, N16, N17, N18, N19, N20, N21, N22, N23, N24, N26, N36, N37	594 6304

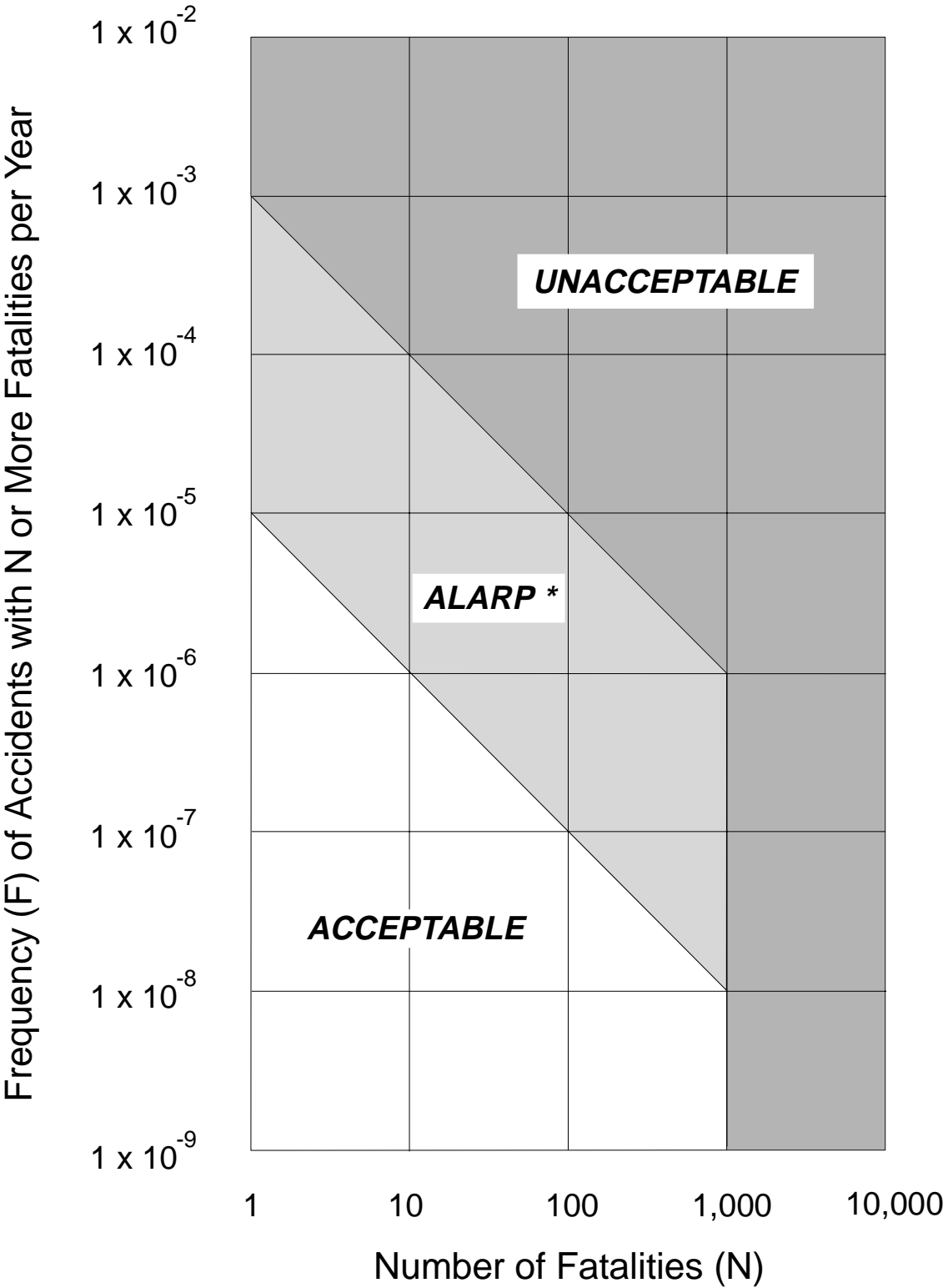
Figure 1 : General Location Plan for Existing PHIs in Hong Kong



Legend

- Potentially Hazardous Installations
 - H3 Shell Estate LPG Store, Heng Fa Chuen, Chai Wan
 - H4 Hong Kong & China Gas Co., Gas Holder, Shek Pai Wan, Aberdeen
 - H5 Shell LPG Transit Depot/Bulk Domestic Supply, Ap Lei Chau
 - H6 WSD Aberdeen WTW
 - H7 WSD Eastern WTW
 - K1 Hong Kong & China Gas Co., Gas Production Plant, Ma Tau Kok Road
 - K3 Mobil Estate LPG Store, Mei Foo Sun Chuen
 - K5 Government Explosives Depot, Stonecutters Island
 - N1 Esso Estate LPG Store, Butterfly Estate, Tuen Mun Area 28
 - N2 Caltex LPG/Oil Terminal, TYTL 48 RP, Tsing Yi
 - N4 Esso Estate LPG Store, Fu Shin Estate, Tai Po Area 17
 - N5 Hong Kong & China Gas Co., Gas Production Plant, Tai Po Area 28
 - N6 Esso LPG/Oil Terminal, TYTL 46, Tsing Yi
 - N8 Mobil LPG/Oil Terminal, TYTL 115, Tsing Yi
 - N10 Caltex Estate LPG Store, Kwong Fuk Estate, Tai Po Area 24
 - N11 China Resources LPG/Oil Terminal, TYTL 57, Tsing Yi
 - N12 Hong Kong & China Gas Co., LPG/Air Mixing Plant, Tuen Mun Area 16
 - N13 WSD Sha Tin WTW, Sha Tin Area 9
 - N14 WSD Tai Po Tau WTW, Tai Po Area 21
 - N15 WSD Tuen Wan WTW, Shing Mun Road, Kwai Chung
 - N16 WSD Tuen Mun WTW, Castle Peak Road, Tuen Mun Area 22
 - N17 WSD Yau Kom Tau WTW, Castle Peak Road, Tsuen Wan
 - N18 WSD Sheung Shui WTW, Fu Tai Au Road, Sheung Shui
 - N19 WSD Silvermine Bay WTW, South Lantau Road, Lantau
 - N20 WSD Tai Lam Chung Prechlorination Plant, Tai Lam Chung
 - N21 WSD Pak Kong WTW, Sai Kung
 - N22 WSD Au Tau WTW, Yuen Long
 - N23 Hong Kong Oxygen & Acetylene Co., Liquid Oxygen Storage, Tseung Kwan O
 - N24 Kowloon Government Explosives Depot, Tai Po Road
 - N26 Ma Yau Tong Ammonium Nitrate/Fuel Oil (AN/FO) Plant No. 1 & 2, Ma Yau Tong
 - N31 Shell LPG/Oil Terminal, West Tsing Yi
 - N34 Shell Industrial LPG Store, San Miguel Brewery, Sham Tseng
 - N36 WSD Tai Po Road WTW, Tai Po Road
 - N37 WSD Shek Lei Pui WTW, Shek Lei Pui
- WTW - Water Treatment Works

Figure 2 : Societal Risk Guideline



* Risk within this region should be reduced to as low as reasonably practicable

Addendum to the ProPECC Practice Note PN 2/94

Original		Amendments	
Annex 1			
<u>Department</u>	<u>Telephone</u>	<u>Department</u>	<u>Telephone</u>
Fire Services Department	733 7746	Fire Services Department	2733 7746
Water Supplies Department	880 2555 399 4228 3994171 399 4328 399 4338	Water Supplies Department	2811 2433 2399 4228 2399 4171 2399 4328 2354 5567
Gas Standards Office Electrical & Mechanical Services Department	895 8683	Gas Utilization Division Electrical & Mechanical Services Department	2808 3683
Civil Engineering Department	762 5307	Civil Engineering Department	2762 5307
Environmental Protection Department	594 6304	Environmental Protection Department	2594 6304