

Understanding COMAH

A guide for new entrants

the Competent Authority



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Introduction

This guidance is aimed at businesses that are expanding their operations and may consequently become subject to the Control of Major Accident Hazards Regulations 1999 (COMAH) as either a new 'lower-tier' or 'top-tier' COMAH site, or move from lower to top-tier status.

It sets out the basic duties for new entrants into COMAH regulation or to top-tier status to enable businesses handling a range of dangerous substances to plan for the transition and meet the additional responsibilities under the Regulations.

This guide also applies to businesses affected by changes to the qualifying thresholds under COMAH due to, for example, the reclassification of a dangerous substance.

All businesses in Great Britain are legally required to protect their employees, third parties and members of the public who may be affected by their work activities. There are also various legal requirements that apply to protect the environment. When an accident occurs, having significant quantities of flammable, environmentally hazardous or toxic substances on site increases the potential to cause multiple injuries or fatalities to those working on site or living in the local community and/or cause damage to the environment. The COMAH Regulations aim to prevent major accidents and, should one happen, require businesses to limit the effects on people and the environment.

The simplest COMAH requirements apply to lower-tier COMAH operators. These businesses must consider the potential for a major accident arising from their work activities and describe their approach to controlling the risks in a major accident prevention policy (MAPP).

Additional COMAH requirements apply where businesses increase their inventories of dangerous substances above the relevant top-tier COMAH threshold. Top-tier COMAH operators should plan for the changes carefully and ensure they make appropriate revisions to their systems for managing and controlling related risks.

Businesses that are already meeting their responsibilities to manage health and safety and environmental protection effectively will be well placed to meet the additional requirements of COMAH regulation.

Using this guidance

Determine whether the COMAH Regulations apply to your site

Refer to Appendix 1 'How the COMAH Regulations apply to your business' to determine if sufficient quantities of dangerous substances are (potentially) present on site to make the establishment subject to the COMAH Regulations.

Appendix 1 contains an extract from Schedule 1 of the COMAH Regulations which lists the relevant dangerous substances for COMAH and the rules for determining your inventory. More detailed information is provided in *A guide to the Control of Major Accident Hazards Regulations 1999 (as amended): Guidance on Regulations L111* (see www.hse.gov.uk/pubns/books/l111.htm).

Establishments that are or will become subject to COMAH

This document outlines the basic duties for all COMAH sites and additional duties that top-tier COMAH sites have. A summary of the information is also provided in Appendix 2 'Summary of duties for new entrants into COMAH'.

Businesses that are considering increasing their inventories of dangerous substances can learn more by contacting their local Competent Authority inspection team (see 'Further Information' at the end of this guide) who can provide further advice to enable informed decision making based on what the changes might mean in practice and how best to manage the transition quickly and effectively.

Non-COMAH sites

The COMAH Regulations do not apply to non-COMAH sites but remember that duties under relevant health and safety legislation will apply. Also, for non-COMAH sites where HSE finds non-compliance with health and safety legislation, costs may be recovered via Fee For Intervention (see www.hse.gov.uk/fee-for-intervention).

Non-COMAH sites must also comply with the environmental legislation relevant to their operations. Many of the practical pollution prevention measures necessary under COMAH are also required under other legislation, though in a manner proportionate to the risk. For more information see:

England

www.environment-agency.gov.uk/business/default.aspx.

Scotland

www.sepa.org.uk/about_us/customer_services_directory/licensing/comah_safety_reporting.aspx

Wales

<http://naturalresourceswales.gov.uk/apply-buy-report/regulate-you/?lang=en>

How the Competent Authority regulates business under COMAH

COMAH establishments are regulated by the COMAH Competent Authority (CA), comprising the Health and Safety Executive (HSE), the Environment Agency, Natural Resources Wales (NRW) and the Scottish Environment Protection Agency (SEPA).

Under the COMAH Regulations, the CA has statutory responsibility to provide regulatory oversight of high-hazard industries using or storing quantities of dangerous substances that fall into the scope of the Regulations.

Our approach therefore aims to assure the public that onshore major hazard businesses are meeting their responsibilities to control major accidents to people and the environment and to mitigate the consequences in the event of an industrial accident.

Our statutory functions under COMAH include assessing safety reports and major accident prevention policies, organising a system of inspections of COMAH establishments, and investigation and reporting on major accidents.

The CA leaflet *Understanding COMAH: What to expect from the Competent Authority* (www.hse.gov.uk/comah/guidance/understanding-comah.pdf) describes how the CA regulates the UK onshore major hazards industry in Great Britain and what businesses can expect from CA inspectors at their establishments. It provides advice and information on how you can prepare for an inspection so it can be conducted efficiently and effectively. It also provides an overview of how the CA recovers its costs under the COMAH regime.

Duties relevant to all COMAH sites

Notification

Why you need to notify

The COMAH Regulations aim to limit the consequences of a major accident to people, local communities and the environment so it is important that regulators and emergency planning authorities are made aware of certain increases in the quantities of dangerous substances on site.

Where the increased quantity of dangerous substances on site equals or exceeds COMAH thresholds it is a legal requirement that you inform the COMAH Competent Authority (CA) of the change – this is called a COMAH notification.

When to notify

Sites generally enter into scope of the COMAH Regulations in one of two ways:

- a business decides to expand and increase its inventory of dangerous substances; or
- external factors result in one or more of the COMAH qualifying thresholds being met or exceeded (for example, reclassification of a substance as dangerous to the environment).

Table 1 provides a summary of the timetable for COMAH notifications to be made.

Table 1 Timetable for COMAH notifications

<i>Reason for entering COMAH</i>	<i>Notify the Competent Authority</i>
Proposed construction of a new establishment, quantities of dangerous substances equal to or in excess of relevant COMAH thresholds	3–6 months before construction begins 3–6 months before start of operation
The newly constructed site	If details in pre-construction notification were missing or have changed
Existing non-COMAH site chooses to increase its inventory of dangerous substances	In reasonable time before the start of operation,* eg 3–6 months
Existing non-COMAH site enters due to change in: <ul style="list-style-type: none"> - dangerous substance classification; or - COMAH Schedule 1 threshold limit; or - knowledge about dangerous substances generated during loss of control 	Within 3 months of the change

* 'Start of operation' means the point at which the site's inventory of dangerous substances first meets or exceeds the COMAH threshold limit.

What to put in a COMAH notification

The key points which have to be included in the notification are:

- name and address of the COMAH operator;
- address of the establishment;
- name or position of the person in charge of the establishment;
- details of dangerous substances present (or likely to be present*) on site;
- quantity and physical form of those dangerous substances;
- brief description of site activities related to the dangerous substances;
- features of the environment which could lead to a major accident on the site;
- elements of surrounding environment which could make the consequences of a major accident worse.

* 'Likely to be present' – eg inventory variations which may occur because of seasonal demand, fluctuations in business activity etc, or dangerous substances which may be present sometimes but not at other times. Also includes dangerous substances which may be generated during the loss of control of an industrial chemical process.

Full details of notification requirements are given in Schedule 3 to the COMAH Regulations (see *A guide to the Control of Major Accident Hazards Regulations 1999 (as amended): Guidance on Regulations* L111).

How to notify the Competent Authority

There is no special form to use for the notification; however, you can freely download and use the notification template provided by the CA (see www.hse.gov.uk/comah/notification/notif1.doc):

- Part A: should be used for statutory information required by the CA;
- Part B: is for non-statutory information and statutory information which you do not want to be placed on the Public Register.

Before completing this form you are advised to discuss the information required by contacting your local HSE or Environment Agency/SEPA/NRW office.

Send the notification to the CA either by email or post and HSE will pass on the details to the relevant environment partner within the CA:

comah.notifications@hse.gsi.gov.uk

COMAH Notifications, HSE
Hazardous Installations Directorate
CEMHD, 2.2 Redgrave Court, Merton Road
Bootle, Merseyside, L20 7HS

HSE will acknowledge receipt of your notification within 10 days. If we have not met this deadline please contact us by phone (0151 951 4694) or email comah.notifications@hse.gov.uk.

Hazardous substances consent

What is hazardous substances consent?

If you are about to become a COMAH site – top tier or lower tier – you will need to obtain a hazardous substances consent. The consent is a planning control that enables a hazardous substances authority (HSA) to consider whether the presence of a significant quantity of a hazardous substance is appropriate having regard to the risk to the community.

Although a separate regulatory process from COMAH, we recommend that you make consent applications in parallel to COMAH preparatory work (this will also save you time).

For specific information on the legislation that underpins hazardous substances consent you should contact your local HSA but for more general queries see:

England

www.planningportal.gov.uk/permission/responsibilities/beforeyoustart/otherpermissions/hazsubs

Scotland

www.scotland.gov.uk/Topics/Built-Environment/planning/publications/legislation

Wales

<http://wales.gov.uk/topics/planning/policy/dear-cpo-letters/hazsubletter/?>

The local HSA grants hazardous substances consent

When an application for hazardous substances consent is made, the local HSA is responsible for deciding whether it is granted or refused. The HSA will normally be the same council as the local planning authority in dealing with any related development proposal.

HSE's role in applications for hazardous substances consent

HSE is a statutory consultee on all hazardous substances consent applications. Its role is to consider the hazards and risks which would be presented by the hazardous substance(s) to people in the vicinity, and on the basis of this to advise the HSA.

HSE will produce a map with three risk zones, representing defined levels of residual risk or harm to people which a hypothetical individual could be subject to. If the HSA grants consent, this map defines the consultation distance within which HSE must be consulted over any relevant future planning applications.

HSE has no power to grant or refuse consent – the final decision rests with the hazardous substances authority.

HSE guidance related to its role within the application process can be found at:

- www.hse.gov.uk/landuseplanning/hazardoussubstances.htm
- www.hse.gov.uk/landuseplanning/lupcurrent.pdf

How long will HSE take to advise the HSA on an application?

Within ten working days of HSE receiving a consultation from an HSA for an application for hazardous substances consent, HSE will check the application includes all the necessary information. HSE will accept the consultation if it finds there is no essential information missing from the application. HSE will not accept a consultation where essential information is missing from a hazardous substances consent application. HSE will notify the HSA of the problem and request that they provide the missing information.

Within 13 weeks from accepting a consultation, HSE will provide written confirmation of its advice to the HSA concerning the application for hazardous substances consent. However, for some non-standard consent applications, HSE may take 26 weeks to provide this.

For new operators of hazardous installations, HSE is willing to work with applicants to improve the quality of relevant information in their hazardous substances consent applications by providing pre-application advice.

The role of the Environment Agency, NRW and SEPA in applications for hazardous substances consent

The CA's three environment partners are also statutory consultees on hazardous substances consent applications and, like HSE, they have no power to grant or refuse consent.

For more information on their general role in the planning process and an overview of environmental issues and planning, see:

Environment Agency:

Building a Better Environment: Our role in development and how we can help
www.environment-agency.gov.uk/research/planning/147852.aspx

Types of planning consultations the Environment Agency wishes to be consulted on:
<https://publications.environment-agency.gov.uk/PDF/GEHO1211BWW-E-E.pdf>

NRW

<http://naturalresourceswales.gov.uk/our-work/policy-advice-guidance/planning-development/?lang=en>

SEPA

www.sepa.org.uk/planning.aspx

Prepare a major accident prevention policy (MAPP)

Who needs to prepare a MAPP?

COMAH regulation 5 requires every COMAH operator to prepare and keep a document setting out their major accident prevention policy (MAPP). For lower-tier COMAH sites it is a standalone document but for top-tier COMAH sites the MAPP may be included in the safety report rather than as a separate document.

What is a MAPP?

Your MAPP is a statement of general intent that should set out your policy on the prevention of major accidents. The MAPP doesn't need to contain a detailed description of your safety management system. However, it should give sufficient detail to show you have systems in place to cover all the aspects listed later in the section 'What should go in your MAPP?'.

You can include MAPP information in your existing health, safety and environmental policy documents or you may produce a separate document. Both must:

- deal specifically with major accident hazards; and
- include measures to protect the environment.

It is about people, plant and systems on a COMAH establishment and what they do in real life.

Senior management should understand and commit to the principles detailed in the MAPP and it should also be signed by the managing director or a similar senior manager in the organisation.

When does your MAPP need to be ready?

The MAPP must be prepared within three months of a site becoming subject to COMAH.

Content of your MAPP

The required information is in two parts:

- your policy setting out your aims and principles of action concerning the prevention of major accidents; and
- a description of your safety management system for achieving these aims.

Note that in the context of COMAH, 'safety' includes environmental protection.

The MAPP will usually be a short and simple document setting down what is to be achieved but it should also include a summary and further references to the safety management system that will be used to put the policy into action. The key areas are:

- organisation and personnel;
- identification and evaluation of major hazards;
- operational control;
- planning for emergencies;
- monitoring, audit and review.

The amount of detail should be proportionate to the level of the hazards present –

the greater the hazards the more detail you will have to provide. The MAPP can refer to other relevant documentation for the establishment.

Your MAPP must be specifically about the management of major accident hazards at your particular establishment.

Specific detail on MAPP content is highlighted in COMAH regulation 5, Schedule 2 to the COMAH Regulations and in HSE Information Sheet *Major accident prevention policies for lower-tier COMAH establishments* (see www.hse.gov.uk/pubns/chis3.pdf).

Do you need to send the MAPP to the CA?

There is no need to submit your MAPP but when requested by the CA, you should make it available.

All measures necessary

Why you need to take all measures necessary

COMAH regulation 4 is a general duty that underpins the COMAH Regulations. It requires COMAH operators to take all measures necessary to prevent major accidents and limit their consequences to people and the environment.

What it means in practice

The COMAH Regulations recognise that all risks cannot be completely eliminated, which in turn means that proportionality is a key element in the enforcement policy of HSE and the Agencies. As a result, the phrase 'all measures necessary' will be interpreted to include this principle and a judgment will be made about the measures in place.

Where hazards are high then high standards will be required to ensure risks are acceptably low. Prevention should be based on the principle of reducing risk to a level as low as is reasonably practicable (ALARP) for both human and environmental risks. However, the ideal should always be, wherever possible, to avoid a hazard altogether. 'All measures necessary' includes measures for mitigating the effects of major accidents.

Do I need to write a specific report?

Usually it won't be necessary to prepare any special documents to comply with this regulation. For top-tier establishments the safety report, emergency plans, hazardous substances consent and planning permissions should provide sufficient evidence. For lower-tier establishments the MAPP, hazardous substances consent and planning permissions will normally be sufficient.

Establishments that are already subject to environmental regulation may have relevant information for managing risk to the environment, although further detail may be required to address major accident hazards.

Duties relevant to top-tier COMAH sites only

Prepare a COMAH safety report

Why you need to prepare a safety report

COMAH regulation 7 requires all top-tier COMAH operators to prepare a safety report and send it to the CA as part of their demonstration that all measures necessary have been taken to prevent major accidents and to limit the consequences to people and the environment of any that do occur.

There are two important benefits of this:

- COMAH operators have to methodically consider their major accident risks, controls and mitigation measures;
- the safety report provides a comprehensive description of the establishment, its surroundings, the associated hazards and risks and the control measures in place, which assists the CA in prioritising its limited inspection resources.

When to submit a safety report

Businesses that enter top-tier COMAH as a result of expansion and an increase in dangerous substances inventory need to prepare and submit a pre-operation safety report before they start operating the plant under COMAH. However, those sites that become top-tier COMAH when external factors result in one or more of the COMAH thresholds being met or exceeded should prepare their pre-operation report within 12 months of becoming a COMAH establishment. Newly constructed establishments will need to submit a pre-construction safety report in a reasonable time before construction begins. The timetable for submission is summarised in Table 2.

Table 2 Timetable for submission of COMAH safety reports

<i>Reason for entering COMAH</i>	<i>Submit safety report to the CA</i>
Proposed construction of a new establishment, quantities of dangerous substances in excess of relevant COMAH thresholds	Within reasonable time before construction begins 3–6 months before start of operation*
The newly constructed site	If details in pre-construction notification were missing or have changed
Existing non-COMAH site chooses to increase its inventory of dangerous substances	In reasonable time before the start of operation,* eg 3–6 months
Existing non-COMAH site enters due to change in: - dangerous substance classification; or - COMAH Schedule 1 threshold limit; or - knowledge about dangerous substances generated during loss of control	Within 12 months of the change

* 'Start of operation' means the point at which the site's inventory of dangerous substances first meets or exceeds the COMAH threshold limit.

The safety report must be kept up to date. If there are any modifications to the plant or the way it is operated or if new facts or information become available, the safety report must be reviewed and, if necessary, revised at the time. Additionally, it must be reviewed after five years.

Drafting a safety report

You should first consult with HSE and the relevant environment partner of the CA to discuss requirements for your particular site.

COMAH operators should look systematically and carefully at how they manufacture, store and use dangerous substances, identify their hazards, evaluate the risks and consider whether the control measures in place are adequate. If carried out properly this process should, where necessary, lead the operator to identify and implement additional measures, or improve existing ones, and so reduce the risk of a major accident occurring. Further information on the requirements for content and structure of safety reports can be found at:

- *Major hazard sites and safety reports: What you need to know* www.hse.gov.uk/comah/background/essentialinfo.pdf
- General COMAH guidance www.hse.gov.uk/comah/guidance.htm
- How the CA assesses safety reports – *Safety Report Assessment Manual (SRAM)* www.hse.gov.uk/comah/sram/index.htm (Note that Section 13 – environmental aspects – is at www.hse.gov.uk/comah/guidance/sram.pdf)
- *Preparing safety reports: Control of Major Accident Hazards Regulations 1999 (COMAH)* www.hse.gov.uk/pubns/books/hsg190.htm

Your safety report must be specifically about the management of major accident hazards at your particular establishment, describing what the people, plant and systems do in real life.

Content of a safety report

The purpose and content of a safety report are set out in Schedule 4 to the COMAH Regulations, but must include:

- a MAPP and a management system for implementing it;
- a description of possible major accidents, their likelihood and their potential consequence for people and the environment;
- measures (such as safe plant and safe operating procedures) to properly prevent major accidents;
- information on the safety precautions built into plant and equipment when it was designed and constructed;
- details of measures (such as firefighting, relief systems and filters) to limit the consequences of any major accident that may occur;
- environmental assessment;
- information about the emergency plan for the site, which is also used by the local authority in drawing up an off-site emergency plan.

The report will also contain technical data about the likelihood of major accidents occurring and the likely consequences for workers, the public and the environment.

Operators are required to describe the consequences so that they can show that they have assessed the risks and that adequate control measures are in place to prevent major accidents. This does not mean that such accidents will happen; the chance may be negligible when compared with day-to-day risk.

How and why the CA assesses safety reports

The CA will assess whether the safety report has provided sufficient information to show that the COMAH site is controlling the risks that site operations could cause to people who live and work nearby, as well as to site workers and to the environment.

The current assessment approach is outlined within *A guide to the Control of Major Accident Hazards Regulations 1999 (as amended)* L111 and detailed in the CA's Safety Report Assessment Manual (SRAM). The SRAM sets out the detailed procedures for carrying out safety report assessment. Assessment is intended to be a team activity, managed by an assessment manager and the procedures include indicative timescales for completion of the various steps.

The overall deadline for completion of a 'full' assessment is 12 months from the date of submission, but the process should be completed within 6 months of assessment commencing. Shorter timescales and some procedural differences are in place for the assessment of pre-construction and pre-operation safety reports.

Prepare and test an on-site emergency plan

Why you need to prepare and test an on-site emergency plan

COMAH regulation 9 requires top-tier COMAH operators to ensure that the consequences of a major accident at a COMAH site are minimised through the provision of effective on-site emergency planning and response arrangements and where necessary, dovetailing with the off-site emergency plans prepared by the local authorities under COMAH or civil contingencies legislation.

Information that should be provided

The plans should be in writing and cover the full range of possible major accidents including the operator's response to reasonably foreseeable low-probability, high-consequence events. Consideration must be given to the potential on-site consequences to people, the environment and property and how to assist with off-site mitigatory action. The plan should also describe the arrangements for restoration of the environment after an accident, including consideration of possible knock-on effects.

The on-site emergency plan should include how the operator would communicate to the public, the emergency services and other authorities concerned in the area, the necessary information that allows those receiving it to decide what actions they need to take for their own safety and to mitigate the consequences of the accident. Other authorities will include the local authority, the appropriate environmental agency, the health authority/Scottish Health Boards and the water companies/authorities.

The on-site emergency plan details the roles that those who work at the establishment will have to play in the event of a major accident. It should include the arrangements that are established for assisting with emergency response off-site. The plan must state how it interfaces with the off-site plan, so that emergency services and those responsible for communicating information to those outside the establishment know where and in what form they will receive information.

The minimum information required is contained in Schedule 5 to the COMAH Regulations and repeated in Annexe 15 of *Competent Authority guidance for inspectors on emergency arrangements for COMAH establishments* (see www.hse.gov.uk/comah/inspectors-emergency-arrangements-comah-establishments.pdf). Also refer to *Emergency planning for major accidents: Control of Major Accident Hazards Regulations 1999 (COMAH) HSG191* (see www.hse.gov.uk/pubns/books/hsg191.htm).

Timetable for drafting an on-site emergency plan

The dates for completion of on-site emergency plans are as follows:

- **before operation starts** – ie where a plan is required because of a planned increase in the quantity of dangerous substances; or
- **within one year of the COMAH Regulations applying to the establishment** – ie where a plan is required because external factors result in one or more of the COMAH thresholds being met or exceeded. (External factors include a change in classification or qualifying quantity of a substance in Schedule 1 or a change in knowledge about dangerous substances as generated during loss of control of an industrial chemical process.)

Supply information to local authorities for off-site emergency planning purposes

Why you need to give information to local authorities

Local authorities play a key role by preparing, reviewing, revising and testing off-site emergency plans for dealing with the off-site consequences of major accidents at top-tier sites. To fulfil this role they need relevant information from COMAH operators.

What information should be provided?

The off-site emergency plan details the roles to be carried out by emergency services, local authorities and other external organisations in the event of a major accident. This includes the arrangements established to help with the emergency response on site. The degree of planning should be proportionate to the probability and consequences of the accident occurring.

Consideration must be given to the potential off-site consequences to people, the environment and property and how to assist with on-site mitigatory action as well as provision for the restoration and 'clean up' of the environment following a major accident. These remedial measures should be proportionate to the level of harm caused by the accident and the risk of continuing harm to people and the environment. The particular environmental hazards associated with the operations carried out on the establishment and the specific off-site environmental conditions should have been identified by the operator in their safety report.

Some local authorities have several top-tier establishments in close proximity and may need to draft emergency plans which take account of the potential consequences from accidents on all of them.

Operators will need to speak to their local authority to determine exact needs but details on off-site emergency plans are in the COMAH Regulations Schedule 5 and repeated in Annexe 5 of *Competent Authority guidance for inspectors on emergency arrangements for COMAH establishments* (see www.hse.gov.uk/comah/inspectors-emergency-arrangements-comah-establishments.pdf). Also refer to *Emergency planning for major accidents: Control of Major Accident Hazards Regulations 1999 (COMAH) HSG191*.

Timetable for providing the information

The information for the local authority must be supplied no later than the date that the on-site emergency plan for the site has to be completed.

Provide certain information to the public

Why you need to give certain information to the public

The CA determines the area around an establishment – known as the public information zone (PIZ) – to which this duty applies but it is the operator who has to provide the information. The PIZ takes into account both the likelihood and effects of possible major accidents at the establishment. It is set on the basis that people outside it are not at significant immediate risk from major accidents, although they could be if the accident escalates.

What information should be provided?

It should include details of the dangerous substances, the possible major accidents and their consequences and what to do in the event of an accident. It should be written in straightforward and simple terms, avoiding the use of complicated technical expressions. The information should be readily understood by lay readers as it is important to get the message across to children as well as adults.

The details are given in Schedule 6 of the COMAH Regulations and repeated in Annexe 16 of *Competent Authority guidance for inspectors on emergency arrangements for COMAH establishments*.

When should you provide the information?

People within the PIZ of a COMAH establishment must be given information without having to request it and it should be supplied 'within a reasonable period of time after the off-site emergency plan has been prepared for the establishment'. Six months would be the normal time.

Appendix 1 How the COMAH Regulations apply to your business

Work out how the COMAH Regulations apply to your business by using this flowchart alongside a copy of *A guide to the Control of Major Accident Hazards Regulations 1999 (as amended)* L111.

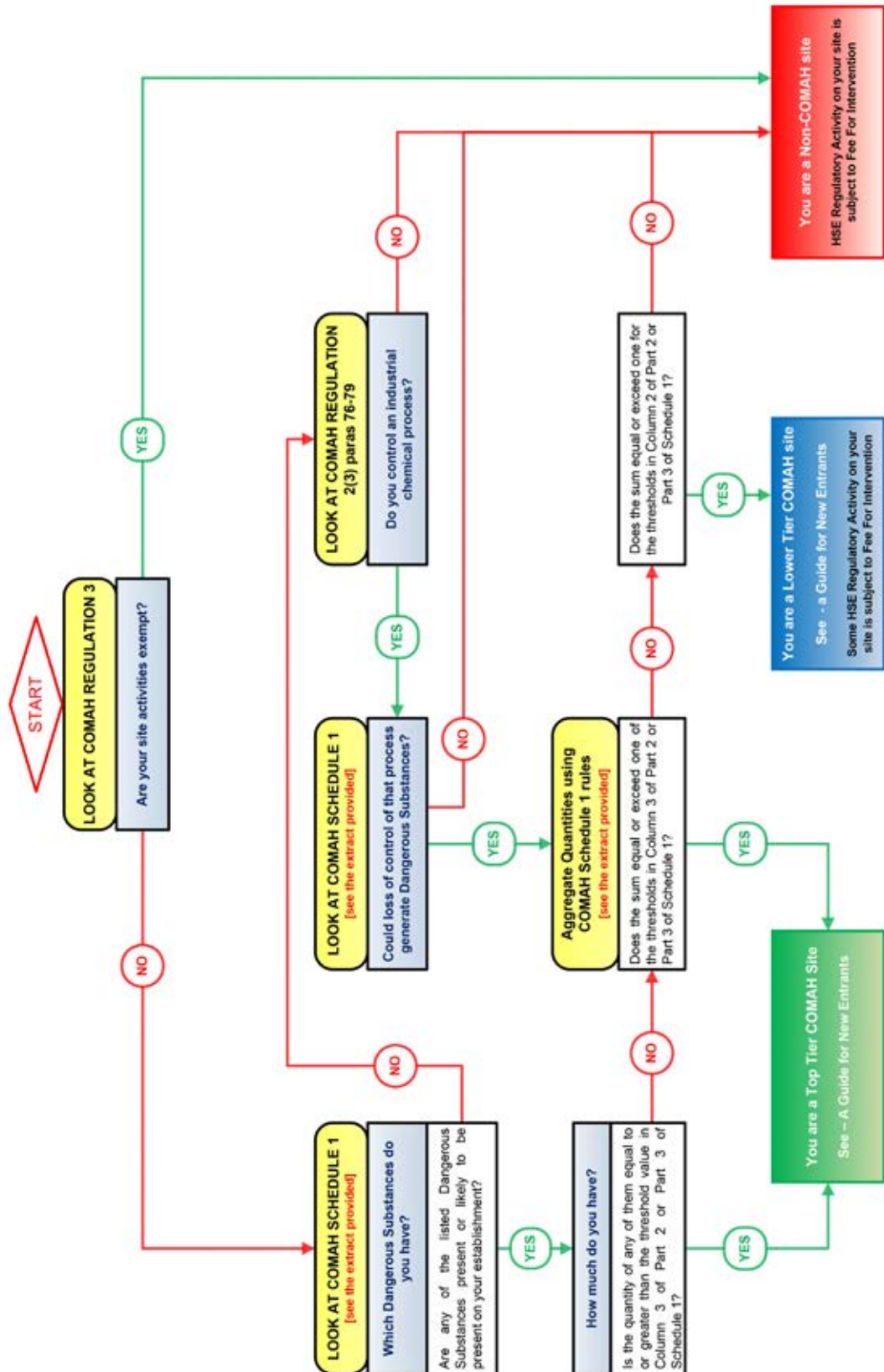
COMAH applies to substances that have the potential to cause major accidents to people and the environment – these are called ‘dangerous substances’. COMAH will apply to your establishment when you store (or are likely to store), use or could generate sufficient quantities of dangerous substances that equal or exceed the COMAH threshold quantities.

The two levels of duties under COMAH – lower tier and top tier – reflect an increasing potential for major accidents to occur in the absence of robust risk control systems.

This appendix contains an extract from the COMAH Regulations ‘Schedule 1 – Dangerous substances to which the regulations apply’. It lists the dangerous substances and provides some guidance on how to determine an inventory.

Figure 1 How do the COMAH Regulations apply to your site?

Navigate this flowchart using *A guide to the Control of Major Accidents Hazards Regulations 1999 (as amended): Guidance on Regulations L111*



Extract from COMAH Regulations 1999 – Schedule 1

Schedule 1 applies to the presence of dangerous substances at any establishment and determines the application of the relevant regulations in accordance with regulation 3(1).

Mixtures and preparations should be treated in the same way as pure substances provided they remain within the concentration limits set according to their properties under the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP). (CHIP is being replaced by the European CLP Regulation and will be revoked from 1 June 2015. See www.hse.gov.uk/chemical-classification/legal/transition-from-chip-to-clp.htm for information on the transitional arrangements.)

The qualifying quantities set out in Schedule 1 Parts 2 and 3 (reproduced in this guidance) are for each establishment.

The quantities to be considered are the maximum quantities which are present at any one time.

Dangerous substances present at an establishment in amounts equal to or less than 2% of the relevant qualifying quantity are ignored for the purposes of calculating the total quantity present if located such that they cannot act as major accident initiator elsewhere on site.

A gas is any substance that has an absolute vapour pressure equal to or greater than 101.3 kPa at a temperature of 20 °C.

A liquid is any substance that is not defined as a gas and that is not a solid at a temperature of 20 °C and at pressure of 101.3 kPa.

Aggregation

Where an establishment has no individual substance or preparation present in a quantity above or equal to the relevant thresholds Schedule 1 requires the quantities of all the dangerous substances present in an installation to be added together as partial fractions of their threshold quantities. If the total equals or exceeds 1, the Regulations apply. See Note 4 to Schedule 1 Part 3 of the COMAH Regulations for partial fraction method.

Only the quantities of substances with similar hazards are added in this way. So toxic and very toxic substances are added; all oxidising, explosive and flammable substances are added together; and all dangerous for the environment substances.

Use the threshold value for whichever of Schedule 1 Part 2 or Part 3 the substance is from. For example, an establishment with ethylene oxide and propylene oxide, both of which appear in Part 2 and are classified as extremely flammable, would add their quantities together with any other extremely flammable, highly flammable, flammable, explosive, or oxidising substances present using the partial fraction formula according to paragraph (b) of Note 4.

Quantities of substances with unrelated hazards are not added, so, for example, toxic would not be added to flammable.

An aggregation result equal to or greater than 1 for the top-tier threshold would mean an establishment was top-tier.

An establishment will be lower-tier where an aggregation result is less than the 1 for the top-tier threshold but equal to or greater than 1 for the lower-tier threshold.

Table 3 Extract from COMAH Regulations 1999 – Schedule 1

Schedule 1 Part 2: Named substances

Where a substance or group of substances listed in this Part also falls within a category of Part 3, the qualifying quantities set out in this Part must be used.

Column 1	Column 2	Column 3
Dangerous substances	Quantity in tonnes	
Ammonium nitrate (as described in Note 1 of this Part; see also Note 8(1) and 8(2))	5,000	10,000
Ammonium nitrate (as described in Note 2 of this Part; see also Note 8)	1,250	5,000
Ammonium nitrate (as described in Note 3 of this Part; see also Note 8(2) and 8(3))	350	2,500
Ammonium nitrate (as described in Note 4 of this Part; see also Note 8)	10	50
Potassium nitrate (as described in Note 5 of this Part)	5,000	10,000
Potassium nitrate (as described in Note 6 of this Part)	1,250	5,000
Arsenic pentoxide, arsenic (V) acid and/or salts	1	2
Arsenic trioxide, arsenious (III) acid and/or salts	0.1	0.1
Bromine	20	100
Chlorine	10	25
Nickel compounds in inhalable powder form (nickel monoxide, nickel dioxide, nickel sulphide, trinickel disulphide, dinickel trioxide)	1	1
Ethyleneimine	10	20
Fluorine	10	20
Formaldehyde (concentration \geq 90%)	5	50
Hydrogen	5	50
Hydrogen chloride (liquefied gas)	25	250
Lead alkyls	5	50
Liquefied extremely flammable gases (including LPG) and natural gas (whether liquefied or not)	50	200
Acetylene	5	50
Ethylene oxide	5	50
Propylene oxide	5	50

Column 1	Column 2	Column 3
Dangerous substances	Quantity in tonnes	
Methanol	500	5,000
4, 4-Methylenebis (2-chloraniline) and/or salts, in powder form	0.01	0.01
Methylisocyanate	0.15	0.15
Oxygen	200	2,000
Toluene diisocyanate	10	100
Carbonyl dichloride (phosgene)	0.3	0.75
Arsenic trihydride (arsine)	0.2	1
Phosphorus trihydride (phosphine)	0.2	1
Sulphur dichloride	1	1
Sulphur trioxide	15	75
Polychlorodibenzofurans and polychlorodibenzodioxins (including TCDD), calculated in TCDD equivalent	0.001	0.001
The following CARCINOGENS at concentrations above 5% by weight:		
4-Aminobiphenyl and/or its salts, Benzotrichloride, Benzidine and/or salts, Bis(chloromethyl) ether, Chloromethyl methyl ether, 1,2-Dibromoethane, Diethyl sulphate, Dimethyl sulphate, Dimethylcarbamoyl chloride, 1,2-Dibromo-3-chloropropane, 1,2-Dimethylhydrazine, Dimethylnitrosomine, Hexamethylphosphoric triamide, Hydrazine, 2-Naphthylamine and/or salts, 4-Nitrodiphenyl, and 1,3 Propanesultone	0.5	2.0
Petroleum products:*		
(a) gasolines and naphthas;		
(b) kerosenes (including jet fuels);		
(c) gas oils (including diesel fuels, home heating oils and gas oil blending streams)	2,500	25,000

Note: from February 2014 – heavy fuel oil (HFO) is included in the petroleum products category with the following qualifying inventories: 2500 tonnes for lower-tier sites and 25 000 tonnes for top-tier sites.

For more information on this change please refer to www.hse.gov.uk/comah/guidance/hfo-june-2013.pdf

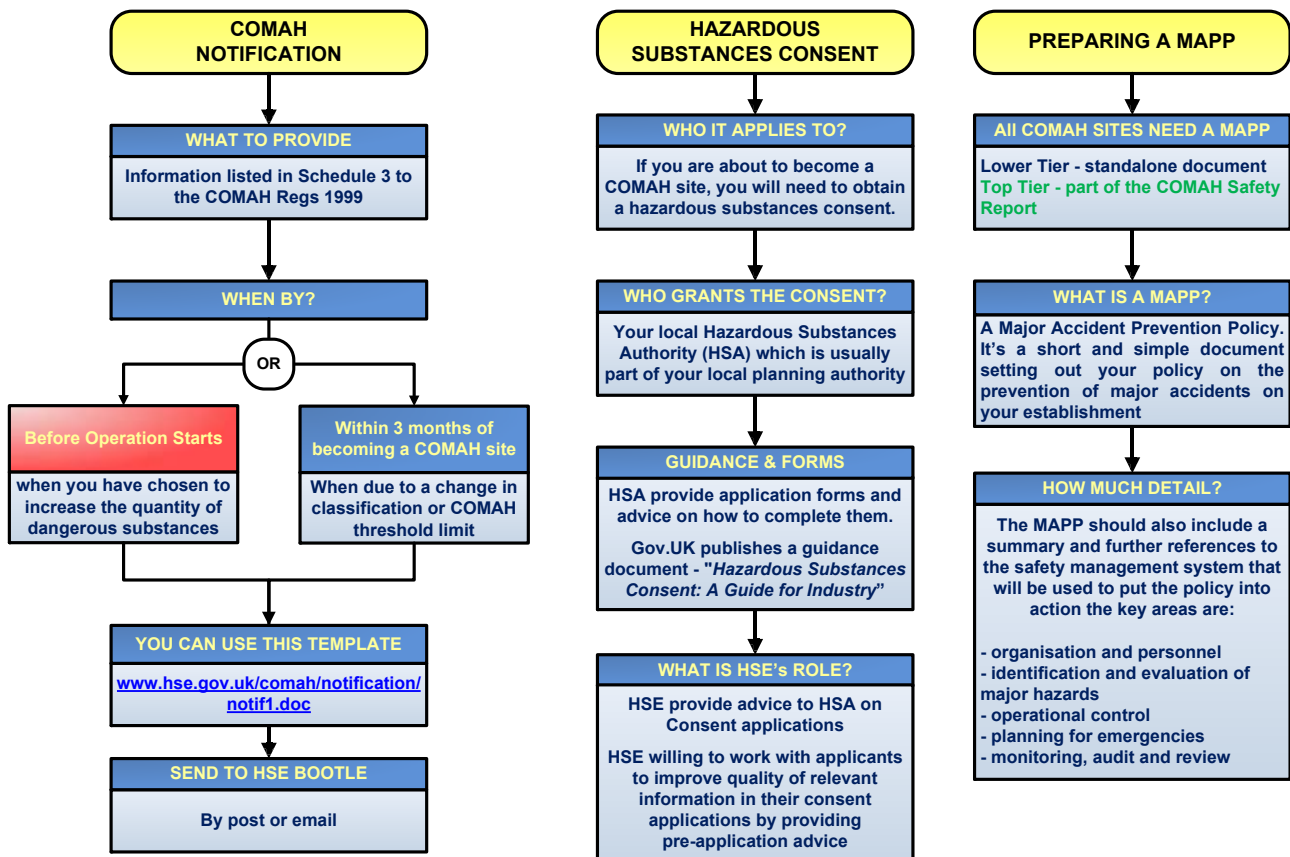
Schedule 1 Part 3: Categories of substances and preparations not specifically named in Part 2

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>
Categories of dangerous substances	Quantity in tonnes	
1 VERY TOXIC	5	20
2 TOXIC	50	200
3 OXIDIZING	50	200
4 EXPLOSIVE (see Note 2) where the substance, preparation or article is an explosive within UN/ADR Division 1.4	50	200
5 EXPLOSIVE (see Note 2) where the substance, preparation or article is an explosive within UN/ADR Divisions 1.1, 1.2, 1.3, 1.5 or 1.6 or risk phrase R2 or R3	10	50
6 FLAMMABLE, where the substance or preparation falls within the definition given in Note 3 (a)	5,000	50,000
7a HIGHLY FLAMMABLE, where the substance or preparation falls within the definition given in Note 3 (b) (i)	50	200
7b HIGHLY FLAMMABLE liquids, where the substance or preparation falls within the definition given in Note 3 (b) (ii)	5,000	50,000
8 EXTREMELY FLAMMABLE, where the substance or preparation falls within the definition given in Note 3 (c)	10	50
9 DANGEROUS FOR THE ENVIRONMENT risk phrases:		
(a) R50: "Very toxic to aquatic organisms" (including R50/53)	100	200
(b) R51/53: "Toxic to aquatic organisms: may cause long term adverse effects in the aquatic environment"	200	500
10 ANY CLASSIFICATION not covered by those given above in combination with risk phrases –		
(a) R14: "Reacts violently with water" (including R14/15)	100	500
(b) R29: "in contact with water, liberates toxic gas"	50	200

Appendix 2 Summary of duties for new entrants into COMAH

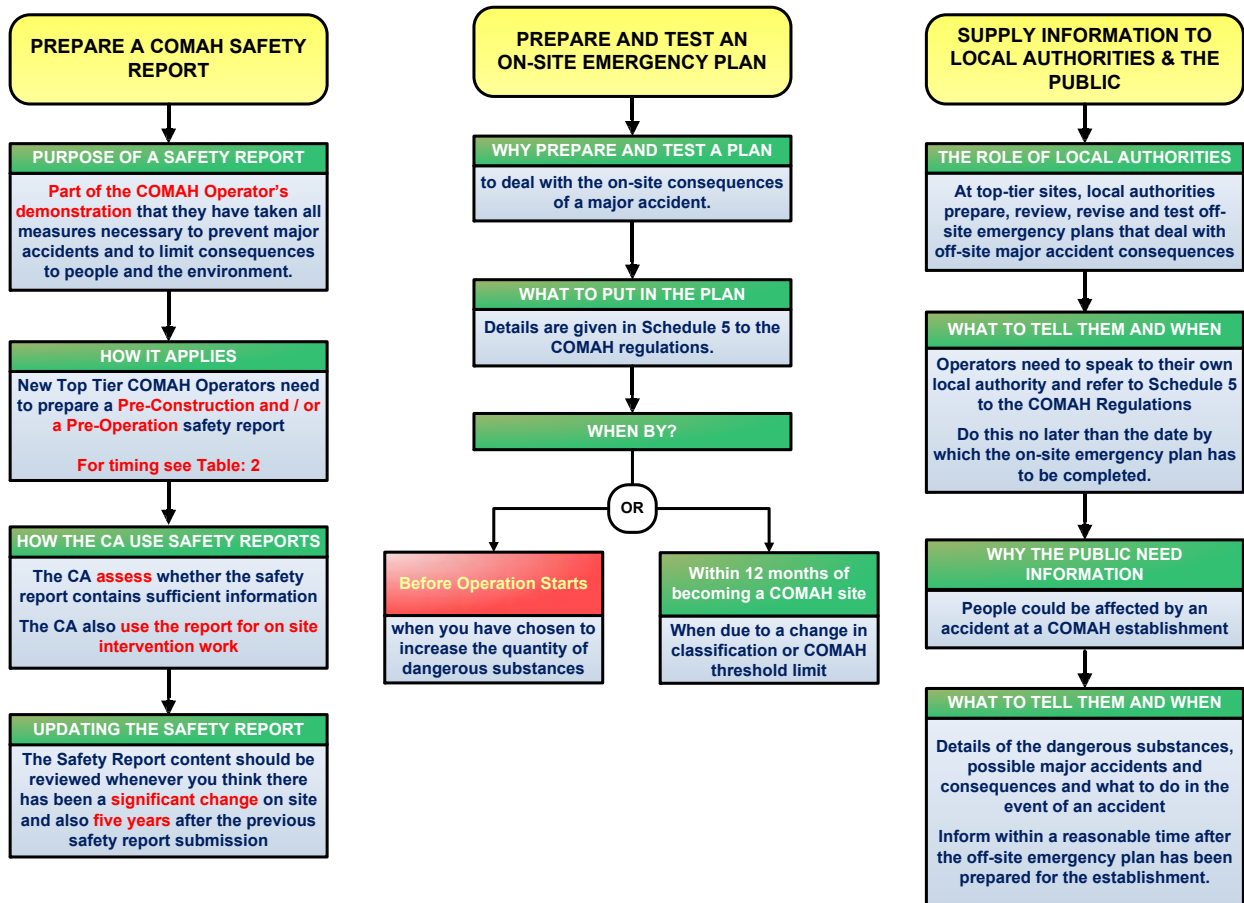
These flowcharts summarise the basic duties under the COMAH Regulations for lower-tier and top-tier COMAH establishments.

Figure 2 Duties of all COMAH sites: General duty to take all measures necessary to prevent major accidents and limit their consequences to persons and the environment



Consider all dangerous substances present or likely to be present in respect of all duties imposed by the COMAH Regulations.

Figure 3 Additional duties of top-tier COMAH sites



References

A guide to the Control of Major Accidents Hazards Regulations 1999 (as amended) Guidance on Regulations L111 www.hse.gov.uk/pubns/books/l111.htm

Preparing safety reports: Control of Major Accident Hazards Regulations 1999 HSG190 www.hse.gov.uk/pubns/books/hsg190.htm

Emergency planning for major accidents: Control of Major Accident Hazards Regulations 1999 HSG191 www.hse.gov.uk/pubns/books/hsg191.htm

Fee For Intervention www.hse.gov.uk/fee-for-intervention

Pollution prevention measures
www.environment-agency.gov.uk/business/default.aspx

Understanding COMAH: What to expect from the Competent Authority
www.hse.gov.uk/comah/guidance/understanding-comah.pdf

Notification template www.hse.gov.uk/comah/notification/notif1.doc

Hazardous substances consent:

- **England** www.planningportal.gov.uk/permission/responsibilities/beforeyoustart/otherpermissions/hazsubs
- **Scotland** www.scotland.gov.uk/Topics/Built-Environment/planning/publications/legislation
- **Wales** <http://wales.gov.uk/topics/planning/policy/dear-cpo-letters/hazsubletter/>
- HSE's role www.hse.gov.uk/landuseplanning/hazardoussubstances.htm and www.hse.gov.uk/landuseplanning/lupcurrent.pdf

Major accident prevention policies for lower-tier COMAH establishments
www.hse.gov.uk/pubns/chis3.pdf

Major hazard sites and safety reports: What you need to know
www.hse.gov.uk/comah/background/essentialinfo.pdf

General COMAH guidance www.hse.gov.uk/comah/guidance.htm

Safety Report Assessment Manual (SRAM)
www.hse.gov.uk/comah/sram/index.htm

Competent Authority guidance for inspectors on emergency arrangements for COMAH establishments www.hse.gov.uk/comah/inspectors-emergency-arrangements-comah-establishments.pdf

Further information

www.hse.gov.uk/comah

www.hse.gov.uk/comah/authorityindex.htm

Finding local CA offices

www.hse.gov.uk/contact/maps/index.htm

www.environment-agency.gov.uk/contactus/36324.aspx

<http://naturalresourceswales.gov.uk/our-work/about-us/who-we-are-what-we-do/where-to-find-us/?lang=en>

www.sepa.org.uk/about_us/contacting_sepa/office_locations.aspx

This leaflet is available at: www.hse.gov.uk/comah/ca-guides.htm

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