

Supplementary Guidance on private sewerage systems

1. Drainage for development within or in the locality of settlements served by an existing public sewerage system shall generally connect to the public sewerage system. Any proposal for private sewerage systems within or in the locality of settlements will require to be justified against the following criterion.
 - a) that a drainage impact assessment has been carried out in conjunction with Scottish Water;
 - b) that engineering solutions for connection to the public sewerage system, have been fully investigated, in conjunction with Scottish Water;
 - c) that the development is unlikely to proceed if the works required by the engineering solution for mains drainage connection were to be implemented; - this must be demonstrated to the Council's satisfaction by reference to the costs identified under criteria (a) and (b), and the expected development values of the proposal.
 - d) that the development is fully justified in terms of its site specific locational need.
 - e) that the development confers significant benefits which outweigh North Ayrshire Council's presumption in favour of mains drainage;
 - f) that the private drainage arrangements are environmentally sustainable; with reference to Best Practicable Environmental Option (BPEO) and that they represent BAT (Best Available Technology); The final discharge to watercourse must be acceptable, and meet the standards that are regulated by SEPA
 - g) that the system should meet the technical standards of North Ayrshire Council. The tank should have vehicular access for servicing, and there should be an area of hardstanding within 30m for this purpose. For septic tanks using sub-surface irrigation the technical requirements are the size and porosity of absorption field, the distance from nearest property, proximity to ditch, drain or watercourse, and proximity of wells and boreholes. This list is not exhaustive, and advice should be taken from NAC Building Control
 - h) that all land and rights required in connection with the private drainage system are within the control of the Applicant;
 - i) that suitable arrangements have been made for the long-term management and maintenance of the private sewerage system. If the system serves more than one dwelling, it should be designed and installed to water authority standards and an agreement with the water authority to adopt the system, or a factoring arrangement that meets with NAC's approval is required.
 - j) that the system is compatible with the proper planning of the area.
2. In countryside areas, outwith the locality of settlements, private sewerage systems are generally acceptable if properly constructed and accessible with satisfactory discharge arrangements. They should also comply with criteria f,g,h,i and j. In coastal areas a proliferation of unsightly sea outfalls serving new development shall not be acceptable.

Justification

Constraints on connection to the public drainage system may lead developers in built up areas to consider installing private sewerage systems. A private sewerage system might use septic tanks, a small sewage treatment plant (also known as a package treatment plant), reed beds or a combination of these systems.

Septic tanks allow the basic primary settlement process to take place. Some biological treatment of the sewage may occur, but domestic chemicals which are drained into the tank can inhibit bacteriological activity with little resulting improvement in effluent quality.

A sewage treatment plant or package treatment plant will treat effluent to a higher standard than a septic tank. It will require a power supply and regular maintenance is essential if it is to operate properly. Shared systems are only acceptable if Scottish Water agree to adopt the system; or, if a suitable factoring system can be arranged, due to concerns over long term maintenance and servicing.

Reed beds are plots filled with gravel, which use certain reeds to introduce oxygen to the effluent through their stem and root system. This facilitates the purification of the sewage. Reed beds are often used in conjunction with a septic tank or sewage treatment plant, as a final treatment before release to a watercourse.

Our policy seeks to provide a proper framework for managing proposals which incorporate private sewage treatment and is justified by the following criteria:-

- a) in the interests of the proper planning of the area;
- b) to protect residential amenity;
- c) to safeguard the future development of the area;
- d) to safeguard the water environment
- e) to secure the proper maintenance of drainage
- f) to avoid potential odour pollution;
- g) to secure appropriate health objectives;
- h) to ensure compliance with future standards.

- a. In the interests of the proper planning area

Private sewerage systems can be inappropriate in certain areas, and, in the case of septic tanks may inhibit the achievement of desirable densities, and so conflict with North Ayrshire Council's wider planning aims.

- b. To protect residential amenity

The use of septic tanks in urban areas or in areas with public sewerage systems is a retrograde step. Package treatment plants and reed beds process effluent to a higher standard but may also generate problems where they conflict with neighbouring uses and if they are not maintained properly. Issues of smell, visual impact, service access and safety, are relevant when considering private sewerage systems

- c. To secure the future development of the area

The economic case for developer led improvements to the public drainage system may be undermined by piecemeal implementation of private drainage systems. For this reason the policy contains a criteria to demonstrate that the proposal is compatible with the proper planning of the area.

- d. To safeguard the water environment

The European Union's Water Framework Directive (WFD) is relevant to the provisions of this policy. The Directive requires the classification of all water bodies, and the implementation of a management plan which ensures that water bodies move towards a good or excellent classification, as defined by the directive, and that no measures are taken that will degrade the condition of a water body to a lower classification.

The proliferation of private sewage treatment systems based on septic tank technology could inhibit efforts to implement the WFD and might threaten the water environment. For this reason the policy contains a presumption that developers connect to the public system, and requires that, among other criteria, the developer should demonstrate that the private sewerage system is the Best Practicable Environmental Option (BPEO), that it uses Best Available Techniques (BAT) and that it is acceptable to SEPA.

- e. To secure the proper maintenance of drainage

The negative aspects associated with private sewerage systems can result from poor maintenance. The policy introduces criteria that require applicants to demonstrate that suitable arrangements can be put in place for the long term management and maintenance of such systems; and that all works and rights are within the control of the applicant. Where a shared system is proposed, the policy requires that either an adoption agreement with the water authority is reached, or that factoring arrangements that meet with NAC's approval be put in place. It is

NAC's view that adoption by the water authority offers the best guarantee that proper long term plant maintenance and operation can be achieved.

- f. To avoid potential odour pollution

Septic tanks can give rise to foul odours which are detrimental to the amenity of built up areas. Private sewerage systems in general, have the potential to cause odour pollution if not properly maintained.

- g. To secure appropriate health objectives

Septic tanks have the potential to cause pollution of watercourses and contaminate groundwater resources. This is to the detriment of human health and contrary to the provisions of the Water Framework Directive.

- h. To ensure compliance with future standards

The philosophy underlying the WFD is that water bodies should not decline in standard, and that there should be continuous improvement towards good or excellent standard. Although NAC cannot anticipate future standards, it is reasonable to plan for further improvement. The widespread use of septic tank based systems would seem a retrograde step, and would not be consistent with the philosophy of continuous improvement.

Private sewerage systems are common in countryside areas and NAC accept that such locations are more able to tolerate septic tanks, or other private sewerage solutions.