

**SUPPLEMENTARY PLANNING POLICY
GUIDANCE**

**MAJOR ACCIDENT HAZARDS AND
HAZARDOUS SUBSTANCES**

November 2004



March 2004

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0 INTRODUCTION

0.1 The Purpose Of This Document

0.1.1 This document sets out a planning policy framework for implementing the land use planning objectives of the Seveso II Directive through the control of development involving hazardous substances and of development close to installations using/keeping hazardous substances. The overall objective is to reduce the number of people at risk and to reduce the likelihood and the extent of harm if an accident occurs.

0.2 The Structure Of This Document

0.2.1 The document is in two parts. The First Part briefly outlines the objectives and content of the Seveso Directive, whilst the Second Part sets out the policy framework.

PART 1 THE SEVESO II DIRECTIVE ON THE CONTROL OF MAJOR ACCIDENT HAZARDS

1.1 THE SEVESO II DIRECTIVE

1.1.1 The objectives of the Seveso II Directive (EU Council Directive 96/82/EC) are to

- prevent major accidents involving hazardous or dangerous substances; and
- limit their consequences for man and the environment

1.1.2 The Directive addresses the management of health, safety and impact on the environment. Its emphasis is on prevention and it places the onus on the operator of the installation where dangerous substances are present to take the necessary measures to achieve this. The Directive requires the establishment of a 'competent authority' to implement (or ensure the implementation) of the duties which it sets out.

1.1.3 The competent authority is set out in the Control of Major Accident Hazard Regulations 2003 (Legal Notice 37 of 2003) (COMAH) and consists of

- 1 the Occupational Health and Safety Authority (OHSA);
- 2 the Environment Protection Directorate of MEPA; and
- 3 the Civil Protection Department.

These Regulations transpose the Directive into local legislation.

- 1.1.4 Operators of existing and new installations must notify the competent authority and must bring changes in the amount or type of dangerous substance to the notice of the authority.
- 1.1.5 The dangerous substances and qualifying quantities are set out in Annex I to the Directive and are transposed in Schedule 1 of the Control of Major Accident Hazards Regulations 2003. The list comprises a number of named substances; and, in addition, it includes 10 generic categories of substances, which has the effect of extending the scope of the Directive to a very wide range of substances.
- 1.1.6 The precise measures which operators must take vary according to the quantities of dangerous substances
- a) **Lower tier establishments** (those where the quantity of dangerous substance exceeds a minimum qualifying quantity but falls below an upper one) are required to notify the competent authority of the presence of dangerous substances and to have in place major-accident prevention policies.
- b) **Top tier establishments** (those where the quantity of dangerous substances exceeds the upper qualifying quantity) must comply with additional requirements. These include
- preparation of a safety report,
 - public access to safety reports,
 - preparation and testing of on-site and off-site emergency plans, and
 - informing members of the public likely to be affected by a major accident.
- 1.1.7 In addition the Directive has a number of land use planning objectives, which are outlined in the next section.

1.2 THE LAND USE PLANNING REQUIREMENTS OF THE DIRECTIVE

1.2.1 Article 12 of the Directive (reproduced in Annex 1) requires that the objectives of

- preventing major accidents involving hazardous substances; and
- limiting their consequences for man and the environment

are taken into account in land use planning policies.

1.2.2 This is to be achieved through the three main mechanisms. Firstly, there should be controls on

- the location of new establishments at which hazardous substances are present or are likely to be present;
- modifications at existing establishments where hazardous substances are present, and
- new developments in the vicinity of existing establishments that would introduce new occupants at an unacceptable level of risk from the consequences of a major accident. Such developments includes locations where concentrations of population are likely to arise such as transport links; locations frequented by the public; and residential areas.

1.2.3 Secondly, land use planning policies and plans, and the procedures for implementing them, should ensure that appropriate distances are maintained between establishments where hazardous substances are present and residential areas, areas of public use and areas of particular natural sensitivity or interest.

1.2.4 Finally, appropriate consultation procedures should be established to implement the policies and ensure that technical advice on risks is available when decisions are taken. Public involvement is important and the public must be able to give its opinion on

- New establishments
- Modifications to existing establishments
- Development around existing establishments

1.2.5 The second part of this document implements these requirements.

PART 2 PLANNING POLICY FOR THE CONTROL OF MAJOR ACCIDENT HAZARDS

2.1 INTRODUCTION

2.1.1 This Part sets out land use planning policies for

- New hazardous development; and
- Development in the vicinity of existing installations keeping hazardous substances

2.1.2 Since the direct impetus for the preparation of this planning policy comes from Malta's accession to the EU and the consequent need to transpose and implement the Seveso II Directive, the current planning policy framework provides little guidance on the issue of major accident hazards. Annex 2 summarises those current policies which have some relevance.

2.2 POLICY - NEW HAZARDOUS INSTALLATIONS AND DEVELOPMENT AT EXISTING HAZARDOUS INSTALLATIONS

2.2.1 Applications for new hazardous installations will be approved only if they

- a) will have no harmful or adverse impact on the environment due to the inherent hazardous nature of the installation or on existing or proposed adjoining land uses;**
- b) are located so as to ensure adequate separation from other uses, including residential areas, areas of public use and areas of particular natural sensitivity or interest, so as to guarantee safety and amenity;**
- c) are located so as to ensure adequate separation from other hazardous installations, to minimise the likelihood of the exacerbation of the consequences of a major accident;**
- d) comply with other relevant Structure Plan and Local Plan policies.**

Proposals for development at existing hazardous installations which involves the addition of new dangerous substances or an increase in the quantity of existing dangerous substances will be assessed against the criteria set out above.

2.2.2 Hazardous installations are those which would have on site dangerous substances in quantities that exceed the lower tier thresholds, as defined and set out in Schedule 1 of the COMAH Regulations (and Annex 1 of the Seveso II Directive). Thirteen such installations have been identified (the first nine are top tier installations) :-

Delimara Power Station
LPG Plant
Enemalta Fuel Storage

Qajjenza, B'Bugia
B'Bugia

Has Saptan installation	B'Bugia (near airport runway)
Wied Dalam installation	B'Bugia
Ras Hanzir installation	Grand Harbour (Kordin)
MOBC	Spencer Hill, Marsa
Oiltanking Malta	Port of Marsaxlokk, B'Bugia.
San Lucian Oil Co.	Qajjenza Rd, B'Bugia
Power Station	Marsa
Waste oils	Spencer Hill, Marsa
Aviation fuelling station	Luqa Airport
LPG Storage	San Lawrenz, Gozo

2.2.3 The central objectives of this policy are to ensure both the safety of the public and the protection of the environment. New hazardous installations are likely to require Environmental Impact Assessment and as part of this it will be necessary to assess the risks of, and from, accidents, and their likely effects and so determine whether there is adequate separation from 'public areas'. Similarly potential impacts on the environment from accidents should be assessed. It will also be important to minimise the potential for a 'domino effect' in the event of a major accident by ensuring that installations are sufficiently distant from one another. Thus Environmental Impact Assessment is necessary to determine the overall acceptability of new installations and not solely to address the mitigation of impacts.

2.2.4 Applications for new development at hazardous installations should indicate the location(s) of the hazardous substance(s) on site, including where use is or will be made of moveable containers rather than fixed storage.

2.2.5 Onsite developments and new developments offsite in the vicinity that have been planned but not completed also need to be taken into account in the decision-making process.

2.3 POLICY - DEVELOPMENT IN THE VICINITY OF HAZARDOUS INSTALLATIONS

2.3.1 Proposed development within the vicinity of the following hazardous installations keeping dangerous substances

Delimara Power Station	Toxic Gas
Il-Qajjenza LPG plant	Thermal Hazard
Birzebbuga Fuel Storage	Thermal Hazard
San Lawrenz LPG installation	Thermal Hazard

will not be permitted where this would cause material harm to the health and safety of people.

Decisions on whether or not there would be material harm to the health and safety of people are based on

- 1) the Consultation Zones Map for each installation in Annex 3;**
- 2) the type of development proposed and its sensitivity level as set out in the Sensitivity Tables in Annex 3; and**
- 3) the Decision Matrix.**

Decision Matrix

Level of Sensitivity	Development in Inner Zone	Development in Middle Zone	Development in Outer Zone
1	A	A	A
2	NA	A	A
3	NA	NA	A
4	NA	NA	NA

A = Acceptable NA = Not Acceptable

This policy will also apply to

- i) those installations noted above which may be relocated; and**
- ii) any new hazardous installations (as defined in 2.2.2 above) which may pose a hazard to the health and safety of people.**

2.3.2 The objective of this policy is to ensure that development does not take place within the vicinity of the identified hazardous installations which might place the public, especially large numbers of people or vulnerable members of the public, using or occupying that development, at the risk of harm in the event of an accident.

2.3.3 Four installations are named in the policy. Of the total of 13 hazardous installations, these four are those which store/use hazardous substances which are likely to be harmful to people, rather than the environment, in the event of a major accident (as noted earlier, this number may change with alterations to the Directive).

2.3.4 The approach in this policy to determining whether or not there would be harm to the public is based on the methodology used by the UK's Health and Safety Executive (HSE).

2.3.5 Three Zones have been identified, by the HSE, around each establishment, based on the likelihood of an accident, the nature of an accident and its effects/consequences, and the risk to the population (Annex 4 gives some background to this).

2.3.6 Types of development are classified into four levels of sensitivity in the Sensitivity Tables, depending on the nature of the population which would be using, visiting or occupying them as follows

Sensitivity Level 1 - Based on normal working population

Sensitivity Level 2 - Based on the general public at home and involved in normal activities

Sensitivity Level 3 - Based on vulnerable members of the public

Sensitivity Level 4 - Large examples of 3 and large outdoor examples of 2

2.3.7 The Decision Matrix brings together the type of development, its sensitivity level and the zone in which it is located and indicates whether a particular type of development would be acceptable in a specific zone.

2.3.8 The Rules following the Sensitivity Tables indicate how the Sensitivity Tables and the Decision Matrix should be used where

- a) the development straddles a zone boundary;
- b) the application is for multiple use development (mixed development);
- c) the development on a site with an existing permitted use.

2.3.9 It is necessary also to consider the potential for cumulative or incremental development and to have regard to the overall capacity of a site to accommodate development, based on the objective of the policy to ensure that larger numbers of people are not placed at risk. Where redevelopment takes place, Rule 4(c) makes it clear that only development with a Sensitivity Level which is the same as or less than that of the existing development should be permitted; this means that if a redevelopment site is proposed to be divided into plots or an application is submitted for only part of that site, the overall capacity of that site in terms of the number and density of residential units and the resultant Sensitivity Level should be considered. For 'greenfield' sites (previously undeveloped land) the overall capacity of the site and of the remainder of the undeveloped land in that zone should be considered together with the potential development density. The appropriate Sensitivity Level from Table Level 2 should then be applied.

2.3.10 The LPG plant at Qajjenza and the Birzebbuga Fuel Storage depot are included in this policy, although they are to be relocated. Once the relocation has taken place, then it will be necessary to define safeguarding zones for the new sites. Similarly safeguarding zones will be identified for any new hazardous installations. These will be subject to this policy.

2.3.11 It may be necessary, in certain cases, to consult the OHSA if a particular form of development is not included in the Sensitivity Tables or in relation to developments at the installation itself.

ANNEX 1

LAND USE PLANNING REQUIREMENTS OF THE SEVESO II DIRECTIVE

Article 12 of the Directive requires that:

1. *"Member States shall ensure that the objectives of preventing major accidents and limiting the consequences of such accidents are taken into account in their land-use planning and/or other relevant policies. They shall pursue these objectives through controls on:*

(a) the siting of new establishments;

(b) modifications to existing establishments covered by Article 10;

(c) new developments such as transport links, locations frequented by the public and residential areas in the vicinity of existing establishments, where the siting or developments are such as to increase the risk or consequences of a major accident.

Member States shall ensure that their land use and/or other relevant policies and the procedures for implementing those policies take account of the need, in the long-term, to maintain appropriate distances between establishments covered by this Directive and residential areas, areas of public use and areas of particular natural sensitivity or interest, and, in the case of existing establishments, of the need for additional technical measures in accordance with Article 5 so as not to increase the risks to people.

2. *Member States shall ensure that all competent authorities and planning authorities responsible for decisions in this area set up appropriate consultation procedures to facilitate implementation of the policies established under paragraph 1. The procedure shall be designed to ensure that technical advice is available, either on a case-by-case or on a generic basis, when decisions are taken."*

ANNEX 2 CURRENT PLANNING POLICY CONTEXT

A2.1 Structure Plan

A2.1.1 The current Structure Plan does not directly address the issue of major accident hazards or dangerous/hazardous substances (other than hazardous waste).

A2.1.2 It does, though, seek to ensure that “proposed development does not have a deleterious impact on existing or planned adjacent uses” (paragraph 7.1), through Policy BEN 1 which states

Development will not normally be permitted if the proposal is likely to have a deleterious impact on existing or planned adjacent uses because of visual intrusion, noise, vibration, atmospheric pollution, unusually high traffic generation, unusual operating times, or any other characteristic which in the opinion of the Planning Authority would constitute bad neighbourliness.

This policy is, however, directed to more general ‘bad neighbourly’ development.

A2.2 Local Plans

A2.2.1 The two approved Local Plans – the Marsaxlokk Bay and the Grand Harbour Local Plans – contain policies relevant to the identified hazardous installations.

Marsaxlokk Bay Local Plan

A2.2.2 A number of policies in the approved Marsaxlokk Bay Local Plan (approved May 1995) deal with specific installations.

LPG Plant, Qajjenza	Policy MQ02 proposes its relocation as it constitutes a hazard to safety – preferably to a site at or near Fort Benghisa identified in policy MV03 - and MQ03 sets out preferred uses for the vacated site
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Delimara Power Station	MD04 requires a landscaping scheme to reduce the Power Station’s visual impact; MD05 ‘allocates’ the land to the south for an extension or for uses requiring storage/working space related to berthing and other marine activities; and MD06 seeks measures to deal with cooling effluent and smokestack emissions
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31st March Fuel MB02 proposes its (long term) relocation as it Storage, Birzebuga constitutes a hazard to safety

Grand Harbour Local Plan

A2.2.3 The Grand Harbour Local Plan, approved in April 2002, contains one general policy, which has broad application in relation to hazardous processes rather than hazardous substances, and a policy for the Ricasoli Industrial Estate.

General Policy	GS07	Where permission is sought for any form of industrial development, even within established industrial complexes, the authority will have special regard to the processes involved and the likely effects on any residential areas in the vicinity. Permission will be refused if, in the opinion of the Authority, the impact on residences is likely to be unacceptable. Such applications will only be reconsidered on the understanding that mitigation measures will be introduced to deal with any problem likely to be caused.
Ricasoli Estate	Industrial	GK20 – encourages the more intensive use of the existing estate, to avoid the need for extension, and its upgrading. The policy also seeks to exclude General Industry (Classes 13 to 16 of the Use Classes Order) and to maintain the open area of land between the estate and Xghajra

**ANNEX 3
SENSITIVITY TABLES**

LEVEL 1: PEOPLE AT WORK, PARKING

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
L1.1 WORKPLACES -	Offices, factories, warehouses, haulage depots, farm buildings, non-retail markets, builders yards.	Workplaces (predominantly non-retail), providing for less than 100 occupants in each building and less than 3 occupied storeys – Level 1 .	Places where the occupants will be fit and healthy, and could be organised easily for emergency action. Members of the public will not be present or will be present in very small numbers and for a short time.
	Sheltered workshops	EXCLUSIONS L1.1 x1 Commercial and industrial, storage and distribution development providing for 100 or more occupants in any building or 3 or more occupied storeys in height - Level 2 (except where the development is at the major hazard site itself it remains Level 1). L1.1 x2 Commercial and industrial, storage and distribution development specifically for the handicapped - Level 3 .	Substantial increase in numbers at risk with no direct benefit from exposure to the risk. Those at risk may be especially vulnerable to injury from hazardous events.
L1.2 - PARKING AREAS	Car parks, truck parks, lock-up garages.	Parking areas with no other associated facilities (other than toilets) – Level 1 .	
	Car parks with picnic areas, or at a retail or leisure development, or serving a park and ride interchange.	EXCLUSIONS L1.2 x1 Where parking areas are associated with other facilities and developments the sensitivity level and the decision will be based on the facility or development.	

LEVEL 2: DEVELOPMENTS FOR USE BY THE GENERAL PUBLIC (1 of 3)

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
L2.1 - HOUSING	Terraced houses, flats, bungalows, villas, etc.	Developments up to and including 30 dwelling units and at a density of no more than 40 per hectare – Level 2.	Development where people live or are temporarily resident. It may be difficult to organise people in the event of an emergency.
	<p>Infill, backland development.</p> <p>Larger housing developments.</p>	<p>EXCLUSIONS</p> <p>L2.1 x1 Developments of 1 or 2 dwelling units - Level 1.</p> <p>L2.1 x2 Larger developments for more than 30 dwelling units – Level 3.</p> <p>L2.1 x3 Any developments (for more than 2 dwelling units) at a density of more than 40 dwelling units per hectare - Level 3.</p>	<p>Minimal increase in numbers at risk.</p> <p>Substantial increase in numbers at risk.</p> <p>High density developments.</p>
L2.2 - HOTEL/ HOLIDAY ACCOMMODATION	Hotels, guest houses, hostels, youth hostels, holiday camps, holiday homes, halls of residence, dormitories.	Accommodation up to 100 beds – Level 2.	Development where people are temporarily resident. It may be difficult to organise people in the event of an emergency.
	<p>Guest houses etc.</p> <p>Larger hotels etc.</p>	<p>EXCLUSIONS</p> <p>L2.2 x1 Accommodation of less than 10 beds - Level 1.</p> <p>L2.2 x2 Accommodation of more than 100 beds – Level 3.</p>	<p>Minimal increase in numbers at risk.</p> <p>Substantial increase in numbers at risk.</p>
L2.3 - TRANSPORT LINKS	Dual carriageways, arterial roads	Major transport links – Level 2.	
	Local access roads.	<p>EXCLUSIONS</p> <p>L2.3 x1 Single carriageway roads – Level 1.</p>	Small period of time exposed to risk.

LEVEL 2: DEVELOPMENTS FOR USE BY THE GENERAL PUBLIC (2 of 3)

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
2.4 - INDOOR USE BY PUBLIC	<p>Food & Drink: Restaurants, Cafes, drive-through fast food, bars, etc.</p> <p>Retail: Shops, showrooms, supermarkets, retail warehouses, small shopping centres, markets, financial and professional services to the public, etc.</p> <p>Community & adult education: Libraries, art galleries, museums, exhibition halls, day surgeries, health centres, religious buildings, community centres. Adult education, 6th form college, college of FE.</p> <p>Assembly & leisure: Bus stations, airport and ferry terminals. Cinemas, concert/ bingo/ dance halls. Sports/ leisure centres, sports halls. Facilities associated with golf courses (e.g. changing rooms, club house), indoor go-kart tracks.</p>	<p>Areas for use by the general public where gross floor space is from 250 m² up to 5000 m² – Level 2.</p>	<p>Developments where members of the public will be present (but not resident) Emergency action may be difficult to co-ordinate.</p>
		<p>EXCLUSIONS</p> <p>L2.4 x1 Development with less than 250 m² gross floor space – Level 1.</p> <p>L2.4 x2 Development with 5000 m² or more gross floor space – Level 3.</p>	<p>Minimal increase in numbers at risk</p> <p>Substantial increase in numbers at risk.</p>

LEVEL 2 : DEVELOPMENTS FOR USE BY THE GENERAL PUBLIC (3 of 3)

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
L2.5 - OUTDOOR USE BY PUBLIC	<p>Food & Drink: Food festivals, picnic area.</p> <p>Retail: Outdoor markets, car boot sales, funfairs.</p> <p>Community & adult education: Open-air theatres and exhibitions.</p> <p>Assembly & leisure: Bus stations, park & ride, ferry terminals. Sports stadia, funfairs, theme parks, viewing stands. Marinas, playing fields, BMX/go- kart tracks. Country parks, nature reserves, picnic sites, marquees.</p>	<p>Principally an outdoor development for use by the general public i.e. developments where people will predominantly be outdoors and not more than 100 people will gather at the facility – Level 2.</p>	<p>Developments where members of the public will be present (but not resident) either indoors or outdoors. Emergency action may be difficult to co-ordinate.</p>
	<p>Outdoor markets, car boot sales, funfairs. Picnic area, park & ride interchange, viewing stands, marquees.</p> <p>Theme parks, funfairs, large sports stadia and events, open air markets, outdoor concerts, pop festivals.</p>	<p>EXCLUSIONS</p> <p>L2.5 x1 Predominantly open-air developments likely to attract the general public in numbers greater than 100 people but less than 1000 – Level 3.</p> <p>L2.5 x2 Predominantly open-air developments likely to attract the general public in numbers greater than 1000 people – Level 4.</p>	<p>Substantial increase in numbers at risk and more vulnerable due to being outside.</p> <p>Very substantial increase in numbers at risk, more vulnerable due to being outside and emergency action may be difficult to co-ordinate.</p>

LEVEL 3: DEVELOPMENTS FOR USE BY VULNERABLE PEOPLE

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
L3.1 - INSTITUTIONAL ACCOMMODATION AND EDUCATION	Hospitals, convalescent homes, nursing homes. Old peoples homes with warden on site or 'on call', sheltered housing. Nurseries, crèches. Schools and academies for children up to school leaving age. Prisons.	Institutional, educational and special accommodation for vulnerable people, or that provide a protective environment – Level 3.	Places providing an element of care or protection. Because of age, infirmity or state of health the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult.
	Hospitals, convalescent homes, nursing homes, old peoples homes, sheltered housing. Schools, nurseries, crèches.	<p align="center">EXCLUSIONS</p> L3.1 x1 24-hour care where the site on the planning application being developed is larger than 0.25 hectare – Level 4. (But not prisons which stay at Level 3). L3.1 x2 Day care where the site on the planning application being developed is larger than 1.4 hectare - Level 4.	Substantial increase in numbers of vulnerable people at risk. Substantial increase in numbers of vulnerable people at risk.

LEVEL 4: VERY LARGE AND SENSITIVE DEVELOPMENTS

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
[Note: All Level 4 developments are by exception from Level 2 or 3. They are reproduced in this table for convenient reference.]			
L4.1 - INSTITUTIONAL ACCOMMODATION	Hospitals, convalescent homes, nursing homes, old peoples homes, sheltered housing.	Large developments of institutional and special accommodation for vulnerable people (or that provide a protective environment) where 24-hour care is provided. And where the site on the planning application being developed is larger than 0.25 hectare – Level 4. (But not prisons which stay at Level 3).	Places providing an element of care or protection. Because of age or state of health the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult. The risk to an individual may be small but there is a larger societal concern.
	Nurseries, crèches. Schools for children up to school leaving age.	Large developments of institutional and special accommodation for vulnerable people (or that provide a protective environment) where day care (not 24-hour care) is provided. And where the site on the planning application being developed is larger than 1.4 hectare - Level 4.	Places providing an element of care or protection. Because of age the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult. The risk to an individual may be small but there is a larger societal concern.
L4.2 - VERY LARGE OUTDOOR USE BY PUBLIC	Theme parks, large sports stadia and events, open air markets, outdoor concerts, pop festivals.	Predominantly open air developments where there could be more than 1000 people present – Level 4.	People in the open air may be more exposed to toxic fumes and thermal radiation than if they were in buildings. Large numbers make emergency action and evacuation difficult. The risk to an individual may be small but there is a larger societal concern

RULES FOR USING THE DECISION MATRIX AND SENSITIVITY TABLES

Apply these rules and procedures where appropriate to the case being considered.

1 Straddling developments - when the site area of the proposed development lies across a zone boundary

1(a) Developments that 'straddle' zone boundaries will normally be considered as being in the zone nearer to the major hazard unless either of the two following conditions apply. The development is in the OUTER of the zones if:

- less than 10% of the site area marked on the application is inside that boundary, OR
- it is only car parking, landscaping, playing fields, open space or access roads etc associated with the development that are in the inner of the zones.

1(b) Where the development straddles the Outer Zone boundary follow the rule above. If, using the rules, the development is considered to be within the Outer Zone then consider all the **facilities** that make up the development proposal. Any that are **entirely** outside the Outer Zone should be discounted when coming to a decision about the Sensitivity Level e.g. when calculating the gross floor area of buildings. All the facilities that are **completely and partly inside** the Outer Zone are then considered together for the purpose of determining the sensitivity level (for multiple-use developments follow the Multiple-use rule).

2 Multiple major hazards

Where the development is in the overall Consultation Zone of more than one major hazard it is necessary to determine which zone the development is in for each major hazard, after applying the straddling rule if necessary. The overall advice is decided on the basis of the most onerous of any of the zones the development is in (Inner Zone more onerous than Middle Zone, Middle Zone more onerous than Outer Zone). This is extremely unlikely to apply as the only zones overlapping are those for the Qajjenza LPG plant and the Birzebbuga Fuel Storage depot and these slightly overlap in Il-Bajja ta' San Gorg.

3 Multiple-use developments

Use this rule set when the development application is for a multiple-use development (e.g. a mix of housing, indoor use by the public and a workplace). First identify the separate parts of the proposal according to the development types in the Sensitivity Tables column 1. Group together all facilities of the same development type and determine the Sensitivity level of each of the groups.

Determine which zone each development type group is in, if necessary using the straddling rule for any group.

Determine the appropriate decision from the Matrix for each group. If any group is incompatible then the decision should be that the development is unacceptable.

4 Development on sites with an existing permitted use

Many proposed developments are not on 'green field' sites. They involve the redevelopment, change of use, extension, addition to or modification of a site or development with an existing permitted use.

4(a) First consider the development in the application according to the procedure and rules set out above. However, if the initial consideration gives an 'unacceptable' decision, then Rule 4b or 4c should be applied as appropriate. If it changes the decision to 'acceptable' then that should be the decision.

4(b) **Modifications, alterations, extensions or additions.** If the proposal is for modifications, alterations, extension or additions to an existing development **and** the population at the development will not increase by more than 10% (or the gross floor area by more than 10% if the population data is not readily available) it may be treated as though it had a sensitivity level one less than the sensitivity level of **the existing development**. If this reduced sensitivity level, combined with the zone that the modification etc is in, produces an 'acceptable' decision then this should be the decision, replacing the initial 'not acceptable' decision.

4(c) **Redevelopment or change of use.** A site which is being redeveloped will already have permission for its existing use. This should be described on the application. If there is no stated or obvious existing use assume that there is none. Existing buildings may or may not be demolished to allow the redevelopment or change of use. Assess the sensitivity level of the permitted use as currently or previously used. If the proposed redevelopment or change of use is at the same Sensitivity level or less than the existing permitted use, then it is acceptable. This takes account of the need not to blight existing developed areas and the fact that the existing permitted use could continue or restart.

DEFINITIONS

Beds. The number of residents for which sleeping accommodation is provided.

Development type is used for similar developments and facilities that can be grouped together when assessing an application (see the first column in the Sensitivity tables).

Dwelling units mean the smallest individual unit of accommodation e.g. house, apartment, maisonette.

Facilities. Buildings and other provisions (e.g. picnic area, children's play area, park and ride bus stop) where people may congregate or be concentrated.

Multiple use developments are proposals that contain more than one development type (therefore possibly different Sensitivity Levels) within the same planning application or enquiry. Within the procedure, each of these different development types are called 'sub developments' and are all individually assessed using the decision matrix. A single 'unacceptable' decision in any number of sub developments will dominate the overall advice on the proposal.

Protective environment. The provision of some element of supervision or care e.g. by a warden being available on-site or on-call.

Redevelopment. The new development re-uses the existing facilities or replaces them with new facilities (in some cases previous buildings may already have been demolished. This does not alter the principle that it is redevelopment of a site with an existing permitted or established use)

School leaving age. The minimum age at which a young person can leave school-currently 16.

Total floorspace. The area of buildings enclosed by the exterior walls multiplied by the number of floors.

Vulnerable people. People who by virtue of age (children and elderly) and/or ill health may be particularly susceptible to the effects of a major accident.

ANNEX 4 TECHNICAL BACKGROUND TO DETERMINING THE ZONES

As noted earlier, the Consultation Zones have been determined by the UK's Health and Safety Executive, using the experience and expertise built up over a number of years.

In particular, the Government Advisory Committee on Major Hazards published 3 reports over the 10 years after the Flixborough explosion between 1974 and 1984. The UK policy was described in a publication "Land Use Planning In the Vicinity of Major Industrial Hazards" (1989) and was broadened by the more general publication "Reducing Risks, Protecting People" (2001). Over the years there have been other reports such as that prepared by the Royal Society which support similar risk levels for decision making.

The approach then is a risk based one. The zones are based on the number of individuals likely to be affected by an accident and set at levels of 50% lethality, ~1-5% lethality, for a normal population and a consultation distance set at ~1-5% lethality for a vulnerable population.

Here in Malta there are two types of hazard :

Hazard	Installation Type	Result of Accident	Risk Criteria
Flammable	LPG installation	catastrophic failure of vessel holding pressurised, liquefied gas leading to explosive release of boiling liquid and expanding vapour (BLEVE – Boiling Liquid Expanding Vapour Explosion)	Thermal Effect Inner zone : 50% fatalities in a normal population Middle Zone : 1 to 5% fatalities in a normal population Outer Zone : 1 to 5% fatalities in a vulnerable population
Toxic	Chlorine storage	Release of toxic gas	Likelihood of a release Gas dispersion Inner zone : 10 chances per million per year Middle Zone : 1 chance per million per year Outer Zone : 0.3 chances per million per year

An important aspect of the risk based approach to mitigation is to recognise that it is based upon the likelihood of an incident and that should one occur the potential consequences will, in the worst case, extend beyond the land use planning zones in the down wind direction. Thus emergency plans need to be drawn up accordingly.