



An  
Bord  
Pleanála

**Inspector's Report**

**PL16.247759**

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<b>Development</b>	House renovation, extension to rear sheds, gatehouse work studio, retention of road access, reinstatement of waste treatment at Lakeside, Carheen, Tourmakeady, Co. Mayo
<b>Planning Authority</b>	Mayo County Council
<b>Planning Authority Reg. Ref.</b>	16/707
<b>Applicant(s)</b>	Anthony Donnelly
<b>Type of Application</b>	Permission
<b>Planning Authority Decision</b>	Grant
<b>Appellant(s)</b>	Anthony Donnelly
<b>Observer(s)</b>	None
<b>Date of Site Inspection</b>	16 <sup>th</sup> March 2017
<b>Inspector</b>	S. Kehely

## 1.0 Site Location and Description

- 1.1. The site has a stated area of 0.41 Hectares and is located in a rural area about 3km north of the village of Tourmakeady on the western side of the R300 and the opposite side the lakeshore of Lough Mask which is about 165m from the site. There is some scattered housing, the nearest house in adjacent land to the north. Colaiste Muire a secondary school is on the northern outskirts of Tourmakeady Village and a primary school and GAA sports grounds are nearer the village.
- 1.2. The site is rectangular in shape with a road frontage in the order of 90m and depth of up to 44m. The site has an established residential use – featuring an old stone cottage of traditional form and style. There are remnants of a shed to the south of the house and a stone wall along the road boundary. There is also a mobile home sited in the north eastern corner of the site near the road. There are two vehicular accesses one at each end of the site frontage. The boundary is marked by a hedgerow and mature trees – one of which is a particularly large evergreen which something of a landmark along the road.
- 1.3. A tributary to the lake bounds the site along its north side. the site slopes up from the road to the south west and the house is set into the slope with a retaining wall set back from the rear boundary. The higher ground in the south western boundary appears to be well drained as evidenced by the open trial holes. There is a recently planted orchard to the rear of the house. The lower lying ground where there was evidence of filled ground in the vicinity of the old septic tank would appear to be more prone to waterlogging as evidenced by the reed vegetation.
- 1.4. The road is poorly aligned in the vicinity of the site both vertically and horizontally. A fairly steady flow of light traffic was apparent at time of inspection around lunch time

## 2.0 Proposed Development

- Extension to house of 110 sq.m by 203.sq. to include separate sheds (88.2) and gatehouse. (28.7)
- The house is 12.6m wide and 6m deep. The extension to the rear is 12.3m wide and 2.7m. deep (with a floor area of 28.3sq.m.) at ground level and widens to

25.7m where it extends cuts into the high ground around the existing house. The extension at this level is 59.5 sq.m

- The extension is contemporary in design and has a flat roof separating it visually from the original cottage structure.
- The accommodation includes four ensuite bedrooms and living space.
- The garage and shed structure is a wide shallow structure of 37m by 2.5m with a flat green roof and vertical planting. This provides for garage, workshop, storage and cleaning areas for. The use (as clarified in further information) is domestic.
- The Gatehouse is a simple rectangular structure of 12.15m by 3.3m with two rooms and kitchenette. No toilet facilities. It is ancillary to the house.
- Vehicular access – two entrances are shown on drawings one at the south end is described as established entrance level with the road and the other at the northern end is described as a retained exit. This northern entrance is shown with sight lines of 74m to the south and 90m to the north from a 2m setback point from the road edge. The 3.5m setback shows 77m and 90 m distances to the south but the latter traverses land to the south. Similarly, the sightline of 90 traverse lands tot eh north.
- The septic tank is shown centrally in the site 7.5m from the house. The system is Stated as septic tank combined with reed bed treatment and polishing area in application form but not the Site Assessment Report
- The percolation area is about 10m from the western boundary and is shown as series of four beds in 13m x 4m approx. area and described on the drawings as a vertical flow gravel reed bed treatment and polishing area.
- A Site Assessment report accompanies the application and includes the following information.
  - Based on the underlying bedrock the site is in an R1 groundwater response area.

- The trial hole indicates a soil classification of silt and cobbles with granular structure and of a loose density type with a preferred flow path through cobbles.
- The T value is recorded at 3.08 (min/25mm). It is stated that the site is therefore suited to both a septic tank and a secondary treatment system discharging to ground water.
- The P value of 3.56. It is stated therefore that the site is suitable for a secondary treatment system
- The conclusion of the site characterisation is that it is not suitable for a septic tank system (tank and percolation area) nor is it suitable for a secondary treatment system comprising a septic tank and filter system constructed on site and polishing filter. /However it considered **suitable for a secondary treatment system comprising a packaged wastewater treatment system and polishing filter.**
- It is therefore proposed in section 5 of the form [Inspector's note: this is what is referred to in PA condition no. 6] to install and Tricel Nova treatment plant followed by a pumped soil polishing filter. on this basis 6 no. 8m trenches are proposed at an invert level of 1.20 for a P/E ratio of 8. The mechanics and specification of system are described in detail in an attached brochure. This will provide secondary treatment using submerged aerated filter technology. The pumped soil polishing filter comprises pipework which distributes the effluent under pressure for treatment using the in situ subsoil.
- Projected treatment performance standards of BOD 95.9, SS of 95.3 and NH<sub>4</sub>-N of 79.9

### 3.0 Planning Authority Decision

#### 3.1. Decision to request further information

- 3.1.1. Further Information was requested by the planning authority in relation to clarification of intended use and proposal with respect to the mobile home on site.

### 3.2. Decision to Grant

Permission GRANTED subject to 10 no. conditions

- Condition No. 2 restricts the use to private domestic use
- Condition 3 requires the entrance to at the northwest corner of the site and to recessed in accordance generally with fig 4.2 page 51 of the county development plan 2014-20 [This reference would appear to relate to previous plan]
- Condition 5 (appealed) states: 'Prior to commencement of development the existing front boundary shall be removed over the entire length of the site and a new boundary wall with a maximum height of one metre shall be erected along a line of 3m from the nearside hedge of the existing carriageway. The area of land between eh proposed front boundary and the nearside edge of the carriageway shall be excavated, filled up and level with a durable permanent macadam material or levelled and sealed with a wearing course. Reason: to accommodate future road improvements.'
- Condition 6 (appealed) states: 'The treatment unit shall be installed in accordance with section 5 of the EPA report submitted to Mayo County Council on 7/09/2016. A reed bed shall not be permitted. Reason for the protection of public health.'
- Condition 9 requires the removal of the mobile home
- Condition 10 requires retention and planting of trees and hedgerows.

### 3.3. Planning Authority Reports

Following clarification of the domestic nature of use, the only matter of concern is visual and relates to the dormer windows. The Roads report is noted with respect to its recommendation of a grant. The other reports are acknowledged as being received without comment. There is no evidence of Appropriate assessment screening.

### 3.4. Other Technical Reports

#### 3.4.1. Road Design Office: no objection subject to 3 conditions

- The proposal is noted as being for an extension to an uninhabited house where the sight visibility is sub-standard. However, if the applicant develops the house with the conditions recommended the sight visibility will be much improved. In order to improve visibility, the first recommended condition requires
  - One entrance at the northern end
  - Recessing and construction to development plan standards (page 51)
- a boundary setback is required to accommodate future road works.
- Standard run-off control is also the subject of a recommended condition.

#### 3.4.2. DAU

- This body raises concerns about potential impact on lough Carra/ Mask complex SAC (site code: 001744) which is 75m downstream and also on Lough Mask SPA (site code: 004062) which is 175m downstream of the site.
- The Department is of the view that the development could
  - Affect the habitats oligotrophic waters containing very few minerals of sandy plains and oligotrophic a to mesotrophic standing water which are habitat types listed in Annex II and are qualifying interests of the SAC 001744.
  - Affect the habitat of the Otter also in Annex II and a qualifying interest to the SAC
  - Affect the wetlands and waterbirds in Annex I (white fronted Goose and common tern which are of special conservation interest for the Lough Mask SPA.
- potential Impacts are identified as

- Water quality due to run-off during and after construction and also due to pollution
  - Damage to nearby habitats in both sites due to construction techniques/site preparation and disposal and management of waste.
- As the project may have the potential to impact on the integrity of two Natura 2000 sites the need for Appropriate Assessment must be considered as part of the planning consent process. The screening for AA and AA if required should focus on the potential impacts in view of the sites conservation objectives and should include measures that will avoid reduce or mitigate for any such impacts. The AA must establish and conclude that the proposed development does not pose a threat to the conservation objectives of the Natura 2000 sites.

#### 4.0 **Planning History**

P07499 (May 07) and P032709 (June 04) both refer to lapsed permissions for house renovation and extension, new waste treatment/percolation area and ancillary works. (no details on file)

#### 5.0 **The Mayo County Development Plan 2014-2020**

##### 5.1. General

- The subject site is located within the Structurally Weak Rural Area and in landscape terms it is within Policy Area 3A- Lowland

##### 5.2. Water Quality Management

- The site is located within approximately 200 metres of the Lough Mask SAC/SPA and key infrastructure projects in table 3 (page 36) relate to Lough Mask such as; Lough Mask Regional Water Supply Scheme: Srah-Westport (north of site) and Lough Mask Regional Water Supply Scheme: Kiltimagh.
- WS-02: It is an objective of the Council to ensure a safe and secure water supply is provided in the County.

- WQ-01: It is an objective of the Council to implement the Western River Basin District Management Plan “*Water Matters*” 2009-2015 to ensure the protection, restoration and sustainable use of all waters in the County, including rivers, lakes, ground water, coastal and transitional waters, and to restrict development likely to lead to deterioration in water quality or quantity.
- WQ-02: It is an objective of the Council to require development in an unsewered area which includes a septic tank/proprietary effluent treatment unit and percolation area to be rigorously assessed in accordance with the accepted EPA Code of Practice for single houses or small communities, business, leisure centres and hotels, taking into account the cumulative effects of existing and proposed developments in the area. Any planning applications for development which require such systems shall be accompanied with an assessment carried out and certified by a suitably qualified person (*i.e.* the holder of an EPA FETAC certificate or equivalent) with professional indemnity insurance.

### 5.3. Road Infrastructure

- The R300 is not included in either the planned infrastructural works in table 3 nor is it included in the schedule of strategically important regional routes in Appendix 4 Table 9.
- RD-04: It is an objective of the Council to provide a safe road system throughout the County
- through Road Safety Schemes and to encourage the promotion of road safety in the County.

### 5.4. Visual Amenity

- Views from the R300 in the vicinity of the site are included Map 4 Views and Prospects. These include scenic views from the road to the lake and highly scenic views from the road to lands to the west.
- Objective 2.3.4: In areas along the sea, estuaries and lake shore lines (referred to as scenic areas) only planning permission for replacement housing, extensions or where a farmer has no other land except in those



areas will be allowed and the scenic views will be protected as much as possible

- The reference to fig 4.2 page appears to be in error and page 51 in the current plan relates to heritage issues and not junction design. This appears to relate to the previous plan.

## 6.0 Statutory Guidance

### 6.1. Code of Practice - Wastewater Treatment and Disposal Systems Serving Single Houses (p.e. < 10)” - Environmental Protection Agency, 2009.

6.1.1. Guidance for domestic wastewater treatment is provided in this document. This refers to the guidance document below for more detailed requirements for reed bed systems which come under the heading of integrated wetland construction.

### 6.2. Integrated Wetlands Construction Guidance Document for Farmyard Soiled Water and domestic Wastewater Applications (The Department of the Environment Heritage and Local Government)

6.2.1. Recognised as concept that can provide a practical and cost-effective solution for both the management of water resources and the delivery of good ecological status for water and its dependent habitats, this Guidance Document focuses on dealing with domestic wastewater and farmyard soiled water. It is acknowledged ICWs can be: -

- economically viable, (in terms of capital costs, running costs and labour costs),
- environmentally sustainable, providing for water, carbon and nutrient re-use,
- an important addition to the landscape with sig. amenity and biodiversity values.

Within an ICW, the correct functioning can be achieved by having a sequential, shallow multi-celled system that receives influent and associated water that is

continuous or intermittent in supply, sufficient to replace what may be lost through evapotranspiration, surface flow discharge and infiltration to ground.

### **Advantages:**

1. An effective multiple-banded intercepting infrastructure for treatment of polluted water within a defined area
2. Use of local materials with minimum 'external costs'.
3. Low maintenance requirements.
4. Ease of commissioning/decommissioning.
5. Sustainable over a long lifetime (50 years or more).
6. A robust and segmented system designed for long life and ease of management, with each segment having its own integrity, nutrient and biological status.
7. Increased biodiversity.
8. An inbuilt bio-monitoring capability that is in keeping with the principles underlying the EU Water Framework Directive and the needs of regulation.
9. Recycling of captured nutrients in a de-watered/compost form after a period of time (c. 10 to 20 years)
10. Carbon sequestration and low energy demands (subject to guidance on methodology by EPA).
11. Potential to recycle treated water and sequestered organic matter.
12. Landscape fit and enhanced scenery.
13. Creation of an aesthetically enhanced area with potential recreational capacity.

### **Disadvantages**

1. Requires dedicated land
2. Requires competent skills for design, site analysis and characterisation, and construction.
3. Requires regulatory authorisation by planning permission and discharge licensing.
4. Construction and establishment of vegetation may be weather dependent.
5. Creation of a potential water hazard if deep areas are included.
6. May pose a threat to surface and ground waters if inadequately designed, constructed, or managed,
7. Will require ongoing informed management, monitoring and licensing.

### **Groundwater Monitoring**

Any requirement for specific groundwater monitoring will depend on a risk-based evaluation of the likely impacts on a) the groundwater beneath and down-gradient of the ICW, b) down-gradient wells or c) nearby surface water receptors. Therefore,

groundwater monitoring requirements will be site specific. The frequency of sampling will depend on the assessment of the risk posed by the ICW. However, quarterly sampling is recommended as the minimum frequency. This can be amended following evaluation of the initial test results. Groundwater can be monitored in a number of ways. The sampling of existing and new wells adjacent to or within the ICW and its curtilage.

1. Sampling of adjacent groundwater hydraulically connected to the wetland.
2. The use of piezometers and lysimeters to measure ground water quality and quantitative flow within or adjacent to the ICW.
3. The use of adjacent watercourses, upstream and downstream of the wetland, to establish overall impact of the associated ICW system's hydrosphere.
- 4. Monitoring of ground water prior to commissioning an ICW will provide insight into any impact that an ICW may have on groundwater when it is operating.**

Consideration should be given to the impact of saturating the topsoil used in the wetlands construction that will increase ammonium concentration in the porewater of the wetland soil even before the reception of polluted water. Any or all of the above approaches require attention to delivering results that regulators can have confidence in. This is best achieved by describing the methodologies used, by demonstration, and by presenting results/analyses.

#### 6.2.2. **Minimum areas**

As a precautionary and ecosystem based approach prevails, it is recommended that the functioning (water surface) area of a farmyard soiled water ICW requires an area calculated on the basis of twice the associated interception area. For domestic wastewater treatment an area of 20-40m<sup>2</sup> per person equivalent (p.e.) is required. A further land area allowance of about 25 percent of this calculated wetland area must be made to encompass the ancillary embankment areas of the overall site.

For farmyard soiled water treatment, the area occupied by an ICW is typically 1-2% of any individual farm area. These indicative area requirements for the ICW based upon the interception area and influent volume is generally a minimum area requirement. **Larger areas may be used especially where lower levels of phosphorus discharge are required. Further additional ponds may be added for water retention or monitoring purposes**

### 6.2.3. In these guidelines Appendix A sets out response for ground water

**R1** Acceptable, subject to meeting the following requirements:

1. The ICW shall be underlain by at least 1000 mm of cohesive subsoil.
2. An upper portion of the subsoil, which will vary in thickness as set out below depending on the risk posed by the ICW, shall have a permeability of less than  $1 \times 10^{-8}$  m/s. Where this is present in situ, (i.e. the subsoil is classed as CLAY (using BS5930) or, in certain situations, SILT/CLAY, and has a clay content of  $>13\%$  (where the particle size distribution is adjusted by excluding materials larger than 20 mm), and is free from preferential flow paths, the surface of the excavated portion of the pond will require plastering with remoulded subsoil. Where the subsoil is considered to have a permeability of greater than  $1 \times 10^{-8}$  m/s (i.e. is classed as SILT or, in certain situations, SILT/CLAY, and the clay content is  $13\%$  but  $>10\%$ ), the subsoil must be enhanced by compaction or puddling to achieve the required permeability standard. Where the subsoil is classed as SAND, GRAVEL or SILT (in circumstances where the clay content is  $<10\%$ ), suitable subsoil or other material must be provided for the liner.
3. The upper 500 mm shall have a permeability of less than  $1 \times 10^{-8}$  m/s
4. Where the subsoil is sand/gravel, the upper 750 mm of the liner shall be installed with a permeability of less than  $1 \times 10^{-8}$  m/s.
- 5. The ICW shall be at least 60m away from any well or spring used for potable water.**

The assessment must also determine whether the ICW discharges, either via surface or ground, to any SAC, SPA or NHA. If it does so, an Appropriate Assessment will be required to determine whether the effect is positive, negative or neutral. ICWs should not be located such that they will have significant negative impacts on any of the habitats or species for which a nature conservation site is designated, on the site's overall integrity or on any other protected species.

## 7.0 Grounds of Appeal

- 7.1. The grounds of appeal are against 2 conditions of permission.

Condition 6 which stipulates that a reed bed system cannot be used is appealed on the basis that the appellant specifically proposes a reed bed system. The submission shows a proposed layout revised from original drawings. The original proposal is upgraded to include a tertiary treatment alongside the secondary treatment to maximise environmental benefit (drawings attached.) The system is supported by examples of good practice and EPA guidance. The ground is based on the following submissions:

- It appears to be based on an unwritten policy and shows disregard for the EPA and Department guidance, international climate change obligations and other ecological considerations
- The site is suitable for reed bed system and this should be actively encouraged
- The concerns for public health are unwarranted given that horizontal flow reed beds do not threaten public health because they are fully covered by a gravel top layer and the vertical flow reed bed will be designed to incorporate a top cover layer to exclude any possible contact with septic effluent.
- Any system that is not reliant on electricity has a greater capacity to protect public health
- Reed bed systems are fully specified in EPA Code of Practice Wastewater Treatment and Disposal Systems for Single House for use as a secondary or tertiary treatment. They are also included in Building Regulations as an option. All such guidance will be adhered to.
- Reed beds provide habitat value for wetland flora and fauna and their use promoted wildlife diversity of these habitats
- Will assist in the storage of rainfall
- Reed bed systems and willow plant will have further benefits for climate mitigation and adaptation

- They have been used for 20 years in Ireland - The nearest example being in Kiltimagh Village in Mayo, Kylemore Abbey in Connemara, Galway and the Dolmen Centre in Donegal
- A well designed reed bed achieves the same or better effluent quality than a mechanical treatment system.
- The agent Feidhlim Harty of FH Wetland Systems Ltd has 20 years' experience in design such facilities for water quality protection and is of the opinion that there is no reason to refuse permission for a reed bed on the site.

7.2. Condition 5 which requires the removal of the existing boundary is appealed on the basis of the visual and ecological benefits of retaining the existing boundary and the limitations on ownership to setback boundary outside the site. The grounds of appeal are based on the following submissions:

- Future road widening is not restricted by the proposed development. The council will not be inhibited in the event of road widening
- Future road works will be accommodated but it is not reasonable to require applicant to carry them out – this is an unreasonable financial burden.
- The condition requires removing the old dry stone wall, hedgerow mature trees and roots and considerable excavation. This complicated by variance in levels and retaining wall. The required finishes including culverting add to the scale of works
- Works will be disruptive to traffic – as road closure is envisaged as being required.
- Works will involve a 3rd party consent beyond the applicants control – as works involve trees and roots along boundary
- There are issues of public liability

- Loss of mature trees and hedges coupled with hardstanding and increased loading on stream with consequences of localised ponding and flooding are highlighted as potential significant ecological impacts
- Omission of this condition is requested.

### 7.3. **Planning Authority Response**

No further comments

### 7.4. **Observations**

None

### 8.0 **Assessment**

#### 8.1. **Issues**

8.1.1. This appeal is against conditions of permission. However, I do not consider that the case can be determined within the provisions of section 139 having regard to the absence of appropriate assessment screening by the planning authority, the proximity to European Sites, the concerns of the DAU, the nature of conditions under appeal and matters arising. In these circumstances consideration of the application de novo is I consider appropriate.

8.1.2. The proposal is for a large extension by way of a series of additional structures to a domestic dwelling and also involves a new waste treatment system and retention of a second vehicular access. As it is an extension of an existing dwelling the principal of dwelling is not strictly at issue. I note that there are two expired permissions for similar proposals although details of these have not been provided. It is not clear if the works to date carried out on site and to the house are on foot of these and what the precise status of the house is. It is assumed based on the information submitted in this assessment that it is a legitimate habitable house. In terms of visual impact, the extension is sensitively scaled and modelled in a complimentary style to the traditional form of the existing house, accordingly siting and design is not at issue in this sensitive lakeside setting where views are protected. The key issues in determining this appeal are:

- Boundary treatment a vehicular access and traffic safety
- Waste water treatment
- Appropriate assessment

## 8.2. Access and traffic safety

- 8.2.1. The local road the R300 onto which it is proposed to retain an access is inadequate in width and alignment and the proposed access is described by the Road Design Office as having substandard site lines. In an effort to improve this situation it is recommended that the boundary wall be set back to provide for future road improvement.
- 8.2.2. The appellant argues that the provision of the set back is unreasonable, difficult and ecologically harmful.
- 8.2.3. The setting back and/or lowering of the boundary will improve sightlines and this is to be welcomed in the interest of traffic safety for both the applicant and other road users. On this basis it is not I consider unreasonable to modify the boundary. I accept that required works should be within the applicant's site.
- 8.2.4. The matter of dispute centres on the need to effectively widen the road for the entire frontage. I note the stone wall is relatively low and once kept at 1m in height (as per previous development which requires 1.05m max height) and cleared of higher vegetation this would provide improve sightlines. I note that the road widening for the R300 is not part of the planned programme of works and it is not a strategic road. That said there is a general policy to improve road safety. Given that the proposed development which involves a significant extension with an enhanced capacity of 8 persons in four bed/four-bathroom house consequent on this proposal I consider it reasonable that improvements to the road frontage area carried out. However, I am inclined to agree that taking out the entire boundary in a visually and ecological sensitive area would be quite intrusive particularly where alternatives such as lowering of the boundary could be applied.
- 8.2.5. I consider the condition should provide for lowering the hedge or relocating to provide sight lines in addition to a splaying of the entrance to the requirement of the planning authority and to be set out and agreed on site. In this regard I draw



attention to the fact that compliance with Fig 4.2 Page 51 in condition 2 is misleading as it would appear to relate to the previous plan as page 51 relates to heritage matters in the current plan. Also reference to northwest should read north east as northwest is to the rear of site where there is no road frontage. This condition needs correction.

- 8.2.6. Encroaching on some one else's land cannot be reasonably relied upon. Cutting back trees for visibility should not be a difficulty under the Roads Traffic Acts. The alternative would be to refuse retention of vehicular access at this point but this would leave a house albeit significantly smaller with access at the southern end where sightlines are severely restricted. I would also recommend a special development contribution be attached towards works necessary for the road works directly benefiting the development – in the order of €100 per linear metre amounts to €9000 -the development contribution scheme specific €200 per linear metre for public footpath to put this in context) This could for example include hedge/tree maintenance removal in the vicinity of the site, signage or towards road widening in the event of revised work programme. In the event that beneficiary works are not carried out the applicant may be entitled to a refund.
- 8.2.7. With respect to matters of liability and road closure I do not consider arguments in this regard to be reasonable. The matter of liability is a legal matter and not a salient planning issue in this case. In any event, it is quite probable the road in the public realm would be taken in charge by the council which addresses this matter, the temporary road closure/obstruction for the purposes of longer term road safety is preferable to the retention of a substandard road. These matters which relate to the public road are subject to the agreement and arrangement of the Roads division of the planning authority and are not in this instance unsurmountable should such works be required.

### 8.3. **Wastewater treatment and public health**

- 8.3.1. In this case it is proposed to install a wastewater treatment system which would replace a very old septic tank system which I suspect pre-dates current standards and therefore should be welcomed in principle as a measure to protect water quality. There is a history of permissions for a new treatment system on this site. In this proposal the application has been accompanied by a site assessment form which

demonstrates how it is proposed to comply with the EPA current standards based on the T and P values and soil characteristics. The results indicate that the best system is a packaged wastewater treatment system and polishing filter which would discharge to ground water and the percolation construction is accordingly specified in the Recommendation section - what the PA describe as part 5 of the Report. (I have tagged with green marker) The site is stated to be unsuitable for septic tank and percolation area or septic tank with filter system constructed on site and polishing filter. I note the treatment system performance standard at 95.9mg/l BOD (where typically 8mg/l would indicate pollution in a surface water body) and NH<sub>4</sub> level of 79.9 mg/l would indicate further treatment is necessary. I consider this can be dealt with by condition in so far as the applicant demonstrates full compliance with the planning authority requirements prior to commencement of development.

8.3.2. Despite the specification on the above form, the submitted drawings indicate a reed bed system and the planning authority in its Condition 6 specifically stipulates that a reed bed system cannot be used. In the grounds of appeal this reed bed system is relocated and proposed to be further upgraded to include a tertiary treatment alongside the secondary treatment to maximise environmental benefit but there are no further percolation studies for this new area yet the ground is visually different in terms of contour level and vegetation in parts. I noted the dry soil condition in the upper levels of the site where the reed growth at the lower levels suggest poorer percolation capability.

8.3.3. While I do not doubt the merits of reed bed system augmented with willow planting, the proposal is unfortunately not sufficiently backed up and if the board is to give further consideration of permitting this system with certainty further details are required. New P and T test would be required. There is no explanation for the relocation to the east on lower ground - although it is probably due to the terrain and avoidance of a pump/electricity. Having examined the guidelines for reed beds in domestic wastewater treatment systems I would have particular concerns regarding the revised location and absence of site specific details.

- the proposed revised reed bed location is shown at a distance on the order 12 metres from the northern stream which is at distance of less than 200m upstream

of the Lough Mask an environmentally sensitive water body SAC/SPA and major public water supply

- The Site Assessment form indicates that the subsoil is partly loose/cobbles
- Notwithstanding the guidance there is no mention of the relationship with the receiving waters. It is not clear whether or not a discharge pipe to the stream will be required (as compared to the statement in the Assessment form that ground water discharge is proposed) and this has implications for licencing, consultation and water quality.
- The site characterisation is based on trial hole s in another location
- Having regard to the recommended land area for example 20-40 times the population equivalent which is stated to be 8 and then the additional reserve area for a further pond or treatment to achieve desired water quality having regard to the assimilative capacity of the receiving waters.
- There is also the issue of ongoing maintenance and the need for example to replace gravel every 5 years. (EPA guidance). There is no evidence of monitoring programme tailored to particular requirements of the site.
- There is also a possible issue of odour which has not been addressed

8.3.4. I do not consider the information submitted to be sufficiently evidence based to conclude that the proposed reed bed development will lead to improved treatment and will not result in pollution with the potential to impact on human health and the environment by way of polluting Lough Mask - a regional public water supply.

8.3.5. In this context the omission of the reed bed system eliminates a risk that has not been fully addressed in the submitted details by reference to the constructed Wetland guidelines. However, it may not be good practice to eliminate an option that may be proven to be a better solution. Accordingly, I consider the condition should be left open for the planning authority to review in more detail but ultimately permission should not specify inclusion of the reed bed system. More precise details should be subject to the planning authority requirements.

## 9.0 APPROPRIATE ASSESSMENT SCREENING

## 9.1. The receiving environment

- 9.1.1. The subject site is located within 200 metres of the Lough Carra/Lough Mask complex SAC (Site Code 001774). This site is of considerable conservation importance as it has good examples of nine habitats listed on Annex I of the E.U. Habitats Directive, four of which are listed with priority status. Some of these habitats are amongst the best examples of their kind in the country. It is also selected for two Annex II mammal species and an Annex II moss. The site is of ornithological importance for both wintering and breeding birds. A relatively large number of rare or localised plant and animal species occur, including the glacial relict Arctic Char.
- 9.1.2. Lough Mask is also a Special Protection Area (SPA (Lough Mask SPA [004062]) under the E.U. Birds Directive, of special conservation interest for the following species: Greenland White-fronted Goose, Tufted Duck, Black-headed Gull, Common Gull, Lesser Black-backed Gull and Common Tern. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated water birds are of special conservation interest for Wetland & Waterbirds.
- 9.1.3. Notwithstanding the concerns expressed by the DAU, the issue of impacts on these designated sites was not dealt with in the original application or Further Information as requested by the planning authority.

## 9.2. Conservation objectives

- 9.2.1. Lough Carra/Mask Complex SAC [001774

Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

### Code Description

- |      |   |
|------|---|
| 3110 | Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)                          |
| 3130 | Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea |
| 3140 | Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.  |

4030	European dry heaths
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (* important orchid sites)*
7210	Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae*
7230	Alkaline fens
8240	Limestone pavements* 15/08/2016
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)*

\* denotes a priority habitat

<b>Code</b>	<b>Common Name</b>	<b>Scientific Name</b>
1303	Lesser Horseshoe Bat	<i>Rhinolophus hipposideros</i>
1355	Otter	<i>Lutra lutra</i>
1393	Slender Green Feather-moss	<i>Drepanocladus vernicosus</i>

#### 9.2.2. Conservation objectives for Lough Mask SPA [004062]

- Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

<b>Bird Code</b>	<b>Common Name</b>	<b>Scientific Name</b>
A061	Tufted Duck	<i>Aythya fuligula</i>
A179	Black-headed Gull	<i>Chroicocephalus ridibundus</i>
A182	Common Gull	<i>Larus canus</i>
A183	Lesser Black-backed Gull	<i>Larus fuscus</i>
A193	Common Tern	<i>Sterna hirundo</i>
A395	Greenland White- fronted Goose	<i>Anser albifrons flavirostris</i>

- Objective: To maintain or restore the favourable conservation condition of the wetland habitat at Lough Mask SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

### 9.3. Pathways

- 9.3.1. As the site is well outside the European sites there will be no direct loss of Habitats. However, there are two potential pathways to the receiving waters in Lough Mask and this is significant in that the qualifying interests include a number of habitats and species dependent on water quality. Firstly, there is surface water run-off to the stream to the north of the site boundary which feeds directly into the lake. Secondly there is the groundwater which given the terrain and sloping of the site relative the lake would also flow into the lake. Accordingly, there's a hydrological connection between the development site and European site.

### 9.4. Sources of Pollution and effect

- 9.4.1. Pollution of the Lough Mask waters would be significant in light of the conservation objectives which rely on water quality. The sources of pollution as identified by the DAU are construction works and the discharge of effluent form the septic tanks.
- 9.4.2. Construction works: There may be potential indirect effects relating to the environmental risk associated with contaminated surface water runoff from the site during and post construction. There may also be airborne dust during construction works. The potentially most harmful would be works closest to the stream such as the proposed gatehouse and also the boundary works. This has not been addressed in the application. I consider however that the scale of the development, amounting to 207sq.m.in 3 elements and likely to be staged, amounts to a fairly small scale development and that normal construction managing practices during this time of a fixed duration would address this matter. This however would need to be subject of a new condition of permission which is very fairly standard. In such circumstances I do not consider the proposed development to be capable of generating an impact of any meaningful magnitude that would be significant in the context of the conservation objectives.
- 9.4.3. Septic tank: The primary impact of the development would be septic tank/wastewater treatment effluent due to the natural drainage downwards from the site to the Lake and also to the stream. The site recommendations address the issue of site specific requirements for drainage by site appraisal, T test and P tests, type and design of

system including percolation trench sizing and ultimately stating that the septic tank effluent will be treated to EPA standards and within specified range of limits. This is an improvement on the older system which is likely to have been a septic tank discharging to a pit. This system which has been assessed by the planning authority and deemed acceptable subject to the omission of the reed bed system is I consider within acceptable limits and unlikely to have a significant effect on the receiving waters.

- 9.4.4. Reed Bed: The original drawings indicate replacement of the treatment system with a percolation area in lands at a distance further from the stream and from the lake shore - it is also on high ground. This is the ground where the trial holes were dug and inspected.
- 9.4.5. While it is clear in the statutory guidance for ICW that such systems provide a means of potential protection of surface water and ground water I am not satisfied that the environmental risks have been fully addressed. I refer to the assimilative capacity of the receiving waters and discharge water quality and certainty by reference to the design guide particulars such as adequate land area and topography and residual reserve area for any failure in the designed system. This is a reasonable concern having regard to the relatively limited development of technology into the context of current water quality challenges and standards. Furthermore, the nearby water supply sources are not identified and protection is not certain.
- 9.4.6. The absence of site specific trial holes for the revised designated reed bed cells is inadequate in establishing baseline data and site suitability. This is crucial in identifying potential conduits and capacity to attenuate pollutant
- 9.4.7. While there is capacity to enhance biodiversity, the underlying risk and insufficient information does not address the precise care needed to be taken for the particular conservation objectives for Lough Mask as Special Area of Conservation and as Special Protection Areas. It cannot be concluded that they will not be negatively impact upon. On balance I consider the original ground to be a preferable location. The site Assessment and recommendations generally support a compliant treatment system.

- 9.4.8. In this context the omission of the reed bed system as proposed eliminates a risk that has not been fully addressed in the submitted details by reference to the Integrated Constructed Wetland guidelines.
- 9.4.9. I do not consider the information submitted to be sufficiently evidence based for the site and its environment to conclude that the proposed reed bed development will lead to an improved treatment and will not result in pollution with the potential to impact on human health and the environment. Having regard to the precautionary principle and on the basis of the information provided with the application and appeal I am not satisfied that the proposed reed bed would not be likely to have a significant effect on the Lough Mask in view of the site's conservation objectives.

#### 9.5. **Determination**

Taking into consideration the small scale nature of the development as proposed and described in the initial site assessment form for waste treatment and which does not include a reed bed without further assessment by the planning authority, the control of construction activities through good practice and consequently the likely limited degree of pollution generation and the separation between the sites, it is reasonable to conclude on the basis of the information available, which I consider adequate in order to issue a screening determination, that the proposed development, individually and in combination with other plans or projects would not be likely to have a significant effect on any European site and in particular specific site number in view of the site's conservation objectives. An appropriate assessment (and submission of a NIS) is not therefore required.

#### 10.0 **Recommendation**

- 10.1. I recommend that planning permission should be granted for the reasons and considerations as set out below.

#### 11.0 **Reasons and Considerations**

Having regard to the planning history on site and the nature of the proposal to extend and upgrade the effluent treatment and discharge, it is considered that, subject to **PL16.247759** **An Bord Pleanála** **Page 24 of 28**



compliance with the conditions set out below, the proposed development would be appropriate and would not prejudice public health, or constitute a traffic hazard. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

### **CONDITIONS**

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application and amended in further information submitted to the planning authority on 10<sup>th</sup> November 2016, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

**Reason:** In the interest of clarity.

2. The proposed gatehouse studio shall be used only as a private domestic studio and shall not at any time be used for agricultural, industrial or commercial purposes or converted for human habitation.

**Reason:** In the interest of residential amenity and public health.

3. Details of the external finishes of the proposed dwelling including the type of stone to be used shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

**Reason:** In the interest of visual amenity.

4. (a) The proposed entrance shall be located at the northern end of the site frontage as generally indicated in the submitted plans and the entrance at the southern end shall be blocked up. The entrance shall be recessed and constructed in accordance with the requirements of the Planning Authority.

(b) The entrance gates shall open inwards.

(c) The existing front boundary shall be retained except to the extent that its removal or modification is necessary to provide for the entrance to the site and improved visibility

**Reason:** In the interest of traffic safety and in the interest of visual amenity.

5. No surface run-off from the site shall discharge onto the public road. Existing road side drainage shall not be impaired and new entrance shall be designed to ensure the uninterrupted flow of existing road side drainage.

**Reason:** In the interest of orderly development

6. Water supply and drainage arrangements, including the disposal of surface water, shall comply with the requirements of the planning authority for such works.

**Reason:** To ensure adequate servicing of the development, and to prevent pollution.

8. The proposed wastewater treatment system shall be located in accordance with drawings submitted with the application on 7<sup>th</sup> September 2016 (to the west of the site) and shall be in accordance with the standards set out in the document entitled "Code of Practice - Wastewater Treatment and Disposal Systems Serving Single Houses (p.e. < 10)" - Environmental Protection Agency, 2009. The use of a reed bed shall only be used where it is demonstrated to the planning authority's satisfaction that it will enhance the treatment system proposed in the Site Assessment form. All details including a monitoring contract shall be submitted for the written agreement of the planning authority prior to commencement of development

**Reason:** In the interest of public health and to protect the water quality of environmentally sensitive area in the Lough Mask catchment.

9. Details of the external finishes of the proposed dwelling including the type and colour of plaster, roof tile, windows and doors to be used shall be submitted to, and agreed in writing with, the planning authority prior to commencement

of development. All materials and finishes shall harmonise with the existing dwelling structure.

**Reason:** In the interest of visual amenity

10. The site shall be landscaped, using only indigenous deciduous trees and hedging species, in accordance with details which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

Any plants which die, are removed or become seriously damaged or diseased, within a period of five years from the completion of the development, shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority.

**Reason:** In order to screen the development and assimilate it into the surrounding rural landscape, in the interest of visual amenity.

11. Construction activity, excavation and demolition waste shall be managed in accordance with a construction and waste management plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. The plan shall include details of site clearance and construction phases and details of the methods and locations to be employed for the prevention of pollution of air and water and details (including date) of the removal/disposal of the mobile home.

**Reason:** In the interests of environmental protection.

12. The developer shall pay the sum of €9,000 (nine thousand euro) (updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office), to the planning authority as a special contribution under section 48 (2)(c) of the Planning and Development Act 2000 in respect of upgrading of the R300 in the vicinity of the site entrance. This contribution shall be paid prior to the commencement of the development or in such phased payments as the planning authority may facilitate. The application of

indexation required by this condition shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to the Board to determine.

**Reason:** It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.

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Suzanne Kehely

Senior Planning Inspector

5<sup>th</sup> April 2017