

HEALTH & SAFETY - Petrol Pumps/Fuel

1. STORAGE OF PETROL

- RISKS = Fire, explosion, environmental damage, health of individuals

2. VEHICLE MOVEMENT

= considerable movement of ALL vehicles on forecourt - lead to accidental collision with structures, people & vehicles

3. HAZARDOUS SUBSTANCES

= spillage, leakage, can cause respiratory problems, dermatitis or chemical burns

4. MANUEL HANDLING

= removing access covers to storage tanks & moving LPG cylinders & positioning of large cleaning fluid containers, may cause injury/muscular strains

5. SNOW & ICE

= on forecourt becomes a risk to pedestrians & skidding of vehicles
- fuel & oil spillages on forecourt can present a slipping hazard

6. MISUSE/BADLY MAINTAINED EQUIPMENT

= increased risk electric shock, when using equipment externally in a wet environment
E.G. Commercial vacuums/car washes

7. OBSTRUCTION

= of exits by stock/packaging, can prevent any escape & provide fuel for fires

8. ROBBERY/RISK of VIOLENCE/DAMAGE to PUMPS

+ compressed air systems + ABUSE of & to

9. PETROL VAPOUR

= petrol gives off highly inflammable vapour even at LOW temperatures. Because of flammability of petrol vapours, service stations carry a risk of fire or explosion NOT common to other types of retail outlets. Ignition of petrol vapours can happen if vapour comes into contact with a heat source capable of igniting it! An ignition spark might come from an electrical switch, a cigarette or a static electrical discharge. Petrol vapour is HEAVIER than air & tends to sink to the lowest possible level of its surroundings & may gather in tanks, cavities, drains pits or other low points & will travel across the ground due to gravity (down-hill) or may be carried in the direction of the wind.

10. HAZARDOUS AREA ZONING of SERVICE STATIONS

= in order to prevent risk of ignition, the service station MUST be zoned on the basis of the probability of an EXPLOSIVE VAPOUR MIXTURE FORMING! Hazardous areas, as found around a service station, are classified into 3 categories:

ZONE CLASSIFICATION for VAPOURS:

ZONE 0 = hazardous area in which a flammable atmosphere is continuously present OR present for long periods

ZONE 1 = hazardous area likely to occur in normal operation

ZONE 2 = hazardous area - not likely to occur in normal operation & IF it occurs, will exist for a short period

DRAWINGS of 3 ZONES so the drawings will need to INDICATE plans & elevations, to show their FULL extent.
- these ZONING diagrams should be contained in a document called: "An Explosion Protection Document" - (EPD)

Any electrical equipment (or mechanical equipment capable of generating enough heat to cause ignition) MUST be suitably rated & certified before they can be installed in a hazardous ZONE within the station. To ensure quality of electrical installation, ALL service stations MUST have their electrical installation TESTED & CERTIFIED by a competent electrician, familiar with EXPLOSIVE ATMOSPHERES.

FUEL DELIVERY

= regulations require petrol storage operators supervise ALL petrol deliveries. However, where local licensing authority gives prior consent, a petrol store may be MODIFIED to allow deliveries under the control of the ROAD TANKER DRIVER ONLY.

FUEL LEAKS IN THE ENVIRONMENT

= if released into environment, petrol & diesel POLLUTE the SOIL & WATER SUPPLIES. Whenever petrol escapes from an UNDERGROUND STORAGE TANK or PIPELINES, it can travel SIGNIFICANT DISTANCES.

PETROL VAPOURS can find their way into BASEMENTS of BUILDINGS & PUBLIC DRAINS with SERIOUS CONSEQUENCES, should the vapours come in contact with an IGNITION source. The LEVEL of RISK with FUEL LEAKAGE means early detection essential. IMMEDIATE correctiv action MUST be taken when LEAKS DETECTED.

Therefore MONITORING of FUEL DELIVERED, STORED & DISPENSED at ANY service station in order to put EMERGENCY RESPONSE PLANS in action.

FIRE & EXPLOSION RISK

DANGEROUS SUBSTANCES ACT 1972 (DSA) - Petroleum (Petrol) Storage Licence

NB = ALL residents MUST check their current Home Insurance Policies, as to how far from 6 unmanned petrol pumps MUST be from their property & HOW living next to a petrol station affects each households insurance premiums.

DEVALUATION of properties in area

ALSO: Location is OVER Alcad Battery Factory

= Cadmium, Radon + other dangerous pollutants in the ground.

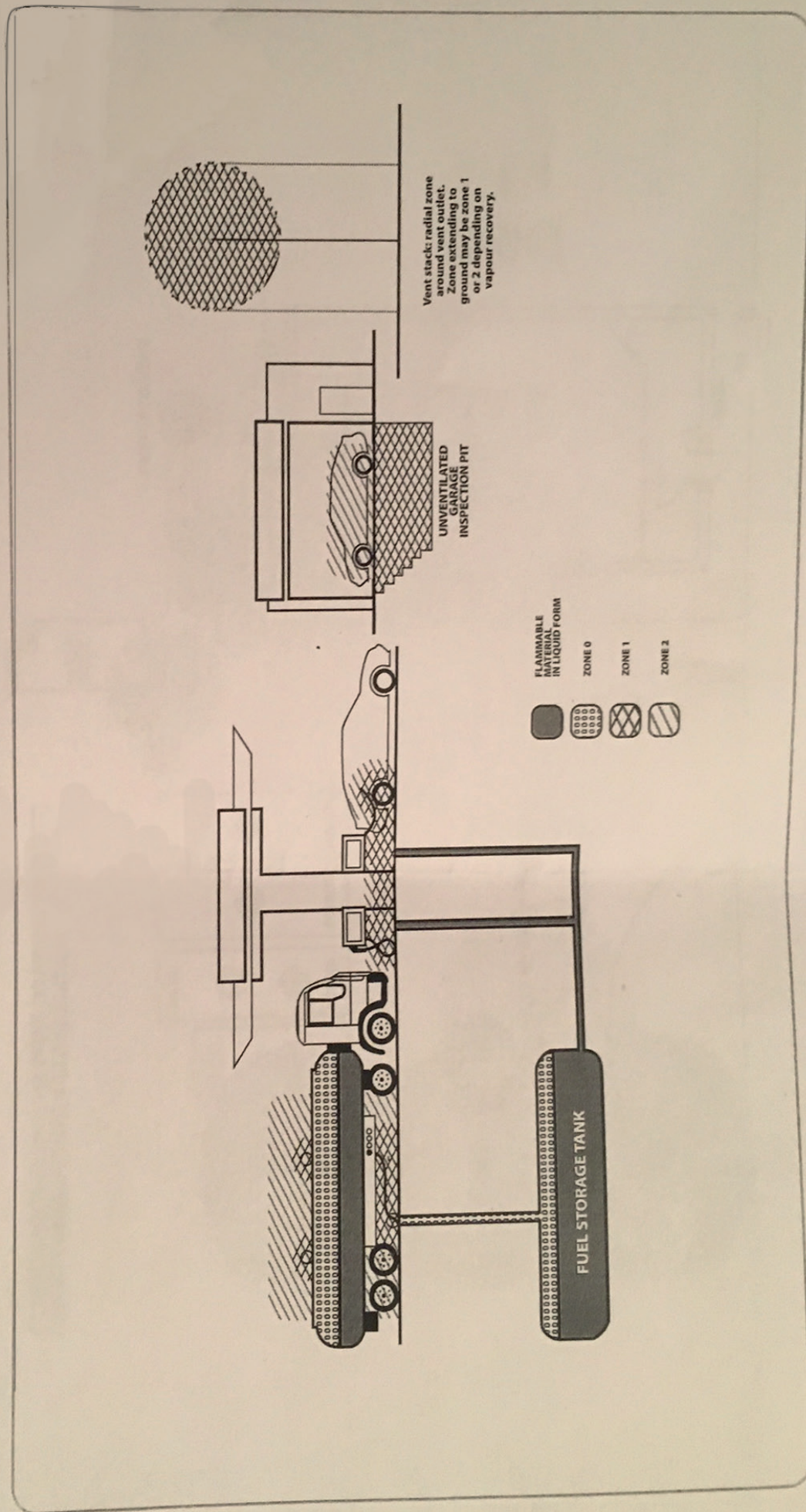
- Locals would need to SEE all reports on EVERYTHING mentioned here.

- Need to see "FIRE SERVICE REPORT & RECOMMENDATIONS"

Fire & Explosion Risks in Service Stations

Graphic 1:

Example of side elevation of a petrol station illustrating hazardous area zones – EX rated equipment required in all identified zones.
Each site must carry out a site specific assessment.



Fire & Explosion Risks in Service Stations

Graphic 2:

Example of a plan view of a petrol station illustrating hazardous area zones – EX rated equipment required in all identified zones. Each site must carry out a site specific assessment.

