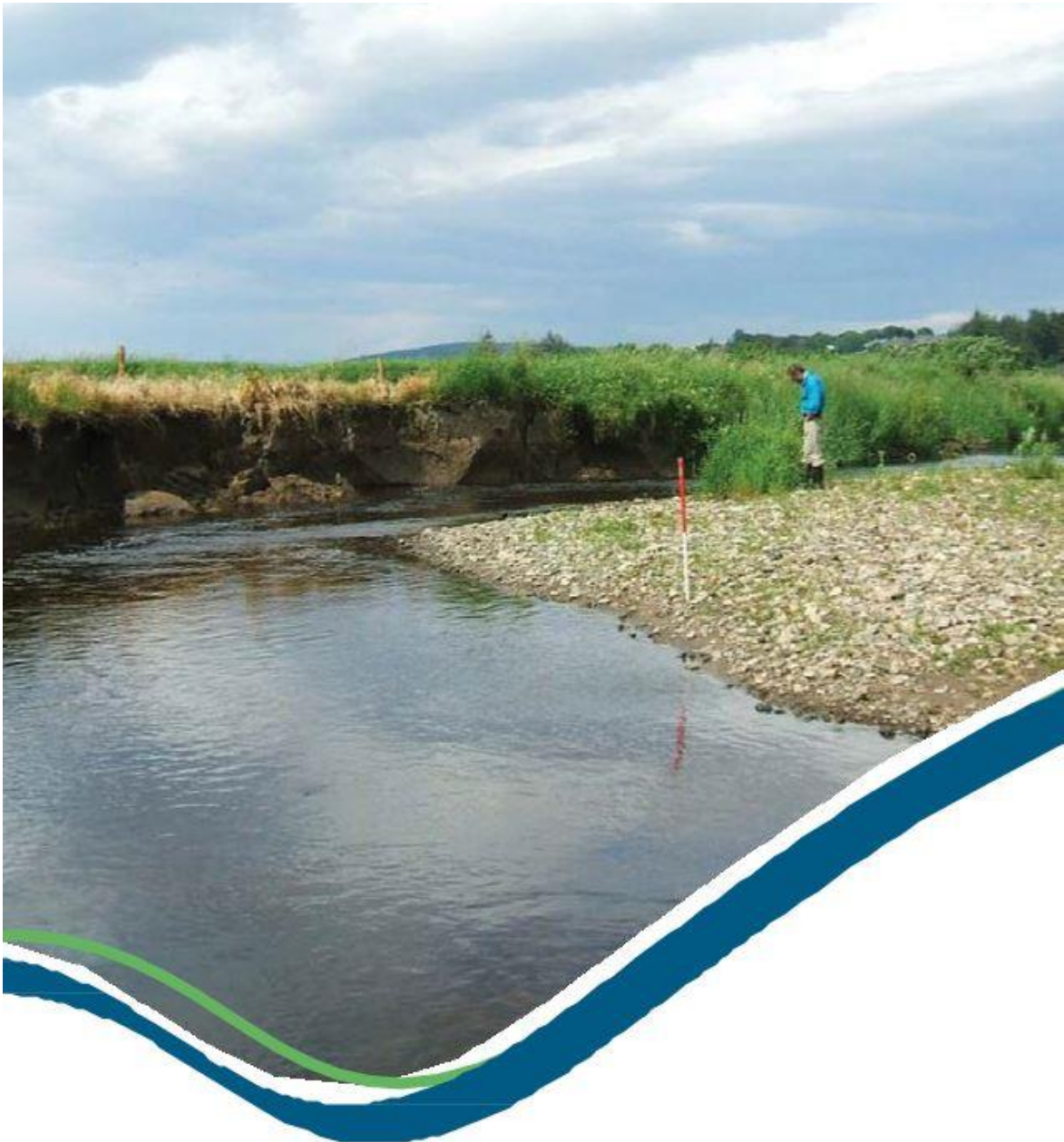


DREDGING - A land manager's guide to the rules



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Introduction

Farmers have long practised sediment management, commonly referred to as dredging. The introduction of controls on these activities in 2006 was therefore a significant change. These controls, known as the Water Environment (Controlled Activities) Regulations or CAR have the aim of maintaining or improving the biodiversity of coastal and transitional waters, rivers, burns and lochs.

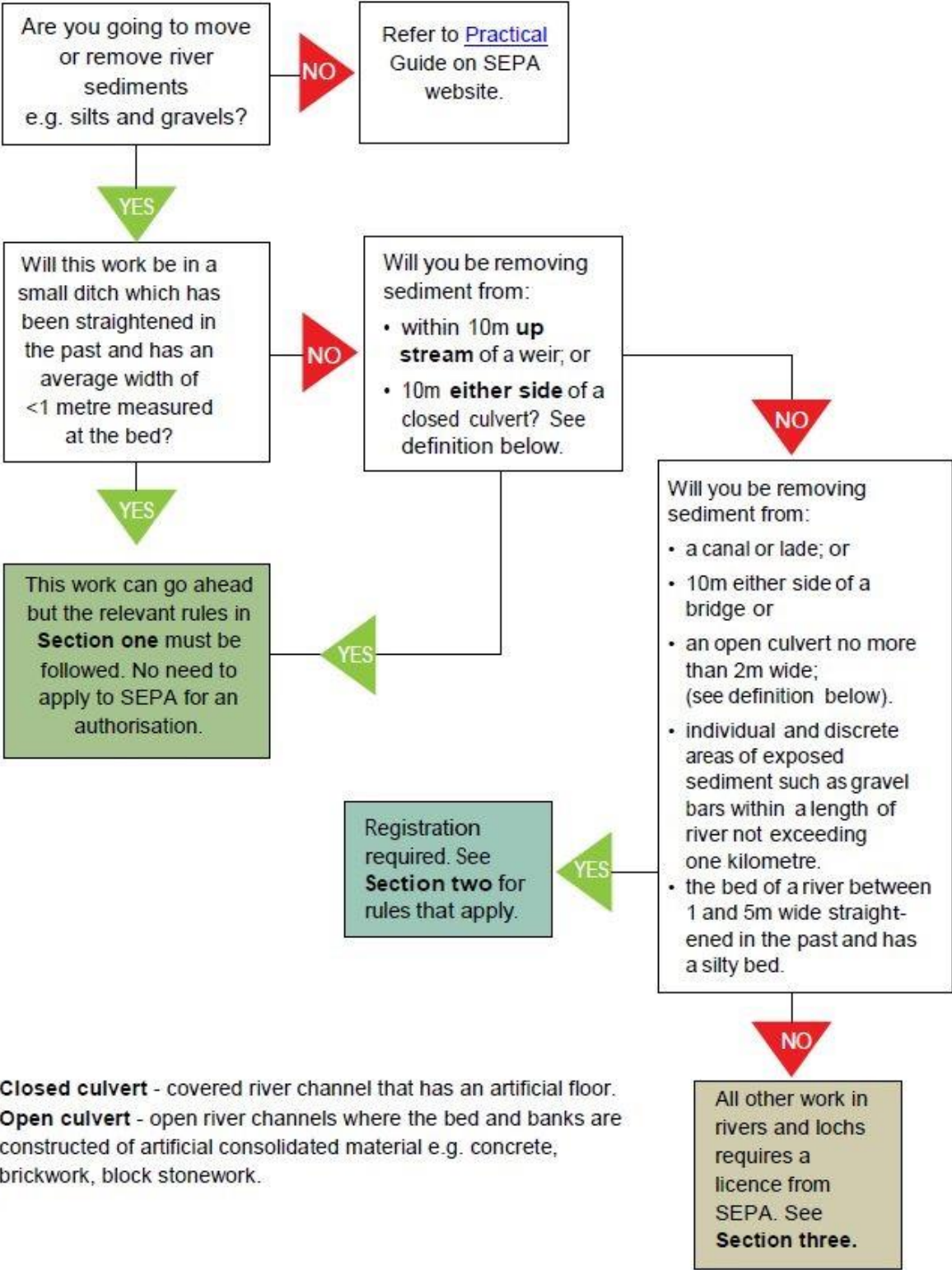
Rivers and burns naturally change shape and direction all the time. Some changes are small, while others are more obvious, particularly during high water flows when there is erosion and sediment deposition. Human intervention into this process is sometimes necessary or essential, but it often has the effect of simply moving the problem elsewhere or damaging fragile habitats. Specifically:

- there can be significant habitat loss, as silts, sands and gravels are an important habitat for plants and animals to live in and for fish spawning;
- there will be an increased risk of flooding downstream as straightened channels increase the speed of flood waters compared to meandering channels;
- where excavated sediment or other material has been piled alongside the river to form flood barriers, this will disconnect the river or burn from potential floodplains beyond and will increase the flood risk downstream and erosion;
- over time the river is unlikely to remain straight as sediment is deposited and it begins to meander once again. This will necessitate more dredging.

Although dredging is regulated, it remains allowable under certain circumstances and with appropriate controls. There is a sliding scale of authorisation (General Binding Rules (GBRs/rules), registration, simple licence, complex licence) depending on the potential environmental risk. The aim of this farmer's guide is to help you understand what you can and can't do, and what levels of authorisation you will require (if any) before you carry out any dredging. If you have any questions, contact your local SEPA office, call 03000 99 66 99 or contact us [via email](#).

The flow chart below applies to rivers and lochs

No authorisation required to clear sub surface field drains or man-made ditches. Also litter debris and in stream vegetation can be removed without authorisation although vegetation removal from banks should be avoided where it will expose banks to erosion.



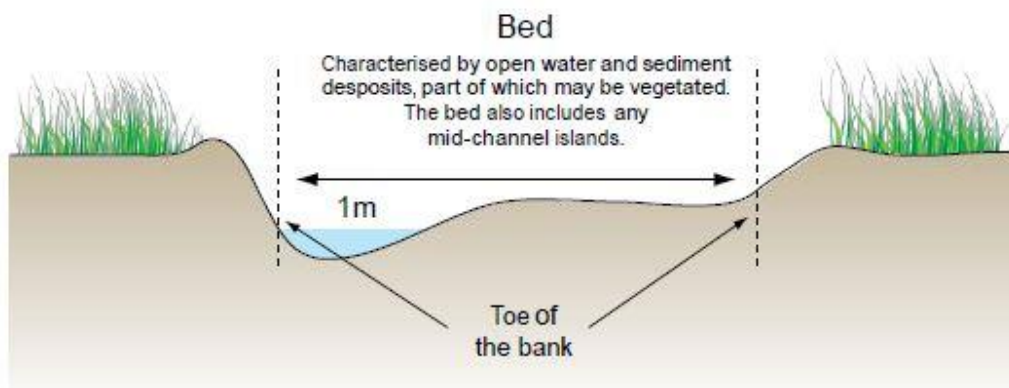
Closed culvert - covered river channel that has an artificial floor.
Open culvert - open river channels where the bed and banks are constructed of artificial consolidated material e.g. concrete, brickwork, block stonework.

Section One: General Binding Rules (GBRs)

GBRs (rules) are a type of authorisation for low risk activities, where the rules are published and it is the responsibility of the person carrying out the activity to abide by these rules. The rules for each activity are set out below.

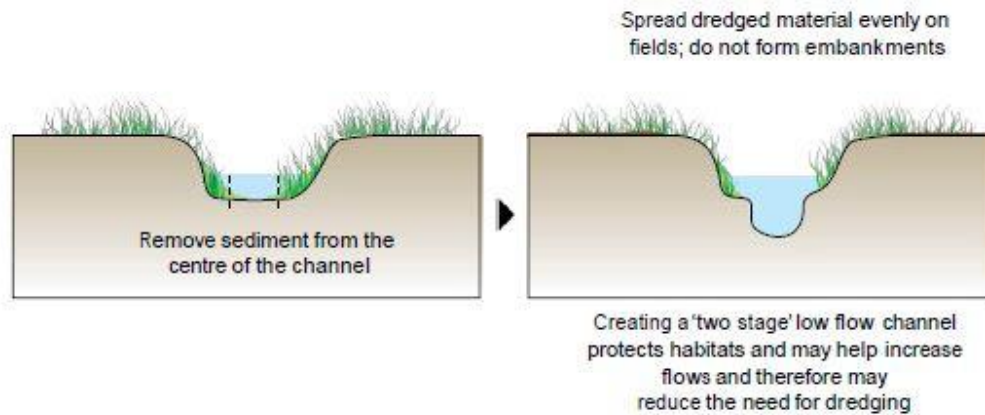
There is no requirement for you to contact SEPA in advance, however, failure to comply with these rules can result in prosecution, so if you are unsure please contact SEPA to discuss.

General Binding Rule 5: Dredging of previously straightened watercourses with an average width of less than one metre along the stretch to be worked



River width is the straight line distance measured between the toe of the banks of any watercourse, including any exposed bars and vegetated islands.

- 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 channel bed adjacent to each bank must be left undisturbed.
- d. All reasonable steps must be taken to prevent the transport of sediments beyond the worked stretch.
- 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. If in doubt about these times, you are advised to contact your local District Salmon Fishery Board or SNH for advice.
- f. All reasonable steps must be taken to avoid increased erosion of the banks and bed.
- g. The works must not result in the heightening of either bank.



SEPA does not intend to apply this rule to man-made ditches formed e.g. for drainage where there was not previously a natural watercourse. (Historic maps can be helpful in deciding if a ditch is man made). However during such works operators should use best practice to ensure that pollution of the water environment down stream is prevented e.g. silt pollution.

General Binding Rule 12: 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.

- a. Sediment or other matter can only be removed within the stretch 10 metres 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. Sediment that has been removed may be returned to the watercourse, provided that:
 - it is returned within the 10 metre stretch downstream of the weir;
 - it does not cause sediment to accumulate in a manner likely to impede the free passage of migratory fish;
 - all reasonable steps are taken to avoid increased erosion of the bed or banks of the watercourse;
 - it is not returned during periods in which fish are likely to be spawning, nor in the period between spawning and the subsequent emergence of the juvenile fish.
- d. The removed sediment and other matter must not be placed on the bank of any watercourse.
- e. The return or removal must not result in pollution of the water environment.
- f. Vegetation may be removed from the banks only if the works cannot otherwise be reasonably carried out.
- g. Vegetation that is removed must not be disposed of into the channel.

General Binding Rule 13: Removal of sediment from the inside of a closed culvert or within 10 metres upstream or downstream of a closed culvert and if desired, its subsequent return.



- 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 fish. If in doubt about these times, you are advised to contact your local District Salmon Fishery Board for advice.
- 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 watercourse, provided that:
 - it is returned within 15 metre downstream of the culvert;
 - its return does not result in an accumulation of sediment that impedes the free passage of migratory fish;
 - 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.

Section Two: Registrations

Registration level activities are small scale and assessed to have medium environmental risk, but can have greater impact in combination with other activities. There are rules for each activity, as set out below, as well as general conditions that must be followed. Applications for a registration can be made online on the SEPA website or in writing, and take about 30 days to assess, after which you will be sent the authorisation if successful. For up to date information on fees please refer to [Charging scheme](#). Discounts are available for subsequent associated registrations.

Section Two A: Activity-specific conditions of registration

The activities registered must be carried out in accordance with the activity-specific conditions below and the general conditions in [Section Two B](#).

Activity A: Sediment management in canals and lades and other artificial water bodies

A.1 The volume of sediment removed shall only be the minimum necessary to maintain the efficient operation of the artificial water body and shall not be disposed of into the surface water.

A.2 The authorised activity shall not be undertaken during periods in which fish are likely to be spawning in the watercourse nor in the period between any such spawning and the subsequent emergence of the juvenile fish.

Activity B: Sediment management within 10m of bridges

B.1 The volume of sediment removed shall only be the minimum necessary to maintain hydraulic efficiency or structural integrity of the bridge

B.2 The authorised activity shall not result in the heightening of either bank.

B.3 Where possible, the sediment removed shall be returned to the affected inland surface water:

B.3.1 as closely as possible downstream of the location of its removal;

B.3.2 by placing it on areas of exposed sediment the edge of which lies more than 1 metre from any part of the bed of the affected surface water that is under water at the time of return; and

B.3.3 outwith periods of unusually dry weather; and

B.3.4 when flowing water in the channel is sufficiently deep to fully submerge at least part of the bed for the entire 1 kilometre length of the inland surface water;

B.4 The authorised activity shall not be undertaken during periods in which fish are likely to be spawning in watercourse nor in the period between any such spawning and the subsequent emergence of the juvenile fish.

Activity C: Sediment management in open culverts

C.1 Sediment shall only be removed from open culverts no more than two metres wide.

C.2 The volume of sediment removed shall only be the minimum necessary to maintain hydraulic capacity or structural integrity of the open culvert.

C.3 Where possible, the sediment removed shall be returned to the affected inland surface water:

C.3.1 as closely as possible downstream of the location of its removal;

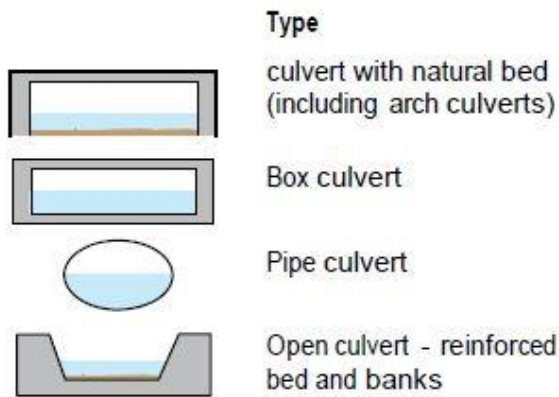
C.3.2 by placing it on areas of exposed sediment the edge of which lies more than 1 metre from any part of the bed of the affected surface water that is under water at the time of return; and

C.3.3 outwith periods of unusually dry weather; and

C.3.4 when flowing water in the channel is sufficiently deep to fully submerge at least part of the bed for the entire 1 kilometre length of the inland surface water;

C.4 The authorised activity shall not be undertaken during periods in which fish are likely to be spawning in the watercourse nor in the period between any such spawning and the subsequent emergence of the juvenile fish.

Guide to identifying and recording culverts



Activity K: Removal of sediment from individual and discrete areas of exposed sediment deposits within a length of river or burn not exceeding one kilometre.

K.1 Sediment shall only be removed:

K.1.1. outwith periods of unusually dry weather;

K.1.2. when flowing water in the channel is sufficiently deep to fully submerge at least part of the bed for the entire 1 kilometre length of the river or burn; and K.1.3. from a maximum length of 30 metres (when measured along the bank) within any individual sediment deposit.

Key points:

- Removal should only be from dry gravels.
- Removal should only be from gravels that are dry during normal low flow – NOT during very low flow, when very large areas of sensitive and normally wet habitat could be exposed.

K.2 Sediment shall not be removed:

K.2.1. from more than one third of the total number of individual and discrete areas of exposed sediment that are present within the 1 kilometre length of river or burn;

K.2.2. from more than 50% of the surface area of any individual sediment deposit

K.2.3. from the same individual sediment deposit more frequently than once every three years.

Key points:

- These rules should ensure that the volume removed is significantly less than the available supply. This means that the river is not 'starved' of sediment and that dependent habitats are protected.

K.3 Sediment shall not be removed from any part of the deposit that is:

K.3.1. within 1 metre of the wetted edge of the deposit, for sediment deposits that are less than 10 metres wide at their widest points; or

K.3.2. within 2 metres of the wetted edge of the deposit, for sediment deposits that are 10 metres wide or more at their widest points.

Key points:

- The width of the sediment deposit is measured at its widest part, perpendicular to its length, outwith periods of unusually dry weather.
- The edge of the bar must be left in place. This has to be at least 1 metre or 2 metres wide depending on the width of the bar. This will maintain the flows past the bar so that sediment is not deposited at the site during medium and low flows.
- Sediment should ideally be removed from the finer deposits at the downstream end of the bar rather than closer to the head of the bar while still leaving the 1 or 2 metre wide edge intact.

K.4 The activity shall not result in the creation of hollows or pits on the bed of the affected surface water that fish could enter at higher flow and then become isolated from the rest of the affected surface water as flows decrease.

Key points:

- Don't remove sediment from below the water level within the bar.

K.5 Where possible, the sediment removed shall be returned to the affected inland surface water:

K.5.1. as closely as possible downstream of the location of its removal;

K.5.2. by placing it on areas of exposed sediment the edge of which lies more than 1 metre from any part of the bed of the affected surface water that is under water at the time of return; and

K.5.3. outwith periods of unusually dry weather; and

K.5.4. when flowing water in the channel is sufficiently deep to fully submerge at least part of the bed for the entire 1 kilometre length of the inland surface water.

Key points:

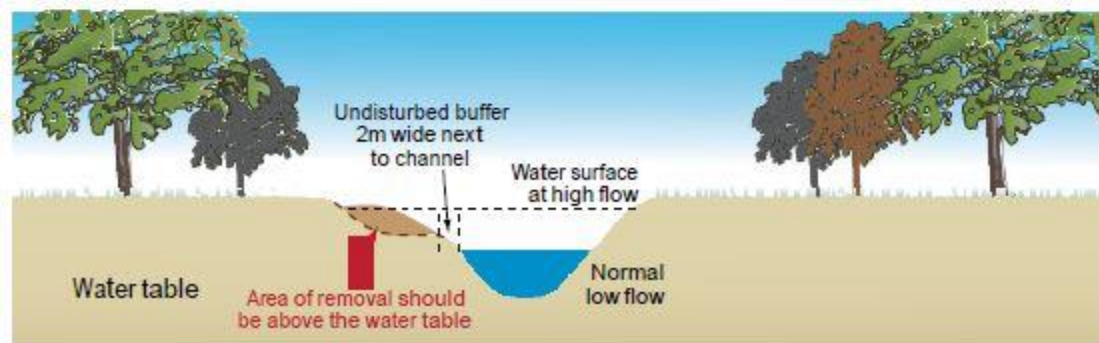
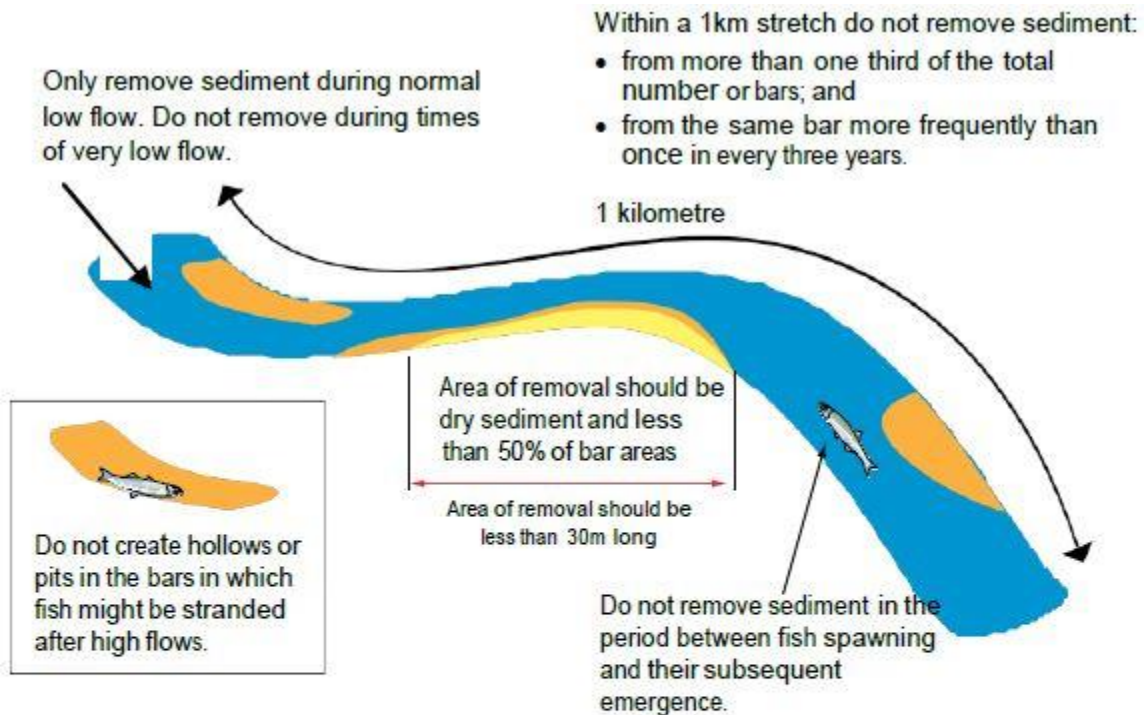
- It is good practice to put the sediment back into the natural system where possible.
- Returned sediment should be placed onto existing dry sediment deposits, but it should not be piled very high (i.e. above the existing bank height).
- It should not be dumped into the wet part of the channel because it could damage species and habitats.
- Return is not required if it's not practical to do so.

K.6 The activity shall not result in the heightening of either bank.

Key points:

- Removed sediment should not be used to create embankments, or to increase the height of any existing embankments. This may require separate authorisation from SEPA.
- The removal area should not go right up to the toe of the bank because this may cause bank collapse.

K.7 The activity shall not be undertaken during periods in which fish are likely to be spawning in the affected surface water nor in the period between any such spawning and the subsequent emergence of the juvenile fish.



Activity L: Removal of sediment from the bed of a stretch of a river or burn that has all of the following characteristics:

- an average width of greater than, or equal to, 1 metre and less than 5 metres as measured between the base of one bank and the other; (Picture 1)
- artificially straightened or canalised with the lines of its bank tops being parallel, or near parallel, throughout its length; (Picture 2)
- a bed surface layer that is entirely, or almost entirely, comprised of sediments with a diameter of less than 2 mm i.e. sands, silts and clay; (Picture 3) and
- except in flood flows, a smooth, un-rippled water surface for all, or nearly all of its length. (Picture 2)



L.1. The total length of the river or burn from which sediment is removed shall not exceed 500 metres. The length may comprise a single, continuous length of 500 metres or a number of shorter lengths that in total do not exceed 500 metres.

Key points (L.1):

- 500m is the total length of dredging allowable under the registration, do not exceed this length. You may split this length up e.g. 100m + 400m.

L.2. The works shall not result in increased erosion in any part of the river or burn.

L.3. The bed of the worked stretch shall be graded at a shallow angle to tie in with the bed level upstream and downstream and there shall be no steps or sudden changes in the angle of the bed slope.

L.4. The activity shall not result in the widening of the river or burn.

L.5. Sediment shall not be removed from the bed of the river or burn adjacent to one bank if sediment is removed from the bed adjacent to the opposite bank.

L.6. No sediment shall be removed from the face of either bank.

Key points (L.2 –L.6):

- Don't leave a sudden change or step in the river bed. Grade the bed using a shallow angle to tie in with the unworked areas.
- Leave the banks intact and some sediment undisturbed at the toe of at least one bank.

L.7. The removed sediment shall not be left on the banks such that its placement heightens the banks.

Key point (L.7):

- Don't make the river bank any higher. Smooth out removed sediment if necessary and keep it away from the bank edge.

L.8. The activity shall not be undertaken within 1km river length of the outlet of any loch unless the outlet from the loch is controlled by a weir, impoundment or similar man-made control.

Key point (L.8):

- The activity must not result in the lowering of loch levels and therefore don't work within 1km of a loch outlet unless there is a dam, weir or other control structure on it.

L.9. The works shall not be undertaken during periods in which fish are likely to be spawning in the river or burn nor in the period between any such spawning and the subsequent emergence of the juvenile fish.

L.10. All reasonable steps shall be taken to prevent the transport of sediment or other matter disturbed by the works into waters beyond the worked stretch. In all cases, measures shall be taken aimed at trapping and retaining as large a proportion as reasonably practical of any sediment and other matter disturbed by the works.

L.11. The sediment removed shall not be disposed of into any part of a river, burn, loch, wetland, coastal water, estuary or other transitional water.

Key points (L.9-L.11):

- These are fine sediments that are being removed and if allowed to drift down stream may settle on the bed and adversely impact fish and other animals.
- Don't work if fish are spawning or young fish are waiting to emerge, but in general, avoid end October to start May. (check exact time with your local fishery board).
- Use measures to prevent environmental harm e.g.
 - Filter materials such as silt curtains or straw bales to trap silt before it gets downstream.
 - Minimise the time the works will take.
 - Choose the right weather conditions e.g. drier periods.

L.12. The activity shall not result in the lowering of the water level in any:

- i site designated for the protection of habitats or species where water level is an important factor in their protection;

- ii wet woodland, spring, flush, seepage, fen, swamp, wet heath, reedbed, peat bog, saltmarsh, dune slack, or machair; or
- iii marshy grassland on rough grazing land.

Key point (L.12):

- Don't lower water levels in wetlands, designated or otherwise. This includes marshy grassland on rough grazing land.

Section Two B: General conditions for all registrations

- a. Other than as specifically permitted or limited by any condition of this authorisation, none of the authorised activities shall have a significant adverse impact on, or cause pollution of, the water environment.
- b. All reasonable steps shall be taken to prevent the transport of sediments or other matter disturbed by the authorised activities into waters beyond the worked stretch.
- c. The authorised activities shall not destabilise the bed or banks of the inland surface water.
- d. Vegetation shall be removed only to the extent necessary to carry out the authorised activities. Any vegetation that is removed shall not be disposed of into any inland surface water.
- e. The authorised activities shall not prevent the free passage of migratory fish.
- f. Where a temporary bridge or culvert is installed to facilitate the authorised activities, the culvert shall not extend more than 10 metres along the length of the inland surface water and shall be removed on completion of the authorised activities.
- g. Where an area of inland surface water is isolated in order to carry out the authorised activities, e.g. by over pumping, the isolated area shall cover as small a surface area as possible and the watercourse shall be returned to the original channel as soon as possible after completion of the authorised activities.
 - i. The inflow to any pumps used shall be screened so as to ensure that fish are not drawn into the pump during its operation.
 - ii. Open channel diversions shall not be used.
- h. Any vehicle, plant or other equipment shall only operate in water where it is impracticable for it to operate on dry land.
- i. If any vehicle, plant or equipment enters the water for the purposes of carrying out the authorised activities, all reasonable steps shall be taken to minimise damage to the bed and banks of the surface water.
- j. Vehicles, plant or other equipment shall not be operated in an inland surface water during periods in which fish are likely to be spawning in that inland surface water nor during the period between any such spawning and the subsequent emergence of the juvenile fish.
- k. Any vehicle, plant or other equipment shall not operate in water where there is a reasonable likelihood that, within 50 metres of such an operation, there are freshwater pearl mussels.
- l. Any vehicle, plant or other equipment used in or near surface waters shall not leak any oil.
- m. Unless condition O below applies, the refuelling and washing of any vehicle, plant or other equipment shall be undertaken at least 10 metres from any surface water or any groundwater abstraction point, and run-off from such washing shall not enter any surface water.

- n. Any static plant or equipment used within 10 metres of surface water shall be positioned on a suitably sized and maintained impervious drip tray with a capacity equal to 110% of the capacity of the fuel tank.
- o. None of the authorised activities shall have a significant adverse impact on private drinking water supplies.

Section Three: Simple licences and complex licences

Licence level activity is higher risk to the environment and is therefore more heavily regulated. Licences contain site specific conditions relating to the activity and require the identification of a person responsible for ensuring compliance with the conditions of the licence. Groups of farmers can apply jointly for catchment licences for removing sediment at different points over a long stretch of river.

When assessing licence applications, SEPA's decision will be based on the following considerations:

- Will there be an adverse effect on protected species? or
- Will there be a downgrade of the water body?

If the answer is yes, then SEPA will ask if there is a need to carry out the work or is there an alternative solution that is more sustainable? If there is a more sustainable solution, justification on why this alternative has not been proposed.

If there is no acceptable justification the application may be refused.

Alternative solutions may be possible and pre application discussions with SEPA are advised.

Table 1 Licence application and subsistence/monitoring fees

	Dredging/sediment management activity	Authorisation level	Fee*
Application fees	Sediment management in small rivers (>1m and less than 3m wide) or in larger rivers, but where the activity extends no longer than 50m	Simple licence	See Charging scheme for up to date information on fees
	All other sediment management	Complex licence	
Subsistence fees	Subsistence fees are not currently charged for engineering activities.		

* Discounts apply where more than one activity is applied for.

Further sources of information

- SEPA [Engineering Guidance](http://www.sepa.org.uk) (www.sepa.org.uk)
- [Scottish Natural Heritage](http://www.nature.scot) (www.nature.scot)

For advice on the presence of fish, please consult with Scottish Natural Heritage and [Fisheries Management Scotland](#) (includes details of local Fisheries Trusts and District Salmon Fisheries Boards).