Water Use

# Regulatory Method (WAT-RM-33)

## Disposals to Land: New Applications

Version: v4

Released: Feb 2020

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**Update Summary**

| Version | Description |
|---|---|
| v1.0 | First issue for Water Use reference using approved content from the following documents:<br>*RM_33_Disposal_to_land.doc* |
| v2 | New section 3.9 (single/multiple licences), new charge for >5m3 (section 3.1) plus general revision to simplify and clarify procedure |
| v3 | Expired CMS links reviewed and updated. |
| v4 | Updated to include a section on waste disinfectant disposal |

**Notes**

**References**: Linked references to other documents have been disabled in this web version of the document. See the References section for details of all referenced documents.

**Printing the Document**: This document is uncontrolled if printed and is only intended to be viewed online.
If you do need to print the document, the best results are achieved using Booklet printing or else double-sided, Duplex (2-on-1) A4 printing (both four pages per A4 sheet).

**Always refer to the online document for accurate and up-to-date information**.

# Table of Contents

# Section A: Disposal of Waste Sheep Dip and Waste Pesticides

## A1 Key Points

This guidance is intended to provide advice to SEPA staff on how to process a CAR application for a new disposal to land of potentially polluting substances. Section A is for disposal of waste sheep dip and/or waste pesticide. Section B is for the disposal of >10m$^3$ of waste disinfectant washings in the event of a notifiable disease outbreak.

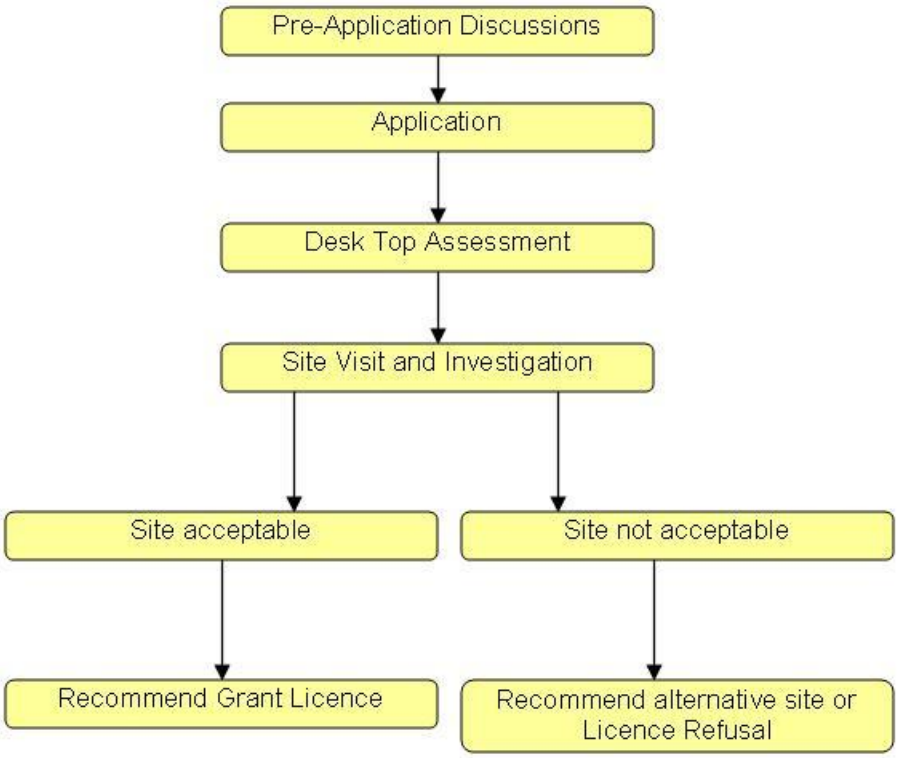
For guidance on SEPA's role in undertaking a review of current CAR authorisations for the disposal of waste sheep dip and/or waste pesticides, refer to *WAT-SG-14: Disposal to Land - Waste Sheep Dip/Pesticide Washings Authorisation Review*.

For guidance on SGRPID's role in undertaking reviews of authorisations for disposal of sheep dip refer to *SEARS-SG-001: Disposal to Land - Waste Sheep Dip Authorisation Review*.

NOTE: Since June 2008 the field visit element of the review of CAR authorisations for the disposal of waste sheep dip to land are carried out by Scottish Government Rural Payments and Inspections Directorate (SGRPID) staff. *SEARS-SG-001: Disposal to Land - Waste Sheep Dip Authorisation Review* offers guidance in this regard.

## A2 Process Summary

**Figure 1 Disposal to land application process**



# A3 Pre-application Consultation

## A3.1 Charges

Applicants for a new licence should be aware that a licence is required before a disposal can take place. Applicants wishing to carry out sheep dipping prior to issue of authorisation may store spent sheep dip in appropriate containers while awaiting approval.

If the disposal is of >20m$^3$/day (>20,000l/day) then a higher level application fee will be applicable. Otherwise the application fee is the lower level charge. Note also that where disposal volumes exceed 5m$^3$ / day a higher level of subsistence fee may apply. For further information see the *Water Environment (Controlled Activities) Charging Scheme*.

## A3.2 Application pack

For new disposals of sheep dip or pesticide to land, potential applicants should be sent, via e-mail if possible:

- A copy of *Sheep Dipping Code of Practice for Scottish Farmers, Crofters and Contractors*
- *CAR Application Forms* (and associated guidance):
  - Form A covering general information
  - Form F covering site-specific and detailed information concerning the application
  - Guide for Applicants on how to complete the application forms

## A3.3 Prior investigation

Staff should talk the applicant through the prior investigation section of the application form. This allows the applicant to evaluate and optimise the location, type and size of ground that they will select for the disposal.

## A3.4 Landfill directive

Only one disposal is allowed per year on each area of land authorised for disposal. This ensures that the Landfill Directive does not apply to the disposal.

## A3.5 Discharge to soakaway

Many substances in waste sheep dip and pesticides are highly polluting. The disposal of these substances via a soakaway significantly increases the risk of pollution and the input into groundwater of hazardous substances as large volumes are discharged over a small area. SEPA policy is presumption against authorisation of disposal of waste sheep dip or pesticide to soakaway.

It is very unlikely that SEPA will authorise disposal to soakaway and then only after significant further investigations and the reasons for this should be discussed with the applicant and alternatives explored.

If the applicant insists in applying for a disposal to soakaway then they should be sent the standard letter *WAT-LETT-23: Further Info Request - Soakaway for Pesticide Disposal*. The letter includes a form which, when completed, will provide additional information on which a final decision can be made.

## A3.6 Responsible person

The CAR licensing regime requires the licence holder to nominate a "responsible person" who shall be responsible for securing compliance with the terms of the licence and the conditions specified within it. Legally, the 'responsible person' may be a natural person (i.e. an individual) or a legal person (e.g. a registered company, a corporation established by statute or charter, or a partnership). The responsible person will be responsible for any breaches in licence conditions, even when they are not the cause.

## A3.7 Scottish sheep scab initiative

Sheep scab is a highly contagious disease, caused by mites that penetrate sheep's skin and is a major animal welfare concern for sheep farmers and Scottish Government. In light of this, SEPA has agreed with NFUS to "fast-track" applications received for authorising disposals of waste sheep dip to land, given the importance of a rapid response to either outbreaks of scab, or periods when there is judged to be a high risk of transmission. On receipt of a letter or e-mail from a veterinary surgeon every effort should be made to process an application as quickly as possible. Confirmation that the application will be authorised (or not as the case may be) should be given to the applicant by telephone or e-mail and this should be followed by written confirmation using *WAT-LETT-12: Letter Issuing Authorisation* where appropriate. Where the site is judged to be unsuitable, staff should agree an acceptable alternative location with the land manager.

Refer to section A4.1 for the fast track approach where the application will involve consultation with an outside agency.

## A3.8 Third party authorisations

SEPA may receive an application from a group of land managers requesting a shared authorisation i.e. the authorisation would be held in one farmers name and he would allow other farmers to dispose of sheep dip on his / her land.

From SEPA's point of view this is acceptable as long as the authorisation covers all the disposals that will be made each year and that no disposal site is used more than once a year.

It should be made clear to the land manager who will hold the authorisation, that as the 'responsible person', he / she will be responsible for complying with the conditions of the authorisation and that any breaches may be reported to SGRPID and could result in penalties being applied to their Single Farm Payment.

## A3.9 When to issue a single or multiple licence.

As mentioned in section 3.4, disposal sites may only be used once per year. Multiple disposal sites will be needed where farmers need to dispose of waste sheep dip on more than one day per year. Multiple sites can be accommodated on a single licence.

In the majority of cases having multiple disposal sites on one licence should not raise any issues. There are some circumstances, for example where disposal sites are particularly spread out geographically, when the use of one licence to authorise multiple disposal sites would not be appropriate. The following criteria should be used to help inform the decision:

One licence can be issued to cover geographically different sites or different farms providing the:

- Disposals have the same responsible person
- Disposals are for the same type of activity, e.g. disposal of waste sheep dip
- Farms are managed / operated as one unit or have some degree of interdependency

If all the above conditions cannot be met, separate licences will be required.

Examples of such circumstances where a single licence may cover multiple disposal sites may include where one farmer manages a number of geographically distinct but interdependent farms or where an owner applies for an authorisation to cover several farms owned by the applicant but which are let to different tenants.

## A3.10 Movement of waste sheep dip and waste pesticides

Waste sheep dip and waste pesticides are 'special waste' which represent a significant risk to the environment or to humans. Contractors, and/or land managers who move waste sheep dip or waste pesticides to another location on a separate farming unit for disposal, will need to comply with the Special Waste Regulations 1996 (as amended). The movement of waste sheep dip or waste pesticide from one farm to another, under different IACS*[1] main

[1] Part of the coding system to identify agricultural holdings under the Integrated Administration and Control System (IACS) used to administer schemes within the Common Agricultural Policy

location codes, should therefore be consigned under the above Regulations prior to movement. SEPA must be notified 72 hours prior to its movement and a Special Waste Consignment Note must be obtained and completed. Consignment Notes may be obtained from your local SEPA office.

Further details on carriage of waste can be found on the SEPA website under *Who Needs to Register?*.

Further details on Special Waste requirements may be found in the SEPA guidance booklet *A Guide to Consigning Special Waste* and on the SEPA website.

# A4 Processing a New Application

## A4.1 Consultation

In certain circumstances other external bodies must be consulted, e.g. where there is a risk of impact to a designated site then SNH must be consulted. For further details you should refer to *WAT-RM-20: Advertising and Consultation* or guidance.

Please be aware of the consultation procedure below if the application is in response to an outbreak of Sheep Scab.

## Scottish sheep scab initiative

It has been agreed that minimising the consultation period between SEPA and external organisations offers the best opportunity to speed up the determinations process. If SEPA receives written confirmation of an outbreak of sheep scab or the existence of an increased risk of transmission from a veterinary surgeon in conjunction with an application or applications the consultation process should be initiated by faxing and telephoning the relevant agencies with a response required within 1-2 days.

## A4.2 Advertising

For SEPA policy on advertising, refer to *WAT-RM-20: Advertising and Consultation*.

## A4.3 Soakaway use for waste pesticide/ sheep dip disposal

The use of soakaways is not recommended in the *PEPFAA Code of Good Practice* because they by-pass the sorptive capacity of the top soil, the biological activity of the soil and possible photochemical degradation (i.e. effects of Ultra Violet light).

CAR does not prohibit the use of soakaways per se, unless the use of a soakaway for disposal might lead to the introduction of hazardous substances into groundwater or the pollution of groundwater by non-hazardous substances. Given the higher environmental risks associated with

the use of soakaways to both ground and surface waters, SEPA policy is presumption against authorisation of disposal of waste sheep dip or pesticide to soakaway.

SEPA will only consider authorising their use if a more detailed prior investigation has been undertaken by the applicant and the information demonstrates soakaway disposal to be suitable.

In the unlikely event that a new applicant indicates their intention to undertake the disposal via soakaway, they must be asked to supply additional information on the soakaway design and construction. Operations staff should inform the applicant that they are required to supply this information by sending out *WAT-LETT-23: Further Info Request - Soakaway for Pesticide Disposal*. This letter is accompanied by the blank soakaway details form which the applicant must complete and return to SEPA. SEPA should also send a copy of the map of the disposal area originally submitted with the application form with the letter, in order that the location of the soakaway can be clearly marked in relation to water supplies and watercourses in the event that this information has not been already provided.

# A5 Determining a New Application

## A5.1 Introduction

There are 6 stages of assessment of a new application as detailed below:

1. *Review application*
2. *Verify site suitability*
3. *Consider consultation responses*
4. *Undertake further risk assessment* (if necessary)
5. *Seek specialist advice* as necessary
6. *Site visit*

*Figure 1* gives an overview of the decision-making process, which should be followed when deciding whether to grant or refuse a Licence following receipt of an application.

## A5.2 Stage 1: Review application

The prior investigation section of the application form, the area of land required and the number of disposals per site per year should be checked.

## A5.3 Prior investigation

The main criteria of site suitability are highlighted on the prior investigation section of the application form. In developing this approach, extensive reference has been made to the recommendations contained in the *PEPFAA*

*Code of Good Practice* and the *Code of Practice for Using Plant Protection Products*.

The criteria used for assessing the suitability of land are intentionally precautionary, with the aim being to guide applicants to the most appropriate disposal areas. Run-off, pooling on the surface of the ground and subsequent discharge to surface or groundwater must be prevented. This is based on the principle that the soil (and its associated vegetative cover) provides a buffer between surface applied wastes and the groundwater below.

Land which is selected as suitable for disposal should allow percolation through the soil and subsoil. This movement through the soil profile is expected to facilitate the absorption of dangerous substances to soil particles, their retention for degradation, further dilution and subsequent dispersal by physical and chemical means. Studies of sorption onto soil, by sheep dip chemicals in particular, indicates that they will be retained within the top 10 cm of a loamy soil. Consequently, 0.6 m depth of soil builds in a considerable safety factor. Such safety factors are often necessary, particularly where soils are fissured (that is preferential flow paths exist), as features like this can allow contaminants to migrate rapidly to groundwater, bypassing some of the protection provided by the soil. A greater depth of a soil with a lower organic matter content may also be acceptable. Obviously, the situation may differ for non-sheep dip chemicals which could include those which are more water soluble and mobile. Extreme care will be required in the consideration of applications involving the disposal of mobile pesticides to ensure they do not reach groundwater. Co-disposal with slurry may assist with decomposition and breakdown processes due to the promotion of microbial activity within the soil.

**Table 1 Suitability criteria**
**(To be used in conjunction with *Appendix 1*)**

| Criteria | Suitable | Less suitable | Unsuitable |
|---|---|---|---|
| Land use | Grassland, heather moor and rough grazing | Land of conservation or amenity value. Fallow land, set-aside and stubble | Bare soil |
| Proximity to watercourses | >10 metres | | <10 metres |
| Annual risk of flooding | | | |
| Proximity to drinking water supplies from spring, well or borehole* | 1. Gravity fed supply >50m up slope or >500m down slope from the disposal area; or<br>2. Pumped supply >500 m in any direction from the disposal area | | 1. Gravity fed supply <50 m up slope and <500 m or down slope from the disposal area; or<br>2. Pumped supply <500m in any direction from disposal area |
| Proximity to unused springs, wells or boreholes | >50 metres | | <50 metres* |
| Slope and land form | 0-3º (even, gentle-moderate) | 4-7º, 7-11º, (moderate, undulating) | >11 º (steep) |
| Soil surface condition | Well vegetated, permeable soil | | Sparse, bare or compacted soil |
| Soil type | Dark coloured soils with high organic matter content<br>Clay soils<br>(low leaching potential) | | Very light coloured soils with low organic matter content<br>Very sandy soils<br>(high leaching potential) |
| - texture | Loamy, peaty | Loamy sands | Gravel and sand |
| - drainage status | Free, moderate or poor with deep drains | | Very poor or waterlogged |
| - depth | >0.6 metres of suitable soil on rock - <0.6 metres may be suitable depending on other soil conditions | | <0.6 metres of high leaching potential soil on rock. Avoid thin, gravelly or fissured soils |
| - pH | 5.0-7.5 | <5.0, >7.5 | |

| | | | |
|---|---|---|---|
| Field drainage | None present Drains with >0.6 metres of soil above pipes in medium and heavy soils | | Ridge and furrow, surface drains, shallow stone drains, drains with permeable backfill. Land recently mole drained or sub soiled |
| Available land | >0.2 ha per 4000 litres of dilute waste chemical** | | <0.2 ha per 4000 litres of dilute waste chemical |

* Unless a detailed hydrogeological assessment indicates otherwise.
** Note that the minimum area of land that is required for typical disposals of sheep dip and other pesticides disposal is not large (refer to Table 2 below)

**Table 2 Area of land required for waste sheep dip disposal**

| Final Waste Dip Volume (prior to dilution) | | Disposal Volume (1:3 waste dip to water) | | Minimum Disposal Area Required | | |
|---|---|---|---|---|---|---|
| Litres | (gallons) | Litres | (gallons) | Hectares | m2 | Acres |
| 225 | (50) | 900 | (200) | 0.045 | 450 | 0.11 |
| 337 | (75) | 1350 | (300) | 0.067 | 670 | 0.16 |
| 450 | (100) | 1800 | (400) | 0.09 | 900 | 0.22 |
| 562 | (125) | 2250 | (500) | 0.112 | 1124 | 0.27 |
| 675 | (150) | 2700 | (600) | 0.135 | 1350 | 0.33 |
| 787 | (175) | 3150 | (700) | 0.157 | 1574 | 0.38 |
| 900 | (200) | 3600 | (800) | 0.18 | 1800 | 0.44 |
| 1800 | (400) | 7200 | (1600) | 0.36 | 3600 | 0.88 |
| 2700 | (600) | 10800 | (2400) | 0.54 | 5400 | 1.32 |
| 3600 | (800) | 14400 | (3200) | 0.72 | 7200 | 1.76 |
| 4500 | (1000) | 18000 | (4000) | 0.9 | 9000 | 2.2 |

## Land area

The area of each disposal site should be at least the minimum size detailed in *Table 2*.

## A5.4 Stage 2: Verify site suitability

Using SEPA's GIS browser system, select the area of interest, zoom in to view the disposal area at an appropriate scale and check the following information:

- the topography of the disposal area(s) and degree of slope
- location of surface watercourses, standing waters and wetlands
- location of springs, boreholes and wells within 500 m (even where these are not used as a source of supply); Note: SEPA does not hold a full list of all abstractions but authorised abstractions can be identified by activating the Authorised Locations of the 'Licensing' theme
- any rocky outcrops
- water logged/marshy areas i.e. from symbols on O.S. map
- location of designated conservation sites (SSSI, SPA, SAC, Ramsar) using the 'WFD Protected Areas' standard map. To determine if advertising is required follow the procedure given in *WAT-RM-20: Advertising and Consultation*.
- the suitability of the disposal area(s) using the 'sheep-dip/pesticide disposal to land layer of the 'Groundwater' theme
  - (Site-specific investigation of soil depth should be undertaken if the disposal lies within 'zone of increased risk')
- Consider checking the Land Use designation as this may provide additional information on vegetation cover.

## A5.5 Stage 3: Consider consultation responses

SEPA staff should consider the responses to consultation. Where necessary they should seek the advice of an appropriate Science specialist

## A5.6 Stage 4: Undertake further risk assessment

A site visit is always required however where:

- The completed prior investigation section of the application form indicates the area is unsuitable
- The land area is not sufficient
- The desk verification process does not confirm the site characteristic as detailed in the prior investigation information
- The consultation responses have highlighted a potential problem with disposal at this location
- The applicant has ticked any of the less suitable criteria in the application form or
- An application is unlikely to be granted on the basis of unacceptable practices such as the disposal site being <10 m from a watercourse or disposal being made via a sub-surface soakaway

It would be beneficial to discuss this with the applicant prior to a site visit as a more suitable area for disposal may be available

Some assessment criteria are more critical than others. If some application criteria provide answers of 'less than suitable' then examine the list below for examples of situations which include less suitable or unsuitable characteristics but may warrant further consideration for authorisation. Site specific information can provide valuable additional information:

- poorly vegetated land where the soil is deep, has a high organic content and is freely drained
- sandy soil (medium leaching potential) where there is >2 m soil depth and the water table is no closer than 3 m from the soil surface for more than 9 months of the year (if this information is available without a detailed hydrogeological assessment)
- clay soil where the surface is well vegetated and the slope does not cause surface run-off to occur
- between 0.3 m and 0.6 m soil cover of soils of a high organic content
- pH of soil outside range if other criteria are suitable
- proposed disposals where water supplies (including those used for human and livestock drinking water, food processing and vegetable washing) are present and are gravity fed (e.g. a spring) and <50 m up slope from the disposal area
- slope and soil surface condition less suited but where there is less than 5 m3 per disposal, and the waste being disposed of has been further diluted by at least 3:1; and
- poorly drained soils where the soil surface is well vegetated, uncompacted and on flat areas of land

Note: The situations highlighted above obviously depend on site specific circumstances and may not be applicable in all circumstances. Due consideration should therefore be given to each application.

If following these assessments the site is still considered to be unsuitable and the applicant has refused or been unable to relocate the disposal site then a more detailed assessment should be carried out by seeking specialist advice and undertaking the site visit required as described in stage 5 below. No application shall be refused without it being taken through a more detailed assessment procedure.

## A5.7 Stage 5: Seek specialist advice

Specialist advice should be sought where:

- The disposal would be made using a soakaway discharging directly to the underlying strata, bypassing the top soil. (This type of application is likely

to be refused but additional information may be required from the applicant - consult a Hydrogeologist)

- The disposal would be made where spring or well water supplies (including those used for human and livestock drinking water, food processing and vegetable washing) are present and are either
  - <50 m up slope, or
  - <500 m down slope from the disposal area, or
  - <500 m in any direction where the ground is flat and there is a well or pumped borehole in use

The Operations Team member should try to gather the following information during the site visit:

- The source of water supply e.g. spring, borehole or well, pumped or gravity fed
- The frequency and rate of use e.g. continuous, daily, weekly, seasonally
- The distance and direction (up slope/down slope) of supply from disposal area
- If the supply is a spring fed holding tank, the location of the spring source
- If a borehole or well supply; the depth of the borehole/well and the presence and depth of casing

Advice from a Hydrogeologist should then be sought.

- The disposal is on or close to a SSSI, SPA, SAC or Ramsar site, where the discharge may affect the status of the site, consult an Ecologist and SNH following the procedures described in *WAT-RM-20: Advertising and Consultation* and the *Nature Conservation Procedure*.
- Where the disposal would take place within a 'zone of increased risk' according to the GIS assessment. Assessment of the soil condition during the inspection will determine whether the site is suitable or not. A Soil Specialist should be consulted if doubt exists following sampling in these circumstances
- Applications which have been advertised and where formal objection have been made which SEPA believe are justified. The specialist consulted will depend on the issue raised.
- Where there are unresolved unsuitable soil or land use criteria the issues may be resolved during the site visit. Where uncertainty remains, consider consulting a Land Quality or Soil Specialist as appropriate.

## A5.8 Stage 6: Site Visit

All applications should receive a site visit to check the suitability of the disposal site on the ground. Complete *WAT-FORM-06: Disposal to Land - New Application Assessment Form* for each disposal site investigated.

Operations staff should make an appointment to visit the applicant as it is imperative that they are present at the site inspection. If the site visit reveals that the selected site is unsuitable and there are more suitable sites on the farm for disposal, the farmer should be advised and recommended to change his application. The applicant must complete the prior investigation section of the application form for each new site.

Staff should follow the *Biosecurity Guidance for SEARS Staff* and any relevant health and safety guidance when undertaking site visits. Particular care should be taken if undertaking sampling.

While on-site the opportunity should be taken to inspect the dipper (operation of these facilities now falls within the scope of CAR and is authorised by General Binding Rule 24). Details should be added to *WAT-FORM-06: Disposal to Land - New Application Assessment Form*.

## A5.9 Assessment Outcome

If the information on the application form is satisfactory, there have been no issues raised during the consultation process and the site conditions have been verified and confirmed by a site visit the application may be authorised without further assessment. *WAT-FORM-06: Disposal to Land - New Application Assessment Form* represents an auditable record of the outcome of the risk assessment.

If a potential problem was initially noted but additional information gained from your review and the site visit indicates that there is negligible risk of pollutants affecting the water environment or that the risk will be reduced to acceptable levels by means of conditions applied to the licence, the application may be authorised, with additional site-specific licence conditions and technical precautions as required e.g. it may be possible to authorise an area for disposal if a suitable 10 metre buffer to a watercourse is included in the Licence. If the disposal area is sloped a larger buffer zone could be included as a further precaution.

If there is sufficient evidence that there is a risk of hazardous substances entering groundwater or groundwater pollution occurring, and no licence conditions can be adopted to prevent this, then the application should be recommended for refusal. In many situations, there may be merit in discussing the decision with the applicant before the licence is refused.

A refusal should only be made in respect to a proposed disposal area which is not suitable and an alternative area cannot be found. Having one unsuitable site is not grounds for refusing the application if another site is suitable, provided that the suitable site is identified in the application and the

authorisation only identifies the suitable site. Similarly, if the refusal is on the basis of a sub-surface soakaway, it may be possible to issue an authorisation for surface application of wastes, without the applicant having to reapply.

Refusal may be justified in some of the following situations:

- The groundwater table is within 1m of the ground surface
- Bedrock is exposed at the surface
- There is very thin gravely soil
- The hydrogeologist considers that water supplies or the water environment may be at risk from the discharge

**Recommendations to refuse an application should be referred to the Regulatory Review Team.**

**Finally, it is essential to record the assessment process and final determination on** *WAT-FORM-06: Disposal to Land - New Application Assessment Form***, and to append this to a completed** *Document Approval Form***.**

# Section B: Disposal of Waste Disinfectant Washings

## B1 Introduction

Following an outbreak of a notifiable disease farm buildings, yards and equipment will need to be cleaned and disinfected (C&D) before restocking can begin. C&D is carried out in two distinct phases: a preliminary disinfection and a secondary thorough clean and disinfection (may be required to be carried out twice). The APHA is responsible for the preliminary disinfection which takes place after the cull and involves applying an approved disinfectant to surfaces to damp down the grossly contaminated areas thereby reducing the levels of infective agent and minimises the risk of local spread. However, this does not remove all infective agents from premises and the site operator will be required to undertake secondary C&D aimed at minimising the chances of the disease recurring.

The preferred option for the disposal of waste disinfectant washings is to a suitably licensed sewage treatment works (either through an existing consented connection to the sewer network or by tanker to the closest suitably licensed works) or wastewater treatment works where possible. The operator of the sewer system or the treatment works must be made aware of the nature and volume of washwater and must give prior permission. Any tanker movements must comply with the Duty of Care, including transported by a registered waste carrier and accompanied by a waste transfer note.

Where disposal at a sewage or wastewater treatment works is not possible, the next option is to discharge the disinfectant washings to land. A CAR registration will be required if you plan to discharge >10$m^3$/d of disinfectant washings in the event of a notifiable disease outbreak.

## B2 Processing and Determining an Application

If an application requires accelerated determination by reason of an “emergency” as defined by Regulation 18(8) of The Water Environment (Controlled Activities) (Scotland) Regulations applicants will tick the box on the application form under Notification of Registration. This will apply if a notifiable disease outbreak has been confirmed and cleaning and disinfection has been required by the National Disease Control Centre. WAT-RM-49 - Emergency Provisions and Accelerated Determination provides further information.

If the disinfectant is mixed with slurry then the whole content of the slurry store requires authorisation for its disposal.

The application form requires the applicant to confirm:

- The site is suitable by ticking “yes” in section 2, site details;
- The disinfectants or detergent used is DEFRA approved;

- That the disinfectants or detergent will be diluted to the correct working strength in accordance with the manufacturer's instructions;
- The application rate will be < 20m3/ha.

If the applicant ticks "yes" to all these questions the application should be authorised.

Should the applicant tick "no" the application will need further assessment. Details of what to do is set out in B2.1-B2.3. Changes to the authorisation conditions may be required if further assessment shows the application to be acceptable.

## B2.1 Nearby waters supplies

Where there is a well, spring or borehole used for human consumption within 250m of the disposal site then then the application should be assessed to determine if the supply is a spring or shallow un-pumped well that is >50 m up slope from the disposal site. If it is then it can be authorised. If not then the Permitting Team member should try to gather the following information and then pass the information to the WRU for assessment:

- The source of water supply e.g. spring, borehole or well, pumped or gravity fed;
- The frequency and rate of use e.g. continuous, daily, weekly, seasonally;
- The distance and direction (up slope/down slope) of supply from disposal area;
- If the supply is a spring fed holding tank, the location of the spring source;
- If a borehole or well supply; the depth of the borehole/well and the presence and depth of casing.

## B2.2 Distance to surface waters

Authorisation is not normally permitted for disposals within 10m of a surface water. However, the disposal area can often be modified to provide a sufficient buffer zone.

## B2.3 Other criteria

If some other answers are "no" then examine the list below for examples of situations which include unsuitable characteristics but may warrant further consideration for authorisation. Site specific information can provide valuable additional information:

- poorly vegetated land where the soil is deep, has a high organic content and is freely drained

- sandy soil where there is >2 m soil depth and the water table is no closer than 3 m from the soil surface
- between 0.3 m and 0.4 m soil cover of soils of a high organic content
- poorly drained soils where the soil surface is well vegetated, uncompacted and on flat areas of land

If following these assessments the site is still considered to be unsuitable and the applicant has refused or been unable to relocate the disposal site then a more detailed assessment should be carried out by seeking specialist advice.

# Appendix 1: Criteria to Assess Land Suitability

## Land Use

### Suitable

- Land that is well vegetated and has good topsoil structure capable of absorbing the volume of liquid being disposed of without the risk of run-off or pooling of the waste on the surface. Grassland, rough grazing or heather moor is therefore potentially suitable. Stubble ground where the land has been undersown with the next crop in the rotation and there is significant new growth may be suitable.

### Less suitable/Unsuitable

- Land of conservation value, comprising of SSSIs, Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). The Conservation (Natural Habitats etc.) Regulations 1994 (which implement the EC Habitats Directive) impose on SEPA a duty to have regard to the need to protect SACs and SPAs. In addition, if any activity which SEPA proposes to authorise has the potential to damage the interests for which any SSSI has been notified, SEPA has a statutory duty to consult with SNH.
- Where local knowledge indicates that the land is statutorily designated for conservation or amenity value, such as Country Parks and Local Nature Reserves.
- Where local knowledge indicates that the land is designated as an Environmentally Sensitive Area or set-aside land, as disposal at such sites may be contrary to the requirements of the scheme.
- Land less than 10 m from public access areas, as the risk of chemical drift or run-off needs to be minimised in line with the requirements of the *PEPFAA Code of Good Practice*.
- Stubble ground where no new crop has been sown and there is limited new growth, due to open and stalky nature of the cropped material.
- Bare soil.

## Proximity to Watercourses

### Suited

- Land more than 10 m from a watercourse, greater than 50 m from a spring, well or borehole and more than 500 m down slope from a drinking water supply. The area in between should be well vegetated, gently sloping (<5 degrees), of moderate-to-high infiltration (>3 cm/hour) and have a low flood risk (<1 year in 10). Such areas will have adequate infiltration capacity to accept maximum application of dilute wastes with minimal risk of run-off and hence pollution of surface waters.

### Less suited

- Land where the slope (>5 degrees) and poor soil surface condition (compacted, frozen or waterlogged) could result in low infiltration capacity and a high risk of surface run-off resulting in pollution of surface waters.

**Unsuited**

- Land less than 10 m from a watercourse, as there is insufficient buffer strip to prevent run-off or spray drift polluting surface waters.
- Land less than 50 m from spring, well or borehole, as required by the *PEPFAA Code of Good Practice*, to prevent impact upon water supplies.
- Land up slope and less than 500 m from a drinking water supply. Pollutants arriving at the water table can move down the hydraulic gradient very quickly to appear in drinking water supplies. For most sites, a lack of detailed hydrogeological knowledge means that caution must prevail when gauging the risk to drinking water supplies. A safety zone of 500 m up slope has therefore been adopted to minimise the risk of pollution of the source unless hydrogeological assessment considers otherwise..
- Land with an annual flood risk >1 year in 10, as flooding of the land could lead to pollution of surface waters.

## Soil Surface Condition and Slope

**Suited**

- Well vegetated, gently sloping land (<5 degrees) with good surface stability, a moisture content less than field capacity and an infiltration rate of greater than 3 cm/hr. These conditions will prevent surface run-off of waste chemicals and loss of eroded soil particles carrying sorbed agrochemicals (especially, pesticides).

**Less suited**

- Land with a slope of >5 degrees has been categorised as unsuitable in the flowchart as this will increase the risk of run-off. Steeper slopes may be suitable where farms or crofts are on marginal ground with difficult conditions, a high proportion of their land which is steeply sloping and where only small quantities of agrochemicals are being disposed (for example, 225 - 900 litres of (undiluted) waste sheep dip). This would also depend on the characteristics of the disposal area, the soil type and extent of soil cover.

**Unsuited**

- Sparsely vegetated, fissured, bare, compacted, frozen or waterlogged soils as they are susceptible to erosion and have low adsorption capacity, resulting in a high risk of run-off and particulate transfer to watercourses.

## Soil Type

Pesticides reaching the soil can dissipate by several routes:

- Volatilisation (governed by physical-chemical properties of pesticide and climate)
- Photochemical degradation (governed by physical-chemical properties of pesticide and weather conditions)
- Surface run-off / sorption by the soil (governed by physical-chemical properties of pesticide and soil conditions)
- Microbial degradation (governed by physical-chemical properties of pesticide and microbial populations)
- Hydrolytic breakdown (governed by physical-chemical properties of pesticide, climatic and soil conditions)
- Leaching (governed by physical-chemical properties of pesticide and soil conditions)

Pesticide formulation will have a bearing on the physical-chemical behaviour of a pesticide.

Nearly all pesticides and sheep-dip chemicals are sorbed by the soil to some degree. Organic matter and clay content are two of the principal soil properties involved in pesticide sorption. Since both of these soil characteristics can be difficult to assess in the field, soil texture, which is easier to assess, can be used to give a good indication of rate of sorption. Details on how to assess soil texture are given in *Appendix 2*.

In general, soils which have extreme characteristics such as very low pH or continuous waterlogging have lower microbial biomasses and are therefore less suitable as disposal areas.

**Suited**

- Soils of high sorption capacity, high degradation and low leaching potential assessed on:
  - Texture- sandy loam, silt loam, sandy silt loam, sandy clay loam, clay loam, silty clay loam and peat.
  - Drainage status - freely or moderately drained soils, preferably where the watertable is >1 metre from the surface for >9 months of the year or inherently poorly drained soils in which the watertable has been controlled by the installation of under-drainage at >0.6 metres depth with no permeable backfill.
  - Depth - >0.6 metres depth of soil with suitable texture. Shallower soils would be considered suitable if other conditions were suitable.

- pH - within the range of 5.0-7.5 encouraging a high microbial biomass activity. Where soils are too acidic, areas may be limed to increase pH (not suitable for heather moorland).

**Unsuited**

- Soils of low sorption capacity and high leaching potential, i.e. soils of coarse texture (gravel, sand, loamy sand), very poor drainage (watertable <0.25 m from surface for >6 months), shallow depth (<0.6 metres), strongly fissured and strongly acid (pH <5.0) or strongly alkaline (pH >7.5).

## Field Drainage

Pollution problems are greatest in land where the type of drainage system results in run-off (surface drains) or rapid leaching via soil by-pass (stone drains, permeable backfill, moling or sub-soiling).

**Suited**

- Freely drained land with no drains present (or of very limited extent) and drained land with >0.6 metres of soil cover above the pipe system. This will provide adequate soil cover to adsorb pesticide wastes.

**Unsuited**

- Land with surface drainage systems, under-drainage with permeable backfill to within 0.6 metres of the surface and recent sub-soiling or moling where soil fissuring persists, as this will enhance infiltration into groundwater.

## Available Land

**Suited**

- Land which has the infiltration capacity to accept a maximum application rate of 20,000 litres (20 cubic metres) of diluted waste pesticide per hectare.

**Less suited**

- Land which has been used for waste disposal within the last year (since only one application of waste is permitted per site per year to comply with the LFD), and where restricted grazing for 28 days after the application is recommended.

Note: The less suitable classification is based on grounds of protection of animal health and Landfill Directive requirements rather than groundwater protection, although a less frequent application is also likely to be of benefit in reducing the potential for groundwater pollution by reducing chemical loading.

# Appendix 2: Texturing Key for Mineral Soils

The table below can be used for field visits to give an approximation to the amount of sand, silt and clay present in the soil and whether it would be suitable for agrochemical disposal at the depth of >0.6 m. The only equipment needed is a small water bottle to moisten the soil sample. Organic-rich soils, such as peat, can be identifiable by their black colour and low density. These soils are suitable for disposal sites as long as they are not waterlogged or likely to pollute surface waters.

## Table 3 Soil Testing Steps

| Step | Action | Next step / Texture | Suitable soil? |
|---|---|---|---|
| 1 | Moisten soil (approx. teaspoon)<br>Can it be rolled into a ball easily? | Yes - Step 2 | |
| | | No - Sand or Gravel | No |
| 2 | Can it be rolled into a cylinder c. 5 mm in diameter? | Yes - Step 3 | |
| | | No - Loamy sand | No* |
| 3 | Can it be rolled into a thin tread? | Yes- Step 4 | |
| | | No -Sandy loam | Yes |
| 4 | Can the thread be formed into a horseshoe shape without cracking? | Yes - Step 7 | |
| | | No - Step 5 (Silty loams) | |
| 5 | Feels smooth and pasty | Yes - Silty loam | Yes |
| | | No – Step 6 | |
| 6 | Feels rough and abrasive | Yes - Sandy silt loam | Yes |
| | | No/cant tell - Silty loam | |
| 7 | Can the horseshoe be formed into a ring without cracking? | Yes - Step 8 (Clays) | |
| | | No - Step 10 (Clay loams) | |
| 8 | Feels gritty | Yes - Sandy clay | Yes |
| | | No - Step 9 | |
| 9 | Feels moderately or very sticky | Yes - Silty clay | Yes** |
| | | No/can't tell – Clay | |
| 10 | Feels gritty | Yes - Sandy clay loam | Yes |
| | | No - Step 11 | |
| 11 | Feels moderately rough | Yes - Clay loam | Yes |
| | | No - Step 12 | |
| 12 | Feels like dough | Yes - Silty clay loam | Yes |
| | | No/can't tell - Clay loam | |

After Trudgil, S. (1989, revised 2012) *Soil types: a field identification guide*.
* Soil depth would have to be greater than 2m in order for soil to be suitable.
** Possibility of run off. Areas would have to be well vegetated and flat.

# References

NOTE: Linked references to other documents have been disabled in this web version of the document.

See the Water >Guidance pages of the SEPA website for Guidance and other documentation (www.sepa.org.uk/regulations/water/guidance/).
All references to external documents are listed on this page along with an indicative URL to help locate the document. The full path is not provided as SEPA can not guarantee its future location.

## Key References

*WAT-RM-20: Advertising and Consultation*

*WAT-SG-14: Disposal to Land - Waste Sheep Dip/Pesticide Washings Authorisation Review*

*WAT-FORM-06: Disposal to Land - New Application Assessment Form*

*WAT-LETT-12: Letter Issuing Authorisation*

*WAT-LETT-23: Further Info Request - Soakaway for Pesticide Disposal*

## Other Documents

*A Guide to Consigning Special Waste* (www.sepa.org.uk)

*Guidance for the Completion of the Document Approval Form* (Doc No: DAF-G-001)

*Document Approval Form* - Environmental Licences and Statutory Notices (Doc No: NEWDAF)

*Biosecurity Guidance for SEARS Staff* (Doc No: ATT/04/03)

*Code of Practice for Using Plant Protection Products* Defra 2006 (www.pesticides.gov.uk/)

*CAR Application Forms* and associated guidance (ww.sepa.org.uk)

- Form A covering general information
- Form F covering site-specific and detailed information concerning the application
- *Guide for Applicants* on how to complete the application forms

*Nature Conservation Procedure* SEPA Intranet

*PEPFAA Code of Good Practice* Prevention of Environmental Pollution From Agricultural Activity, Scottish Executive (www.scotland.gov.uk/)

*SEARS-SG-001: Disposal to Land - Waste Sheep Dip Authorisation Review* (SGRPID Inspection Guidance)

*Sheep Dipping Code of Practice for Scottish Farmers, Crofters and Contractors* SEPA 2006 (www.sepa.org.uk/)

*Soil types: a field identification guide*, Trudgil, S., Field Studies Council (www.field-studies-council.org/)

*Water Environment (Controlled Activities) Charging Scheme* (www.sepa.org.uk)

*Who Needs to Register?* (www.sepa.org.uk)

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