

RADIATION EMERGENCY IN THE PORT OF SOUTHAMPTON

What to do if you live nearby

THIS BOOKLET IS IMPORTANT

Make sure you keep it in a safe place and ensure you pass it on to any new residents should you move on.

JULY 2018 – JULY 2021

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



MINISTRY OF DEFENCE



New Forest
DISTRICT COUNCIL



SOUTHAMPTON
CITY COUNCIL



Hampshire and the Isle of Wight Local Resilience Forum

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 search Emergency Planning

www.hiow-localresilienceforum.org.uk

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.

As Britain's premier port, nuclear-powered vessels may occasionally visit Southampton.

This booklet provides essential safety information that you'll need in the **highly unlikely** event of a leak of radioactive material from a vessel. It is being distributed to all households within a 1.5 kilometre radius of the section of the Docks where these vessels would berth in accordance with emergency regulations.

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

Follow instructions you are given.

Although the chance of ever having to use this booklet in an emergency is very slight, PLEASE PUT IT IN A SAFE PLACE WHERE YOU CAN FIND IT EASILY.

For more information on radiation safety, call the Emergency 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 vessels 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, the emergency services and the health service. The plan gives you information to keep you safe until the problem has been dealt with.



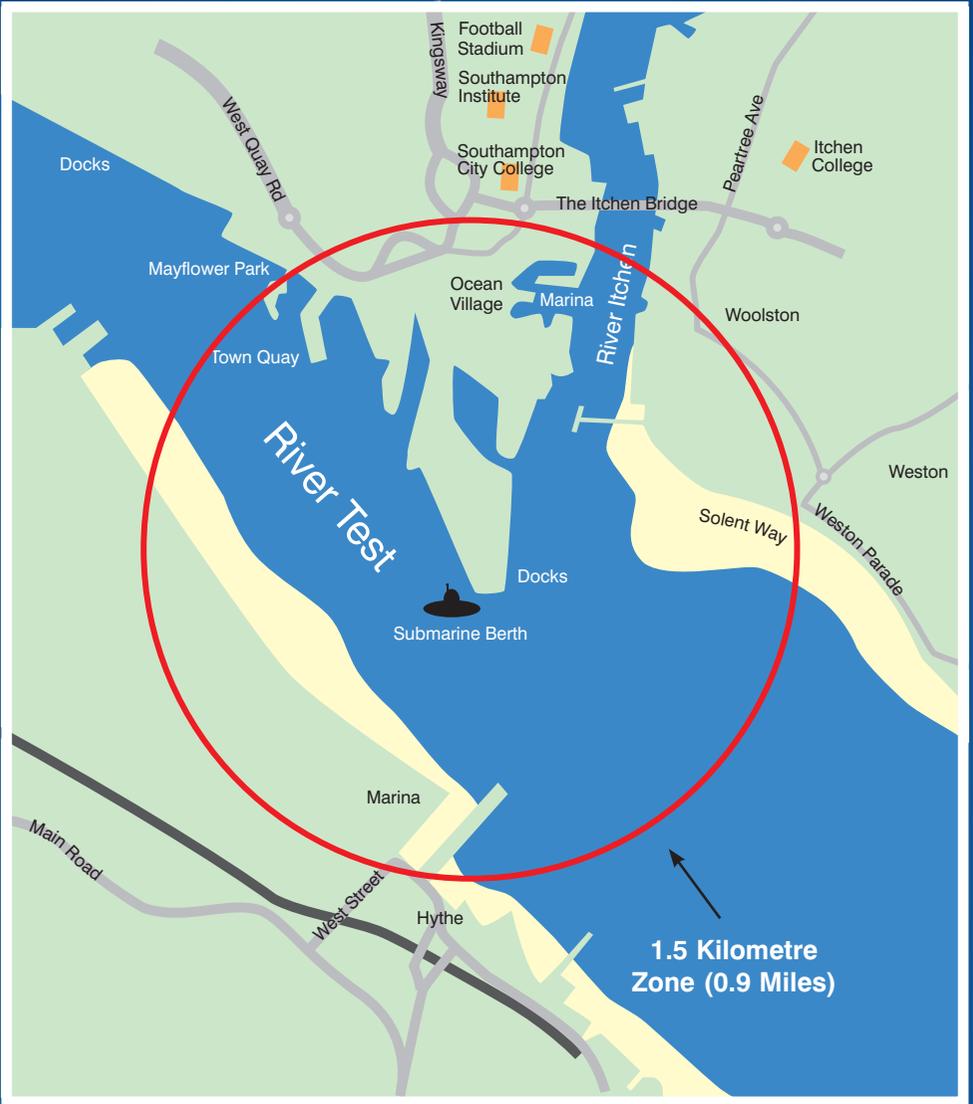
HOW DO I KNOW IF I WILL BE AFFECTED?

In the unlikely event of an incident occurring it would probably only affect people living or working very close to or within the port. Legislation requires people living up to 1.5 km away to be given prior information about a nuclear emergency as provided in this booklet. The map opposite shows the 1.5 km 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. The Police may also issue warnings over loudhailers in the affected areas.



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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 DO I DO IF I LIVE WITHIN 1.5 KILOMETRES

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.

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.

(0.9 MILES) OF BERTH 38 EASTERN DOCKS?

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

POTASSIUM IODATE TABLETS - HOW TO GET THEM AND WHEN TO TAKE THEM

Listen to information about something called “PITs” – Potassium Iodate Tablets and how they will be distributed to you.

Most residential properties will receive PITs from Royal Navy personnel distributed to your door. If you are out when they call PITs will be left with a leaflet telling you what to do.

Some PITs will be pre-positioned locally to certain hotels, schools, high rise flats, residential care homes and Western Docks cruise terminals within and immediately adjacent to the 1.5 km zone.

Only take PITs when told to do so – these arrangements will be confirmed by radio and TV announcements.

Should you require further assistance you can contact Southampton City Council on: 023 8083 3005

9

STAY TUNED

Wait for more information on when to take the tablets.

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.

WILL WE BE EVACUATED?

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.

Evacuated areas will be controlled, so don't worry if you have to leave your home.

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.



I HAVE FRIENDS AND RELATIVES LIVING IN THE AREA BUT THEY ARE FURTHER THAN 1.5 KILOMETRES (0.9 MILES) FROM THE EASTERN DOCKS. SHOULDN'T THEY HAVE THE TABLETS TOO?

The authorities will continually monitor the situation. If the decision is taken that others outside 1.5 km (0.9 miles) zone require precautionary measures, they will be advised accordingly.



FOOD AND DRINK

It is unlikely that tap water and 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.

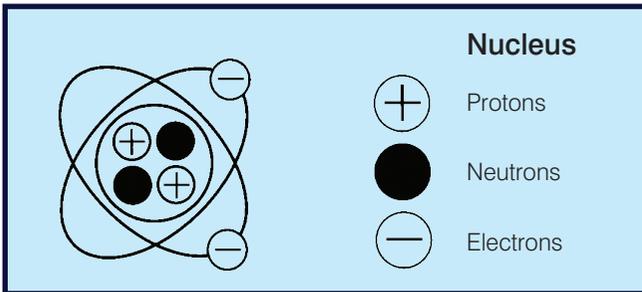
ATOMS

Everything is made up of tiny building blocks called atoms.

Each atom is made up of **electrons** which orbit around a **nucleus**.

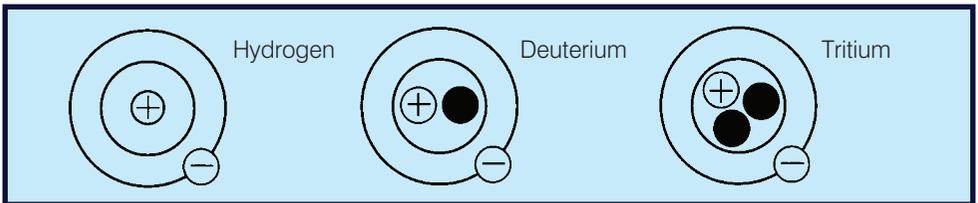
This contains **protons** and **neutrons**.

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

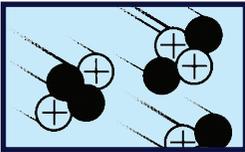
Some atoms are naturally unstable. They can change into atoms of another element by getting rid of some of their protons, neutrons and electrons. When this happens, the atom gives off **radiation**. Everybody receives a small amount of natural radiation.

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**.

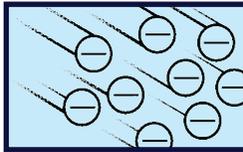
Radionuclides can emit 3 types of radiation:

Alpha radiation



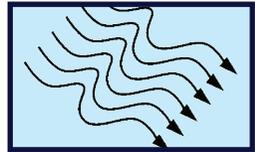
Heavy positively charged particles, each made up of 2 protons and 2 neutrons.

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.

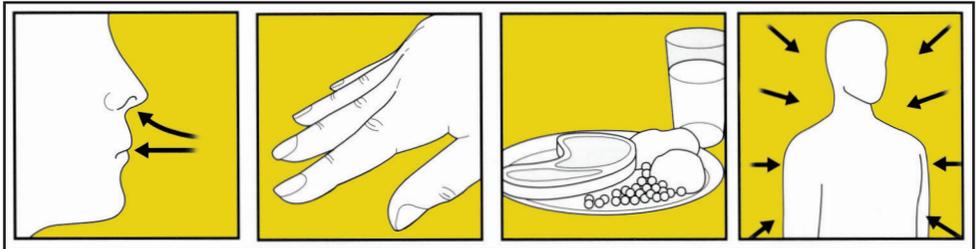
Different types of radiation can cause different effects. Some parts of the body are more sensitive to radiation than other parts of the body.

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

COUNTERMEASURES

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 (potassium iodate 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 2001 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 a copy at **www.southampton.gov.uk** – search Emergency Planning in the A-Z search. It is a plan called **Reactor Emergency Plan** that can be downloaded at the bottom of the page.

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



POTASSIUM IODATE TABLETS FOR USE AT THE TIME OF A NUCLEAR EMERGENCY

The use of these tablets has been advised by the National Health Service. They will protect your health if used as directed.

You may be advised not to take the tablets immediately. If so, tune in to local radio or television where further information will be available.

Adults (including pregnant women and women who are breastfeeding)	Two tablets
Children aged three to twelve years	One tablet
Children aged one month to three years	Half of a tablet
Birth to one month	Quarter of a tablet

Special advice for babies and small children

Babies and small children unable to swallow tablets should have their dose crushed up in a teaspoon of jam, honey or yoghurt, or should have their dose dissolved in a small quantity of milk formula or juice. Ignore any traces of undissolved tablet.

The only people who should not take the tablets are those who know that they are allergic to iodine and those who suffer from the very rare conditions of hypocomplementaemic vasculitis or dermatitis herpetiformis. Your doctor will have told you if you suffer from one of these conditions.

If you have any queries relating to taking the tablets, contact NHS Helpline on **111**.

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

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City Depot

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