

RADIATION EMERGENCY IN THE PORT OF SOUTHAMPTON

Information for people living in the
5km Outline Planning Zone

NOV 2020 - NOV 2023

Booklet has been produced by Southampton City
Council in cooperation with New Forest
District Council and the Ministry of Defence



MINISTRY OF DEFENCE





Who is responsible for implementing the protective action?

Southampton City Council is committed to supporting the work of the Hampshire & Isle of Wight Local Resilience Forum (HIOW LRF).

The HIOW LRF consists of representatives from emergency services, local authorities and any other organisations who would be involved in an emergency. The role of the HIOW LRF is to ensure that all of these organisations work together to prepare for, respond to and recover from emergencies.

The HIOW LRF is responsible for the development, maintenance and testing of plans and procedures for major emergencies and incidents to ensure all of the organisations are prepared to respond to a major incident in the county. This joined up approach helps to ensure the best possible service for people living in Hampshire and the effective fulfilment of legal obligations under the Civil Contingencies Act 2004.

The following web sites contain information about Southampton City Council Emergency Preparedness, Resilience & Response Team and HIOW LRF:

www.southampton.gov.uk/emergencyplanning

www.hants.gov.uk/community/localresilienceforum

These give:

- Advice and guidance on protecting yourself and your business.
- Assessment of local risks.
- Information about emergency plans.
- Current information.
- Contact information.
- Links to other relevant websites.

What is the Outline Planning Zone?

Over many years the UK has developed, and refined, detailed plans for how the response to a nuclear emergency should be managed. There has never been a nuclear incident in the UK that has required the activation of these plans, but it's important they exist and are reviewed.

The Outline Planning Zone surrounding the Southampton operational berth is 5km. Outline Planning Zones are always circles around specific sites and defining the zone this way allows those who will have to respond to such an event, such as police, fire and other emergency services, to draft public protection plans ready to be put into operation.

Protective actions for people in the Outline Planning Zone would only be activated if it was determined the risk from the event extended beyond the area for which detailed emergency plans already exist. If the plan for the wider area was activated it would be a decision based on the best available information as opposed to previously developed planning assumptions.

Information about what to do in the event of a radiation emergency at the operational berth nuclear site is routinely provided to people who live within the Detailed Emergency Planning Zone DEPZ. This is available on www.southampton.gov.uk/emergencyplanning. Hard copies available on request.

Southampton City Council will provide specific advice for all schools and care homes in the area in the event of an emergency.

For more information on radiation safety, call the Emergency Preparedness, Resilience & Response Team at Southampton City Council on 023 8083 2427.

This written information is available on request in other formats or languages. Please contact 023 8083 2427 for help.

WHAT DO YOU MEAN BY AN EMERGENCY?

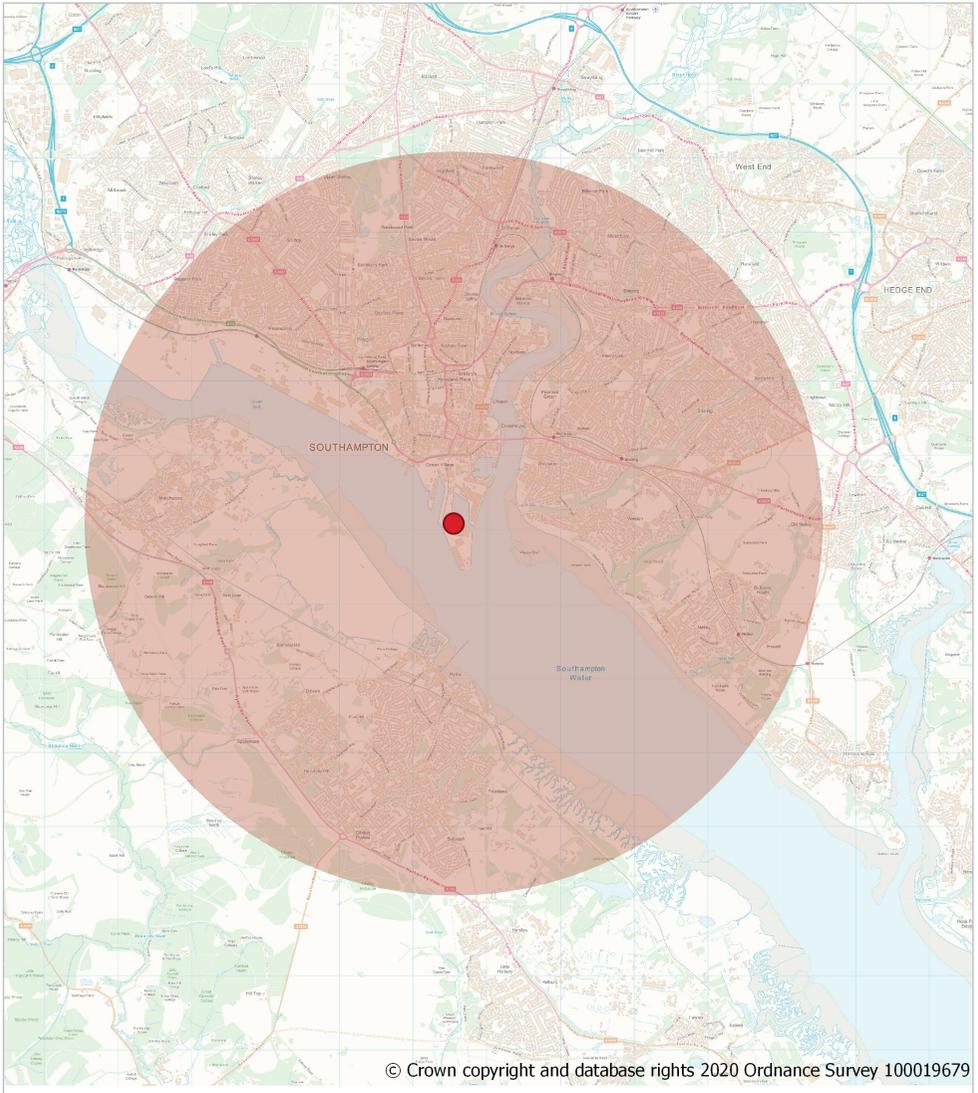
The design of nuclear powered warships means that an accident involving a vessel's reactor is extremely unlikely. However, if the reactor on board a vessel suffers a serious problem and begins to leak, radioactive particles might escape into the air. There is no possibility of a "nuclear bomb" type of explosion. As soon as the Royal Navy knows a nuclear powered vessel in or near the port has a problem, it will start a well-rehearsed emergency plan that it practices regularly with Southampton City Council, New Forest District Council, Eeastleigh Borough Council, the emergency services and the health service. The plan gives you information to keep you safe until the problem has been dealt with.

HOW DO I KNOW IF I WILL BE AFFECTED?

In the unlikely event of an incident occurring it would probably only affect people living or working very close to or within the port. New legislation requires people living up to 5kms away to be given prior information about a nuclear emergency as provided in this booklet. The map opposite shows the 5km zone.

HOW WILL I KNOW AN EMERGENCY HAS HAPPENED?

There will be an announcement on local radio and television and the advice in this book will be repeated.



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**We show the area as a circle to make it easier to understand.
The actual zone goes out to the nearest natural or landscape boundary.**

IN AN EMERGENCY

WHAT TO DO IF YOU LIVE WITHIN 5K OF THE OUTLINE PLANNING

1 GO IN

In the highly unlikely event of a nuclear incident the best thing to do is to go indoors and stay there. Don't go outside unless you are told to. Make sure you keep your pets indoors as well. If you have an elderly neighbour you may want to tell them that there is an emergency.

2 CLOSE THE WINDOWS AND DOORS

3 SHUT DOWN FANS, FIRES AND VENTILATORS

In fact anything that draws air in from outside.

4 STAY IN

Don't collect your children from school – they will be looked after there.

5 TUNE IN

To local radio or TV, which will be giving out emergency information. The frequencies for the local radio stations are shown on the back cover of this booklet.

**The drill in an emergency is simple:
GO IN • STAY IN • TUNE IN**

ZONE (3.1 MILES) OF BERTH 38 EASTERN DOCKS

6 DON'T USE THE TELEPHONE UNLESS YOU URGENTLY NEED HELP.

In an emergency the telephone system could become very busy. If you have to make a call, please keep it short.

7 DO NOT LEAVE THE AREA UNLESS YOU ARE TOLD TO DO SO

You will be much safer indoors. If you need to leave the area you will be told and you should follow the instructions given. If you try to leave earlier you may block the roads for emergency services.

8 STABLE IODINE TABLETS (SITS)

SITs will be made available to those who need them if the information available at the time tells us it is appropriate.

If advised to take SITs, this should be only when told to do so. Arrangements will be confirmed by radio and TV announcements.

9 STAY TUNED

Wait for more information on what to do next.

WHAT HAPPENS AFTER THE WARNINGS ARE GIVEN?

The local authorities will liaise with the Royal Navy and other agencies to deal with the release of information and, as soon as it is completely safe to go outside again, there will be announcements on local radio and TV, and by loudhailer.

In the days following the incident, health experts will carry out checks on the air, water and soil to make sure it is safe. There will be more information in all news media – including the newspapers – on what further action you need to take, if any. You can also call Southampton City Council on **023 8083 3005** for information.

Remember - the risk of this sort of accident happening is extremely remote. But being prepared is nevertheless sensible.

SHOULD WE LEAVE THE AREA?

In the event of an emergency, do not leave your home unless advised to do so – the best thing to do is to STAY IN.

Evacuated areas will be controlled, so don't worry if you have to leave your home. If a warning is given then the following items should be packed and ready to go:

- Clothing and bedding.
- Medicines or special foods you might need.
- Private documents and special valuables.
- If you have children – baby food, clothing, toys and books.
- If you have pets – leads, baskets/carriers, cages and food.



I HAVE FRIENDS AND RELATIVES WHO LIVE CLOSE TO THE EASTERN DOCKS WHAT SHOULD THEY DO?

People who live within 1.5km will already have detailed public information for that zone about what to do in the event of an emergency



FOOD AND DRINK

It is unlikely that tap water or any food or drink that you have in your house that is covered and sealed will be affected.

As the emergency is dealt with further information will be given out on local radio and TV stations.

Helpful advice will also be given to farmers, fishermen and other food producers.

The following pages give you technical information about radiation and its possible effects, which you may find informative. They also tell you who to contact if you want to know more.

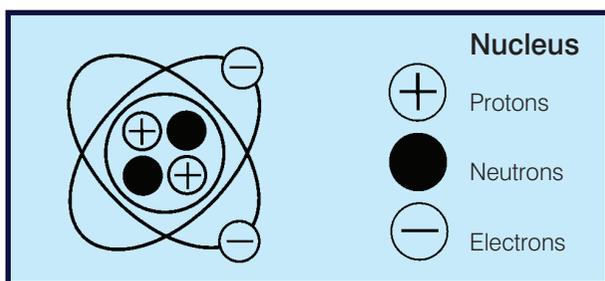
The most important thing to do, in the event of an emergency, is to follow the instructions given earlier in this booklet.

ATOMS

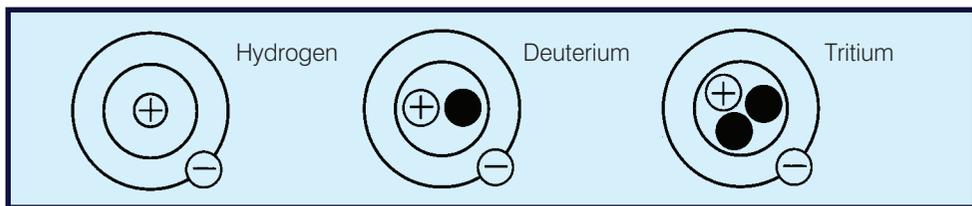
Everything is made up of tiny building blocks called atoms.

Each atom is made up of **electrons** which orbit around a **nucleus**. This contains **protons** and **neutrons**.

Atoms of the same substance or element have the same number of protons and electrons.



There can be different numbers of neutrons in the same element. An element which has a different number of neutrons is called an **isotope**.



For example, the element hydrogen has the isotopes hydrogen, deuterium and tritium.

When you know the number of protons and neutrons in the nucleus of a specific atom, it is often called a **nuclide**. An example is the nuclide carbon-16, which has 6 protons and 10 neutrons.

Atoms can link together to form **molecules**. Molecules can be made up of atoms of the same element or different elements. The molecule water (H_2O) is formed when two Hydrogen atoms join with one Oxygen atom.

RADIOACTIVITY AND RADIATION

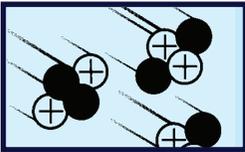
Some atoms are naturally unstable. They can change into atoms of another element by getting rid of some of their protons, neutrons and electrons. When this happens, the atom gives off **radiation**. Everybody receives a small amount of natural radiation.

An atom is **radioactive** when it changes and gives off radiation.

This change is called decay. An atom which is decaying is known as a **radionuclide**.

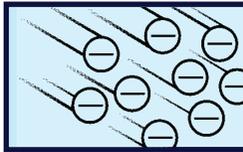
Radionuclides can emit 3 types of radiation:

Alpha radiation



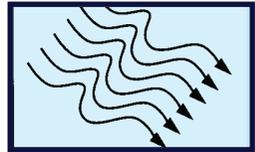
Heavy positively charged particles, each made up of 2 protons and 2 neutrons.

Beta radiation



High speed electrons (negatively charged).

Gamma radiation



Similar to X-Rays. They penetrate further.

HOW RADIATION COULD AFFECT YOUR BODY

Radiation can cause changes to molecules and tissue. One type of change that can be produced is **ionisation**.

For example, ionised water molecules in tissue are chemically very reactive and are called **free radicals**. Free radicals can damage other molecules. Ionisation can also change or affect DNA, the molecule which contains the information used to control our growth and development.

All this can lead to biological effects such as cell changes. It is possible that these changes may not show up until some time after exposure to radiation.

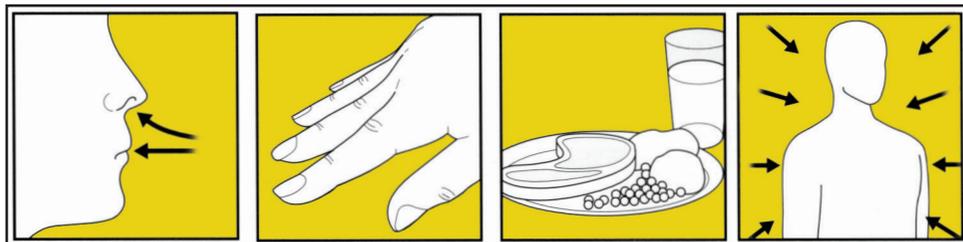
Different types of radiation can cause different effects. Some parts of the body are more sensitive to radiation than other parts of the body.

Studies have shown that the risk of an effect from exposure to radiation increases with the radiation dose.

HAZARDS FROM A RADIATION EMERGENCY

You could be exposed to radiation by:

1. Inhaling contaminated air and gases.
2. Having contact with contaminated surfaces.
3. Eating or drinking exposed contaminated food or water (ingestion).
4. Direct exposure to radiation.



1. Inhalation

2. Contaminated surfaces

3. Ingestion

4. Direct exposure

PROTECTIVE ACTIONS

These are the actions you can take to minimise the effects of exposure to radiation and contamination as the result of a nuclear accident.

Sheltering by staying indoors is the best way to protect yourself in the short term. Doors and windows should be closed to help stop direct exposure, inhalation and contamination of surfaces inside buildings.

Stable iodine tablets can help prevent radioactive iodine from concentrating in the thyroid gland. Issue of these tablets is combined with sheltering and/or evacuation.

Evacuation can help avoid exposure to relatively high doses. It can help protect you from direct exposure and inhalation.

Food bans of milk and other foods may be necessary. This will protect you from ingestion.



FURTHER INFORMATION

The Radiation (Emergency Preparedness and Public Information) Regulations say that this kind of guide has to be updated every three years in the interests of greater public information.

If you would like to find out more about the emergency plan for the area around the port you can find and download a copy of the *Reactor Emergency Plan* at

www.southampton.gov.uk/emergencyplanning

You can get more information on radiation from the following websites:

www.hse.gov.uk – search = Reppir

www.opsi.gov.uk – search = Radiation emergencies

www.gov.uk – search = Radiation emergencies

Further copies of this leaflet can be obtained from:

Emergency Preparedness, Resilience & Response Team

City Depot

First Avenue

Southampton, SO15 0LJ

Telephone 023 8083 2427

IF YOU HEAR AN EMERGENCY ANNOUNCEMENT

1. **GO IN** – shut the windows and doors - shut down fans, fires and ventilators.
2. **STAY IN** – and await distribution of tablets by the Royal Navy.
3. **TUNE IN** – to local radio or TV for information on when to take your tablets.
4. Don't use the phone unless you need urgent help.
5. Wait for the all-clear announcement.
6. Watch for long-term safety information in the news and in leaflets.

TELEPHONE HELPLINE

Southampton City Council 023 8083 3005

BROADCAST INFORMATION

Information will be broadcast on:

TV: BBC1, BBC2, ITV Meridian

Radio: BBC Radio Solent (96.1 & 103.8 FM)
The Breeze (107.8 FM)
Heart FM (96.7 FM)
Wave FM (105.2 FM)
Capital FM (103.2 FM)

Social media channels:

 [Facebook.com/sotoncc](https://www.facebook.com/sotoncc)

 twitter.com/SouthamptonCC

If you would like more information please contact
Emergency Preparedness, Resilience & Response Team
City Depot, First Avenue, Southampton SO15 0LJ
Telephone 023 8083 2427