

Guidance for Managing Risk of Water Pollution from Farming Activities

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Guidance for Managing Risk of Water Pollution from Farming Activities

Purpose of Guidance

This guidance covers:

- general requirements for the following farming activities:
 - o storage and application of fertiliser,
 - o storage and application of pesticides,
 - keeping of livestock,
 - o cultivation of land,
 - o operating sheep dipping facilities;
- suggestions of reasonable measures to help you comply with the general requirements for the above activities;
- best practice recommendations to further reduce the risk of water pollution from the above activities;
- a glossary of terms; and
- other useful sources of information.

This guidance does not cover abstraction or discharge of water, substances or pollution, or any work to, or in the proximity of, a douit. Please refer to Schedule 2 of The Environmental Pollution (Water Pollution) Ordinance, 2022 for the general requirements relating to those activities.

This guidance is aimed at anyone who might carry out the above activities, including if the activities are carried out on residential land for subsistence purposes. Following this guidance will help you comply with the requirements of The Environmental Pollution (Water Pollution) Ordinance, 2022. The intention of this guidance is to supplement the Ordinance; the definitions provided in the 'Glossary of Terms' section, the reasonable measures identified for each activity, as well as the best practice recommendations are provided to help you ensure that no risk of water pollution exists and that no water pollution occurs from the activities carried out on your land. The general requirements detailed in Schedule 2 of the Ordinance and in each section of this guidance are mandatory, whereas the best practice recommendations within this guidance are discretionary. This guidance does not supersede the Ordinance.

Failure to comply with the general requirements may result in the occurrence of, or risk of, water pollution and is an offence under The Environmental Pollution (Water Pollution) Ordinance, 2022. The full version of the legislation is available on the Guernsey Legal Resources <u>website</u>. Please note that there may be regulatory requirements in place via other agencies which you are required to comply with that are not covered in this guidance.

The Environmental Pollution (Water Pollution) Ordinance, 2022 comes into effect as of 28th November 2022. The general requirements (Schedule 2) of the Ordinance come into effect as of 28th May 2023 this is a transitionary period where people can consider the requirements and make alterations, as may be necessary, to comply.

Reasonable measures to prevent water pollution occurring

Should a water pollution event occur, it is best practise to evidence that all reasonable measures have been taken to mitigate water pollution occurring from their activities. Below are examples of such reasonable measures which should be carried out to discover whether or not any water resources (such as a douit, stream, ditch, pond, wetland, spring, well or borehole) exist in proximity to the location of the activity or activities.

- Contact the Office of Environmental Health and Pollution Regulation and Guernsey Water for information, such as indications of streams, douits, ditches, ponds, wetlands and private drinking water supplies.
- Consult any available maps to identify possible locations of water resources.
- Engage with your neighbours to understand where drinking water supplies not connected to the mains exist in proximity to your land, or where other water resources may exist on their land.

Please refer to the specific activities in this guidance for examples of reasonable measures relevant to each activity (see the 'How to comply with the general requirements' section for each activity). For information regarding defences to offences under the Ordinance, please refer to Part VI of the Ordinance.

It is recommended that all the guidance in this document, including best practice recommendations, are followed or tailored to be more appropriately applied to meet the characteristics of your land.

Diffuse agricultural water pollution

Diffuse agricultural water pollution can arise from the cumulative impact of agricultural activities in the catchment area. You should be aware that the mitigation of water pollution from activities occurring on your land may not prevent diffuse water pollution from occurring. Consideration of other activities in the areas surrounding your land should be taken into account when you develop and implement controls and mitigations on your land.

Advice on anything not covered by this guidance

For advice or information regarding anything outside the scope of this guidance for the above listed activities, please contact the States of Guernsey Farm Services or Agriculture, Countryside and Land Management Services.

Managing risk of water pollution from the storage of fertiliser

The scope of this section does not cover anything unrelated to reducing the risk of water pollution from the storage of fertiliser, such as guidance or advice on planning permission. For clarity, this section is relevant for both liquid fertilisers (such as slurry) and solid fertilisers (such as manure), as well as straight, compound and mixed fertilisers.

The Environmental Pollution (Water Pollution) Ordinance, 2022 takes precedent over any slurry management plan in effect at your property.

General requirements

Unless fertiliser is stored in a building constructed and maintained to prevent run-off or seepage of fertiliser from the building, it may not be stored, including temporarily in a mobile tank or bower, on land that:

- is within 10 meters of any douit, stream, ditch or pond (as measured from the top of the bank);
- is within 10 meters of any wetland;
- is within 50 meters of any spring that supplies water for human consumption;
- is within 50 meters of any well or borehole that is not capped in such a way as to prevent the ingress of water;
- is waterlogged (see 'Glossary of Terms' for definition); or
- has an average soil depth of less than 40 centimetres and overlies gravel or fissured rock, unless the fertiliser is stored in an impermeable container.

These requirements apply in all cases other than:

- where a licence has been granted under Section 15 of The Environmental Pollution (Guernsey) Law, 2004 that covers the storage of fertiliser; or
- where an exemption has been granted under The Environmental Pollution (Prescribed Operations) (Exemptions) Regulations, 2019 (as amended) for the storage of fertiliser; or
- fertiliser which is stored in accordance with the Control of Poisonous Substances (Guernsey) Regulations, 2014.

How to comply with the general requirements

Below is information which relates to the general requirements in the Ordinance for this activity. The purpose of this information is to help you understand why the general requirements are in place and how to comply with them. Please note that the examples provided are not definitive but are a suggestion of reasonable measures you could take to help you comply with the general requirements. Further mitigating measures are covered in the Best Practise Recommendations section below.

Construction of storage building

To prevent run-off or seepage of fertiliser from a building, the building should be constructed from materials that do not allow water to drip, flow, seep or otherwise exit the boundaries of the building. Some internal surfaces of the building such as the floor surface should be constructed from impermeable materials. This will ensure that the fertiliser remain contained in the event of a spill or leak from whatever containers/ bags the fertiliser is stored in within the building. Examples of impermeable surfaces include metal, concrete, brick or stone slabs that are not compromised by any opening, holes, gaps, cracks etc.

Storage in proximity to watercourses

If a suitably constructed building is <u>not</u> available, fertiliser must not be stored within the above detailed proximity of Guernsey's water resources (douit, stream, ditch, pond, wetland, spring, well or borehole) – this is to reduce the risk of stored fertiliser entering these watercourses and causing pollution in the event of a spill or leak of fertiliser from the storage location. The distance for private drinking water supplies (springs, wells and boreholes) which are not constructed in a way that prevents water entering is further than other types of watercourses due to the risk of pollution to water used for human consumption from fertiliser.

Shallow soil on gravel or fissured rock

An average soil depth of less than 40 cm on top of gravel or rock with cracks or openings will increase the ability for fertiliser to travel through the ground to water courses and cause water pollution. If a suitably constructed building is <u>not</u> available and/or the fertiliser is not stored in a container that prevents water from flowing, leaking or seeping out, fertiliser must not be stored on this type of land to help reduce the risk of water pollution from the fertiliser storage location.

Waterlogged soil

If a suitably constructed building is <u>not</u> available, fertiliser must not be stored on land where the soil is waterlogged – this means soil that has reached its limit for retaining water. The water retaining capacity is determined by the characteristics of the soil, such as the texture (content of clay, silt or sand), structure (density and how absorbent it is) and how much organic matter the soil contains. Note that waterlogged soil is slightly different when in a forest – refer to the 'Glossary of Terms' for more information.

Best practise recommendations

Outlined below are further actions you could take to ensure that the risk of water pollution occurring as a result of this activity is as low as possible. These are best practice recommendations and you are encouraged to implement/carry out each of these recommendations on your land.

Siting, construction, and maintenance

You should consider and manage the risks of fertiliser storage in areas that are in close proximity to coastal waters. It is recommended that fertiliser is stored at least 10 meters from coastal waters.

Avoid storing fertilisers in areas that are prone to flooding, or which are within 10 meters of an opening into a surface water drainage system.

The area where fertilisers are stored should be able to contain any leaks or spills to a volume of up to 110% of the total quantity of fertiliser likely to be stored there. This can be achieved by implementing a secondary containment system, such as a bund. The secondary containment system should be soundly constructed of materials resistant to leakage by liquid (such as metal, concrete, brick or stone slabs) and should not be compromised by any openings, holes, gaps, cracks etc.

You should ensure that all fertiliser storage is secure, and where possible protected from weather and direct sunlight.

It is recommended that you routinely check all accessible parts of your storage area, secondary containment system and associated equipment for damage or leaks. Any damage or leaks identified should be repaired immediately.

Mobile tanks or bowers

- Bowsers and fittings should be fit for purpose and protected from damage.
- Mobile tanks and bowers should be on level, solid ground prior to any delivery of fertiliser.
- Laden mobile tanks or bowers should not be moved unless all lids, hatches and valves are closed and locked.

Fertiliser delivery, record keeping and spill management

Before any delivery occurs, you should ensure that the tank has sufficient capacity to avoid overfilling.

It is recommended that an accurate stock record is kept so that information regarding the quantity and type of fertiliser stored are available in the event of a spill, leak or identification of a water pollution event.

Your fertiliser provider will have measures in place to ensure containment should a spill occur during the delivery process. It is recommended that you have a spillage contingency plan, and that you know what do to in the event of a spill. In the event of a spill you should ensure that your fertiliser provider is notified and that all reasonable steps are taken to contain the spilled material as far as practical. Contact the Office of Environmental Health and Pollution Regulation in the event of a significant spill or leak during the storage or application of fertilisers.

Managing risk of water pollution from the application of fertiliser

The scope of this section does not cover anything unrelated to reducing the risk of water pollution from the application of fertiliser, such as guidance or advice on planning permission or appropriate fertilisers to apply. For clarity, this section is relevant for both liquid fertilisers (such as slurry) and solid fertilisers (such as manure), as well as straight, compound and mixed fertilisers.

The Environmental Pollution (Water Pollution) Ordinance, 2022 takes precedent over any slurry management plan in effect at your property.

General requirements

The following requirements apply in all cases other than:

- where a licence has been granted under Section 15 of The Environmental Pollution (Guernsey) Law, 2004 that covers the application of fertiliser; or
- where an exemption has been granted under The Environmental Pollution (Prescribed Operations) (Exemptions) Regulations, 2019 (as amended) for the application of fertiliser; or
- fertiliser which is applied in accordance with the Control of Poisonous Substances (Guernsey) Regulations, 2014.
- Fertilisers must not be applied to land in excess of the nutrient needs of the crop.
- Any equipment used to apply fertiliser must be maintained in a good state of repair.
- Fertiliser must be applied on the land in such a way and at such times that the risk of water pollution is minimised.

Organic fertiliser

No <u>organic</u> fertiliser may be applied to land that:

- is within 10 meters of any douit, stream, ditch or pond (as measured from the top of the bank);
- is within 10 meters of any wetland or opening into a surface water drainage system;
- is within 50 meters of any spring that supplies water for human consumption
- is within 50 meters of any well or borehole that is not capped in such a way as to prevent the ingress of water;
- has an average soil depth of less than 40 centimetres and overlies gravel of fissured rock, except where the application is for forestry operations;
- is frozen (except where the fertiliser is farm yard manure), waterlogged or covered with snow; or
- is sloping, unless run-off is intercepted (by e.g. a buffer zone) to prevent it from entering any douit, stream, ditch, pond or wetland towards which the land slopes.

Inorganic fertiliser

No inorganic fertiliser may be applied to land that:

- is within 2 meters of any douit, stream, ditch or pond (as measured from the top of the bank);
- is within 2 meters of any wetland or opening into a surface water drainage system;
- is within 5 meters of any spring that supplies water for human consumption
- is within 5 meters of any well or borehole that is not capped in such a way as to prevent the ingress of water;
- has an average soil depth of less than 40 centimetres and overlies gravel or fissured rock, except where the application is for forestry operations;
- is frozen, waterlogged or covered with snow; or
- is sloping, unless run-off is intercepted (by e.g. a buffer zone) to prevent it from entering any douit, stream, ditch, pond or wetland towards which the land slopes.

How to comply with the general requirements

Below is information which relates to the general requirements in the Ordinance for this activity. The purpose of this information is to help you understand why the general requirements are in place and how to comply with them. Please note that the examples provided are not definitive but are a suggestion of reasonable measures you could take to help you comply with the general requirements. Further mitigating measures are covered in the Best Practise Recommendations section below.

Crop nutrient needs

You should work out the nutrients your soil or crop needs prior to any fertiliser application, taking into account the results of any soil sampling and analysis you may have carried out. Carrying out regular soil and manure sampling and analysis is a reasonable measure that you can implement to help you understand the soil needs prior to the application of fertiliser. The amount of fertiliser used and the frequency of use should be as low as possible for the purpose it is being applied for.

Equipment maintenance

Equipment should be used in accordance with the manufacturer's instructions, and any maintenance directions should be followed. Any damage to equipment, or if there is any indication that is it not working as intended, should be addressed prior to any further use of the equipment.

Minimising risk of water pollution

To reduce the risk of water pollution when applying fertiliser, it is reasonable that you:

• check your application equipment routinely;

- work fertiliser into the soil within 12 hours of applying it;
- plan each application of fertiliser on your land, including assessing the water pollution risks and the weather forecast at the time of application, i.e. taking into account the field, soil and weather conditions, and how much fertiliser to use; and
- take all reasonable precautions to mitigate against the risk of diffuse agricultural water pollution, such as by understanding what activities are being carried out in neighbouring land parcels, considering whether the cumulative impacts of those activities with yours could result in diffuse water pollution and how that might be avoided.

Shallow soil on gravel or fissured rock

An average oil depth of <40 cm soil depth on top of gravel or rock with cracks or openings will increase the ability for fertiliser to travel through the ground to water courses and cause water pollution. Fertiliser must not be applied on this type of land, unless the fertiliser application is for forestry operations, to help reduce the risk of water pollution.

Land that is frozen, waterlogged and/or sloping

Fertilisers typically easily dissolves in liquid and therefore must not be applied to land that is frozen (unless the fertiliser being used is farm yard manure) or land that is covered in snow, to reduce the risk of water run-off.

Fertiliser must not be applied to land that is waterlogged – this means soil that has reached its limit for retaining water. The water retaining capacity is determined by the characteristics of the soil, such as the texture (content of clay, silt or sand), structure (density and how absorbent it is) and how much organic matter the soil contains. Note that waterlogged soil is slightly different when in a forest – refer to the 'Glossary of Terms' for more information.

Unless water run-off is captured, contained or otherwise stopped from entering watercourses, fertiliser must not be applied to land that slopes towards any douit, stream, ditch, pond or wetland. Implementing buffer zones is a reasonable method to reduce water run-off. A buffer zone is an area around the edges of watercourses where the land is cropped and no fertiliser application, cultivation or other activity occurs.

Application in proximity to watercourses or surface water drainage system

Organic or inorganic fertiliser must not be applied to land that is within the above detailed proximity of Guernsey's water resources (douit, stream, ditch, pond, wetland, spring, well or borehole) or opening to any surface water drainage system – this is to reduce the risk of fertiliser entering these resources and causing pollution at the time of or time following application. The distance for private drinking water supplies (springs, well and boreholes) which are not constructed in a way that prevents water entering is further than other types of watercourses due to the risk of pollution to water used for human consumption from fertiliser.

Best practice recommendations

Fertiliser use and application

You should consider and manage the risks of fertiliser application in areas that are in close proximity to coastal waters. It is recommended that fertiliser is not applied within 2 meters of coastal waters.

Use of the manures on the farm should be prioritised to help cut down on the use of artificial fertilisers.

Fertiliser should be applied by a person who is suitably competent.

Fertiliser transportation

You should ensure that all fertilisers are safely transported to the application site. Consider the vehicle being used for transportation, where the vehicle is parked when the fertiliser has been transported, and how the fertilisers are secured against unauthorised access when away from the storage location. You should ensure that unused fertilisers are safely returned to your storage location.

Record keeping

It is recommended that an accurate application record is kept so that information regarding the quantity and type of fertilisers stored are available in the event of a spill, leak or identification of a water pollution event.

Managing risk of water pollution from the storage of pesticides

The scope of this section covers the storage of pesticides for both domestic and commercial uses. It does not cover anything unrelated to reducing the risk of water pollution from the storage of pesticides, such as guidance or advice on health and safety, appropriate product to use, biocides or veterinary medicine, or guidance relating to any product that does not fall under the definition of pesticide in this guidance and in The Environmental Pollution (Water Pollution) Ordinance, 2022.

You should be aware that there are additional requirements regarding pesticide application under other legislation, For example, there is a requirement under The Control of Poisonous Substances (Guernsey) Regulations, 2014 to hold a recognised qualification for the purchase, storage and application of professional pesticide products – contact the Guernsey Health & Safety Executive (HSE) or visit <u>https://gov.gg/pesticide</u> for information.

General requirements

- Pesticide-treated plants must not be stored or soaked in any douit, stream, ditch, pond or wetland.
- Pesticide, including any used packaging that has been stored in contact with pesticide, must not be stored on an impermeable surface draining to a surface water drainage system.

How to comply with the general requirements

Below is information which relates to the general requirements in the Ordinance for this activity. The purpose of this information is to help you understand why the general requirements are in place and how to comply with them. Please note that the examples provided are not definitive but are a suggestion of reasonable measures you could take to help you comply with the general requirements. Further mitigating measures are covered in the Best Practise Recommendations section below.

Pesticide treated plants

Any plants that you wish to store or soak in water and which have been treated with pesticides should be stored in water that is contained and separated from any douit, stream, ditch, pond or wetland, such as a watertight container that has been filled with water from a tap. This is to stop any pesticide, or residue of pesticide, from entering those watercourses from the plants and causing pollution.

Storage of pesticides

Packaging that has been stored in contact with pesticide includes the original container that the pesticide product was purchased in, as well as any subsequent containers it is decanted into for storage or use. It includes containers that form part of the equipment used to apply pesticides.

Pesticide and any used packaging must not be stored on an impenetrable surface that drains to a surface water drainage system. An impermeable surface is any solid surface that does not allow liquid to run, drip, seep or otherwise penetrate through. Examples of impermeable surfaces include metal, concrete, brick or stone slabs that are not compromised by any opening, holes, gaps, cracks etc.

Best practise recommendations

Storage location and maintenance

It is recommended that you do not store your pesticides in locations that increase the impact and/or likelihood of water pollution. These include:

- locations above water resources, eg a stream or pond;
- on land sloping towards a water resource, eg a stream or pond; and
- areas prone to flooding.

The area where pesticides are stored should be able to contain any leaks or spills to a volume of up to 110% of the total quantity of the products likely to be stored there. This can be achieved by implementing a secondary containment system, such as a bund. The secondary containment system should be soundly constructed of materials resistant to leakage by liquid (such as metal, concrete, brick or stone slabs) and should not be compromised by any opening, holes, gaps, cracks etc.

It is recommended that you routinely check all accessible parts of your storage area, secondary containment system and associated equipment for damage or leaks, and any damage or leaks identified are repaired immediately.

Record keeping and spill management

An accurate stock record should be kept so that information regarding the quantity and type of pesticide stored are available in the event of a spill, leak or identification of a water pollution event.

In the event of a spill you should ensure that all reasonable steps are taken to contain the spilled material as far as practical. Contact the Office of Environmental Health and Pollution Regulation in the event of a significant spill or leak during the storage of pesticides.

Managing risk of water pollution from the application of pesticides

The scope of this section covers the application of pesticides for both domestic and commercial uses. It does not cover anything unrelated to reducing the risk of water pollution from the application of pesticides, such as guidance or advice on health and safety, appropriate product to use, biocides or veterinary medicine, or guidance relating to any product that does not fall under the definition of pesticide in this guidance and in The Environmental Pollution (Water Pollution) Ordinance, 2022.

You should be aware that there are additional requirements regarding pesticide application under other legislation. For example, there is a requirement under The Control of Poisonous Substances (Guernsey) Regulations, 2014 to hold a recognised qualification for the purchase, storage and application of professional pesticide products – contact the Guernsey Health & Safety Executive (HSE) for information and advice regarding this.

General requirements

- Pesticide application preparation, and the cleaning and maintenance of pesticide application equipment, must be carried out in a way that prevents any spillages, run-off or washings from entering Guernsey's water resources.
- Pesticide application equipment must be maintained in a good state of repair.
- Pesticide application equipment must not be filled with water taken from any douit, stream, ditch, pond or wetland, unless;
 - A device preventing back siphoning is fitted to the system; or
 - The water is first placed in an intermediate container from which the equipment is filled.

How to comply with the general requirements

Below is information which relates to the general requirements in the Ordinance for this activity. The purpose of this information is to help you understand why the general requirements are in place and how to comply with them. Please note that the examples provided are not definitive but are a suggestion of reasonable measures you could take to help you comply with the general requirements. Further mitigating measures are covered in the Best Practise Recommendations section below.

Preparation, cleaning and maintenance

Guernsey's water resources include any douit, stream, ditch, pond, spring, well, borehole and the sea.

To prevent any spillages, run-off or washings from entering Guernsey's water resources, you should carry out any preparations, cleaning and maintenance in a bunded area to contain all liquids. Preparation includes the mixing of pesticide product and organising the intended equipment for application. Cleaning refers to the cleaning of any equipment and materials used to prepare the pesticide and pesticide equipment for application, or any cleaning carried out during the maintenance of the equipment used for pesticide application.

Equipment should be used in accordance with the manufacturer's instructions, and any cleaning and/or maintenance directions provided by the manufacturer should be followed. Any damage to equipment, or if there is any indication that is it not working as intended, should be addressed prior to any further use of the equipment.

Using water from a douit/ stream/ditch/pond/wetland

If you wish to use water from a douit, stream, ditch, pond or wetland to mix with the pesticide, you must ensure that any pesticide, or residue of pesticide, does not enter those water resources. A back siphoning device fitted to your pesticide application equipment will allow water to be taken but without letting any water flow back into the water resource once it has mixed with the pesticide. Alternatively, you could first collect water from the water resource using a clean, watertight container which is then transferred into the pesticide application equipment. If neither of these options are used, then you must not fill your pesticide application equipment with water from a douit, stream, ditch, pond or wetland.

Best practise recommendations

When and where to apply pesticides

It is recommended that you do not apply any pesticides in vulnerable locations, such as stream banks, ponds, wet meadows, marshy areas, douits, drainage ditches, underground culverts or paved areas.

The application of pesticides should be confined to the target area, and conditions where the spray could be moved out of the target area, such as by wind or rainfall, should be avoided. This is particularly relevant where pesticides are applied by aerial application or via by tractor boom. Pesticides should not be applied in wet or windy conditions, or if immediate rain is forecast.

Pesticides are easily transported in liquid and therefore should not be applied to land that is frozen or land that is covered in snow, to reduce the risk of water run-off.

Pesticides should not be applied to land that is waterlogged – this means soil that has reached its limit for retaining water. The water retaining capacity is determined by the characteristics of the soil, such as the texture (content of clay, silt or sand), structure (density and how absorbent it is) and how much organic matter the soil contains. Note that waterlogged soil is slightly different when in a forest – refer to the 'Glossary of Terms' for more information.

Use, quantity and transport of pesticides

The amount of pesticide product used and the frequency of use should be as low as possible for the purpose it is being applied for. As far as is reasonable practicable, products classified as dangerous for the aquatic environment should not be used. Check the product label for further information. You should ensure that all pesticides are safely transported to the application site. Consider the vehicle being used for transportation, where the vehicle is parked when pesticides have been transported, and how the pesticides are secured against unauthorised access when away from the storage location. You should ensure that unused pesticides are safely returned to your storage location.

Record keeping, spill management and alternative options

It is recommended that an accurate application record is kept so that information regarding the quantity and type of pesticide applied and when are available in the event of a spill, leak or identification of a water pollution event.

In the event of a spill you should ensure that all reasonable steps are taken to contain the spilled material as far as practical. Contact the Office of Environmental Health and Pollution Regulation in the event of a significant spill or leak during the application of pesticides. Please note that the accidental application of surplus pesticides could be considered a spill, and should be treated accordingly.

It is recommended that you reduce your reliance on the use and application of pesticides by reducing the risk of pest, weed and disease. This could be facilitated through:

- efficient and specific use of chemical applications, such as pesticides and fertilisers;
- crop rotation, the use of resistant crop varieties, and other suitable cultural controls;
- the use of nets, mulches, mechanical weeding and other suitable physical and mechanical controls;
- encouraging biodiversity through the enhancement of natural native habitats;
- monitoring for pests, weeds and diseases.

You should consider the use of alternative products and activities that have a lesser impact on drinking water quality and the environment. Further information about alternative ways to manage pests can be found online.

Managing risk of water pollution from the keeping of livestock

The scope of this section does not cover anything unrelated to reducing the risk of water pollution from the keeping of livestock, such as advice or guidance on health and safety, animal welfare or veterinary advice.

General requirements

- Significant erosion or poaching of any land which is within 5 meters of any of the following must be prevented:
 - A stream, douit, pond or ditch (as measured from the top of the bank);
 - A wetland;
 - A spring that supplies water for human consumption; or
 - A well or borehole that is not capped in such a way so as to prevent the ingress of water.
- Livestock must be prevented from entering any land that is within 5 meters of:
 - \circ $\;$ any spring which supplies water for human consumption; or
 - \circ $\,$ any well or borehole that is not capped in such a way as to prevent ingress of water

How to comply with the general requirements

Below is information which relates to the general requirements in the Ordinance for this activity. The purpose of this information is to help you understand why the general requirements are in place and how to comply with them. Please note that the examples provided are not definitive but are a suggestion of reasonable measures you could take to help you comply with the general requirements. Further mitigating measures are covered in the Best Practise Recommendations section below.

Preventing significant erosion or poaching of land

Poaching of soil occurs where soil has been broken down and compacted under the weight of heavy animals such as livestock and/ or under the weight of vehicles. Direct physical damage to the soil in this way reduces the ability of the soil to retain water and increases the risk of erosion. Soil erosion is where the upper lay of soil is diminished or lost – this process occurs naturally but is made worse by human activities.

There are a number of ways that significant erosion and poaching of land in proximity to any douit, stream, ditch, pond, wetland, spring, well or borehole can be prevented, some of which will also help control livestock access. Reasonable measures include:

 routinely checking the soils for significant erosion, signs of damage, loss of structure or poaching;

- don't place livestock feeding rings or drinking troughs, or locate any tracks, within 10 meters of any stream, douit, pond, ditch, wetland, spring, well or borehole;
- erecting fences to limit livestock access to any stream, douit, pond, ditch or wetland;
- provision of hard standing around permanent feeders, water troughs and in gateways;
- encourage growth of vegetation on the banks of streams and ditches;
- implementing buffer zones: a buffer zone is an area around the edges of watercourses where the land is cropped and no fertiliser application, cultivation or other activity occurs; and
- control stocking rates.

Best practise recommendations

Minimising risk of water pollution

There are several actions you can do to help prevent water pollution occurring as a result of keeping livestock. These include:

- wintering livestock on level fields that are well-drained;
- correct deep soil compaction by carrying out subsoiling on suitable soils with satisfactory drainage;
- consider drainage of your pasture in advance of the winter to help remove any standing water and saturated areas;
- place livestock who are more likely to cause poaching in areas that have better drainage;
- avoid grazing land with livestock when the soil moisture is at field capacity.

More information regarding how to avoid or address poached soil can be found online; it is important to consider the land and soil type when determining which mitigation methods are most appropriate for your land.

Managing risk of water pollution from the cultivation of land

The scope of this section does not cover anything unrelated to reducing the risk of water pollution from the cultivation of land, such as advice or guidance on health and safety or crop growing. It does cover the cultivation of land for crops and the moling of land.

General requirements

- Where land is to be cultivated, it must be done in a way that minimises the risk of water pollution.
- Where land is to be cultivated for crops, the following requirements apply to the land:
 - it must not be within 2 meters of any stream, ditch or pond (as measured from the top of the bank);
 - it must not be within 2 meters of any wetland;
 - it must not be within 5 meters of any spring that supplies water for human consumption;
 - it must not be within 5 meters of any well or borehole that is not capped in such as way so as to prevent the ingress of water;
 - it must not be waterlogged.
- Where the moling of land is to take place, the following requirements apply:
 - it must not be carried out on slopes that have an overall gradient in excess of 4.5 degrees;
 - \circ $\,$ it must not be carried out on land the slopes towards any douit, stream, pond or wetland.

How to comply with the general requirements

Below is information which relates to the general requirements in the Ordinance for this activity. The purpose of this information is to help you understand why the general requirements are in place and how to comply with them. Please note that the examples provided are not definitive but are a suggestion of reasonable measures you could take to help you comply with the general requirements. Further mitigating measures are covered in the Best Practise Recommendations section below.

Reducing the risk of water pollution from cultivation

To reduce the risk of water pollution when cultivating land, it is reasonable that you:

 plan each cultivation of your land, including taking into account the field, soil and weather conditions to avoid increasing the risk of water pollution as a result of those conditions;

- take all reasonable precautions to mitigate against the risk of diffuse agricultural water pollution, such as by understanding what activities are being carried out in neighbouring land parcels, considering whether the cumulative impacts of those activities with your activities could result in diffuse water pollution and how that might be avoided; and
- ensure that all land cultivation activities that use equipment of products are carried out in accordance with the manufacturer's instructions.

Storage in proximity to watercourses

Land must not be cultivated for crops within the above detailed proximity of Guernsey's water resources. The distance for wells and boreholes which are not constructed in a way that prevents water entering, and for springs supplying water for human consumption, is further than other types of watercourses due to the risk of pollution to drinking water from land preparation for crop planting and/or harvesting.

Waterlogged soil

Land that is waterlogged must not be cultivated - this means that the land has reached its limit for retaining water. The water retaining capacity of the land is determined by the characteristics of the soil, such as the texture (content of clay, silt or sand), structure (density and how absorbent it is) and how much organic matter the soil contains. Note that waterlogged soil is slightly different when in a forest – refer to the 'Glossary of Terms' for more information.

Moling activities

Moling is a land cultivation method where a tool or device is used to create a channel within the soil, the primary purpose of which is to allow for the flow of water. Moling of land enables you to more easily manage and direct the transfer of water across your land, however the process of moling itself can increase the risk of water pollution as it essentially displaces the soil. The above detailed general requirements apply in cases where you are planning to use moling as a method of cultivating your land, to help reduce the risk of water pollution from this activity.

Best practise recommendations

Cultivation need, methods and techniques

You should consider whether cultivation is needed, based on the soil type. For example, where soils have low potential for improvement, cultivation may not yield improved conditions while also increasing the risk of water pollution.

The least intensive and most appropriate cultivation method (or combination of methods where different soil types exist) for your purposes should be used. You should implement management measures to control the pathway of water flow and therefore the potential movement of sediment and diffuse pollutants that may be caused by the chosen cultivation technique.

Cultivation techniques should generally not be used to manage excess water on the land. Alternative options should be considered if you require long-term management of excess water on your land.

You should consider the impacts of climate change on the suitability of any cultivation technique. Changes in the frequency and strength of rainfall, drought and wind increase the risk of water pollution.

Open top linear cultivation

Where open top linear cultivation channels are created (not channels created via moling), the following should be taken into consideration:

- appropriate design and/or mitigations measures to reduce the risk of surface run-off, soil erosion and sediment delivery into water resources, such as the direction of the channel in relation to any slope of the land;
- avoid using channels on slopes greater than 11 degrees –use discontinuous forms of cultivation on steep slopes.

Buffer zones

It is recommended that buffer zones are used to protect water bodies from disturbance, particularly erosion. A buffer zone is an area around the edges of watercourses where the land is cropped and no fertiliser application, cultivation or other activity occurs.

Managing risk of water pollution from operating sheep dipping / handling facilities

The scope of this section does not cover anything unrelated to reducing the risk of water pollution from sheep dipping and/or handling facilities, such as advice on appropriate product to use, health and safety, sheep welfare or other veterinary advice, or sheep handling. Please note that there may be regulatory requirements in place via other agencies which you are required to comply with that are not covered in this guidance, such as building control and planning requirements.

General requirements

The following requirements apply at sheep dipping or operating facilities, where:

- sheep are held immediately after dipping;
- o pour-on parasite treatments are applied; or
- \circ sheep are held immediately after the application of pour-on treatments.
- Access to any douit, stream, ditch, pond or wetland by sheep must be prevented while there is risk of transfer of sheep dip fluid from the fleece to such places.
- Sheep dipping facilities must not discharge underground, and must not leak or overspill.
- Sheep dipping facilities must not be filled with water taken from any douit, stream, ditch, pond or wetland unless:
 - \circ $\;$ a device preventing back siphoning is fitted to the system; or
 - \circ $\;$ the water is first placed in an intermediate container.
- Sheep dipping facilities must be emptied as soon as practical following completion of dipping.

How to comply with the general requirements

Below is information which relates to the general requirements in the Ordinance for this activity. The purpose of this information is to help you understand why the general requirements are in place and how to comply with them. Please note that the examples provided are not definitive but are a suggestion of reasonable measures you could take to help you comply with the general requirements. Further mitigating measures are covered in the Best Practise Recommendations section below.

Using water from a douit/ stream/ditch/pond/wetland

If you wish to use water from a douit, stream, ditch, pond or wetland to mix with the sheep dip product, you must ensure that no sheep dip product, or residue of sheep dip product, enters those water resources. A back siphoning device fitted to your system will allow water to be taken but without letting the water in the facility that has mixed with the sheep dip from flowing back into the water resource. Alternatively, you could first collect water from the water resource using a clean, watertight container which is then transferred to the sheep dip facility. If neither of these options are used, then you must not use water from a douit, stream, ditch, pond or wetland for your sheep dip and handling facilities.

Access to water resources by dipped sheep

You should always let sheep drain thoroughly before allowing them to exit the handling area. A minimum of 10 minutes is reasonable. Sheep must be prevented from accessing areas where they could come into contact with any douit, stream, ditch, pond or wetland while there remains a risk of sheep dip fluid transferring from the fleece into the water – waiting at least 2 weeks after dipping is reasonable. An alternative source of drinking water should be provided for your sheep during this time. These measures will help prevent water pollution from sheep dip product, or residue of sheep dip product, if and when sheep access these water resources.

Discharges from sheep dip facilities

Your sheep dip facilities should be either connected to the main drain system or to a cesspit – no aspect of the facility should discharge underground. You should routinely check all accessible parts of your dip and handling area and associated equipment for damage or leaks, and repair any identified damage or leaks repaired immediately to help prevent any leaks or spills. You must ensure that the facility does not overspill - only as much product as is necessary for immediate use should be used, and no more product than is required for your immediate needs should be stored.

You should ensure all activities using equipment or products are carried out in accordance with the manufacturer's instructions.

Best practise recommendations

Siting, construction, and maintenance

Sheep dip baths and draining ponds should be properly sited, constructed and maintained, and associated equipment maintained in good working order, to reduce the risk of water pollution from any spills or leaks. It is recommended that sheep dips are sited at least 10 meters away from any douit, stream, ditch, pond or wetland. Sites that are prone to flooding should not be used. Mobile dips need to be carefully sited due to the increased risk, and should not be moved while containing dip solution unless specifically designed to be moved.

It is recommended that physical controls are in place at your sheep dip facility to help prevent water pollution. These include:

- a dip bath with no leaks or drain holes by, for example, using a one-piece prefabricated design;
- an entry slope to avoid sheep dropping vertically into the dip and causing unnecessary splashing;

- watertight splash screens, including across the dip entry slope, to deflect splashes;
- draining pens which have a sloped, impermeable floor to ensure drainings run back into the dip bath. An impermeable surface is any solid surface that does not allow liquid to run, drip, seep or otherwise penetrate through. Examples of impermeable surfaces include metal, concrete, brick or stone slabs that are not compromised by any opening, holes, gaps, cracks etc.

Planning and carrying out sheep dipping and/or handling activities

All aspects of the dipping operation should be planned in advance, including assessing the water pollution risks and implementing measures to minimise these risks. Sheep dip baths and associated equipment and handling areas should be inspected and tested before each use.

You should ensure that any operators or staff of sheep dipping or handling facilities are trained and sufficiently competent in the use of sheep dips, or supervised by a trained and sufficiently competent person, and that they understand the harmful effects of sheep dip on aquatic life.

When storing sheep dip product, it is recommended that the containers are clearly labelled and that the storage location is secured when not in use. It is recommended that the storage location is within a secondary containment system.

Disposal of waste sheep dipping product

Any leftover dipping product should be properly managed and disposed of at a licensed waste disposal facility. Waste dip should be stored in watertight containers designed to store toxic materials. No waste dip should be disposed of to soakaways, sewers, drains, cesspools or septic tanks.

Empty containers should be thoroughly cleaned before disposal, with the water used for cleaning added to the remaining dipping solution. If containers cannot be cleaned, you should dispose of them as hazardous waste. Containers should <u>not</u> be reused. Transport of waste arising from sheep dipping activities for disposal must be undertaken by a licensed waste transport carrier. Please contact the Office of Environmental Health & Pollution Regulation if you are considering disposal options for waste sheep dip product before any waste sheep dip is disposed of. Waste sheep dip must <u>not</u> be disposed of to land.

Managing spills of waste sheep dipping product

You should have procedures in place to deal with spills of dip concentrate or used dip, or sheep escaping from the application area into the surrounding area, particularly if your dip and/ or handling area is located in proximity to any douit, stream, ditch, pond or wetland. All reasonable steps should be taken to contain the spilled material as far as practical. Contact the Office of Environmental Health and Pollution Regulation in the event of a spill or leak during the storage or use of sheep dip product.

Record keeping

It is recommended that an accurate record is kept so that information regarding the quantity and type of materials stored and used, and when and where they are stored and used, are available in the event of a spill, leak or identification of a water pollution event. Accurate records should also be kept regarding the disposal of waste sheep dip, including what product, the quantity, how and when it was disposed of and where.

Alternatives to sheep dipping

It is recommended that you consider the use of alternatives to sheep dips where suitable that have a lesser impact on drinking water quality and the environment. Examples include a pour-on or injectable product, or a spray.

Glossary of Terms

<u>Aerial application</u>: (of pesticides) is a method of applying pesticide without any physical contact with the crop or soil. Pesticide application by drone or light aircraft are examples of aerial application.

<u>Bund:</u> means a containment around an area where hazardous liquids are handled or stored and which contains liquid in the event of a leak. A bund is an example of a secondary containment system.

<u>Crop</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as any plant grow for commercial purposes.

<u>Cultivation</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as the preparation of any land prior to planting and the harvesting of any crop.

<u>Cultural controls</u>: (in agriculture) means modifying the growing environment to reduce unwanted outcomes. For example, reducing the risk of disease by incorporating resistant crop varieties. Other categories of controls in agriculture include mechanical, physical, biological and chemical controls.

<u>Diffuse agricultural water pollution:</u> means the release of pollutants into Guernsey's water resources, whether directly or indirectly, from agricultural activities which individually may have no effect on the water environment but which collectively may result in water pollution.

<u>Ditch:</u> is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as an open channel which collects and conveys drainage water from surface or sub-surface drainage to other surface water.

<u>Farm vard manure</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as a mixture of bedding material and animal excreta in solid form arising from the housing of livestock (except such arising from keeping birds for the production of food).

<u>Fertiliser:</u> is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as any substance containing nutrients, excluding forestry brash, which is used on land to enhance plant growth. Further to that definition, organic fertiliser refers to fertilisers made from naturally degradable compounds. Inorganic fertilisers refers to fertilisers containing synthetic materials.

<u>Groundwater</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or the subsoil.

<u>Guernsey's water resources</u>: is defined in The Environmental Pollution (Guernsey) Law, 2004 as all water on or below the surface of the ground in Guernsey, whether or not under the control of the Water Board and whether or not within the catchment area.

<u>Livestock</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as cattle, sheep, pigs, equines, goats, llamas or alpacas, or poultry, and any animal kept for the production of food, wool, skin or fur or for use in the farming of land.

<u>Moling</u>: (of land) is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as a cultivation method where an implement is used to open a conduit within the soil along which water may flow.

<u>Pesticide</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as any pesticide of other substance declared to be a poisonous substance under regulation 2 of the Control of Poisonous Substances (Guernsey) Regulations, 2014.

<u>Pesticide application equipment:</u> is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as pesticide sprayers and other devices used to apply pesticide.

<u>Poaching:</u> (of soil) means where soil has been broken down and compacted under the weight of heavy animals such as livestock, or vehicles.

<u>Pollution</u>: is defined in The Environmental Pollution (Guernsey) Law, 2004 as the presence in the environment, whether permanently or temporarily, of any pollutant; and a "pollutant" is any substance or energy capable of causing –

- (a) harm to the health or well-being of man, including damage to or deleterious interference with man's senses;
- (b) harm to the health of other living organisms supported by the environment; or
- (c) other interference with the ecological systems of which man or other living organisms for part.

<u>Run-off:</u> (of water) is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as any water from rainfall or any meltwater from ice or snow flowing over or horizontally through the surface of the ground and any matter picked up by that water as it flows.

<u>Secondary containment</u>: is defined as a drip tray, an area surrounded by a bund or catchpit or any other system for preventing the release of materials/ liquids, which has escaped from primary containment, from escaping further from the place where it is stored.

<u>Subsoiling</u>: means to plough or turn up the layer of soil below the top layer.

<u>Surface water</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as any water on the surface of the ground including water which has drained from roofs and other structures.

<u>Surface water drainage system</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as a system that is used to collect and drain water run off from premises and transport it to, and discharge it into, Guernsey's water resources, and may include any surface water sewers and associated inlets, outlets, gullies, manholes, oil interceptors, silt traps, and attenuation, settlement and treatment facilities.

<u>Water pollution</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as the introduction into Guernsey's water resources of any pollutant.

<u>Water for human consumption</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as water that may be ingested by humans, used in the preparation of food or drink, or used in the cleaning of material involved in the storage or consumption of food or drink.

<u>Waterlogged</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as soils which is at water retaining capacity, except in a forest where it means water which is visible on the soil surface.

<u>Well</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as a permeable underground collection tank.

<u>Wetland</u>: is defined in The Environmental Pollution (Water Pollution) Ordinance, 2022 as an area of ground the ecological, chemical and hydrological characteristics of which are attributable to frequent inundation of saturation by water and which is directly dependent, with regards to its water needs, on a body of groundwater or a body of surface water.

Other Useful Information

Links to relevant legislation

The following legislation is available on the Guernsey Legal Resources website:

- The Environmental Pollution (Guernsey) Law , 2004
- The Environmental Pollution (Water Pollution) Ordinance, 2022
- The Environmental Pollution (Prescribed Operations) (Exemptions) Regulations, 2019
- The Environmental Pollution (Prescribed Operations) (Fees) Regulations, 2019
- Control of Poisonous Substances (Guernsey) Regulations, 2014

Further resources for pesticide storage and application

Identification of any well or borehole that is not capped in such a way as to prevent the ingress of water

If you are in any doubt as to the existence of any well or borehole within 50 meters of the activities being carried out on your land, or of the integrity of the capping of any well or borehole, please contact the Office of Environmental Health & Pollution Regulation.

<u>H&S information on purchase, storage, application, approval etc. of pesticides in the</u> <u>Bailiwick Guernsey</u> <u>https://gov.gg/pesticide</u>

https://gov.gg/article/155612/Pesticides-gardening-and-tree-services-HSE-guidance

Lab Services https://gov.gg/labservices

<u>States of Jersey guidance for pesticides</u> <u>https://www.gov.je/Industry/FarmingFishing/PlantsProduce/Pages/Pesticides.aspx</u>

UK and EU Codes of Practice and Guidance for pesticides

<u>Code of Practice for suppliers of pesticides to agriculture, horticulture and forestry (the</u> <u>Yellow Code), DEFRA</u>

Code of Practice for using plant protection products, DEFRA

Health and Safety Executive (HSE), UK.

Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides.

Scottish Government code of practice for using plant protection products in Scotland

Further resources for fertiliser storage and application

<u>UK Guidance</u>

<u>UK Code of Practise for the prevention of water pollution from the handling and storage of fluid fertilisers.</u>

UK Code of Practise for the prevention of water pollution from the storage and handling of solid fertilisers.

Rules for farmers and land managers to prevent water pollution

Applying the farming rules for water

Prevention of environmental pollution from agricultural activity: guidance

Lab Services https://gov.gg/labservices

<u>UK Nutrient Management Guide</u> <u>https://ahdb.org.uk/nutrient-management-guide-rb209</u>

Further resources for the keeping of livestock

Guernsey Guidance

Agriculture and horticulture (HSE guidance)

Soils and Countryside

<u>UK Guidance</u> <u>Assessing and controlling risks from livestock, HSE</u>

<u>Rules for farmers and land managers to prevent water pollution, DEFRA and Environment</u> <u>Agency</u>

Further resources for operating sheep dipping and/or handling facilities

UK Guidance

Sheet dip: ground water protection code, guidance, DEFRA and Natural Resource Wales

<u>Prevention of environmental pollution from agricultural activity: guidance, Scottish</u> <u>Government</u> Health and Safety Executive (HSE), advice for farmers and other involved in dipping sheep

States of Guernsey Vet

https://gov.gg/animalhealth

Contact details

In the case of a water pollution event: during business hours, please contact the Office of Environmental Health and Pollution Regulation, States of Guernsey on 01481 221161.

If a significant water pollution event occurs/ is identified out of hours, please notify the Princess Elizabeth Hospital switchboard on 01481 220000.

<u>Planning permission and building control</u>: Land Planning and Building Control, Environment Department, States of Guernsey tel: 01481 221161. <u>https://www.gov.gg/buildingcontrol</u>

<u>Health and safety:</u> Guernsey Health and Safety Executive, States of Guernsey on 01481 221161. https://gov.gg/hse

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