



IGI Seminar 2010

Control of Major Accident Hazards Directive (Seveso/Comah)





Overview

1. Background to the Directive
2. Regulations
3. Land-use Planning
4. Exclusions
5. Information



Background

Accidents have
driven the
changes to the
legislation....

Flixborough, 1974



- Release of 40 tonnes of Cyclohexane
- Vapour Cloud Explos.
- 28 killed
- Mgt. failure



Seveso 1976





Seveso Accident



- Manufacture of a bactericide
- Out-of control reaction vented 2 kgs of TCDD
- Poisoning, Chloracne, Public alarm
- Lack of info, no proper emergency plan



Bantry 1979





Major Hazards – Seveso I (1982)

- Protection of public and environment
- Threshold + Activity
- Safety Case
- All necessary measures

Bhopal 1984





Mexico City 1984





Mexico City 1984





Hickson 1993





Major Hazards – Seveso II (1996) - 96/82/EC

- Experience of Seveso I
- Lessons from other major accidents











Directive 2003/105/EC - Objectives..

- Control of Major Accident Hazards (COMAH)
Involving Dangerous Substances
- Better risk & accident management





Directive 2003/105/EC - Objectives..

- Land-use planning controls
- Catch all establishments with sufficient inventory
- Lay down principles for safety management





Directive 2003/105/EC - Objectives..

- Set essential requirements of national inspection
- Revised Safety Report
- Domino effects to be considered
- Public access to information
- Emergency plans to be revised & tested as necessary





Regulations

- EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations- SI 74 of 2006 implement the Directive in Ireland



Purpose of Regulations

- Protection Of Persons &
 - Protection Of The **Environment**
- From
- Major Accidents Involving Dangerous Substances



Major Accidents

- Major Emission
- Fire
- Explosion
- Serious Danger
 - Immediate/delayed
 - Inside/outside
- Involving dangerous Substances





Presence Of Dangerous Substances

- First Schedule to the Regulations
- Lower Tier/Upper Tier





Presence Of Dangerous Substances

- Categories Of Dangerous Substances
- Addition Rules
- Classification, Packaging & Labeling Directives
(now CLP/GHS)





Establishment Tiers

● LOWER

TIER >

● UPPER

TIER >

General Duties

Notification

MAPP

Lower Tier +

Safety Report

Internal Emergency Plan

External Emergency Plan

Information to the Public





Notification..

- Operator must notify the Health & Safety Authority and the Planning Authority if they are covered by the Regulations





General Duties 1

Take All Necessary Measures:

- Prevent Major Accidents Occurring
- Limit Consequences of Major Accidents



General Duties 2

- Identification of all major accident hazards
- Provide & Maintain
 - Safe installations
 - Systems of Work
 - Means of entry & exit
- Handling and use of dangerous substances
- Provision of
 - Instruction
 - Training
 - Supervision



General Duties 3

- Use Of Best Practicable Means to
- Prevent A Major Emission
- Rendering Harmless And Inoffensive



Domino Effects

- Duty on the HSA to identify and inform.
- Duty on operator to provide and take account of such information.





Major Accident Prevention Policy

- Sets out aims & principles for controlling major accidents
- Policy Document
- Written
- Must take account of principles in 2nd Schedule
- Must be implemented





2nd Schedule - MAPP

- Organization & Personnel
- Identification & Evaluation of Major Hazards
- Operational Control
- Management of Change
- Emergency Planning
- Monitoring Performance
- Audit & Review



Establishment Tiers

• LOWER

TIER >

• UPPER

TIER >

General Duties

Notification

MAPP

Lower Tier +

Safety Report

Internal Emergency Plan

External Emergency Plan

Information to the Public





Upper-tier Duties

- Safety Report (4th Schedule)
- Updates & modifications
- On-site emergency plans (5th Schedule)
- Information for off-site EP
- Information to the public (6th Schedule)



Safety Reports

Purpose:-

- Demonstrate
 - MAPP & SMS Are in Place
 - Major Accident Hazards Have Been Identified
 - Necessary Measures Are in Place
 - Adequate Safety & Reliability
 - Design & Construction
 - Operation & Maintenance
 - Preparation of Internal Emergency Plans
- Supply Information for External Emergency Plan
- Provide Information for Land-use Planning
- Contain Updated Inventory of Dangerous Substances





Ext. Emergency Plans

- ❖ Function of local competent authority [LCA]
- ❖ Notification by HSA
- ❖ 3 year intervals for review/revision/testing
- ❖ Provision of information for internal emergency plan
- ❖ Fifth Schedule
- ❖ Consultation with
 - other local competent authorities
 - operator
 - HSA/EPA
 - public
- ❖ Specific to the Workplace
- ❖ Exemption



Information For Safety Of Public..

- Obligation on Operator
- Inform Persons/Institutions in Specified Area
 - Safety Measures
 - Correct Behaviour to Adopt
- Sixth Schedule
- Provide Information at Least Every 5 Years









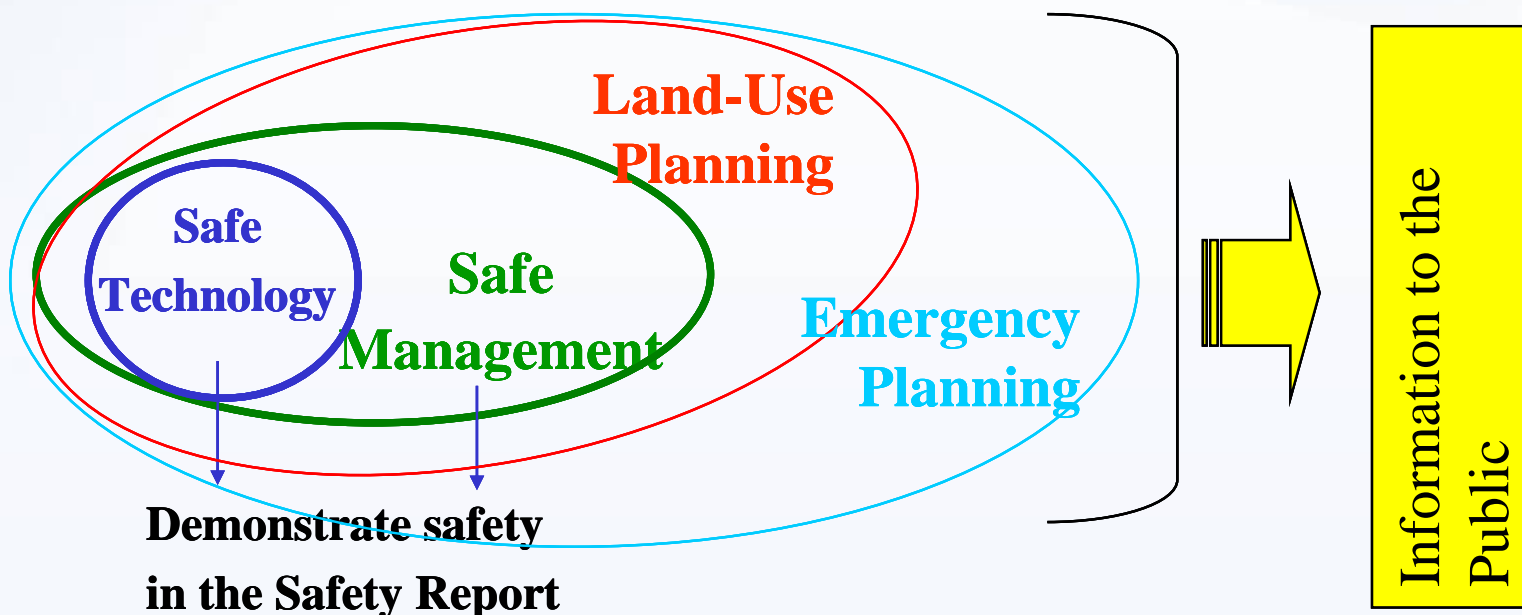


Land-use Planning

- Art. 12 -Technical advice on risks from establishment
- Case by Case/Generic Basis
- **Development by Operator or Development in vicinity of establishment**
- Consultation Distance



INSPECTIONS

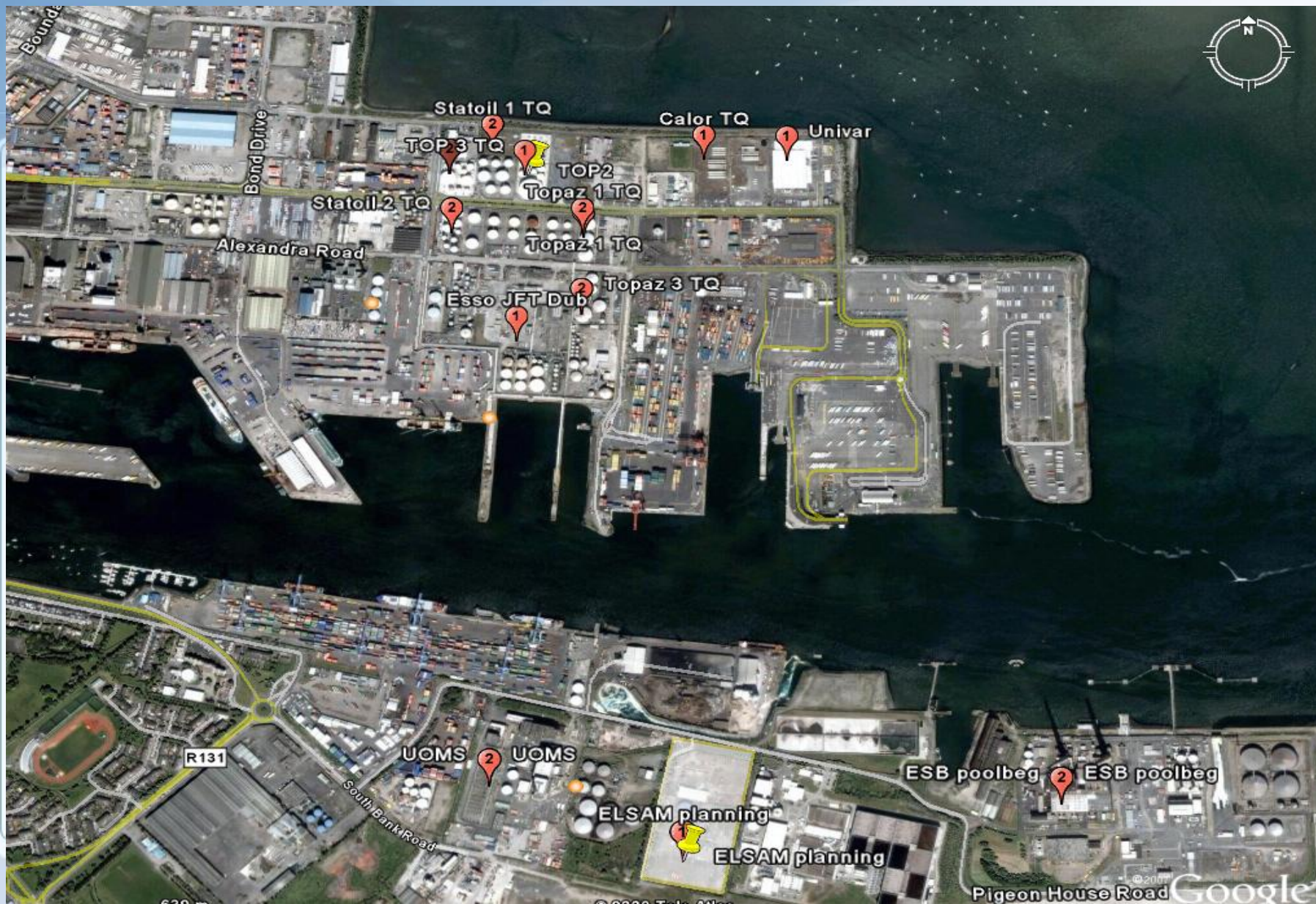


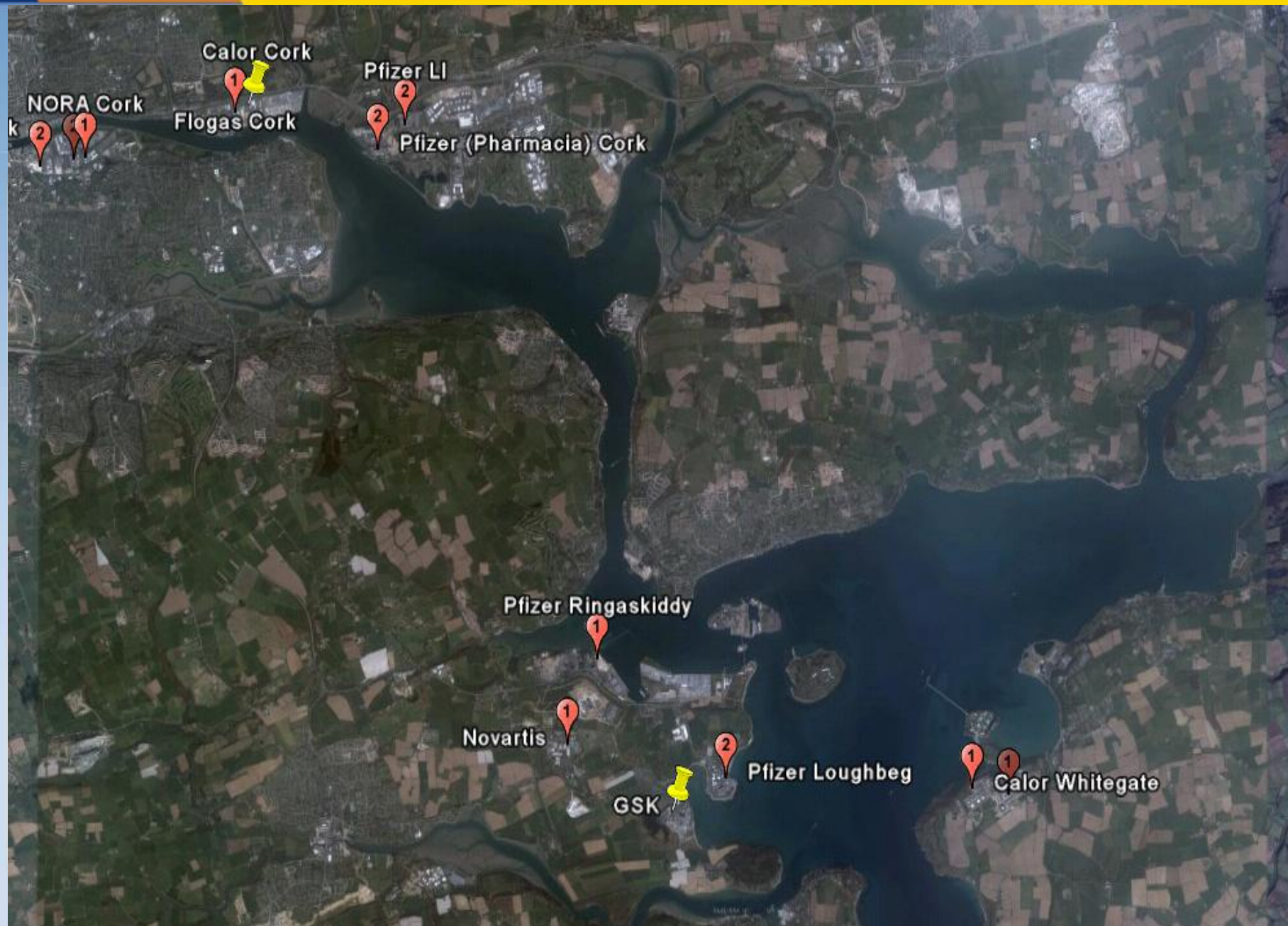
‘Permissioning’ Regime

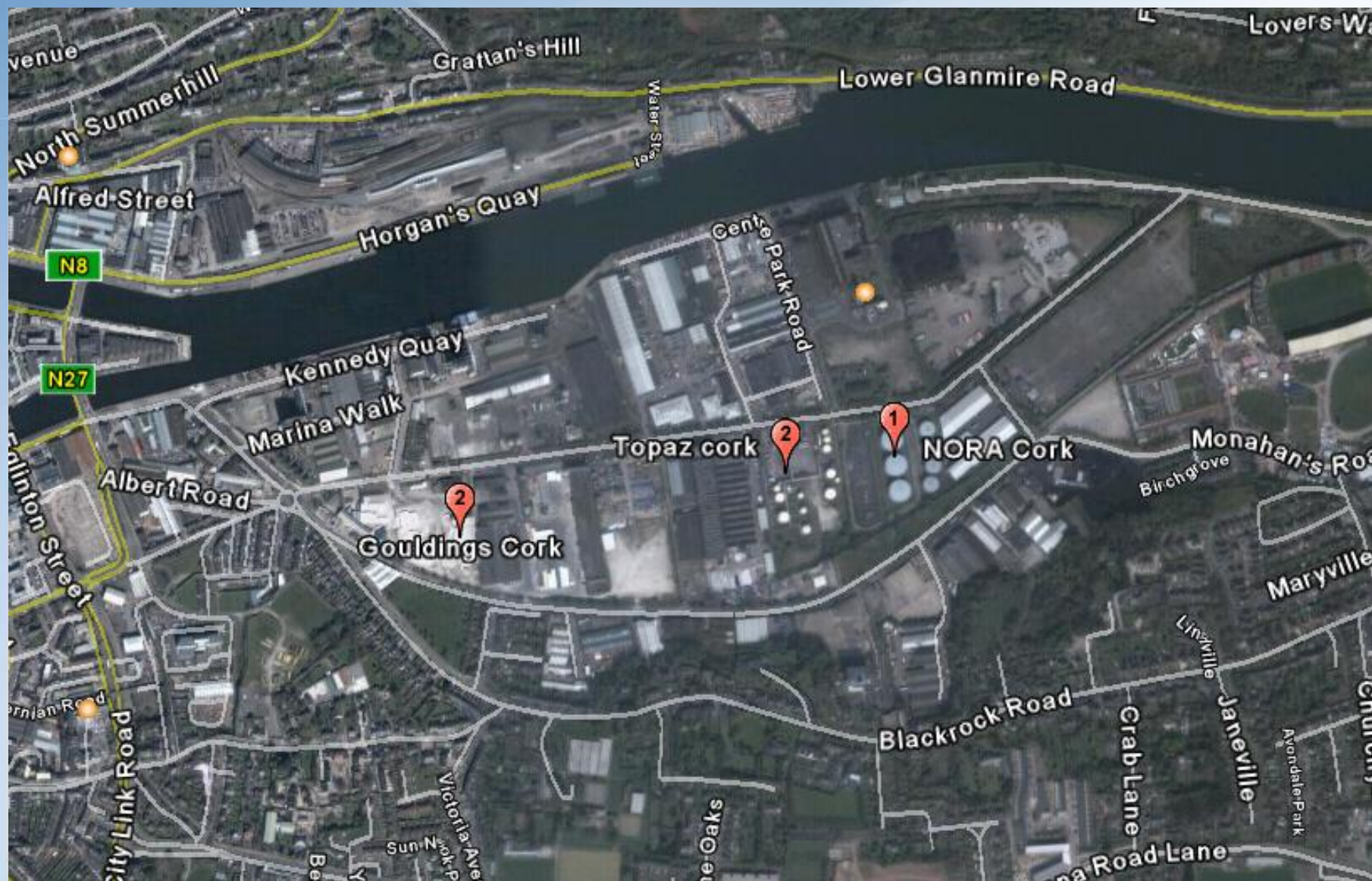


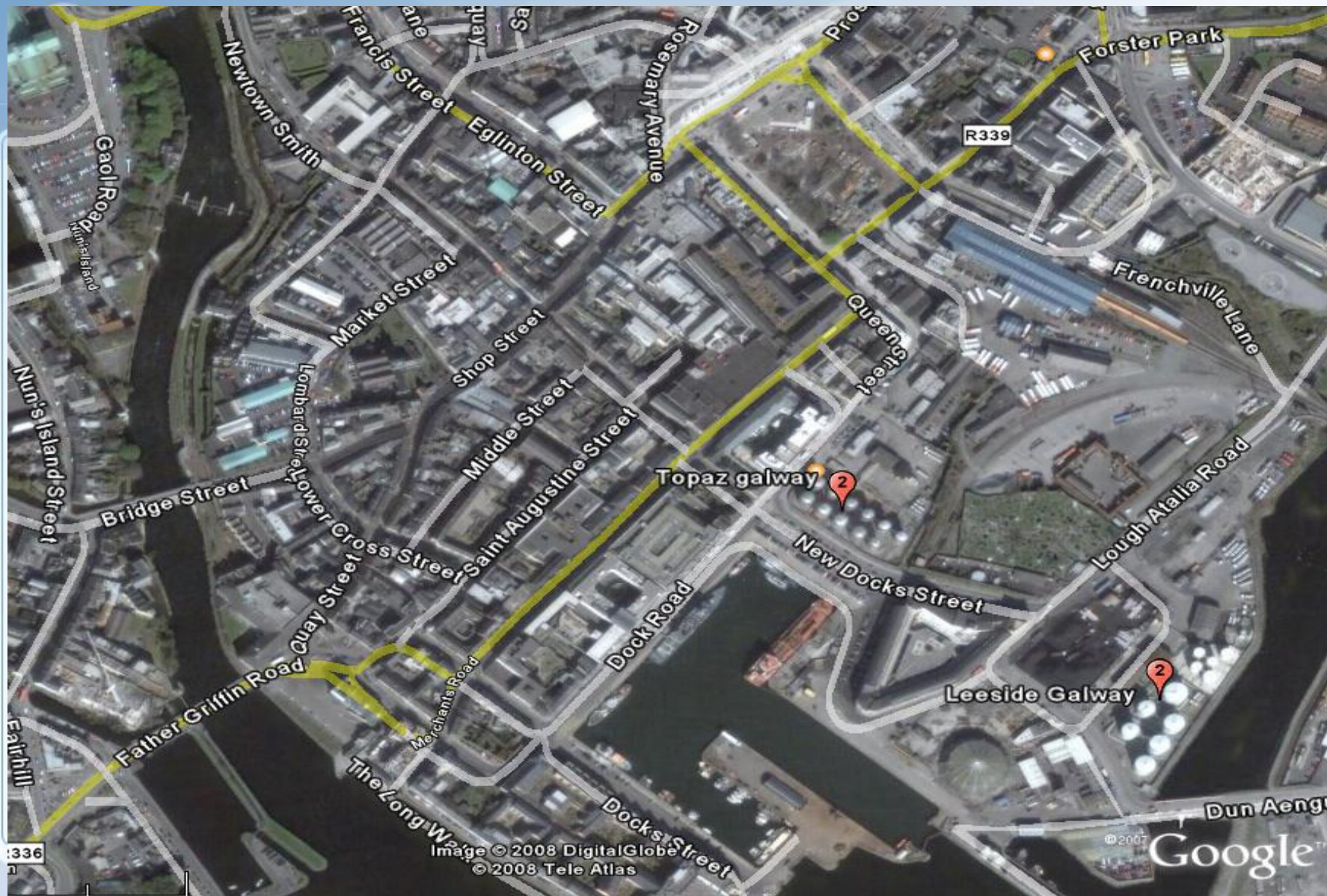
Consultation Distance

Activity	Distance [metres]
LPG Storage:	
<i>Above ground:</i>	600
<i>Mounded/underground: < 100 t</i>	100
<i>> 100 t</i>	200
Refinery	1500
Ammonia	2000
Chemical Warehouse	700
Bulk Flammable Storage	300/450
Bulk Toxic Storage	700
Chemical Processing <i>[Flammable/Toxic Substances]</i>	1000
Chemical Processing <i>[Dust Explosion Risks]</i>	300
Explosives Manufacture	1000











Individual Risk Zones

$10^{-5}/\text{year}$

• Risk of fatality for Inner Zone (Zone 1) boundary

$10^{-6}/\text{year}$

• Risk of fatality for Middle Zone (Zone 2) boundary

$10^{-7}/\text{year}$

• Risk of fatality for Outer Zone (Zone 3) boundary





Risk-based advice

	Inner Zone (Zone 1)	Middle Zone (Zone 2)	Outer Zone (Zone 3)
Level 1	✓	✓	✓
Level 2	✗	✓	✓
Level 3	✗	✗	✓
Level 4	✗	✗	✗



Enforcement

- Offences: Failure to Comply With Regs.
- Notices of prohibition, restriction, requirement
- Notice for Information
- Examination of Safety Rept.
- Prosecution (Costs).



Exclusions - 1

Not Covered by the regulations:

- Property occupied by the Defence Forces
- Hazards created by **Ionising Radiation**
- Transport by air/sea/road



Exclusions - 1

Not covered by the regulations:

- ❖ (d) the exploitation (exploration, extraction and processing) of minerals in mines, quarries or by means of boreholes, with the exception of chemical and thermal processing operations and storage related to those operations which involve dangerous substances;



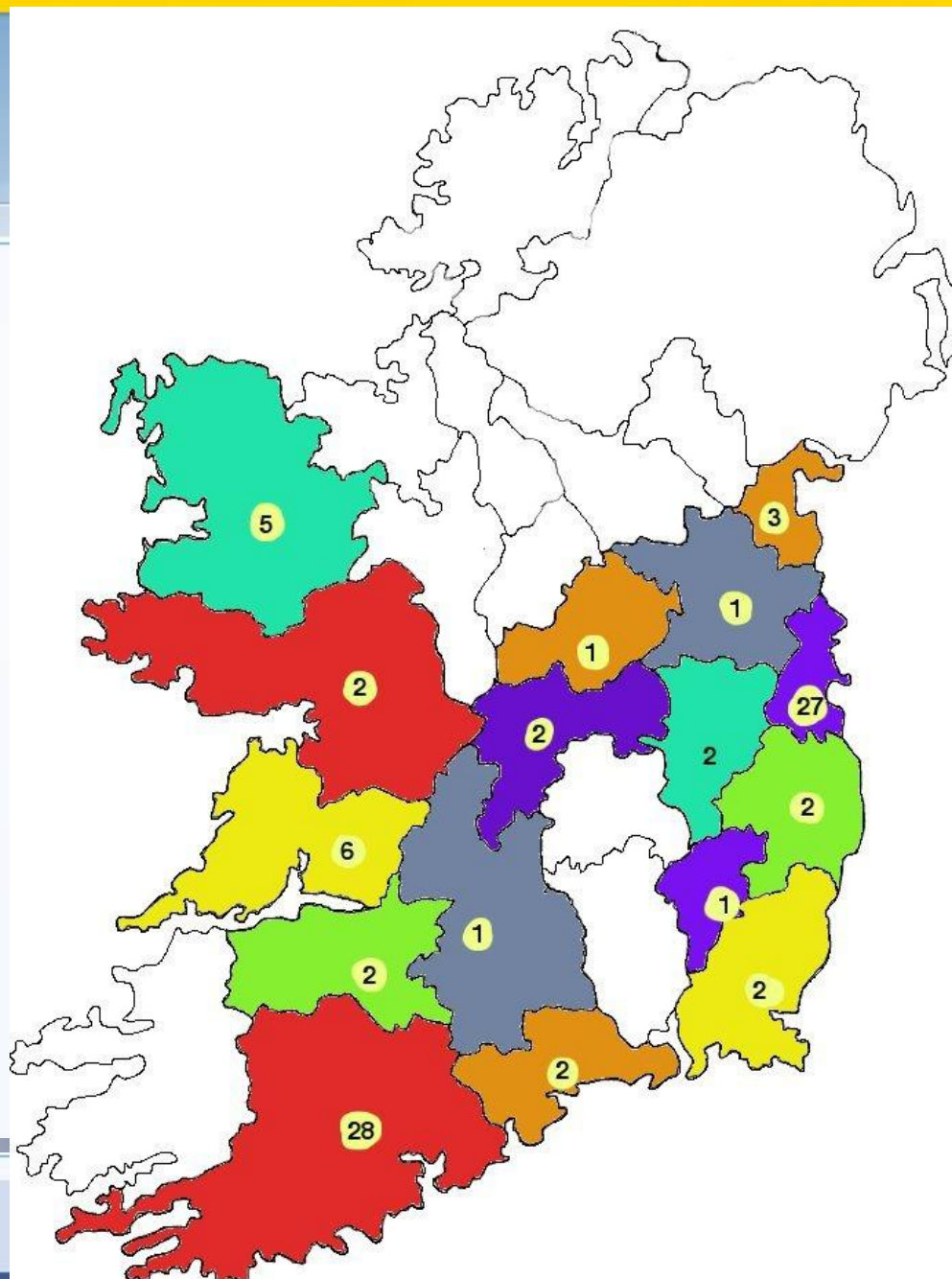
Exclusions - 3

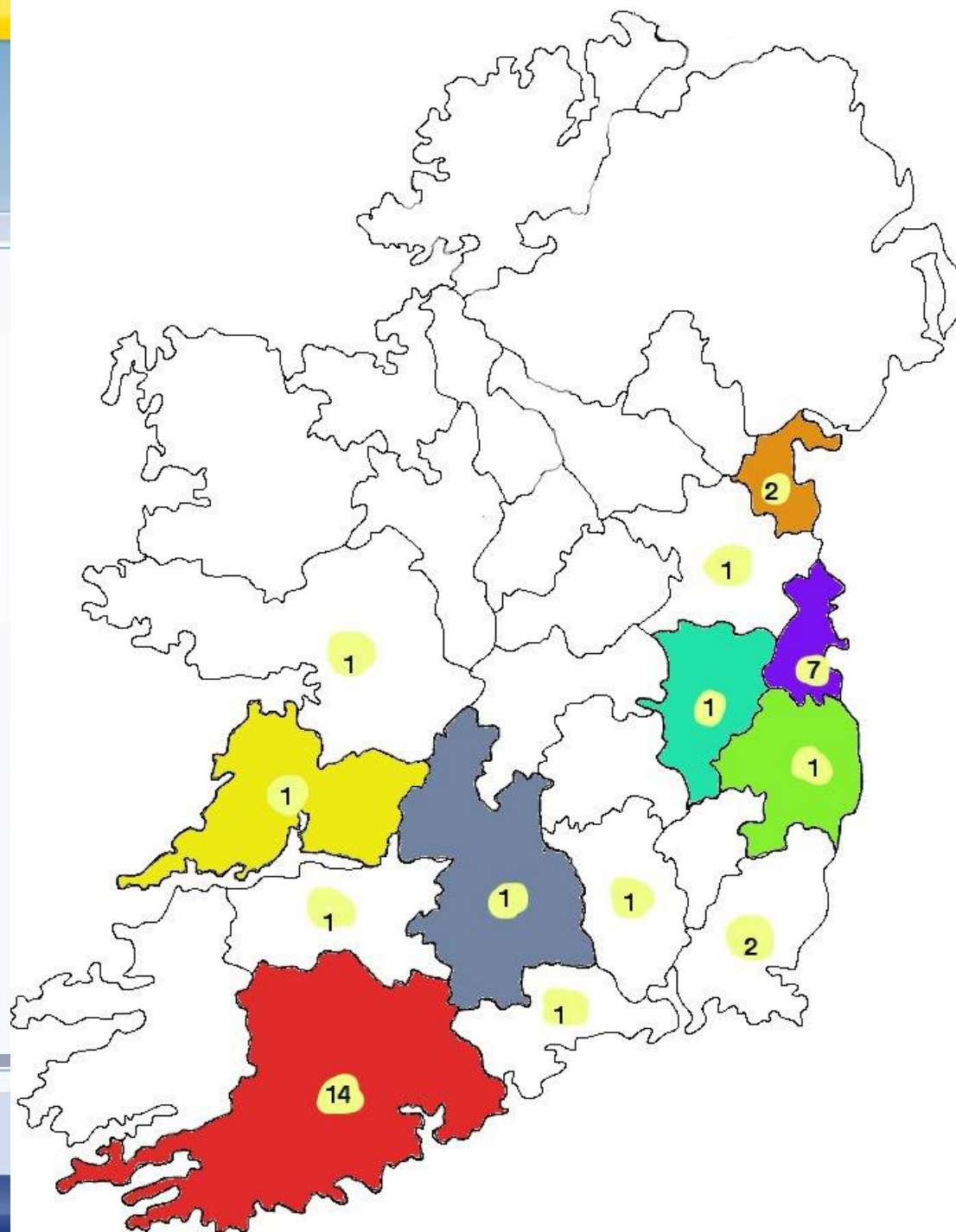
- Associated intermediate temporary storage
- Docks, Wharves & Marshalling Yards
- **Pipelines** & Pumping stations



Exclusions - 4

- (e) the offshore exploration and exploitation of minerals, including hydrocarbons;
- (f) waste land-fill sites, with the exception of operational tailings disposal facilities, including tailing ponds or dams, containing dangerous substances as defined in Annex 1, in particular when used in connection with the chemical and thermal processing of minerals.







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The Health & Safety Authority

Working to create a national culture where all commit to safe and healthy workplaces and the safe and sustainable management of chemicals



Hazard Communication Seminars (CLP)

Two seminars to be held, Dublin on the 13th May and Cork on the 18th May

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Export/Import

Asbestos

Chemical Agents

Carcinogens

Detergents

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List of Establishments

Safety Report

Land Use Planning

Emergency Planning

MAPP and Safety Management

Notification and Charges

REACH

Classification and Labelling

Transport of Dangerous Goods by
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Export/Import

Asbestos

Chemical Agents

Home > Your Industry > Chemicals > Control of Major Accident Hazards

General Information on Control of Major Accident Hazards

The Control of Major Accident Hazards Involving Dangerous Substances Regulations

These regulations (often referred to as '[COMAH Regulations](#)' or '[Seveso Regulations](#)') give effect to European Directive 96/82/EC. They apply only to locations where significant quantities of dangerous substances are stored.

About [90 such establishments](#) have been identified in Ireland.

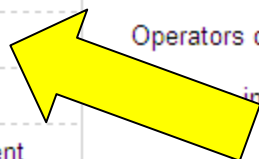
The legislation deals with the prevention of [major accidents](#). Not every type of activity is covered by the regulations - there are a number of [exclusions](#).

Operators of establishments covered by the regulations have [duties](#) imposed on them.

For more information follow the links below:

Related Links:

- > [Legislation and Guidance](#)
- > [Safety Report](#)
- > [Land Use Planning](#)
- > [Emergency Planning](#)
- > [MAPP and Safety Management](#)
- > [Notification and Charges](#)





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Land Use Planning



Role of the HSA in Land-use Planning (LUP)

The Directive requires that controls are in place on developments at qualifying establishments and in their vicinity. The planning & development regulations implement this aspect of the Directive. The HSA are required to provide technical advice to the planning authorities, either on a case-by-case basis or generically. Advice provided to the planning authority should be available from them on application, and in many cases is on their websites. The final planning decision rests with the planning authority.

Consultation Distance

On being notified of the existence of an establishment, the Authority formally writes to the relevant planning authority, giving them a consultation distance around the establishment. The Authority recommends that developments within this consultation zone should be referred to it, for technical advice.

This table sets out the current consultation distances used by the Authority (taken from the Planning & Development

Policy & Approach of the Health & Safety Authority to COMAH Risk-based Land-use Planning (19 March 2010)

Including Detailed Implementation by Sector



Sources of Information

Copies of legislation are available from the office of the AG's Office <http://www.irishstatutebook.ie/>

The Major Accident Hazards Bureau (MAHB) of the European Commission maintains a website on the "Seveso " Directive at <http://mahbsrv.jrc.it/>.

Specific queries about this legislation should be addressed to the Process Industries Unit, HSA.

Our website www.hsa.ie contains guidance produced by the Authority.



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Questions?