

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)

A Practical Guide

A practical guide to the regulations, including:

- An overview
- Definitions of the regimes
- Levels of authorisation
- The General Binding Rules

Version 8.3 February 2019



Briefing note

The CAR practical guide, Version 8, January 2018

1. Background

This revised guide provides practical advice on the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended), or CAR. It details which activities are regulated by SEPA. The key changes to the guide are summarised in this briefing note. For further information on the regulations, visit the water regulation pages of the SEPA website. Please note that the CAR Practical Guide is only available electronically.

2. Summary of changes

This revision is primarily to include the changes to CAR brought in by the Water Environment (Miscellaneous) (Scotland) Regulations 2017.

2.1 Pollution control regime

- Oil Storage now covered by new GBRs 26, 27 and 28
- Sites where there is an onward distribution of oil – new Licence requirement for those not able to comply with GBR28
- Application of pesticide – revised GBR23 and new Registration and Licence
- Construction site SUDS – revised GBR10 and new Licence
- Direct discharge into groundwater of grout containing blaes for the purpose of construction or maintenance works – new Registration

2.2 Engineering regime

- Operating vehicles in or near a surface water or wetland – revision to GBR9 – the Registration for this activity has been removed
- Bank protection using trees – new GBR25 – Registration has been removed

v8.1 January 2018

Correction relating to herbicide applications

v8.2 February 2018

Pollution control regime

A licence is now required for surface water discharge from 60 hectares of residential development (>1000 houses previously) and A roads are now included.

Engineering regime

Updated information text in relation to contacting local District Salmon Fishery Boards or Trusts for advice.

v8.3 February 2019

Pollution control regime

Clarification of the level of authorisation of surface water from different types of construction sites.

Engineering regime

Updated information text in relation to clarifying river width in determining level of authorisation.

Contents

<u>1. Purpose of the guide</u>	4
<u>2. The Controlled Activities Regulations (CAR)</u>	6
<u>2.1 Levels of authorisation</u>	7
<u>2.2 General Binding Rules</u>	7
<u>2.3 Registrations</u>	7
<u>2.4 Licences</u>	7
<u>3. Pollution control regime</u>	8
<u>3.1 Point source pollution control</u>	8
<u>3.2 Diffuse pollution control</u>	9
<u>3.3 Pollution control – levels of authorisation</u>	10
<u>3.4 Pollution control – General Binding Rules</u>	16
<u>4. Abstraction regime</u>	32
<u>4.1 Groundwater abstractions and borehole construction</u>	
<u>- levels of authorisation</u>	33
<u>4.2 Abstraction – General Binding Rules</u>	36
<u>5. Impoundment regime</u>	40
<u>5.1 Impoundment – levels of authorisation</u>	41
<u>5.2 Impoundment – General Binding Rules</u>	42
<u>6. Engineering activities</u>	43
<u>6.1 Engineering – levels of authorisation</u>	44
<u>6.2 Engineering – General Binding Rules</u>	49
<u>7. Glossary of terms and acronyms</u>	57

1. Purpose of the guide

This guide provides practical advice on the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended), or CAR. It details which activities are regulated by SEPA.

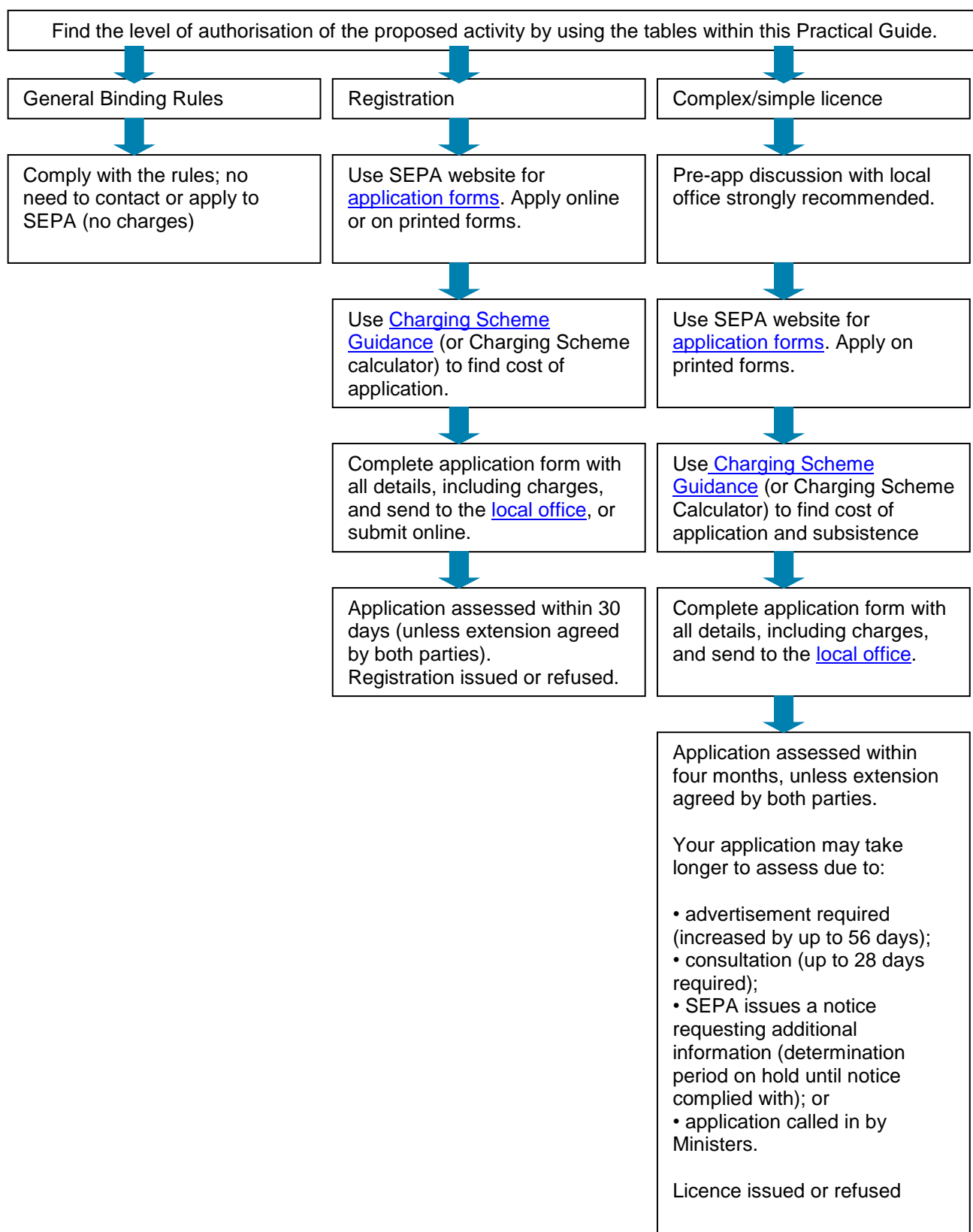
More detailed guidance on how SEPA has implemented CAR and background information on the Water Framework Directive (WFD) can be found at: www.sepa.org.uk/water.aspx

The CAR Practical Guide will help you determine which level of authorisation you need to apply for:

1. Refer to the relevant chapter to see if your activity requires authorisation.
2. If your activity falls under a General Binding Rule (GBR) you do not need to apply to SEPA for an authorisation, though you must ensure you comply with the conditions of the GBR. If your activity needs to be registered or licensed you will need to apply to SEPA. Application forms are available at: www.sepa.org.uk/water/water_regulation/car_application_forms.aspx
3. To work out the cost of the application, and to find out whether a subsistence (annual) fee applies, you will need to refer to the Charging Scheme Guidance at: www.sepa.org.uk/wfd/regimes/charging.htm
4. You can also use SEPA's online Charge Calculator to determine the fee (this will also calculate reduced application fees for multiple activities): www.sepa.org.uk/wfd/regimes/charging.htm
5. Submit the completed application form, with the correct application fee, to your local SEPA office: www.sepa.org.uk/contact

Note: If at any point you have a query, please contact your local SEPA office: www.sepa.org.uk/contact

CAR authorising process¹



¹ As required by the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).

2. The Controlled Activities Regulations authorisation requirement

Since 1 April 2006 it has been an offence to undertake the following activities without a CAR authorisation:

- any activity liable to cause pollution of the water environment², including discharges of polluting matter and disposal of waste sheep dip and waste pesticides;
- abstraction of water from the water environment;
- construction, alteration or operation of impounding works (e.g. dams and weirs) in surface water³ or wetlands⁴;
- carrying out building or engineering works (a) in inland water⁵ (other than groundwater) or wetlands; or (b) in the vicinity of inland water or wetlands and having or likely to have a significant adverse effect on the water environment;
- artificial recharge or augmentation of groundwater;
- the direct or indirect discharge, and any activity likely to cause a direct or indirect discharge, into groundwater of any hazardous substance or other pollutant;
- any other activity which directly or indirectly has or is likely to have a significant adverse impact on the water environment.

If any of these activities is already authorised by one of the following environmental regulatory regimes, it will already be considered to be authorised under CAR. You will not need to apply for separate authorisation:

- Radioactive Substances Act 1993
- Integrated Pollution Control (Part 1 of Environmental Protection Act 1990)
- The Pollution Prevention and Control (Scotland) Regulations 2000
- The Pollution Prevention and Control (Scotland) Regulations 2012
- Waste Management Licensing (Part II of Environmental Protection Act 1990)

CAR authorisation is intended to control impacts on the water environment, including mitigating the effects on other water users. Additional consents may be required from other authorities, such as planning permission or permission associated with conservation areas or protected species.

Throughout this guide there are references to new and existing activities. As a general rule, for the purposes of CAR, a new activity is one that started on or after 1 April 2006, while an existing activity is one that started before 1 April 2006.

² the water environment' includes all surface water, groundwater and wetlands.

³ 'surface water' means inland water (other than groundwater), transitional water (e.g. estuaries) and coastal water.

⁴ 'wetland' means an area of ground the ecological, chemical and hydrological characteristics of which are attributable to frequent inundation or saturation by water and which is directly dependent, with regard to its water needs, on a body of groundwater or a body of surface water.

⁵ 'inland water' means all standing or flowing water on the surface of the land (e.g. rivers, lochs, canals, reservoirs) and all groundwater.

2.1 Levels of authorisation

In order to allow for proportionate regulation based on the risk an activity poses to the water environment, there are three types of CAR authorisation:

- General Binding Rules (GBRs)
- Registrations
- Licences

2.2 General Binding Rules

GBRs represent a set of mandatory rules which cover specific low risk activities. Activities complying with the rules do not require an application to be made to SEPA, as compliance with a GBR is considered to be compliance with an authorisation. Since the operator is not required to apply to SEPA, there are no associated charges.

SEPA uses its statutory role in the land use planning system to highlight GBRs that may apply to a given proposal.

The individual GBRs are described in more detail in the appropriate regime-specific sections of this guide. They are numbered according to Schedule 3 of CAR.

Note: If you think you would be unable to comply with one or more of the general binding rules applicable to your proposed activity, you may still be able to carry out the activity by obtaining an authorisation from SEPA in the form of a registration or water use licence. SEPA will be able to determine whether the activity can be carried out under one of these forms of authorisation without posing a significant environmental risk. Please contact your local SEPA office for advice.

2.3 Registrations

These allow for the registration of small-scale activities that individually pose low environmental risk but, cumulatively, can result in greater environmental risk. Operators must apply to SEPA to register these activities. A registration will include details of the scale of the activity and its location, and there will be a number of conditions of registration that must be complied with. There is an application fee for registrations, though subsistence (annual) charges do not apply.

2.4 Licences

These allow for site-specific conditions to be set to protect the water environment from activities that pose a higher risk. Licences can cover linked activities on a number of sites over a wide area, as well as single or multiple activities on a single site. Application fees apply to all licences, and subsistence (annual) charges may apply. SEPA has simple licences and complex licences for activities, for which different charges apply.

A key feature of CAR licences, unlike GBRs and registrations, is that they require the applicant to nominate a 'responsible person' (i.e. an individual/partnership/company) to be held accountable for securing compliance with the terms of the licence.

To determine which level of authorisation is required for an activity, please consult the regime-specific sections of this guide.

Information on charges and associated guidance is available at:

<https://www.sepa.org.uk/regulations/authorisations-and-permits/charging-schemes/charging-schemes-and-summary-charging-booklets/>

3. Pollution control regime

WEWS⁶ and CAR provide a framework within which certain activities that may impact on the water environment may be authorised subject to conditions that adequately protect the water environment, but it may not be appropriate to authorise all activities e.g. a slurry spill in the vicinity of a watercourse is an activity liable to cause pollution of the water environment, but SEPA would not authorise it. SEPA routinely uses this framework to control point source discharges to the water environment as well as disposals to groundwater via land.

Pollution, in relation to the water environment, means the direct or indirect introduction, as a result of human activity, of substances (including bacteria and other pathogens) or heat into the water environment, or any part of it, which may give rise to any harm.

For these purposes, 'harm' means:

- (a) harm to the health of human beings or other living organisms;
- (b) harm to the quality of the water environment, including:
 - (i) harm to the quality of the water environment taken as a whole;
 - (ii) other impairment of, or interference with, the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems;
- (c) offence to the senses of human beings;
- (d) damage to property; or
- (e) impairment of, or interference with, amenities or other legitimate uses of the water environment.

The Water Environment (Diffuse Pollution)(Scotland) Regulations 2008 introduced a number of General Binding Rules (GBRs) to control specified activities that are liable to cause diffuse pollution, these changes are now incorporated in CAR and amend the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Scotland) Regulations 2003 to allow surface water run-off from some farm steading areas to be drained to a constructed farm wetland.

The Water Environment (Miscellaneous) (Scotland) Regulations 2017 brought the provisions of the Water Environment (Oil Storage) (Scotland) Regulations 2006 which is now revoked. These are contained within General Binding Rules 26, 27 and 28.

3.1 Point source pollution control

Point source discharges include:

- sewage and trade effluent discharges;
- surface water discharges from urban areas;
- abandoned mine discharges;
- disposals of waste sheep dip and other waste pesticides.

Such discharges will typically be made directly to the water environment. However, the regime also covers discharges to land that result in the indirect discharge of matter liable to cause pollution of groundwater.

In particular, SEPA authorises discharges of sewage and trade effluent to land (e.g. via a soakaway) and the disposal of waste sheep dip and other waste pesticides.

⁶ The Water Environment and Water Services (Scotland) Act 2003

It is recognised that in certain circumstances a structure may have to be constructed before an authorised activity can be carried out (e.g. a new outfall pipe to facilitate a point source discharge or an intake structure to facilitate an abstraction). In these circumstances, SEPA treats the construction (an engineering activity) as secondary to the primary activity and will normally authorise the construction activity in the same authorisation document as the primary activity. This means that SEPA will not normally require two separate applications to be made or fees to be paid, however, SEPA will need details of any dependent activities to be submitted with the main application.

SEPA does not require authorisation for the following types of discharge:

- Discharges from vessels in coastal or transitional waters. These will continue to be controlled by the Maritime and Coastguard Agency (as set out in the Merchant Shipping Act 1995) and will not be covered by CAR. However, SEPA will consider taking enforcement action against vessels discharging sewage or trade effluent to rivers and lochs where this is liable to cause pollution.
- Occasional discharges from public water treatment works, and the water supply system, provided it is undertaken in accordance with the Water Supply Hygiene procedures (Scottish Water) or the Water (Scotland) Act 1980.
- Discharges of uncontaminated groundwater abstracted* directly through boreholes/well pointing and discharged without contact with any other drainage run-off, in order to dewater opencast coal sites/quarry/construction sites. It must be made very clear to the operator that this only applies to uncontaminated groundwater.
- Discharges from storage tanks/pipelines which are filled with clean water in order to test water tightness e.g. fish farm tanks, chemical/oil storage tanks.
- Discharges of uncontaminated rainwater which has collected in an oil storage bund. i.e. no visible sheen.
- Initial pumping out of water from a dry dock and also uncontaminated water which is released simply by the opening of gates.

* The initial abstraction may require authorisation.

Authorisation from SEPA will be required for the disposal to land of waste sheep dip or waste pesticides and pesticide washings.

3.2 Diffuse pollution control

Diffuse pollution is caused by releases of pollutants from a range of activities on land that individually may have little effect on the water environment, but cumulatively can have a significant impact across a (river) catchment.

The General Binding Rules (GBRs) for diffuse pollution are based on widely accepted standards of good practice, such as the Prevention of Environmental Pollution from Agricultural Activity (PEPFAA) Code, the 4 Point Plan and the Forests and Water Guidelines. Essentially, they provide a statutory baseline of good practice and are expected to contribute significantly to improvements in water quality.

Activities covered by the GBRs include the:

- storage and application of fertilisers;
- keeping of livestock;
- cultivation of land;
- discharge of surface water run-off;
- construction and maintenance of roads and tracks;
- storage and application of pesticide;
- operation of sheep dipping facilities.

3.3 Pollution control – levels of authorisation

Use Table 1 to determine the level of authorisation applicable for pollution activities. The notes below the table provide supporting information.

Table 1: Pollution control levels of authorisation

pe = population equivalent

CSO = combined sewer overflow

GBR	Registration	Simple licence	Complex licence
Sewage and organic effluents			
	Organic effluents ≤15pe (including discharges to soakaways)	Organic effluents >15– 100pe	Organic effluents >100pe
	Sewage (including discharges to soakaways): built before 1 April 2006 ≤50pe built after 1 April 2006 ≤15pe	Sewage: built before 1 April 2006 >50– 100pe built after 1 April 2006 >15–100pe	Sewage >100pe
		Low significance CSOs	Medium and high significance CSOs
			Emergency overflows
Fish farms			
	All non-commercial fish hatcheries for native fish	Freshwater cage fish farms ≤2 tonnes	Freshwater cage fish farms >2 tonnes
		Marine cage/tank fish farms ≤50 tonnes	Marine cage/tank fish farms >50 tonnes
	Tank fish farms/hatcheries ≤0.5 tonnes	Tank fish farms/hatcheries >0.5 tonnes	

GBR	Registration	Simple licence	Complex licence																					
Inorganic effluents and other trade effluents																								
Direct discharges into groundwater as a result of construction or maintenance works which come into contact with groundwater (e.g. pouring of concrete below the water table) [GBR16]	Inorganic effluents and other trade effluents including mines and quarries (not landfill leachates) <table border="1"> <tr> <td>Volume m³/d</td> <td></td> <td>pe</td> </tr> <tr> <td>≤10</td> <td>and</td> <td>≤15</td> </tr> </table>	Volume m ³ /d		pe	≤10	and	≤15	Inorganic effluents and other trade effluents, including those from mines and quarries and landfill leachate <table border="1"> <tr> <td>Volume m³/d</td> <td></td> <td>pe</td> </tr> <tr> <td>≤10</td> <td>and</td> <td>>15-100</td> </tr> <tr> <td>>10-100</td> <td>and</td> <td>≤100</td> </tr> </table>	Volume m ³ /d		pe	≤10	and	>15-100	>10-100	and	≤100	Inorganic effluents and other trade effluents, including those from mines and quarries and landfill leachate <table border="1"> <tr> <td>Volume m³/d</td> <td></td> <td>pe</td> </tr> <tr> <td>>100</td> <td>or</td> <td>>100</td> </tr> </table>	Volume m ³ /d		pe	>100	or	>100
Volume m ³ /d		pe																						
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Volume m ³ /d		pe																						
≤10	and	>15-100																						
>10-100	and	≤100																						
Volume m ³ /d		pe																						
>100	or	>100																						
	Direct discharge into groundwater of grout containing blaes for the purpose of construction or maintenance works																							
		Water treatment works discharges																						
		Discharges from dry docks																						
Thermal effluents																								
	Cooling water, with no chemical addition or Freshwater Fisheries Directive compliance Implications	Cooling water with chemical addition, or Freshwater Fisheries Directive compliance implications																						
		All boiler blow-down																						
Surface water drainage																								
Surface water run-off/ discharges under GBR10(a), GBR11 and GBR21		Surface water discharges from >60 hectares of land used for residential premises, >1,000 car park spaces, all industrial estates, and motorways and A roads																						

GBR	Registration	Simple licence	Complex licence
Surface water run-off from a construction site licence under GBR10(b)		<p>Surface water run-off from a construction site (including any constructed access tracks) which:</p> <ul style="list-style-type: none"> • Includes a single lane road / track (no wider than 4 metres except at passing places etc) or pipe/ services infrastructure >5km and <10km in length <p>Or</p> <ul style="list-style-type: none"> • Is an area of up to 4 hectares and contains an area of more than 1 hectare with a slope of more than 25 degrees <p>Or</p> <ul style="list-style-type: none"> • Includes a length >500m and ≤ 10km with a slope of more than 25 degrees slope 	<p>Surface water run-off from a construction site (including any constructed access tracks):</p> <p>With an area of > 4 hectares (approx. 10 acres <i>(NOTE: sites greater than 15 hectares will be charge a PROJECT BASED LICENCE ACTIVITY)</i>)</p> <p>OR</p> <p>Which includes a single lane road or track (wider than 4 metres), or rail line, pipeline/other linear services with a length greater than 10km</p>
Construction and maintenance of waterbound roads and tracks under GBR22			
Agricultural and forestry activities			
Storage/application of fertiliser, where not already covered by regulations [GBR18]			
Keeping of livestock [GBR19]			
Cultivation of land [GBR20]			

GBR	Registration	Simple licence	Complex licence
Surface water run-off from rural land activities [GBR21]			
Storage/application of pesticide that are plant protection products [GBR23]	Application of pesticide – on plants which are not invasive species - within 1 metre, but not entering any river, burn, ditch, loch, wetland, transitional water or coastal water	Application of pesticide in water to control any plant	
Operating sheep dipping facilities [GBR24]		Disposal to land of waste sheep dip or waste pesticides $\leq 20\text{m}^3/\text{day}$	Disposal to land of waste sheep dip or waste pesticides $>20\text{m}^3/\text{day}$
Oil Storage			
The storage of oil in a portable container with a capacity of less than 200 litres [GBR26]			
Storage of oil used to serve heating or cooking facilities on premises used wholly or mainly for residential purposes [GBR27]			
All other storage of oil which meets specified standards for container suitability, secondary containment, ancillary equipment and monitoring [GBR28]		The storage of oil for onward distribution which does not comply with GBR28	

Points of note:

Registration activities

1. Organic effluents (including discharge to soakaways) that, prior to treatment, have an organic loading of 15 or less population equivalents (pe).
2. Sewage systems (including discharge to soakaways) built before 1 April 2006 that, prior to treatment, have an organic loading of $\leq 50\text{pe}$.

3. Sewage systems (including discharge to soakaways) built after 1 April 2006 that, prior to treatment, have an organic loading of ≤ 15 pe.

For domestic housing, a minimum of 5pe is used for any house with up to and including three bedrooms.

For houses with more than three bedrooms, a further 1pe is added for each additional bedroom. (Full details on how to calculate this can be found in the British Water Code of Practice Flows and Loads- Sizing Criteria, Treatment Capacity for Small Wastewater Treatment Systems [Package Plants]: (www.britishwater.co.uk/Publications.aspx).

4. Effluents from non-commercial fish hatcheries rearing native fish for the enhancement of biodiversity.
5. Effluents from commercial fish hatcheries or tank farms with ≤ 0.5 tonnes of annual fish production.
6. Inorganic and other effluents with a maximum daily volume ≤ 10 m³/day and ≤ 15 pe. Landfill leachates must be authorised by either a simple or complex licence.
7. Direct discharge into groundwater of grout containing blaes for the purpose of construction or maintenance works.
8. Effluents from cooling water processes into which no chemicals have been added and/or where there are no Freshwater Fisheries Directive compliance implications.
9. The application of pesticide within 1 metre of any river, burn, ditch or loch, as measured from the top of the bank; within 1 metre of a wetland; or within 1 metre of any transitional water or coastal water as measured from the shoreline where:
 - a. The treated plants are not invasive species outwith their native range
 - b. No pesticide will enter the river, burn, ditch, wetland, loch, transitional water or coastal water

Simple licence activities

1. Organic effluents that, prior to treatment, have an organic loading > 15 and ≤ 100 population equivalents (pe).
2. Sewage systems built before 1 April 2006 that, prior to treatment, have an organic loading of > 50 and ≤ 100 pe.
3. Sewage systems built after 1 April 2006 that, prior to treatment, have an organic loading of > 15 and ≤ 100 pe.
4. Sewage effluent from combined sewer overflows (CSOs) and storm tank discharges, which are of low significance:
 - Low significance for inland waters means that a discharge is made only when the flow in the inlet sewer exceeds 'formula A' and the discharge receives at least eight times dilution (foul dry weather flow (DWF) at 5% low river flows) in the receiving environment and where there is no interaction with other discharges.
 - Low significance for coastal and transitional waters means not in EC-designated bathing waters, shellfish water, or other areas with specific water quality requirements and where there is no interaction with other discharges.
5. Freshwater cage fish farms that produce ≤ 2 tonnes of fish in any one year.

6. Marine cage fish farms or discharges from marine tanks that hold no more than 50 tonnes in weight of fish at any time.
7. Effluent from fish farm hatcheries or tank farms that produce >0.5 tonnes of fish in any one year.
8. Inorganic effluents and other effluents (including those from mines and quarries, landfill leachates and other effluents not defined elsewhere) that have a maximum daily volume of no more than 100m³ per day, and an organic loading prior to treatment of no more than 100 pe and where it is above the registration criteria.
9. Effluents from water treatment works (e.g. backwash water and reject water). Occasional discharges from water treatment works site operations (e.g. safety shower, chlorine monitors) will normally be included in the single water use licence for the site and not require separate authorisation.
10. Effluents from the dewatering of dry docks.
11. Effluents from cooling water processes that involve the addition of chemicals and/or where there are Freshwater Fisheries Directive compliance implications.
12. Effluents from boiler blow-down.
13. Discharges of surface water arising from:
 - more than 60 hectares of land used for residential purposes;
 - more than 1,000 car park spaces;
 - industrial estates⁷;
 - drainage from motorways and A roads⁸.

This applies to surface water discharges arising from the above activities which are new or enlarged. It does not apply to existing surface water discharges, unless SEPA considers that additional controls in the form of a licence are required.

14. Management of surface water run-off from a construction site (including any constructed access tracks) which:
 - includes a single lane road / track (no wider than 4m except as detailed below) or pipe/ services infrastructure e.g. rail line, pipeline, power-line >5km and <10km in length.

The 4 metre width limit does not apply at passing places; turning areas; or bends that need to be larger than 4 metres to allow large vehicles to negotiate them; or
 - Is up to 4 hectares and ;which includes an area of more than 1 hectare with a slope in excess of 25° or

⁷ 'Industrial estates' does not include business parks (offices) or retail parks (shops); these are considered on the basis of the number of car parking spaces. An industrial estate would normally include marshalling yards, lorry parks and distribution depots, including ports, but does not include developments of low significance consisting of one or several small units.

⁸ Drainage from new or modified motorways and A roads should be licensed if any one outfall drains a length of >1km. The requirement for licensing also covers drainage from major intersections from such roads, but not junctions of a major road, etc. and a minor road. 'Modified' in this context means major work, such as the addition of an extra lane and would not cover retarring of roads etc. Each outfall draining a length of >1km needs a licence. For example, a length of new motorway with 20 surface water outfalls, five of which drain lengths of >1 km, would require an application for a licence incorporating five associated activities.

- Includes a length >500m and ≤ 10km with a slope of more than 25 degrees slope.
15. The application of pesticide to water to control any plant.
 16. All activities involving the disposal of waste sheep dip or waste pesticides onto or into land, where the proposed total volume is ≤20m³ per day.
 17. The storage of oil for onward distribution which does not comply with GBR28

Complex licence activities

1. Sewage and organic effluents that, prior to treatment, have an organic loading more than 100 population equivalent (pe).
2. Sewage effluent from storm tanks and combined storm sewage overflows that are not considered to be of low significance (as defined above).
3. Effluent from emergency overflows.
4. Freshwater cage fish farms producing >2 tonnes of fish in any year.
5. Marine cage fish farms or effluents from marine tanks which hold >50 tonnes in weight of fish at any time.
6. Inorganic effluents and other effluents (including those from mines and quarries, landfill leachates and other effluents not defined elsewhere), that either have a maximum daily volume >100m³ per day or an organic loading prior to treatment of >100pe.
7. Management of surface water run-off from a construction site (including any constructed access tracks):
 - With an area of more 4 hectares (approx. 10 acres); or
 - Which includes a single lane road or track (wider than 4 metres), or rail line, pipeline/other linear services with a length greater than 10km.

IMPORTANT NOTE: - Project base licences (and hourly charging) will be applied to large construction projects where the area of the construction site is greater than 15 hectares (greater than approx. 37 acres) for transport infrastructure, housing and any other construction project.

8. All activities involving the disposal of waste sheep dip and waste pesticides onto or into land, where the proposed total volume is >20m³ per day.

3.4 Pollution control – General Binding Rules

As described in Section 2, CAR contains General Binding Rules (GBRs) for specific low risk activities. When an activity complies with the relevant GBR, there is no need to contact SEPA or apply for a formal authorisation.

Compliance with the GBR is treated as compliance with an authorisation under CAR. SEPA may ask to be satisfied that a GBR is appropriate for a given activity, when consulted as a statutory consultee on a planning application under the Town and Country Planning System.

The GBRs are outlined below. For ease of interpretation, the format and language in this practical guide may differ slightly from the exact wording in CAR. If you are unclear about a particular activity or its associated GBRs, you are advised to consult Schedule 3 of CAR.

GBR10:

- a) Discharge of surface water run-off from a surface water drainage system to the water environment from:
 - i. up to 60 hectares of land used for residential premises;
 - ii. land used for non-residential premises or yards, except where the buildings or yards are in an industrial estate;
 - iii. land used as a motorised vehicle parking area with up to 1,000 parking spaces;
 - iv. metalled roads other than motorways and A roads;
 - v. waterbound roads; or
- b) Discharge of water run-off from a construction site to the water environment where the site, including any constructed access tracks does not:
 - i. exceed 4 hectares;
 - ii. contain a road or track length in excess of 5km; or
 - iii. include any area of more than 1 hectare or any length of more than 500 metres on ground with a slope in excess of 25°.

Rules:

- a) All reasonable steps must be taken to ensure that the discharge does not result in pollution of the water environment;
- b) the discharge must not-
 - i. contain any trade effluent or sewage; or
 - ii. result in visible discolouration, iridescence, foaming or sewage fungus in the water environment;
- c) the discharge must not result in the destabilisation of the banks or bed of the receiving surface water;
- d) the discharge must not contain any water run-off from any built developments, the construction of which is completed on or after 1st April 2007, or from construction sites operated on or after 1st April 2007, unless-
 - i. during construction those developments are drained by a SUD system or equivalent systems equipped to avoid pollution of the water environment;
 - ii. following construction those developments are drained by a SUD system equipped to avoid pollution of the water environment;
 - iii. the run-off is from a development that is a single dwelling and its curtilage; or
 - iv. the discharge is to coastal water;

Rules (continued):

- e) the discharge must not contain any water run-off from:
 - i. any fuel delivery areas constructed on or after 1st April 2007, or any areas where vehicles, plant and equipment are refuelled constructed on or after 1st April 2007;
 - ii. vehicle loading or unloading bays constructed on or after the 1st April 2007 where potentially polluting matter is handled; or
 - iii. oil and chemical storage handling and delivery areas constructed on or after 1st April 2007;
- f) in relation only to activity 10(b), all parts of a construction site on which –
 - i. operations first commenced on or after 1st June 2018; and
 - ii. any works are to be undertaken, or any vehicles are to be operated or parked, must be drained by a surface water drainage system with capacity to accommodate the maximum volume of run-off that would reasonably be expected to occur from that land during the period of construction;
- g) all facilities with which the surface water drainage system is equipped to avoid pollution, including oil interceptors silt traps and SUD system attenuation, settlement and treatment facilities, must be maintained in good order and repair; and
- h) all reasonable steps must be taken to ensure that any matter liable to block, obstruct, or otherwise impair the ability of the surface water drainage system to avoid pollution of the water environment is prevented from entering the drainage system.

GBR11: Discharge into a surface water drainage system.

Rules:

- a) Oil, paint thinners, pesticides, detergents, disinfectants or other pollutants must not be disposed of into a surface water drainage system or onto any surface that drains into a surface water drainage system;
- b) any matter liable to block, obstruct or otherwise impair the ability of the surface water drainage system to avoid pollution of the water environment must not be disposed of into a surface water drainage system or onto a surface that drains into a surface water drainage system;
- c) sewage or trade effluent must not be discharged into any surface water drainage system; and
- d) on construction sites, any area of exposed soil from which the discharge of water run-off to the water environment is authorised under activity 10, and the period of time during which such soil is exposed, must be the minimum required to facilitate the construction works being undertaken at that site.

GBR16: Direct discharge of pollutants into groundwater as a result of construction or maintenance works in or on the ground, which come into contact with groundwater.

Rules:

- a) No solid or liquid materials coming into contact with groundwater shall contain substances listed in CAR Schedule 2 (except drilling fluids used during the works, provided they do not result in pollution of the water environment).
- b) No materials coming into contact with groundwater shall cause pollution of the water environment.

Pulverised Fuel Ash (PFA) is often a component of grout used to stabilise underground mine workings and operators should be aware that it may contain substances listed in Schedule 2 of CAR. SEPA therefore recommends that the operator or their agent assesses whether the use of PFA in grout will meet the requirements of GBR16. Acceptable assessments will be in line with the guidance document entitled 'BRE488 Stabilising Mine Workings with PFA Grouts – Environmental Code of Practice (2006)', which includes a methodology for assessing the risks to groundwater from PFA grouts.

GBR18: The storage and application of fertiliser.

Rules:

- a) No fertiliser⁹ may be stored, including temporarily in a mobile tank or bowser, on land that:
 - i. is within 10 metres of any-
 - 1. river, burn, ditch or loch, as measured from the top of the bank;
 - 2. wetland; or
 - 3. transitional water or coastal water as measured from the shoreline;
 - ii. is within 50 metres of any-
 - 1. spring that supplies water for human consumption, or
 - 2. well or borehole that is not capped to prevent the ingress of water;

⁹ except where regulated under The Environmental Protection Act 1990 or The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Scotland) Regulations 2003

Rules (continued):

- iii. is waterlogged;
- iv. has an average soil depth of less than 40cm and overlies gravel or fissured rock, except where the fertiliser is stored in an impermeable container; or
- v. is sloping, unless the fertiliser is inorganic or it is ensured that any run-off of fertiliser is intercepted (by means of a sufficient sized buffer or otherwise) to prevent it entering any river, burn, ditch, wetland, loch, transitional water or coastal water towards which the land slopes.

Rule (a) does not apply where the fertiliser is being stored in a building that is constructed and maintained to a standard that prevents run-off or seepage of fertiliser from the building.

- b) the base and walls of any container, and the walls and joints of any pipes, of any storage system used to store liquid digestate must:
 - i. be impermeable and protected against corrosion; and
 - ii. capable of withstanding the loads on them when the storage system is full;
- c) any storage system used to store liquid digestate or liquid sewage sludge must be maintained in such a condition that no digestate or sewage sludge escapes from the system.
- d) inorganic liquid fertiliser must only be stored in a rigid, impermeable tank that:
 - i. has a lockable, double valve on the outlet that is closed and locked when the tank is unattended;
 - ii. is located above ground; and
 - iii. is protected from vehicle collision;
- e) inorganic liquid fertilisers must not be stored in a field unless contained in a tank, bowser or spreading equipment:
 - i. whose hatches and lids are securely closed and whose outlets are securely closed and locked, except when the fertiliser is being transferred or applied;
 - ii. that is held on a support in such a way that it cannot become dislodged; and
 - iii. that is on a support which is stable under the fully loaded weight of the tank or bowser and cannot itself become dislodged;
- f) when any inorganic liquid fertiliser, liquid digestate or liquid sewage sludge is being transferred to a tank, bowser or spreading equipment, all reasonable steps must be taken to prevent any spillage or leakage entering the water environment;
- g) no organic fertiliser may be applied to land that-
 - i. is within 10 metres of any-
 - 1. river, burn, ditch or loch, as measured from the top of the bank;

Rules (continued):

2. wetland;
 3. transitional water or coastal water as measured from the shoreline; or
 4. opening into any surface water drainage system;
- ii. is within 50 metres of any-
 1. spring that supplies water for human consumption; or
 2. well or borehole that is not capped in such a way as to prevent the ingress of water;
 - iii. has an average soil depth of less than 40cm and overlies gravel or fissured rock, except where the application is for forestry operations;
 - iv. is frozen (except where the fertiliser is farm yard manure) waterlogged or covered in snow; or
 - v. is sloping, unless the fertiliser is inorganic or it is ensured that any run-off of fertiliser is intercepted (by means of a sufficient sized buffer or otherwise) to prevent it entering any river, burn, ditch, wetland, loch, transitional water or coastal water towards which the land slopes;
- h) no inorganic fertiliser may be applied to land that-
- i. is within 2 metres of any-
 1. river, burn, ditch or loch, as measured from the top of the bank;
 2. wetland;
 3. transitional water or coastal water as measured from the shoreline; or
 4. opening into any surface water drainage system;
 - ii. is within 5 metres of any-
 1. spring that supplies water for human consumption, or
 2. well or borehole that is not capped in such a way as to prevent the ingress of water;
 - iii. has an average soil depth of less than 40cm and overlies gravel or fissured rock, except where the application is for forestry operations;
 - iv. is frozen (except where the fertiliser is farm yard manure) waterlogged or covered in snow.
 - v. is sloping, unless the fertiliser is inorganic or it is ensured that any run-off of fertiliser is intercepted (by means of a sufficient sized buffer or otherwise) to prevent it entering any river, burn, ditch, wetland, loch, transitional water or coastal water towards which the land slopes.

Rules (continued):

- i) fertilisers must not be applied to land:
 - i. in such amounts that the crop requirement for nitrogen is exceeded;
 - ii. in excess of the amount required to maintain the soil phosphorus status at acceptable agronomic levels; or
 - iii. during heavy rainfall or where heavy rainfall is forecast within 24 hours.
- j) dewatered digestate or dewatered sewage sludge must be stored:
 - i. in such a way that it is securely contained so that any escape or run-off is prevented; or
 - ii. in a heap which is protected from the ingress of water;
- k) if dewatered digestate or dewatered sewage sludge is stored in a heap in field, it must be applied to land within 6 months of the commencement of the storage;
- l) any equipment used to apply fertiliser must be maintained in a good state of repair; and
- m) fertiliser must be applied on land in such a way and at such times that the risk of pollution of the water environment is minimised.

GBR19: Keeping of livestock.

Rules:

- a) Significant erosion or poaching of any land that is within 5m of any-
 - i. river, burn, ditch or loch as measured from the top of the bank;
 - ii. wetland;
 - iii. spring that supplies water for human consumption;
 - iv. well or borehole that is not capped in such a way so as to prevent ingress of water; or
 - v. transitional water or coastal water, as measured from the shoreline,must be prevented;
- b) livestock must be prevented from entering any land that is within 5m of a spring that supplies water for human consumption or any well or borehole that is not capped in such a way as to prevent ingress of water;
- c) livestock feeders must not be positioned within 10 metres of any-
 - i. river, burn, ditch or loch as measured from the top of the bank;
 - ii. wetland;

Rules (continued):

- iii. spring that supplies water for human consumption;
 - iv. well or borehole that is not capped in such a way so as to prevent ingress of water; or
 - v. transitional water or coastal water as measure from the shoreline; and
- d) run-off from land on which livestock congregate to access watering points or feeders must be intercepted (by means of a sufficient buffer zone or otherwise) such that any faeces, urine or soil in the run-off are prevented from entering any spring, well, borehole, surface water or wetland.

GBR20: Cultivation of land.

Rules:

- a) No land may be cultivated for crops that is-
- i. within 2m of any-
 - 1. river, burn, ditch, or loch, as measured from the top of the bank;
 - 2. wetland; or
 - 3. transitional water or coastal water, as measured from the shoreline;
 - ii. within 5m of any-
 - 1. spring that supplies water for human consumption; or
 - 2. well or borehole that is not capped in such a way so as to prevent the ingress of water; or
 - iii. waterlogged;
- b) moling of land must not be carried out on slopes that:
- i. have an overall gradient in excess of 4.5°; and
 - ii. slope towards any surface water or wetland; and
- c) land must be cultivated in a way that minimises the risk of pollution to surface water or wetland.

GBR21: The discharge of water run-off via a surface water drainage system to the water environment as a result of rural land activities (without prejudice to the operation of GBR10 and the rules related to it).

Rules:

- a) Water must be discharged in a way which minimises the risk of pollution of any river, burn, ditch, wetland, loch, transitional water or coastal water; and
- b) no discharge from drainage may result in the destabilisation of the banks or bed of the receiving river, burn, ditch, wetland, loch, transitional water or coastal water.

GBR22: Construction and maintenance of waterbound roads and tracks.

Rule:

No material that will or is likely to result in metallic, sulphide rich or strongly acidic polluted water run-off from such roads or tracks may be used in the carrying out of the activity.

GBR23: The storage and application of pesticides that are plant protection products.

Rules:

- a) The preparation of pesticide for application and the filling, cleaning or maintenance of pesticide sprayers or other devices used to apply pesticides:
 - i. must be undertaken in a manner which prevents any spillages, run-off or washings from entering any surface water or wetland; and
 - ii. must not be undertaken within 10 metres of any-
 - 1. river, burn, ditch or loch, as measured from the top of the bank;
 - 2. wetland;
 - 3. transitional water or coastal water, as measured from the shoreline; or
 - 4. opening into a surface water drainage system;
- b) pesticide sprayers and other devices used to apply pesticides must be maintained in a good state of repair, such that there is no leakage of pesticide from any part of the equipment and the sprayer is calibrated to accurately deliver the required application rate;
- c) pesticide sprayers and other devices used to apply pesticide must not be filled with water taken from any river, burn, ditch, wetland or loch unless:
 - i. a device preventing back siphoning is fitted to the system; or
 - ii. the water is first placed in an intermediate container;

Rules (continued):

- d) pesticide-treated plants must not be stored or soaked in any river, burn, ditch, wetland, or loch;
- e) pesticide must be applied in accordance with the terms and instructions of the relevant product approval;
- f) unless in accordance with paragraph (g), pesticide must not be applied in, onto or over ground or allowed to drift onto or over ground-
 - i. that is frozen, snow covered or waterlogged, except where the application in, onto or over waterlogged ground is necessary for the purpose of controlling fungal disease and all precautions are taken to minimise the risk of pesticide entering any river, burn, ditch, wetland, loch, transitional water or coastal water;
 - ii. that is within 1m of any river, burn, ditch, wetland or loch, as measured from the top of the bank, or within 1m of any transitional water or coastal water as measured from the shoreline;
 - iii. that is sloping, unless it is ensured that any run-off of pesticide is intercepted (by means of a sufficient buffer zone or otherwise) to prevent it from entering any river, burn, ditch, wetland, loch, transitional water or coastal water towards which the land slopes;
 - iv. that is within 50m of any spring that supplies water for human consumption;
 - v. that is within 50 metres of any well or borehole unless the well or borehole is capped in such a way as to prevent the ingress of the pesticide;
 - vi. that has an impermeable surface which drains directly to a surface water drainage system, unless measures are taken to minimise the risk of pesticides entering the drainage system; or
 - vii. along roads, railway lines, permeable surfaces or other infrastructure, unless measures are taken to minimise the risk of pollution of any river, burn, ditch, wetland, loch, transitional water, coastal water or surface water drainage system; and
- g) pesticide may be applied within 1 metre of any river, burn, ditch or loch, as measured from the top of the bank; within 1 metre of any wetland; or within 1 metre of any transitional water or coastal water as measured from the shoreline where-
 - i. they are specifically approved for aquatic use under Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC(a) and are applied in accordance with the terms of that approval;
 - ii. the application is for the sole purpose of controlling an invasive species of plant outwith its native range;
 - iii. no pesticide enters the river, burn, ditch, wetland, loch, transitional water or coastal water;
 - iv. the ground over or onto which pesticide is applied is not frozen snow covered or waterlogged;

Rules (continued):

- v. the ground over or onto which plant protection product is applied is not an impermeable surface which drains directly into a surface water drainage system unless measures are taken to minimise the risk of pesticide entering the drainage system;
- vi. the ground over or onto which pesticide is applied is not within 50 metres of any spring that supplies water for human consumption;
- vii. the ground over or onto which pesticide is applied is not within 50 metres of any well or borehole unless the well or borehole is capped in such a way as to prevent the ingress of the pesticide;
- viii. the application, including the method used, is designed to minimise damage to other, non-target vegetation;
- ix. all necessary steps are taken to ensure that the application does not result in increased erosion of the banks of the river, burn, or loch or the shoreline of the transitional water or coastal water; and
- x. there is no abstraction of water intended for human consumption from the-
 - 1. river burn or ditch, within 250 metres downstream of the application; or
 - 2. the loch or wetland within 250 metres of the application;
- h) application of pesticide must be carried out in such a way, and at such times, that the risk of pollution of any river, burn, ditch, wetland, loch, transitional water or coastal water is minimised, in particular, pesticide must not be applied-
 - i. during rainfall; or
 - ii. during conditions when there is a risk that spray will drift or be blown outwith the target area;
- i) pesticide, including any used packaging that has been stored in contact with the pesticide, must not be stored-
 - i. within 10m of any-
 - 1. river, burn, ditch or loch, as measured from the top of the bank;
 - 2. wetland; or
 - 3. transitional water or coastal water as measured from the shoreline;
 - ii. within 50m of any spring that supplies water for human consumption; or
 - iii. within 50m of any well or borehole (unless the well or borehole is capped in such a way as to prevent the ingress of any pesticide),

unless the pesticide or used packaging is stored in such a way that any leakage or spillage and any exposed pesticide on used packaging cannot reach any river, burn, ditch, wetland, loch, transitional water, coastal water or any opening into a surface water drainage system, including by being transported in rainwater runoff;

Rules (continued):

- j) 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.

GBR24: Operating sheep dip facilities and operating sheep handling facilities where:

- a) sheep are held immediately after dipping;
- b) pour-on parasite treatments are applied; or
- c) sheep are held immediately after the application of pour-on treatments

Rules:

- a) Sheep must be prevented from having access to any surface water or wetland while there is a risk of transfer of sheep dip fluid or any pour-on parasite treatment from their fleece to such places;
- b) no mobile sheep dipping facility, or part of any sheep dipping facility constructed on or after 1 April 2008 or sheep handling facility used for pour-on treatments constructed on or after 1st January 2018, may be located within 50 metres of any-
 - i. river, burn, ditch; or loch as measured from the top of the bank;
 - ii. wetland;
 - iii. transitional water or coastal water, as measured from the shoreline; or
 - iv. well, spring or borehole;
- c) sheep dipping facilities must not discharge underground and must not leak or overspill;
- d) sheep dipping facilities must not be filled with water taken from the water environment unless-
 - i. a device preventing back siphoning is fitted to the system; or
 - ii. the water is first placed in an intermediate container; and
- e) without prejudice to the continued requirement to obtain specific authorisation for the disposal of sheep dip under CAR, sheep dip facilities must be emptied within 24 hours following completion of dipping.

It is also worth noting that the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Scotland) Regulations 2003 has been amended¹⁰ to allow surface water run-off from certain areas of a farm steading to be drained to a constructed farm wetland (CFW). (See the amendment for full details of which areas are permitted).

A CFW is a series of one or more constructed shallow free-flowing vegetated ponds (known as cells) which are designed to receive and treat lightly contaminated surface water run-off, such that any discharge will not pollute the water environment. CFWs are not suitable for

¹⁰ By the Water Environment (Diffuse Pollution) (Scotland) Regulations 2008

treating more nutrient-rich effluents or run-off containing pesticides or sheep dip. It is strongly recommended that expert advice is sought when considering installing a CFW to ensure that the discharge does not cause pollution of the water environment. The SEPA CFW design manual illustrates the design standards which SEPA recommends should be considered in order to construct a robust CFW.

GBR26: The storage of oil in a portable container with a capacity of less than 200 litres.

Rules:

The container must be of sufficient strength and structural integrity so as to ensure that it is unlikely to burst or leak in its ordinary use.

GBR27: The storage of oil on premises used for residential purposes (except where the premises is a vehicle or vessel), where the oil is–

- a) stored in a container with a capacity of 2,500 litres or less; and
- b) where the oil is used solely to serve a fixed combustion appliance installation providing space heating or cooking facilities

Rules:

- a) The container must be of sufficient strength and structural integrity so as to ensure that it is unlikely to burst or leak in its ordinary use; and
- b) any container which is installed or altered must comply with the requirements of any applicable regulations under the Building (Scotland) Act 2003(a).

GBR28: The storage of oil on premises other than:

- a) where the premises is a vehicle or vessel
 - i. where the storage is an activity specified in GBR 26 or 27; or
 - ii. otherwise authorised under CAR
- b) in a container which is wholly underground (unless situated wholly within a building underground)

Rules:

- a) The oil must be stored in a container which is of sufficient strength and structural integrity, and has been installed so as to ensure that it is unlikely to burst or leak in its ordinary use
- b) The container must be situated within a secondary containment system which:
 - i) Subject to paragraph (e), must have a capacity of not less than 110% of the container's storage capacity or, if there is more than one container within the system, of not less than 110% of the largest container's storage capacity, or 25% of the aggregate storage capacity, whichever is greater;
 - ii) It must be positioned, or other steps taken so as to minimise any risk of damage to it by impact so far as it is reasonably practicable;

Rules (continued):

- iii) Its base and walls must be impermeable to water and oil;
- iv) Its base and walls must not be penetrated by any valve, pipe or other opening which is used for draining the system; and
- v) If a fill pipe or draw off pipe penetrates its base or any of its walls, all points at which the pipe meets the base or walls must be adequately sealed to prevent oil escaping from the system;
- c) Any valve, filter, sight gauge, vent pipe or other equipment ancillary to the container (other than a fill pipe or draw off pipe or a pump) must be situated within the secondary containment system;
- d) If the connection point to a fill pipe is not within the secondary containment system, a drip tray must be used to catch any oil spilled when the container is being filled with oil;
- e) Where any drum is used for the storage of oil in conjunction with a drip tray as a secondary containment system, it is sufficient if the tray has a capacity of not less than 25% of:
 - i) The drum's storage capacity; or
 - ii) If there is more than one drum used at the same time with the tray, the aggregate storage capacity of the drums;
- f) Where a fixed tank is used for storing oil:
 - i) Any sight gauge must be properly supported and fitted with a valve which closes automatically when not in use;
 - ii) Any fill pipe, draw off pipe or overflow pipe must:
 - (1) Be positioned or other steps taken, so as to minimise any risk of damage by impact so far as is reasonably practicable;
 - (2) If made of materials which are liable to corrosion, be adequately protected against corrosion; and
 - (3) Not be permeable to hydrocarbon vapours;
 - iii) If underground, any fill pipe, draw off pipe or overflow pipe must:
 - (1) Have no mechanical joints, except at a place where such joints are accessible for inspection by removing a hatch or cover;
 - (2) Be adequately protected from physical damage;
 - (3) Have adequate facilities for detecting leaks;
 - (4) If fitted with a leakage detection device which is continuously to monitor for leaks the detection device must be maintained in working order and tested at the appropriate intervals, and at least every 5 years, to ensure that it works properly; and
 - (5) If not fitted with a leakage detection device, must be tested for leaks before it is first used and further tests for leaks must be performed in the case of pipes which have mechanical joints, at least once every 5 years, and in other cases, at least once in every 10 years;

Rules (continued):

- iv) If above ground, any fill pipe, draw off pipe or overflow pipe must be properly supported;
- v) The tank must be fitted with an automatic overfill protection device (which may include an alarm sounding device) if the filling operation is controlled from a place where it is not reasonably practicable to observe the tank or any vent pipe;
- vi) Where a screw fitting or other fixed coupling is fitted, it must be maintained in good condition and used whenever the tank is being filled with oil;
- vii) Where oil from the tank is delivered through a flexible pipe which is permanently attached to the container or delivery pump:
 - (1) The pipe must be fitted with a tap or valve at the delivery end which closes automatically when not in use;
 - (2) The tap or valve must not be capable of being fixed in the open position unless the pipe is fitted with an automatic shut off device;
 - (3) The pipe must-
 - (a) Be enclosed in a secure cabinet (equipped with a drip tray) which is locked shut when not in use; or
 - (b) The pipe must have a lockable valve where it leaves the container which is locked shut when not in use; or
 - (c) The premises in which the pipe is situated must have appropriate security to prevent unauthorised access; and
 - (4) The pipe must be kept within the secondary containment system or positioned above an area which drains to a suitable oil interceptor when not in use;
- viii) Any pump must be:
 - (1) Fitted with a non-return valve in its feed line;
 - (2) Positioned or other steps must be taken, so as to minimise any risk of damage to it so far as is reasonably practicable; and
 - (3) Protected from unauthorised use; and
- ix) Any permanent vent pipe, tap or valve through which oil can be discharged from the tank to the open must be:
 - (1) Situated within the secondary containment system;
 - (2) Arranged so that any oil discharged from the tank other than to its intended destination is contained within the system; and
 - (3) In the case of a tap or valve, fitted with a lock and locked shut when not in use; and
- g) Where a mobile bowser is used for storing oil:
 - i) Any tap or valve permanently fixed to the bowser through which oil can be discharged to the open must be fitted with a lock and locked shut when not in use;

Rules (continued):

- ii) Where oil is delivered through a flexible pipe which is permanently attached to the mobile bowser:
 - (1) The pipe must be fitted with a manually operated pump or a valve at the delivery end which automatically closes when not in use;
 - (2) The pump or valve must be provided with a lock and locked shut when not in use; and
 - (3) The pipe must be fitted with a lockable valve at the end where it leaves the container and must be locked shut when not in use; and
- iii) Any sight gauge must be secured to the mobile bowser and be fitted with a valve or tap which must be locked in the shut position when not in use

4. Abstraction regime

Abstraction means the doing of anything whereby any water is removed or diverted by mechanical means, pipe or any engineering structure or works from any part of the water environment, whether temporarily or permanently, including anything whereby the water is so removed or diverted for the purpose of being transferred to another part of the water environment.

We have also included borehole construction and operation in this section as it is often associated with abstraction, though not in all cases.

Surface water includes canals and lades. Abstractions from these are therefore controlled activities within the scope of the CAR. Note also that feeds and take-offs from watercourses into canals and lades are also classed as abstractions and therefore require to be authorised.

SEPA will not require authorisation for the following abstraction activities:

- Abstraction of water from the public water supply infrastructure.
- The removal or diversion of water as a result of land drainage works. During the construction phase, the abstraction of groundwater from the dewatering (passive or otherwise) of road, rail or other cuttings is regulated via GBR, registration or licence as any other abstraction would be. Once an operational final passive drainage system is in place for the cutting, such as a pipe network to collect run off and seepage, the activity will be treated as land drainage works and as such no further authorisation will be required.
- The temporary abstraction of water to enable working within a river, including the over pumping of water.
- Abstractions by vessels where the water is returned to the water environment from the vessel.
- Abstractions of water stored in off-line impoundments (see Section 5 for definition) and artificial storage ponds that receive their inflow from an already authorised abstraction. Note that an authorisation is required for an abstraction from a dug storage pond collecting water from field drains and/or groundwater.
- Abstractions from artificial treatment systems, including Sustainable Urban Drainage Systems (SUDS) and quarry settlement lagoons.
- Abstraction for the purposes of fire-fighting.
- Abstraction of rainwater from construction site excavations or quarries of volcanic or metamorphic rocks (e.g. basalt, granite and schist). Note that the abstraction of groundwater from excavations is a controlled activity to which GBR15 applies (see Sections 4.1 and 4.3) as is the abstraction of groundwater from quarries.

Dependent activities

It is recognised that in certain circumstances a structure may have to be constructed before an authorised activity can be carried out (e.g. an intake structure to facilitate an abstraction or abstraction return structure). In these circumstances, SEPA treats the construction (an engineering activity) as secondary to the primary activity and will normally authorise the construction activity in the same authorisation document as the primary activity. This means

that SEPA will not normally require two separate applications to be made or fees to be paid, however, SEPA will need details of any dependent activities to be submitted with the main application.

The construction of a flood by-pass channel will be authorised as an engineering activity. When authorising the construction of a flood by-pass channel, the diversion of flood water into the by-pass channel will also be authorised. However this will not be subject to additional abstraction application fees (or abstraction subsistence charges) and will not require a separate authorisation.

4.1 Abstraction and Borehole Construction and Operation – levels of authorisation

Use Table 2 and Table 3 to determine the level of authorisation applicable for abstraction activities. The notes below each table provide supporting information.

Table 2: Surface water abstraction levels of authorisation

GBR	Registration	Simple licence	Complex licence
Inland¹¹ abstractions			
Inland abstractions <10m ³ /day [GBR2]	Inland abstractions ≥10 and ≤50m ³ /day	Inland abstractions >50 and ≤2000m ³ /day	Inland abstractions >2000m ³ /day
	All abstractions from lochs where the full amount abstracted is returned to the same loch		
	All abstractions from offline impoundments (e.g. storage ponds) fed solely by field drains		
Abstraction from coastal¹² and transitional¹³ waters			
Coastal and transitional water abstractions <10m ³ /day [GBR2]	All coastal and transitional water abstractions ≥10m ³ /day		

Note: The rates of abstraction are the maximum peak daily abstraction on any given day.

¹¹ Inland waters include all standing or flowing water on the surface of the land (other than transitional water) and all groundwater, within the landward limits of coastal water.

¹² Coastal waters are waters between the three-mile limit and the limit of the highest tide, or the seaward limit of transitional water.

¹³ Transitional waters are waters, other than groundwater, in the vicinity of river mouths that are partly saline as a result of their proximity to coastal water but which are substantially influenced by freshwater flows.

Points of note:

Registration activities

1. Inland abstractions of 10-50m³ surface water per day.
2. All abstractions from lochs where the full amount abstracted is returned to the same loch.
3. All abstractions from offline impoundments (e.g. storage ponds) fed solely by field drains.
4. All coastal and transitional water abstractions ≥10m³ per day.

Simple licence activities

1. Inland abstractions of surface water >50 and ≤2000m³ per day.

Complex licence activities

1. Inland abstractions of surface water >2000m³ per day.

Table 3: Borehole construction and operation and groundwater abstraction levels of authorisation

GBR	Registration	Simple licence	Complex licence
Borehole construction and operation and abstraction for the purpose of test pumping or sampling			
The construction and operation of a borehole which will be or is intended to be < or equal to 200m deep and complies with GBR3 Abstraction from a borehole intended for the abstraction of <150m ³ /yr if the abstraction is to test the yield or properties of the aquifer or to sample the water quality [GBR 4]	The construction and operation of a borehole, and abstraction for the purpose of test pumping or sampling, where the borehole will be or is intended to be < or equal to 200m deep and where a registration or licence level abstraction is planned	The construction and operation of a borehole which will be or is intended to be greater than 200m in depth. Abstraction from this borehole would be authorised by either an appropriate GBR or an abstraction registration or licence.	
Groundwater abstractions			
Groundwater abstractions <10m ³ /day [GBR2]	Groundwater abstractions ≥10 and ≤50m ³ /day	Groundwater abstractions >50 and ≤2000m ³ /day	Groundwater abstractions >2000m ³ /day
Temporary abstraction of groundwater from a construction site			
Dewatering an excavation [GBR15]			

GBR	Registration	Simple licence	Complex licence
Abstraction of groundwater for geothermal energy			
Abstraction and subsequent re-injection of groundwater for the purposes of extracting geothermal energy from the abstracted water or for the purpose of transferring heat to geological formations as part of a cooling system [GBR17]			

Note: The rates of abstraction are the maximum peak daily abstraction on any given day.

Points of note:

Groundwater abstraction and borehole construction and operation

SEPA will consider if multiple borehole construction and operation can be treated as a CAR single activity where:

- The boreholes are drilled within a small geographic area (each borehole is within 150m of another borehole in the well-field)
- There are no lateral wells
- Activities associated with the boreholes are not likely to require further demonstration of the integrity of the borehole. For example boreholes subject to high pressure fracking.

Registration activities

- Abstractions of 10-50m³ groundwater per day.
- The construction and operation of a borehole which will be or is intended to be < or equal to 200m deep and where a registration or licence level abstraction is planned. If an abstraction of between 10 and 50m³/d is planned, a borehole construction and operation registration should be applied for as part of the abstraction registration. A separate borehole construction and operation registration is required for a borehole intended for a licence level abstraction.

Simple licence activities

- Abstractions of groundwater >50 and ≤2000m³ per day.
- The construction and operation of a borehole which will be or is intended to be greater than 200m in depth and is temporary in nature. This means that the borehole will be fully backfilled and de-commissioned within 14 days of being constructed. It includes closed loop geothermal systems where the pipework involved is fully cemented in place within 14 days of being drilled. Because of the higher risk that deep boreholes pose to groundwater an application for a CAR licence will be required for the construction and operation of a borehole which will be or is intended to be greater than 200m in depth.

Complex licence activities

- Abstractions of groundwater >2000m³ per day.
- The construction and operation of a borehole which will be or is intended to be greater than 200m in depth

4.2 Abstraction – General Binding Rules

As described in Section 2, CAR contains General Binding Rules (GBRs) for specific low risk activities. When an activity complies with the relevant GBR, there is no need to contact SEPA or to apply for a formal authorisation. Compliance with the GBR is treated as compliance with an authorisation under CAR.

The abstraction GBRs are outlined below. For ease of interpretation, the format and language may differ slightly from the GBRs presented in CAR. If you are unclear about a particular GBR or its rules/conditions, you are advised to consult Schedule 3 of CAR.

GBR2: Abstraction of less than 10m³ of water in any one day.

Rules:

- a) There must be a means of demonstrating that the abstraction is less than 10m³ in any one day (e.g. measuring the rate of abstraction) or a means of demonstrating that the maximum volume that could be abstracted cannot exceed 10m³ in any one day; and
- b) water leakage must be kept to a minimum by ensuring that all pipework, storage tanks and other equipment associated with the abstraction and the use of the water are maintained in a state of good repair.

SEPA assumes that the following controlled activities abstract less than 10m³ per day and fall within the scope of GBR2. Abstractions of water for:

- supplying solely domestic water to 50 people or less;
- filling water troughs for livestock;
- filling a pesticide sprayer.

GBR3: The construction, extension or operation of any well, borehole or other works by which water may be abstracted, where such works are-

- a) not intended for the purpose of abstraction;
- b) intended for the abstraction of <10m³ water in any one day;
- c) intended for the abstraction of <150m³ water in any period of one year, and the purpose of the abstraction is either-
 - i. to test for the yield of the borehole or well or the hydraulic properties of the aquifer; or
 - ii. to sample the water quality;
- d) intended to dewater one or more excavations at-
 - i. a construction site for roads, buildings, pipelines or other built developments; or
 - ii. a site at which the maintenance of such developments is being undertaken; or
- e) intended for the purpose of undertaking activity 17.

Rules:

- a) The construction and operation of-
 - i. subject to b) and c), any well or borehole; and
 - ii. any other works,
must be such as to avoid the entry of pollutants or water of a different chemical composition into the water environment;
- b) drilling fluids may be introduced if necessary to facilitate the drilling of the well or borehole, provided this does not result in pollution of the water environment;
- c) potable water may be introduced into the well or borehole to test the hydraulic properties of the aquifer;
- d) when any well or borehole is no longer required, it must be back-filled or sealed to the extent necessary to prevent loss of groundwater from any aquifer and to avoid the entry of pollutants or water of a different chemical composition into any body of groundwater; and
- e) the depth of any well or borehole beneath the surface of the ground must not exceed 200 metres.

GBR4: The abstraction from a borehole, and any subsequent discharge of abstracted water, if the total volume abstracted is less than 150m³ in any period of one year and the purpose of the abstraction is either-

- a) to test the yield of the borehole or well or the hydraulic properties of the aquifer; or
- b) to sample the water quality.

Rules:

- a) The abstraction must not cause the entry of pollutants or water of a different chemical composition into any body of groundwater; and
- b) when the borehole is not being used for abstraction, it must be back-filled or sealed to the extent necessary to avoid loss of groundwater from any aquifer.

GBR15: The temporary abstraction of groundwater where roads, railways, buildings, pipelines, communication links are being constructed or maintained by means of pumping groundwater:

- directly from any excavation(s) on the site; or
- from any well or borehole on the site, to help dewater any other excavation(s) on site.
- and where desired, the subsequent discharge of the abstracted groundwater to the water environment.

Rules:

- a) Groundwater may only be abstracted at the site for a maximum of 180 consecutive days, in geological strata where groundwater flow rates are low (e.g. silts).
- b) Groundwater may only be abstracted at the site for a total of five separate days, in any 180 consecutive day period, where excavations, wells or boreholes that abstract groundwater are constructed in geological strata where groundwater flow is high (e.g. sands and gravels and sandstones).
- c) Groundwater must not be abstracted from any excavations, wells or boreholes that are within 250m of a wetland
- d) Groundwater must not be abstracted from any excavations, wells or boreholes that are within 250m of an abstraction that is not used solely for dewatering an excavation.
- e) All reasonable steps must be taken to ensure that the quantity of sediment in the abstracted water is minimal.
- f) Any subsequent discharge of the abstracted water from the excavation or run-off that has collected in the excavation must be via a surface water drainage system authorised under CAR, subject to the consent of the person having operational control of the system.

SEPA would generally consider that groundwater flow rates would be high where for unconsolidated strata the 'principal soil type' is sand or coarser, with the material having no apparent plasticity/cohesion. These characteristics should be determined in accordance with British Standard (BS5930: 1999, Code of Practice for Site Investigations), for bedrock aquifers the aquifer productivity is thought to be high or very high in accordance with SEPA's aquifer map.

SEPA would generally consider that groundwater flow rates would be low where:

- a) for unconsolidated strata the 'principal soil type' is clay, silt or sand with greater than 8% fines (silt and clay) in all samples;
- b) for bedrock aquifer the aquifer productivity is thought to be moderate, low or very low in accordance with SEPA's aquifer map.

Authorisation by SEPA will be needed for dewatering operations not covered by GBR15.

GBR17: The abstraction and subsequent return of groundwater for the purposes of extracting geothermal energy from the abstracted water or for the purpose of transferring heat to geological formations as part of a cooling system.

Rules:

- a) The abstracted water must be returned to the same part of the geological formation or the mine workings from which it was abstracted;
- b) any volume of water may be abstracted but the volume of water abstracted and not returned must not exceed 10m³ per day;
- c) no substances may be added to, or otherwise allowed to enter, the abstracted water prior to its return to the geological formation or mine workings from which it was abstracted;
- d) there must be a means of demonstrating that the net abstraction is not more than 10m³ in any one day;

Rules (continued):

- e) water leakage must be kept to a minimum by ensuring that all pipe work, storage tanks and other equipment associated with the abstraction and use of the water are maintained in a good state of repair; and
- f) the activity must not be located within 250 metres of any abstraction of water intended for human consumption and must not prevent any abstraction of water which is authorised under CAR.

GBR17 applies to open loop geothermal systems (i.e. where an abstraction from the water environment occurs). A licence will be required where the borehole will be or is intended to be >200m in depth.

5. Impoundment regime

'Impounding works' means in relation to surface water:

(a) any dam, weir or other works by which surface water may be impounded;

(b) any works diverting the flow of surface water in connection with the construction or alteration of any dam, weir or other works by which water may be impounded

'On-line' impounding works hold back flows in wetlands, rivers, lochs and estuaries. Consequently, they affect downstream water flows, sediment transport and migration of fish. 'Off-line' impoundments are built to store water (including surface run-off, groundwater, or land drainage) and are not on-line.

SEPA will use the impoundment regime to regulate the following aspects of on-line impoundments:

- engineering aspects involved in construction or alteration of a dam, weir or other works impounding water;
- management of a dam, weir or raised loch – particularly in terms of water levels, downstream flows and fish passage.

SEPA will only require authorisation for alterations to impounding works that have an impact on the water environment. For example, the addition of a gantry to a dam would not need authorisation. The retrospective fitting of a wave wall will also not require authorisation, as long as the overall height or volume of the water stored behind the dam is not increased. The new works must also not impact on any overflow structures or compensation flows.

Authorisation (new or variation) will be required for any works (either temporary or permanent) that alter the height of the dam or the maximum capacity impounded. Authorisation is also required if there are any impacts on structures that are for the purpose of fish passage.

SEPA will not require authorisation for the following impoundment activities:

- The construction and operation of off-line impoundments do not require authorisation. Examples include impoundments:
 - that receive their inflow from an authorised abstraction (including impoundments constructed by farmers to hold water used for irrigation and firewater ponds/impoundments used by industry);
 - that form part of an artificial treatment system;
 - in canals and lades (including locks), which hold back flows within the canal or lade.
- The placement and operation of temporary impoundments solely for the purpose of pollution control associated with construction and development sites do not require authorisation.

Off-line flood storage impoundments (e.g involving embankments) that collect water during flood conditions and then release this water when river levels fall, may require authorisation under the engineering regime (Section 6).

The removal of sediment behind a weir is covered in the engineering regime. GBR12 deals specifically with this activity (Section 6.2). Sediment management in rivers and lochs and other parts of the water environment is also dealt with in the engineering regime.

Dependent activities

Bed or bank reinforcement directly associated with, and required for the structural integrity of impounding works is classed as a dependent activity. Engineering activities are classed as dependent where, in the opinion of SEPA, they are required for the structural integrity of the primary activity. Dependent engineering activities will be authorised as part of the primary activity and details of dependent activities should be submitted with any application, however they will not be subject to additional application fees and will not require a separate authorisation.

5.1 Impoundment – levels of authorisation

Use Table 4 to determine the level of authorisation applicable for impoundments. The notes below the table provide supporting information.

Table 4: Impoundment levels of authorisation

GBR	Registration	Simple Licence	Complex Licence
Existing passive weirs ≤1m high that do not affect the passage of salmon or sea trout [GBR1]		All other existing weirs, dams, raised lochs and other impounding works	
		Removal or modification of an impoundment authorised under GBR1	
		Construction of new impoundments ≤1m high that do not affect passage of salmon or sea trout	The construction of all other new impoundments

Removal or modification of impoundments

Removal or modification of impoundments is a controlled activity and will require a new or varied authorisation in accordance with the categories set out within this table (i.e. its level of authorisation will be the same as a new structure of the same type and scale). Please refer to charging guidance for details of reductions in application fee available for the removal of structures.

Points of note:

Simple licence activities

1. All existing weirs, dams, raised lochs and other impounding works other than those authorised under GBR1.
2. Removal or modification of an impoundment authorised under GBR1.
3. Construction and operation of new impoundments $\leq 1\text{m}$ high which do not affect the passage of salmon or sea trout.

Complex licence activities

Construction and operation of new impoundments other than those $\leq 1\text{m}$ high which do not affect the passage of salmon or sea trout.

5.2 Impoundment – General Binding Rules

As described in Section 2, CAR contains General Binding Rules (GBRs) for specific low risk activities. When an activity complies with the relevant GBR, there is no need to contact SEPA or apply for formal authorisation. Compliance with the GBR is treated as compliance with an authorisation under CAR.

The impoundment GBR is outlined below. For ease of interpretation, the format and language may differ slightly from the GBR presented in the CAR. If you are unclear about a particular GBR or GBR condition, you are advised to consult Schedule 3 of CAR.

GBR1: The operation of any weir that is not capable of being operated to control the water level upstream, does not create a height differential of more than 1m between the upstream and downstream water surfaces and was constructed before 1 April 2006.

Rule:

- a) The weir must not impede the free passage of salmon and sea trout during periods within which, in the absence of the weir, the flow of the river would be at a level expected to permit their migration.

6. Engineering activities

CAR requires authorisation for the carrying out of building or engineering works, or works other than impounding works in:

- inland surface water (other than groundwater) or wetlands;
- the vicinity of inland water or wetlands and having, or likely to have, a significant adverse impact on the water environment.

(For impounding works see section 5)

Engineering works in coastal and transitional waters are not regulated by SEPA under CAR, but by Marine Scotland.

SEPA will not normally require an authorisation for the following engineering activities:

- All works in inland wetlands, where the wetland is not directly associated with a river, loch or artificial water body.
- Maintenance of existing man-made structures where 'maintenance' means any routine, recurring work needed to keep structures in the state of repair necessary to ensure that they can continue to serve their normal, intended functions. It includes running repairs, such as re-pointing and replacement of worn or damaged parts (e.g. corroded debris screens or fixings) provided that the works do not extend the structures beyond their current footprints or change their structural characteristics (e.g. by using materials that are not the same or equivalent to those that they repair or replace). GBR 9 must be complied with.

Works to partially or fully reinstate or replace failed or abandoned structures, may require authorisation, please contact SEPA for advice. This will depend on the type and scale of the works and the length of time since the structure has failed or been abandoned.

- The removal or management of in-stream or bank-side (riparian) vegetation. Before felling any trees you should consult local planning authorities to see if legal controls exist in the area e.g. Tree Preservation Orders and obtain any necessary permissions from other bodies e.g. a tree felling licence from Forestry Commission Scotland. See WAT-SG-44: Good Practice Guide – Riparian Vegetation Management Page 31
- The removal of in-stream debris/rubbish including fallen trees. This includes for example the removal of debris from culverts and screens.
- Land drainage works that do not affect a natural watercourse.
- Construction and maintenance of road drains.
- Gold panning which complies with SEPA's gold panning [position](#).
- Engineering activities on minor watercourses with the exception of culverting for land-gain, dredging and permanent diversions/realignments. A minor watercourse is not shown on the 1:50,000 scale Ordnance Survey maps (Landranger series).

You must ensure you do not cause pollution. If in doubt whether your activity requires authorisation under CAR, please contact your local SEPA office.

Guidance on activities in the vicinity of inland surface waters and activities affecting surface water dependent wetlands.

Building and development in the vicinity of inland surface waters and wetlands will not normally require authorisation, unless SEPA considers there is a likelihood of significant adverse impact on the water environment. Activities that may require authorisation include land-raising or lowering, embankments and floodwalls within 10 metres or 2 channel widths (whichever is shorter).

Activities that can directly affect the quality of surface water dependent wetlands that will require authorisation include drainage operations (dredging or excavation of drainage channels), removal of sediment through excavation, or changing elevations using fill material.

Dependent activities

It is recognised that in certain circumstances a structure may have to be constructed before an authorised activity can be carried out (e.g. a new outfall pipe to facilitate a point source discharge or an intake structure to facilitate an abstraction). In these circumstances, SEPA treats the construction (an engineering activity) as secondary to the primary activity and will normally authorise the construction activity in the same authorisation document as the primary activity. This means that SEPA will not normally require two separate applications to be made or fees to be paid, however, SEPA will need details of any dependent activities to be submitted with the main application.

The construction of a flood by-pass channel will be authorised as an engineering activity. When authorising the construction of a flood by-pass channel, the diversion of flood water into the by-pass channel will also be authorised. However this will not be subject to additional abstraction application fees (or abstraction subsistence charges) and will not require a separate authorisation.

6.1 Engineering – levels of authorisation

Use Table 5 to determine the level of authorisation applicable for engineering activities. The notes below the table provide supporting information.

Table 5: Engineering levels of authorisation

GBR	Registration	Simple licence	Complex licence
Sediment management			
Dredging in a previously straightened river, burn or ditch <1m wide [GBR5]	Removal of sand, silt or clay from the bed of previously straightened rivers and burns which are ≥1m and <5m wide*. Up to 500m length along the bed may be removed (Activity L)		
	Sediment management in canals, lades and other artificial inland surface waters (Activity A)	All other sediment management ≤50m in length in rivers >3m wide*	All other sediment management >50m in length in rivers >3m wide*

GBR	Registration	Simple licence	Complex licence
Sediment management within 10m upstream of a Weir [GBR12]	Sediment management within 10m of a bridge (Activity B)	All other sediment management in rivers $\leq 3\text{m}$ wide* and wetlands	
Sediment management within 10m of a closed culvert [GBR13]	Sediment management in open culverts $\leq 2\text{m}$ wide* (Activity C)	All other sediment management $\leq 500\text{m}^2$ in total area on lochs	All other sediment management $> 500\text{m}^2$ in total area on lochs
Sediment management within 5m of an outfall or intake [GBR13]	Removal of sediment from individual and discrete areas of exposed sediment such as gravel bars within a length of river or burn not exceeding 1 kilometre (Activity K)		
Bank reinforcement, embankments, floodwalls and other bank modifications			
Green bank reinforcement or reprofiling $\leq 10\text{m}$ or \leq one channel width in length (whichever is greater) [GBR8]	Green bank reinforcement (Activity D) or re-profiling (Activity E) $\leq 50\text{m}$ in length	All other green bank reinforcement or reprofiling	
The placement of trees or parts of trees in a watercourse to protect eroding banks [GBR25]		Grey bank reinforcement, floodwalls and embankments ¹ $\leq 100\text{m}$ in length in rivers $> 3\text{m}$ wide* and lochs	All other grey bank reinforcement, floodwalls and embankments ¹ in rivers $> 3\text{m}$ wide* and lochs
		All grey bank reinforcement, floodwalls and embankments ¹ in rivers $\leq 3\text{m}$ wide*	
Bridges and other types of crossing structures			
Minor bridges with no construction on bed or banks [GBR6]	Bridges with no construction on bed and $\leq 20\text{m}$ of total bank affected ² (Activity F)	All other bridges, fords and causeways	
Temporary bridges in rivers $< 5\text{m}$ wide [GBR6]	Closed culverts used for footpaths, cycle route, single track roads or single track railways in rivers $\leq 2\text{m}$ wide* (Activity G)	All other closed culverts used for crossings	

GBR	Registration	Simple licence	Complex licence
Pipeline or cable crossings by boring beneath the bed of inland surface waters [GBR7]	Pipeline or cable crossings beneath bed by isolated open-cut or mole plough. (Activity H)	All other pipeline or cable crossings, e.g. by direct open cut or laid on channel bed	
In-stream or in-loch structures			
Boulder placement in a river or burn (occupying <10% of channel width) [GBR14]	Bed reinforcement ≤10m in length downstream of closed culverts (Activity I)	All other in-stream structures in rivers >3m wide* affecting ≤50m of river length	All other in-stream structures in rivers >3m wide* affecting >50m of river length
		All other in-stream structures in rivers ≤3m wide*	
	In-loch structures with total area ≤50m ² (Activity J)	In-loch structures with total area ≤500m ²	In-loch structures with total area >500m ²
Channel modifications			
		All diversions, realignment, flood by-pass channels and culverting for land gain on rivers ≤3m wide*	All diversions, realignment, flood by-pass channels and culverting for land gain on rivers >3m wide*
Other activities			
Construction and maintenance of a surface water drainage system outfall [GBR6]		Other controlled engineering activities not defined elsewhere in the table	

Removal of structures

Removal of structures is a controlled activity and will require authorisation in accordance with the categories set out within this table (i.e. its level of authorisation will be the same as a new structure of the same type and scale). Please refer to charging guidance for details of reductions in application fee available for the removal of structures.

Points of note:

* This width is the straight line distance measured between the toe of the banks of any watercourse, which spans the bed of the watercourse, including any exposed bars and vegetated islands.

¹ for further information on authorisation requirements for embankments please refer to Table 7 on Page 44 of WAT-RM-02

² For river crossings the total length of bank affected includes the total length of structures on both banks, this includes the length of bridge abutments and any dependant bank reinforcement. For example, for a registration bridge (≤ 20m total bank affected) the maximum length for each bridge abutment would be 10m.

Refer to the glossary for definitions of terms used in this section.

Registration activities

Letter reference (A to L) used in above table corresponds to [registration application form](#)

1. Removal of sand, silt and clay from the bed of artificially straightened or canalised rivers and burns which are ≥ 1 m and < 5 m wide. Up to a total of 500m length along the bed may be removed (a single length of 500m or shorter lengths totalling 500m). Such rivers will have parallel or near parallel banks with unrippled and smooth water flow and a bed dominated by sand, silt or clay. The works must be completed within 12 months of being registered, include measures to prevent pollution. They must not damage wetlands or lochs, widen the river channel, heighten the river banks, leave a step in the river bed or cause erosion. SEPA must be informed 1 week before work starts.
2. Sediment management in canals, lades and other artificial inland surface waters. This category covers dredging works required for the efficient operation of the canal, lade or other artificial water. This category does not include works within heavily engineered natural watercourses.
3. Sediment management within 10m of a bridge. This covers dredging works required to maintain the flood capacity or structural integrity of bridges.
4. Sediment management of open culverts ≤ 2 m wide. Open culverts are defined as river channels which have beds and banks constructed of artificial and consolidated material such as concrete, block stonework or brickwork.
5. Removal of sediment from individual and discrete areas of exposed sediment such as gravel bars within a length of river or burn not exceeding 1 kilometre. Dry gravel can be removed from a third of the gravel bars over the 1km stretch; other restrictions include only 50% of the surface area being removed and a maximum of 30m length on any bar.
6. Green bank protection or re-profiling no more than 50m in total length along banks/shore, that are not captured under the conditions of GBR8 (Section 6.2). Green bank protection includes the use of materials such as rip-rap and log revetments restricted to the bank toe (i.e. should be submerged during normal flow conditions), and biodegradable geo-textiles.
7. Bridges across rivers and lochs where no part of the structure encroaches on the bed (e.g. no piers or in-channel supports). In addition, the total length of structures on both banks should not be more than 20m. This category includes bottomless arch culverts.
8. Pipe and box culverts used for single-track roads and single track railways, footpaths and/or cycle routes, where the affected watercourse is not more than 2m wide.
9. Pipeline or cable crossings by isolated open-cut. This requires a trench to be excavated across the bed of the watercourse, and the area of working to be isolated (kept dry), using techniques involving over pumping and gravity-fed pipes.
10. Mole plough cable or pipe laying (Mole ploughing)-A technique using a specialised pipe and cable laying plough to cut a temporary narrow channel into which pipes or cables are fed and simultaneously pushes the spoils removed back into the cut channel, eliminating the need to backfill.
11. Bed reinforcement not more than 10m in length immediately downstream of a pipe or box culvert using rip-rap. This covers reinforcement work that is deemed necessary to prevent scour immediately downstream of an existing culvert.

- Loch structures where the total surface area of the structure is not more than 50m². This category includes small boat slips, piers, jetties and platforms.

Simple licence activities

- Sediment management over a length of no more than 50m in watercourses greater than 3m wide. This includes sediment removal such as dredging, gravel extraction and sediment movement within the channel (e.g. pool maintenance works).
- Sediment management in lochs within an area no more than 500m².
- Sediment management over any length in watercourses no more than 3m wide.
- Green bank protection or re-profiling along banks/shore for more than 50m. Green bank protection includes the use of materials such as rip-rap and log revetments restricted to the bank toe (i.e. should be submerged during normal flow conditions) and biodegradable geo-textiles.
- Grey bank protection, floodwalls and embankments no more than 100m in total length in watercourses greater than 3m wide and lochs. Grey bank protection includes the use of materials such as rip-rap over the full height of the bank, gabion baskets, concrete, grouted stone, brick or block stonework, sheet piling, wood piling and non-biodegradable geo-textiles.
- All grey bank protection, floodwalls and embankments in watercourses no more than 3m wide. Grey bank protection includes the use of materials such as rip-rap over the full height of the bank, gabion baskets, concrete, grouted stone, brick or block stonework, sheet piling, wood piling and non-biodegradable geotextiles.
- All other bridges, fords and causeways. This category will include bridges affecting more than 20m total bank lengths, or bridges with in-stream supports. This category also includes all fords and causeways constructed across lochs and wetlands. Where multiple crossings of a ford are required within a short space of time a temporary bridge should be considered.
- All other pipe or box culverts used for crossings. This category will include all pipe or box culverts used for multiple track/lane roads, and pipe or box culverts used for minor bridges on watercourses greater than 2m wide.
- All other pipeline or cable crossings, e.g. by direct open cut or laid on the bed of the inland surface water. Direct open cutting requires a trench to be excavated across the bed of the watercourse and deals with situations where techniques such as over-pumping are not feasible and the working area therefore remains under water.
- All other in-stream structures on watercourses no more than 3m wide. This includes bed reinforcement not associated with closed culverts (see registration activity), croys, groynes and other flow deflectors, and other in-stream structures (such as boulder placements not satisfying the GBR conditions). Where a structure impounds water, this will require authorisation according to the table set out in Section 5.
- All other in-stream structures on watercourses greater than 3m wide affecting no more than 50m of total river length.
- Loch structures with a surface area greater than 50m² but no more than 500m². This includes boat slips, piers, jetties, platforms, etc.
- All forms of permanent diversion, channel straightening, channelisation, re-sectioning, re-meandering or culverting for land gain on watercourses no more than 3m wide.
- Other engineering activities on or in the vicinity of inland surface waters and wetlands not described elsewhere in the levels of authorisation table.

Complex licence activities

1. Sediment management in watercourses greater than 3m wide over a length of more than 50m. This includes sediment removal such as dredging, gravel extraction and sediment movement within the channel (e.g. pool maintenance works).
2. Sediment management in lochs greater than 500m² in total area.
3. Grey bank protection, floodwalls and embankments greater than 100m in total length in watercourses greater than 3m wide and lochs. Grey bank protection includes the use of materials such as rip-rap over the full height of the bank, gabion baskets, concrete, grouted stone, brick or block stonework, sheet piling, wood piling and non-biodegradable geo-textiles.
4. In-stream structures on watercourses greater than 3m wide affecting more than 50m of total channel length. This would include large areas of bed reinforcement. Where a structure impounds water, this will require authorisation according to the table set out in Section 5 of this document.
5. Loch structures where the total surface area of the structure is more than 500m² e.g. large boat slips, piers, jetties, platforms, etc.
6. All forms of permanent diversion, channel straightening, channelisation, re-sectioning, re-meandering or culverting for land gain on watercourses greater than 3m wide.

6.2 Engineering – General Binding Rules

As described in Section 2, CAR contains General Binding Rules (GBRs) for specific low risk activities. When an activity complies with the relevant GBR, there is no need to contact SEPA or to apply for a formal authorisation. Compliance with the GBR is treated as compliance with an authorisation under CAR.

The engineering GBRs are outlined below. For ease of interpretation, the format and language may differ slightly from the GBRs presented in the CAR. If you are unclear about a particular GBR or GBR condition, you are advised to consult Schedule 3 of CAR.

It should be noted that GBR9 must be followed when operating a vehicle, plant or equipment for the purposes of undertaking any other engineering GBR activity.

GBR5: Dredging of previously straightened watercourses with an average width of less than 1m along the stretch to be worked.

Please also check GBR9

Rules:

- a) Vegetation may be removed from the banks only if the works cannot otherwise be reasonably carried out.
- b) Vegetation that is removed must not be disposed of into the channel.
- c) The activity must not result in the widening of the watercourse.
- d) All reasonable steps must be taken to prevent the transport of sediments beyond the worked stretch.

Rules (continued):

- e) Work must not be carried out when fish are likely to be spawning in the affected surface water, or in the period between spawning and the subsequent emergence of juvenile fish.¹⁴
- f) All reasonable steps must be taken to avoid increased erosion of the banks and bed.
- g) The bed of the worked stretch must be graded at a shallow angle to tie in with the bed level upstream and downstream and there must be no steps or sudden changes in the angle of the bed slope.
- h) The removed sediment must not be left on the banks such that its placement heightens the banks.

SEPA does not intend to apply this GBR to man-made ditches formed where there was not previously a natural watercourse. However, during such works, operators should use best practice to ensure that pollution of the water environment downstream from the works (including silt pollution) is prevented. Similarly, SEPA does not intend to regulate engineering maintenance operations in road drainage ditches or equivalent, but does expect such work to be undertaken in a way which prevents pollution of downstream waters.

GBR6: Construction and maintenance:

- of a minor bridge over a river, burn or ditch
- (or removal) of a temporary bridge over a river, burn or ditch that has a channel width of less than 5 metres
- of a surface water outfall

Please also check GBR9

Rules:

- a) Vegetation may be removed from the banks only if the works cannot otherwise be reasonably carried out.
- b) Vegetation that is removed must not be disposed of into the channel.
- c) The works must not prevent the free passage of migratory fish.
- d) The works must not result in the narrowing of the channel width or the heightening of any bank.
- e) Work in the channel must not be carried out when fish are likely to be spawning in the affected surface water, or in the period between spawning and the subsequent emergence of juvenile fish.¹⁴

¹⁴ If in doubt about these times, you are advised to go to [Fisheries Management Scotland](#) for contact details of the local District Salmon Fishery Board (*which has statutory powers in relation to the protection and improvement of salmon and sea trout fisheries within their district*) and/or Fishery Trust.

Rules (continued):

- f) If necessary, a temporary culvert extending no more than 10m along the length of the river, burn or ditch may be installed to facilitate the works and any such culvert must be removed on completion of the works.
- g) All reasonable steps must be taken to ensure that the works do not result in increased erosion of the bed and banks.
- h) As far as reasonably practicable, within 12 months of the work starting, the bed and banks of the river, burn or ditch must be reinstated at least to their condition before the works started.
- i) As far as reasonably practicable, within 12 months of removal of a temporary bridge, the bed and banks must be reinstated at least to their condition before the works started.
- j) The activity must not result in pollution of the water environment.
- k) Any outfall and associated works must be designed and constructed to be no larger than is necessary for the proper operation of the outfall, and in any case must not extend more than 20 metres along the length of the watercourse.

GBR7: Pipeline or cable laying by boring underneath a watercourse.

Please also check GBR9

Rules:

- a) The works must not result in any alterations to the bed and banks of the watercourse, except as permitted in rule (b) and (d) below.
- b) Vegetation may be removed from the banks only if the works cannot otherwise be reasonably carried out.
- c) Vegetation that is removed must not be disposed of into the channel.
- d) As far as reasonably practicable, within 12 months of the works starting, the bed and banks must be reinstated at least to their condition before the works started.

GBR8: Controlling bank erosion by green bank reinforcement or re-profiling.

Please also check GBR9

Rules:

- a) All reasonable steps must be taken to ensure that the works do not result in increased erosion of the banks.
- b) The works must not result in the destabilisation of the bed upstream or downstream of the works.
- c) Vegetation may be removed from the banks only if the works cannot otherwise be reasonably carried out.
- d) Vegetation that is removed must not be disposed of into the channel.

Rules (continued):

- e) The revetment can only be constructed from vegetation, geotextiles, untreated wood, or non-grouted stone rip rap.
- f) The length of any revetment must not exceed 10m or if the channel width is more than 10m, one channel width.
- g) Where wood or stone rip-rap is used, use is limited to the toe of the bank.
- h) Except for the purposes of repairing an existing revetment, bank protection works must not be carried out within five channel widths or 50m (whichever is the greater) of any existing bank protection works on either bank of the river, burn or ditch.
- i) The work must not result in the heightening of the banks.
- j) Work must not be carried out when fish are likely to be spawning in the affected surface water, or in the period between spawning and the subsequent emergence of juvenile fish¹⁵.
- k) The revetments must be maintained in a good state of repair to avoid erosion of the banks or destabilisation of the bed.

GBR9: Operating any vehicle, plant or other equipment (machinery) in or near any surface water or wetland for the purpose of undertaking any other GBR activity or for the purpose of maintaining an existing man-made structure in or near any surface water or wetland.

Rules:

- a) Machinery should only operate in water where it is impracticable for it to operate on dry land.
- b) Refuelling must take place at least 10m away from any surface water.
- c) Any static plant or equipment used within 10m of surface water must be positioned on a suitable drip tray with capacity for 110% of the fuel tank supplying the static plant or equipment.
- d) Machinery used in or near surface water must not leak any oil.
- e) Washing of any machinery must take place at least 10m away from any surface water and the washings must not be allowed to enter any surface water.
- f) Machinery must not be operated in rivers, burns and ditches when fish are likely to be spawning in the affected surface water, or in the period between spawning and the subsequent emergence of juvenile fish¹⁵.
- g) Machinery must not be operated in rivers, burns and ditches if there is a reasonable likelihood that there are freshwater pearl mussels within 50m of such operation.

¹⁵ If in doubt about these times, you are advised to go to [Fisheries Management Scotland](#) for contact details of the local District Salmon Fishery Board (*which has statutory powers in relation to the protection and improvement of salmon and sea trout fisheries within their district*) and/or Fishery Trust.

Rules (continued):

- h) Machinery must not be operated in rivers, burns and ditches during forestry operations.
- i) Following the operation of the machinery, any damage caused by the operation to the bed and banks of the surface water must be repaired, including re-establishing vegetation on any areas of bare earth on the banks resulting from the operation, either by covering the area with grass turfs or lining them with a biodegradable geotextile and seeding.

GBR12: Removal of sediment from the area of impounded water upstream of a weir authorised under CAR, and where desired, return of that sediment to the watercourse.

Please also check GBR9

Rules:

- a) Sediment or other matter can only be removed within the stretch 10m upstream of the weir.
- b) Only sediment which has recently been deposited (i.e. that which is reasonably expected to have been deposited within the three years preceding the date of removal) can be removed.
- c) Unless it is not reasonably practicable to do so, any gravel and coarse sediment that has been removed must be returned to the watercourse from which it was taken.
- d) The return of sediment must:
 - be placed at the edge of the watercourse downstream of the weir in a location where high flows are able to redistribute it;
 - it does not cause sediment to accumulate in a manner likely to impede the free passage of migratory fish;
 - be placed in such a way and such a location that the risk of the placement resulting in increased erosion of the bed or banks of the watercourse is minimised.
 - not be placed in a wetted part of the watercourse during periods in which fish are likely to be spawning, nor in the period between spawning and the subsequent emergence of the juvenile fish.
 - not contain man-made matter or result in pollution.
- e) The removed sediment must not be deposited in the channel or on the banks of any watercourse except in accordance with (d) above.
- f) The removal of sediment must not result in pollution of the water environment.
- g) Vegetation may be removed from the banks only if the works cannot otherwise be reasonably carried out.
- h) Vegetation that is removed must not be disposed of into the channel.

GBR13: Removal of sediment from the inside of a closed culvert or within 10m upstream or downstream of a closed culvert or within 5m of an outfall or inlet and if desired, its subsequent return.

Please also check GBR9

Rules:

- a) The removal or return of sediment must not result in the bed of the watercourse upstream of the culvert being lower than the upper surface of the base of the culvert.
- b) The removal or return of sediment must not result in a vertical step between the upper surface of the base of the culvert and the bed of the watercourse into which it discharges.
- c) Work must not be carried out when fish are likely to be spawning in the affected surface water, or in the period between spawning and the subsequent emergence of juvenile fish¹⁶.
- d) Vegetation may be removed from the banks only if the works cannot otherwise be reasonably carried out.
- e) Vegetation that is removed must not be disposed of into the channel.
- f) The removed sediment and other matter must not be placed on the bank of any watercourse.
- g) Sediment that has been removed may be returned to the same watercourse, provided that:
 - it is returned as close to the location of its removal as is practicable;
 - its return does not result in an accumulation of sediment that impedes the free passage of migratory fish; and
 - all reasonable steps are taken to avoid increased erosion of the bed or the banks.
- h) The activity must not result in pollution of the water environment.

¹⁶ If in doubt about these times, you are advised to go to [Fisheries Management Scotland](#) for contact details of the local District Salmon Fishery Board (*which has statutory powers in relation to the protection and improvement of salmon and sea trout fisheries within their district*) and/or Fishery Trust.

GBR14: Boulder placement in a river or burn.

Please also check GBR9

Rules:

- a) Individual boulders or groups of boulders must not occupy more than 10% of the river width.
- b) Boulders must not be placed within 20m of any other natural or placed boulder or any other instream structure (croy, jetty, bridge pier etc.) which occupies more than 10% of the channel width.
- c) Boulders must not be placed in a manner that results in the width occupied by in stream structures extending to greater than 10% of the channel width.
- d) Boulders must not be placed against the banks unless the placement forms part of revetment works authorised under CAR.
- e) The tops of the boulders must be submerged, except during periods of low flows.
- f) Work must not be carried out when fish are likely to be spawning in the affected surface water, or in the period between spawning and the subsequent emergence of juvenile fish¹⁷.
- g) All reasonable steps must be taken to ensure that the boulder placement will not result in increased erosion of the bed or banks.
- h) Boulders must not be placed at any location where there is a likelihood that freshwater pearl mussels are located within 50m of that specific location.

GBR25:

- a) The placement of trees or parts of trees in any river, burn or ditch to protect eroding banks;
- b) (i) reducing the angle of an eroding bank; or
(ii) placing stones for the purpose of protecting banks, where the trees or parts of trees being placed in accordance with paragraph (a) consist or willow spilling or willow stakes

Please also check GBR9

Rules:

- a) Other than in accordance with paragraph (e), the trees or parts of trees must be placed only in or along eroding banks;

¹⁷ If in doubt about these times, you are advised to go to [Fisheries Management Scotland](#) for contact details of the local District Salmon Fishery Board (*which has statutory powers in relation to the protection and improvement of salmon and sea trout fisheries within their district*) and/or Fishery Trust.

Rules (continued):

- b) the placement must result in an arrangement of live or dead tree stems, branches or roots which, as the water flows through the arrangement, flex or bend and impede its flow with the effect of cushioning the bank from the force of the river, burn or ditch;
- c) the placed trees or parts of trees must be tied, keyed or staked into the bank or bed of the river, burn or ditch so as to secure them in place;
- d) the placed trees or parts of trees must:
 - i. follow the line of the toe of the eroded bank at the time of placement; and
 - ii. be graded into the existing lines of the banks at either end of the eroded bank;
- e) the placement may extend beyond the upstream and downstream ends of an eroding bank only to the extent necessary to:
 - i. prevent the river from going around the placements and eroding the bank behind them; or
 - ii. ensure the line of the placements is graded smoothly into the existing lines of the bank at either end of the eroded bank;
- f) in protecting eroding banks:
 - i. the angle of an eroding bank may only be reduced for the purpose of enabling the establishment of growth of the willow; and
 - ii. stones may be placed at the toe of the bank for the purpose of preventing the bank being undercut before the willow has become established, provided that any stones used are no larger than the largest stones that have been deposited on the channel bed within 500 metres of the eroding bank;
- g) all reasonable steps must be taken whilst placing trees or parts of trees to:
 - i. prevent any exposed soil or other sediments from entering the river, burn or ditch; and
 - ii. where soil or other sediments do enter the river, burn or ditch, prevent these from being transported beyond the part of the bank being protected;
- h) once the trees or parts of trees have been placed, any areas of bare earth on the banks resulting from the works must be re-vegetated to minimise the risk of soil erosion, either by covering with grass turfs or lining with biodegradable geotextile and seeding; and
- i) where the trees or parts of trees need to be placed on the wetted part of the bed of the river, burn or ditch or their placement would otherwise be likely to disturb the wetted part of the bed of the river, burn or ditch they must not be placed if there is a reasonable likelihood that there are freshwater pearl mussels in the part of the river, burn or ditch that would be affected.

7. Glossary of terms and acronyms

Abstraction	In relation to a body of surface water or groundwater, means the doing of anything whereby any water is removed by mechanical means from that body of water, whether temporarily or permanently, including anything whereby the water is so removed for the purpose of being transferred to another body of water within the water environment.
Artificial water body	A body of surface water created by human activity in a location where no significant water body existed before and which has not been created by the direct physical alteration, movement or realignment of an existing water body.
Bank re-profiling	Changing the slope of a river or loch bank but the planform/course of the river is maintained. Does not include heightening of the bank. This can include a creation of a 2-stage channel.
Bank top	The first major break in the slope of the bank of any body of inland surface water, beyond which cultivation or development would be possible.
Bank height	The height of the bank of any body of inland surface water measured vertically from the bank toe to the bank top, excluding any artificial heightening of the bank (e.g. embankments, retaining walls).
Bank toe	The lowest point on the bank of any body of inland surface water where the bank meets the bed of the body of inland surface water.
Bed reinforcement	Reinforcement of bed only, for minimising bed erosion.
Boulder placements	Boulders placed in rivers or lochs to manipulate flow. Usually for fisheries enhancement, can be used in restoration.
Bridge	Includes all span structures where a transport route (e.g. foot path, cycle path, road) crosses a watercourse, it should not impact the bed of the watercourse. Includes single span structures (including pre-cast culverts with no artificial floor/invert) and span structures with piers (in stream supports).
Bridging culvert	Closed culverts with artificial floor/invert where a transport route (e.g. foot path, cycle path, road) crosses a watercourse, but not for land gain. Impacts the bed and banks of watercourses. Please note, pre-cast culverts with no artificial floor/invert are classed as span structures and are included in the bridge category.

Causeway	Elevated transport route constructed across lochs or wetlands.
Closed culvert (bridging culvert for river crossing)	Closed culverts with artificial floor/invert where a transport route (e.g. foot path, cycle path, road) crosses a watercourse, but not for land gain. Impacts the bed and banks of watercourses. Please note, pre-cast culverts with no artificial floor/invert are classed as span structures and are included in the bridge category.
Coastal water	Water (other than groundwater) within the area extending landward from the three mile limit up to the limit of the highest tide or, where appropriate, the seaward limits of any bodies of transitional water, but does not include any water beyond the seaward limits of the territorial sea of the United Kingdom adjacent to Scotland.
Coastal water abstractions	Abstractions of water from coastal water.
Croys/groynes/ flow deflectors	Structures placed in rivers or lochs can manipulate flow. Can have many purposes e.g. fisheries enhancement, bank protection.
CSO	Combined sewer overflow.
Cultivated	Land prepared and used for raising crops.
Culverting for land gain	Permanent under-grounding of watercourses for land gain e.g. building a housing development on top of a watercourse. Excludes culverts for river crossings (e.g. where a transport route crosses a watercourse).
Dredging	Removal of bed material from watercourses from >50% of the channel width - usually the entire channel width. Generally results in channel deepening and/or widening (sometimes called resectioning).
Effluent	Any liquid, including particles of matter and other substances in suspension in liquid, usually derived from sewage or a trade process.
Embankment/land raising	Artificial raising of the natural bank height or land adjacent to the inland surface water
EO	Emergency overflow.
Fertiliser	Any substance containing nutrients that is utilised on land to enhance plant growth (i.e. manures, slurries and inorganic fertiliser).
Field drains	Field drains are an underground system of pipes and channels designed to remove surface and sub-surface water from a given area of land. Field drains should only run intermittently, primarily after prolonged periods of rainfall. Field drains do not include ditches.
Flood by-pass channel	Additional flow route that diverts high flows from one location and returns them

	to a different location to reduce overbank flows; normally associated with flood management projects.
Fords	River or loch crossing but is not raised, is at bed level. May be natural substrate or reinforced with artificial material.
Geothermal energy	Energy derived from the heat in the interior of the Earth.
Green bank reinforcement	Soft bank reinforcement. Includes the use of vegetation and biodegradable geotextiles over the full height of the bank. Also includes the use of rip rap and log/ timber restricted to the bank toe.
Grey bank reinforcement	Hard bank reinforcement. Includes the use of non-biodegradable materials over the whole height of the bank including rip rap, gabion baskets, concrete, grouted stone, brick or block stonework, sheet piling, wood piling and non biodegradable geotextiles. Does not include heightening of bank.
Groundwater	Water below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Impounding works/ Impoundment	<p>a) Any dam, weir, or other works by which surface water may be impounded; or</p> <p>b) Any works diverting surface waters in connection with the construction or alteration of any dam, weir or other works falling within (a) above.</p> <p>Raising the level of an existing natural loch is also considered an impoundment. A pond or lake created by excavation below the pre-existing ground level (e.g. a dug pond or flooded quarry) is not included.</p> <p>'On-line' impoundments hold back flows in the water environment (wetlands, rivers, artificial water bodies, lochs and estuaries) and consequently affect downstream water flows, sediment transport and migration of fish.</p> <p>'Off-line' impoundments are built to store water (including surface run-off, groundwater, or land drainage) and are not on-line.</p>
Inland abstraction	This includes both inland surface water and groundwater abstractions.
Inorganic effluent	Effluent that primarily does not contain matter from an animal or vegetable origin and does not exert a notable biochemical oxygen demand (BOD). Such effluent includes discharges from mines, quarries, water treatment works, etc.
In-stream structures	All structures that occupy a portion of the channel. Includes bed reinforcement not

	associated with closed culverts, jetties, platforms, marinas, croys, groynes and other flow deflectors.
In-loch structures	All structures that occupy a portion of a loch includes jetties, platforms, marinas, croys, groynes and other flow deflectors.
Jetties/platforms/marinas	This includes jetties (piers), fishing platforms, marinas and boat slips that extend into surface waters, can include solid and stilted structures.
Land drainage	A series of subsoil pipes or ditches, which are designed to drain an area of land to allow development or for agricultural use.
Loch	A body of standing inland surface water.
Moled	A cultivation method where an implement is used to open a conduit within the soil along which water may flow.
Mole plough	A technique using a specialised pipe and cable laying plough to cut a temporary narrow channel into which pipes or cables are fed and simultaneously pushes the spoils removed back into the cut channel, eliminating the need to backfill.
Off-line impoundment	See Impoundment.
On-line impoundment	See Impoundment.
Open culvert	River channels where the bed and banks are constructed of artificial consolidated material e.g. concrete, brickwork, block stonework.
Organic effluent	Effluent that primarily contains matter from an animal or vegetable origin and exerts a notable biochemical oxygen demand (BOD). This includes all sewage effluents, effluents from food and drinks manufacture, etc.
Other effluents	Effluents that may have a mixture of organic and inorganic content and/or which do not fit neatly into categories defined elsewhere within this document (i.e. landfill leachate contains both a significant organic and inorganic content).
p.e.	Population equivalent. A measure of the organic biodegradable load of an effluent prior to treatment. One population equivalent (1pe) has a five-day biochemical oxygen demand (BOD5) of 60 grams of oxygen per day. The load is calculated on the basis of the maximum average weekly load entering the treatment plant during the year, excluding unusual situations such as those due to heavy rain.
Pipeline/cable crossing	Location where a pipeline or cable crosses a surface water. Can be laid below the bed, submerged, or spanned above a surface water.

Point source discharge	A discharge of an effluent or other matter to the water environment or land by means of a fixed installation, pipe, outlet or otherwise.
Raised loch	A loch where the surface water level has been increased above its natural level. This is typically due to the installation of a physical structure, such as a small dam or an embankment, which has raised the natural level of the outflow from the loch.
Realignment/diversion	Includes any alteration to a rivers course or planform, from a natural state to a less natural state e.g. straightening of a watercourse. Any alteration to a rivers course or planform where the natural state of the river is maintained or improved. E.g. restoration of modified river to more natural channel pattern or diverting a channel and maintaining channel naturalness.
Reservoir	Reservoirs are artificial storage places for water (e.g. ponds, impoundments and raised lochs) from which the water may be withdrawn for such purposes as electricity generation, irrigation or water supply.
Rip-rap	Large coarsely broken rock placed on stream banks to reduce erosion by flowing water, or to support a slope embankment.
Sediment management	Any works which involve moving, introducing or removing sediment from the channel of a river or bed of a loch (includes dredging).
Sediment removal	Removal of bed material from watercourses from 50% of the channel width. Includes any removal of bed material from lochs.
Sewage effluent	Any effluent from sewage disposal or a sewerage works.
SUDS	Sustainable Urban Drainage System
Trade effluent	Any effluent produced in the course of any trade or industry.
Transitional waters	Means water (other than groundwater) in the vicinity of river mouths which is partly saline in character as a result of its proximity to coastal water but which is substantially influenced by freshwater flows
Waterbound road	A road constructed of coarse stone and fine aggregate to form a tightly bound semi-impervious surface.
Weir	An on-line overflow structure (i.e. an impoundment across a watercourse) that is used for controlling upstream water level. Passive weir - any weir that is not capable of being operated to control the water level upstream of the weir.