

Campervan and motorhome waste disposal



A guide for independent developments

Created in partnership with:



**Scottish
Water**
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Water
Horizons**



Foreword

The people and places of rural and island Scotland have welcomed tourists in significant numbers for well over 100 years.

Our economy and infrastructure have changed a great deal in that time, enhancing the experience we offer to visitors and supporting the sector's success.

In recent years, there has been significant growth in campervan tourism, bringing new infrastructure challenges. In particular, there is limited provision in many areas for responsible disposal of waste water, some of it chemically treated, from campervans' onboard toilets and drains.

This guide has been produced in partnership to assist communities, businesses and other organisations who are seeking to respond to that challenge.

We share with them the goal of supporting a flourishing economy, which welcomes visitors, values the quality of our natural environment and sustains the wellbeing of local communities.

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The partners wish to acknowledge the important contribution which has been made by a number of other stakeholders to the development of this guidance, including the Campervan and Motorhome Professional Association (CAMPA), Comhairle Nan Eilean Siar, NetRegs, VisitScotland and Highlands & Islands Enterprise. This document has benefitted greatly from their input, but the authors are solely responsible for the guidance, the underlying policies it reflects, as well as any errors or omissions.

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1. Introduction

In recent years, there has been a significant increase in the number of people visiting rural and island areas of Scotland in campervans and motorhomes.

There is currently a limited number of campervan waste water disposal points, resulting in inappropriate use of public toilets, with potential for blockages or spills, risk of serious environmental pollution, and health and safety risks.

This has a potentially significant impact on communities and also affects the experience of visitors who seek to dispose of their waste responsibly. There is demand for the provision of more facilities which can be delivered and maintained by local communities, charities, businesses or other interested parties.

This document seeks to identify potential options, consider the challenges and provide guidance about proceeding with the chosen solutions.

2. Proposed solutions

Campervans typically have two separate tanks for storing their waste water – grey and black water tanks. Grey water consists of water from showers, sinks and baths, whilst black water contains toilet waste including a variety of added chemicals.

Due to their composition, black and grey water require different treatment. The typical tank size for grey water is 100 litres and for black water is 20 litres (including rinse water).

Through various discussions and thorough consideration, the following options have been identified as potential solutions:

1. Direct connection to a public sewer for both grey water and black water;
2. Connection of grey water to a sewer and a standalone collection tank for black water;
3. Soakaway for grey water and a standalone collection tank for black water;
4. Standalone collection facility for all waste to be tankered off site.

Each of these solutions have their own advantages and disadvantages and may not be suitable due to issues such as location and sewer network accessibility.

In order to decide which option might be right for you to develop, some questions have been prepared in the following section to provide an indication of potential considerations and challenges.



Grey water

Used water from showers, sinks and baths without chemicals.



Black water

Used water from toilets containing chemicals and solids.

2. Proposed solutions cont.

The following flow chart is provided to assist you in finding the solution for your development:

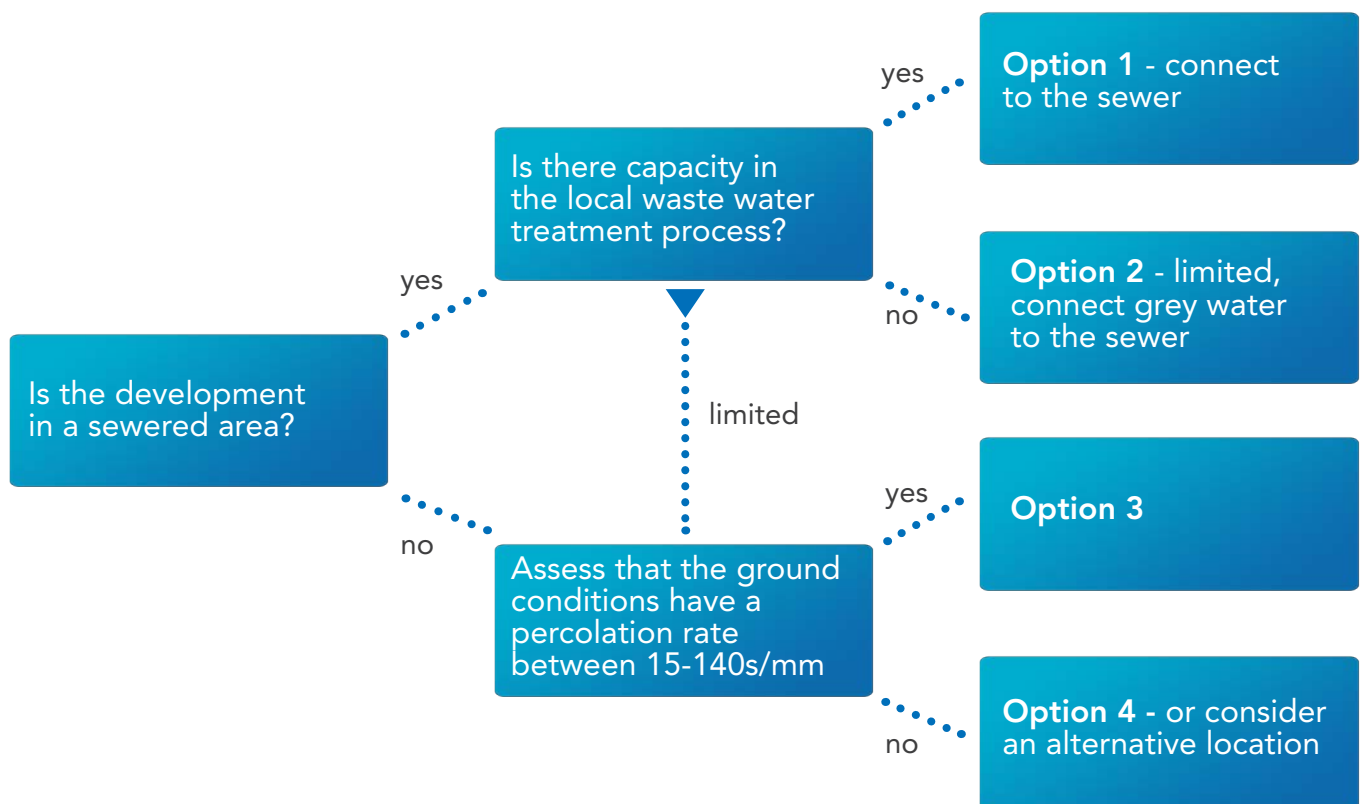


Figure 1 – flow chart to assist with decision making when looking for a suitable option

Alternative Solutions

If you identify a solution which is not covered in this document, but you believe to be technically viable for your site, you must consult the Scottish Environment Protection Agency (SEPA), your Local Authority and Scottish Water to obtain relevant guidance and approvals.



3. Initial considerations

Depending on your circumstances, you may want to start by confirming the need and opportunity for additional campervan waste disposal facilities in your area.

Have you checked whether there are any campervan facilities provided nearby?

Investigating whether there are existing disposal facilities in the area will give an indication of the demand and economic viability of additional facilities.

In some areas, maps are produced by local tourism agencies showing existing facilities, and example of which can be found [here](#) (appendix 1). At the time of writing, CAMPA are working on incorporating a waste disposal map in their website, you can find their website [here](#)¹.

Have you considered the costs and identified funding?

Every option will have capital and operational costs and they should be assessed in the early stages of the project.

You may also wish to consider whether you want the disposal point to be free to use or whether you want to charge a small fee to help cover operational costs.

Do you have access to a Scottish Water sewer network?

If there is no public sewer in close proximity to your site, then only options 3 and 4 should be further considered.

If there is a public sewer nearby, please contact Scottish Water and submit a Pre-Development Enquiry (PDE) to obtain further advice as early as possible.

Do you have access to a suitable water supply?

Your disposal unit may require connection to a water supply. It is also likely that water for rinsing and washing will be needed.

Please contact Scottish Water and submit a PDE as early as possible if a new connection to the public water supply is required.

Note on Septic Tanks

While septic tanks are a potential option, in many cases they are considered an inadequate solution alone for dealing with campervan waste.

The variance in summer/winter usage demand, as well potential presence of harmful chemicals, can have an impact on the septic tank performance. This can result in operational issues, septic tank failure, environmental pollution incidents and increased maintenance costs.

3. Initial considerations cont.

The next stage is to decide on the best site for the facility.

Some further questions to consider are:

Is there land available, with easy access for connection to water and sewer networks, where required?

A key step is to identify suitable land and engage with the landowner to secure their agreement (if you do not already own the land).

In exploring any potential site options, consider the cost of water, waste water and any other utility connections that you may need.

Is your site large enough to be accessible and manoeuvrable for campervans and/or tankers?

Your site will have to be designed so that campervans and, where relevant, tankers can stop and access the disposal point.

It is crucial to ensure there is enough space for these vehicles to manoeuvre safely.

Have you considered the vicinity of your site?

It is important to consider the area where the campervan waste water disposal point will be located, especially in relation to additional traffic in the area, impact on amenities and potential for odours.

Are you aware of the site ground conditions?

Ground conditions will have a significant impact on the construction costs.

You should avoid contaminated land and digging rock, as these will present more challenges and costs when carrying out work.

Table 1 – questions to consider during the initial planning stages of the project

4. Applying for planning permission

We recommend submitting a pre-planning application in advance of a full planning application. If there are issues with a proposed development, a full application can be a costly way of finding out that the project has significant problems. A pre-planning application is a quick and low cost way to highlight any concerns at an early stage.

Applications for pre-planning and planning permission can be submitted through your Local Authority website.

[This link](#)² will direct you to The Highland Council's planning information page. Comhairle nan Eilean Siar's planning information can be accessed using [here](#)³.

If you are working outwith these areas, you can find the contact details of your local authority using [here](#)⁴.

5. Environmental considerations & Duty of Care

When the waste water from campervans is discharged you, as an operator of the waste water disposal point, are obligated to dispose of it safely and legally.

You have a legal responsibility to ensure that you produce, store, transport and dispose of controlled waste without harming the environment. This is your Duty of Care.

You must never dispose of chemical toilet waste into a watercourse, surface drain, the ground or groundwater.

NetRegs website contains guidance explaining your responsibilities related to handling waste; please click [here](#)⁵ for more information on your Duty of Care.



6. Options

6.1 Direct connection to the sewer

The main factors determining whether this is a viable option are:

- Distance from the nearest suitable point of connection to the public sewer network;
- Distance from the local Waste Water Treatment Works (WWTW) to provide dilution to chemical toilet waste within the sewer network;
- Capacity of the local WWTW to receive chemical toilet waste without disruption to the treatment process.

Many small rural and island communities in Scotland have limited public waste water infrastructure. In some areas, homes and businesses have private septic tanks or small private treatment systems.

Other communities are served by relatively localised sewer networks, draining into small public septic tanks. The small size of these systems means that the biological treatment process can be vulnerable to some of the chemicals which may be present in black water waste.

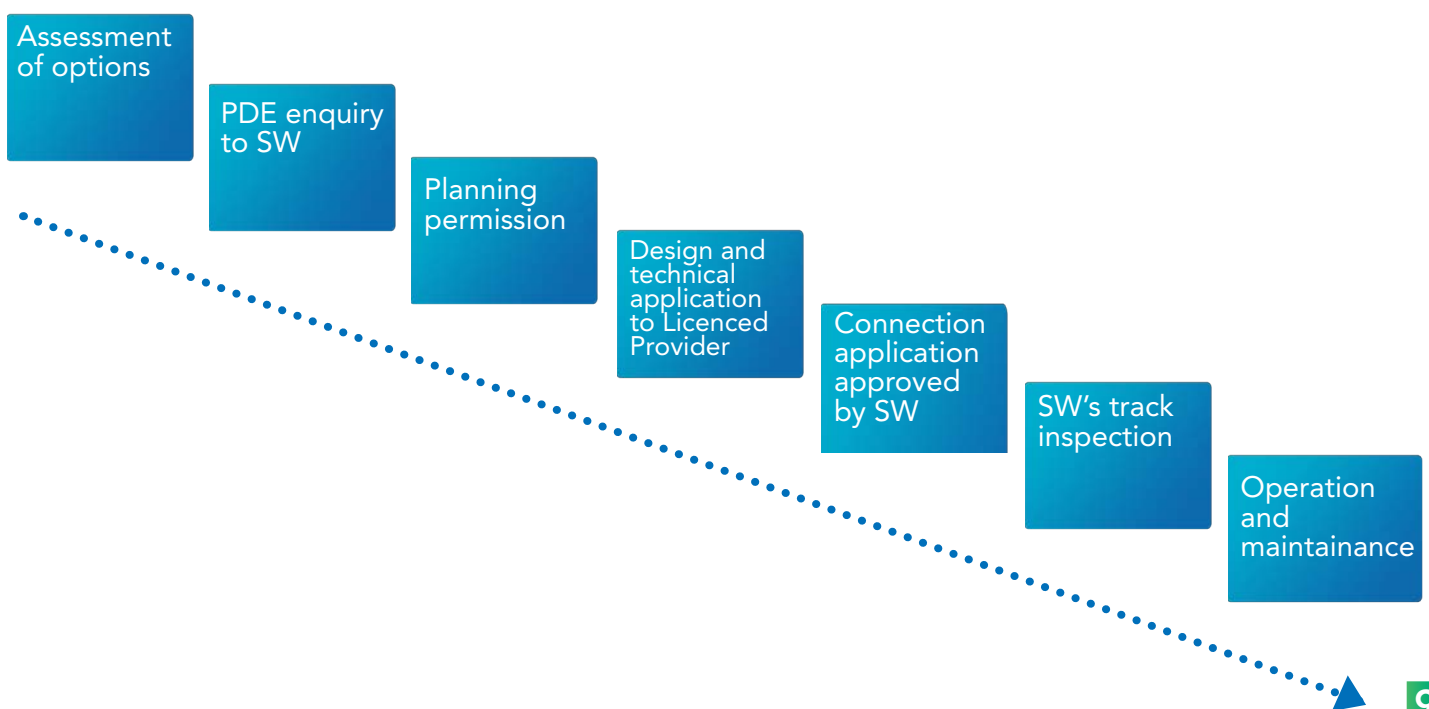
You can contact [Scottish Water](#)⁶ (SW) for early advice on whether the WWTW in your area may be able to accept chemical toilet waste. In general, the most promising locations will be in larger villages and towns.

The location of your site within the public sewer network can also be considered. If your site is close to the WWTW, the black water might not be diluted enough when it reaches the works.

Without sufficient dilution, some of the chemicals present in black water can harm good bacteria that form part of the treatment process. This could affect the ability of the WWTW to treat waste water to the required standard before effluent is returned to rivers or the sea.

In general, it is best to consider sites that are within the area served by the public sewer network, but some distance from the local WWTW.

The process that should be followed when applying for a direct connection to the sewer is outlined below (details on the following page):



6.1 Direct connection to the sewer cont.

It is recommended that you consult Scottish Water as early as possible (by submitting a pre-development enquiry) for some early advice and indication whether a connection to the public sewer can be obtained. Additionally, we recommend submitting a pre-planning application enquiry to your local authority to get some early guidance on any key planning considerations.

Pre-Development Enquiry (PDE)

There are two options for submitting a pre-development enquiry:

1. Directly approaching Scottish Water
2. Through your chosen Licenced Provider*

* All non-household customers in Scotland who use water or waste water services need to have a supplier - referred to as a Licenced Provider. See [this link](#)⁷ for more information and to choose your licenced provider.

Option one will allow you to submit a direct application to Scottish Water in order to determine whether there is sufficient capacity in the sewer network and local treatment works.

Option two means going through your chosen Licenced Provider. You should also enquire about connection to the water network if a new water supply is needed, either for your chosen disposal unit or for rinse water.

You can find the PDE form on Scottish Water's [here](#)⁸.

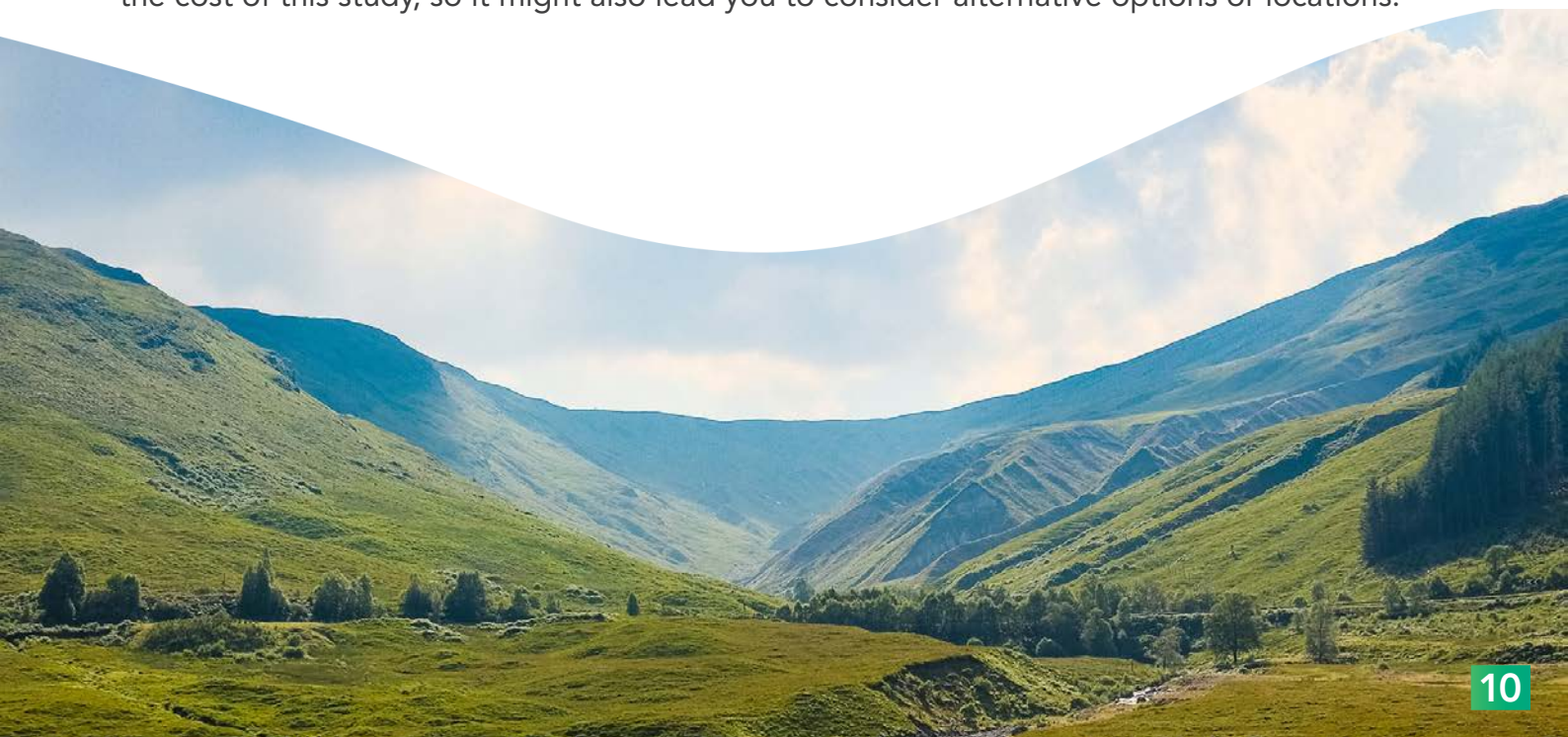
Whichever option you choose, you will be asked to provide the same information. See Appendix 2 for more guidance on the PDE form.

PDE Response

Scottish Water will issue a PDE response letter which will indicate whether there is enough capacity in the network and the treatment works for your campervan waste water disposal connection, as well as for a new water supply where required.

If you are proposing to pump the flows or if there are any major known issues such as sewer flooding in the area, you might be required to carry out a Drainage Impact Assessment (DIA).

Scottish Water will be able to direct you to a competent consultant to carry out these works or you can approach an experienced consultant of your choice. You will be expected to cover the cost of this study, so it might also lead you to consider alternative options or locations.



6.1 Direct connection to the sewer cont.

Planning Permission

Once the feasibility of connection for water and waste water is confirmed at your chosen site, you are ready to apply for planning permission. See Section 4 above.

Design & Technical Application

Before starting any works on site, you will be required to submit a connection application, including design drawings. The technical application **can only be submitted to Scottish Water via your Licenced Provider**. Scottish Water will review your application and if there are no further concerns, permission for the connection will be granted.

It is recommended that you employ a competent consultant to complete the designs and to provide any supporting information. An incomplete or inaccurate application will cause delays in obtaining your connection permission.

The design should ensure that the discharge point is appropriately covered to avoid rainwater or surface water entering the sewer system. Some examples are shown below. Please note that the option shown in pictures 4 or 5 would not be accepted unless the disposal point was installed within a shelter to prevent rainwater from entering the sewer. It is also worth highlighting that pictures 3 and 4 show grey water disposal points, as the grid across the disposal area would not be suitable for black water.

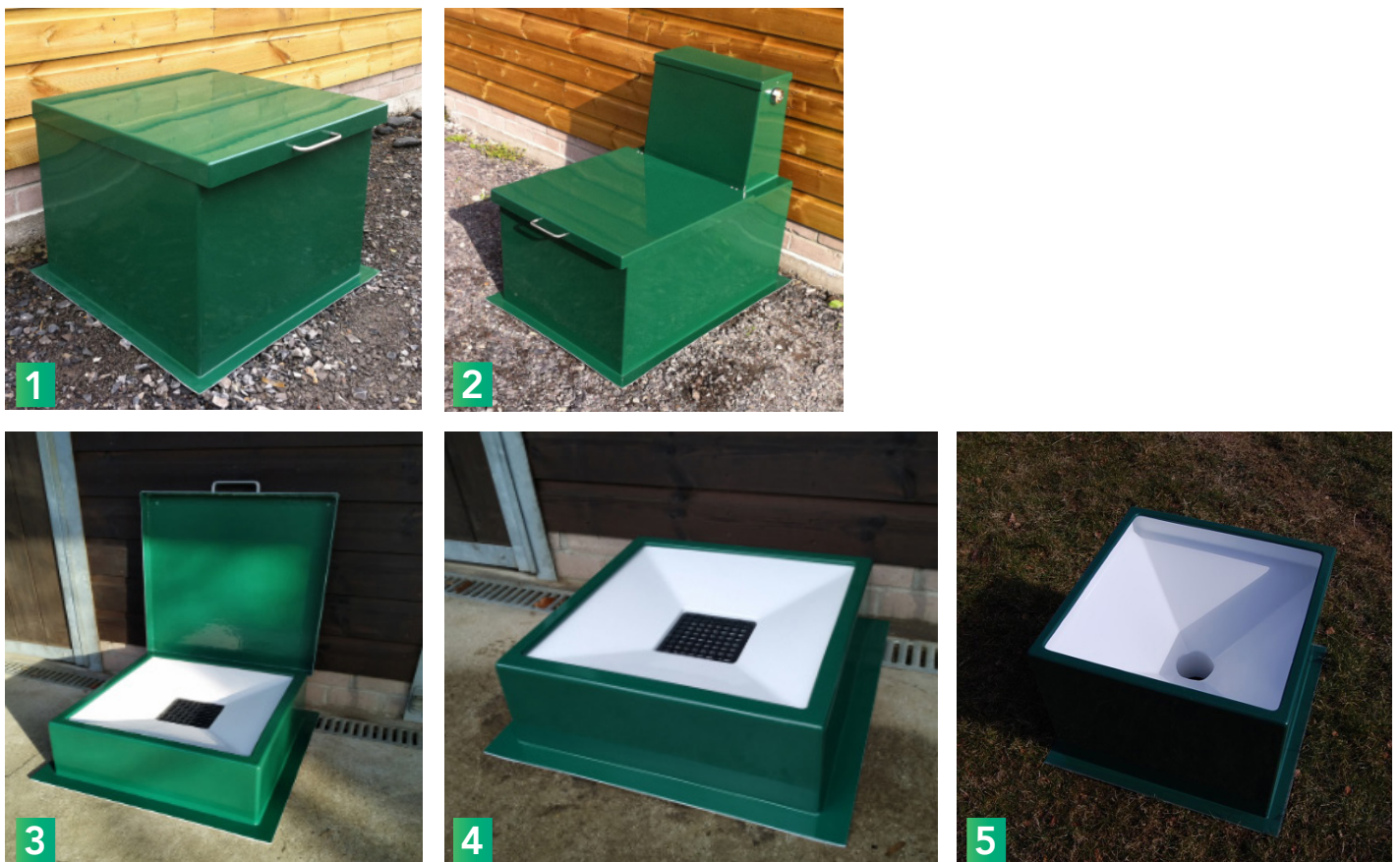


Figure 3 – examples of waste water disposal point design⁸

More technical guidance is provided in [Sewers for Scotland 4th Edition](#)¹⁰, which should be followed in the design of your waste water disposal point.

6.1 Direct connection to the sewer cont.

Scottish Water Track Inspection

Once any pipework is installed, and in advance of final connection to the public sewer network or water mains, Scottish Water needs to ensure that it meets with the required standards before the trench is backfilled. You should request an inspection through your Licenced Provider. More information [can be found here](#)¹¹.

Operation & Maintenance

Whilst operational, the discharge point will require regular maintenance to ensure that the site is clean and not causing disturbance or harm to the environment. You must also comply with Section 46 of the Sewerage (Scotland) Act 1968, which requires that the discharge from your site does not injure the sewer or treatment works, interfere with free flow of sewers, adversely affect treatment processes or be prejudicial to health.

6.2 Connection of grey water to sewer and a standalone collection tank for black water

This option will consist of two separate elements:

- Separate connection for grey water to the sewer;
- Standalone collection tank for black water.

This option will be suitable for areas that have access to a Scottish Water sewer network, but the location or the nature of the local waste water treatment process mean that black water cannot be accepted.

For the grey water connection application to connect to a public sewer, please follow the guidance outlined in section 6.1 above.

Installation of a standalone collection tank for black water will involve the processes described below.

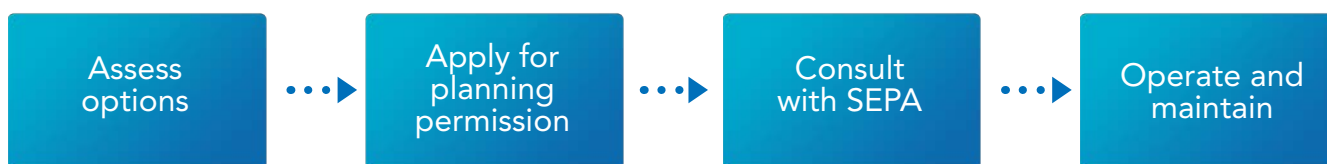


Figure 4 – process flow diagram for part of option 2 (standalone collection tank for black water)

The initial considerations and the need to confirm whether planning permission is required still apply. The next stage involves engagement with SEPA.

6.2 Connection of grey water to sewer and a standalone collection tank for black water cont.

Consultation with Scottish Environment Protection Agency (SEPA)

According to Paragraph 41 of the Waste Management Licensing (Scotland) Regulations 2011, temporary storage of waste at the place of production could be exempt from waste management licensing.

Although an activity may be exempt from waste management licensing, it must still be carried out properly.

It is an offence if the activity:

- presents a risk to water, air, soil, plants or animals;
- causes nuisance through noise or odours;
- adversely affects the countryside or places of special interest.

If any of the above issues occur, any individual may complain to either the Local Authority or SEPA. Your Local Authority Environmental Health department or SEPA may require you to carry out works to remedy the situation.

As the activity does not involve the recovery or disposal of waste, this exemption does not have to be registered with SEPA. If, however, you wish to register the activity to obtain paperwork suitable for auditing, this exemption can be [registered online](#)¹².

It is a good practice to consult SEPA at the start of the project, so that any potential concerns can be addressed as early as possible.



6.2 Connection of grey water to sewer and a standalone collection tank for black water cont.

Design Considerations

You must make sure that black water is stored in a secure container that does not leak and that people cannot gain unauthorised access. The tank volume may be a limiting factor for your site and should be taken into account during the design stage. As the tank will only be holding black water (which is stored in a much smaller tank than grey water within campervans), it is advisable to design the black water container to accommodate enough flows for the tank to be emptied regularly. The frequency should be such that the contents of the tank do not cause odour issues for those using it or staying nearby.

In order to avoid any potential problems, please see [NetRegs](#)¹³ for guidance on good practice.

Other things to consider during the design stage are:

- Flexible design to allow for various styles of campervans to dispose of their waste (there is a wide variety of tanks available for storing black water).
- Tank design should include a tank volume level indicator in order to monitor when it needs emptying.
- The tank should be accessible for emptying by road tanker. A rigid tanker will be able to empty the tank of approximately 14,000 litres, while an artic tanker would have capacity for around 30,000 litres.

The space requirements for manoeuvring will be different for each vehicle size and should be considered when designing the site. Tanker stopping distance should be a maximum of 30 metres away from the tank. The design should take into account increased loading from vehicles in the vicinity.

Operation & Maintenance

Unlike the option of direct connection to sewer, a separate storage tank for black water will require regular maintenance and emptying, so operational costs should be taken into account during the planning stage.

Appropriate signage must be in place to ensure that grey water is not being discharged to the black water tank and vice versa.

You will be required to complete a Waste Transfer Note (WTN) whenever your waste is collected. For more information and for details on how to complete a WTN, [click here](#)¹⁴.



6.3 Soakaway for grey water and a standalone collection tank for black water

This option consists of two elements:

- A soakaway for grey water;
- A standalone collection tank for black water;

For guidance regarding a standalone collection tank for black water, please refer to Section 6.2.

Installation of a soakaway to receive grey water may be an option in some locations where there is not a public sewer nearby or connection is unfeasible. To pursue this option, you should:

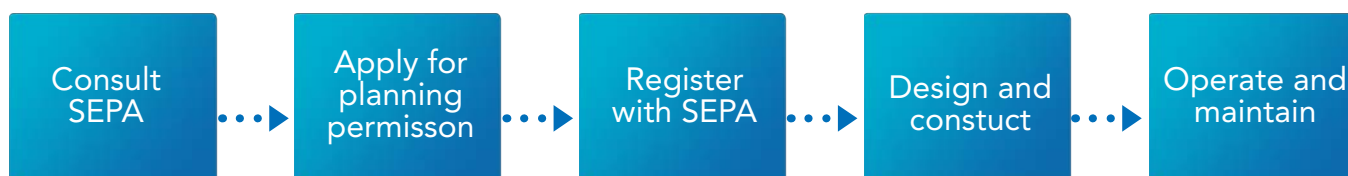


Figure 7 - process flow diagram for part of option 3 (soakaway)

Register with SEPA

Grey water must not be allowed to discharge directly to the water environment but should be directed to a soakaway with an appropriate Controlled Activity Regulations (CAR) authorisation.

Any activity likely to cause pollution to the water environment must be carefully controlled and managed to prevent damage. Pollution control is managed by the [Water Environment \(Controlled Activities\) \(Scotland\) Regulations 2011](#)¹⁵.

The disposal of grey water to a soakaway requires authorisation under the above regulations. More information can be found in SEPA's guidance document [Regulatory Method \(WAT-RM-04\) indirect sewage discharges to groundwater](#)¹⁶.

In all cases, we strongly advise that you contact SEPA to discuss any activity before preparing and submitting your application; they can advise you on how to prepare your application, what guidance is available and what type of information you will need to provide in order to prove that your activity will not harm the environment.

The level of authorisation required is dependent on the effect that the activity will have on the water environment:

- Registration – activities that pose a low individual risk, but may collectively affect the environment, will need a registration and this requires you to apply, incurring a fee. However, you will not incur an annual subsistence charge.

6.3 Soakaway for grey water and a standalone collection tank for black water cont.

SEPA consider that the maximum number of campervans which could dispose of grey water under a registration would be 20 per day. If it is estimated that the number of disposals of campervan waste would be above 20 per day, either a simple licence or a complex licence would be required. If the estimated disposal of campervan waste to a proposed grey water soakaway is above 20 per day, you must contact SEPA to discuss this.

- Licence – activities that pose a moderate to high risk to the environment will either require a simple licence or, if a more complicated environmental assessment is needed, a complex licence. A licence depends on the identification of a 'responsible person', who must ensure compliance with the conditions of the licence. In either case, an application charge will apply and the activity may also be subject to an annual subsistence charge.

Design & Construction

The design of the soakaway should be compliant with the [Technical Handbook: \(Section 3: Environment\)](#)¹⁷, which specifically refers to grey water. Soakaway design calculations are also provided in Appendix 3 of this guidance.

To discharge treated effluent to the ground, you must have access to a suitable area of land. You will first need to carry out:

- a preliminary ground assessment;
- trial pits, to determine the seasonally highest level of the water table and type of soil;
- percolation testing to determine the percolation value of the ground, how large an area of land will be needed, and the type of infiltration system that will be suitable. For technical information, see section 4.3. in:

[Regulatory Method \(WAT-RM-04\) indirect sewage discharges to groundwater](#)¹⁶.

For more information on soakaways, see the following guide: [GPP 4: Treatment and disposal of waste water where there is no connection to the public foul sewer](#)¹⁸.

In addition, section 7.2 below provides some general construction guidance.



6.3 Soakaway for grey water and a standalone collection tank for black water cont.

Operation & Maintenance

It is a legal requirement that you maintain the system appropriately and that it is operating according to the conditions of the authorisation at all times. Failure to do this could be an offence.

Find out what the maintenance requirements are for your own system and ensure the servicing is completed regularly. You will want to carry out simple checks between the services in order to prevent problems with the system. More information is provided in Section 4.8.2 of the [GPP4](#)¹⁸ guidance document.

6.4 Standalone collection facility for all waste water to be tankered off site

This option should only be considered if none of the options above are feasible for your site and an alternative location for the facility cannot be identified. Please note, since all of the waste water from the campervans will have to be tankered off site, there will be higher operational costs and environmental impact.

For a single tank installation, please see guidance outlined in section 6.2.



7 Other things to consider

7.1 Clean water connection

You might consider providing a clean water supply on your site through one of the following:

- Connection to a public water supply network;
- Private water supply.

Connection to a Public Water Supply Network

The process is similar to the one outlined for Option 1 (direct connection to sewer). You will be required to submit a PDE form and might be required to undertake a Flow and Pressure test to assess the network capacity. Please follow [this link](#)¹⁹ for further connection guidance.

If you choose to install a clean water supply, you must comply with Water Byelaws.

The Water Supply (Water Fittings) (Scotland) Byelaws 2014 apply to all plumbing systems, water fittings and appliances connected to the public water supply. Compliance with Water Byelaws helps protect the health and wellbeing of everyone using the public supply in Scotland.

Ensuring your plumbing is installed, and used, in line with the requirements of the Water Byelaws will protect you, your business or organisation, from criminal prosecution, adverse publicity and potentially substantial fines. For more information please follow [this link](#)²⁰.

Private Water Supply

Where there are no public mains available, you may consider looking into private supply. You will have responsibility to ensure the water is safe for members of the public. For further guidance and information on your duties please click [here](#)¹.



7.2 General construction guidance

- A minimum of one borehole and/or trial pit should be sunk/dug to determine the geology and the water table.
- A competent and suitably qualified designer should be used to prepare design drawings and specifications.
- The findings from ground investigations will ultimately determine both the design and cost of the project.
- In terms of excavation support, it may be possible to safely batter back should ground conditions permit, break a shear face in rock, or install a piled cofferdam in wet/challenging ground conditions.
- The presence of rock, particularly shallow/hard rock has the potential to significantly increase construction cost.
- Similarly, the presence of sands, gravels, fluid soils or a high water table have the potential to complicate the construction process and thereby increase costs.
- Glass Reinforced Plastic (GRP) tanks are generally the most practical solution although they may require an in situ concrete surround to counteract the effects of floatation.
- Provision should be made for safe/level hardstanding around access/maintenance points to ensure operational safety.
- Suitable provision for tanker access is a principal consideration before identifying the tank location – if there is not access to a robust, safe means of entering, parking and turning, tankers may refuse to enter the site and collect waste.



7.3 Signage for appropriate disposal

It is crucial to have appropriate signage on your site to avoid environmental contamination, prevent damage to the sewer system or soakaway and minimise risk to public health.

- Make sure your chemical disposal point is appropriately marked and make it clear whether grey water can be accepted or not.
- If there is a separate grey water disposal point, it must also be appropriately marked. Under no circumstances should chemical toilet waste be emptied at this point.
- If there are public toilets on site, these should have appropriate signage explaining that campervan waste should never be emptied in them.
- Erect signage to advise against the disposal of toilet cassette waste or dumping rubbish illegally, which could help to prevent pollution incidents anywhere else in Scotland.
- Any clean water connection should be away from the waste water disposal point and should be appropriately signposted. It should also say whether the water is safe to drink or not and if it is a private supply (if applicable).
- Highlight the need to check the hose that is being used – has it ever been used for emptying waste water? Asking the question might prevent campervan owners from contaminating their water and becoming very ill.
- Consider signage for site traffic management – you might want to implement a one way traffic system on your site to ensure that campervans, motorhomes and tankers are able to manoeuvre without causing a risk of accident.



7.4 Costs

The table below has been prepared to provide you with example costs for the elements of various options, in order to help you during the planning stage and to show you how different variables can influence construction costs.

The estimations are independent of the development site sewerage. Assumptions have been made regarding site conditions such as soft/rocky ground, clear access, no obstructions and programme length.

This is by no means an exhaustive list of assumptions and it should be reiterated that the estimated costs are purely at a high level, so detailed planning and design should be undertaken. It is recommended that you obtain independent quotations for your specific site before deciding to proceed with the project.

Option elements	Conditions	Cost (approx)
Storage Tank (assumed 2500 litres)	Minimal excavation - above ground installation option	£22k
	Soft ground - below ground installation option	£26k
	Rock - below ground installation option	£40k
Direct Sewer Connection	Soft ground, within 3m of disposal point	£24k
	Rock, within 3m of disposal point	£37k
	Soft ground, within 10m of disposal point	£30k
	Rock, within 10m of disposal point	£46k
Direct Connection to Sewer and Public Water Supply	Soft ground, within 3m of disposal point	£40k
	Rock, within 3m of disposal point	£49k
	Soft ground, within 10m of disposal point	£49k
	Rock, within 10m of disposal point	£54k

Table 2 – example costings

7.4 Costs cont.

To identify operational costs (e.g. water charges or routine tank emptying) you will need to contact a Licenced Provider or tankering contractor to provide you with a quotation.

Please note, depending on your location, service needs and choice of contractor, these costs can widely vary and can have a significant impact on the viability of your project.



References

1. CAMPA's waste disposal information

<http://www.campa.org.uk/waste-disposal/>

2. The Highland Council planning permission

[https://www.highland.gov.uk/info/180/planning - applications warrants and certificates/143/planning_permission](https://www.highland.gov.uk/info/180/planning_-_applications_warrants_and_certificates/143/planning_permission)

3. List of public organisations including councils and links to their websites

<https://www.mygov.scot/organisations/>

4. Duty of Care – your waste responsibilities

<https://www.netregs.org.uk/environmental-topics/waste/duty-of-care-your-waste-responsibilities/>

5. Scottish Water Development Services

<https://www.scottishwater.co.uk/business-and-developers/connecting-to-our-network/connections-contact-us>

6. List of Licenced Providers

<http://www.scotlandontap.gov.uk/suppliers/suppliers>

7. Pre-Development Enquiry form

<http://www.scottishwater.co.uk/-/media/ScottishWater/Document-Hub/Business-and-Developers/Connecting-to-our-network/All-connections-information/190718PreDevelopmentEnquiryFormApril17.pdf>

8. Source for examples of chemical toilet disposal units

<https://www.ctdp.co.uk/>

9. Sewers for Scotland 4th Edition

<https://www.scottishwater.co.uk/en/Business%20and%20Developers/Connecting%20to%20Our%20Network/Waste%20Water%20Connection/Waste%20Water%20Connection%20Technical%20Standards>

10. Connecting to the Scottish Water network

<https://www.scottishwater.co.uk/en/Business-and-Developers/Connecting-to-Our-Network/Pre-Development-Information/Application-Forms>

References cont.

11. Registering for waste exemptions

<https://www.sepa.org.uk/regulations/authorisations-and-permits/application-forms/waste-management-exemptions/>

12. Storage and transport of waste

<https://www.netregs.org.uk/environmental-topics/waste/storage-handling-and-transport-of-waste/storage-transport-of-waste/>

13. Waste transfer notes

<https://www.netregs.org.uk/environmental-topics/waste/duty-of-care-your-waste-responsibilities/waste-transfer-notes-and-how-to-complete-them/>

14. The Water Environment (Controlled Activities) (Scotland) Regulations 2011

<http://www.legislation.gov.uk/ssi/2011/209/contents/made>

15. Regulatory Method (WAT-RM-04) Indirect sewage discharges to groundwater

https://www.sepa.org.uk/media/152688/wat_rm_04.pdf

16. Technical Handbook: (Section 3: Environment)

<https://www.gov.scot/policies/building-standards/monitoring-improving-building-regulations/>

17. GPP4 treatment and disposal of waste water where there is no connection to the public foul sewer

<https://www.netregs.org.uk/media/1460/gpp4-20171031-online-v1.pdf>

18. Water connection application guidance

<https://www.scottishwater.co.uk/business-and-developers/connecting-to-our-network/water-connection/water-connection-application-forms>

19. Water byelaws

<https://www.scottishwater.co.uk/business-and-developers/byelaws-and-trade-effluent/water-byelaws>

20. Private water supply guidance

<https://www.mygov.scot/new-private-water-supply/>

21. Western Isles campervan leaflet

[https://www.visitouterhebrides.co.uk/dbimgs/1654_BB%20Campervan%20leaflet_SCREEN_AW_2018_07_31\(3\).pdf](https://www.visitouterhebrides.co.uk/dbimgs/1654_BB%20Campervan%20leaflet_SCREEN_AW_2018_07_31(3).pdf)

Appendices

Appendix 1

[This link](#)²² takes you the Western Isles Campervan leaflet, which shows facilities in some of the Isles that can be used by campervan users.

Appendix 2

2.10 Non-domestic

Number of non-domestic units: Maximum number of storeys:

Business type and description: e.g. hospitals, hotels, schools, office, warehouse etc.	Office	School	Hotel	N/A Campervan waste water disposal	N/A
Number of units:				X	
Estimated start date:				X	

Section 3: Servicing Details - Flows

3.9 Foul discharge

Post-development peak foul discharge: litres/sec

Estimated daily flows from the campervan disposal point can be calculated using the formula below:

Peak Foul Discharge (l/s) =
$$\frac{(100 \text{ litres per campervan} \times \text{assumed number of campervans})}{(16 \text{ hours} \times 60 \times 60)}$$

If there was to be an additional discharge to the sewer from other units such as showers etc. the figures to calculate the flows can be found in [Code of Practice – Flows and Loads 4](#). The above formula can be used to calculate the flows by replacing 100l/campervan with a number from Codes of Practice for the relevant unit.

Appendix 2 cont.

Section 3: Servicing Details – Surface Water

3.11 How are you dealing with your surface water:

1. Reuse and/or store on site
2. Private soak-away system within plot
3. Watercourse
4. Surface water sewer
5. Combined sewer (only accepted in exceptional circumstances)

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Please make sure to confirm that no surface water will be entering public sewer. This is important, as Scottish Water will not accept surface water into a combined sewer and incorrect application can cause delays to your project.

Appendix 3

Soakaway calculations

The disposal of grey water (from baths, showers, washbasins, sinks and washing machines) may be accomplished by an infiltration field the area of which can be calculated from the following:

$$A = P \times V_p \times 0.2$$

A - is the area of the sub-surface drainage trench, in m²

P - is the number of persons served (No of vans per day *100 litres) /150

and

V_p - is the percolation value obtained, as described above, in secs /mm. This will require you to carry out a percolation test at the proposed site.





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