

Agents Workshop on Site Suitability Assessment for Domestic Waste Water Treatment Systems

Galway County Council



8th June 2023

Site Assessments on The Islands, and in
Connemara, in County Galway



Legal status of the EPA Code of Practice (2021)

- Section 76 of the EPA Act – Codes of Practice

‘practical guidance ...for the purposes of environmental protection’

- Building Regulations: - Technical Guidance Document H –

‘...systems for single houses should comply with the... EPA Code of Practice 2009 Wastewater Treatment and Disposal Systems Serving Single Houses’

‘if [a] technical specification is subsequently revised or updated by the issuing body, the new version may be used’

- Planning circular NRUP 01/2021 refers to application of the Code of Practice under Section 22(2)(c) of the Planning and Development Regulations which requires:

“...information on the on-site treatment system proposed and evidence as to the suitability of the site for the system proposed.”

6. DETERMINING SITE SUITABILITY AND THE APPROPRIATE DWWTS

6.1 Integration of the Desk Study and On-Site Assessment

The information gathered during the desk study and the on-site assessment is used to characterise the site and, if the site is deemed suitable, to choose and design an appropriate DWWTS.

In summary, determining site suitability means checking that all the following requirements relevant to the site are met:

- ▲ the natural slope is $\leq 1:8$;
- ▲ all required minimum separation distances from the DWWTS can be met;
- ▲ all required minimum depths of unsaturated soil and/or subsoil are present on the portion of the site hosting the DWWTS;
- ▲ percolation values of the soil and/or subsoil are within the acceptable ranges;
- ▲ any other issues arising from the site characterisation.

These are detailed further below. Table 6.1 summarises the relevance of the data collected from the desk study and the on-site assessment.

The cumulative loading from on-site DWWTSs should also be considered, particularly in areas of high-density one-off housing (see Section 5.4.1).

Table 6.1: Information obtained from the desk study and on-site assessment

Information collected	Relevance	Factor determined
GWPR zoning	Identifies groundwater protection requirements and receptors at risk	Site restrictions
Hydrological features	Potential cumulative nutrient	
Density of existing		



6. DETERMINING SITE SUITABILITY AND THE APPROPRIATE DWWTs

6.1 Integration of the Desk Study and On-Site Assessment

The information gathered during the desk study and the on-site assessment is used to characterise the site and, if the site is deemed suitable, to choose and design an appropriate DWWTs.

In summary, determining site suitability means checking that all the following requirements relevant to the site are met:

- ▲ the natural slope is $\leq 1:8$;
- ▲ all required minimum separation distances from the DWWTs can be met;
- ▲ all required minimum depths of unsaturated soil and/or subsoil are present on the portion of the site hosting the DWWTs;
- ▲ percolation values of the soil and/or subsoil are within the acceptable ranges;
- ▲ any other issues arising from the site characterisation.

These are detailed further below. Table 6.1 summarises the relevance of the data collected from the desk study and the on-site assessment.

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Iron pans



Knock, Mayo



Balla, Mayo







Tipperary Town



Iron pans

- Occur in exceptionally well drained situations ... either sands and gravels (on the subsoil map), very stony, gravelly tills, or shattered, shallow bedrock
- Iron oxide is the main cementing material
- They often mean patches of, or continuous, rushes on the land surface
- In extreme cases they lead to the development of peat (usually in mountainous, high rainfall areas)

- Generally the pans themselves are non-uniform and 'wavy'
- They are often discontinuous over short distances
- They may be thick (1-2cm) or thin (<1mm)
- Always a red, orange or dark yellowish brown colour ... May be coupled with black Manganese pan
- Sometimes they have a grey horizon over them, between them and the topsoil ... This layer has been 'reduced'



Lough Guitane

The Islands



Government Scheme

Irish Times, 7th June 2023

- Homeowners who want to renovate vacant and derelict properties on offshore islands will be given significantly higher grants than those on the mainland, under new plans due to be unveiled by the Government.
- The maximum grant will be 20 per cent higher for vacant island properties, meaning island dwellers can avail of €60,000 compared to €50,000 for vacant mainland properties.
- For derelict properties, the grant will be up to €84,000 compared to €70,000 on the mainland. This will come into effect from July 1st and will be applied retrospectively to any existing applications, Minister for Rural Development Heather Humphreys will announce.

Percolation tests – existing houses proposing extensions ... bedroom numbers not changing



Assessments on the Islands – existing houses ... bedrooms numbers rising ...

1.3 Variances for Existing Systems, Sensitive Areas and New Technologies

Adoption without modification of the specifications in this document may not, in all circumstances, be appropriate.

In sensitive areas, such as bathing water catchments, high status river catchments, high status lake catchments, drinking water source protection areas or zones of contribution to public water supplies, localities adjacent to shellfish areas designated through the Shellfish Water Directive (2006/113/EC) or pearl mussel catchments, local authorities may apply and require standards higher than those specified within this CoP.

Existing DWWTs may not meet the performance requirements as set out in this CoP. If existing DWWTs are being upgraded, variances to the requirements set out within this CoP may be considered by the local authority where the authority is satisfied that the proposed upgrade will protect human health and the environment. DWWTs serving buildings of architectural or historical interest may be especially likely to give rise to such circumstances. Homeowners should consult with their local authority to determine if planning permission is required for proposed upgrades.

The use of new and innovative products and technologies must be considered in detail by local authorities on a case-by-case basis with due regard to:

- ▲ compliance with building regulations;
- ▲ compliance with technical standards as appropriate;
- ▲ evidence of suitability internationally or in Ireland;
- ▲ adequate protection of the environment and human health.















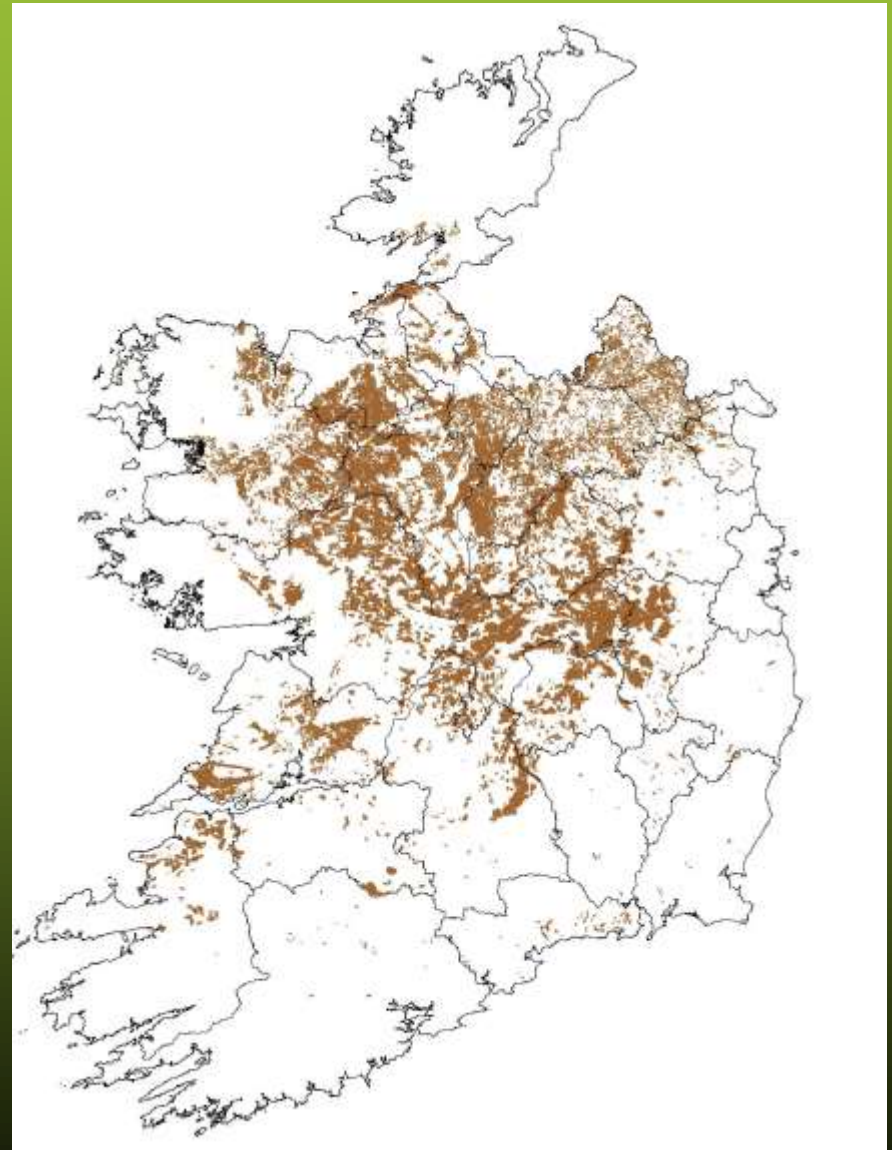
Misconceptions

- ◆ Drains and drainage will work in all cases
- ◆ Replacing, importing or mounding topsoil is a viable solution in all 'problem' cases
- ◆ Importing soil ... only OK when
 - ◆ Permeable layer below soil being replaced (SAND, GRAVEL, SILT)
 - ◆ Unsaturated bedrock below soil to be replaced
 - ◆ There's 500 mm depth in situ soil/subsoil in the first place
 - ◆ GWPR conditions can be met

**Where deep, saturated, heavy, clayey subsoil ...
THESE DO NOT WORK!!**

Peats

- This includes
 - Blanket peats, intact, cutover and reclaimed
 - Raised peats, intact, cutover and reclaimed
 - Fen peats
- **Blanket peat covers 7,553 km² (10.75%) ...none in Meath, Westmeath, Kildare**
- **Raised or fen peats cover 5,767 km² (8.21%) ...represented in every county**
- **Cumulatively peat covers 18.96% ... (31.8% Galway)**



Basin Peats

Common in east Galway



Cloonacool, Sligo



Corlea, Longford



Mount Nugent, Cavan

Blanket Peats

Common in Connemara



Peat is too wet for treatment

Inagh Valley, Connemara



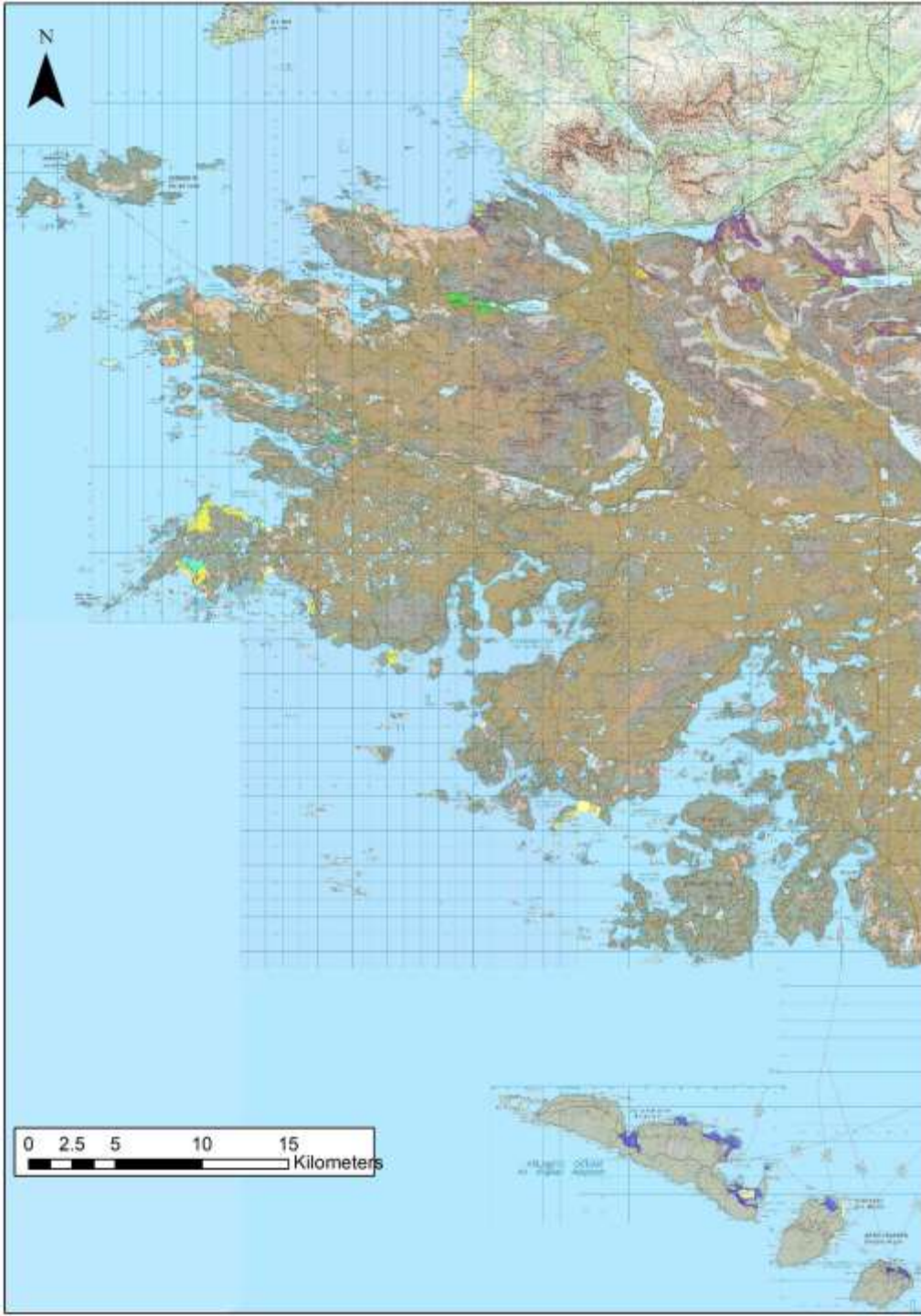
- Dry peat to 500mm depth is not considered 'unsaturated soil and/or subsoil'
- It will have fast percolation values in summer, but exceptionally high ones in winter

Eyrecourt, Galway



Mullingar, Westmeath





Islands

- Dominated by bedrock at a relatively shallow depth
- Sensitivities in terms of protection of species and habitats
- Much of the islands terrain means finding the correct conditions challenging

Connemara

- Dominated by bedrock at a relatively shallow depth or peat
- Sensitivities in terms of protection of species and habitats
- Much of the terrain means finding the correct conditions challenging

The same principles apply as on the
mainland

Appropriate Assessment

- Appropriate assessment is an assessment process to determine the impact of a proposed plan or project on Natura 2000 Sites and their habitat and species in particular.
- The assessment of the impact on bird and other species and habitats was first introduced in the Birds Directive in 1997 and the Habitats Directive in 1992.
- With the introduction of the Birds Directive and the Habitats Directive the EU sought to implement a more comprehensive strategy based on the designation of areas which would enjoy special conservation status and within which special rules on environmental protection would apply.
- The preamble to the Habitats Directive specifically states that the EU's central objective is the preservation, protection and improvement of the quality of the environment, including the conservation of natural habitats and wild fauna and flora. This Directive sought to recognise and balance the interaction between bio-diversity while taking account of economic, social, cultural and original development requirements.

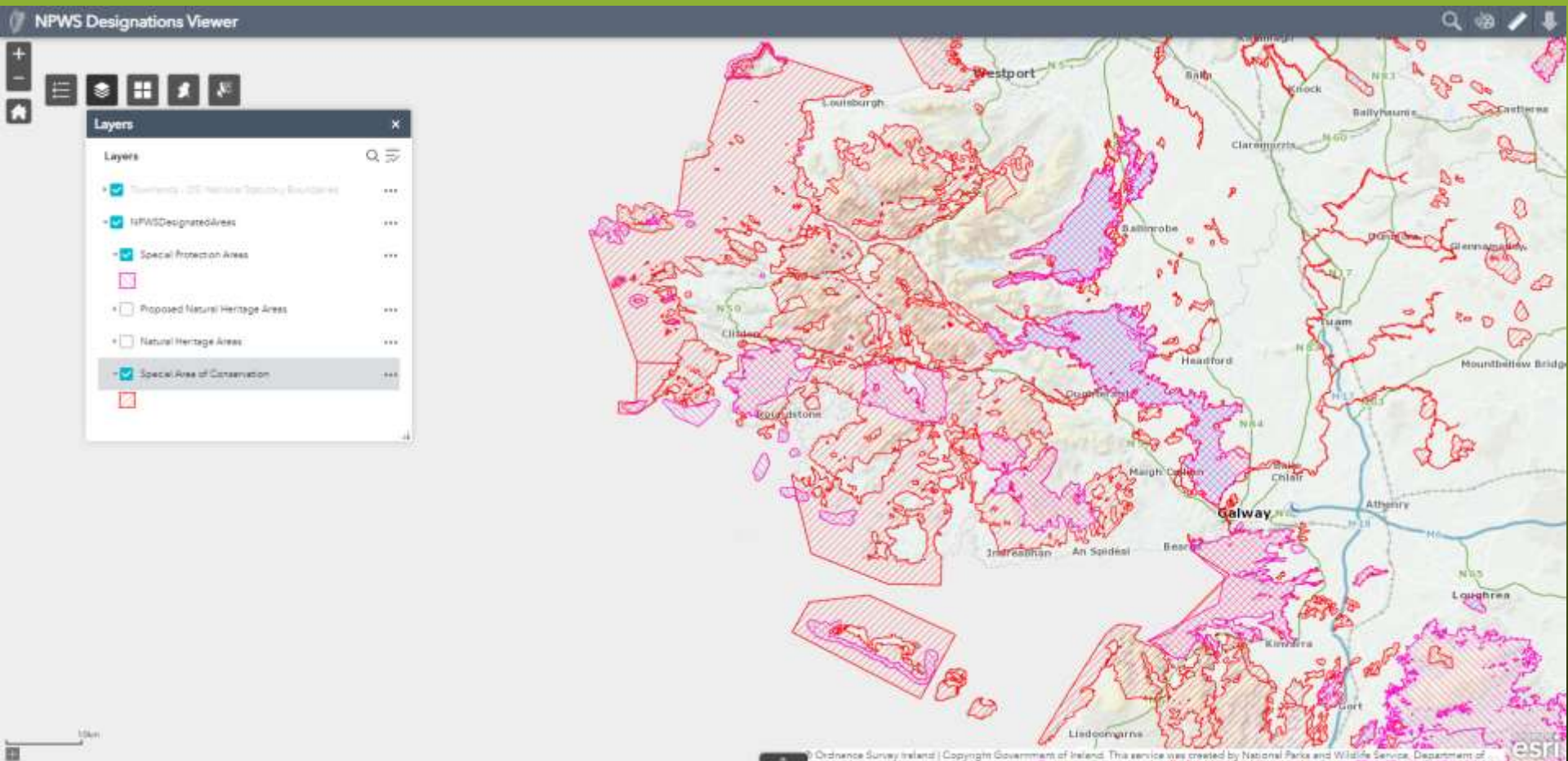
European sites ... SACs (Habitats) and SPAs (Birds)

- Every application for Planning Permission has to be screened for AA.
- Local Authorities usually do this themselves and the conclusion should always be contained in the planner's report.
- If the planner is uncertain, they will ask the applicant to engage an ecologist to prepare the AA screening document, so that is then used by them to screen it out and make the conclusions.
- If they didn't request an AA in an RFI, then that means they are generally satisfied and have screened it themselves.
- If they screen it themselves, and are concerned, they will request the applicant to prepare an NIS.
- Generally an AA screening report is prepared by a developer and submitted with an application for development where the developer considers the project is not likely to have significant effects on a European Site.

European sites ... SACs (Habitats) and SPAs (Birds)

- In the event that a screening exercise indicates that there is a risk that a plan or project may have significant effects on a European Site, it is necessary to carry out an Appropriate Assessment.
- This involves a consideration of whether the plan or project is likely to adversely affect the integrity of the European Site.
- A rigorously scientific baseline study of the impact on protected species, including the underlying data as to precise times, places and methodology, must be included.
- Conservation objectives come in to play, and as limestone pavement, lowland hay meadows, coastal lagoons, etc. in 'Qualifying Interests', fraught with difficulty.

European sites ... SACs (Habitats) and SPAs (Birds)



Legal issues

On 4 May 2022, the High Court dismissed the challenge to a decision of the Board refusing planning permission, at the third attempt, for the construction of a single dwelling, wastewater treatment system and associated works at Roscam Townland in Galway:

Madden v. An Bord Pleanála [2022] IEHC 257.

The court was concerned with the Habitats Directive and the impact of the wastewater treatment system.

The court could not find any defect in the approach of the Board.

