Planning Practice Guidance (http://planningguidance.communities.gov.uk)

Guidance

Hazardous Substances

1. Planning for Hazardous Substances
(http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/planning-for-hazardous-substances/)

Planning for Hazardous Substances

Why does land use planning need to consider hazardous substances?

The lessons from explosions such as at the Flixborough chemical works in Humberside in 1974, Seveso in Italy in 1976 and Buncefield in 2005 underline the importance of controlling sites where hazardous substances could be present and where development is proposed near them.

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How does the planning system deal with hazardous substances?

There are three elements to how the planning system deals with preventing and limiting the consequences of major accidents:

1. Hazardous substances consent

This is required for the presence of certain quantities of hazardous substances. This is a key part of the controls for storage and use of hazardous substances which could, in quantities at or above specified limits, present a major off-site risk.

- The purpose of hazardous substances consent

- Deciding whether a hazardous substances consent is needed

- Applying for hazardous substances consent

- Deciding applications for hazardous substances consent
  (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/deciding-applications-for-hazardous-substances-consent/)

- After consent has been granted
  (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/after-consent-has-been-granted/)

- Breaches of hazardous substances control
  (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/breaches-of-hazardous-substances-control/)
2. Dealing with hazardous substances in plan-making

When preparing Local Plans (http://planningguidance.communities.gov.uk/blog/guidance/local-plans/), local planning authorities are required to have regard to the prevention of major accidents and limiting their consequences. They must also consider the long-term need for appropriate distances between hazardous establishments and population or environmentally sensitive areas. They must also consider whether additional measures for existing establishments are required so that risks to people in the area are not increased. Detailed requirements are set out in the Town and Country Planning (Local Planning) (England) Regulations 2012 (http://www.legislation.gov.uk/uksi/2012/767/regulation/10/made).

Further guidance can be found under dealing with hazardous substances in plan-making (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/dealing-with-hazardous-substances-in-plan-making/).

3. Handling development proposals around hazardous installations

When considering development proposals around hazardous installations the Local Planning Authority is expected to seek technical advice on the risks presented by major accident hazards affecting people in the surrounding area from the Health and Safety Executive. This allows those making planning decisions to give due weight to those risks, when balanced against other relevant planning considerations. The Health and Safety Executive also provides advice on developments around pipelines, licensed explosives sites, licensed ports and other relevant sites. The Office for Nuclear Regulation (http://www.hse.gov.uk/nuclear/land-use-planning.htm) provides advice on developments around nuclear installations.

Further guidance on development can be found under handling development proposals around hazardous installations (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/handling-development-proposals-around-hazardous-installations/).

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What is the policy and legislation governing planning and hazardous substances?

The following paragraphs of the National Planning Policy Framework are particularly relevant to planning for hazardous substances:

- Paragraph 2 (http://planningguidance.communities.gov.uk/blog/policy/introduction/#paragraph_2) on EU obligations and statutory requirements;
- Paragraph 172 (http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/plan-making/#paragraph_172) on planning policies taking account of the major hazards and mitigating the consequences of major accidents;
- Paragraph 194 (http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/decision-taking/#paragraph_194) on consulting appropriate bodies when planning, or determining applications, for development around major hazards;

Related policy

National Planning Policy Framework

- Paragraph 2 (http://planningguidance.communities.gov.uk/blog/policy/introduction/#paragraph_2)
- Paragraph 172 (http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/plan-making/#paragraph_172)
- Paragraph 194 (http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/decision-taking/#paragraph_194)
The glossary to the Framework (http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/annex-2-glossary/) defines what is meant by ‘major hazards’, including nuclear installations.

Article 12 of the Seveso II directive (http://ec.europa.eu/environment/seveso) requires planning controls to apply to all establishments within the scope of the Directive. In England this is implemented through a system of consents for hazardous substances under the Planning (Hazardous Substances) Act 1990 (http://www.legislation.gov.uk/uksi/1990/10/contents) and through arrangements for dealing with planning applications and plan-making.

The main regulations are:

- the Planning (Hazardous Substances) Regulations 1992 (http://www.legislation.gov.uk/uksi/1992/656/contents/made) (as amended – see below);
- the Town and Country Planning (Local Planning) (England) Regulations 2012 (http://www.legislation.gov.uk/uksi/2012/767/regulation/10/made) (see regulation 10(1)(a) and (b).

Amendments to the above have been made by:

- the Planning (Control of Major Accident Hazards) Regulations 1999 (http://www.legislation.gov.uk/uksi/1999/743/contents/made);

Separately, the Health and Safety Executive and Environment Agency have responsibility for implementing other aspects of the Seveso II Directive (http://ec.europa.eu/environment/seveso) and deliver this through other regulations, principally the Control of Major Accident Hazards Regulations 1999 (http://www.legislation.gov.uk/uksi/1999/743/contents/made). This guidance only deals the land use planning aspects of Seveso II under the planning legislation referred to above.

A new directive, Seveso III, was published in 2012 and is required to be implemented by 31 May 2015. This guidance will be updated to reflect the new regulations (http://www.legislation.gov.uk/uksi/2015/627/contents/made) implementing the directive. A draft of the updated guidance can be viewed here (https://www.gov.uk/government/publications/hazardous-substances-draft-planning-practice-guidance%20).

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2. The purpose of hazardous substances consent (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/what-is-the-purpose-of-hazardous-substances-consent/)

The purpose of hazardous substances consent

What is the purpose of hazardous substances consent?

The hazardous substances consent process ensures that hazardous substances can be kept or used in significant amounts only after an assessment of the risk to people and the environment in the surrounding area. This is a key part of the
controls for storage and use of hazardous substances which could, in quantities at or above specified limits, present a major off-site risk. The system of hazardous substances consent does not replace requirements under health and safety legislation.

Hazardous substances consent provides control over the presence of hazardous substances whether or not an associated planning permission is required. Where the presence of a hazardous substance is directly associated with a proposed development, local planning authorities can exercise some control through the decisions on applications for planning permission.

The consent process regulates the storage and use of hazardous substances and enables breaches of control, which may present serious risks, to be dealt with quickly and effectively.

Even after measures have been taken to prevent major accidents, there will remain the residual risk of an accident which cannot entirely be eliminated. Hazardous substances consent ensures that this residual risk to people in the vicinity or to the environment is taken into account before a hazardous substance is allowed to be present in a controlled quantity. The extent of this risk will depend upon where and how a hazardous substance is present: and the nature of existing and prospective uses of the application site and its surroundings.

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Who decides if the risk of storing hazardous substances is tolerable?

The hazardous substances authority has responsibility for deciding whether the risk of storing hazardous substances is tolerable for the community. Therefore the decision on whether a particular proposal to store or use a hazardous substance should be allowed is one for the hazardous substances authority.

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Who is the hazardous substances authority and what is its role?

The hazardous substances authority will usually be the local planning authority. The local council should therefore be the first point of contact to check who the local hazardous substances authority is. The hazardous substances authority for an area determines hazardous substances consent applications and enforces the controls.

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Who advises the hazardous substances authority on the level of risk?

The Health and Safety Executive advises the hazardous substances authority on the nature and severity of the risk to persons in the vicinity arising from the presence of a hazardous substance. The Environment Agency advises on the risk to the environment, including if an environmental permit is needed.

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Does hazardous substances consent override planning permission requirements?
Where there is development associated with the storage or use of hazardous substances, a separate planning permission may also be necessary. Dealing with related applications for hazardous substances consent and for planning permission together should speed up decision making and avoid unnecessary duplication in providing information.

There may be different considerations, and decisions, for related applications. It is important that related decisions are not inconsistent (e.g. conditions containing conflicting requirements). To avoid confusion, detailed control over the manner in which a hazardous substance is to be kept or used is best addressed by hazardous substances consent conditions.

Are there any special arrangements for statutory undertakers?

Statutory undertakers are subject to the consent procedure and will apply to a Government department for authorisation of a development involving the hazardous substances.

3. Deciding whether a hazardous substances consent is needed

When is consent needed for the storage or use of hazardous substances?

Consent is needed if specified hazardous substances are stored or used at or above specified controlled quantities. Where more than one substance is present there are procedures for working out whether consent is required. In certain circumstances there are exceptions to these controls.

What hazardous substances are subject to the controls?

The list of substances and controlled quantities set out in the Planning (Hazardous Substances) (Amendment) (England) Regulations 2009 as amended by the Planning (Hazardous Substances) (Amendment) (England) Regulations 2010 is in three parts:

- Part A: named hazardous substances.
- Part B: un-named substances that fall within generic categories of substances or preparations.
- Part C:
When is a hazardous substances consent needed?

Generally, consent is required for the presence of hazardous substances on, over or under land unless below the thresholds listed in the Planning (Hazardous Substances) (Amendment) (England) Regulations 2009 as amended by the Planning (Hazardous Substances) (Amendment) (England) Regulations 2010:

- If any of the named substances at Part A of the regulations are present at a site at or above the specified threshold then a hazardous substances consent is needed;

- In many cases the substances present at a site may not be included in Part A but they may fall within one or more of the ‘generic categories’ of substances or preparations specified in Part B of the regulations.

A consent may also be required:

- For the presence of hazardous substances even though the amount of the substance present is below the threshold specified for that substance. This may happen because substances within the same generic category, or that have similar hazard characteristics, are added together to determine whether consent is required for some or all of them. This is calculated using an addition rule.

- For substances that appear as a result of a loss of control of an industrial chemical process. In this case if a substance in either Part A or B of the regulations may be present in an amount at or above its controlled quantity (even though the substance would not normally be present) consent is required. The consent would not be for the dangerous substance(s) that would be produced during any loss of control of the chemical process. The consent would be required for the substances present at the site that in the event of a loss of control would lead to the production of the released dangerous substance(s), as specified in Part C.
What are the generic categories in the list?

The ‘generic categories’ of substances and preparations for the Seveso II Directive, used in Part B of the regulations, are those set out in the Chemical (Hazards Information and Packaging for Supply) Regulations 1994. Further information is available from the Health and Safety Executive.

What is the addition rule?

The list of hazardous substances subject to these controls is split into Part A and Part B. The addition rule applies when substances in Part A are present below their individual controlled quantity, together with substances from the same classification in Part B. It also applies when substances with similar characteristics (as explained in legislation) in Column B are present together.

For the addition rule the following calculation is used:

\[
\frac{q_1}{Q} + \frac{q_2}{Q} + \frac{q_3}{Q} + \frac{q_4}{Q} + \frac{q_5}{Q} + \ldots \geq 1
\]

The quantities present for each substance \(q_i\) are expressed as fractions of the controlled quantity for that substance \(Q\). These are then added together. If the sum equals or exceeds 1, then a consent is required for each of the substances included in the addition.

For some substances in Part A of the list, the controlled quantity \(Q\) is different for the purpose of the addition. In this case it is set out in Column 3 of the table in Schedule 1 of the Regulations.

For illustrations of how the addition rule works see examples of the addition rule.

Are there any exceptions to the normal hazardous substances consent requirements?

Exceptions to the normal hazardous substances consent requirements are set out in the section 4(3) of the Planning (Hazardous Substances) Act 1990 and in the Planning (Hazardous Substances) Regulations 1992.
Do I need consent for substances stored in small amounts which do not pose a risk?

In some circumstances, small amounts of most substances can be disregarded when assessing whether Hazardous Substances Consent is required. This is because of an exemption known as the 2% rule.

Regulations stipulate that the exemption can apply up to 2% of the controlled quantity of most substances where its presence cannot initiate a major accident elsewhere on the site. This may be, for example, because it is stored separately or because of the physical properties of the substance as stored on site. However, the exemption does not apply to chlorine, pressurised LPG, hydrogen selenide or selenium hexafluoride. The responsibility for determining whether small quantities of hazardous substances maybe disregarded under this exemption is, initially, for the site operator.

For illustrations of how the 2% rule might apply see the examples of the 2% rule.

Is hazardous substances consent needed for nuclear sites?

The hazardous substances consent procedure does not apply to substances that create a hazard from ionising radiation at licensed nuclear sites. However, other hazardous substances present at licensed nuclear sites (those which do not create hazards through ionising radiation) are subject to hazardous substance consent controls.

Do explosives require hazardous substances consent?

Explosives controlled by licences issued by the Health and Safety Executive are not included in the list of hazardous substances.

The quantity of explosives licensed by county councils is less than the quantity subject to hazardous substances consent. There should therefore be no need for consent for the presence of these explosives alone. However, consent may be required if present in combination with other hazardous substances.

How will planning requirements for Heavy Fuel Oils change?

In early 2014 an amendment to regulations on Hazardous Substances Consent came into force to implement a change to the Seveso II directive. The amendment names Heavy Fuel Oils as a Petroleum Product in the list of hazardous substances. This raises the controlled quantity at which consent for Heavy Fuel Oils is required from 100 to 2,500 tonnes. Where existing consents are no longer required as a result of the
change they will become obsolete. However, existing consents will not become obsolete where they are still required. This could be where those consents already cover Heavy Fuel Oils in quantities at or above the new threshold. This could also be where Heavy Fuel Oils are present with other substances, and consents continue to be required under the addition rule. In such circumstances, existing consents should be considered as continuing to have effect.

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- List of hazardous substances and controlled quantities

List of hazardous substances and controlled quantities

The list of hazardous substances and controlled quantities for England below is intended as a guide and should be read in conjunction with the Planning (Hazardous Substances) Regulations 1992 as amended.

- Part A: Named substances
- Notes to Part A
- Part B: Categories of substances and preparations not specifically named in Part A
- Notes to Part B
- Notes to Parts A and B
- Part C: Substances used in an industrial chemical process
- Notes to Part C
Examples of the addition rule

Example 1

Assume that the following substances are present together at an establishment

<table>
<thead>
<tr>
<th>Substance/Category</th>
<th>Amount present</th>
<th>Controlled quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromine</td>
<td>21.00 tonnes</td>
<td>20.00 tonnes</td>
</tr>
<tr>
<td>Chlorine</td>
<td>3.00 tonnes</td>
<td>10.00 tonnes</td>
</tr>
<tr>
<td>Very toxic</td>
<td>1.00 tonne</td>
<td>5.00 tonnes</td>
</tr>
<tr>
<td>Toxic</td>
<td>5.00 tonnes</td>
<td>50.00 tonnes</td>
</tr>
</tbody>
</table>

The amount of bromine is greater than its controlled quantity. It therefore requires a hazardous substances consent.

None of the other substances or categories of substance exceeds its controlled quantity. But they all have similar hazard characteristics (they are all either very toxic or toxic substances and fall within categories 1, 2 and 10 of Part B of the list). Further information on classifications is available from the Health and Safety Executive (http://www.hse.gov.uk/chip/index.htm). They must therefore be added together. Expressed as fractions of their controlled quantities the sum is:

\[
\frac{3}{10} + \frac{1}{5} + \frac{1}{50} = 0.30 + 0.20 + 0.10 = 0.60.
\]

The sum of the addition is less than 1, so there is no need for a consent for any of these substances, other than the bromine. The addition rule applies for substances in Part A appearing at less than their controlled quantity which are present with substances from Part B with the same classification. As the amount of bromine is greater than its controlled quantity, it is not included in the aggregation calculation.

Example 2

<table>
<thead>
<tr>
<th>Substance/Category</th>
<th>Amount present</th>
<th>Controlled quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromine</td>
<td>15.00 tonnes</td>
<td>20.00 tonnes</td>
</tr>
<tr>
<td>Chlorine</td>
<td>3.00 tonnes</td>
<td>10.00 tonnes</td>
</tr>
<tr>
<td>Hydrogen selenide</td>
<td>0.50 tonnes</td>
<td>50.00 tonnes</td>
</tr>
<tr>
<td>Ethylene oxide</td>
<td>2.00 tonnes</td>
<td>5.00 tonnes</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>1.00 tonnes</td>
<td>5.00 tonnes</td>
</tr>
</tbody>
</table>
### Example 1

None of these substances is present at amounts greater than its individual controlled quantity. But substances that have similar hazard characteristics have to be considered under the addition rule.

Bromine, chlorine, hydrogen selenide and the very toxic and toxic substances have similar characteristics. They have to be added together. Expressed as fractions of their controlled quantities the sum is:

\[
\frac{15}{20} + \frac{3}{10} + \frac{0.5}{50} + \frac{1}{5} + \frac{5}{50} = 0.75 + 0.30 + 0.01 + 0.20 + 0.10 = 1.36.
\]


The sum of these fractions is greater than 1, so for each of these five substances a hazardous substances consent would be required. Any consent granted by the hazardous substances authority will be in respect of the amount of the hazardous substance present.

Ethylene oxide, propylene oxide and the oxidising substance also have common characteristics. They fall within categories 3-9 of Part B of the list and are added together. Expressed as fractions the addition is:

\[
\frac{2}{5} + \frac{1}{5} + \frac{3}{50} = 0.40 + 0.20 + 0.06 = 0.66.
\]

Since the sum is less than 1, there is no need for a consent for any of these three substances.

### Example 3

A number of dangerous substances are present at an establishment. None of them are substances named specifically in Part A of the list but they are all within the categories of in Part B. The site operator does not wish to name the individual substances, preferring to apply for consent under their generic headings. The substances shown on the consent application form are as follows:

<table>
<thead>
<tr>
<th>Substance/Category</th>
<th>Amount present</th>
<th>Controlled quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Very toxic</strong></td>
<td>7.00 tonnes</td>
<td>5.00 tonnes</td>
</tr>
<tr>
<td><strong>Toxic</strong></td>
<td>35.00 tonnes</td>
<td>50.00 tonnes</td>
</tr>
<tr>
<td><strong>Dangerous for the environment</strong></td>
<td>50.00 tonnes</td>
<td>200.00 tonnes</td>
</tr>
</tbody>
</table>

These substances have similar hazard characteristics and they therefore have to be added together for the purpose of determining whether a consent is needed. Expressed as fractions of their controlled quantities the addition is:
7/5 + 35/50 + 50/200 = 1.40 + 0.70 + 0.25 = 2.35.

The sum of the addition exceeds 1, so for each of the substances a hazardous substances consent is required.

When the aggregation rule is applied only to substances that fall within Part B of the list, all of the substances have to be taken into account, even if an individual substance appears in excess of its controlled quantity. In the above example it would not be permissible to disaggregate the very toxic substances from the calculation.

Example 4

Substances A, B and C are present at a site and are used in a chemical process to produce substance Z. None of the substances A, B, C or Z used or produced in the chemical process requires a hazardous substances consent. However, in the event of a loss of control of the chemical process, it is known that in some circumstances A, B and C will react to produce a different substance, ZX. ZX is included in of the list of hazardous substances, at an amount that exceeds its controlled quantity. A consent would therefore be required for substances A and B and C.

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• Exceptions from hazardous substances consent

Exceptions from hazardous substances consent

Temporary presence of hazardous substances for a short time while in transit

The temporary presence of a hazardous substance does not need to be taken into account if it is being transported from one place to another, unless it is unloaded or present on land which already has consent for other hazardous substances. It is up to the hazardous substances authority to take a view on whether the presence of a hazardous substance is temporary.

Substances in transit, unloaded to transfer to another means of transport, are likely to be exempt if there was clear intention to transfer to another means of transport as opposed to going into storage. It is for the hazardous substances authority to determine whether a consent would be required based on the requirements of legislation.

This would not apply if the temporary presence is on a site where consent is already required for other hazardous substances which are not being transported. In these circumstances, the substances present temporarily will have to be taken into account in calculating the total quantity for consent.

Hazardous substances in pipelines

Consent is not generally required for hazardous substances in pipelines. However where pipelines on, over, or under an establishment – and connected to it – carry hazardous substances, these will require consent. Consent is also required for pipelines carrying substances from one part of the establishment to another.

Harbours assisting ships in an emergency

Where ships or other sea vessels containing hazardous substances are allowed to enter a harbour in a dangerous condition there is an exemption from needing consent. The harbourmaster may waive normal requirements for advance notice in the interests of health and safety.
In such cases substances may need to be removed and stored as a matter of urgency. There is an exemption for 14 days from unloading to give time for suitable alternative storage arrangements to be made.

**Waste landfill sites**

Hazardous substances at waste landfill sites are exempt from the consent procedures. There may be controls on substances in the waste management licence issued by the Environment Agency. The exemption applies only to hazardous substances at a waste landfill site and not to substances present at other disposal sites (e.g. at waste disposal incinerators).

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- **Examples of the 2% rule** ([http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/when-is-consent-needed-for-the-storage-or-use-of-hazardous-substances/examples-of-the-2-rule/](http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/when-is-consent-needed-for-the-storage-or-use-of-hazardous-substances/examples-of-the-2-rule/))

**Examples of the 2% rule**

*Example 1*

A site has a number of locations where small quantities of oxygen are stored, each less than 4 tonnes in size. The total quantity stored is greater than the controlled quantity for oxygen, which is 200 tonnes. However, all of the storage containers have suitable separation such that they are not capable of causing fire escalation which could become the initiator of a major accident elsewhere on the site. Under such circumstances the site does not require hazardous substances consent.

*Example 2*

A site has a small number of large bulk oxygen vessels which in aggregate can store a total of 196 tonnes. In addition there are a number of locations where small quantities of oxygen are stored, each less than 4 tonnes in size. The total quantity stored is greater than the controlled quantity for oxygen, which is 200 tonnes. However, all of the small storage containers of less than 4 tonnes have suitable separation such that they are not capable of causing fire escalation which could become the initiator of a major accident elsewhere on the site. Under such circumstances the small containers do not need to be included in the total quantity and consequently the site does not require hazardous substances consent.

*Example 3*

The following substances are present at a site, each stored in a single separate container.

<table>
<thead>
<tr>
<th>Substance/Category</th>
<th>Amount present</th>
<th>Controlled quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromine</td>
<td>8.00 tonnes</td>
<td>20.00 tonnes</td>
</tr>
<tr>
<td>Ethyleneimine</td>
<td>3.00 tonnes</td>
<td>10.00 tonnes</td>
</tr>
<tr>
<td>Hydrogen selenide</td>
<td>0.50 tonnes</td>
<td>50.00 tonne</td>
</tr>
<tr>
<td><em>Very toxic</em></td>
<td>1.00 tonne</td>
<td>5.00 tonnes</td>
</tr>
<tr>
<td><em>Toxic</em></td>
<td>5.00 tonnes</td>
<td>50.00 tonnes</td>
</tr>
</tbody>
</table>

None of the substances present are at amounts greater than their individual controlled quantities, but they all have similar characteristics and have to be added together. Expressed as fractions of their controlled quantities the sum is:

$$\frac{8}{20} + \frac{3}{10} + \frac{0.5}{50} + \frac{1}{5} + \frac{5}{50} = 0.40 + 0.30 + 0.01 + 0.20 + 0.10 = 1.01.$$  


The sum of these fractions is greater than 1, so for each of the substances the controlled quantity is considered to be present and a hazardous substances consent would be required for each of them.

If the very toxic substance was stored in two separate containers one of which contained 0.9 tonne and the other 0.1 tonne: then the calculation and outcome could be different. The hazardous substance in the smaller container represents 2% of the controlled quantity for that substance. If the 0.1 tonnes of very toxic material could not initiate a major accident elsewhere on the site (for example because it is stored separately or because of the physical properties of the very toxic substance as stored on site) it maybe disregarded when calculating the aggregate quantity. So the calculation would then be:

$$\frac{8}{20} + \frac{3}{10} + \frac{0.5}{50} + \frac{0.9}{5} + \frac{5}{50} = 0.40 + 0.30 + 0.01 + 0.18 + 0.10 = 0.99.$$  

The sum of these fractions is less than 1, so there is no need for a consent for any of the substances.

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4. Applying for hazardous substances consent

(http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/how-are-applications-for-consent-made/)
How can applicants help make sure a decisions are not delayed?

Incomplete applications can delay decisions. Early discussions with the hazardous substances authority and the Health and Safety Executive can help to ensure the quality of their applications and prevent delays. The Health and Safety Executive will give pre-application advice to new operators of hazardous installations and to nationally significant infrastructure project applicants. If applications are incomplete, or information required by the Health and Safety Executive is not provided, this can cause delays for applicants.

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Who can see the information provided in an application?

The application form will be used to make the decision on consent by the hazardous substances authority and for consultation with the Health and Safety Executive, Environment Agency and Natural England where appropriate. Applications, including plans, will be open to inspection by the public. Applicants who are in doubt as to what could be disclosed may want to have a prior informal discussion with the hazardous substances authority.

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Do applicants need to do to tell people around the site that they are making an application?

Applicants need to tell others around the site that they intend to make an application. This allows people living and working in the area to make their views known to the hazardous substances authority.

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How do applicants tell local people about their application?

Before submitting an application, applicants need to publicise that they intend to do so. This gives the opportunity for people to review the application and accompanying documentation. Applicants should have a completed application form and accompanying documents ready when publicising. For more details see information needed in an application (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/how-does-the-planning-system-deal-with-hazardous-substances/how-are-applications-for-consent-made/information-needed-in-an-application/#paragraph_033).

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Do applicants need to own the site to apply for consent?

Applicants do not need to own the application site in order to make an application for consent. However, owners should be given the opportunity to comment on the application. Every application must therefore also be accompanied by a signed certificate relating to ownership. This will be one of the certificates (A-D) set out in Form 5 in Schedule 2 of the Planning (Hazardous Substances) Regulations 1992 (http://www.legislation.gov.uk/uksi/1992/656/schedule/2/made).

Applicants should provide a copy of:
• Certificate A if they are the freeholder of all the land and there are no leaseholders with leases of 7 or more years;
• Certificate B if not, and they know the names and addresses of the other owners; or
• Certificate C or D if they cannot ascertain all, or some, of the other owners in order to serve individual notices on them.

How much does an application cost?
For applications where no one substance exceeds twice the controlled quantity, the fee is £250. For proposals involving the presence of a substance in excess of twice the controlled quantity, the fee is £400. Where an application is for the removal of conditions attached to a grant of consent or for the continuation of a consent upon partial charge in ownership of the land, the fee is £200.

How can Hazardous Substances Authorities apply for consent themselves?
Where a hazardous substances authority in England wishes to obtain a hazardous substances consent itself, it will apply to the Secretary of State for Communities and Local Government by sending the application to the National Planning Casework Unit at the following addresses:

National Planning Casework Unit
5 St Philips Place
Colmore Row
Birmingham
B3 2PW

npcu@communities.gsi.gov.uk

Can hazardous substances consent be given under Local and Neighbourhood Development Orders?
Local and Neighbourhood Development Orders allow for development to take place without the need for an express grant of planning permission. However they cannot provide an exemption from hazardous substances consent, which would need to be obtained in the normal way. Further guidance on local and neighbourhood development orders near hazardous installations see ‘What about Local and Neighbourhood Development Orders?’

Do hazardous substances controls apply to Crown land?
Section 79 of the Planning and Compulsory Purchase Act 2004 applies hazardous substances controls to Crown land.
• Information needed in an application

The forms to apply for consent are prescribed in Schedule 2 of the Planning

Applicants should:
• Answer the questions on the form. This includes information about the
  substances for which consent is required (referring to the most up to date
  list of substances) and the manner in which the substances are to be kept
  and used.
• Provide relevant maps and drawings. Firstly, a site map, to a scale of at least
  1:10,000, identifying the application site and showing National Grid lines and
  reference numbers. Secondly, a substance location plan, to a scale of at
  least 1:2,500, showing any area of the site where the substance is to be
  stored. It is helpful if topographical features of the site are indicated. Where
  existing and proposed works are shown on the same drawing, new works
  should be easily distinguishable.
• Where the substance is to be used in a manufacturing, treatment or other
  industrial process, include the location of the major items of plant involved in
  that process. Also other details such as maximum temperature and maximum
  pressure.
• Provide information about access points to and from the land.
• Provide information about how they have told people about the application.
• Provide a certificate (Form 5 in the regulations) explaining who owns the site.
• Provide a copy of any existing hazardous substances consent.

This information should be provided for each hazardous substance or generic
category for which consent is required.

ID 39-041-20140306 Last updated 06 03 2014

Notifying local people about an application

The requirements for notifying people about an application for hazardous
substances consent are set out in the Planning (Hazardous Substances)

Three steps are needed:
• A notice of the application should be published in a local newspaper. Form 3
  in the regulations (http://www.legislation.gov.uk/uksi/1992/656/schedule/2/made)
  sets out how this should look. This must be published within the 21 days
  before the date on which the application is made. The applicant is
  responsible for arranging for the documents to be available for inspection at
  a suitable place within the locality.
• A copy of the notice should be published at the application site. This should
  be easily legible for people without needing to go onto the land. The notice
  should be displayed for at least seven days of the 21 day period.
• When the application is made, the applicant will need to certify that this
  publicity has happened by providing a copy of the newspaper notice (verifying
  that it has been published and stating the name and date of publication). A
  certificate (Form 4 in regulations) should confirm that the site notice was
displayed as required. If the site notice was not displayed, through no fault of
the applicant, an explanation should be given.

ID 39-042-20140306 Last updated 06 03 2014

5. Deciding applications for hazardous substances consent

What does the hazardous substances authority do when it receives an application?

The first thing a hazardous substances authority will do is to make sure the application is in order. This will involve ensuring it meets the requirements set out in the Planning (Hazardous Substances) Regulations 1992 (http://www.legislation.gov.uk/uksi/1992/656/regulation/5/made). If the application is in order, the hazardous substances authority will acknowledge it. It will place a copy on the register of consent applications, which is available to anyone who wants to see it. If it does not consider the application is in order it will tell the applicant why.

ID 39-043-20140306 Last updated 06 03 2014

What expert advice should the hazardous substances authority seek?

Before deciding on a consent application, the hazardous substances authority should consult the Health and Safety Executive, Environment Agency and any other bodies as required by legislation. These include fire and civil defence authorities, other relevant planning authorities and public utilities. Natural England should also be consulted where it appears to the hazardous substances authority that an area of particular natural sensitivity or interest may be affected. The hazardous substances authority must give consultees at least 28 days to comment.

ID 39-044-20140306 Last updated 06 03 2014

What is the role of the Health and Safety Executive and Environment Agency?

The role of Health and Safety Executive and the Environment Agency is to advise the hazardous substances authority on the risks arising from the presence of hazardous substances. The Health and Safety Executive has the expertise to assess the risks to people, and the Environment Agency risks to the environment. However, the decision as to whether the risks from hazardous substances are tolerable in the context of existing and potential uses of neighbouring land is made by the hazardous substances authority.

ID 39-045-20140306 Last updated 06 03 2014

What will the hazardous substances authority consider in making a decision?
Before reaching a decision, the hazardous substances authority will weigh up all the comments received, including those from the Health and Safety Executive. It will take account of local needs and conditions, the local plan, and any other material considerations.

ID 39-046-20140306 Last updated 06 03 2014

**What consideration should be given to the Health and Safety Executive's advice?**

In view of its acknowledged expertise in assessing the off-site risks presented by the use of hazardous substances, any advice from Health and Safety Executive that hazardous substances consent should be refused, should not be overridden without the most careful consideration. Where a hazardous substances authority is minded to grant consent against Health and Safety Executive advice, it should notify the Health and Safety Executive (http://www.legislation.gov.uk/uksi/1992/656/made) and allow 21 days for the Executive to give further consideration. During that period the Health and Safety Executive will consider whether to request the Secretary of State for Communities and Local Government to call-in the application for determination.

ID 39-047-20140306 Last updated 06 03 2014

**What decision can the hazardous substances authority make on the consent?**

It may grant consent, either with or without conditions, or may refuse it. If it refuses consent or grants it subject to conditions, it should provide full reasons for the decision. This will help the applicant to decide whether or not to contest the decision. The requirements for making a decision are set out in the Planning (Hazardous Substances) Act 1990 (http://www.legislation.gov.uk/ukpga/1990/10/section/9).

ID 39-048-20140306 Last updated 06 03 2014

**What conditions can be imposed on a consent?**

The hazardous substances authority can impose conditions (http://www.legislation.gov.uk/ukpga/1990/10/section/10), including how and where substances are kept and the times substances may be present or requiring permanent removal within a certain time.

Conditions on how a substance is to be kept or used should only be imposed if the Health and Safety Executive has advised that such conditions should be imposed. Where an authority is considering imposing a condition restricting where a substance may be present within a site, it should try to avoid imposing undue restrictions on the relatively small amounts of that substance being elsewhere. For example, a condition may allow a hazardous substance to be stored in a moveable container in a different area of a site from where it has previously been stored provided the quantity does not exceed 10 per cent of the controlled quantity set out above. This avoids situations where, for example, relatively small amount of a substance in a moveable container in a different part of the site (e.g. a gas canister to service a staff kitchen), or which is covered by the ‘2% rule’ (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/how-does-the-planning-system-deal-with-hazardous-substances/when-is-consent-needed-for-the-storage-or-use-of-hazardous-substances/#paragraph_016), would otherwise be a breach.

ID 39-049-20140306 Last updated 06 03 2014
Who else could decide applications for consent?

The hazardous substances authority will usually decide the application. The Secretary of State also has the power to call in an application for his own determination. This will be very much the exception, for example where an application raises issues of more than local importance. Where an application is called-in, the hazardous substances authority must inform the applicant.

Under the nationally significant infrastructure planning regime hazardous substances consent can be deemed to be granted by a Development Consent Order. The aim in doing so is to provide a ‘one stop shop’ for consenting for nationally significant infrastructure projects. A deemed consent can also be issued in certain circumstances by the Government where consent is required for a development by a statutory undertaker or local authority which requires Government authorisation.

How long will it take to decide on an application for consent?

A decision should be given within eight weeks from receipt of a valid application. Alternatively, it should be given within any extended period agreed in writing between the applicant and hazardous substances authority. In order to avoid delay it is important that the application contains all of the necessary information. Early discussions between the applicant, Health and Safety Executive and hazardous substances authority can help ensure this.

What if an applicant is not happy with the decision or the hazardous substances authority is taking too long to reach it?

It is important to consider the reasons for any refusal or conditions. It may be possible to overcome objections by changing the proposal in some way and submitting a new application. Discussions between the hazardous substances authority and applicant can help.

If a hazardous substances authority is taking longer than eight weeks to make a decision it is possible to appeal, although this may take longer than waiting for the authority to make a decision.

Can applicants appeal against the decision on an application for consent?

An appeal can be made to the Secretary of State if the hazardous substances authority:

• refuses to grant consent;
• refuses an application for a continuation of consent upon change in ownership of part of the land;
• refuses to grant any consent, agreement or approval required by a condition imposed on a consent;
• refuses an application to vary or remove conditions attached to a previous grant of consent;
• grants consent but imposes conditions which are unacceptable to the applicant; or
• fails to reach a decision within the statutory time limit of eight weeks, or any longer period agreed with the applicant.

Hazardous substances consent appeals (http://www.planningportal.gov.uk/planning/countryside/environmental/hazsubstances) may be made at any time within six months of the decision or, if no decision has been made, within six months from when a decision should have been given. This gives the applicant time to discuss matters with the hazardous substances authority to see if there is any possibility of finding a way of overcoming its objections bearing in mind that an appeal is intended to be a last resort.

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6. After consent has been granted (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/after-consent-has-been-granted/)

After consent has been granted

Can the consent be used straight away?

The applicant can use the consent immediately unless the consent contains conditions that do not allow this. There may be other approvals required in connection with consent (e.g. planning permission if development is required).

ID 39-054-20140306 Last updated 06 03 2014

Who can implement the consent?

Unless a condition is imposed limiting use of the consent to a specified person or company the consent will normally run with the land, rather than being personal to the applicant. This means that if the land is sold in its entirety, the new owner will be able to implement the consent. Where there is a partial change in control of land with a consent (e.g. part of the land is sold, but not all of it) that consent is revoked unless an application to continue has been made.

ID 39-055-20140306 Last updated 06 03 2014

Can conditions be altered?

An application can be made to the hazardous substances authority to vary or revoke any conditions (Form 2 in the regulations (http://www.legislation.gov.uk/uksi/1999/981/schedule/2/made)). In considering applications the hazardous substances authority can only consider the conditions; it cannot overturn the original decision by refusing consent outright. If the hazardous substances authority decides that the conditions should be varied or removed, it will grant a new consent. If it decides that the conditions should not be changed, the application will be refused, but the original consent will still stand. The same publicity procedures will apply as for applications for a new consent.

ID 39-056-20140306 Last updated 06 03 2014

Will a hazardous substances consent affect decisions on future development nearby?

Where a consent exists it will be taken into account in deciding nearby applications for planning permission (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/handling-development-proposals-around-hazardous-installations/) and in
What happens if the consent is not implemented?

If the substances with consent have not been present for five years, the hazardous substances authority may revoke the consent without needing to pay compensation. There are also other circumstances where consent can be revoked.

Can hazardous substances authorities revoke or change a consent?

The hazardous substances authority can revoke or modify a consent. This requires confirmation by the Secretary of State, and the hazardous substances authority would be liable to pay compensation. There are also specific circumstances where a consent can be revoked, set out in section 14 of the Planning (Hazardous Substances) Act 1990.

In some cases the use of the land with a consent may change. For example, there have been situations where sites with consent have since been converted into a car park. In these situations the hazardous substances authority can revoke the consent. Where a consent has not been relied on for five years, or the use of the land has changed materially since the consent was granted, it maybe revoked without compensation being payable.

If there is a change to the person in control of part of the land the consent is automatically revoked unless an application for continuation has been made. It is likely that a hazardous substances authority will need to modify information in the consent or conditions. But it should rarely be appropriate to impose more onerous conditions or revoke a consent.

Applications for revocation that are subject to confirmation by the Secretary of State should be sent to the National Planning Casework Unit at the following addresses:

National Planning Casework Unit
5 St Philips Place
Colmore Row
Birmingham
B3 2PW
npcu@communities.gsi.gov.uk

What happens if an operator gives up a consent?

If an operator wants to give up the consent or reduce the maximum quantity of hazardous substances for which it has consent it should discuss this with the hazardous substances authority. There is no procedure for giving up consent set out in legislation however alternative arrangements may be made (e.g. the hazardous substances authority may revoke the consent and make a separate agreement with the operator to waive compensation).
Who keeps a register of applications and consents?
Hazardous substances authorities keep a register containing information about applications for hazardous substances consent.

ID 39-061-20140306 Last updated 06 03 2014

7. Breaches of hazardous substances control

Who is responsible for ensuring hazardous substances consent requirements are complied with?
Enforcement of hazardous substances controls is the responsibility of the hazardous substances authority. The authority will liaise with the Health and Safety Executive where contraventions give rise to health and safety concerns. The Health and Safety Executive may consider whether action is also appropriate under the Health and Safety at Work etc Act 1974.

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What happens if somebody operates without consent?
Contravention of hazardous substances control can be a serious and immediate risk to people in the area. There are several options for a hazardous substances authority if somebody is operating without consent, or in contravention of a condition. In deciding a course of action the hazardous substances authority will:

• take account of the nature of the unauthorised use;
• the degree of risk arising from it; and
• whether the breach is intentional.

In less serious cases the hazardous substances authority can negotiate with the operator to resolve the situation without formal action. For example, a hazardous substances authority may ask an operator to apply for consent retrospectively. Alternatively, the hazardous substances authority can serve a contravention notice, setting out what should be done to rectify the situation.

The hazardous substances authority can also ask for a court injunction to restrain a breach of control or prosecute. The fact that contravention is a criminal offence reflects the potential gravity of such a breach.

ID 39-063-20140306 Last updated 06 03 2014

What is a contravention notice?
A contravention notice would set out the alleged contravention and the steps required to remedy that contravention. Requirements for a notice are set out in legislation.

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The hazardous substances authority should also send a copy of the notice to the Health and Safety Executive. The notice should be accompanied by information about the right to appeal, the grounds for which are set out in legislation.

The hazardous substances authority can withdraw a contravention notice at any time.

ID 39-064-20140306 Last updated 06 03 2014

8. Dealing with hazardous substances in plan-making

What information is available to local planning authorities in making plans?

Local planning authorities should know the location of hazardous installations as they will have been informed of consultation zones by the Health and Safety Executive and consultation distances by the Office for Nuclear Regulation. For licensed explosives sites the license holder will provide the local authority with a safeguarding plan for the site. Plan preparation can be informed by taking into account the likely advice on applications within these zones. This will also enable the local planning authority to have regard to the objective of preventing major accidents and limiting their consequences.

If a neighbourhood plan is being developed in an area where a consultation zone applies, local planning authorities will want to take this into account when exercising their duty to advise and assist.

It is good practice to discuss any emerging issues with the Health and Safety Executive (or Office for Nuclear Regulation) at the earliest opportunity.

ID 39-065-20140306 Last updated 06 03 2014

How should businesses that need hazardous substances consent and local authorities work together?

It is good planning practice for local authorities and businesses that need hazardous substances consent to work together when Local Plans are being prepared. This can help to reduce the potential for conflicting land uses and promote safety of people and protection of the environment.

The National Planning Policy Framework sets out that local planning authorities should support existing business sectors and, where possible, identify and plan for new or emerging sectors likely to locate in their area. This may include the chemicals industry, distributors and other businesses that require hazardous substances consent.

Related policy

National Planning Policy Framework

- Paragraph 21

Dealing with hazardous substances in plan-making
The chemicals industry is an important part of the UK economy. Local planning authorities can use the duty to co-operate to work strategically with neighbouring authorities and local enterprise partnerships to understand the needs of business in their area, including the chemicals industry.

In wholly or predominantly business areas that have been designated as such for neighbourhood planning, businesses can take the lead and the local planning authority can work with business to support their ambitions, including early consideration of the need for hazardous substances consent.

What can be done to overcome conflicts between hazardous substances consents and the demand for development?

It is good practice for local planning authorities to work proactively with businesses to consider how any conflicts between businesses requiring hazardous substances consents, and the need for development, can be overcome.

Reviews of consents to ensure they are still in use could help identify where consents may be redundant or could be given up.

If a hazardous substances consent is no longer used it may be appropriate for it to be revoked so as not to prevent development in the vicinity. Hazardous substances consent can be revoked in other situations, although this may result in compensation being payable.

What expert advice should be sought on planning applications around hazardous installations?

Local planning authorities should know the location of hazardous installations as they will have been informed of consultation zones by the Health and Safety Executive and consultation distances by the Office for Nuclear Regulation. For licensed explosives sites the license holder will provide the local authority with a safeguarding plan for the site. Schedule 5 of the Town and Country Planning (Development Management Procedure) Order 2010 requires local planning authorities to consult the Health and Safety Executive on applications above certain thresholds in these consultation zones.
They must consult the Health and Safety Executive on applications in consultation zones for residential development, and large retail, office or industrial developments. They must also consult the Health and Safety Executive on applications which are likely to result in an increase in the number of people working in or visiting the notified area. Particular regard should be had to children, older people or disabled people. There may be particular issues to consider for hotels and similar developments where people may be unfamiliar with their surroundings, or which may result in a large number of people in one place. Within consultation zones certain permitted development rights may not apply. For each type of development, the Health and Safety Executive’s advice to local planning authorities will take account of the maximum quantity of a substance permitted by a hazardous substances consent and any conditions attached to it.

Local planning authorities must also consult with Health and Safety Executive, Environment Agency and, where the development could affect a sensitive natural area, with Natural England. This is necessary for new establishments, modifications to existing establishments, and development (including transport links) in the vicinity of existing establishments, which could increase the risk or consequences of major accident.

Local planning authorities should also consult the Office for Nuclear Regulation in certain circumstances.

ID 39-068-20140306 Last updated 06 03 2014

**How should applications for planning permission which are below thresholds for consultation be dealt with?**

Local planning authorities should be alert to encroachment of development in consultation zones, including where larger developments are divided between smaller applications to fall below consultation thresholds. Unplanned and encroaching development can add costs for businesses to provide additional safety measures, and risk increased consequences should a major accident occur. Local planning authorities can consult the Health and Safety Executive on other applications.

ID 39-069-20140306 Last updated 06 03 2014

**How will the Health and Safety Executive be consulted?**

PADHI (Planning Advice for Developments near Hazardous Installations) is the name of the methodology used by Health and Safety Executive to give land use planning advice. Health and Safety Executive has developed a software version of this methodology, known as PADHI+ which is available on-line to planning authorities, to enable them to consult Health and Safety Executive directly for advice on developments around major hazard sites and pipelines. As a statutory consultee, the Health and Safety Executive will provide advice within 21 days.

ID 39-070-20140306 Last updated 06 03 2014
What consideration will the local planning authority give to Health and Safety Executive advice?

Health and Safety Executive’s role is an advisory one. It has no power to direct refusal of planning permission or of hazardous substances consent. Where Health and Safety Executive advises that there are health and safety grounds for refusing, or imposing conditions on an application, it will, on request, explain to the local planning authority the reasons for its advice.

The decision on whether to grant permission rests with the local planning authority. In view of its acknowledged expertise in assessing the off-site risks presented by the use of hazardous substances, any advice from Health and Safety Executive that planning permission should be refused for development for, at or near to a hazardous installation or pipeline should not be overridden without the most careful consideration.

Where that advice is material to any subsequent appeal, the Health and Safety Executive may provide expert evidence at any local inquiry. More information on the issues the Health and Safety Executive takes into account when advising on applications can be found on the HSE Land Use Planning website (http://www.hse.gov.uk/landuseplanning/).

ID 39-071-20140306 Last updated 06 03 2014

What happens if a local planning authority would like to give planning permission against Health and Safety Executive advice?

Where a local planning authority is minded to grant planning permission against Health and Safety Executive’s advice, it should give Health and Safety Executive advance notice of that intention, and allow 21 days from that notice for the Health and Safety Executive to give further consideration to the matter. This will enable the Health and Safety Executive to consider whether to request the Secretary of State for Communities and Local Government to call-in the application. The Secretary of State exercises the power to call-in (https://www.gov.uk/government/collections/planning-applications-called-in-decisions-and-recovered-appeals) applications very selectively.

Health and Safety Executive will normally consider its role to be discharged when it is satisfied that the local authority is acting in full understanding of the advice received and the consequences that could follow. It will consider recommending call-in action only in cases of exceptional concern or where important policy or safety issues are at stake.

Local planning authorities should notify the Health and Safety Executive where planning permission has been granted in the Safeguarding Zone of a Health and Safety Executive licensed explosives site.

ID 39-072-20140306 Last updated 06 03 2014

How can conflicts between consents and development be addressed?

It is good planning practice for local planning authorities to work proactively with businesses that have consent where there is potential conflict between the existence of a consent and a local authority’s planning priorities.

Reviews of consents to ensure they are still in use could help identify where consents may be redundant or could be given up (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/after-consent-has-been-granted/#paragraph_060).
It is also important to plan strategically for the chemicals industry and other uses that require hazardous substances consents. Business, industry and local planning authorities working together when Local Plans are being prepared (http://planningguidance.communities.gov.uk/blog/guidance/local-plans/preparing-a-local-plan/#paragraph_006) can help to reduce future problems and promote safety of people and protection of the environment.

ID 2a-073-20140306 Last updated 06 03 2014

If hazardous substances consent is no longer required will it still prevent development nearby?

Redundant hazardous substances consents can be a barrier to development. Sometimes a consent is no longer required by an operator. For example, a facility may have shut down or a site redeveloped. However, unless the hazardous substances consent is revoked (http://planningguidance.communities.gov.uk/blog/guidance/hazardous-substances/how-does-the-planning-system-deal-with-hazardous-substances/can-the-consent-be-used-straight-away/#paragraph_059) then consultation zones are still likely to apply. Hazardous substances authorities should be proactive about revoking consents that no are no longer required.

ID 39-074-20140306 Last updated 06 03 2014

What about development around nuclear installations?

Consultation requirements can vary between sites for proposed developments in the vicinity of licensed nuclear installations. Administrative arrangements exist under which the Office for Nuclear Regulation (http://www.hse.gov.uk/nuclear/) specify consultation zones and the type of developments on which it should be consulted.

Where the local planning authority is in any doubt about whether the Office for Nuclear Regulation should be consulted in a particular case (http://www.hse.gov.uk/nuclear/land-use-planning.htm), it should contact them at the earliest opportunity.


Given their statutory role in public safety, local authority emergency planners will have a key role to play in advising local planning authorities on developments around nuclear installations. Early engagement can help to address issues which may otherwise affect development proposals at a later stage.

ID 39-075-20140306 Last updated 06 03 2014

Related policy

National Planning Policy Framework

- Paragraph 172 (http://planningguidance.con sustainable-development/plan-making/#paragraph_172)
- Paragraph 194 (http://planningguidance.con sustainable-development/decision-taking/#paragraph_194)

How is development around licensed explosives facilities considered?

The Health and Safety Executive issue consultation zones around licensed explosive sites and licensed ports. Licences issued by the Health and Safety Executive specify that each place keeping or handling explosives shall be separated from other occupied buildings. This ‘safety distance’ varies according to the types and quantities of explosives present.
The licence does not of itself prevent construction or activities within these distances, but this may lead to further restrictions being imposed on the licensee. This could result in the operations with explosives becoming unviable. Licensees are therefore usually alert to any development which occurs or is proposed in the vicinity of their premises and which may seriously affect their operations. So that the Health and Safety Executive is also made aware of the possibility of encroachment on the safety distances local planning authorities are required to consult Health and Safety Executive at an early stage about applications for development in the vicinity of licensed explosives sites and licensed ports.

ID 39-076-20140306 Last updated 06 03 2014

**What about Local and Neighbourhood Development Orders?**

Local and Neighbourhood Development Orders allow for development to take place without the need for an express grant of planning permission. The same consultation requirements set out above apply in preparing Order as apply to deciding applications for planning permission. If a neighbourhood planning body is unsure whether there is a consultation zone covering their neighbourhood it should ask the local planning authority in the first instance.

ID 39-077-20140306 Last updated 06 03 2014

**Could the zones for consultation change over time?**

Changes may sometimes be required to consultation distances around sites that already have a consent for the presence of hazardous substances. Health and Safety Executive/Office for Nuclear Regulation will keep the consultation zones under review and will inform the local planning authority if changes are appropriate. Similarly, the local planning authority should liaise with Health and Safety Executive/Office for Nuclear Regulation if it becomes aware of changed circumstances that might affect the consultation zone.

ID 39-078-20140306 Last updated 06 03 2014
IN THE HIGH COURT OF JUSTICE

QUEEN'S BENCH DIVISION
(CROWN OFFICE LIST)

Royal Courts of Justice
Strand
London WC2

Date: Thursday, 14th January 1999

Before:

MR JUSTICE CARNWATH

REGINA

and

TANDRIDGE DISTRICT COUNCIL

EX PARTE MOHAMED AL FAYED

(Computer-aided Transcript of the Stenograph Notes of
Smith Bernal Reporting Limited
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Fax No: 0171-831 8838
Official Shorthand Writers to the Court)

MR I CROXFORD QC and MR R SINGH (instructed by Halsey Meyer Higgins, London SW1E 6AE) appeared on behalf of the Applicant.

MR N KING (instructed by Tandridge District Council, Surrey RH8 OBT) appeared on behalf of the Respondent.

MR D PANICK QC and MR A GRIFFITHS (instructed by Freshfields, London EC4Y 1HS) appeared on behalf of Mercury Personal Communications

JUDGMENT
MR JUSTICE CARNWATH: This is an application to quash a decision of the Tandridge District Council by which they granted planning permission for the erection of a radio telephone base station tower at a site called the Oxted Quarry in Surrey.

The Applicant is a local resident who fears that he would be affected by the station. The background is this: the application for planning permission was made by Mercury Communications PLC, on 1st May 1997, through their agent Stappard Howes Associates. The council gave notice to people living in the vicinity in order to give them an opportunity to make objections if so minded. Solicitors for Mr Al Fayed submitted objections on 4th June 1997, these raised various matters of concern but included the following:

"Our client's main concern relates to the electro magnetic and radiation fields and waves emitted by such antennae and their associated equipment. In particular our client is very concerned at the possible health hazards for people living in the immediate locality which it is thought may now be associated with these types of equipment and emitted radio energy.

The position is still so unclear that the European Union has set up an Enquiry to look into this very point.

We enclose with this letter a copy of the Recommendations of the European Commission Expert Group who are continuing their research in the current absence of the essential data on both radiotelephones and, more importantly, the associated necessary antennae."

The letter also enclosed certain material from the National Radiological Protection Board.

I will need to come back to the material that was included, but one item was an article in the Radiological Protection Bulletin for March 1997, written by a Dr Alastair McKinlay, who is an acknowledged expert in this field and a member of the Radiological Protection Board. In that article he has summarised the recommendations of the European Commissions Expert Group established by the Commission in 1993 looking at the safety of radiotelephone base station antennae.

There was also included a 1996 statement from a body called the International Commission on Non-ionising Radiation Protection of which Dr McKinlay was the UK representative.

Mr Al Fayed himself wrote to the leader of the council on 4th June raising similar concerns. He said this:

"The visibility problem is not the concern. The concern, as expressed in my Consultant's objections to the present planning application, is based on the possible danger to those living within proximity and the locality to the advent of increased interference from electromagnetic fields and from radiation. It is clear that there is very little database evidence to show whether there is, or is not, a health and environmental problem relating to such structures and their associated equipment. However, there is quite clearly concern viewed by the European Commission and they have set up, perhaps belatedly, an expert group to investigate the side effects and consequences of such new uses of technology."

A reply was sent by the Chairman of the Council on 5th June responding to that letter. The Chairman said this:
"In respect of the Oxted Chalkpit mast, the Council's Director of Planning and Environment has advised me that he has received the objection letter from your solicitors. I attach for your information an extract from the national planning guidance contained in Planning Policy Guidance Note No 8 (PPG8) on telecommunications. Paragraphs 1-6 set out the general position and presumption to facilitate the growth of telecommunications systems. Paragraph 37 indicates that radiation is a matter for the Health and Safety Executive (HSE). Radio interference is acknowledged in paragraph 38 as being a material planning consideration.

Your solicitor's letter has therefore been forwarded to the HSE and the Radiocommunications Agency for their comments. The Director of Planning & Environment has also written to the applicants on these points and has asked for the height and siting to be amended."

Unfortunately it is common ground that, although that letter says that Mr Al Fayed's solicitors' letter had been sent to the HSE, that had not in fact happened.

The letter was, on the other hand, sent to Stappard Howes, the agents for Mercury, and comments from them were received. On this particular issue, in their letter of 23rd June, they said this:

"The objectors main concern relates to health and safety issues. The National Radiological Protection Board is responsible for advising the Government on health and safety issues relating to radio transmission systems and has set guidelines and limits within which all radio systems should operate. These are designed to protect both the general public and workers who might come in close contact with radio transmission equipment. One-2-One has a very strong commitment to health and safety and to this end have adopted limits more stringent than the guidelines recommended by the NRPB. Your attention is drawn to paragraph 37 of PPG 8 in which it states that 'radiation safety is a matter for the Health and Safety Executive..' and on this basis is not a material planning consideration."

(The last comment, that radiation safety is not a material planning consideration, is not supported by Mr Pannick, who appears on behalf of Mercury before me. As we will see, it was omitted when this letter was referred to in the planning officer's report.)

There was at this stage certain discussion about the height of the proposed tower and a revised application was put in reducing it from 30 metres to 22.5 metres and reducing the number of antennae and dishes.

The application was referred to the Health and Safety Executive, but the letter to them did not draw attention to any particular aspects for their consideration, and in particular, did not draw attention to Mr Al Fayed's objections on the basis of radiation.

The HSE responded on 3rd July. The letter contains a heading which refers to regulations dealing with hazardous substances and pipeline safety, and a circular dealing with planning controls and hazardous installations, but does not make any reference to PPG 8 on telecommunications.

The body of the letter says this:
"The application has been passed to the Inspector responsible for the premises for any general comment and reply as appropriate.

HSE has considered the proposals and because of the nature of the development at this location there are no reasons on health and safety grounds why the application should not be permitted."

Mr Al Fayed also submitted further objections by letters dated 18th and 21st July. These repeated the substance of the objections he had already made. The second of those letters referred to a television report on Channel 5 which, according to the letter, related to the erection of a new radio antennae mast and understandable concerns of a household in its immediate vicinity. The letter says:

"...'National Radiological Protection Board' currently now considered that further research was necessary so as to ensure that both with the proliferation of such antennae masts and the enormously increased use of mobile phones, where there are now more that 7 million users, that those residing in the close vicinity of such masts were not having their health adversely affected by the constant exposure to low levels or radio microwaves over continuous and protracted periods. The risk of cancer was particular mentioned.

Our client's experts have pointed out that our client's original letter of objection was apparently referred to the Health and Safety Executive for reply. It would be important to know the views of that Executive in the light of the above apparent need for further research as envisaged by the NRPB which of course only confirms the views of the European Commission which has already set up such an enquiry as we mentioned in our client's original letter of objection concerning this possible health hazard."

As I have said, the understanding that the original letter had been sent to the HSE was mistaken. Nor was this letter itself drawn to the HSE's attention.

The matter came before the relevant committee of the council on 22nd July. They had before them a report of the relevant officers. That described the application proposal. It recorded the results of consultations, including the following:

"Health & Safety Executive - considered the proposals and because of the nature of the development at this location there are no reasons on health and safety grounds why the application should not be permitted."

Under "Planning Issues", the report referred to the National Guidance contained in PPG 8, and, in particular, to the Government's policy on telecommunications, which is to facilitate the growth of new and existing systems, subject to other planning objectives. There was also a reference to "the Surrey Structure Plan 1994", which contains a specific policy on communication development and:
"states that development will normally be permitted provided, in particular, a comprehensive 'network' plan has been prepared having regard to the environment of the area, and there are no other alternative sites."

The local plan contains similar policy.

There was discussion of the "need" for the proposal:

"The applicant has submitted extracts from the Mercury Network plan which illustrates the 'gap' which will result in the Network if the tower and antennas are not provided..."

There was then a discussion of "Visual Impact", and finally a heading, "Health and Safety" under that heading was the following:

"Concern has been expressed by some local residents about the impact of radio signals on health, and radio interference."

The report then quoted from the Stappard Howes' letter to which I have already referred, but omitting the suggestion that this issue was not a material planning consideration.

There was a passage dealing with the question of interference with navigation and radiocommunications of Mr Al Fayed's helicopter. The section concluded:

"PPG 8 at paragraph 37 stated that "Radiation safety is a matter for the Health and Safety Executive (HSE). As part of the wireless telegraphy licensing procedures, applicants are made aware of safety requirements, and details of radio sites are passed to the HSE.""

The report recommended the grant of permission subject to conditions. That recommendation was accepted by the Committee and planning permission was granted. It appears that there was no specific discussion of Mr Al Fayed's objections relating to safety at the council meeting.

That is the relevant material up to the date when the planning permission was granted. I have, however, been referred, without objection, to subsequent matters which may be relevant to the consideration of questions of discretion.

The role of the HSE itself has been clarified by further correspondence. In a letter dated 23rd December 1997 they commented on their response to the application (this is in a letter to Mr Al Fayed's solicitors). They said this:

"The Local Planning Authority did not include any documents from your company... objecting to the proposed development, when consulting this departments in June 1997. The advice given to the Local Planning Authority was based on the Department of the Environment Circular 11/92 upon which the planning application was submitted. Hence the final paragraph of my letter dated 26th June, 1996 was correct on the information supplied and in the context under which this department was consulted.

The Local Planning Authority did not request any advice on radiofrequency, radiation and electro-magnetic fields when submitting planning application [the number is given] to this department."
For information on the HSE's current policy, it was suggested that inquiries should be directed to the Health Directorate of the HSE.

Solicitors for Mercury wrote to the HSE on 28th May 1998. They referred to the earlier letter of December 1997 and said:

"Our understanding of your letter is that you did not think Tandridge District Council were asking you for advice on radiofrequency radiation look and electromagnetic fields when they wrote to you in June 1997.

If it had been your understanding that you were being asked by Tandridge District Council for advice in relation to safety issues associated with low level RF electromagnetic fields please would you let us know what your response would have been, both in June/July 1997 and as at the present day."

The response to that letter from the Agency is dated 19th June 1998. The advice is set out as follows:

"There are no regulations made under the Health & Safety at Work Act 1974 governing exposure to radio frequency radiation. The NRPB have published guidelines which give restrictions to avoid direct biological effects due to heating... [reference is made to a 1993 paper]

There are no proven long term ill health effects such as cancer associated with exposure to radio frequency radiation. The National Radiological Protection Board (NRPB) has reviewed research into the possible association between exposure to radio frequency radiation and cancer. It concluded that the current evidence for such an association is weak and that no persuasive biological mechanism has been established for such an effect."

The other matter to which I should refer, subsequent to the decision, is that when leave was applied for in these proceedings, there was also sought an injunction to prevent the development going ahead pending the hearing of this application. That was refused by Moses J. The present position is that the radio mast has been erected and is in operation.

I come then to the grounds of challenge. Mr Croxford, for the Applicant, puts his challenge under three principal headings: first, misdirection/acting under dictation; second, failure to give adequate consideration to all material considerations; and third, irrationality. In my view, the case stands or falls on the second of those issues. I can see no separate basis for a case of irrationality, whether on the material before the authority in 1997 or the material now available. There is nothing arguably perverse in the authority having taken the view that the concerns raised by Mr Al Fayed were not of sufficient substance in the overall balance to justify a refusal.

As to the first of Mr Croxford's headings, I do not, with respect, find it a very helpful way of looking at the matter in general, or on the facts of this case. The point he makes is that the local authority wrongly thought that they were bound by the views of the HSE on this issue rather than having an obligation to exercise their own judgment. If the local authority had thought that, they would clearly be wrong (see Lavender -v- Minister of Housing and Local Government, ...
and Another (1971) WLR 1231). There is no doubt that the decision was for then, and they could not treat it as conclusively determined by the views of the HSE.

On the other hand, it is clearly right that on a technical issue such as this, they should give great weight to the advice of the expert bodies having particular statutory responsibility for such matters. This is particularly so when one is dealing with what I assume is intended to be part of a national telecommunications network. The operators of such network can reasonably expect planning decisions to be guided by a consistent and scientifically informed national policy approach. Indeed, if a particular local authority departs from such national policy guidance and such national technical advice without good reason, it risks being overturned on appeal and being ordered to pay the costs. An example of that, in a somewhat similar case over ten years ago, is the case of Manchester City Council v The Secretary of State for the Environment (1988) JPL 774.

Now, of course, that approach must not be taken too far. I was referred by Mr Croxford to another case on costs, that is the decision of the Court of Appeal in Newport MBC v The Secretary of State for Wales (1988) JPL 377. In that case the Inspector had held that the authority's objections to a proposal for a chemical waste treatment planned were not substantiated at the Inquiry, and had awarded costs against the authority. That decision was upset on appeal by the Court of Appeal. The case shows that, as a matter of law, an authority may take account of genuine concerns about public safety, even when they are not wholly supported by technical evidence. However, that conclusion must be read in its context. The ratio of that decision, as I understand it, is apparent from the end of the judgment of Hutchison LJ at page 384. He said this:

"I accept Mr Howell's submission that the only sensible construction of the material words is that the Inspector, and therefore the Secretary of State who adopted his reasoning, was approaching the question whether the council had behaved unreasonably on the basis that the genuine fears on the part of the public, unless objectively justified, could never amount to a valid ground for refusal. That was in my judgment a material error of law." (emphasis added)

Thus the Inspector erred in that case in treating the fears of the public as being of no relevance at all to the planning decision, as a matter of law. That does not mean that it would necessarily be reasonable for an authority to refuse a permission on the basis of unsubstantiated fears or, if they do so, that they are immune from the risk of an award of costs against them.

As to PPG 8 and the reference to these matters being matters for the Health and Safety Executive, I do not read that as intended to imply that the authority are bound to follow what the HSE says, but as expressing the common sense approach that the national guidance should be regarded as having the greatest weight. I am further satisfied that the

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authority did not, in the event, regard themselves as bound by the HSE's views. The fact that this topic was included in the report to the Committee shows that the officers regarded it as something which should be considered by the authority. There is evidence before me from Mr Evans, the relevant officer, and from Mr Dalrymple, the chairman of the committee, which makes clear that they understood that the decision was one for the authority. That evidence has not been challenged in cross-examination, and I see no reason not to accept it.

There was some discussion of a letter from Mr Evans, dated 24th October 1997. This was written some time after the decision, and in response to complaints made by Mr Al Fayed's solicitors. Having referred to PPG8, he commented:

"... Decision cannot generally be made on the basis of matters covered by other legislation.

Concerning 'radiation safety', paragraph 37 of PPG8 specifically stated that 'radiation safety is a matter for the Health and Safety Executive (HSE)'. In view of this guidance and my previous comments, it would, therefore, not be possible for the Council to refuse planning permission for telecommunications development proposals on health grounds, this being a matter for the Health and Safety Executive to consider.

With specific reference to your grounds for applying for leave to seek a judicial review against the Council's decision in respect of the Oxted Quarry tower, I trust you will now agree that the Planning and Environment Committee and Officers of the Council did take account of your client's detailed health objection but were obliged to reach their decision with due regard to the limitations imposed by planning law and guidance. The 'uncertain' state of scientific understanding as to any health risks would not have been a sustainable reason for refusing planning permission under present planning law."

I accept that there are parts of that passage which suggest that the authority were precluded as a matter of law considering this matter but, on the other hand, the reference to this not being a "sustainable reason for planning permission", seems to me to be more naturally a reference to it not being one which could be defended on appeal. However that might be, that is a letter which, as I say, was written after the decision, and I have the unchallenged sworn evidence of Mr Evans and Mr Dalrymple as to how they viewed the matter.

I come back to what seems to me the heart of Mr Croxford's case, which is the second of his grounds. For this he relied on the way the matter was expressed by Lord Diplock in Secretary of State for Education v Tameside MBC (1977) AC 1015 at 1065. He paraphrased the question as being, "did the local authority ask itself the right question and take reasonable steps to acquaint itself with the relevant information to enable it to answer it correctly?"

Mr Croxford identified the "right question" as follows:
“(a) what is the nature of the Applicant's objection?
(b) What factual material and/or advice is available relevant to that objection, and insofar as advice is obtained, then upon what factual basis is it offered?
(c) what (if any) weight should be given to the objection and such factual material or advice?”

Mr Croxford suggests that the answers to those questions should have been, first, that the nature of the objection was that there was material and an unacceptable risk of damage to people's health by reason of microwave radiation, in particular, caused by non-thermal effects. The evidence in support of that objection should have been the material submitted by Mr Al Fayed (to which I have already referred) together with any other relevant scientific evidence accessible to the HSE or the NRPB and the advice of those bodies on those matters. Finally, he says, the weight to be given to those matters was something which required a fully informed decision by the council which has not yet been made.

I see force in Mr Croxford's complaint that the substance of his client's objection was never properly considered by the authority. It is not I think in dispute that Mr Al Fayed's letters raised a serious planning issue which should reasonably have been investigated before the decision. It is clear on the evidence that the authority did not investigate it themselves, because they reasonably treated it as a matter for the advice of the Health and Safety Executive; but it is equally clear that it was never in fact investigated by the HSE, because they were not put on notice that this aspect of the development was something which they had to consider. It is apparent from both the committee report and the Chairman's letter of 5th June, that the authority accepted that Mr Al Fayed's concerns justified investigation and also that they both thought the proper body to advise on this was the HSE. The approach suggested by the Chairman of this letter was, as it seems to me, entirely reasonable had it in fact been carried into effect, but for whatever reason it was not. The HSE were consulted; but, as we now know, they were not sent Mr Al Fayed's letters nor, more significantly, the technical material which he had enclosed, and they did not think they were being consulted on this aspect. Unfortunately, that would not have been apparent to the committee when reading the officer's report. The reference to the HSE's views, as quoted in the report, is perfectly general. The quotation does not include the particular references in the heading to the HSE letter, which might have suggested that the HSE were not addressing this particular issue. A committee member reading that report would have assumed that the issue, which, at the end of the report, is said to be a matter for the HSE, would have been encompassed by the general statement of the HSE which is referred to on the first page. Accordingly, it seems to me that there was a flaw in the decision-making process. That, however, is not enough to get Mr Al Fayed home as far as substantive relief is concerned. The court will not quash a decision of this
kind unless the flaw is one of practical significance, in the sense that there is a realistic possibility that the decision might have been different if the matter had been handled correctly. Now, it is here, as it seems to me, that Mr Al Fayed's case must fail.

I have been taken by Mr Croxford through a substantial amount of technical material on this subject, including material which was not before the committee. It is not necessary to review the material in any detail because the overall effect is quite clear. It is certainly the case that over the last few years there has been discussion, among those interested in the subject, of the possible effects of radio telecommunications on health. One particular aspect has been discussion of the extent to which any such effects may go beyond the thermal effects, which are recognised, and understood.

One sees this distinction in the material which was put before the council by Mr Al Fayed, in particular the very helpful article by Dr McKinley. In that article dated March 1997, he was referring to the recommendations of a European Commission Expert Group.

He discusses the findings of the Expert Group in relation to the current state of knowledge. Under the heading "HEALTH CONCERNS", he says this:

"Overall, the existing scientific literature encompassing toxicology, epidemiology and other data relevant to health risk assessment, while providing useful information provides no convincing evidence that the use of radiotelephones, whether analogue or digital, poses a long-term public health hazard. However, in view of the concern about possible biological effects of the microwave radiation used, it is important to assess the existing body of knowledge on biological effects induced by microwave radiation."

In relation to thermal effects, he says that the current exposure guidelines are intended to limit both whole body temperature and localised temperature, and he explains how they are expressed. He goes on:

"Thermal effects are well established and form the biological basis for restricting exposure to radiofrequency fields. In contrast, non-thermal effects are not well established and, currently, do not form a scientifically acceptable basis for restricting human exposure to microwave radiation at those frequencies used by hand-held radiotelephones and base stations."

The rest of the paper is a discussion of the state of knowledge, with suggestions for further research.

There is nothing in any of the other material I have been referred to which appears to me to take the matter any further. Dr McKinlay has sworn an affidavit, which is before me. In that he explains his role within the NRPB and his expertise in this area. He explains the NRPB's position as follows:

"Thus the NRPB concluded that its exposure guidelines were appropriately designed to prevent adverse responses to the increased heat load and elevated tissue temperature resulting from exposure to radiofrequency electromagnetic fields."
Since publication of the NRPB exposure guidelines in 1993, the NRPB staff have continued to monitor and review the published scientific literature to electromagnetic fields and human health and the NRPB has, from time to time, sought further advice from its Group on non-ionising Radiation.

The current position of the NRPB is that compliance with its recommended basic restrictions will prevent any adverse effect on human health due to exposure to electromagnetic fields.”

That is the authoritative view expressed by the expert body responsible for advising on this matter. It has not been challenged by any technical evidence on behalf of Mr Al Fayed, or in cross-examination. Mr Croxford finds the high point of his case in a quotation from Dr McKinley's article, in which he says this:

"Definitive answers about health hazards related to the use of radiotelephones are unlikely to come about in the short-term."

To similar effect is an article by a Mr Repacholi, from the World Health Organisation, talking about future research; he says this:

"Effects of exposure to low-level RF fields are not established or even well understood, so that definitive statements about health risks cannot be made. It seems likely that any possible effect on health is subtle. However, because it is not possible to prove the negative in hazard-valuation studies, no definitive affirmation of safety can be made. Therefore, a coordinated and focused research program in key areas is necessary."

So says Mr Croxford, there is a legitimate doubt about the matter and it would therefore be legitimate for the authority to take the view that no decision should be made, until that legitimate doubt is dispelled.

Those statements have to be seen in the context of the NRPB's advice overall. Unless the whole of the telecommunications systems of the country is to grind to a halt, some view has to be taken on matters such as this and, as I say, a consistent policy approach has to be taken.

If this decision were to be quashed and the matter were to go back to the local authority, the question would then have to arise whether they should grant or refuse permission, and if they were minded to refuse it, whether they would be willing to make an enforcement notice to discontinue the use. In making that decision they would have to take into account the advice of the NRPB, as I have summarised it. In view of the way it is put by Dr McKinlay, I find it impossible to see how a reasonable authority could take the view that this consideration would justify a refusal, or if they refused it that they be able to uphold it on an appeal. I say that also bearing in mind the positive case for the proposal, which the authority clearly accepted, in order to fill a gap in the existing network in line with approved policies. I can see no realistic possibility that, if I were to quash this decision, it would result in any different decision. Therefore, the
application must fail.

By way of conclusion, and to allay any concerns that Mr Al Fayed may have, I should refer to the unchallenged evidence on behalf of Mercury as to the extent of the likely impact on him.

Dr Ramsdale, who is employed by Mercury as Head of Technical Strategy, explains that the power density predicted from this antennae to the nearest house is approximate 20,000 times lower than the NRPB's investigational level, and that the level at Mr Al Fayed's own house is nearly 3 million times lower than the NRPB's investigation level. He also points out that there are many different sources of everyday exposure to radio frequency radiation with which we all have to contend. He says this:

“To illustrate this point, the power output of the Crystal Palace television station is over one thousand times greater than that of the replacement MPC base station. This means that... if one lived virtually anywhere within 20 kilometres of the Crystal Palace TV station one would receive a higher exposure from that station than that predicted at Mr Al Fayed's house from MPC's replacement base station.”

For these reasons, I dismiss his application.

MR KING: Would your Lordship make an order that the application be dismissed and that the Applicant pay the costs of the Respondent.

MR PANNICK: My Lord, I too, on behalf of Mercury have an application for costs. I can develop it if it is opposed. Would your Lordship like me to develop why it is appropriate?

MR JUSTICE CARNWATH: Yes. One has to bear in mind the guidance given by the House of Lords in----

MR PANNICK: Another Bolton case, does your Lordship have a copy of it?

MR JUSTICE CARNWATH: I have seen it.

MR PANNICK: Can I summarise it. The position is this: we say that here there are issues of principle relating to the proper approach to the grant of planning permission. Your Lordship was referred to the need for a national approach in relation to the matter. Secondly, applying the criteria stated by Lord Lloyd, there was a need for us to remain separate from the Local Planning Authority and, thirdly, we had a sufficiently separate interest on the facts requiring protection. We invite your Lordship to apply those criteria but also to note by reference to the evidence in this case, first of all that the Applicants supplied a very substantial amount of scientific evidence, to most of which your Lordship has not, in fact, taken during the course of the proceedings which it was necessary for us to answer so that your Lordship can see the proposition.

Secondly, the important evidence from Dr McKinlay and, indeed, from Professor Ramsdale as supplied by us and, thirdly, the letter from the HSE on 19th June 1998 was also supplied by us.

In my submission, it was right and proper that Mercury should be separately represented, and it would be unjust that Mercury should have to pay its own costs of defending this planning permission. Mr Al Fayed chose to bring these proceedings, the importance that they have for Mercury, and he has failed and should pay the costs in my submission.
MR CROXFORD: My Lord, our first position with respect is that your Lordship having found the flaw, but found in the Respondent's favour on the exercise of discretion, your Lordship should make no order for costs. If your Lordship is not minded to do that, then there should be one order and one order only.

My Lord, the position is this as we respectfully submit: there is in fact no obvious discrete, identifiable interest or issue addressed that arises in respect or has been addressed by Mr Pannick for Mercury. The position has been that, insofar as evidence has been made available and has been put in by Mercury, it could have been made available to the local authority. The local authority's position has been that it has effectively put forward the national or consistent position by referring you, as we have referred you also, to the NRPB guidance which, after all, is the same material my learned friend Mr Pannick relies upon as showing what the national position was. Indeed, in some large measure, whilst it did not -- I do not criticise him for this -- whilst it did not stop him rehearsing, embellishing and reordering some of the submissions which my learned friend Mr King had made yesterday afternoon, in large part, Mr Pannick actually adopted the submissions of the local authority, saying he was going to add little or nothing and, with respect, he did add little or nothing other than reordering and so forth. My Lord, we would respectfully say this is a straightforward case in which the ordinary approach illustrated in the Bolton case -- which is of course a planning appeal case, but the ordinary approach of Ord 53 applications, that a single order for costs should go, Lord Lloyd's exception in paragraph 2 as to showing "a separate issue", we would say it does not arise here. The issues which have been identified and debated over the last day and a half were the same as between the local authority and the developer, Mercury, and insofar as the success has been on the discretion, each of them sought to advance substantially similar arguments.

My Lord, in those circumstances, we would invite you to say, therefore, no order for costs and in the alternative only one.

MR JUSTICE CARNWATH: Can I just put two points: first the point that Mr Pannick makes that from Mercury's point of view, as opposed to Tandridge, this is a national consideration because, obviously, a refusal in these sorts of grounds of any telecommunication centre would have fairly dire national implications for Mercury and, therefore, that is something which perhaps takes it more into the Bolton category.

MR CROXFORD: My Lord, firstly, it would not have any effect nationally whatsoever on the outcome of this application, because if your Lordship had quashed, you would have quashed not on the merits, but on the defect in process. It is only because you have got the extract of discretion that you had to address merits at all, where the national interest, as my friend would put it, arises. The discussion of the national interest, if you had quashed, would have been a matter which arose then before the local authority, so that is the first response.

My Lord, the second response is this: if your Lordship would be good enough to remind yourself of my learned friend, Mr King's, outline submissions, it is page 5. I am not going to read them to you, but those submissions were looking effectively at the national position insofar as they are looking at discretion and they are looking at the position disclosed by Dr McKinlay and Professor Ramsdale which are rehearsing -- both of them are rehearsing the NRPB position which is the national position. My learned friend, Mr King, was taking that point as, indeed, with the greatest of respect to my Lord, on your judgment, he was bound to take, because your Lordship in giving judgment, if I understand rightly, has found that an authority such as Tandridge is, in effect, bound to follow such advice as is given by the NRPB which is, by definition, national in character in circumstances such as this, because there is no, on the face of it, conclusive evidence, scientific evidence otherwise. My Lord, the position was bound to be that the national concern, if that is what it was with Mercury was going be addressed and was addressed by Tandridge.

MR JUSTICE CARNWATH: The other point I was going to put to you is this: it might be said that until the HSE and the NRPB's position was, in fact, made clear by the correspondence, that you had legitimate grounds for pursuing the matter, that once that had been done as it was at the end of 1997, clearly you should have that point, except that you had all you could legitimately seek, in which case the basis would be to make no order for costs up to the end of 1997 and award costs thereafter.

MR CROXFORD: My Lord, I am not going to look a gift horse in the mouth as the third alternative and say it is a third alternative, if you are against me on the primary submission of saying, no order for costs, then I would encourage you to make that order. The position at its highest did not come about until June 1998 when this explanation came through in...
the HSE letter which, on one view, is certainly addressed only to the position in respect of June.

MR JUSTICE CARNWATH: I suppose Dr McKinlay's evidence was probably the fullest statement and that was March.

MR CROXFORD: No, my Lord. Dr McKinlay's evidence rehearses what is already in the public domain, and the issue here would have been what advice would the local authority have received from the HSE? Your Lordship will see that the sentence concluding, 'the association is weak' etc and not persuasive, but that would have meant, my Lord, if he then accepted that -- and I recognise that it may be implicit in your Lordships' judgment -- we could never have argued that the members of the local authority could have formed a different view, and that is really a very important and significant point, because your Lordship has in your judgment, if I understand it rightly, adopted an approach in respect of discretion, that the court will look at the likely outcome and, with the greatest of respect to my Lord, will do so in an inherently logic fashion. By a logical route, you will assess the likely outcome of a planning application where what is being considered is not logical, not necessarily in whole but in part, because there will be substantial fears which may not be well based in scientific fact. My Lord, the approach of the court with respect is difficult in those circumstances to come to something logically and to assess the weight or something which is inherently illogical and yet (I shall presently have an application to make) it is something which, of course, the planning authority is quite entitled to do (see West Midlands and see Newport) where the Court of Appeal has found that acceptance of the illogical----

MR JUSTICE CARNWATH: I am not sure what you are now doing, are you rearguing the case or dealing with my particular point?

MR CROXFORD: I am trying to address your particular point, because, my Lord, your point put me----

MR JUSTICE CARNWATH: You are not attracted by it?

MR CROXFORD: Not at all. I am attracted by it as an alternative to paying two sets of costs, obviously, but your Lordship's point says to me, once you have this letter of June 1998 or Dr McKinlay's evidence saying what their view is, you then ought to stop, because the likely outcome of the exercise of discretion by the judge is that the outcome of the planning application would not have been different.

MR JUSTICE CARNWATH: Thank you. Mr King, I do not think I need hear from you.

MR KING: Thank you.

MR JUSTICE CARNWATH: Mr Pannick, I think I do need to -- looking again at Bolton, I am not sure how you can bring yourself within the exceptions that are set out there.

MR PANNICK: Can I direct your Lordship's attention to 1178H:

"The developer will not normally be entitled to his costs unless he can show that there was likely to be a separate issue on which he was entitled to be heard or alternatives unless he has an interest which requires separate representation."

That is how I put it.

MR JUSTICE CARNWATH: The next sentence is rather crucial.

MR PANNICK:

"the mere fact that he is the developer does not of itself justify a second set of costs."

Certainly, my Lord, we say we had an interest which requires separate representation and one sees at 1179 at letters B to D what Lord Lloyd regarded as the sort of factors that justified at first whether they were difficult questions of principle. Secondly the need, or possible need for redetermination. Then there is the scale of development and the importance of the outcome for the development. On your Lordship's findings this is self-evident as a matter of the most considerable importance for Mercury. It is wholly unrealistic for my friend to submit that this is a matter of purely local concern. It
is a matter of general concern. In all those circumstances, given that we had separate interests to protect, this is by no means a standard planning case concerned only with local interests. In my submission, it would be unjust, where the applicant having brought these proceedings, not to have to pay our costs, especially when a very substantial part of the material did relate to scientific material which we were in the best position to respond to and which, in fact, we were the persons responding to it.

MR JUSTICE CARNWATH: Yes. The McKinlay evidence, that was part of your evidence.

MR PANNICK: Yes, McKinlay and Ramsdale. That is the evidence which responds to the material, and there is a mass of it in volumes 2 and 3 which the Applicant filed. We are the ones who have had the burden of producing the scientific answers to what the Applicant has been contending, it is we who have succeeded substantially in relation to the discretion issue insofar as the Applicant has succeeded, he has succeeded by reference to the deficiencies of the council for which we are in no way, of course, responsible. It is our case that has succeeded before your Lordship by reference to the scientific realities of this case. In those circumstances, I do submit that it would be wrong for Mercury not to have its cost of this application. That is my submission.

MR JUSTICE CARNWATH: It seems to me that the district council should have their costs in whole, although I found there was a flaw, I think I also found it was a flaw which could not reasonably have effected the decision and in accordance with the principles established by the Bolton case in the House of lords (1995) 1 WLR 376, the authority were fully entitled to present their position.

The position of Mercury is slightly more difficult. Undoubtedly they had a separate interest to defend because it is their development which is under attack, but the House of Lords made it clear that that by itself was not a sufficient reason for issuing two sets of costs. The House did grant more that one set of costs in that case, but they took into account the national policy considerations which required the Secretary of State to stand aloof from the parties, as they put it, and the fact that the funding for the opposition came from eight authorities supported by a consortium who have major and commercial interests.

This case, as I understand it, is brought by an individual who is concerned by his residential environment, and in general, the position of the council and the developers was very much the same. There is, however, the special factor that the decision in this case would have implications for Mercury nationally, and also that the objection did raise technical issues on which the evidence adduced on behalf of Mercury and particularly that of Dr McKinlay and Professor Ramsdale has been of some importance.

In those circumstances, I think it is fair to award half their costs to Mercury, so there will be one set of costs for the authority and half the costs for Mercury.

MR CROXFORD: My Lord, I have two other applications. First can I ask your Lordship to grant leave to appeal? I have indicated already in costs -- as I understand your Lordship's approach correctly, it is that you have applied a threshold test on discretion, there being, in effect, no reasonable possibility of an application for planning permission having failed. We would respectfully suggest that it is very difficult to see how such an approach can be applied in the logical way of your Lordship's court properly to this essentially difficult and illogical area which has been recognised in the West Midlands case and others, and that, we respectfully suggest, is something that their Lordships should look at.

My Lord that is the first application. Would it be convenient if I mention the other? It is only asking for an order for expedition of the transcript.

MR JUSTICE CARNWATH: Why do you want that?

MR CROXFORD: My Lord, in order that we can get on with the business of properly preparing ipsissima verba the appeal.

MR JUSTICE CARNWATH: I am sure the shorthand writer will get you a transcript as soon as she can, but this is not one of those cases which I regard as requiring special expedition, unlike some of the cases we deal with. I am afraid I refuse you leave to appeal as it turns very much on its own facts. Thank you very much.
An Act to consolidate certain enactments relating to special controls in respect of hazardous substances with amendments to give effect to recommendations of the Law Commission.

[24th May 1990]

BE IT ENACTED by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

Notes

1 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9), Act modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a), Power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

2 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9); modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a); power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

Extent

Preamble: England, Wales

Hazardous substances authorities

1. **Hazardous substances authorities: general.**

   The council of the district [, Welsh county, county borough]¹ or London borough in which land is situated shall be the hazardous substances authority in relation to the land except in cases where [section 3]² applies. [But, in the case of a London borough, see also section 2B(5) of the principal Act (Mayor of London to be the hazardous substances authority in certain circumstances).]³
Notes

1. Words inserted by Local Government (Wales) Act 1994 c. 19 Sch.6(II) para.26(1) (April 1, 1996)
2. Words repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 as SI 1991/2829 but could not take effect until the commencement of 1990 c.10 s.1 on June 1, 1992)
3. Words inserted by Greater London Authority Act 2007 c. 24 Pt 7 s.31(4) (October 23, 2007 in relation to any power to make regulations or an order; April 6, 2008 otherwise)

Commencement

s. 1: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 1: England, Wales

Repealed

2.— […]¹

Notes

1. Repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 as SI 1991/2829 but could not take effect until the commencement of 1990 c.10)

Law In Force

3.— Hazardous substances authorities: other special cases.

(1) The county council shall be the hazardous substances authority for land which is in a non-metropolitan county [in England]¹ and—
(a) […]²
(b) is used for the winning and working of minerals (including their extraction from a mineral-working deposit); or
(c) is situated in England and used for the disposal of refuse or waste materials,
 […]³
(2) […]²
(3) The Broads Authority is the hazardous substances authority for the Broads unless subsection (1) […]³ applies.
(4) If the land is in an area for which an urban development corporation [or a Mayoral development corporation]¹⁴ is the local planning authority in relation to all kinds of development, the corporation shall be the hazardous substances authority for the land unless subsection (1) […]³ applies.
(5) If the land is in an area for which a housing action trust established under Part III of the Housing Act 1988 is the local planning authority in relation to all kinds of development, the trust shall be the hazardous substances authority for the land unless subsection (1) […]³ applies.
(5A) The power to make a designation order under section 13 of the Housing and Regeneration Act 2008 which contains provision of the kind mentioned in section 14(3) of that Act does not extend to providing for the Homes and Communities Agency to be the hazardous substances authority (whether instead of, or concurrently with, a county council) in relation to land to which subsection (1) above applies.

(5B) Subject to this, section 1 and this section are subject to any provision made by such an order.

(5C) A joint planning board constituted under section 2(1B) of the principal Act for a united district in Wales is the hazardous substances authority for land in the united district unless subsection (4) or (5) applies.

(6) [...]

Notes

1 Words inserted by Local Government (Wales) Act 1994 c. 19 Sch.6(II) para.26(2) (April 1, 1996)
2 Repealed by Environment Act 1995 c. 25 Sch.24 para.1 (April 1, 1997 as SI 1996/2560)
3 Words repealed by Environment Act 1995 c. 25 Sch.24 para.1 (April 1, 1997 as SI 1996/2560)
4 Words inserted by Localism Act 2011 c. 20 Sch.22 para.38 (January 15, 2012)
5 S.3(5A) and (5B) substituted for s.3(5A) by Housing and Regeneration Act 2008 c. 17 Sch.8 para.54 (December 1, 2008: substitution has effect subject to savings and transitional provisions specified in SI 2008/3068 art.11)
6 Added by Planning (Wales) Act 2015 anaw. 4 Pt 6 s.40 (March 16, 2016 as SI 2015/1987)
7 Repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 but could not take effect until the commencement of 1990 c.40 s.3)

Commencement

s. 3: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 3(1)-(6): England, Wales

Control over presence of hazardous substances

4.— Requirement of hazardous substances consent.

(1) Subject to the provisions of this Act, the presence of a hazardous substance on, over or under land requires the consent of the hazardous substances authority (in this Act referred to as “hazardous substances consent”).

(2) Subsection (1) does not apply if the aggregate quantity of the substance—

(a) on, over or under the land;

[ (aa) on, over or under other land which is controlled by the same person and which, in all the circumstances (including in particular the purpose for which the land and the land]
mentioned in paragraph (a) is used) forms with the land so mentioned a single establishment; ]¹
(b) on, over or under other land which is within 500 metres of [ the land mentioned in paragraph (a) ]² and controlled by the same person; or
(c) in or on a structure controlled by the same person any part of which is within 500 metres of [ the land mentioned in paragraph (a) ]³,
is less than the quantity prescribed as the controlled quantity for that substance.

[(2A) A quantity of a substance which falls within more than one paragraph of subsection (2) shall only be counted once.]⁴

[ (3) The temporary presence of a hazardous substance while it is being transported from one place to another is not to be taken into account unless—
(a) it is unloaded; or
(b) it is present on, over or under land in respect of which there is a hazardous substances consent for any substance, or in respect of which (not taking into account the quantity of the substance being transported) there is required to be such a consent for any substance.
]⁵

(4) The Secretary of State may by regulations provide that hazardous substances consent is not required or is only required—
(a) in relation to land of prescribed descriptions;
(b) by reason of the presence of hazardous substances in prescribed circumstances.

(5) Regulations under this section may make different provision for different cases or descriptions of cases.

Notes
1 Added by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.2(2)(a) (April 20, 1999)
2 Words substituted by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.2(2)(b) (April 20, 1999)
3 Words substituted by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.2(2)(c) (April 20, 1999)
4 Added by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.2(2)(d) (April 20, 1999)
5 Substituted by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.2(2)(e) (April 20, 1999)

Commencement
s. 4: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 4(1)-(5): England, Wales
(i) the substances that are hazardous substances; and
(ii) the quantity which is to be the controlled quantity of any such substance; and
(b) may by regulations provide that, except in such circumstances as may be prescribed, all hazardous substances falling within a group specified in the regulations are to be treated as a single substance.

(2) Regulations which—
(a) are made by virtue of subsection (1)(a)(i); or
(b) are made by virtue of subsection (1)(a)(ii) and reduce the controlled quantity of a substance,
may make such transitional provision as appears to the Secretary of State to be appropriate.

(3) The power to make such transitional provision includes, without prejudice to its generality, power to apply sections 11 and 26 subject to such modifications as appear to the Secretary of State to be appropriate.

(4) Regulations under this section may make different provision for different cases or descriptions of cases.

Notes

1 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9), Act modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a), Power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

2 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9); modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a); power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

Commencement

s. 5: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 5(1)-(4): England, Wales

Obtaining hazardous substances consent

6.— Hazardous substances consent: general.

(1) Hazardous substances consent—
(a) may be granted on an application under this Act, or
(b) may be deemed to have been granted by virtue of section 11 or 12.
(2) Without prejudice to the provisions of this Act, any hazardous substances consent shall (except in so far as it otherwise provides) enure for the benefit of the land to which it relates and of all persons for the time being interested in the land.

Notes

1 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9), Act modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a), Power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

2 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9); modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a); power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

Commencement

s. 6: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 6(1)-(2): England, Wales
(d) may require hazardous substances authorities to determined applications for hazardous substances consent within such time as may be prescribed;
(e) may require hazardous substances authorities to give prescribed persons or bodies prescribed information about applications for hazardous substances consent, including information as to the manner in which such applications have been dealt with.

(3) [In subsection (2) above “appropriate consultations” means consultations with the safety regulator and with such persons or bodies as may be prescribed. ]

(a)-(b) […]

(4) Regulations under this section may make different provision for different cases or descriptions of cases.

Notes
1 Words inserted by Environmental Protection Act 1990 c. 43 Sch.13(I) para.3 (January 1, 1992: effect start date is January 1, 1992 but the start date for the affected chunk is March 11, 1992)
2 Words substituted by Environmental Protection Act 1990 c. 43 Sch.13(I) para.2(2) (January 1, 1992: effect start date is January 1, 1992 but the start date for the affected chunk is March 11, 1992)
3 Words substituted by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.6 (April 1, 2014)

Commencement
s. 7: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 7(1)-(4): England, Wales

8.— Certificates as to applicant’s status etc.

(1) Regulations under this Act may provide that an application for hazardous substances consent or an appeal against the refusal of such an application or against the imposition of a condition on such a consent shall not be entertained unless it is accompanied by one of the following certificates in the prescribed form and signed by or on behalf of the applicant—

(a) a certificate stating that, at the beginning of the period of 21 days ending with the date of the application, no person (other than the applicant) was the owner of any of the land to which the application relates;
(b) a certificate stating that the applicant has given the requisite notice of the application to all the persons (other than himself) who, at the beginning of that period, were owners of any of the land to which the applications relates;
(c) a certificate stating that—

(i) the applicant is unable to issue a certificate in accordance with paragraph (a) or (b);
(ii) he has given the requisite notice of the application to such one or more of the persons mentioned in paragraph (b) as are specified in the certificate;
(iii) he has taken such steps as are reasonably open to him (specifying them) to ascertain the names and addresses of the remainder of those persons but has been unable to do so;

(d) a certificate stating that—

(i) the applicant is unable to issue a certificate in accordance with paragraph (a);
(ii) he has taken such steps as are reasonably open to him (specifying them) to ascertain the names and addresses of the persons mentioned in paragraph (b) but has been unable to do so.

(2) Where such provision is made any such certificate as is mentioned in subsection (1)(b) or (c) must set out—

(a) the names of those persons to whom the applicant has given the requisite notice of the application;
(b) the addresses at which notice was given to them;
(c) the date of service of each such notice.

(3) Such regulations may require that any such certificate as is mentioned in subsection (1)(c) or (d) shall also contain a statement that the requisite notice of the application, as set out in the certificate, has on a date specified in the certificate (which must not be earlier than the beginning of the period mentioned in subsection (1)(a)) been published in a local newspaper circulating in the locality in which the land in question is situated.

(4) Such regulations may also require that where an application is accompanied by such a certificate as is mentioned in subsection (1)(b), (c) or (d) the hazardous substances authority—

(a) shall not determine the application before the end of the period of 21 days beginning with the date appearing from the certificate to be the latest of the dates of service of notices as mentioned in the certificate or, if later, the date of publication of a notice as so mentioned;
(b) in determining the application, shall take into account any representations relating to it which are made to them before the end of that period by any person who satisfies them that he is an owner of any land to which the application relates; and
(c) shall give notice of their decision to every person who has made representations which they were required to take into account in accordance with paragraph (b).

(5) Such regulations may also make provision as to who is to be treated as the owner of land for the purposes of any provisions of the regulations.

(6) If any person—

(a) issues a certificate which purports to comply with the requirements of regulations made by virtue of this section and contains a statement which he knows to be false or misleading in a material particular; or
(b) recklessly issues a certificate which purports to comply with those requirements and contains such a statement,
he shall be guilty of an offence and liable on summary conviction to a fine not exceeding level 3 on the standard scale.

(7) Regulations under this section may make different provision for different cases or descriptions of cases.

(8) Subject to subsection (5), in this section “owner,” in relation to any land, means a person who is for the time being the estate owner in respect of the fee simple in the land or is entitled to a
tenancy of the land granted or extended for a term of years certain, of which not less than seven years remain unexpired.

Notes

1 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9), Act modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a), Power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

2 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9); modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a); power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

Commencement

s. 8: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 8(1)-(8): England, Wales

9.— Determination of applications for hazardous substances consent.

(1) Subject to the following provisions of this Act, where an application is made to a hazardous substances authority for hazardous substances consent, that authority—

   (a) may grant hazardous substances consent, either unconditionally or subject to such conditions as they think fit; or

   (b) may refuse hazardous substances consent.

(2) In dealing with such an application the hazardous substances authority shall have regard to any material considerations and, in particular, but without prejudice to the generality of the foregoing—

   (a) to any current or contemplated use of the land to which the application relates;

   (b) to the way in which land in the vicinity is being used or is likely to be used;

   (c) to any planning permission [or development consent] \(^1\) that has been granted for development of land in the vicinity;

   (d) to the provisions of the development plan; and

   (e) to any advice which the [safety regulator has] \(^2\) given following consultations in pursuance of regulations under section 7(2).

(3) If an application relates to more than one hazardous substance, the authority may make different determinations in relation to each.

(4) It shall be the duty of a hazardous substances authority, when granting hazardous substances consent, to include in that consent—

   (a) a description of the land to which the consent relates;
(b) a description of the hazardous substance or substances to which it relates; and
(c) in respect of each hazardous substance to which it relates, a statement of the maximum quantity allowed by the consent to be present at any one time.

Notes
1 Words inserted by Planning Act 2008 c. 29 Sch.2 para.43 (March 1, 2010)
2 Words substituted by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.7 (April 1, 2014)

Commencement
s. 9: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 9(1)-(4)(c): England, Wales

10.— Power to impose conditions on grant of hazardous substances consent.

(1) Without prejudice to the generality of section 9(1), a hazardous substances authority may make the grant of hazardous substances consent conditional on the commencement or partial or complete execution of development on the land which is authorised by a specified planning permission or development consent[1] or may grant hazardous substances consent subject to conditions with respect to any of the following—
   (a) how and where any hazardous substance to which the consent relates is to be kept or used;
   (b) the times between which any such substance may be present;
   (c) the permanent removal of any such substance—
      (i) on or before a date specified in the consent; or
      (ii) before the end of a period specified in it and commencing on the date on which it is granted.

(2) [A hazardous substances authority] may only grant consent subject to conditions as to how a hazardous substance is to be kept or used if the conditions are conditions to which the [safety regulator has] advised the authority that any consent they might grant should be subject.

(3) It shall be the duty of a hazardous substances authority when granting hazardous substances consent to include in that consent in respect of each hazardous substance to which it relates a statement of all conditions relating to that substance subject to which the consent is granted.

Notes
1 Words inserted by Planning Act 2008 c. 29 Sch.2 para.44 (March 1, 2010)
2 Words substituted by Environmental Protection Act 1990 c. 43 Sch.13(I) para.2(3) (January 1, 1992: effect start date is January 1, 1992 but the start date for the affected chunk is March 11, 1992)
3 Words substituted by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.8 (April 1, 2014)
11. Deemed hazardous substances consent; established presence

—Deemed hazardous substances consent: established presence.

(1) Where a hazardous substance was present on, over or under any land at any time within the establishment period [for which hazardous substances consent was not required during that period,] hazard substances consent may be claimed in respect of its presence.

(2) A claim shall be made in the prescribed form before the end of the transitional period and shall contain the prescribed information as to the presence of the substance during the establishment period and as to how and where it was kept and used [during the period for which it was so present].

(3) Subject to subsections [5 and 6] (6), the hazardous substances authority shall be deemed to have granted any hazardous substances consent which is claimed under subsection (1).

(4) [The authority shall be deemed to have granted any] hazardous substances consent which is deemed to be granted under this section if an aggregate quantity of the substance not less than the controlled quantity was present at any one time within the establishment period.

(6) If it appears to the hazardous substances authority that a claim for hazardous substances consent does not comply with subsection (2), it shall be their duty, before the end of the period of two weeks from their receipt of the claim—

(a) to notify the claimant that in their opinion the claim is invalid; and

(b) to give their reasons for that opinion.

(7) Hazardous substances consent which is deemed to be granted under this section is subject [to the condition that] the maximum aggregate quantity of the substance that may be present—

(i) on, over or under the land to which the claim for the consent relates;

(ii) on, over or under other land which is controlled by the same person and which, in all the circumstances (including in particular the purposes for which the land and the land mentioned in sub-paragraph (i) is used) forms with the land so mentioned a single establishment;

(iii) on, over or under other land which is within 500 metres of the land mentioned in sub-paragraph (i) and controlled by the same person; or

(iv) in or on a structure controlled by the same person any part of which is within 500 metres of the land mentioned in sub-paragraph (i),]
at any one time shall not exceed the established quantity [ , [ and in calculating whether
the established quantity is exceeded, a quantity of a substance which falls within more than
one sub-paragraph of this paragraph shall only be counted once; ] 10 and ] 9
[(b) to such other conditions (if any) as are prescribed for the purposes of this section and
are applicable in the case of that consent.] 9

[(8) In this section—
“establishment period” means the period of 12 months immediately preceding the relevant
date;
“established quantity” means in relation to any land, the maximum quantity which was
present on, over or under the land at any one time within the establishment period;
“the relevant date” means the date on which the Planning (Control of Major-Accident
Hazards) Regulations 1999 came into force;
“the transitional period” means the period of 6 months beginning with the relevant date.
] 11

Notes
1 Words added by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.4(2)(a) (April 20, 1999)
2 Words substituted by Environmental Protection Act 1990 c. 43 Sch.13(I) para.4(a) (January 1, 1992: substitution
came into force on January 1, 1992 as 1990 c.43 but could not take effect until the commencement of 1990 c.10
s.11)
3 Words substituted by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.4(2)(b) (April 20,
1999)
4 Repealed by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.4(2)(c) (April 20, 1999)
5 Words substituted by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.4(2)(d) (April 20,
1999)
6 Words repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into
force on January 1, 1992 as 1990 c.43 but could not take effect until the commencement of 1990 c.10 s.11)
7 Words inserted by Environmental Protection Act 1990 c. 43 Sch.13(I) para.4(b) (January 1, 1992: insertion came
into force on January 1, 1992 as 1990 c.43 but could not take effect until the commencement of 1990 c.10 s.11)
8 Substituted by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.4(2)(e)(i) (April 20, 1999)
9 S.11(7)(b) substituted for s.11(7)(b) and (c) by Environmental Protection Act 1990 c. 43 Sch.13(I) para.4(b)
(January 1, 1992: substitution came into force on January 1, 1992 as 1990 c.43 but could not take effect until the
commencement of 1990 c.10 s.11)
10 Words added by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.4(2)(e)(ii) (April 20,
1999)
11 Substituted by Planning (Control of Major-Accident Hazards) Regulations 1999/981 reg.4(2)(f) (April 20, 1999)

Commencement
s. 11: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes
of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 11(1)-(8) definition of "the transitional period": England, Wales
12.— Deemed hazardous substances consent: government authorisation.

(1) Where—
   (a) the authorisation of a government department is required by virtue of an enactment in respect of development to be carried out by a local authority, or by statutory undertakers who are not a local authority; and
   (b) the development would involve the presence of a hazardous substance in circumstances requiring hazardous substances consent,

the department may, on granting that authorisation, also direct that hazardous substances consent shall be deemed to be granted subject to such conditions (if any) as may be specified in the direction.

(2) On granting a consent under section 36 of the Electricity Act 1989 in respect of any operation or change of use that would involve the presence of a hazardous substance in circumstances requiring hazardous substances consent, the Secretary of State may direct that hazardous substances consent shall be deemed to be granted, subject to such conditions (if any) as may be specified in the direction.

[(2A) On making an order under section 1 or 3 of the Transport and Works Act 1992 which includes any provision that would involve the presence of a hazardous substance in circumstances requiring hazardous substances consent, the Secretary of State may direct that hazardous substances consent shall be deemed to be granted, subject to such conditions (if any) as may be specified in the direction. ]

[(2B) On making an order granting development consent in respect of development that would involve the presence of a hazardous substance in circumstances requiring hazardous substances consent, the person making the order may direct that hazardous substances consent shall be deemed to be granted, subject to such conditions (if any) as may be specified in the direction. ]

(3) Before giving a direction under any of subsections (1) to (2B), the person having power to give the direction must consult the Health and Safety Commission.

(4) For the purposes of this section development shall be taken to be authorised by a government department if—
   (a) any consent, authority or approval to or for the development is granted by the department in pursuance of an enactment;
   (b) a compulsory purchase order is confirmed by the department authorising the purchase of land for the purpose of the development;
   (c) consent is granted by the department to the appropriation of land for the purpose of the development or the acquisition of land by agreement for that purpose;
   (d) authority is given by the department for the borrowing of money for the purpose of the development, or for the application for that purpose of any money not otherwise so applicable; or
   (e) any undertaking is given by the department to pay a grant in respect of the development in accordance with an enactment authorising the payment of such grants,

and references in this section to the authorisation of a government department shall be construed accordingly.

(5) The provisions of this Act (except section 22) shall apply in relation to any hazardous substances consent deemed to be granted by virtue of directions under this section as if it had been granted by the Secretary of State on an application referred to him under section 20.
A person shall, as respects any hazardous substances consent deemed to be granted by virtue of directions given by the person under this section, send to the hazardous substances authority concerned any such information as appears to be required by them for the purposes of a register under section 28.

Notes
1. Added by Transport and Works Act 1992 c. 42 Pt I s.18 (January 1, 1993)
2. Added by Planning Act 2008 c. 29 Sch.2 para.45(2) (March 1, 2010)
3. Substituted by Planning Act 2008 c. 29 Sch.2 para.45(3) (March 1, 2010)
4. Added by Environmental Protection Act 1990 c. 43 Sch.13(I) para.5 (January 1, 1992: effect start date is January 1, 1992 but the start date for the affected chunk is March 11, 1992)
5. Words substituted by Planning Act 2008 c. 29 Sch.2 para.45(4)(a) (March 1, 2010)
6. Words inserted by Planning Act 2008 c. 29 Sch.2 para.45(4)(b) (March 1, 2010)

Commencement
s. 12: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 12(1)-(6): England, Wales

Variation and revocation of consents

Law In Force

13.— Application for hazardous substances consent without condition attached to previous consent.

(1) This section applies to an application for hazardous substances consent without a condition subject to which a previous hazardous substances consent was granted.

(2) On such an application the hazardous substances authority shall consider only the question of the conditions subject to which hazardous substances consent should be granted.

(3) If on such an application the hazardous substances authority determine—

(a) that hazardous substances consent should be granted subject to conditions differing from those subject to which the previous consent was granted; or

(b) that it should be granted unconditionally,
they shall grant hazardous substances consent accordingly.

(4) If on such an application the hazardous substances authority determine that hazardous substances consent should be granted subject to the same conditions as those subject to which the previous consent was granted, they shall refuse the application.

(5) Where—

(a) hazardous substances consent has been granted or is deemed to have been granted for the presence on, over or under land of more than one hazardous substance; and
(b) an application under this section does not relate to all the substances, the hazardous substances authority shall only have regard to any condition relating to a substance to which the application does not relate to the extent that it has implications for a substance to which the application does relate.

(6) Where—
   (a) more than one hazardous substances consent has been granted or is deemed to have been granted in respect of the same land; and
   (b) an application under this section does not relate to all the consents, the hazardous substances authority shall only have regard to any consent to which the application does not relate to the extent that it has implications for consent to which the application does relate.

(7) […]

Notes

1 Repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 but could not take effect until the commencement of 1990 c.10 s.13)

Commencement

s. 13: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 13(1)-(7): England, Wales

14.— General power by order to revoke or modify hazardous substances consent.

(1) The hazardous substances authority may by order revoke a hazardous substances consent or modify it to such extent as they consider expedient if it appears to them, having regard to any material consideration, that it is expedient to revoke or modify it.

(2) The hazardous substances authority may also by order revoke a hazardous substances consent if it appears to them—
   (a) that there has been a material change of use of land to which a hazardous substances consent relates; or
   (b) that planning permission [or development consent]1 has been granted for development the carrying out of which would involve a material change of use of such land and the development to which the permission [or development consent]2 related has been commenced; or
   (c) in the case of a hazardous substances consent which relates only to one substance, that that substance has not for at least five years been present on, over or under the land to which the consent relates in a quantity equal to or exceeding the controlled quantity; or
   (d) in the case of a hazardous substances consent which relates to a number of substances, that none of those substances has for at least five years been so present.

(3) An order made by virtue of subsection (2)(a) or (b) in the case of a consent relating to more than one substance may revoke it entirely or only so far as it relates to a specified substance.
(4) An order under this section shall specify the grounds on which it is made.

Notes
1 Words inserted by Planning Act 2008 c. 29 Sch.2 para.46(a) (March 1, 2010)
2 Words inserted by Planning Act 2008 c. 29 Sch.2 para.46(b) (March 1, 2010)

Commencement
s. 14: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 14(1)-(4): England, Wales

Law In Force
15.— Confirmation by Secretary of State of s. 14 orders.

(1) An order under section 14[…]

(2) The Secretary of State may confirm any such order submitted to him either without modification or subject to such modification as he considers expedient.

(3) Where a hazardous substances authority submit an order under section 14 to the Secretary of State for his confirmation under this section, the authority shall serve notice of the order—
   (a) on any person who is an owner of the whole or any part of the land to which the order relates;
   (b) on any person other than an owner who appears to them to be in control of the whole or any part of that land;
   (c) on any other person who in their opinion will be affected by the order.

(4) A notice under subsection (3) shall specify the period (which must not be less than 28 days from the service of it) within which any person on whom the notice is served may require an opportunity of appearing before and being heard by a person appointed by the Secretary of State for that purpose.

(5) If such a person so requires, the Secretary of State, before confirming the order, shall give that person and the hazardous substances authority such an opportunity.

(6) Where an order under section 14 has been confirmed by the Secretary of State, the hazardous substances authority shall serve a copy of the order on every person who was entitled to be served with notice under subsection (3).

Notes
1 Words repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 but could not take effect until the commencement of 1990 c.10 s.15)
Commencement
s. 15: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 15(1)-(6): England, Wales

Law In Force

16. — Compensation in respect of s. 14 orders.

(1) This section applies where an order is made under section 14(1) revoking or modifying a hazardous substances consent.

(2) If, on a claim made to the hazardous substances authority within the prescribed time and in the prescribed manner, it is shown that any person has suffered damage in consequence of the order—
   (a) by depreciation of the value of an interest to which he is entitled in the land or in minerals in, on or under it; or
   (b) by being disturbed in his enjoyment of the land or of minerals in, on or under it,
the authority shall pay him compensation in respect of that damage.

(3) Without prejudice to subsection (2), any person who carries out any works in compliance with the order shall be entitled, on a claim made as mentioned in that subsection, to recover from the hazardous substances authority compensation in respect of any expenses reasonably incurred by him in that behalf.

(4) Any compensation payable to a person under this section by virtue of an order shall be reduced by the value to him of any timber, apparatus or other materials removed for the purpose of complying with the order.

(5) Sections 117 and 118 of the principal Act (which contain general provisions as to the assessment of and the determination of claims for compensation) shall apply as if compensation under this section were compensation under section 115 of that Act.

Notes
1 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9), Act modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a), Power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

2 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9); modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning Act 1990 (c.8), ss. 28, 54, 173(8), Sch. 2 Pt. III para. 3(a); power to modify Act conferred by Town and Country Planning Act 1990 (c.8), s. 6(5), Town and Country Planning Act 1990 (c.8), ss. 314–319, Sch. 16

Commencement
s. 16: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)
17.— Revocation of hazardous substances consent on change of control of land.

(1) A hazardous substances consent is revoked if there is a change in the person in control of part of the land to which it relates, unless an application for the continuation of the consent has previously been made to the hazardous substances authority.

(2) Regulations may make provision in relation to applications under subsection (1) corresponding to any provision that may be made by regulations under section 7 or 8 in relation to applications for hazardous substances consent.

[(3) This section does not apply if the control of land changes from one emanation of the Crown to another.]

Notes

1 Added by Planning and Compulsory Purchase Act 2004 c. 5 Sch.3 para.20 (June 7, 2006)

18.— Determination of applications for continuation of hazardous substances consent.

(1) When an application is made under section 17 for the continuation of a hazardous substances consent the hazardous substances authority—
   (a) may modify the consent in any way they consider appropriate; or
   (b) may revoke it.

(2) In dealing with such an application the authority shall have regard to any material consideration and, in particular, but without prejudice to the generality of the foregoing—
   (a) to the matters to which a hazardous substances authority are required to have regard by section 9(2)(a) to (d); and
   (b) to any advice which the [safety regulator has given following consultations in pursuance of regulations under section 17(2)].

(3) If an application relates to more than one consent, the authority may make different determinations in relation to each.
(4) If a consent relates to more than one hazardous substance, the authority may make different determinations in relation to each.

(5) It shall be the duty of a hazardous substances authority, when continuing hazardous substances consent, to attach to the consent either—
   (a) a statement that it is unchanged in relation to the matters included in it by virtue of sections 9(4) and 10(3); or
   (b) a statement of any change in respect of those matters.

(6) The modifications which a hazardous substances authority may make by virtue of subsection (1)(a) include, without prejudice to the generality of that subsection, the making of the consent subject to conditions with respect to any of the matters mentioned in subsection (1) of section 10; and subsection (2) of that section shall apply as respects those conditions as it applies to the grant of consent subject to conditions.

(7) Where any application under section 17(1) is made to a hazardous substances authority then, unless within such period as may be prescribed, or within such extended period as may at any time be agreed upon in writing between the applicant and the hazardous substances authority, the hazardous substances authority either—
   (a) give notice to the applicant of their decision on the application; or
   (b) given notice to him that the application has been referred to the Secretary of State in accordance with directions given under section 20,
the application shall be deemed to have been granted.

Notes

1 Substituted by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.9 (April 1, 2014)

Commencement

s. 18: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 18(1)-(7)(b): England, Wales

19. Compensation on revocation or modification of consent under s. 18.
Where on an application under section 17(1) the hazardous substances authority modify or revoke the hazardous substances consent, they shall pay to the person in control of the whole of the land before the change in control by virtue of which the application was made compensation in respect of any loss or damage sustained by him and directly attributable to the modification or revocation.

Notes

1 Act amended by Planning (Listed Buildings and Conservation Areas) Act 1990 (c.9), ss. 72(2), 91(4), Town and Country Planning Act 1990 (c.8), s. 1(1)(3)(5), Town and Country Planning Act 1990 (c.8), s. 336(9), Act modified by Planning (Consequential Provisions) Act 1990 (c.11), s. 5, Sch. 3 paras. 13, 14, Town and Country Planning
20.— Reference of applications to Secretary of State.

(1) The Secretary of State may give directions requiring applications for hazardous substances consent or applications under section 17(1) to be referred to him instead of being dealt with by hazardous substances authorities.

(2) A direction under this section—
   (a) may be given either to a particular hazardous substances authority or to hazardous substances authorities generally; and
   (b) may relate either to a particular application or to applications of a class specified in the direction.

(3) Any application is respect of which a direction under this section has effect shall be referred to the Secretary of State accordingly.

(4) Before determining an application referred to him under this section, the Secretary of State shall, if either the applicant or the hazardous substances authority so with, give to each of them an opportunity of appearing before, and being heard by, a person appointed by the Secretary of State for the purpose.

(4B) Subsection (4) does not apply to an application referred to the Welsh Ministers under this section instead of being dealt with by a hazardous substances authority in Wales.¹

(5) The decision of the Secretary of State on any application referred to him under this section shall be final.

(6) […]²
21.— Appeals against decisions or failure to take decisions relating to hazardous substances.

(1) Where a hazardous substances authority refuse an application for hazardous substances consent or an application under section 17(1) or an application for any consent, agreement or approval of the authority required by a condition imposed on the grant of such consent, or grant it subject to conditions, the applicant may, if he is aggrieved by their decision, appeal to the Secretary of State.

(2) A person who has made an application for hazardous substances consent may also appeal to the Secretary of State if the hazardous substances authority have either—
   (a) given notice to the applicant of their decision on the application; nor
   (b) given notice to him that the application has been referred to the Secretary of State in accordance with directions given under section 20, within such period as may be prescribed, or within such extended period as may at any time be agreed upon in writing between the applicant and the hazardous substances authority; and for the purposes of this Act in such a case the authority shall be deemed to have decided to refuse the application.

(3) An appeal under this section must be made by notice served in the prescribed manner within such period as may be prescribed.

   (3A) A notice of appeal under this section must be accompanied by such information as may be prescribed.

   (3B) The power to make regulations under subsection (3A) is exercisable by—
      (a) the Secretary of State, in relation to England;
      (b) the Welsh Ministers, in relation to Wales.

   (3C) Section 40(3) does not apply in relation to regulations under subsection (3A) made by the Welsh Ministers.
(3D) Regulations under subsection (3A) made by the Welsh Ministers are subject to annulment in pursuance of a resolution of the National Assembly for Wales.\(^1\)

(3E) Once notice of an appeal under this section to the Welsh Ministers has been served, the application to which it relates may not be varied, except in such circumstances as may be prescribed.

(3F) Regulations which make provision under subsection (3E) must provide for an application which is varied to be subject to such further consultation as the Welsh Ministers consider appropriate.\(^2\)

(4) The Secretary of State may allow or dismiss an appeal under this section or may reverse or vary any part of the decision of the hazardous substances authority (whether or not the appeal relates to that part of it) and may deal with the application as if it had been made to him in the first instance.

(5) Before determining an appeal under this section, the Secretary of State shall, if either the applicant or the hazardous substances authority so wish, give each of them an opportunity of appearing before and being heard by a person appointed by the Secretary of State for the purpose.

(5B) Subsection (5) does not apply to an appeal against a decision of a hazardous substances authority in Wales.\(^3\)

(6) The decision of the Secretary of State on any appeal under this section shall be final.

(7) […]\(^4\)

(8) The Schedule to this Act applies to appeals under this section.

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Notes

1 Added by Planning Act 2008 c. 29 Sch.11 para.6 (November 26, 2008 for purposes specified in 2008 c.29 s.241(1)(a); April 6, 2009 in relation to England; April 30, 2012 otherwise)

2 Added by Planning (Wales) Act 2015 anaw. 4 Pt 7 s.47(4) (September 6, 2015 for the purposes of enabling the Welsh Ministers to exercise any function of making regulations or orders by statutory instrument under any enactment as amended by 2015 anaw 4 Pts 3-8; not yet in force otherwise)

3 Added by Town and Country Planning (Determination of Procedure) (Wales) Order 2014/2773 Sch.1 para.26 (November 11, 2014)

4 Repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 but could not take effect until the commencement of 1990 c.10 s.21)

Amendments Pending

s. 21(5A): added by Planning Act 2008 c. 29 Sch. 10 para. 27 (date to be appointed)

Commencement

s. 21: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 21(1)-(8): England, Wales
[21A Determination by Secretary of State of procedure for certain proceedings

(1) The Secretary of State must make a determination as to the procedure by which proceedings to which this section applies are to be considered.

(2) A determination under subsection (1) must provide for the proceedings to be considered in whichever of the following ways appears to the Secretary of State to be most appropriate—
   (a) at a local inquiry;
   (b) at a hearing;
   (c) on the basis of representations in writing.

(3) The Secretary of State must make a determination under subsection (1) in respect of proceedings to which this section applies before the end of the prescribed period.

(4) A determination under subsection (1) may be varied by a subsequent determination under that subsection at any time before the proceedings are determined.

(5) The Secretary of State must notify the appellant or applicant (as the case may be) and the hazardous substances authority of any determination made under subsection (1).

(6) The Secretary of State must publish the criteria that are to be applied in making determinations under subsection (1).

(7) This section applies to—
   (a) an application referred to the Secretary of State under section 20 instead of being dealt with by a hazardous substances authority in England;
   (b) an appeal under section 21 against a decision of a hazardous substances authority in England.

(8) The Secretary of State may by order amend subsection (7) to—
   (a) add proceedings under this Act to, or remove proceedings under this Act from, the list of proceedings to which this section applies, or
   (b) otherwise modify the descriptions of proceedings under this Act to which this section applies.

(9) An order under subsection (8) may—
   (a) contain incidental, supplementary, consequential, transitional and transitory provision and savings;
   (b) amend, repeal or revoke any provision made by or under this Act or by or under any other Act.

(10) The power to make an order under subsection (8) is exercisable by statutory instrument.

(11) No order may be made under subsection (8) unless a draft of the instrument containing the order has been laid before, and approved by resolution of, each House of Parliament.

1

Notes

1 Added by Planning Act 2008 c. 29 Pt 9 c.2 s.196(3) (November 26, 2008 for purposes specified in 2008 c.29 s.241(1)(a); April 6, 2009 subject to savings provision specified in SI 2009/400 art.6(2) otherwise)
Extent
s. 21A(1)-(11): England, Wales

The text of this provision varies depending on jurisdiction or other application. See parallel texts relating to:

England | Wales

Partially In Force

England

[NOTE: not yet in force otherwise.]

Wales

[21B.— Determination by the Welsh Ministers of procedure for certain proceedings]

(1) The Welsh Ministers must make a determination as to the procedure by which proceedings to which this section applies are to be considered.

(2) A determination under subsection (1) must provide for the proceedings to be considered in such one or more of the following ways as appear to the Welsh Ministers to be appropriate—

(a) at a local inquiry;
(b) at a hearing;
(c) on the basis of representations in writing.

(3) The Welsh Ministers must make a determination under subsection (1) in respect of proceedings to which this section applies before the end of the prescribed period.

(4) A determination under subsection (1) may be varied by a subsequent determination under that subsection at any time before the proceedings are determined.

(5) The Welsh Ministers must notify the appellant or applicant (as the case may be) and the hazardous substances authority of any determination made under subsection (1).

(6) The Welsh Ministers must publish the criteria which are to be applied in making determinations under subsection (1).

(7) This section applies to—

(a) an application referred to the Welsh Ministers under section 20;
(b) an appeal to the Welsh Ministers under section 21.

(8) The Welsh Ministers may by order amend subsection (7) to—

(a) add proceedings under this Act to, or remove proceedings under this Act from, the list of proceedings to which this section applies; or
(b) otherwise modify the descriptions of proceedings under this Act to which this section applies.
(9) An order under subsection (8) may—
   (a) contain incidental, supplementary, consequential, transitional and transitory provision and savings;
   (b) amend, repeal or revoke any provision made by or under this Act or by or under any other Act.

(10) No order may be made by the Welsh Ministers under subsection (8) unless a draft of the instrument containing the order has been laid before, and approved by resolution of the National Assembly for Wales.

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Notes
1 Added by Town and Country Planning (Determination of Procedure) (Wales) Order 2014/2773 art.2(3) (November 11, 2014)

Extent
s. 21B(1)-(10): England, Wales

Law In Force

22. — Validity of decisions as to applications.

(1) If any person is aggrieved by any decision of the Secretary of State under section 20 or 21 and wishes to question the validity of that decision on the grounds—
   (a) that it is not within the powers of this Act; or
   (b) that any of the relevant requirements have not been complied with in relation to that decision,
he may [...]1 make an application to the High Court under this section.

(2) Without prejudice to subsection (1), if the hazardous substances authority who made the decision on the application to which the proceedings relate or, as the case may be, referred the application wish to question the validity of any such decision as is mentioned in that subsection on any of the grounds there mentioned, the authority may [...]1 make an application to the High Court under this section.

(2A) An application under this section may not be made without the leave of the High Court.

(2B) An application for leave for the purposes of subsection (2A) must be made before the end of the period of six weeks beginning with the day after the date on which the decision to which the application relates is taken.

(2C) When considering whether to grant leave for the purposes of subsection (2A), the High Court may by interim order suspend the operation of the decision the validity of which the person or authority concerned wishes to question, until the final determination of—
   (a) the question of whether leave should be granted, or
   (b) where leave is granted, the proceedings on any application under this section made with such leave.

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(3) On any application under this section [...] (other than an application for leave) [...]3 the High Court—
(a) may by interim order suspend the operation of the decision the validity of which is questioned by the application until the final determination of the proceedings;
(b) if satisfied that the decision in question is not within the powers of this Act, or that the interests of the applicant have been substantially prejudiced by a failure to comply with any of the relevant requirements in relation to it, may quash that decision.

(4) In this section “the relevant requirements”, in relation to any decision, means any requirements of this Act or the [principal Act] or of [the Tribunals and Inquiries Act 1992], or of any order, regulations or rules made under this Act or under either of those Acts which are applicable to that decision.

(5) Except as provided by this section, the validity of any such decision as is mentioned in subsection (1) shall not be questioned in any legal proceedings whatsoever.

(6) Nothing in subsection (5) shall affect the exercise of any jurisdiction of any court in respect of any refusal or failure on the part of the Secretary of State to take any such decision as is there mentioned.

Notes
1 Words repealed by Criminal Justice and Courts Act 2015 c. 2 Sch.16 para.7(2) (October 26, 2015: repeal has effect subject to transitional provisions specified in SI 2015/1778 art.4(a))
2 Added by Criminal Justice and Courts Act 2015 c. 2 Sch.16 para.7(3) (October 26, 2015: insertion has effect subject to transitional provisions specified in SI 2015/1778 art.4(a))
3 Words inserted by Criminal Justice and Courts Act 2015 c. 2 Sch.16 para.7(4) (October 26, 2015: insertion has effect subject to transitional provisions specified in SI 2015/1778 art.4(a))
4 Words substituted by Environmental Protection Act 1990 c. 43 Sch.13(I) para.7 (January 1, 1992: effect start date is January 1, 1992 but the start date for the affected chunk is March 11, 1992)
5 Words substituted by Tribunals and Inquiries Act 1992 c. 53 Sch.3 para.33 (October 1, 1992)

Commencement
s. 22: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 22(1)-(6): England, Wales

Contraventions of hazardous substances control

Law In Force

23.— Offences.

(1) Subject to the following provisions, of this section, if there is a contravention of hazardous substances control, the appropriate person shall be guilty of an offence.

(2) There is a contravention of hazardous substances control—
(a) if a quantity of a hazardous substances equal to or exceeding the controlled quantity is
or has been present on, over or under land and either—
   (i) there is no hazardous substances consent for the presence of the substance; or
   (ii) there is hazardous substances consent for its presence but the quantity present
       exceeds the maximum quantity permitted by the consent;
(b) if there is or has been a failure to comply with a condition subject to which a hazardous
    substances consent was granted.

(3) In subsection (1) “the appropriate person” means —
(a) in relation to a contravention falling within paragraph (a) of subsection (2)—
   (i) any person knowingly causing the substance to be present on, over or under the
       land;
   (ii) any person allowing it to be so present; and
(b) in relation to a contravention falling within paragraph (a) or (b) of that subsection, the
    person in control, of the land.

(4) A person guilty of an offence under this section shall be liable [ on summary conviction, or
on conviction on indictment, to a fine.]\(^1\)
   (a)-(b) [...]\(^1\)
   (i)-(ii) [...]\(^2\)

[ (4A) In determining the amount of any fine to be imposed on a person convicted of an offence
under this section, the court shall in particular have regard to any financial benefit which has accrued
or appears likely to accrue to him in consequence of the offence. ]\(^2\)

(5) In any proceedings for an offence under this section it shall be a defence for the accused to
prove—
   (a) that he took all reasonable precautions and exercised all due diligence to avoid
       commission of the offence, or
   (b) that commission of the offence could be avoided only by the taking of action amounting
       to a breach of a statutory duty.

(6) In any proceedings for an offence consisting of a contravention falling within subsection (2)(a),
it shall be a defence for the accused to prove that at the time of the alleged commission of the
offence he did not know, and had no reason to believe—
   (a) if the case falls within paragraph (a)(i)—
      (i) that the substance was present; or
   (b) if the case falls within paragraph (a)(ii), that the substance was present in a quantity
      exceeding the maximum quantity permitted by the consent.

(7) In any proceedings for an offence consisting of a contravention falling within subsection (2)(b),
it shall be a defence for the accused to prove that he did not know, and had no reason to believe,
that there was a failure to comply with a condition subject to which hazardous substances consent
had been granted.

Notes

\(^1\) Words substituted by Legal Aid, Sentencing and Punishment of Offenders Act 2012 (Fines on Summary Conviction)
   Regulations 2015/664 Sch.4(1) para.20 (March 12, 2015: substitution has effect subject to transitional provisions
   and savings specified in SI 2015/664 reg.5(1))
2 Words substituted and s.23(4A) inserted by Planning and Compensation Act 1991 c. 34 Sch.3(I) para.10(b) (January 2, 1992: insertion came into force on January 2, 1992 but could not take effect until the commencement of 1990 c.10 s.23 on June 1, 1992)

Commencement
s. 23: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise subject to transitional exemptions specified in SI 1992/725 art.4) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 23(1)-(7): England, Wales

Law In Force

24.— Power to issue hazardous substances contravention notice.

(1) Where it appears to the hazardous substances authority that there is or has been a contravention of hazardous substances control, they may issue a notice—
   (a) specifying an alleged contravention of hazardous substances control; and
   (b) requiring such steps as may be specified in the notice to be taken to remedy [ wholly or partly] the contravention,
   if they consider it expedient to do so having regard to any material consideration.

(2) Such a notice is referred to in this Act as a “hazardous substances contravention notice”.

(3) A hazardous substances authority shall not issue a hazardous substances contravention notice where it appears to them that a contravention of hazardous substances control can be avoided only by the taking of action amounting to a breach of a statutory duty.

(4) A copy of a hazardous substances contravention notice shall be served—
   (a) on the owner of the land to which it relates;
   (b) on any person other than the owner who appears to the hazardous substances authority to be in control of the land; and
   (c) on such other persons as may be prescribed.

(5) A hazardous substances contravention notice shall also specify—
   (a) a date not less than 28 days from the date of service of copies of the notice as the date on which it is to take effect;
   (b) in respect of each of the steps required to be taken to remedy the contravention of hazardous substances control, the period from the notice taking effect within which the step is to be taken.

(6) Where a hazardous substances authority issue a hazardous substances contravention notice the steps required by the notice may, without prejudice to the generality of subsection (1)(b), if the authority think it expedient, include a requirement that the hazardous substances be removed from the land.

(7) Where a notice includes such a requirement, it may also contain a direction that at the end of such period as may be specified in the notice any hazardous substances consent for the presence
of the substance, shall cease to have effect or, if it relates to more than one substance, shall cease to have effect so far as it relates to the substances which are required to be removed.

(8) The hazardous substances authority may withdraw a hazardous substances contravention notice (without prejudice to their power to issue another) at any time before [or after] it takes effect.

(9) If they do so, they shall immediately give notice of the withdrawal to every person who was served with a copy of the notice [or would, if the notice were re-issued, be served with a copy of it].

Notes
1 Words inserted by Planning and Compensation Act 1991 c. 34 Sch.3(I) para.11(a) (January 2, 1992: insertion came into force on January 2, 1992 but could not take effect until the commencement of 1990 c.10 s.24 on June 1, 1992)
2 Words inserted by Planning and Compensation Act 1991 c. 34 Sch.3(I) para.11(b) (January 2, 1992: insertion came into force on January 2, 1992 but could not take effect until the commencement of 1990 c.10 s.24 on June 1, 1992)
3 Words inserted by Planning and Compensation Act 1991 c. 34 Sch.3(I) para.11(c) (January 2, 1992: insertion came into force on January 2, 1992 but could not take effect until the commencement of 1990 c.10 s.24 on June 1, 1992)

Commencement
s. 24: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent
s. 24(1)-(9): England, Wales

[24A.— Variation of hazardous substances contravention notices.

(1) A hazardous substances authority may waive or relax any requirement of a hazardous substances contravention notice issued by them and, in particular, may extend any period specified in accordance with section 24(5)(b) in the notice.

(2) The powers confered by subsection (1) may be exercised before or after the notice takes effect.

(3) The hazardous substances authority shall, immediately after exercising those powers, give notice of the exercise to every person who has been served with a copy of the hazardous substances contravention notice or would, if the notice were re-issued, be served with a copy of it.

1

Notes
1 Added by Planning and Compensation Act 1991 c. 34 Sch.3(I) para.12 (January 2, 1992)

Extent
s. 24A(1)-(3): England, Wales
25.— Hazardous substances contravention notices: supplementary provisions.

(1) The Secretary of State may by regulations—
   (a) specify matters which are to be included in hazardous substances contravention notices, in addition to those which are required to be included in them by section 24;
   (b) provide—
      (i) for appeals to him against hazardous substances contravention notices;
      (ii) for the persons by whom, grounds upon which and time within which such an appeal may be brought;
      (iii) for the procedure to be followed on such appeals;
      (iv) for the directions that may be given on such an appeal;
      (v) for the application to such appeals, subject to such modifications as the regulations may specify, of any of the provisions of \[sections 174, 175(1) to (3) and (6), 176, 177, 285 and 289\] of the principal Act;
   (c) direct that any of the provisions of \[sections 178, 179 to 181, 183, 184, 186, 187 and 188\] of that Act shall have effect in relation to hazardous substances contravention notices subject to such modifications as he may specify in the regulations;
   (d) make such other provision as he considers necessary or expedient in relation to hazardous substances contravention notices.

(2) If any person appeals against a hazardous substances contravention notice, the notice shall \[subject to regulations under this section\] be of no effect pending the final determination or the withdrawal of the appeal.

(3) Regulations under section 24 or this section may make different provision for different cases or descriptions of cases.

(4) Where any person has appealed to the Secretary of State under this section against a hazardous substances contravention notice, no person shall be entitled, in any other proceedings instituted after the making of the appeal, to claim that the notice was not duly served on the person who appealed.

\[5\] Subsection (5) of section 250 of the Local Government Act 1972 (which authorises a Minister holding an inquiry under that section to make orders with respect to the costs of the parties) shall apply in relation to any proceedings before the Secretary of State on an appeal under this section as if those proceedings were an inquiry held by the Secretary of State under section 250.
[25.— Hazardous substances contravention notices: supplementary provisions.]

(1) The Secretary of State may by regulations—
   (a) specify matters which are to be included in hazardous substances contravention notices, in addition to those which are required to be included in them by section 24;
   (b) provide—
      (i) for appeals to him against hazardous substances contravention notices;
      (ii) for the persons by whom, grounds upon which and time within which such an appeal may be brought;
      (iii) for the procedure to be followed on such appeals;
      (iv) for the directions that may be given on such an appeal;
      (v) for the application to such appeals, subject to such modifications as the regulations may specify, of any of the provisions of sections 174, 175(1) to (3) and (6), 176, 177, 285 and 289 of the principal Act;
   (c) direct that any of the provisions of sections 178, 179 to 181, 183, 184, 186, 187 and 188 of the principal Act shall have effect in relation to hazardous substances contravention notices subject to such modifications as he may specify in the regulations;
   (d) make such other provision as he considers necessary or expedient in relation to hazardous substances contravention notices.

(2) If any person appeals against a hazardous substances contravention notice, the notice shall subject to regulations under this section be of no effect pending the final determination or the withdrawal of the appeal.

(3) Regulations under section 24 or this section may make different provision for different cases or descriptions of cases.

(4) Where any person has appealed to the Secretary of State under this section against a hazardous substances contravention notice, no person shall be entitled, in any other proceedings instituted
after the making of the appeal, to claim that the notice was not duly served on the person who appealed.

(5) Subsection (5) of section 250 of the Local Government Act 1972 (which authorises a Minister holding an inquiry under that section to make orders with respect to the costs of the parties) shall apply in relation to any proceedings [ in England]² before the Secretary of State on an appeal under this section as if those proceedings were an inquiry held by the Secretary of State under section 250.

Notes

1 Words substituted by Town and Country Planning (Determination of Procedure) (Wales) Order 2014/2773 Sch.1 para.27(b) (November 11, 2014)

2 Words inserted by Planning (Wales) Act 2015 anaw. 4 Sch.5 para.24 (March 1, 2016 subject to transitional provisions specified in SI 2016/52 art.17)

Amendments Pending

s. 25(1)(b)(v): words inserted by Town and Country Planning (Determination of Procedure) (Wales) Order 2014/2773 Sch. 1 para. 27(a) (date to be appointed: insertion came into force on November 11, 2014 but cannot take effect until the commencement of substitution from 2008 c.29 Sch.10 para.28(a))

s. 25(1)(b)(v): words inserted by Planning Act 2008 c. 29 Sch. 10 para. 28(a) (date to be appointed)

s. 25(1)(c): words substituted by Planning Act 2008 c. 29 Sch. 10 para. 28(b) (date to be appointed)

Commencement

s. 25: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 25(1)-(5): England, Wales

Repealed

26.— […]¹

Notes

¹ Repealed by Statute Law (Repeals) Act 2008 c. 12 Sch.1(9) para.1 (July 21, 2008)

[ 26A.— Fees for consent applications.

(1) Provision may be made by regulations for the payment of a fee of the prescribed amount to a hazardous substances authority in respect of an application for, or for the continuation of, hazardous substances consent.
(2) Regulations under this section may provide for the payment to the Secretary of State of a fee of the prescribed amount in respect of any application which is, by virtue of regulations under section 25, deemed to have been made for hazardous substances consent.

(3) Regulations under this section may provide—
   (a) for the transfer of prescribed fees received by a hazardous substances authority in respect of any application which is referred to the Secretary of State under section 20;
   (b) for the remission or refunding of a prescribed fee (in whole or in part) in prescribed circumstances or in pursuance of a direction given by the Secretary of State;
and the regulations may make different provision for different areas or for different cases or descriptions of cases.

1

Notes

1 Added by Environmental Protection Act 1990 c. 43 Sch.13(I) para.9 (January 1, 1992)

Extent

s. 26A(1)-(3)(b): England, Wales

Law In Force

[26AA.— Injunctions.

(1) Where a hazardous substances authority consider it necessary or expedient for any actual or apprehended contravention of hazardous substances control to be restrained by injunction, they may apply to the court for an injunction, whether or not they have exercised or are proposing to exercise any of their other powers under this Act.

(2) On an application under subsection (1) the court may grant such an injunction as the court thinks appropriate for the purpose of restraining the contravention.

(3) Rules of court may, in particular, provide for such an injunction to be issued against a person whose identity is unknown.

(4) In this section “the court” means the High Court or the county court.

1

Notes

1 Added by Planning and Compensation Act 1991 c. 34 Sch.3(I) para.15 (November 25, 1991 for certain purposes specified in SI 1991/2728; January 2, 1992 otherwise)

Extent

s. 26AA(1)-(4): England, Wales

Miscellaneous provisions
27.— Temporary exemption directions.

(1) If it appears to the Secretary of State—
   (a) either—
       (i) that the community or part of it is being or is likely to be deprived of an essential 
           serviced or commodity; or
       (ii) that there is or is likely to be a shortage of such a service or commodity affecting 
           the community or part of it; and
   (b) that the presence of a hazardous substance on, over or under land specified in the 
       direction in circumstances such that hazardous substances consent would be required, is 
       necessary for the effective provision of that service or commodity,

he may direct that, subject to such conditions or exceptions as he thinks fit, the presence of the 
substance on, over or under the land is not to constitute a contravention of hazardous substances 
control so long as the direction remains in force.

(2) A direction under this section—
   (a) may be withdrawn at any time;
   (b) shall in any case cease to have effect at the end of the period of three months beginning 
       with the day on which it was given, but without prejudice to the Secretary of State's power 
       to give a further direction.

(3) The Secretary of State shall send a copy of any such direction to the authority who are the 
hazardous substances authority for the land.

(4) […]

Notes

1 Repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force 
on January 1, 1992 as SI 1991/2829 but could not take effect until the commencement of 1990 c.10 s.27)

Commencement

s. 27: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes 
of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 27(1)-(4): England, Wales

28.— Registers etc.

(1) Every […] hazardous substances authority […] shall keep, in such manner as may be 
prescribed, a register containing such information as may be prescribed with respect—
   (a) to applications for hazardous substances consent […] made to that authority; […]
       (i)-(ii) […]
       [ (aa) to applications under section 17(1) made to that authority; ]
   (b) to hazardous substances consent having effect by virtue of section 11 or 12 with respect 
to land for which that authority is […] the hazardous substances authority:
(c) to revocations or modifications of hazardous substances consent granted with respect to such land; and

(d) to directions under section 27 sent to the authority by the Secretary of State [;]¹

[ and every such register shall also contain such information as may be prescribed as to the manner in which applications for hazardous substances consent have been dealt with. ]¹

(2) […]⁵

(3) Every register kept under this section shall be available for inspection by the public at all reasonable hours.

Notes

1 Words repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 as 1990 c.43 but could not take effect until the commencement of 1990 c.10 s.28)

2 Words substituted by Environmental Protection Act 1990 c. 43 Sch.13(I) para.2(4)(a) (January 1, 1992: substitution came into force on January 1, 1992 as 1990 c.43 but could not take effect until the commencement of 1990 c.10 s.28)

3 Added by Environmental Protection Act 1990 c. 43 Sch.13(I) para.2(4)(a) (January 1, 1992: insertion came into force on January 1, 1992 as 1990 c.43 but could not take effect until the commencement of 1990 c.10 s.28)

4 Words inserted by Environmental Protection Act 1990 c. 43 Sch.13(I) para.2(4)(b) (January 1, 1992: insertion came into force on January 1, 1992 as 1990 c.43 but could not take effect until the commencement of 1990 c.10 s.28)

5 Repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 as 1990 c.43 but could not take effect until the commencement of 1990 c.10 s.28)

Commencement

s. 28: Date to be appointed (August 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 28(1)-(3): England, Wales

29.— Health and safety requirements.

(1) Nothing in—

(a) any hazardous substances consent granted or deemed to be granted or having effect by virtue of this Act; or

(b) any hazardous substances contravention notice issued under section 24, shall require or allow anything to be done in contravention of any of the [ relevant provisions ]¹ or any prohibition notice or improvement notice […]².

(2) To the extent that such a consent or notice purports to require or allow any such thing to be done, it shall be a void.

(3) Where it appears to a hazardous substances authority who have granted, or are deemed to have granted, a hazardous substances consent or who have issued a hazardous substances contravention notice that the consent or notice or part of it is rendered void by subsection (2), the authority shall, as soon as is reasonably practicable, consult the [ safety regulator ]³ with regard to the matter.
(4) If the safety regulator advises that the consent or notice is rendered wholly void, the authority shall revoke it.

(5) If the safety regulator advises that part of the consent or notice is rendered void, the authority shall so modify it as to render it wholly operative.

(6) In this section—

“improvement notice” means a notice served under section 21 of the Health and Safety at Work etc. Act (“the 1974 Act”) or given under paragraph 3 of Schedule 8 to the Energy Act 2013 (“the 2013 Act”);

“prohibition notice” means a notice served under section 22 of the 1974 Act or given under paragraph 4 of Schedule 8 to the 2013 Act;

“relevant provisions” means—

(a) the relevant statutory provisions within the meaning of Part 1 of the 1974 Act; and

(b) the relevant statutory provisions within the meaning of the 2013 Act other than—

(i) the provisions of the Nuclear Safeguards Act 2000; and

(ii) any provision of nuclear regulations identified in accordance with section 74(9) of the 2013 Act as being made for the nuclear safeguards purposes.

†

Notes

1 Words substituted by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.10(2)(a) (April 1, 2014)

2 Words repealed by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.10(2)(b) (April 1, 2014)

3 Words substituted by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.10(3) (April 1, 2014)

4 Words substituted by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.10(4) (April 1, 2014)

5 Words substituted by Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014/469 Sch.2 para.10(5) (April 1, 2014)

30.— Application of this Act to certain authorities and persons.

(1) The provisions of this Act shall have effect, subject to such exceptions and modifications as may be prescribed, in relation to granting hazardous substances consent for authorities who are hazardous substances authorities [...].

(2) Subject to the provisions of section 12, any such regulations may in particular provide for securing—

(a) that any application by such an authority for hazardous substances consent in respect of the presence of a hazardous substance on, over or under land shall be made to the Secretary of State and not to the hazardous substances authority;

(b) that any order or notice authorised to be made, issued or served under those provisions shall be made, issued or served by the Secretary of State and not by the hazardous substances authority.

Notes

1 Words repealed by Environmental Protection Act 1990 c. 43 Sch.16(VII) para.1 (June 1, 1992: repeal came into force on January 1, 1992 but could not take effect until the commencement of 1990 c.10 s.30)

Commencement

s. 30: Date to be appointed (august 24, 1990 for purposes specified in 1990 c.10 s.41(2); March 11, 1992 for purposes of making regulations; June 1, 1992 otherwise) (1990 c. 10 s. 41(2); SI 1992/725 art. 2, art. 3)

Extent

s. 30(1)-(2)(b): England, Wales

[30A Application to the Crown

(1) This Act (except the provisions specified in subsection (2)) binds the Crown.

(2) The provisions are—

(a) section 8(6);

(b) section 23;

(c) section 26AA;

(d) section 36A;

(e) section 36B(2).

]¹

Notes

¹ Added by Planning and Compulsory Purchase Act 2004 c. 5 Pt 7 c.1 s.79(3) (August 6, 2004 in relation to the exercise of powers specified in SI 2004/2097 art.2; June 7, 2006 otherwise)

Extent

s. 30A(1)-(2)(e): England, Wales
[30B  Crown application: transitional]

(1) This section applies if at any time during the establishment period a hazardous substance was present on, over or under Crown land.

(2) The appropriate authority must make a claim in the prescribed form before the end of the transitional period.

(3) The claim must contain the prescribed information as to—
   (a) the presence of the substance during the establishment period;
   (b) how and where the substance was kept and used.

(4) Unless subsection (5) or (7) applies, the hazardous substances authority is deemed to have granted the hazardous substances consent claimed in pursuance of subsection (2).

(5) This subsection applies if the hazardous substances authority think that a claim does not comply with subsection (3).

(6) If subsection (5) applies, the hazardous substances authority must, before the end of the period of two weeks starting with the date they received the claim—
   (a) notify the claimant that they think the claim is invalid;
   (b) give their reasons.

(7) This subsection applies if at no time during the establishment period was the aggregate quantity of the substance equal to or greater than the controlled quantity.

(8) Hazardous substances consent which is deemed to be granted under this section is subject—
   (a) to the condition that the maximum aggregate quantity of the substance that may be present for the purposes of this subsection at any one time must not exceed the established quantity;
   (b) to such other conditions (if any) as are prescribed for the purposes of this section and are applicable in the case of the consent.

(9) A substance is present for the purposes of subsection (8)(a) if—
   (a) it is on, over or under land to which the claim for consent relates,
   (b) it is on, over or under other land which is within 500 metres of it and is controlled by the Crown, or
   (c) it is in or on a structure controlled by the Crown any part of which is within 500 metres of it,

and in calculating whether the established quantity is exceeded a quantity of a substance which falls within more than one of paragraphs (a) to (c) must be counted only once.

(10) The establishment period is the period of 12 months ending on the day before the date of commencement of section 79(3) of the Planning and Compulsory Purchase Act 2004.

(11) The transitional period is the period of six months starting on the date of commencement of that section.

(12) The established quantity in relation to any land is the maximum quantity which was present on, over or under the land at any one time within the establishment period.
[30C  Enforcement in relation to the Crown

(1) No act or omission done or suffered by or on behalf of the Crown constitutes an offence under this Act.

(2) A local planning authority must not take any step for the purposes of enforcement in relation to Crown land unless it has the consent of the appropriate authority.

(3) The appropriate authority may give consent under subsection (2) subject to such conditions as it thinks appropriate.

(4) A step taken for the purposes of enforcement is anything done in connection with the enforcement of anything required to be done or prohibited by or under this Act.

(5) A step taken for the purposes of enforcement includes—
   (a) entering land;
   (b) bringing proceedings;
   (c) the making of an application.

(6) A step taken for the purposes of enforcement does not include—
   (a) service of a notice;
   (b) the making of an order (other than by a court).

[30D  References to an interest in land

(1) Subsection (2) applies to the extent that an interest in land is a Crown interest or a Duchy interest.

(2) Anything which requires or is permitted to be done by or in relation to the owner of the interest in land must be done by or in relation to the appropriate authority.
Risk criteria for land-use planning in the vicinity of major industrial hazards
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(iii)
Summary

This document relates to one of the long-standing tasks of the Health and Safety Executive, to advise planning authorities on the development of land in the vicinity of 'major hazard' installations. The increasing use of numerical techniques of risk assessment for this work now makes it necessary for criteria to be established and made widely available for discussion.

It is the aim of this discussion document to:

(a) review the background to the HSE advisory role;
(b) outline the basis of the derivation of HSE advice on major hazards;
(c) consider the implications of the use of quantified techniques in the derivation of such advice; and
(d) outline criteria forming the basis of the advice.

This document is published to inform and stimulate discussion, and to invite comment on the approaches used by HSE.

Comments on this document should be sent to

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1 Introduction

1 Early in 1988, the Health and Safety Executive (HSE) published a discussion document entitled The tolerability of risk from nuclear power stations. This referred to the concept of the quantification of risk from industrial activities, and it suggested numerical values for levels of risk which might be regarded as tolerable for workers and the public associated with nuclear installations. The present document carries forward the discussion with specific reference to the development of land in the vicinity of industrial installations where there is a possibility of major fire, explosion or toxic release (other than nuclear installations and licensed explosives installations). These installations are usually called 'major hazards'.

2 It has been recognised for some years that safety should be taken into account when making decisions about the development of land near major hazards where a major accident might extend beyond the site boundary. This provides a valuable extra precaution to limit the risk to the public, in addition to regulation of standards on the site itself under the Health and Safety at Work etc Act 1974 (HSW Act). For this purpose, land-use planning law is used, with HSE acting as an expert national adviser to the local planning authorities.

3 When the arrangements were introduced nearly twenty years ago, the advice was based on the predicted consequences of severe accidents which were judged to be 'reasonably foreseeable' or 'credible'. More recently it has become possible to refine the approach to incorporate estimates of actual risk levels, in numerical terms. This document outlines HSE's approach to its formulation of advice using quantified risk levels. Here, 'risk' means the likelihood (probability or frequency) of a harmful event such as injury or death from an accident at a major hazard. The word 'hazard' is used to mean a situation with a potential to cause harm, for example a tank of pressurised toxic gas, but it does not imply whether the likelihood is high or low.

4 The document begins by describing the nature of approaches to risk assessment of major hazards, and the implications of HSE's use of such approaches. HSE has had several years' experience in the quantitative assessment of the risks, and in judgements made on a specific case-by-case basis of the significance of such risks. HSE feels that it is now timely to discuss general criteria which could be used to facilitate decision-making on safety aspects of proposed new developments near major hazards. Quantitative risk criteria are presented to indicate the significance of the safety aspects. It is noted that safety is but one of the factors to be considered in planning decisions, and such decisions are specific to the individual cases; but it seems helpful to all parties involved in the planning process to provide general guidance here.

5 The criteria fit into a three-zone approach, with a top zone where the risk is clearly a major consideration; a middle zone where the risk is a consideration but it may be necessary to make a more detailed study; and a bottom zone where the risk seems insignificant. This approach has been accepted generally as a basis for qualitative advice about major hazards and can now be adapted for application with a quantified base.

6 It is emphasised that the criteria described here are for use only in the context of land-use planning for proposed new developments around major hazards (other than nuclear or licensed explosives installations, for which specific arrangements already apply). In particular, they do not give guidance on policy for existing land-use activities nor for the siting of new major hazards, which do not easily lend themselves to the use of simple criteria. Neither do they imply that risks from the major hazards to existing populations require action under the HSW Act.

Objectives of HSE advice

7 British legislation for the control of major hazards is based on the following principles:

**Identification:** via the Notification of Installations Handling Hazardous Substances Regulations 1982 (NIHHS), the Control of Industrial Major Accident Hazards Regulations 1984 (CIMAH) and CIMAH (Amendment) Regulations 1988.

**Risk reduction:** via the HSW Act and other relevant legislation, eg CIMAH.

**Mitigation:** via CIMAH - emergency planning and information to the public - and via land-use planning control.

8 'Risk reduction', involving assessment and appropriate control on site, should reduce the risk of an accident to a low level, but it does not eliminate the hazard completely. There remains some residual risk. It is still prudent to exercise land-use planning control over building in the vicinity of major hazards. This was strongly recommended by the Advisory Committee on Major Hazards (ACMH). It concluded that the responsibility for such control should remain with land-use planning authorities in Great Britain, since safety was but one of many factors which may need to be considered in the process of decision-making.
The overall objective here is to ensure that the element of residual risk is taken into account in planning decisions, as recommended by ACMH. In the short term, significant developments for public occupation near to major hazards should be inhibited to avoid undesirable increases in numbers at risk. In the longer term, some reduction in the numbers at risk may be possible through the medium of strategic land-use planning.

Current arrangements

Formal procedures have existed since 1972 for planning authorities to obtain advice from HSE about the risks associated with major hazards, and the potential effects upon populations in their vicinity. Over the years, these arrangements have been modified both administratively and in respect of the legal framework of planning controls. They are now set out in DoE Circular 9/84, Welsh Office 17/84 and SDD 9/84. Further changes are expected under the Housing and Planning Act 1986 to introduce a consent system for the presence of major hazards.

The consultation arrangements for proposed new developments near existing major hazards, put simply, are as follows. HSE, through its Area Offices, tells the local planning authority of the existence of each installation which is notifiable under the requirements of NIHHS and/or CIMAH. At the same time, HSE considers each application (the more complex applications are considered centrally by HSE's Major Hazards Assessment Unit), and passes back advice to the planning authority. The planning authority is responsible for the actual decision. Where HSE's advice is to refuse planning permission, it is accompanied by an offer to supplement the general advice with more detailed advice based on the assessment of risk associated with the hazardous installation. Where there is a proposal for a new major hazard, a similar procedure is used. Planning authorities identify such applications and pass them to HSE's Major Hazards Assessment Unit, and HSE considers each application (the more complex applications are considered centrally by HSE's Major Hazards Assessment Unit). A planning application is then considered by HSE's Major Hazards Assessment Unit. The planning authority is responsible for the actual decision. Where HSE's advice is to refuse planning permission, it is accompanied by an offer to supplement the general advice with more detailed advice based on the assessment of risk. Where there is a proposal for a new major hazard, a similar procedure is used. Planning authorities identify such cases by questions on a planning application form. This discussion document does not deal with such cases (para 37).

Options: protection or risk-based advice

HSE's original approach was to advise on the basis of a concept of 'protection' of those exposed to a hazard. This resulted in advice which aimed at a separation distance between development and hazard which provided a very high degree of protection against the more likely smaller events, whilst also giving very worthwhile (sometimes almost total) protection against unlikely but foreseeable larger-scale events. ACMH endorsed this approach. To apply the concept in practice involved the identification of the worst events (of fire, explosion, or toxic release) and then the determination of a separation distance based on a defined level of injury or the intensity of the thermal radiation, blast overpressure or toxic exposure respectively.

The protection concept has generally been well received, particularly in those cases where the worst credible event clearly formed an upper limit on possible event size (eg for some flammable or explosive hazards). It has, however, been subject to criticism on a number of grounds; these include:

(a) the possibility that the protection provided is beyond that which is 'reasonableness', if a low probability of serious injury is combined with a very low likelihood of the critical event, thus resulting in excessive restrictions on land use;

(b) the somewhat arbitrary nature of the worst event, and potential inconsistency between installations in deciding which major event to use as a basis;

(c) the difficulty of comparing the degree of protection with that which seems to be necessary or desirable for other hazards in life.

Planning inquiries concerned with major hazards have in recent years concluded that HSE's advice should take specific account of the likelihood of injury to the public, as well as the possible extent of injury effects. The protection concept takes account of likelihood in a qualitative way, but it seemed to be expected that it should be quantified if possible. To meet this need, techniques have been developed which aim to quantify the risks associated with hazardous installations, in order to underpin the advice to planners. These techniques come under the general term 'quantified risk assessment' (QRA). A brief outline of the techniques used by HSE is given in Appendix 1.

There are various uncertainties associated with the estimates of risk produced by QRA. These are discussed in paras 17-23. It follows that decisions based on these estimates should take the uncertainties into account. It is quite normal for the process of decision-making to allow for uncertainty, since all estimates of forecasts are uncertain to some extent.

Apart from the question of uncertainties, to propose criteria requires judgements on whether or not an estimated risk level is 'significant', and if so, how significant it is. These are matters which are fraught with subjective perceptions. In developing criteria, HSE has attempted to incorporate its understanding of the prevailing consensus based on published views, deeded cases etc, and also to leave a certain amount of flexibility. There may still be a need from time to time.
Discussion of risk assessment

17 All estimates involve uncertainty; and QRA cannot produce a precise value for the risks. What is of paramount importance is that those who produce and those who use the risk numbers are aware of the inherent uncertainties, so that any judgements or decisions which result are taken in their knowledge.

18 Various methods exist for the estimation of uncertainties, and for the effects of deviations from average or typical results of model calculations. These methods are, however, themselves subject to uncertainty. They range from mathematical modelling (eg ‘Monte Carlo’ simulations) to subjective interpretation of results. At present the preferred approach of HSE is to use a combination of sensitivity testing and applied judgements to gain an impression of the uncertainty and its effects. In sensitivity testing, the assumptions about the values of various factors are changed to see whether this has much effect on the final result. If so, more effort is put into refining those factors.

19 Uncertainties may arise in various parts of an assessment. They may include:

Failure-rate data: For an accident to result, an explosion or a loss of containment of a hazardous substance must occur. Accident frequency depends, therefore, on the frequency of failure or serious maloperation of components of the plant. There are generally two methods of deducing such frequencies: either by the use of historical data, or by structured analysis of potential causes. The latter is necessary because historical data may be sparse, and of doubtful relevance, when the crucial final event is very rare and of low probability.

Consequences: Here also it might seem possible to use data on past events to predict the likely outcome of a particular loss of containment. However, the data are unlikely to show the full range of possibilities. For example, before Bhopal the largest major hazard toxic gas disaster had killed 60 people; but in Bhopal over 2000 died. Thus it is necessary to make predictions by calculation. Disasters such as Bhopal, and the Mexico City LPG accident where 500 died, show that predictions of very large consequences may not be unrealistic in certain circumstances at least. Having postulated loss of containment, the rate of release of hazardous substance has to be calculated together with its subsequent behaviour. This requires mathematical models, which may be based on or partially validated by experimental data. Also, some of the phenomena associated with such events may be subject to substantial random fluctuations (eg concentrations within gas clouds).

Impact, injury: Consequence models indicate the intensity of a particular (harmful) effect - heat, toxic gas exposure, or blast overpressure. The effects of this on a person or building have then to be considered, along with the likelihood that injury may result. Reactions and susceptibilities vary within a particular population. This is discussed in more detail in paras 48-53.

Human error: Human action influences all aspects of control, from project conception, through design, construction, commissioning, operation, inspection, maintenance and repair, to the final stage of decommissioning. Thus there is scope for mistakes at all stages. To some extent, human error is the price paid for the benefits of human flexibility, skill and ingenuity. In principle, it may be reduced by automating the parts of a system which are critical for safety; but of course, automatic devices may also fail, either from overstressing, or deterioration, or from mistakes in design, maintenance etc. Usually there will be a mixture of automation and human operation in a system.

20 It is important that human error be taken into account as a cause of accidents, to give a full assessment of risks from an installation. This may be done implicitly (using data of failure-rates from all causes) or explicitly (by analysing the potential causes of failure including human error). The HSE methods here rely mainly on the implicit approach, but assessors are able to analyse to greater depth where some particular aspect seems very sensitive to assumptions on human error.

21 The implicit approach relies on the assumption that the history of failures of components includes those caused by human error. Then the calculated risk should relate to an average level of human error. It is sometimes suggested that HSE assessors should include an adjustment to failure-rates to allow for some deviation from ‘average’ of the overall quality of the safety management at an installation. HSE, and others, are considering whether it might be possible to apply some numerical factor to the ‘average’ assessment results to allow for non-average quality of safety management. For the purpose of land-use planning, care would be needed to allow for the possibility of changes in management over the many years’ lifetime of a planning decision.

22 HSE’s present view is that any allowance for ‘good’ management should be applied if at all only within narrow limits. An allowance to reduce the predicted failure-rates because of good quality could well be optimistic, given the possibility of changes over
the years. Conversely, a large adjustment to increase the failure-rates for poor quality would seem to imply that a level of safety well below the average is tolerable here, which is not the case. Note that an assessment based on 'average' levels should be somewhat pessimistic, since standards should tend to improve. Performance now should be better than the past, when the data were generated; the future should be better still. However, there is the possibility of intensification of activity in the major hazard itself. While this will be controlled under the 'Consent' provisions of the Housing and Planning Act 1986, it may to some extent offset any pessimism in the assessment.

23 The question is sometimes raised of the risks from grossly negligent or perverse human actions which might defeat the best precautions built into a plant. These might arise from failures of management, false management goals (production before safety), gross deviation from normal behaviour, or deliberate acts. Experience suggests that these are not likely to be dominant contributions to the overall risk from an installation, provided that a proper degree of vigilance and safety consciousness is applied. Nevertheless, the possibilities remain and must be allowed for in judging the predicted risk figures. In its document on The tolerability of risk from nuclear power stations, HSE concluded that it was reasonable to assume that the risk of a release of substance is within an order of magnitude of that assessed on the basis of plant failures from historical data, for an installation operating with strict standards of control, training of staff etc. This allows for all causes of accidents including gross human actions, but it does contain an implicit judgement on the quality of management. For plant that is less well managed the probability of a serious accident could be greater. The way to deal with this is by achieving proper quality of management and operation, rather than to apply large factors to QRA results.

24 Several methods have been developed to cope with the effects of uncertainties in hazard and risk assessments. The two main approaches are:

- **Pessimism:** Here, it is necessary to ensure that any assumptions, whether explicit or implicit, err at all in a pessimistic direction, ie they overestimate the risk. This should result in a value which is almost certainly not an underestimate, but which may possibly be a large overestimate of the risks. There may be considerable uncertainty as to the amount of the overestimate, and its implications.

- **Best estimate:** Here, efforts are made to ensure that all assumptions are as realistic as possible. Again, there is uncertainty. It is not clear what the overall effects of

the combinations of uncertainties are. It would not necessarily be known whether the results are an underestimate or an overestimate of the risks. It is important to test the sensitivity of the results as much as possible to minimise the uncertainties.

25 Clearly, in using the best-estimate approach it is necessary to allow for the possibility of optimistic results by setting the risk criteria quite low. This need to fit the criteria to the assessment approach presents a further problem, namely how to compare the results of assessments which used different methods having different degrees of pessimism or optimism.

26 HSE currently uses an approach which may be described as 'cautious best-estimate'. Every attempt is made to use realistic, best-estimate assumptions (whilst clearly defining the basis of the assumptions), but where there is difficulty in justifying an assumption, some overestimate is preferred. In such a case, the sensitivity of the overall results to that particular assumption might be tested, and further research work might be done to try to improve the realism of the results. For example, in assessing the consequences of an LPG fireball, HSE assumes that the fireball grows instantaneously to full size and emits heat at a constant high rate for the full life-time of the fireball. Research is planned to refine these assumptions.

27 The 'cautious best-estimate' approach helps to offset any uncertainty arising from the possibility of grossly abnormal human behaviour and other unquantified causes of accidents. For the example shown above, the risk of receiving a specific dose of heat from a particular fireball is probably exaggerated somewhat by the assumptions. This offsets to a certain extent any underestimate of the likelihood of a fireball.

28 A feature of the HSE approach is that it makes an explicit allowance for mitigating factors such as people's ability to escape or to protect themselves in emergency. For example, for a toxic gas hazard, HSE assumes that people out of doors would try to escape indoors, with a probability of success which depends on the concentration of gas out of doors. Such people, and those already indoors, might eventually receive a dangerous toxic load of gas which has penetrated indoors: but in the case of a brief release of gas, the rate of penetration may be sufficiently low that people indoors are safe. For a fire hazard HSE assumes that, after a few seconds, people would attempt to run away and shield themselves from the heat. These assumptions may have the effect that HSE's risk figures are lower than those produced by other assessors, contrary to the common belief that HSE overestimates the risks by being unduly pessimistic.
2 Types of risk

29 The risks from major hazards are of direct concern to the individual people who might be injured, but they are also of concern to society at large since there is the potential for large-scale disasters. It is generally recognised that these two aspects both require consideration in risk criteria for major hazards.

Individual risk

30 ‘Individual risk’ is defined by the Institution of Chemical Engineers as:

“The frequency at which an individual may be expected to sustain a given level of harm from the realisation of specified hazards”.

In other words, it is the likelihood that a particular person might be harmed. The person may be, say, a typical inhabitant of a house at a particular location, or a typical user of a leisure facility at a particular location; or it may be a named individual whose habits are known. For the purpose of this document it is the ‘typical’ sorts of cases which are considered.

31 The individual risk from a major hazard near a development site is expressed as the probability that a typical user of the development would be harmed in the course of a year, due to the major hazard. For example, it may be stated that the risk is one chance in a million that such a person would be killed in any year by that cause. An example of individual risk is the risk of being killed in a road accident; this is about 100 in a million per year on average. More examples of individual risk are shown in Appendices 2 and 3.

32 Care is needed in the use of individual risk values which relate to ‘typical’ or ‘average’ people. There will in reality be a wide range of possible values, reflecting the wide variations in people’s habits and vulnerability to harm. Thus any particular person may have a risk which is greater, equal to, or less than the ‘typical’ value. Any risk criteria or judgements need to take this into account. It may be most meaningful to consider the risk to an individual who is an average member of the most exposed group. For example, for a development of houses, the most exposed group would probably be people with very young children who spend a high proportion of their time at home. This enables us to make the simplifying assumption that a house occupant is present 100% of the time (see also para 53(c)).

Societal risk

33 ‘Societal risk’ is defined by the Institution of Chemical Engineers as:

“The relationship between frequency and the number of people suffering from a specified level of harm in a given population from the realisation of specified hazards”.

In the context of this document, it relates to the chances of a disaster due to the location of a particular development near a major hazard. To express this concept in terms of numbers is rather difficult, since it is necessary to consider the size of the disaster as well as its probability; and in reality there would be a range of possible sizes, each with different probabilities. Thus there might be a low chance of injuring most of the people in a development, or a higher chance of injuring just a few of them, from the same major hazard plant.

34 An example of a ‘societal’ risk is air travel, which seems to present a risk of about 1 in 10 in any year of a major disaster in Britain. Such disasters cause grief and shock throughout the country, followed by detailed inquiries into their causes and demands that general action be taken to reduce this sort of risk. Similar reactions may be seen after the Zeebrugge ferry, King’s Cross underground and Piper Alpha oil rig disasters etc. It is these reactions by society which distinguish ‘societal’ risks from the more mundane risks which do not have disaster potential, such as motoring, even though the latter may result in many more deaths per year.

35 Both ‘individual risk’ and ‘societal risk’ may seem to be but different aspects of the same hazard; and it may seem to involve an element of double counting, if not double standards, to consider societal risk for disasters if it does not apply to small-scale accidents. Nevertheless, there is a real public expectation that potential disasters will receive priority attention from the legislators, and from those charged with the enforcement of measures aimed at their prevention. To respond to this expectation we need to consider the societal risk from major hazards. ‘Individual risk’ and ‘societal risk’ are discussed in more detail in Chapters 3 and 4.

Other considerations

36 This document deals with the situation of a proposed new development in the vicinity of an existing major hazard installation. The risks here are to the future users of the new development. HSE is consulted on over 4000 such cases each year, arising from the presence of about 1700 notifiable installations. In about
15% of these cases, the Major Hazards Assessment Unit (MHAU) is asked to consider in detail the level of risk involved. For the other cases, Inspectors in the Area Offices of HSE apply judgements derived from experience coupled with generic guidelines provided by MHAU.

37 The case of a proposed new development in the vicinity of an existing major hazard is considered to be a separate problem from that of the location of a new major hazard itself. A development near an existing major hazard may be a relatively modest addition to an existing population in the vicinity, while a new major hazard will introduce a hazard where there was none before. Also, taking a national view, there may well be more scope for siting new developments a considerable distance from major hazards, than there is for siting new major hazards a considerable distance from any existing populations. For example, there are relatively few areas in Britain where there is realistic potential for major hazard developments which are more than, say, 1 km from the nearest housing; but there is much land which is more than 1 km from a major hazard. Thus it may be necessary to use different criteria for cases of new major hazards.

38 HSE appreciates that the broad generalisations above may be inappropriate for some planning districts where there are concentrations of major hazards. In such districts the use of the criteria may have severe implications for their detailed development plans prepared under the Planning Acts. However, HSE feels obliged to offer advice which is consistent across the nation. Where this causes severe problems, there may be sufficient flexibility within the criteria for local factors to be taken into account. If not, the planning authority will need to review with care the basis of HSE advice, in discussion with HSE or consultants as necessary, to weigh the risks against the local benefits of the developments.

Transportation risks

39 There is a substantial quantity of hazardous substances transported throughout the UK by road, rail and water. In many cases, this transportation is associated with the major hazards considered in this document. The risks associated with such transport operations are currently the subject of a major study by a sub-committee of the Health and Safety Commission's Advisory Committee on Dangerous Substances, as a result of a recommendation in the Third Report of the Advisory Committee on Major Hazards. These risks are therefore not considered in this document, except in so far as loading and unloading operations of transportation vehicles in major hazards affect off-site risks. There are also many pipelines which are notified under NIHHS. Arrangements apply for planning control similar to those outlined above for factory major hazards. At present the basis for HSE advice for developments near most pipelines is still being established, and is outside the scope of this document.
3 Individual risk criteria

Background

40 The following suggestions for individual risk criteria for land-use planning near major hazards derive from: the advice given in the Royal Society Study Group (RSSG) Report *Risk assessment*, published in 1983; the views of ACMH; and the HSE document on *The tolerability of risk from nuclear power stations*. The RSSG discussed the factors of interest in a safety decision, and it indicated that there might be scope for formal techniques such as cost-benefit analysis for specific problems. However, it was able to suggest some general rules to limit the discussion. In particular, it defined an upper bound on risk such that anything above this level was “unacceptable in essentially all circumstances” (except perhaps for activities entered into voluntarily, in full knowledge of the risks; or in times of war). Some action would normally be required to reduce the risks to below that level.

41 The RSSG also defined a lower bound, below which any risks could “legitimately be regarded as trivial by the decision-maker”. Such low risks might be readily identifiable, and they might even relate to hazards which cause anxiety, but it would normally be a waste of limited resources to do anything about them.

42 Having set upper and lower bounds, there is a middle zone between them where the risks need to be considered carefully. In this zone, it would be appropriate to apply the general concept of ‘reasonably practicable’ safeguards. To do this, the risks are compared with the scope for reducing them, to see whether it seems reasonable to reduce them. This may involve some form of cost/benefit consideration.

43 The Advisory Committee on Major Hazards (ACMH) quoted the RSSG at length in its Third Report. It acknowledged the general concept of the three-zone approach, although emphasising that it is difficult to set a precise criterion within the middle zone. Its comments on RSSG relate mainly to the judgement of control measures on major hazards but they clearly have some relevance to land-use control adjacent to such hazards. ACMH suggested some basic principles:

(a) The risk from a major hazard to an individual employee or member of the public should not be significant when compared with other risks to which a person is exposed in everyday life.

(b) The risk from any major hazard should, whenever reasonably practicable, be reduced. Note that the comparison of risk against effort to reduce it in the judgement of ‘reasonable practicability’ is one of ‘gross disproportion’, and not equivalence. In other words, it is necessary to be very certain that it would be unrealistic to seek further reductions in risk at the cost of more stringent control measures.

(c) Where there is a risk from a major hazard, additional hazardous development should not add significantly to the existing risk.

(d) If the possible harm from an incident is high, the risk that the incident might actually occur should be made very low indeed. This takes account of society’s particular abhorrence of accidents which cause many simultaneous casualties. This relates to the concept of ‘societal risk’.

44 For control of land-use in the vicinity of major hazards a similar set of principles is suggested which takes account of the roles of HSE and the planning authority, namely that HSE is an adviser and the planning authority is the decision-maker. The criteria proposed below are intended to satisfy the following principles:

(a) HSE will advise strongly against any development which introduces a substantial number of people into an area where their individual risks are ‘significant’ when compared with other risks to which they are exposed in everyday life. For this purpose, ‘significant’ will be set at quite a low level of risk, since this is an involuntary risk to people who probably get little direct benefit from the activity which causes the risk. Also, in many cases there will have been little expenditure prior to the application, so the cost of a refusal should be relatively small (Appendix 5). This sets an upper level of risk criterion.

(b) HSE will not advise against developments where the individual risks seem to be very small in comparison with everyday life, unless the development makes a significant contribution to societal risk. This sets a lower level criterion for individual risk. It is still necessary in addition to consider societal risk. Situations can be envisaged where the individual risk is extremely low, because a particular person spends only a small fraction of the time there; but there may at any one time be a large number of people present. Examples are: shopping centres, leisure facilities, transit facilities at ports, etc.

(c) Between the lower and upper bounds, which will be set as close as seems possible, the details of a particular development case such as its size should
be taken into account and a judgement made whether it tends to the high or low risk level.

45 For the criteria shown in paras 54-57, the span between lower and upper bounds, namely a factor of ten or one order of magnitude, is less than is often used in a three-zone approach. This seems reasonable for a situation where there is a tightly defined type of decision problem, namely new development near existing major hazard installations. (Note: To ease the decision even further, the middle zone might be shrunk to a single value, above which HSE advises against and below which it does not advise against a development. This would seem too insensitive a system, with insufficient scope for judgement in marginal cases.) It is of course open to a planning authority to take into account any particularly significant local factors which might justify a departure from these guidelines.

46 The advice given by HSE for cases above the upper limit will correspond to ‘substantial risk’ in Circulars DOE 9/84, WO 17/84 and Annex 3 of SDD 9/84. For cases below the lower bound and with insignificant societal risk, the advice will be ‘negligible risk’. For cases between these limits, HSE will attempt to make a judgement in order to advise whether the risk is ‘substantial’, ‘negligible’ or the middle category of ‘marginal’ risk, depending on circumstances. (HSE now makes a conscious effort not to use ‘marginal risk’ as an easy option for difficult cases, since many local planning authorities and planning inquiries have found it somewhat unhelpful.)

47 Even if ‘substantial risk’ advice is given, it is still open to the planning authority to grant permission, if there are very strong points in favour of the development. In such cases HSE would wish to meet the planning authority to explain the risk in more detail. This enables an indication to be given of how the risk compares to the limit, and to allow more advice to be given on the meaning of a particular level of risk.

48 It has often been assumed that risk criteria for major hazards should relate to the likelihood of death. This seems straightforward and easy to compare with risks from other hazards in life. However there are two important problems with a criterion based on the risk of death in the present context:

(a) society is concerned about risks of serious injury or other damage as well as death;

(b) there are technical difficulties in calculating the risks of death from a hazard to which individual members of a population may have widely differing vulnerabilities.

49 The second point may be appreciated by considering an example, such as the toxic gas chlorine. If a cross-section of the population were exposed to a dangerous cloud of chlorine, some people would be more seriously affected than others, and a proportion might die. Those who died could have had some pre-existing condition or weakness which made them more vulnerable, but there might also have been people who had simply been exposed to high-concentration pockets of gas in the cloud. It is not possible to identify in advance who these people would be, nor is it possible to predict a particular person’s susceptibility to chlorine. Thus it is not possible to say with certainty what is the probability of a particular person being killed by a particular exposure to chlorine. This implies that it is not possible to calculate an individual risk of death for a particular person. However, there are techniques (eg probit transformations) which permit the calculation of proportions of populations affected by a given level of harm; these are also subject to uncertainties.

50 It is of course possible to take ‘average’ or ‘typical’ susceptibility and average concentration, and to use these to produce ‘average’ individual risks. This ‘average’ might conceal a very wide range of risks to particular people, and it is not clear whether it has any real meaning.

51 One approach to this sort of problem is to consider the case of the particular individual who is most at risk. This would give an indication of the maximum likely level of individual risk in situations where there is a variation about the average. The approach is questionable for the present purpose as there may be no obvious limit to susceptibility; people with severe breathing problems may be extremely sensitive. Thus it is not possible to draw the line and define the ‘worst case’ individual.

52 It is possible to avoid some of these problems by using an injury criterion other than death. For example, it is possible to define a dose of toxic gas, or heat, or explosion overpressure which gives all the following effects:

- severe distress to almost everyone:
  - a substantial fraction requires medical attention;
  - some people are seriously injured, requiring prolonged treatment;
  - any highly susceptible people might be killed.

This might be described as a ‘dangerous’ dose, as it has the potential to cause death but it will not necessarily do so. Then the risk assessed is that an individual at a particular place will be exposed to such a dangerous dose or worse. The results of such an assessment may be described as:

"The risk that a typical user of the development will be exposed to a dangerous dose or worse of toxic gas, heat or explosion overpressure".
Some points to note with this approach:

(a) **Dangerous dose or worse**: It is a feature of such an assessment approach that a quoted risk value, eg 1 in a million per year, represents the likelihood of receiving a dose from one of a wide range of possible events. Some of those events might give a dose which is just within the 'dangerous' level, but others might give much worse doses. Usually it is the borderline events which are more likely, so the chance of getting a substantially worse dose is considerably less than the quoted value. Nevertheless, the point must be allowed for in setting criteria for individual risk. It would be misleading to describe a risk as 10 in a million per year of a 'dangerous' dose when this may include, say, 8 in a million per year risk of an overwhelmingly fatal dose, since the latter would actually dominate the risk of death. (This is actually very unlikely, with typical distributions of initiating events, wind/weather patterns etc; but the assessor should check that a case in point is not atypical in this way.)

(b) **Toxic gas, heat or explosion overpressure**: It is possible to define a 'dangerous' dose for each of these effects. It is more difficult, but not impossible, to add together the risks from all the hazards on a mixed toxic/flammable site. Care is needed in doing this to ensure that the degree of 'danger' is similar for all effects so that the total risk can be treated as a single entity. From time to time HSE publishes its views on what constitutes a 'dangerous' dose for a particular substance or effect. In general, a 'dangerous' dose is one which would result in the death of a small percentage of a typical cross-section of the national population.

(c) **Typical user of the development**: The use made of a development varies with people's habits. There seem to be basically two types of development, namely those used daily by the same people such as housing, schools, workplaces etc, and those used intermittently or just once such as supermarkets, hotels, leisure centres. The former require criteria for both individual and societal risk, while the latter are mainly societal risk problems (with individual risk perhaps being relevant for staff). For the former, it is necessary for assessment to assume a typical pattern of user behaviour. Thus for housing, the individual risk would be assessed for a person who is present most of the time; for simplicity it is reasonable to assume 100% of the time. For this purpose, it is reasonable to choose as a basis an individual with a relatively high rate of attendance, but this choice would tend to overestimate the average risk somewhat.

### Suggested individual risk criteria

54 The RSSG, and HSE's document *The tolerability of risk from nuclear power stations*, suggested that most people would regard as trivial a hazard whose risk was below about 1 in a million per year chance of death. It is not clear from RSSG whether this figure should be related to a typical individual in a group at risk, or whether it should be related to the most exposed or vulnerable member. For the present purpose HSE will use the figure of 1 in a million per year for the lower bound, but in relation to the risk of receiving a 'dangerous' dose or worse, for a typical pattern of user behaviour in a development. As discussed above, a cross-section of the population contains a proportion of highly vulnerable people for whom a 'dangerous' dose would likely result in death. Thus this criterion equates to about 1 in a million per year chance of death for such people. For the majority of the population, assessments done by HSE suggest that it corresponds to a risk of about 1/3 in a million per year of death, since this is the risk of receiving a somewhat higher dose which would be expected to result in the death of 50% of the population.

55 For developments where there would clearly be a high proportion of highly susceptible people, a more stringent criterion might be appropriate. HSE suggests that a level of 1/3 in a million per year of a 'dangerous' dose or worse would be trivial even for such cases as homes for the elderly, caring institutions, long-stay hospitals etc.

56 The upper limit cannot simply be based on the RSSG value, since that allowed for cases where there was a high element of 'voluntariness' in the risk, and the people at risk were gaining special personal benefit from the activity. For hazards which are involuntary and with little immediate benefit to the people at risk, it is generally assumed that more stringent criteria should be applied. HSE will use an upper limit of 10 in a million per year of a dangerous dose or worse, for all development cases above a certain size (para 57). This implies that the more vulnerable members of the population are at a risk of death of about 10 in a million per year. This level of risk is put into perspective below.

57 In using these criteria, HSE would automatically indicate 'negligible risk' for proposals below the lower bound for developments such as housing where a particular person might well be present most of the time. (There are many types of development where a particular person would be present only infrequently, so the individual risk is extremely small; these are dealt with as societal risks in Chapter 4.) HSE would similarly automatically indicate 'substantial risk' for proposals with a substantial number of people (25 or more people) above the upper limit since there would
probably be one or more highly susceptible people in such a number. For proposals where the risks lie between these values, HSE would consider whether there are features of detail which tend to justify more or less stringent advice.

58 It is emphasised that these criteria relate to risk values estimated by a 'cautious best-estimate' approach (para 26). The actual risk levels may be higher than those shown by the estimate; para 23 suggests up to an order of magnitude higher. This means that the estimated risk of, say, 1/3 in a million per year may correspond to an actual risk of about 1 in a million or slightly more per year. However, the 'caution' in the estimate makes it unlikely that the risk is actually higher than the figures show.

Comparisons

59 Comparisons of individual risks are to be found in Appendices 2 and 3. It can be seen that the upper bound number proposed here is about one-tenth the risk of being killed in a road accident. This is proposed as a reasonable criterion for an involuntary hazard, where the costs of prevention, by refusal of outline planning permission, do not include any physical action such as the modification or closure of existing buildings. The lower level or 'trivial' figure is about 10 times as great as the risk of being killed by lightning, and is similar to the RSSG and previous HSE figures. It can also be seen that the upper limit figure here is one-tenth of the level suggested in the HSE document on The tolerability of risk from nuclear power stations for the maximum risk that might be tolerated from an industrial installation to a member of the public. HSE suggests a lower figure for the present purpose for two main reasons:

(a) to set a level below the maximum 'tolerable' level allows for some uncertainty in the results of the risk assessment and possible changes in the future at the development and the plant;

(b) it seems reasonable to set a criterion below the maximum limit for a development which has not yet started and is therefore relatively inexpensive to stop.

Taken overall, and bearing in mind the point about ease of decision in para 45, it seems appropriate to choose for the present purpose a limit between the 'intolerable' and 'negligible' levels.

60 Appendix 5 contains a discussion of the economic aspects of this approach. It is suggested, on a national basis, that the cost is small of inhibiting certain types of development on that small fraction of the national land which is near major hazards. It is offset by the limitation of risk giving an improved quality of planning when the risks from major hazards are taken properly into account. It is emphasised that the criteria discussed here are not intended to relate to existing buildings near a major hazard, since any action for these would require a different appraisal of what seems reasonable or justifiable.
4 Societal risk criteria

Background

61 The RSSG noted that people perceive “high-consequence hazards” as different from hazards which do not have the potential to injure many people at once. In the assessment of major hazards, it is necessary to consider the potential sizes and likelihoods of disastrous events. There are two main features of disasters which make them significant over and above the same number of injuries from a multiplicity of separate small events:

(a) a disaster focused on one community causes a devastating shock to the local community where it happens (eg, Aberfan, Lockerbie),

(b) a disaster also causes a shock to the whole nation or even the world (eg Bhopal). This shock may take the form of initial grief and sympathy followed by anxiety and demands for action to reduce the risks of such events. Thus there is a profound political reality about the significance of such accidents, and an expectation that they will be regulated stringently.

In addition, a disaster may involve very large property losses, strain on emergency services etc.

62 It seems essential to allow in risk criteria for the disaster aspect of major hazards as well as the individual risk to the people actually in danger of physical injury. However, it is much more difficult to define the size of a disaster risk in terms of numbers. For individual risk, its size is defined as the chance per year that either a particular or a typical individual will be injured. There is just one single value of individual risk to a particular person from a given installation. With societal risk, it is not only the chance which is important but also the potential size of the disaster. Indeed, any particular installation could give rise to a range of different accident sizes, all with different chances.

63 Appendix 4 indicates how the range of sizes and frequencies of disasters can be expressed mathematically. Use is made of the F/N curve, which is a graph of chance or frequency (F) of events with number of casualties equal to or greater than N.

The use of societal risk values

64 There is at present no clear consensus on criteria for societal risk, and it is not even clear how best to describe such risk. The F/N curve is a difficult concept, and it is not apparent how to compare two F/N curves for two different situations. The difficulty can be seen by a simple example: Which is worse, a situation which might lead to 10 deaths once in 10 years, or one which might lead to 1000 deaths once in 1000 years? Both give an average of 1 death per year, but they seem very different in their significance to society.

65 The difficulty of comparing societal risks has implications for the use of criteria, since a criterion is basically a standard for comparison. Clearly a societal risk is below a criterion F/N line if the whole F/N curve is below the line, but it is not obvious when part of the curve crosses the line (Appendix 4). This could be a serious difficulty.

66 Another difficulty for the present purpose is that developments are considered one at a time, and the contribution to the total national societal risk from any one development is very small. Even at a local level, the additional societal risk from a small development in a built-up area may seem small (eg, adding 10 houses to an existing 50; the effect on the local community of having, say, 150 people injured is not greatly different from 125 since both are horrific). However, over the years the small additions to societal risks will accumulate and eventually it will appear that there has been a considerable increase in the number of people at risk from major hazards.

67 HSE has given advice on about 5000 developments near major hazards, requiring detailed assessments, in the last 15 years. Of these, many were concluded not to be causes for concern. Of the developments which were inadvisable, each on its own would not have made a large addition to the overall societal risk from major hazards in the UK. However, taken altogether there would perhaps have been a significant increase had HSE not advised against. In general, while it is likely that the extra societal risk due to any single development would be very small, unrestrained developments could eventually add up to a noticeable worsening of the overall situation.

68 F/N curves relate only to injuries or fatalities, and they do not allow for other aspects such as economic losses. Also, a calculated curve may not match closely the impact on society of different sizes of accident with the same overall total number of casualties. It has been suggested that use could be made of a concept of ‘aversion’ to allow a greater weighting to be given to larger disasters, but society’s response may be related to other factors as well as the number of people hurt. In extreme cases, even an accident with very few or no
deaths can cause great public anxiety and a severe political reaction (for example, the Three Mile Island nuclear power station accident in USA or the Seveso incident in Italy).

69 It must be emphasised that these difficulties relate specifically to the present question of new developments near major hazards. Other situations may not present such difficulties.

A judgemental approach

70 It was noted above that there are particular difficulties with the aggregation of small elements of societal risk. This means that it is very difficult to derive and use numerical criteria for those elements, that is for particular developments which arise and must be judged one at a time over the years.

71 Rather than attempt to produce numerical criteria for societal risk in the present context, HSE will apply some qualitative judgements. For housing, HSE's advice will be based on the criteria for individual risk shown in paras 54-58. The element of societal risk will be allowed for by using a harsher judgement for larger developments in the middle zone of the criteria. The judgement here is essentially a weighting of the significance of individual risk to allow for the larger size of development, on the basis of a judgement of the aversion of society to larger-scale disasters.

72 In practice, HSE will assess the risks to people in housing using the methods described in Appendix 1. This produces figures for individual risk for a hypothetical house resident who is assumed to be at home 100% of the time. (In reality this may not be too unrealistic for many people, who spend most nights and many days at home.) Then these figures for individual risk will be compared with the criteria, ie upper and lower limits of significant individual risk of 10 in a million and 1 in a million per year respectively. For housing which falls between these limits, HSE will advise against developments at a lower level of risk for larger developments. For example, HSE might advise against 10 houses just outside the 10 in a million position but not if they were to be well outside that position. Conversely, HSE might advise against a large development (30 houses or more) just inside the 1 in a million position. Judgement would obviously be needed in cases where the development straddles these values. (For developments of less than 10 houses, see para 81, category C.)

73 The approach outlined above for housing allows for society's increasing aversion to larger-scale disasters, in a common-sense way. However, it would be rather simplistic if it failed to take account of the presence of existing buildings. For example, a development of 10 houses on a 1-acre site in an area where there are already many houses might well be perceived to be less significant than 10 houses near a major hazard which is otherwise surrounded by green fields. In the first case, the development adds fractionally to an existing societal risk. In the second, a societal risk is created where there was none before. Thus any judgement should be tempered by the extent to which the existing situation is changed. In general, HSE would assume that the significance of any given size and type of development is greatest if it intrudes on an unoccupied zone around a major hazard.

74 Other types of development may produce quite trivial levels of individual risk, but substantial societal risk. Consider a supermarket near a major hazard. Any particular individual shopper may be present once a week for one hour, so is most unlikely to be present at a time which coincides with the rare event of a major accident. If the risk to a hypothetical house resident in a house at that position were 10 in a million per year, the individual risk to the shopper would be very much below 1 in a million. However, at any one time during the day the supermarket will contain many people, so any major accident would be a disaster. HSE will assume that different types of development are roughly equivalent in their risk significance to various sizes of housing development. More discussion of this general point is given under categories of development in Chapter 5.

75 HSE will be guided by the following equivalencies in making judgements about cases where the risk is mainly societal:

<table>
<thead>
<tr>
<th>Housing</th>
<th>Retail</th>
<th>Leisure (daytime)</th>
<th>Holiday hotel accommodation</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 houses</td>
<td>100 people</td>
<td>100 people</td>
<td>25 people</td>
</tr>
<tr>
<td>30 houses</td>
<td>300 people</td>
<td>300 people</td>
<td>75 people</td>
</tr>
</tbody>
</table>

Note: For the cases other than housing, the 'number of people' applies to typical peak periods.

76 To summarise, HSE will:

(a) form a judgement on a hypothetical housing development of equivalent size at the location of the development site, on the basis of its position relative to the individual risk levels;

(b) use the same advice for the actual development in question.

77 Difficulties may arise where the societal risk development is very large but only in use very intermittently, eg a sports stadium. This gives an extreme combination of low chance but high number of people. Such cases will still need considerable judgement to be applied.
5 Categories of development

78 The discussion so far has concentrated mainly on the potential risks to people who would occupy new housing developments near major hazards. Other types of development are very different in character: people might be present for only a fraction of the day, or they might be transient, or the usage might be very intermittent, or the occupants might be unusually vulnerable, etc. It was suggested in the chapter on societal risk that criteria could be devised by forming a view on a hypothetical housing development at the proposal site, then using judgement to consider whether the actual proposal is more or less of a risk than a housing development would be. Then the view could be modified accordingly, to give the advice for the real case.

79 HSE has attempted to fit the various types of development into a set of categories which may be compared with housing for significance in the vicinity of major hazards. Then these categories can be used in the formulation of generalised development control advice around particular major hazards, by relating the advice to that which would have been given for housing.

80 This procedure is based on an approach which has been used by HSE for some years. Our familiarity with the approach, and the general impression that it is seen to be sensible and acceptable to planning authorities, are incentives for continuing with it. The approach divides developments into four categories according to several factors which determine the levels of risk. The factors include:

(a) inherent vulnerability of the exposed population (compare: healthy adults, children, elderly, disabled etc);

(b) proportion of time spent by any individual in the development (compare: home, workplace, shopping, hospital, leisure centre etc);

(c) size, ie number of people who might be present;

(d) whether people are likely to be indoors or out of doors, and, if out of doors, how easily they could seek shelter (compare: home, garden centre, football stadium, cinema, office block etc);

(e) ease of evacuation or other emergency measures;

(f) construction of buildings (height, materials, ventilation etc);

81 The four categories, based on these factors, are:

Category A: Housing, hotel, or holiday accommodation.

These are developments in use 24 hours a day where people live or are temporarily resident. There should be an average mix of the healthy, unhealthy, young and old. It may be difficult to organise people in an emergency. The building construction and design may not provide great protection against hazards.

Category B: Some workplaces, parking areas etc. (Includes: factories, warehouses, offices, farm buildings, non-retail plant nurseries, all for less than 100 occupants; and car parks for less than 200 vehicles etc.)

This includes developments where the occupants would tend to be fit and healthy, and could be organised easily for emergency action. Members of the general public will at most be present in small numbers and often only for a short time in any day.

Category C: Retail, community, leisure, etc.

This includes shops (250 m² or larger), and community facilities such as restaurants, pubs or entertainment (over 100 m²). Here, members of the public will be present, but not resident. They may be indoors or out of doors, and possibly in large numbers. Emergency action may be difficult to co-ordinate. This category also includes cases not covered by A, B or D, eg housing with less than 10 units.

Category D: Highly vulnerable, or very large facilities.

This includes hospitals, homes for the elderly, schools etc. It also includes very large examples from category C (eg 5000 m² of floor-space, or provision for more than 1000 people out of doors). For the institutional type of use, we are dealing with places which provide an element of care, protection or education. The occupants may be especially vulnerable and difficult to move in an emergency.

Some developments (eg retail) will not be used at night. It is sometimes found that the calculated risks are dominated by events that occur in the sort of weather which is more likely at night; then the risk figures can be misleading. HSE will make due allowance for this effect in its advice.

(Note: HSE provides a more comprehensive and precise definition of categories A, B, C, D for practical use by planning authorities.)

82 It can be seen that category A is the ‘housing’ category which forms the conceptual basis of HSE’s approach. Category C cases are assumed to be similar in significance to category A, so that relatively small C developments are given similar advice to relatively small A (ie about 10 houses), while large C are given the same advice as large A (ie over about 30 houses) (see para 75).
Category D contains 'institutions' which are considered to be more sensitive than housing. To illustrate this, suppose an exposure to toxic gas is lethal to 5% of the average population. Such an exposure might be lethal to 50% of elderly people. Category D also contains some very large cases similar in type to Category C, to allow for the possibility of thousands or tens of thousands of people being put at risk. At present, HSE tends to treat this sort of category D rather like an extreme case of category A and to take particular account of the possibility of people being caught out of doors with no refuge.

With category B, HSE usually advises that there is no need to refuse permission near a major hazard on safety grounds. This acknowledges the substantial mitigating factors compared to housing. HSE is also mindful of the need to use land for some beneficial purpose. It seems reasonable to permit small manufacturing units and the like, particularly in locations where the external risk from a major hazard is substantially less than the average risk of being injured at work (i.e., 23 in a million per year average, in manufacturing).

HSE may also not advise against a development in circumstances where it is a small addition to an existing population at risk. An example is a proposal for an in-fill development of a couple of houses in an area which is already fairly built-up. Here, there are two main arguments: first, that the addition to the societal risk is very small, and second, that the 'dangerous dose' would only be fatal for a small fraction of the population, and a fraction of the population of two houses is probably zero. This general approach is likely to be hardened if the small development sets a precedent for substantial piecemeal growth, or it approaches closer to the major hazard than the existing building line.
6 Summary of criteria

86. HSE will usually advise against developments near major hazards in the circumstances shown below. The advice is stronger the higher the calculated risk. It is for planning authorities to decide whether the development should be refused, weighing the factor of safety with other factors in the case. Planning authorities are advised to give more weight to safety for higher risks or larger developments than the limits quoted here.

(a) Housing developments providing for more than about 25 people where the calculated individual risk of receiving a defined ‘dangerous dose’ of toxic substance, heat or blast overpressure exceeds 10 in a million per year.

(b) Housing developments providing for more than about 75 people where the calculated individual risk of receiving a ‘dangerous dose’ exceeds 1 in a million per year.

(c) For developments in category C (para 81) HSE prefers not to suggest hard and fast rules based simply on risk figures. This is a category where the factors determining risk vary considerably in their importance, so it is difficult to generalise. HSE will tend to follow a similar approach to category A. Thus moderately sized developments will usually be inadvisable where the calculated individual risk for a hypothetical house resident exceeds 10 in a million per year, and large ones where the risk figure exceeds 1 in a million per year.

(d) The 1 in a million per year criterion may be extended downwards somewhat for developments which fall into category D, either because the inhabitants are unusually vulnerable or the development is extremely large.

(c) For all types of development, HSE is likely to advise more strongly against planning permission where the development forms a precedent for further growth or encroaches within any pre-existing cordon sanitaire, and comes within the risk criteria described above.

87. To illustrate the effects of these criteria, some typical distances to various risk levels from major hazard plant are shown in the following table. These examples are taken mainly from HSE’s work with chlorine installations, which comprise about 10% of the notified major hazards. A larger proportion of the major hazards in Britain are pressurised LPG installations, for which the distances would typically be of the order of a few hundred metres.

<table>
<thead>
<tr>
<th>Type of installation</th>
<th>Approx number in Britain</th>
<th>Approximate distance (m) to risk levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10 in a million per y</td>
</tr>
<tr>
<td>Bulk liquid chlorine for water treatment (2 x 30 te tanks, simple plant etc)</td>
<td>55</td>
<td>150</td>
</tr>
<tr>
<td>Bulk liquid chlorine in chemical works (more throughput than above)</td>
<td>50</td>
<td>350</td>
</tr>
<tr>
<td>Phosgene user plant (1 te drums)</td>
<td>10</td>
<td>600</td>
</tr>
<tr>
<td>Sulphur dioxide user plant</td>
<td>35</td>
<td>200</td>
</tr>
<tr>
<td>Pressurised liquid ammonia user plant</td>
<td>10</td>
<td>150</td>
</tr>
<tr>
<td>Refrigerated ammonia storage plant</td>
<td>10</td>
<td>150</td>
</tr>
</tbody>
</table>

Notes:
1. These distances are given by way of illustration and should not be used for any particular development case without consultation with HSE.
2. Many of these installations have other major hazard substances present as well, and those substances may dominate the risk levels.
Appendix 1  HSE methods for quantified risk assessment for developments near major hazards

Introduction

For people to be injured by a major hazard, there must occur a sequence of events. These are described below for two typical substances, LPG (a liquefied flammable gas) and chlorine (a liquefied toxic gas).

**LPG** (Liquefied petroleum gas: hazards of fire and vapour cloud explosion, and possibly missiles from bursting vessels):

- Plant failure - breach of containment - release of LPG - vaporisation - mixture with air - possibly travel downwind - ignition - fire, explosion - heat, possibly blast propagation, possibly missiles - impact (either directly on people, or on buildings which collapse or burn) - injury.

**Chlorine** (Liquefied toxic gas: hazard of damage to lungs if inhaled):

- Plant failure - breach of containment - release of liquid or gas - vaporisation of liquid - mixture with air - travel downwind - dilution - penetration into buildings - inhalation by people - injury.

The risks are quantified by making numerical estimates of the probabilities and consequences of the sequence of events. This will be described in more detail for chlorine. HSE has developed a computerised system known as RISKAT (Risk assessment tool) for this purpose. RISKAT allows great flexibility in the depth to which parts of the analysis may be done, by providing a basic framework into which results from the analysis are injected. The computer then integrates these inputs and performs supporting calculations to produce overall values of individual and societal risk.

The calculated individual risk may be shown either as a graph of risk against distance from the plant, assuming a uniform distribution of wind directions and weather types; or it may be shown as 'contours' on a map, incorporating the local distribution of wind and weather. Examples of these presentations are given in Figures 1 and 2 on page 19.

Outline of assessment for toxic gas

The assessment involves seven main stages, following a sequence which is common for many different systems of QRA for major hazards:

(a) Identification of possible hazardous release events.
(b) Identification and analysis of the failure mechanisms which would allow the release to occur.
(c) Estimate rates and durations of releases.
(d) Estimate the frequencies of the releases, using the analysis of failure mechanisms.
(e) Estimate the injury consequences of the releases, taking into account mitigating factors.
(f) Combine the various frequencies and consequences to determine the overall risk levels.
(g) Judge the significance of the risk levels (e.g., by comparison with criteria).

The main text deals with the last stage in detail. All the stages are described briefly as follows:

**Identification of hazards** With a chlorine installation, the hazard is simply an escape of chlorine producing toxic gas which could possibly drift off-site and affect people. It is necessary to identify those parts of the installation which contain chlorine in significant quantities.

**Failure mechanisms** It is necessary to develop a basic understanding of the plant, its control and safety systems, operating conditions and practices; this would normally require a visit to the site. Then the complex process piping and instrumentation diagrams can be reduced to a simple summary, as in Figure 3 on page 20. This forms the basis for analysis. The installation is then sub-divided into vessels, pipework, transfer couplings, pumps and user plant. Each of these components could in principle produce a range of releases, from a minor weep to a complete loss of containment. It is necessary to simplify by reducing this range to a few discrete release cases. (E.g., pipe failure could range from a pin-hole to complete severance. This is simplified to two cases, namely guillotine fracture i.e., both ends open, and split i.e., equivalent to a 13 mm diameter hole, for 25 or 50 mm pipe. The very smallest releases are assumed to have no off-site hazard potential.)

The types of failure considered for a simple chlorine plant are shown in Figure 4 on page 20.

As part of the identification procedure, one can use an 'event tree' analysis, where the progression to failure from an initiating event is derived. This is particularly useful if there are several possible outcomes of the
initiating event. An example of this is given in Figure 5 on page 21.

Rates and durations of releases Each of the failure events is considered in turn and calculations are made of the rate of release of hazardous material and the duration. The duration takes account of the available quantity of substance feeding the leak, and the possibility of shutting it off by automatic or manual valves or patching the hole etc. For vessel bursts, the release is effectively complete and instantaneous, but lesser events may give prolonged releases.

Event frequency The frequency or failure-rate of a particular component (vessel, pipe etc) may be deduced from historical data, possibly with some expert judgement to allow for differences between the present plant and that involved in the history of failures. Alternatively, failure-rates may be synthesised by a fault-tree or ‘top-down’ analysis. This assumes that a relatively rare top event arises from coincidence of more likely faults, and there is data available on the likelihood of each of those faults. The analysis shows how coincidences arise, and it allows the frequencies of the various coincidences to be calculated.

Whichever approach is used, it is necessary for the assessor to apply engineering judgement to determine which data are most relevant to the plant in question. HSE often uses generic failure-rate data taken from various sources (eg failure of large pressure vessels). This rests on the assumption that a plant operated to reasonable standards should be no more likely to fail than the general population of vessels from which the data arose. In practice this may tend to overestimate the risk somewhat, if standards at the plant in question are actually better than the average in the past. However, the presence of better than average standards now may not guarantee them in future (paras 21, 22).

The judgement involved in failure-rate data is a major source of uncertainty in quantified risk assessments. It is therefore important to test the sensitivity of the results to the assumptions, and to seek to refine them if necessary.

Consequences The aim here is to estimate whether people at various locations might be affected significantly by the release cases identified above. This information can then be combined with the frequencies, to show the overall risk that a particular location might be affected.

To do the estimates, it is necessary first to define that level of exposure to the hazard which causes significant effects. HSE uses the concept of a ‘dangerous dose’ (paras 52, 53). For chlorine, the ‘dangerous dose’ is the toxic load received when a person is exposed to a certain concentration for a certain time. Thus the estimate sets out to determine the areas of land where such concentration/time combinations may be exceeded. For a fire hazard such as LPG, the ‘dangerous dose’ would be a certain intensity of heat for a certain time, while for explosion hazards it is a certain blast overpressure.

For any particular release of chlorine, the extent of the location affected by a ‘dangerous dose’ depends on weather conditions (some conditions cause more rapid dilution than others), and the particular location depends on wind direction. Computer codes based on mathematical models of gas dispersion are used to show the extent in various weather conditions. These models allow for the initial behaviour of the cold gas/air mixture as a heavier than air cloud, which slumps and spreads as it moves downwind, eventually becoming so dilute that it behaves as a passive or neutral density cloud.

HSE tries to allow for the possibility that people are indoors, or that they will try to go indoors, when the cloud reaches them. A house offers for some time a degree of protection, as the concentration builds up more slowly indoors than outside. The models can show the extent of ‘dangerous dose’ for people indoors, by including an allowance for gas infiltration rate. This protection due to being indoors is an important mitigating factor. (Note: It is of course important for people to come out of doors once the cloud has passed, to escape any gas which will by then have penetrated indoors and be slow to leave.)

Combine frequencies and consequences For any particular combination of release rate, weather and wind direction, there is a specific probability that an occupant of a house at a particular point would be within the ‘dangerous dose’ zone. Due allowance is made for the likelihood of a person being out of doors in a particular type of weather, and of being able to escape indoors. Then to give the overall individual risk value, for all combinations, it is necessary first to multiply the particular probability by the frequency of the release. This gives the contribution of risk from one combination. Finally, all these contributions are added together.

The RISKAT computer program does most of the calculations automatically. It is necessary to input the list of events with their frequencies and release-rates, and to provide information (from meteorological records) on wind and weather conditions. It is also necessary to input: the concentration/time relationship to define a ‘dangerous dose’; the probability of being out of doors in various weathers; the likelihood of escaping indoors in various gas concentrations; and the rate at which gas penetrates into buildings at various windspeeds.

To calculate societal risk, it is also necessary to input data on the distribution of population around the installation. This can be a difficult and time-consuming process, and inevitably some simplifying assumptions are needed, eg assuming uniform population over a block of land. Particular care is needed with buildings whose populations vary greatly throughout the day and night.
Comparison with criteria  
RISKAT produces results in various formats:

(a) Graphs of individual risk against distance, assuming a uniform wind direction distribution;
(b) ‘Contours’ of individual risk overlaid on maps of an area, taking account of the real, non-uniform wind direction and weather conditions;
(c) societal risk, in the form of an $\Gamma/N$ plot (Appendix 4).

For the purpose of comparison with the criteria discussed in this document, the most relevant results are the risk contours. These show the levels of individual risk for a proposed development site. Often the result is quite clear-cut, but difficulties may arise if the site is large or the contours are close together so that the site straddles the boundaries between zones of high, intermediate or low risk. Then it is necessary to judge whether sufficient of the proposal is at sufficient risk to suggest that planning permission be refused on safety grounds.

Figure 6 on page 22 shows results for societal risk before and after a proposed development. It can be seen that the development does not affect the high-$N$ part of the curve. The reason is that the densest areas of existing population lie in a different direction from the development, so it does not add to the maximum number of people which might be affected at one time. However, the development causes an increase in frequency by up to threefold at medium and low-$N$. This occurs because it is nearer than most existing buildings, so it increases the chance of a small release affecting some people.

---

**Examples of distances to 10 and 1 in a million years risk levels**

It is the essence of quantified risk assessment that specific attention is paid to the characteristics of each particular plant, local weather patterns etc. However, experience has shown similarities between the results from similar types of installation. Some examples of the distances to the criterion risk levels for house residents are shown in the table in para 87, to illustrate the potential effects of the policies proposed in the document.
Fig. 1: Toxics RISKAT output: individual risk vs distance (Assumes uniform wind/weather direction)

Fig. 2: Toxics RISKAT output: contours of individual risk
Pipe Labelling Scheme

First letter is for identification
Number refers to pipe dia. in inches
Final letter indicates liquid (L) or gas (G)

CC = Coupling
RSOV = Remotely operated shut off valve (push button)
EFV = Excess flow valve

(NB. Protective devices, design of components etc. shown here are for illustration rather than to imply specific legal requirement or best practice)

Fig. 3 Chlorine installation (basic plant, not showing all valves, instrumentation etc.)

Fig. 4 Analysis of release cases
RSOV2 (5 min) Manual valves (20 min)

Y Y 0 forward flow (liquid)

N Y 0F,5B

Y Y 0F,20B

N Y 0F,20D

EFV (Instantaneous)

Yes

No

Y Y 5F,5B

N Y 20F,5R

No

Y Y 5F,20B

N Y 20F,20B

EFV = Excess flow valve
RSOV = Remotely operated shut off valve (push button)

(N.B. Greatly simplified e.g. does not show vapour return, tanker pressurisation, etc., for illustration rather than to imply specific legal requirements or best practice).

Fig. 5 Event-tree for coupling failure during delivery
Fig. 6 Societal risk (F/N) curves: Example to show effect of a new development close to the major hazard in an area which is already partly built up.
Appendix 2  Examples of individual risks

Risk figures are given here as the average over the whole population of Great Britain, except where there is a specific small group exposed (eg rock climbers). The figures are given as the chance in a million that a person will die from that cause in any one year, averaged over a whole lifetime (except where otherwise stated).

<table>
<thead>
<tr>
<th>Causes</th>
<th>Risk per million per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>All causes (mainly illnesses from natural causes)</td>
<td>11 900</td>
</tr>
<tr>
<td>Cancer</td>
<td>2 800</td>
</tr>
<tr>
<td>These figures vary greatly with age; see Appendix 3</td>
<td></td>
</tr>
<tr>
<td>All violent causes (accident, homicide, suicide etc)</td>
<td>396</td>
</tr>
<tr>
<td>Road accidents</td>
<td>100</td>
</tr>
<tr>
<td>Accidents in private homes (average for occupants only)*</td>
<td>93</td>
</tr>
<tr>
<td>Fire or flame (all types)*</td>
<td>15</td>
</tr>
<tr>
<td>Drowning*</td>
<td>6</td>
</tr>
<tr>
<td>Gas incident (fire, explosion or carbon monoxide poisoning)</td>
<td>1.8</td>
</tr>
<tr>
<td>Excessive cold*</td>
<td>8</td>
</tr>
<tr>
<td>Lightning</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Accidents at work - risks to employees


| Deep-sea fishing (11K vessels)     | 880         |
| Coal extraction and manufacture of solid fuels | 106         |
| Construction                        | 92          |
| All manufacturing industry         | 23          |
| Offices, shops, warehouses etc inspected by local authorities | 4.5 |

Leisure - risks to participants during active years

| Rock climbing (assumes 200 hours climbing per year) | 8000 |
| Canoeing (assumes 200 hours per year)               | 2000 |
| Hang-gliding (average participant)                  | 1500 |
### Appendix 3  Risk of death as a function of age (1980-84 mean, Great Britain): all causes (mostly illness from natural causes)

<table>
<thead>
<tr>
<th>Age</th>
<th>Males</th>
<th>Females</th>
<th>All persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>2900</td>
<td>2300</td>
<td>2600</td>
</tr>
<tr>
<td>5-14</td>
<td>280</td>
<td>190</td>
<td>240</td>
</tr>
<tr>
<td>15-19</td>
<td>780</td>
<td>310</td>
<td>550</td>
</tr>
<tr>
<td>20-24</td>
<td>860</td>
<td>340</td>
<td>600</td>
</tr>
<tr>
<td>25-34</td>
<td>920</td>
<td>520</td>
<td>720</td>
</tr>
<tr>
<td>35-44</td>
<td>1800</td>
<td>1200</td>
<td>1500</td>
</tr>
<tr>
<td>45-54</td>
<td>6100</td>
<td>3700</td>
<td>4900</td>
</tr>
<tr>
<td>55-64</td>
<td>18 000</td>
<td>9800</td>
<td>14 000</td>
</tr>
<tr>
<td>65-74</td>
<td>46 000</td>
<td>25 000</td>
<td>34 000</td>
</tr>
<tr>
<td>75-84</td>
<td>105 000</td>
<td>66 000</td>
<td>79 000</td>
</tr>
<tr>
<td>85 and over</td>
<td>220 000</td>
<td>180 000</td>
<td>190 000</td>
</tr>
</tbody>
</table>

*Source: Annual Abstract of Statistics 1987, Central Statistical Office*
Put simply, societal risk is the likelihood of a disaster. Societal risk may be defined thus: “The relationship between frequency and the number of people suffering from a specified level of harm in a given population from the realisation of specified hazards” (I Chem E booklet, Nomenclature for hazard and risk in the process industries). It is expressed numerically as the chance per year (or frequency) that there will be a disaster harming more than a particular number of people. The frequency is usually denoted by F, and the number of people by N.

There is the potential for a whole range of sizes of disaster from major hazards, and there may even be a range of sizes possible from a particular plant. For example, suppose that a release of 10 kg/s of chlorine from a particular plant in typical daytime weather with a south-west wind might threaten people at a nearby supermarket, but no other building is near enough to be at risk in such weather. Suppose that there are typically 100 people present. Thus N = 100 for this type of event. Now the same plant may also release 5 kg/s, and in calm night-time weather with a north-east wind this may threaten 200 people on a housing estate in the opposite direction from (and further away than) the supermarket. Here, N = 200. If the predicted frequency for the first event is 10 in a million per year, and that for the second event is 1 in a million per year, the total risk for N = 100 or more is a sum of two combinations, i.e., 11 in a million per year. In practice, there will be many more combinations, all contributing to the total societal risk.

A major problem with societal risk is to aggregate all the combinations to produce a statement which can then be compared to criteria. One method of combining all the elements of societal risk is to plot a graph of frequency F vs N, where F is the frequency of N or more deaths. In the example above, the two cases would combine to give two points on such a graph, with F = 10^{-6}/y for N = 200, and F = 1.1 x 10^{-5}/y for N ≥ 100. (Note that 1.1 x 10^{-5}/y is made up from 10^{-5}/y for N = 100 plus 10^{-6}/y for N = 200. Both these events contribute to the risk that N > 100 occurs.)

Figure 7 on page 26 shows a hypothetical F/N plot for a particular chlorine installation in a built-up area. The shape of the curve is interesting. It becomes very steep at high N, i.e., the frequency becomes very low and then vanishes. This shows that there is an upper limit to the number of people who may be affected. The curve is flat at low N, indicating that an event which affects one person is likely to affect several.

Figure 8 on page 27 (from: D Fernandes-Russell, Societal risk estimates from historical data for UK and world-wide events, Research Report No 3, School of Environmental Sciences, University of East Anglia) shows some F/N plots for data for the whole world and for the UK, for accidents in the chemical and petrochemical industries. It is noteworthy that the UK ‘F’ for a particular ‘N’ is about 1/30 of the world ‘F’ in most cases.

### Derivation of criteria

For the purposes of the criteria, it would in principle be possible to compare the assessed F/N curve for the particular development with some criterion F/N curve. This is reasonable if the assessed curve is similar in shape to the F/N criterion curve, or wholly above or wholly below the criterion. Problems arise if the assessed curve crosses the criterion curve. For example, consider curve AB in Figure 7. It shows a lower F than the assessed curve at low N, and a higher F at high N. It is not obvious whether it is ‘worse’ or ‘better’ than the assessed curve.

To derive a criterion F/N curve, one approach would be to start with the UK F/N curve for a particular hazard, then to deduce some fraction of the F/N values to set a criterion. This fraction would need to be very small, so that all developments in the foreseeable future which meet the criterion would not add up to a substantial increase of the current UK societal risk. This approach suffers from several drawbacks, eg:

(a) the problem of comparing a curve which ‘crosses’ the criterion line;

(b) technical problems in estimating numbers of deaths (paras 48-53).

Because of these and other difficulties, HSE proposes at present to use the judgemental approach outlined in paras 71-77. It is possible that further consideration of societal risk will eventually allow a more formal approach.
Cumulative frequency (F) per year

Number of casualties (N)

Fig. 7 Case societal risk
Fig. 8 Frequency of accidents in the chemical and petrochemical industries
(UK and worldwide 1966-86)
Appendix 5  Some economic considerations

Introduction

The aim of HSE advice is to try to ensure that decisions about the development of land near major hazards take full account of the risk aspect. HSE therefore draws attention in many cases to the unsuitability of land for types of development which are vulnerable to the hazard. This has the effect of making explicit, considerations which in principle ought to be reflected in the market value of such land.

This appendix considers how to analyse net losses and gains to the nation from both the introduction of the hazard and from taking explicit account of it. It also comments on the transfer of wealth involved between the different parties. Conclusions it leads to are:

(a) the costs to be offset against the benefits of greater safety are, for the nation as a whole, considerably less than the apparent costs in lower land values borne by those owning property near the hazard;
(b) in deciding on whether or not to invest in the mitigation of a hazard, it is relevant to consider costs that would be saved for the nation in reducing the distortion of the otherwise desired pattern of land development.

On the issue of compensation it should be noted that unless planning permission is refused or withdrawn where there are existing permitted development rights, there is normally no entitlement to compensation when planning permission is refused. However, where an owner has been refused planning permission and considers that the land has no reasonably beneficial use apart from the proposed development, the owner can demand that it be purchased by the local authority.

Example of costs of inhibiting land use

Let us assume that there is a site which seems in all ways to be suitable for housing. Its value as agricultural land might be £1M while its value as housing land might be £10M. Then suppose that there is discovered to be a hazard, of whatever sort, making the land unsuitable for housing though it remains suitable for agriculture. The apparent loss from that discovery to the land holder is the whole development value, ie £9M.

The builder might then bid for another site which is less attractive; for example it may be rather further away from where people are likely to work, with slightly less attractive views and amenities. That land also has an agricultural value of £1M, but suppose its worth to the builder is only £8M. This is so because the less attractive, less well situated houses will sell for less than they would on the first site. So £9M of the first land holder’s loss is compensated for by £8M gain to a second land holder; thus only the £1M difference in price between the two sites (plus any loss of profit to the builder) is a net loss to the nation (externalities and multiplier effects being equal).

If there are no other costs of the hazard except those borne by the operation of it, it is worth the nation’s
while to tolerate the hazard if economic gains from it being there are equivalent to the capital value of £1M or greater.

Let us further assume that the gains for operation of the hazard are equivalent to a capital value of £5M. It is well worthwhile for the nation to tolerate the hazard. However, the existing land holder still suffers a loss even though it is essentially less in aggregate than the gains of the second land holder plus those of the hazard operators. It is arguable that if the risk really existed but had simply not been acknowledged, then simple better knowledge of the real situation should have depressed the market price of the first site by £9M anyway. All that any formal restriction harring housing development does is to enforce the recognition of that reality. The effect would be the same as that of a sudden discovery that the soil on the site was unsuitable for foundations. All that is part of the normal risks faced by land holders.

However, if the hazard is newly introduced, then the land holder of the first site finds his interests being damaged by the action of another. In a perfect market the solution would be for the operator of the new hazard to obtain his neighbours’ agreement to the location of the hazard by offering him compensation in the form of buying and making available the second housing development site, and contributing at least £1M out of his own gains from operating the hazard. The effect would then be that neither land holder was worse off than before, whilst the hazard operator (and the nation) would have secured a substantial profit from the operation of the hazard. Practical compensation arrangements tend towards this model, but rarely if ever match it exactly.

There will be a secondary effect from the reduction of the overall stock of land potentially available for a development due to the presence of a major hazard. In a few areas the resulting rises in the prices of other nearby development land might exceed the loss to the land holder near the hazard. What would be happening would be that the absolute scarcity of land of that particular type in that particular locality would be forcing a real rise in land prices. The gain to other land holders takes the form of an increase in monopoly rents accruing to them as owners of a commodity which has become increasingly scarce. It does not represent a net gain in economic welfare but a transfer of wealth at the expense of aspiring purchasers of property in the area. The cost to the nation is still the same as that discussed above in the housing example, namely that the efficiency of the economy is reduced because development is forced into a different sub-optimal pattern.

Exactly what those distortions would be in the case of a region with absolute scarcity of that particular type of land will be difficult to calculate; but may be substantial. If there were such an absolute shortage of land in an area it would probably lead to calls for the examination of alternative locations for the hazard. However, such examples are likely to be very rare. The more general case will be that there are nearby substitutes for the land near the major hazard, and the effect on the price from reducing the supply of available land will probably be undetectable.

The balance of cost and benefit

The presence of a major hazard imposes a cost upon those in the immediate vicinity. This can be estimated by taking the costs of all the different sorts of damage that might be inflicted by the hazard and multiplying by the likelihood of each sort of damage occurring. (This is the type of calculation undertaken when working out an insurance premium.) Where full information on the risks associated with the major hazard exists and is acted upon, this cost would be reflected in the price of land in the vicinity. Where these conditions do not apply it is necessary that this cost be borne in mind and taken account of by the relevant planning and regulatory authorities.

In calculating the costs of damage to activities on the land surrounding a hazard, it would be proper to include a value for risks to life and limb, as is done in calculating the costs and benefits of road improvements. Society tends to be more averse to concentrated incidents of such damage than to diffuse incidents, and this aversion may be reflected in the judgements taken about the value of these costs; this is a manifestation of the societal risk concept.

It is worthwhile to the nation to relocate the hazard or the proposed development where this cost term exceeds the efficiency lost for relocation. Usually this will involve shifting the development since the loss of gain from the operation of the major hazard, or cost of moving it, will usually exceed the development gains foregone in relocating development from the vicinity of the major hazard. Where a potentially very valuable development would be inhibited there might be less resource cost in removing the hazard by withdrawal of its existing planning permission, although this would probably require the payment of compensation to the owner of the hazard. For all the reasons set out above, such cases will be extremely rare.
Appendix 6 Glossary and discussion on use of certain terms

Introduction

This appendix draws heavily on a booklet on nomenclature published by the Institution of Chemical Engineers (I Chem E). Other sources include the Royal Society Study Group on risk assessment, and the reports of the Advisory Committee on Major Hazards.

There is a broad measure of agreement between the sources listed above and usage in industries such as nuclear energy, where the terms are used in a physical science or engineering context. However, certain important terms are used differently in other contexts. An obvious example is ‘risk assessment’, which relates to a process of analysis and calculation of postulated accidents in the major hazard industries, but to a process of deduction of no-effect levels in toxicology, or a derivation of financial liability in insurance. HSE does not wish to attempt to impose a single definition across the board but it is necessary to make it clear how certain terms are used in a particular context.

This appendix covers the following terms: hazard, major hazard, risk, individual risk, societal risk, risk assessment, uncertainty, residual risk, pessimistic, best estimate. Each term is defined and briefly discussed.

Hazard

I Chem E: “A physical situation with a potential for human injury, damage to property, damage to the environment or some combination of these”.

It is usually necessary to specify ‘hazard of what and to whom’. The size of the potential incident may be quantified, eg maximum foreseeable number of serious casualties. The crucial point to note here is that hazard is a potential to cause harm. The likelihood of that potential being realised should not be read into any statement which deals only with hazard.

Major hazard

I Chem E: “An imprecise term for a large-scale chemical hazard, especially one which may be realised through an acute event. Or, a popular term for an installation which has on its premises a quantity of a dangerous substance which exceeds the amount prescribed by the above references”. The references are NIHHS and CIMAH Regulations. This term is also used more broadly to mean any hazard with the potential to produce a large-scale incident or disaster.

Note that a major hazard may actually have a very low likelihood of realisation, so it is not necessarily a pressing cause for concern. It is of course necessary to ensure that the likelihood is kept low, and HSE usually assumes that the bigger the potential, the more stringent are ‘reasonably practicable’ controls.

Risk

I Chem E: “The likelihood of a specified undesired event occurring within a specified period or in specified circumstances. It may be either a frequency (the number of specified events occurring in unit time) or a probability (the probability of a specified event following a prior event), depending on the circumstances”.

This is essentially the same as the RSSG definition. It is a rather narrow definition, as a deliberate choice to avoid the confusion when attempts are made to use ‘risk’ to mean the overall combination of likelihood and consequences.

A couple of points:

(a) For low frequency or rare events, it is more meaningful to interpret the frequency value as the chance that the event will occur in the next time interval. For example: a risk frequency of 1000 in a million per year means that on average there would be one event every thousand years, spread out at random. If we observe one installation for 10,000 years, or 10,000 installations for one year, we would see about ten events. It also means that there is a 1 in 1000 chance that we shall see the event during the next year of exposure to the risk from one installation, which should be more useful information to decision-makers. (Or perhaps a 1 in 30 chance that we shall see the event in the next thirty years may be more meaningful.)

(b) The use as a conditional probability (eg, ‘if the vessel bursts there is a 1 in 10 risk that the gas will catch fire’) also follows common usage, but it is distinct from the frequency use.

Individual risk

I Chem E: “The frequency at which an individual may be expected to sustain a given level of harm from the
realisation of specified hazards". For example, there may be an individual risk of 1 in a million that a particular person would be killed by an explosion at a major hazard near their home for every year that the person lives at that address.

Note that this refers to a particular person or a typical member of a particular group eg, 'Mr Brown of Sycamore Villa' or 'an inhabitant of the Woodlands Estate'. There is also often a wider use of the term when the risk from a hazard is averaged over the whole population eg, '5000 road deaths per year implies an individual risk of 1 in 10 000 per year'. This is a crude average and it conceals very wide variations between types of people (children, elderly, taxi-drivers, cyclists etc). These variations should be borne in mind when comparing risks derived by QRA with statistics of the risks from everyday life.

Note that the level of individual risk is the same, whether there is actually just one person at risk or many people at the same risk.

Societal risk

I Chem E: "The relationship between frequency and the number of people suffering from a specified level of harm in a given population from the realisation of specified hazards".

This is a 'relationship' because there is a whole range of possible outcomes and frequencies from a single hazardous installation. It is often convenient to show this range on an F/N plot. This is described in more detail in Appendix 4.

Risk assessment

RSSG and I Chem E both use the term 'risk assessment' to mean a process which includes the calculation (or estimation) of the level of risk, and the value (or political) judgements of its significance. RSSG suggests the terms 'risk-estimation' and 'risk-evaluation' for the two parts of the process respectively. 'Risk-management' was suggested for the making and implementing of decisions for subsequent actions such as measures to reduce the risk.

I Chem E proposes that the term 'risk assessment' be used only where there has been a quantitative estimation of the likelihoods of events. Then it is redundant to add 'probabilistic' or 'quantitative'.

One of these redundant words may be used to make it clear that the estimation was quantitative. This would also help to avoid confusion with other usages of 'risk assessment'. While either word has often been used, synonymously, 'quantitative' is used here; hence 'quantitative risk assessment' or QRA. Another synonym is 'probabilistic safety assessment', PSA.

Uncertainty

Compared to many types of calculation or forecast, QRA of rare events is subject to considerable uncertainty. This arises from various sources:

(a) paucity of data on: failures of components, erroneous human actions, and extreme internal or external stresses;
(b) difficulty in identifying all possible routes to failure;
(c) difficulty in calculating consequences of failure;
(d) variability in human responses to impacts.

We use the word 'uncertainty' to cover the overall effect of all these factors on the degree of confidence in the numerical results. This uncertainty may itself be expressed numerically, when it is a measure of the precision of an analysis, but this should not be confused with uncertainty as to whether the analysis covers all possible failure modes and causes.

Residual risk

I Chem E: "The remaining risk after all proposed improvements to the facility under study have been made".

In the present context, 'residual risk' relates to the risk from a reasonably well-run plant.

Pessimistic: best estimate

Not defined by I Chem E or RSSG.

A pessimistic, otherwise known as 'conservative', QRA is one in which the assessor follows a deliberate policy to make assumptions which tend to overestimate the risk, whenever there may be substantial uncertainty about a particular factor. In a 'best estimate', the assessor makes assumptions which are as near the likely real values as possible. The results of a 'pessimistic' estimation would be expected to overstate the risk, while a 'best estimate' may err on either side.

Note that a 'pessimistic' estimate does not guarantee a decision which errs on the side of safety. The decision maker may compensate for a known or suspected degree of pessimism.
Bibliography

This is a list of some of the Acts, Regulations, Reports and other published documentation which are mentioned in this document.

Acts, Regulations, Circulars


Scottish Development Department, *Planning controls over hazardous development* (SDD Circular 9/84), Edinburgh 1984

Reports


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