



An
Bord
Pleanála

Inspector's Report

ABP-313619-22

Development	Retention of recently drilled borehole, Permission for a new single storey treatment plant building. An appropriate assessment screening report and a hydrogeological report is submitted.
Location	Castletown Townland, Cross, Cong, Co. Mayo
Planning Authority	Mayo County Council
Planning Authority Reg. Ref.	22160
Applicant(s)	Funshinagh / Cross Group Water Scheme GWS.
Type of Application	Retention Permission.
Planning Authority Decision	Refuse permission
Type of Appeal	First Party versus refusal
Appellant(s)	Funshinagh / Cross Group Water Scheme GWS.
Observer(s)	None.

Date of Site Inspection

9th February 2023.

Inspector

Bríd Maxwell

1.0 Site Location and Description

- 1.1. This appeal relates to a rural site located within the townland of Castletown on the northeastern shores of Lough Corrib and circa 6km to the southwest of Cong and 4km south of the village of Cross in County Mayo. Shrule and Headford are circa 9km to the east and southeast respectively. The appeal site which has a stated area of 0.0342 hectares is occupied by the Funshinagh/ Cross Group Water Scheme (GWS) Treatment Plant pumphouse 19.5sq.m and a recently drilled borehole. The borehole is within a hardstand area adjacent to the pumphouse. The topography of the area is relatively level with a gently slope to the Lough Corrib. The local area is rural in character predominantly in agricultural uses with a scattered pattern of residential development.
- 1.2. The Funshinagh/Cross Group Water Scheme GWS is currently supplied by water from Lough Corrib. An intake pipe is positioned c120m southwest of the lake shore. A stainless steel screen is fitted to the pipe at the intake point and the lake water is gravity fed to an underground tank at the rear of the WTP. The water is pumped through the WTP where it is treated by turbidity filters, chlorine disinfection and UV treatment and then distributed to the Group water scheme distribution network.
- 1.3. The appeal site lies within the designated European Sites Lough Corrib Special Area of Conservation SAC (Site Code 000297) and Lough Corrib Special Protection Area SPA (Site Code 004042).

2.0 Proposed Development

- 2.1. The application involves permission to retain a new borehole (drilled on 26th February 2021) and permission to construct a new single storey treatment plant building to be provided as an extension to the existing WTP pumphouse building.
- 2.2. Application details indicate that the Funshinagh / Cross GWS supplies water to c170 houses plus the agricultural water demand within the catchment area. Average daily abstraction of 240m³/day although this can rise to 200m³/day in extreme heat or heavy usage.
- 2.3. Mayo County Council, as supervisory authority, have identified concerns regarding water quality within the scheme and have placed the scheme on the 'at risk' scheme

list. Concerns relate to vulnerable source, inadequate treatment process, inefficient disinfection process and unvalidated cryptosporidium barrier. Zebra mussels have also been identified at the water intake pipe. Given the issues with the existing scheme and in order to comply with 2014 Drinking Water Regulations a new groundwater source borehole source has been found and is now proposed for retention and development from trial borehole to production borehole.

3.0 Planning Authority Decision

3.1. Decision

By order dated 26th April 2022 Mayo County Council issued notification of its decision to refuse permission for the following reason:

“Having regard to the nature and extent of the proposed development and the details on file, it has not been established to the satisfaction of Mayo County Council that the Group Water Scheme can supply a potable water supply compliant with the EU Drinking Water Regulations 2014. Therefore, it is considered that the development as proposed would be prejudicial to public health and contrary to the proper planning and sustainable development of the area.”

3.2. Planning Authority Reports

3.2.1. Planning Reports

Planner’s report relies on the recommendations of the rural water office and recommends refusal as per subsequent decision.

3.2.2. Other Technical Reports

Area Engineer recommends referral to Environment, Water Services and Rural Water Section.

Water Services – No issues for public water supply.

Rural Water Office Report makes reference to the County Mayo Strategic Rural Water Plan 2001 and the recommendation therein that the Funshinagh / Cross GWS amalgamate with Glencorrib and Mochara GWS and that one treatment plant be installed in Glencorrib.

The Funshinagh Cross GWS is currently on the Department of Housing Local Government and Heritage Remedial Action List as it has been deemed to have a vulnerable source and cannot guarantee a potable water supply compliant with EU Drinking Water Regulations 2014. The hydrological report carried out on behalf of the GWS agrees with national GSI hydrological designated mapping of the area. The GWS hydrological report confirms that the new borehole aquifer is “extremely vulnerable” and that there would not be a sufficient supply from the borehole to meet the demand from the GWS. The tests and sampling of this borehole were carried out over a very short period and it is considered that there is not sufficient evidence available to determine that this new water source is a viable sustainable supply to meet compliance with the EU Drinking Water Regulations. Refusal is recommended.

3.3. Prescribed Bodies

No submissions.

3.4. Third Party Observations

No submissions

4.0 Planning History

No planning history.

5.0 Policy Context

5.1. The Water Framework Directive

5.1.1 The EU Water Framework Directive (2000/60/EC) requires all Member States to protect and improve water quality in all waters so that good ecological status is achieved by 2015 or, at the latest, by 2027. It was given legal effect in Ireland by

the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003). It applies to rivers, lakes, groundwater, and transitional coastal waters. The Directive requires that management plans be prepared on a river basin basis and specifies a structured method for developing these plans.

5.2. Water Environment (Abstractions and Associated Impoundments) Act 2022.

The act which was enacted in December 2022 sets out a system of controls on the abstraction and impoundment of water to ensure full compliance with Ireland's responsibilities under the Water Framework Directive. The Act provides a registration, licensing and control regime for water abstractions including a simple registration system for abstractions above a threshold of 25m³ per day and a licence requirement for abstractions above a threshold of 2,000m³/day and in certain other circumstances depending on the significance of the abstraction.

5.3. Development Plan

The Mayo County Development Plan 2022 refers.

Within Chapter 10 Natural Environment and at 10.4.10 it is set out that Water Quality is a key issue that affects us all and its protection is the responsibility of all sections of society. Ensuring that our local natural water bodies are clean and well protected is critically important to our health and wellbeing. The quality of all waters in County Mayo, including surface waters (rivers and lakes), estuarine and coastal waters and groundwater, represents an important ecological, recreational, economic, public health and aesthetic resource for the county. The quality of water can be easily damaged and is difficult to restore, leading to often widespread and long-term effects. Mayo County Council has responsibility for the protection of all waters in the county. The Council has an important role to play in the protection, maintenance and improvement of water quality through the planning and management of future development.

At 10.4.10.2 Blue Dot Catchments Programme The 'Blue Dot Catchments Programme' is a key action under the River Basin Management Plan for Ireland

2018-2021. The aim of the 'Blue Dot' programme is to protect and restore high ecological status to a network of river and lake catchments. Map 10.3 illustrates the Blue Dot high-status waterbodies and sub-basins in County Mayo. The Council will take a precautionary approach to development which impacts on water quality, and particularly High-Status waters, in keeping with the protection objective of the WFD.

Drinking Water Protected Areas

The Council will seek to protect both ground and surface water resources and will work with Irish Water to develop and implement Drinking Water Safety Plans to protect sources of public water supply and their contributing catchment. Mayo County Council will also work with the National Federation of Group Water Schemes in respect of Source Protection Plans for Group Water Schemes to protect these sources. Groundwater Protection Scheme and Source Protection Zones The Geological Survey of Ireland has completed a Groundwater Protection Scheme for County Mayo. The overall aim of this scheme is to preserve the quality of groundwater, particularly for drinking purposes, for the benefit of present and future generations. A key component of the Groundwater Protection Scheme is Source Protection Zones (SPZs), which are delineated around groundwater sources to provide protection, by placing tighter controls on activities within those areas. SPZs are derived by integrating source protection areas (areas surrounding individual groundwater sources) and vulnerability categories. The Council will take a precautionary approach to development in Source Protection Zones. Development proposals which pose a potential risk to groundwater within these zones will be required to demonstrate that no reasonable alternative site is available, and that groundwater quality will be protected to the satisfaction of the Council.

Water Quality Policies include:

NEP 17 To promote public awareness of water quality issues and the measures required to protect surface water, coastal and transitional waters and groundwater bodies from inappropriate and damaging development.

NEP 18 To co-operate with the EPA and other authorities in the continued implementation of the EU Water Framework Directive.

NEP 19 To protect existing groundwater sources and aquifers in the county and to manage development in a manner consistent with the protection of these resources.

NEP 20 To meet our targets to achieve 'good status' in all water bodies in compliance with the Water Framework Directive and to cooperate with the implementation of the National River Basin Management Plan 2018-2021, and subsequent plans.

NEP 21 To manage, protect and enhance surface water and ground water quality to meet the requirements of the Water Framework Directive.

Water Quality Objectives include:

NEO 37 To ensure that the Water Framework Directive, the River Basin Management Plan and any subsequent Water Management Plans are fully considered throughout the planning process.

NEO 38 To ensure, through the implementation of the River Basin Management Plan(s) and the associated Programmes of Measures and any other associated legislation or revised plans, with all relevant stakeholders, the protection and improvement of all drinking waters, surface water, coastal and transitional waters and ground waters throughout the county.

NEO 39 To manage in a sustainable manner, the existing groundwater sources and aquifers in the county and manage development in a manner consistent with the sustainable management of these resources, in conformity with the EU Environmental Objectives (Groundwater) Regulations 2010 and the second cycle National River Basin Management Plan 2018-2021, and any subsequent plans and the Groundwater Protection Scheme.

NEO 40 To protect groundwater sources through the implementation of the Groundwater Protection Scheme and Source Protection Zones. Development proposals within these zones which have the potential to pose a risk to groundwater will be required to demonstrate that no reasonable alternative site is available, and that groundwater quality will be protected to the satisfaction of the Council.

NEO 41 To protect both ground and surface water resources and to work with Irish Water to develop and implement Drinking Water Safety Plans, to protect sources of public water supply and their contributing catchment, and to work with the National

Federation of Group Water Schemes, in respect of Source Protection Plans for Group Water Schemes to protect these sources.

NEO 42 To comply with the Blue Dot Catchments Programme and protect and restore high status water bodies in County Mayo and ensure all proposed development which may have an impact on a high-status water quality site will require site specific assessment to determine localised pressures and demonstrate suitable mitigation measures, in order to protect these sites.

NEO 43 To protect through its regulatory controls and in conjunction with the Local Authority Waters Programme, water bodies with 'high ecological status', to restore water bodies that have fallen below 'high ecological status', to maintain water bodies at 'Good Status' and to mitigate threats to water bodies identified as 'At Risk' i.e. 'Moderate and Poor Status'

5.4. **Natural Heritage Designations**

The site is within the Lough Corrib Special Area of Conservation SAC(Site Code SAC 000297) and Lough Corrib Special Protection Area SPA (Site Code 004042)

5.5. **EIA Screening**

I note the relevant classes as set out in Schedule 5 of the Planning and Development Regulations.

I note within Part 1. 11 Groundwater abstraction or artificial groundwater recharge schemes where the annual volume of water abstracted or recharged is equivalent to or exceeds 10 million cubic metres.

Within Schedule 5 Part 2 Class 10 (I) Infrastructure Projects. *“Groundwater abstraction and artificial recharge schemes not included in Part 1 of this Schedule where the average annual volume of water abstracted or recharged would exceed 2 million cubic metres.”*

According to the submitted details Funshinagh Cross GWS abstracts 240m³/day equating to 87,600m³ annually therefore is not subject to mandatory EIA.

Having regard to the nature and scale of the development proposed for retention and proposed development it is considered that issues arising from the proximity

/connectivity to European Sites can be adequately dealt with under the Habitats Directive (Appropriate Assessment) as there is no likelihood of other significant effects on the environment. The need for Environmental Impact Assessment can therefore be excluded at preliminary examination and a screening determination is not required.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1 The appeal is submitted by John Diskin and associates consulting engineers on behalf of Funshinagh Cross / Group Water Scheme. Grounds of appeal are summarised as follows:

- The Funshinagh Cross / Group Water Scheme supplies drinking water to 170 houses and associated non domestic demand within the supply area which includes 79 farms and 4 businesses.
- The scheme in operation since 1974 is a voluntary organisation and run on a non-profit basis for the benefit of members.
- Current supply is from Lough Corrib. Raw water from Lough Corrib is difficult and expensive to treat to drinking water regulations standard.
- Due to the level of total organic carbon in the Lough Corrib raw water and the consequential poor UVT values and expense and difficulty to treat to a standard that would ensure a proper cryptosporidium barrier to the treated water the Funshinagh /Cross Group Water Scheme decided to identify a new borehole source and in March 2021 a trial borehole was drilled at a location identified by a water diviner near the existing pumphouse.
- Rural Water Office report refers to recommendation in County Mayo Strategic Rural Water Plan 2001 that the Funshinagh / Cross Group Water Scheme amalgamate with Glencorrib an Mochara GWS and install one treatment plant in Glencorrib. Nothing happened between 2001 and 2019 in relation to this proposal.
- The Funshinagh /Cross Group Water Scheme has requested Mayo County Council to update their rural water strategic plan in light of finding the new source of excellent

water which is cheap to treat. Mayo County Council have declined and insist on the amalgamation which is not an option for the Funshinagh /Cross Group Water Scheme.

- The Department of Heritage Local Government and Housing approved a 2019-2021 Multi Annual Rural Water Programme in 2019 on foot of a submission from Mayo County Council without reference to the Board of the Funshinagh /Cross Group Water Scheme. They sought funding under Measure 2 to upgrade the Funshinagh /Cross treatment plant facilities so that the scheme can sustainably achieve compliance with the parameters of the Drinking Water Regulations 2014. Mayo County Council did not seek funding to connect the Funshinagh /Cross Group Water Scheme to either the Glencorrib GWS or the Irish Water pipeline network.
- The connection to The Irish water pipeline network from the Cong public supply circa 3km distant would cost approximately €375,000 to €400,000.
- The Glencorrib Group Water treatment plant would need to be upgraded and enlarged before it could supply to the Funshinagh /Cross Group Water Scheme and as there is a design build and operate contractor in possession of the Glencorrib water treatment plant and will be for 5-6 years such an upgrade. Cost is estimated at €250,000 to €300,000 for upgrade. The overall cost of connecting the Funshinagh /Cross Group Water Scheme to the Glencorrib GWS would therefore be between €625,000 and €650,000. By comparison the cost of treating the Funshinagh /Cross Group Water Scheme new borehole is estimated at €100,000.
- Mayo County Council requested and received funding of €300,000 for the Funshinagh /Cross Group Water Scheme from the Department under Measure 2b – Public Health Compliance in 2019. While eligible work would include upgrading works the Council has advised that this allocation can only be used for amalgamation of the Funshinagh /Cross Group Water Scheme and Glencorrib GWS. Neither scheme management committee wish to amalgamate and the Funshinagh /Cross Group Water Scheme do not wish to transition to Irish Water.
- Mayo County Council issued a direction to the Funshinagh /Cross Group Water Scheme on 27th October 2021 to present an “Action Plan” within 60 days. A request to extend the 60 day deadline due to Christmas holiday period was rejected

therefore this was in effect a 37 day notice. Action Plan was submitted on 26th December 2021.

- Both Funshinagh Cross (240m³/day) and Glencorrib (642m³/day.) Group water schemes use lough corrib as their sources of raw water. Both treatment plants are on the eastern side of Lough corrib. Due to prevailing winds the chances of floating debris and nutrients turning up at the Glencorrib GWS intake point are much higher than for Funshinagh /Cross intake as it is relatively sheltered for such winds.
- Tri Halo Methanes (THMs) (a chlorine disinfection bi-product) are an issue for both Funshinagh /Cross and Glencorrib Group Water Scheme as outlined in the EPA publication for “Drinking Water Quality in Private Group Schemes and Small Private Supplies 2020.”
- The new Funshinagh / Cross borehole source has no such THM issues as there is no total organic carbon in the borehole raw water. The provision of the pilot borehole, which is artesian and not connected to Lough Corrib indicates a raw water very low in total organic carbon and this confirms that THMs will not be relevant with this new source.
- A further option exists in the Funshinagh /Cross GWS to top up the borehole water with the existing Lough Coirrib source water should there be a shortfall in the yield from the borehole during peak flow conditions. As the extra portion of water from Lough Corrib will only be in the order of 1.00 to 2.00 cubic metres per hour the dilution with the borehole water will still not result in THM exceedances. (as confirmed in Consultant Hydrogeologist report)
- The existing Glencorrib Group Water Scheme does not have the capacity to supply the Funshinagh/Cross GWS. It supplies water that is non compliance with the EU Drinking regulations. As per details provided by Rural Water Section Mayo County Council the capacity of Glencorrib GWSS is 642m³ /day with maximum demand 572m³/day. Thus it only has 70m³/day available.
- Notable THM Failure in the Glencorrib GWS and the treatment plant is located in the flood plain of Lough Corrib. The level of the access road had to be raised to reduce flooding events and when flooding occurred it prevented access to the plant save for by boat.

- Irish Water Lough Mask supply is at / exceeds capacity and the nearest Irish Water Pipeline is almost 3km distant in the Cong direction. An extension is predicted to cost in the region of €375,000 to €400,000.
- The Glencorrib GWS cannot currently supply adequate or compliant water. Irish Water will not be in a position to supply potable water until 2025. The Glencorrib GWS would have to carry out significant upgrade works to the pipeline network and treatment system, and it could be 2024/2025 before such works are complete.
- Professional Engineering advisors state that these two long term options cannot be considered and could not be the basis of any action plan as the existing 170 domestic customers cannot be exposed to public health risks in the interim 2 to 3 years in light of the Mayo County Council Direction. This would expose the Funshinagh /Cross Group Water Scheme management to unacceptable criminal prosecution exposure should an untoward event occur. The EU phrase of overriding public interest includes public safety and relates to Funshinagh Cross GWS.
- Hydrogeological report from i.e. consulting recommends the development of the pilot borehole into production well and to consider a second production borehole on the site to level off the cone of depression during pumping.
- The grounds for refusal do not relate to planning considerations. No alternative source will be available before 2024/2025.
- The treatment system for the Funshinagh/Cross Borehole water should permission be granted could be up and running before end November 2022 at a cost of less than €100,000.
- The only difficulty with the Funshinagh Cross new borehole raw water is the presence of a trace of hydrogen sulphide. There is no upper threshold limit for hydrogen sulphide in drinking water regulations 2014 and it is relatively straightforward to remove hydrogen sulphide from a water supply. It requires the raw water to be aerated using air blowers to oxidise hydrogen sulphide followed by chlorination, filtration, and then a duty and standby validated UV reactor. pH adjustment may be required to make the oxidation process more efficient, As a final polishing it may be necessary to pass the water through a carbon filter. The Funshingagh Cross GWS operators are familiar with the water treatment equipment /

technology now required to remove the hydrogen sulphide trace and operating it will be well within their competence.

- Mayo County Council have advised the Funshinagh/Cross Group Water Scheme that Mayo County Council will not grant aid the treatment costs associate with new treatment equipment required to treat the new borehole water. This is disappointing however the Funshinagh /Cross Group Water Scheme are prepared to fund the new treatment system from their own resources with possible loans from the Credit union. The cost to the exchequer of connecting the Funshinagh /Cross Group Water Scheme to the Glencrorrib Group Water Scheme at an estimated cost of €625000 and €650,000 versus the estimated cost of €100,000 in treating the Funshinagh /Cross GWS new borehole.
- While Rural Water Mayo may refuse to grant aid treatment for the Council should not block the scheme from access to a safe and compliant drinking water now and into the future.
- Request that the Board consider granting permission, Two conditions are suggested. Firstly that the applicant provide compliant test results of the treated water to ensure compliance with drinking water standards prior to connection to the mains network. Secondly that further hydrological step testing be carried out if required.

6.2. **Planning Authority Response**

The Planning Authority did not respond to the grounds of appeal.

6.3. **Observations**

No submissions

7.0 **Assessment**

- 7.1. Having regard to the nature of the development proposed for retention and further development and the decision of the local planning authority and matters raised in

the grounds of appeal, I consider that the key issue to be addressed in the context of proper planning and sustainable development relates to the question of viability and sustainability of the proposed groundwater source to meet the requirements of the group water scheme. The issue of appropriate assessment also needs to be addressed. As regards visual impacts of the proposed new treatment plant building I note that while the building is significantly larger than the existing WTP building, having regard to the topography of the landscape and character of the area, I do not consider that the visual impact would be significant. Noise and other impacts on the amenities of the area are not considered to be a barrier to the proposed development.

7.2. I note that the grounds of appeal includes some detail in respect of interactions with the rural water office of Mayo County Council with respect to Mayo County Council's Rural Water Strategic Plan 2001 which recommended that the Funshinagh/ Cross GWS amalgamate with the neighbouring Glencorrib GWS. Information includes estimates with regard to the costings for alternative proposals. I note that the issue of cost is not a planning matter and the merits of the amalgamation option are not part of the development proposed. It is therefore appropriate that deliberations are confined to the of the assessment of the proposal on its own merit in the context of proper planning and sustainable development.

7.3. I note that the Planning Authority refused permission on the following grounds:

“Having regard to the nature and extent of the proposed development and the details on file, it has not been established to the satisfaction of Mayo County Council that the Group Water Scheme can supply a potable water supply compliant with the EU Drinking Water Regulations 2014. Therefore, it is considered that the development as proposed would be prejudicial to public health and contrary to the proper planning and sustainable development of the area.”

The deliberations and recommendation of the Council's planner relies heavily on the report of the Rural Water Office which emphasises the need for a long term sustainable drinking water supply compliant with EU Drinking Water Regulations

2014. The report refers to the hydrological report carried out on behalf of the Funshinagh / Cross GWS which agrees with the national GSI hydrological designated mapping of the area confirming that the new borehole aquifer is extremely vulnerable and that there would not be a sufficient supply from the borehole to meet the demand of the GWS. It is noted that the tests and sampling of the borehole were carried out over a very short period of time and it was asserted that there is insufficient evidence available to determine that this new water source is a viable sustainable supply to meet compliance with EU Drinking Water Regulations 2014.

7.4 I note the Hydrological Action Programme Report for Funshinagh /Cross GWS, by IE Consulting, December 2021, which accompanied the planning application. It notes that the GWS is underlain by the Owenriff member, which is a dark limestone with thin (50cm thick) nodular, bioturbated silty shales. Regional scale faulting is located <1km north and south of the GWS WTP. The Owenriff member forms part of an LI aquifer, Locally important aquifer consisting of bedrock which is moderately productive only in local zones. GSI describes the aquifer as an aquifer with a limited network of fractures fissures and joints producing a low fissure permeability which tends to decrease with depth. A shallow zone of higher permeability may exist in the upper few metres where rock may be more weathered. Higher permeability may also occur along fault zones. Low permeability and storage capacity result in low recharge acceptance across the aquifer. The GSI groundwater vulnerability rating (the natural vulnerability of the groundwater dictates the likelihood of contamination if a contamination event occurs) is classified as extreme with significant areas of bedrock at surface along the lake shore. On analysis of the specific capacity curve, calculated from the step test, the estimated maximum yield is 360m³/day. This was not considered sustainable however given the large corresponding maximum drawdown (100m). Based on the analysis the safe yield of the borehole was considered to be 9-10m³/hr which is equal to 216-240m³/day. Constant rate test results for transmissivity value and specific capacity demonstrated characteristics typically representative of a poorly productive aquifer. The report notes that the rapid recovery and large drawdown observed during pumping tests do not indicate that this is a sustainable source at large pumping rates. Large drawdowns can

exacerbate other issues, including water quality and supply in the surrounding area. Water quality analysis from September 20 October 2021 indicated good quality, improved to the current lake water source. A H₂S odour was noted which is often associated with sulphide containing muddy limestone which when exposed to air is oxygenated to hydrogen sulphide. The report notes that the different water chemistry of the borehole and the lake indicate that they may be sourced from separate water bodies.

7.5 The conclusion and recommendations of the hydrology report is that a second groundwater source is required to complement the existing borehole. A second borehole will increase supply available to the scheme, balance pumping and reduce drawdown of both wells. If a second borehole is drilled it is recommended that a geological log be taken to inform the underlying geology, aquifer priorities and to investigate the H₂S smell. It is noted that two sources have been identified by the diviner and the scheme plans to drill at the second point though details are not provided.

7.6 I note that within the grounds of appeal correspondence from ie consulting reaffirms the recommendation that a second developed groundwater borehole source is provided to complement the existing borehole. It is asserted that the second borehole will increase supply available to the scheme, balance the pumping and reduce drawdown of both wells. It is noted that because the aquifer is fractured the success of a second borehole is dependent on the inter connectivity of fractures, so until a second borehole is drilled and tested it is not possible to be definitive regarding its yield. It is outlined that should a second borehole be unsuccessful; consideration could be made to mix the borehole water with lake water. The mixing of lake water would need to include treatment processes which can be regarded as failsafe from a public health perspective to include a cryptosporidium barrier.

7.7 Having considered the information submitted, I am inclined to concur with the Planning authority that the level of information provided is insufficient in terms

of enabling any degree of certainty regarding the viability and sustainability of the proposal to meet the needs of the groupwater scheme. The uncertainty regarding the capacity of the aquifer source in advance of the provision of a second trial hole and the implications of the alternative proposal for a combined groundwater and lakewater source have not been fully explored and do not enable the assessment of the potential impacts. I note a number of other matters are also not addressed within the application. The issue of impact on water balance in the aquifer ie: the equilibrium between the rate of discharge out of the aquifer and the recharge rate from the infiltration of rainfall. No information is provided regarding existing public or private sources taking water from the aquifer to assess current water abstraction rates. It is not therefore possible to assess impact on the water balance of the aquifer. The assessment of the potential for impacts on existing wells in the area would necessitate identification of the location of all wells within a zone of contribution and a prediction of which wells could reasonably be expected to be affected by the proposed development as a result of the lowering of the watertable. The implications of the establishment of a source protection area for the borehole and the resultant implications for other land uses has also not been addressed. In the absence of clarity on these issues the application has not demonstrated that the proposal represents a viable and sustainable source for the Funshinagh Cross Group Water scheme or that the proposal would not negatively impact on the groundwater resource. On this basis I consider that refusal is warranted.

7.8 Appropriate Assessment

7.8.1 Compliance with Article 6(3) of the Habitats Directive

The requirements of Article 6(3) as related to screening the need for appropriate assessment of a project under Part XAB, section 177U of the Planning and Development Act 2000 (as amended) are considered fully in this section.

Background to the application

On the issue of appropriate assessment, the application is accompanied by an Appropriate Assessment Screening by Aster Environmental Consultants Ltd. I note that the AA screening report only addresses the borehole element of the proposed development and does not address the works and development to provide the proposed single storey treatment plant building. The report identifies European Sites within a possible zone of influence of the development, identifies potential pathways and impacts, and assesses the significance of potential impacts of the borehole.

The applicants AA screening report concluded that despite proximity to Lough Corrib SAC and SPA no impacts were predicted on the qualifying interest or conservation objectives of the Lough Corrib SAC and Lough Corrib SPA as a result of the trial borehole, alone or in combination with other plans and projects in the area, and therefore the need for Appropriate Assessment and a Natura Impact Statement is screened out. The report relies on the hydrologist report which notes a difference in the chemical signature of the lake and the borehole water source therefore the source is understood to be a separate waterbody.

7.8.2 Screening for Appropriate Assessment – Test of likely significant effects

The proposed development is not directly connected with or necessary to the management of a European site and therefore it needs to be determined if the development is likely to have significant effects on a European Site.

The proposed development is examined in relation to any possible interaction with European sites designated Special Conservation Areas SAC and Special Protection Areas SPA to assess whether it may give rise to significant effects on any European site.

Description of Development

The project involves retention of a borehole and development from trial borehole to production borehole and construction of single storey treatment plant building, to be provided as an extension to the existing WTP pumphouse building and all associated site works.

Taking account of the characteristics of the proposed development in terms of its location and the scale of works, the following issues are considered for examination in terms of implications for likely significant effects on European sites:

- Construction related – uncontrolled surface water silt / construction related pollution.
- Operational – uncontrolled surface water pollution run off. Wastewater pollution.
- Habitat loss / fragmentation
- Habitat disturbance / species disturbance (construction and or operational)

Submissions and observations.

No submissions raise specific issues with regard to impact on European sites.

7.8.3 European Sites

Part of the development site within the Lough Corrib Special Area of Conservation(Site Code 000297) and Lough Corrib SPA (Site Code 004042). A number of other European sites occur within 15km of the site within a possible zone of influence. Where a possible connection between the development site and a European Site has been identified, these sites are examined in more detail.

European sites within 15km possible zone of influence include :

Natura 2000 Site	Site Code	Distance
Lough Corrib SAC	000297	0m
Lough Corrib SPA	004042	0m
Cloughmoyne SAC	000479	3km
Macorcha Lough SAC	001536	5km
Kildun Souterrain SAC	002320	5.5km
Shrule Turlough SAC	000525	5.8km
Clyard Kettle-Holes SAC	000480	6.85km
Lough Carra / Mask Complex SAC	001774	8km
Lough Mask SPA	004062	10km

Gortnandarragh Limestone Pavement SAC	001271	10km
Ross Lake Woods SAC	001312	13km

7.8.4 Identification of Likely Effects

The site of the proposed development comprises a hardstand area adjacent to the existing WTP pumphouse and adjacent grassland site. The proposed development is not connected with or necessary for the conservation management of any Natura 2000 site. The site of the proposed development is within the Lough Corrib SAC and Lough Corrib SPA. On the basis of absence of source pathway receptor connection to the remaining sites above there is no likelihood of significant effects on these sites and they can be screened out.

I consider that the reasoning of Aster Environmental Consultants which screens out potential impact of borehole on the qualifying interests and conservation objectives on the basis of different chemical signature of the Lake to the borehole source. The range of activities arising from the construction and operation of the proposed development of the treatment plant building that would possibly have any potential effects on the European sites would relate to pollution of surface water due to run off including during construction activities and potential species disturbance.

As regards In-combination effects there are no known development projects or plans with which significant in-combination effects would arise.

Mitigation Measures

No measures designed or intended to avoid or reduce any harmful effects of the proposed development on a European site have been relied upon in this screening exercise.

7.8.5 Screening Determination

The proposed development has been considered in light of the requirements of Section 177U of the Planning and Development Act 2000 as amended. Having carried out Screening for Appropriate Assessment of the project, it has been concluded that there is no likelihood of significant effects to 9 sites within the possible zone of influence. The potential for significant effects to European Sites, the

Lough Corrib SAC, and Lough Corrib SPA cannot be excluded due to proximity and surface and groundwater connectivity. As the project individually or in combination with other plans or projects would be likely to give rise to significant effects on Lough Corrib SAC and Lough Corrib SPA in view of their Conservation Objectives, Appropriate Assessment is therefore required.

This determination is based on the following:

- The nature and extent of the proposed development, with emphasis placed on surface water discharges,
- The proximity to European sites, and
- The known pathways between the site and the European site.

The possibility of significant effects on other European sites has been excluded on the basis of objective information. The following European sites have been screened out for the need for appropriate assessment.

Cloughmoyne SAC	000479
Mocorcha Lough SAC	001536
Kildun Souterrain SAC	002320
Shrule Turlough SAC	000525
Clyard Kettle-Holes SAC	000480
Lough Carra / Mask Complex SAC	001774
Lough Mask SPA	004062
Gortnandarragh Limestone Pavement SAC	001271
Ross Lake Woods SAC	001312

Measures intended to reduce or avoid significant effects have not been considered in the screening process.

8.0 Recommendation

8.1. Refuse permission for the following reasons.

Reasons and Considerations

1. The application has not demonstrated that the proposed development can supply a viable and sustainable supply to meet the requirements of the Funshinagh / Cross Group Water Scheme or that the proposed development would not impact negatively on the groundwater resource. In the absence of such information and having regard to Article 5 of the European Communities Environmental Objectives (Groundwater) Regulations, 2010, which requires that a public authority, in the performance of its functions, shall not undertake those functions in a manner that knowingly causes or allows deterioration in the quantitative or chemical status of a body of groundwater, it is considered that the proposed development would constitute a threat to the quantitative status of a ground water body and would be contrary to the proper planning and sustainable development of the area.
2. On the basis of the information provided with the application and appeal and in the absence of a Natura Impact Statement the Board cannot be satisfied that the proposed development individually, or in combination with other plans or projects would not be likely to have a significant effect on the Lough Corrib SPA (Site Code 000297) and Lough Corrib SAC (site code 004042) in view of the site's Conservation Objectives. In such circumstances the Board is precluded from granting permission.

Brid Maxwell
Planning Inspector

22 June 2023