

National
Operational
Guidance

Hazard

Biosecurity



NFCC

National Fire
Chiefs Council

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Hazard - Biosecurity

Hazard Knowledge

Non-native species and exotic animal disease outbreaks can have serious environmental and economic impacts. Exotic animal disease will usually require specific control measures depending on the nature of transmission. National response and guidance to an exotic animal disease outbreak will be led by an appropriate governmental department with special procedures adopted during outbreaks.

When non-native species are transferred they can transform ecosystems and threaten native species by outcompeting native species, degrading habitats and spreading disease. This is usually because of a lack of predators of the invasive species and can cause long lasting environmental harm such as profuse plant growth affecting oxygen levels in a body of water.

Whenever fire and rescue services work there is a risk that cross-contamination can occur that damages biosecurity, unintentionally introducing species to new areas or transferring disease that can harm the environment.

Fire and rescue services can affect biosecurity by using water from one open water source and allowing it to run off into another or transferring materials on vehicles or PPE from one incident site to another.



Control measure - Clean equipment, vehicles and personal protective equipment (PPE)

Control measure knowledge

All personal protective equipment (PPE), clothing and equipment should be thoroughly inspected. Any debris such as mud, plant or animal matter should be removed and left at the site. Attention should be paid to the seams and seals of boots and waders. Any pockets of pooled water should be emptied.

Equipment should be hosed down or pressure washed on site. The resulting contaminated water should be contained on site and not be allowed to enter any other watercourse or drainage system.

Once cleaned, equipment may require dipping in disinfectant solution. This will prevent the spread of some diseases but is unlikely to kill non-native species. However, submersion in hot water for 15 minutes is an effective biosecurity measure. If facilities are not available, on-site equipment should be carefully contained.

The best way to prevent transfer of waterborne species is to thoroughly dry equipment and PPE after use. Equipment should be dried for 48 hours before being used again. The drying process should be thorough, as some non-native species can survive for up to 15 days in damp conditions and two days in dry conditions. This may not be possible and alternative methods should be considered.

Strategic actions

Fire and rescue services should:

- Work with environmental agencies, government departments and emergency planning groups to provide support, guidance, training and resources to reduce biosecurity risks
- Develop and maintain appropriate records for Sites of Special Scientific Interest (SSSI) and Site-Specific Risk Information (SSRI)

Tactical actions

Incident commanders should:

- Use appropriate methods to clean and decontaminate equipment, vehicles and PPE
- Consider liaising with environmental agencies for advice and support to decontaminate equipment and personnel



Control measure - Containment

Control measure knowledge

The principle of containment whenever practicable and safe to do so is the preferred approach to managing incidents where polluting liquids or materials have been released or generated by on-site activities, including firefighting.

This hierarchy should be used in most instances when containing contaminated fire water run-off and spillages of polluting materials:

Hierarchy	Activity	Description
1	Containment at source	The most effective intervention point is where the source of pollution can be controlled to stop or reduce the volume released. Methods include the use of clay seal putty, leak sealing devices, wedges, and drums. Contaminated fire water will ideally be contained at an incident scene either inside the building or as close to it as possible.
2	Containment close to source	The next point of intervention is as close to the source as possible. This may be when it is not possible to contain at source or where there has already been significant loss of pollutant. Methods include the use of grab packs, booms and pop-up pools.
3	Containment on the surface	The most common way for contaminants to enter the environment is via drainage systems. Methods to prevent this include the use of booms, clay drain mats, pipe blockers, pumps, and inflatable dams.
4	Containment in drainage system	Pollutants may be contained in drainage systems if they have already entered the system. This can be carried out using in-built pollution control devices in the drainage systems such as oil separators, drain closure valves and containment lagoons/tanks and ponds. Such a system should allow predictable volumes of run-off to be stored, although allowance should be made for rainfall and how well systems have been maintained. Portable equipment such as pipe blockers can also be used.

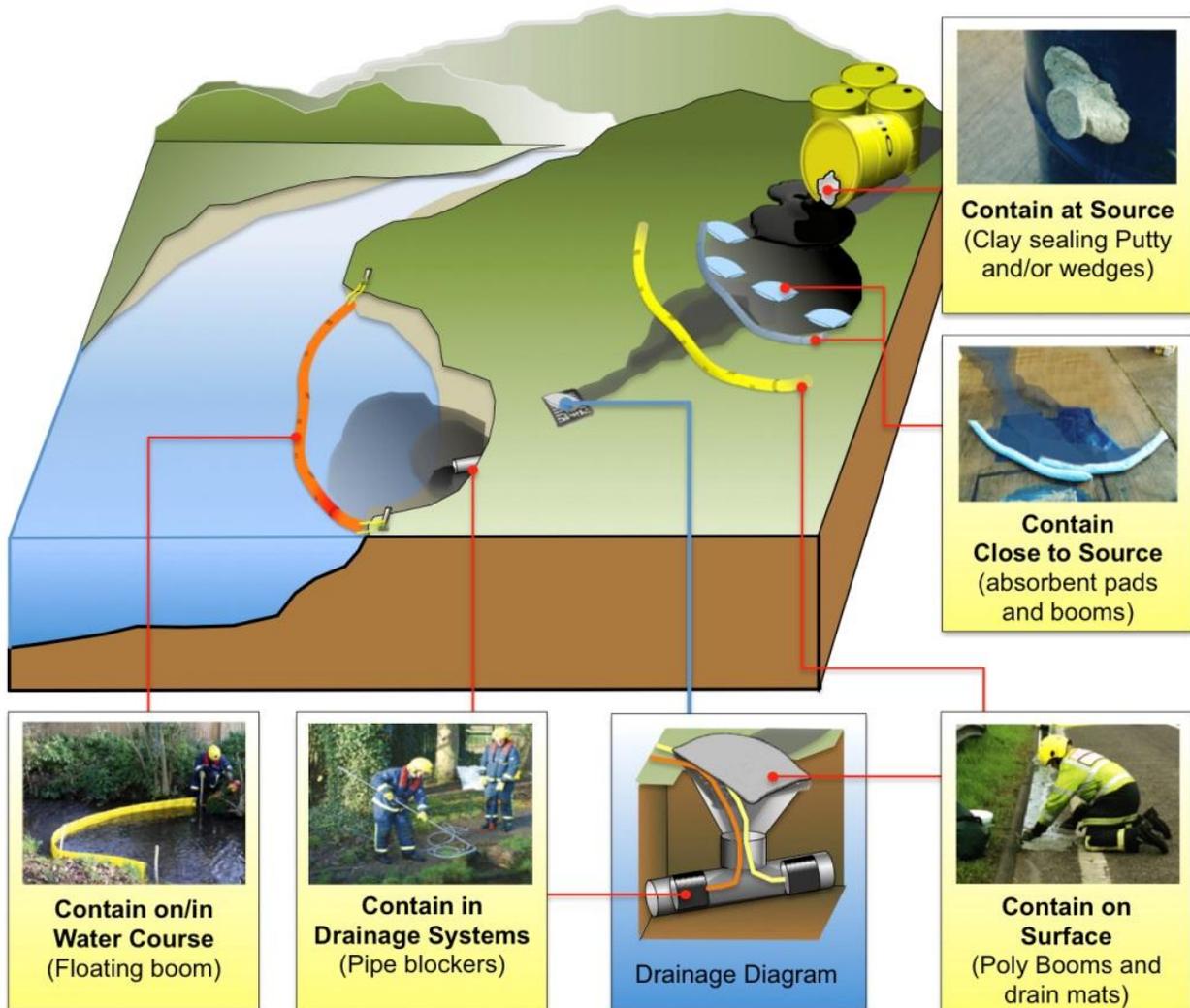


- 5 Containment on or in watercourse The deployment of booms on a watercourse downstream of an incident is of significant benefit where a pollutant floats. Damming can be used where pollutants are mixed or do not float but is normally restricted to small ditches and streams with low flows. Booms can also be deployed around drinking water intakes.

See Section 3.2, [Environmental Protection Handbook](#).



Pollution Hierarchy



Off-site containment is an alternative that can be considered by fire and rescue services. Foul sewerage systems can be used to contain polluting material if approved by the sewerage company and environment agency. When doing so take care that pollutants and sewage do not escape from any storm overflows into the sewerage system. The contained pollutants and sewage may then be removed.

It may also be possible to divert pollutants to a local sewage treatment works, where the pollutant can either be treated in the treatment process or contained in storm tanks before deciding on disposal. These tanks are present at many treatment works and are used to store the large volumes of diluted sewage produced during high rainfall. Approval from the sewerage company must be sought before diverting pollutants to a sewage treatment works because the treatment process can be affected if levels of pollution are too high. This would result in the release of both

pollutants and untreated or partially treated sewage. See Section 1.66, [Environmental Protection Handbook](#).

Pollution control devices such as drain closure valves, storage lagoons or balancing ponds are installed in some surface water drainage systems. These devices can be used to help contain pollutants if permission is given by the sewerage company, the owner/occupier or highway authority. In some places the environment agencies keep large volume pumps that can be used to support, supplement or replace fire and rescue service pumps.

Unless there is an immediate risk to life, containment measures can be used and advice and guidance from environment agencies should be sought before making any attempt to dilute. Never add detergent or any other cleaning products to spillages and never hose spillages to the drain without prior authority from the environment agencies and/or sewerage undertakers.

For further information see the [Environmental Protection Handbook](#).

Strategic actions

Fire and rescue services should:

- Develop procedures for containing fire water run-off
- Obtain sewerage information from local sewerage undertaker
- Consider the inclusion of drainage information in operational risk plans. See National Operational Guidance: [Operations](#)

Tactical actions

Incident commanders should:

- Minimise the impact of the incident and fire service actions on any identified environmental risk
- Consider the legal exemptions in relation to environmental protection i.e.
 - A discharge is made in an emergency to avoid danger to human health
 - All reasonably practicable steps were taken to minimise pollution
 - The relevant environment agency is informed of the incident as soon as possible
- Consider carrying out an [environmental risk assessment](#) to identify:
 - Site drainage

- local surface waters and/or groundwater and vulnerability
- Attempt to control pollution using a Source – Pathway - Receptor model
- Consider the availability of pollution control equipment and/or pollution containment facilities on site
- Establish the location of the nearest sewage treatment works, and whether it has the capacity to contain and or treat fire water run-off?
- Inform and/or seek advice from environment agencies and/or sewage undertakers where necessary
- Consider diverting water to holding areas or sacrificial areas that will not affect firefighting operations
- Identify potential drainage routes for fire water run-off and released vehicle content
- Consider future disposal options. Refer to section [Disposal](#)
- Identify the location of motorway pollution control devices (PCD) and operate as necessary
- Communicate any risk to the environment to those attending the incident and relevant agencies



Control measure - Specialist advice: Biosecurity

Control measure knowledge

During exotic animal disease outbreaks a governmental department will lead the response and issue appropriate guidance to emergency responders with the aim of:

- Eradicating the outbreak



- Protecting the health and safety of the public and those involved in controlling the outbreak
- Minimising the burden on the taxpayer and the economic impact of the outbreak
- Minimising the number of animals that must be humanely destroyed

The control measures required to minimise the effects of emergency responders on the eradication of the disease will depend on the type of outbreak and how it spreads. National and local contingency arrangements and emergency plans are available for identified risks. Fire and rescue services should consider them during development of business continuity plans and develop emergency response plans with emergency planning groups.

Strategic actions

Fire and rescue services should:

- Work with environmental agencies, government departments and emergency planning groups to Implement emergency procedures as appropriate during exotic animal disease outbreaks

Tactical actions

Incident commanders should:

- Follow specialist advice from appropriate agencies during exotic animal disease outbreaks