ALTEMAR
Marine & Environmental Consultancy

An Coimisiún Pleanála,
64 Marlborough Street,
Dublin 1,
D01 V902

19th February 2026

Re: ACP Planning Ref: 323742-25

Ecological Response to ACP invitation to respond to submissions relating to the proposed extension to the existing Burial Ground at Drumcliff Burial Ground located at the townland of Drumcliff, Ennis, Co. Clare.

Dear Sir/Madam,
We are the appointed ecologists for the Drumcliff Burial Ground and prepared an Appropriate Assessment Screening/Natura Impact Statement and the Ecological Impact Assessment in relation to the above development. In response to the submissions made in relation to the proposed extension I wish to note the following:

Experience
Altemar Ltd. is a long established environmental consultancy that is based in Greystones Co. Wicklow and has been in operation in Ireland since 2001. Altemar's services include initial constraints assessments, baseline surveys in aquatic and terrestrial environments, to assisting in project design, mitigation and reporting including Appropriate Assessment Screenings, Natura Impact Statements, biodiversity chapters (EIAR), Ecological Impact Assessments (EcIA), constraints assessments, GIS, habitat mapping, invasive species assessments and to the public dissemination of environmental data. I am a founding Director of Altemar and an Environmental Scientist and Marine Biologist with 31 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. He is currently contracted to Inland Fisheries I am a MCIEEM and holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture).

Response to submissions

1. Submission from Robert Behan

Altemar Response: No ecological issues have been raised by Robert Behan in his submission.

2. Submission from Pat Tierney

Altemar Response: No ecological issues have been raised by Pat Tierney in his submission.

3. Submission from Dermot Quelly

Altemar Response: No ecological issues have been raised by Dermot Quelly in his submission.

4. Submission from Uisce Eireann

Altemar Response: No ecological issues have been raised by Uisce Eireann in their submission.

5. Submission from Development Applications Unit

Altemar Response: No ecological issues have been raised by Development Applications Unit in its submission. However, it is important to note that the Development Applications Unit is within the Department of Housing, Local Government and Heritage. The Department of Housing, Local Government and Heritage is also the head Department for the National Parks and Wildlife Service. If the National Parks and Wildlife Service felt that there was potential for significant effects on the integrity of designated sites and their qualifying interests and in particular Ballyallia Lake SAC (IE000014) and Ballyallia Lough SPA (IE004041), these would have been raised in this submission. Only comments in relation to Archaeology were made in this submission.

6.Michael Duffy (MD)
Altemar Response: Specifically in relation to ecological/designated site comments I wish to note the following (in sequence of his submission)

1) MD Comment "This is a disingenuous assessment in a karst environment where surface water and groundwater regularly interact."

   Altemar Response: It is assumed that this refers to the hydrological and hydrogeological assessment and does not directly relate to the NIS or EcIA submitted. As outlined in the HES response "*The author is correct in stating that the local area is mapped as a karst environment, where interactions between surface water and groundwater do exist, such as at Poulacorey swallow hole, however the site investigation data carried out demonstrates that the proposed site is situated on the flanks of a drumlin, underlain by a thick layer of glacial boulder clay (8.5-13.5m deep), and as such is not situated on karstified bedrock but is in an area of low groundwater vulnerability. As such, we refute the idea that this assessment is disingenuous, as the assessment is based on site-specific data rather than regional scale desk-based mapping.*"

2) MD Comment "The submitted Natura Impact Statement completely ignores fundamental likely impacts from direct connectivity between the subject site and the Lower River Shannon SAC Site No: 002165 and the Ballyallia Lough SPA Site No: 004041. The designated Ground Water body IE_SH_G_080 is at risk of not achieving its WFD status."

   Altemar Response: The submitted AA Screening/NIS systematically assessed each of the designated sites within the potential zone of influence:

Site Code	European Site	Distance
Special Areas of Conservation		
IE000014	Ballyallia Lake SAC	100 m
IE002165	Lower River Shannon SAC	400 m
IE002247	Toonagh Estate SAC	3 km
IE000032	Dromore Woods and Loughs SAC	3.9 km
IE000037	Pouladatig Cave SAC	4.5 km
IE002091	Newhall and Edenvale Complex SAC	5 km
IE002246	Ballycullinan, Old Domestic Building SAC	6.3 km
IE000016	Ballycullinan Lake SAC	6.5 km
IE001926	East Burren Complex SAC	7.1 km
IE002010	Old Domestic Building (Keevagh) SAC	8 km
IE000057	Moyree River System SAC	8.4 km
IE000019	Ballyogan Lough SAC	9.8 km
IE002318	Knockanira House SAC	10 km
IE002314	Old Domestic Buildings, Rylane SAC	10.3 km
IE000064	Poulnagordon Cave (Quin) SAC	10.8 km

IE002157	Newgrove House SAC	11 km
IE000051	Lough Gash Turlough SAC	13 km
Special Protection Areas		
IE004041	Ballyallia Lough SPA	100 m
IE004077	River Shannon and River Fergus Estuaries SPA	5.9 km
IE004168	Slieve Aughty Mountains SPA	8 km
IE004220	Corofin Wetlands SPA	8.4 km

As outlined in the AA Screening in relation to the Lower River Shannon SAC "The proposed development site is located 400m from this SAC on the far side of the Ennis WwTP. There is no direct hydrological pathway to the SAC.

"*There is an indirect hydrological connection to this SAC via surface water drainage during construction and operation. Surface water drainage will infiltrate into the ground and may enter topographically down-gradient waterbodies (including Drumcliff Stream and Poulacorry River), which ultimately outfall to the Ballyallia Lough. Given the scale of the proposed development, natural infiltration of groundwater through subsoils, and distance to this SAC across a complex watercourse network that outfalls to the Ballyallia Lough, no significant effects on the Qualifying Interests of this SAC are likely. Any silt or pollutants that may enter topographically down-gradient waterbodies will settle, be dispersed, or diluted within the ground (infiltration through subsoils), the existing watercourse network, and within Ballyallia Lough. In the absence of mitigation, the construction and operation of the proposed development will not impact on the conservation interests of the site.*
Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site. No impacts on the qualifying interests of this European site are foreseen."

In relation to Ballyallia Lough SPA the AA Screening stated that "*The proposed development site is located 100m from this SPA on the far side of the existing graveyard to the north of the site. There is no direct hydrological pathway to the SPA.*
There is an indirect hydrological connection to this SPA via surface water drainage during construction.
During the construction phase of development, given the nature of the proposed works (including minor reprofiling, excavations, and earthworks) which will involve the use of machinery and transportation of materials, it is considered that there is the potential for dust and contaminated (silt) surface water runoff to enter topographically down-gradient waterbodies (including Drumcliff Stream and Poulacorry River), which ultimately outfall to the Ballyallia Lough. Mitigation measures are required to ensure that there are no likely significant effects on the Qualifying Interest of this SPA.
During operation, surface water drainage will infiltrate to ground via 5 no. proposed soakaways. As detailed in the Hydrological and Hydrogeological Assessment accompanying this planning application: 'An impact assessment of potential groundwater effects has also been completed.
Due to the underlying thickness of subsoils, which provide a substantial protective layer to the underlying aquifer and the geophysical inference of good, clean, non-karstified limestone underlying the proposed extension site, the conclusion of the assessment process is that there will be no significant effects on groundwater quality as a result of the proposed development.
During the construction phase of development, given the nature of the proposed works (including site levelling, excavations, and earthworks) which will involve the use of machinery and transportation of materials, it is considered that there is the potential for contaminated surface water runoff to enter topographically down-gradient waterbodies (including Drumcliff Stream and Poulacorry River), which ultimately outfall to the Ballyallia Lough. Mitigation measures are required to ensure that there are no likely significant effects on the Qualifying Interest of this SPA.
Given that this SPA is located 100m from the proposed development site, within the environs of an existing graveyard, the qualifying interests of the site would be accustomed to the activity, including excavators, in the intervening areas. It is unlikely that noise levels during construction and operation will impact on the designated qualifying interests of this site which is on the far side of an existing graveyard.
In the absence of mitigation measures, and out of an abundance of caution, it is considered that significant effects on the qualifying interests of this SPA are likely via surface water drainage during the construction phase of development.

Stage 2 AA (Natura Impact Statement) is Required." This designated site proceeded to NIS and mitigation measures will be put in place.

3) MD Comment "*The subject site is located contiguous to SAC: 002165 - Lower River Shannon SAC and connected directly by a recorded subterranean conduit.*"

Altemar Response: As outlined in the HES response that accompanies this letter "*The subject site is not contiguous to this SAC, it is mapped 600m from the Lower River Shannon SAC boundary. The subject site is not connected directly by a recorded subterranean conduit, all the site investigation data demonstrates that the site is underlain by 8.5-13.5m of boulder clay, with no evidence of any karst features below this clay interpreted from the geophysics survey.*

There is a swallow hole located at Poulacorey, 250m north of the proposed site, and there is a mapped tracer test to the Drumcliff spring, but there is no scientific evidence from the intrusive site investigation data nor from the geophysical surveying carried out, of a karst conduit or any form of karst feature at depth beneath the proposed site."

4) MD Comment "*As can be seen from the WFD Cycle 2 Catchment Shannon Estuary North Sub-catchment Fergus_SC_030 (appended) one of the significant pressures identified in the sub-catchment is Anthropogenic Pressures with sub-pressures stated to be unknown. A potential pressure is leachate from the proposed graves to the subterranean conduit which is the direct feed to the downstream Drumcliff Spring a 30,000m3 per day potable water source.*"

Altemar Response: As outlined in the HES Response "*HES have worked directly with Uisce Eireann on the Drumcliff Plant water source and can confirm an average abstraction rate of 12,000 m3/day. We understand the scheme serves a population of ~30,000.*"

5) MD Comment "*The interaction between surface water and groundwater in this karst environment means that there is potential for this pollution and other construction stage or operation stage impacts to contiguous Natura 2000 sites.*"

Altemar Response: See point 3 above i.e. "*all the site investigation data demonstrates that the site is underlain by 8.5-13.5m of boulder clay, with no evidence of any karst features below this clay interpreted from the geophysics survey.*"

6. MD Comment "*This is a disingenuous assessment in a karst environment where surface water and groundwater regularly interact over short distances. Groundwater can regularly re-emerge as surface water and visa versa. "The drainage design incorporated into the proposed development. will ensure that surface water will be collected, treated and retained within the site, with infiltration to ground via 5 no. proposed soakaways".*

Altemar Response: See point 3 above i.e. "*all the site investigation data demonstrates that the site is underlain by 8.5-13.5m of boulder clay, with no evidence of any karst features below this clay interpreted from the geophysics survey.*"

7. There is no assessment of infiltration, potentially directly to the karst conduit, feeding the potable source at Drumcliff Spring.

• *The conceptual site model of the site is outlined in Section* 4.1 *and in summary* is *conceptualised as a sloping site, underlain by thick clay-rich subs oils (8S-13.5m) which form a drumlin feature overlying the limestone bedrock which forms the primary groundwater aquifer within the region. Low/moderate permeability rates indicate slow potential infiltration to groundwater within these subsoils into the underlying aquifer.*

Altemar Response: *As outlined in the HES Response "Section 4.4.1 of the HES report details the Operational Phase Impact assessment on potential surface water quality impacts from the proposed surface water drainage system. This section specifically lists the Poulacorey karst feature (and associated Drumcliff Spring PWS) as one of 4 no. potential receptors.*

This section goes on to describe the proposed drainage system at the subject site and the drainage measures employed to ensure that there will be no likely negative effects on potential receptors. These measures include:

- *Surface water falling on green (grave) areas will infiltrate into green areas.*
- *Footpaths will be sloped toward adjacent green areas to allow for infiltration. Surface water from footpaths, which does not directly infiltrate to ground, will be collected by aco drains and directed to soakpits.*
- *Surface water from new roadway will generally be served by a french drain with land drain pipe the roadway. A soak pit area will be provided at the lowest point of the drainage run to accommodate any heavy flows of surface water than is not absorbed by the french drain itself.*
- *New gullies serving existing roadway/proposed roadway junction area are served by a soak pit.*
- *Main Pedestrian Access Ramp and stairs with non-porous finish to be accommodated by soak pit.*

As a result of these design measures, the residual effect on the Poulacorey karst feature and Drumcliff Spring PWS was assessed to be a negative, imperceptible, indirect, medium-term, highly unlikely effect on these receptors.

8. MD Comment "There is no factual basis for this perception that there is 8.8-13.5m of *"thick day-rich subsoifs"*. Grave diggers in Drumcliff regularly encounter rock. There was no assessment of the depth of the karst conduit to Drumcliff Spring.
• *From this conceptual mode" surface water is considered* to *be the main potential pathway forpotentiql effects; rather than groundwater;*

Altemar Response: As outlined in the HES Response "Site investigations at the site include:
• *5 no. trial pits to a maximum depth of 1.9mbgl, conducted by GII in 2022;*
• *EM31 ground conductivity, 2-D resistivity and seismic refraction geophysical investigations, conducted by Minerex Geophysics Ltd. in 2022; and,*
• *A further 7 no. trial pits to a depth of 2.4m below final proposed level (equating to actual excavated depths of 2.9 – 5.4m below existing ground level.*
There was no bedrock encountered in any of the trial pits, and the geophysics report of the site interprets bedrock (competent Limestone) between 8.5-13.5mbgl, with boulder clay deposits (as per the trial pits) overlying the Limestone. The available site-specific ground investigation data directly contradicts the unsupported claims made by Mr Duffy."

9) MD Comment "*The basis for the conceptual model is flawed. The clear risk from this development is to "groundwater within a source protection area. While this may primarily be a WFD issue it is also an AA issue. Potential topographically down gradient receptors include -*
• *1 no. karst feature (Poulacorey swallow hole) mapped 250m north of the proposed development site. The Poulacorey swallow hole is connected to the Drumcliff Spring PWS (lkm south). The recommended separation distance to drinking water supplies is 250m (SEPA Guidelines, refer to Footnote 3), which is maintained in this instance; and,*"

Altemar Response: The HES response to the above items clearly outlines the lack of significant groundwater risk. These are addressed in points 3 & 4 above.

10) MD Comment "*There is no recognition of the karst conduit between Poulacorey swallow hole is connected to the Drumcliff Spring. This completely ignores the vertical separation to the conduit which is likely to be less than 10m as opposed to the 250m requirement. There is no geological testing of this site and therefore there is a lacuna in the information provided to the decision maker.*
• *The Ballyalia Lake pNHA and SAC and Ballyafia Lough SPA are situated "'200m north of the site.*
• *An assessment of potential impacts on down gradient receptors has been completed within Section* 4 *of this report. Proven and effective drainage management techniques have been incorporated into the design, to ensure surface water impcacts on down gradient*

receptors will not occur. All surface water runoff generated from hard standing areas within the site will be retained on-site and allowed to recharge to *ground via* 5 *no. soakaways;*
• *The impact assessment process has concluded that there will be no significant effects on down gradient surface water bodies as a result of the proposed development;*
• *An impact assessment of potential groundwater effects has also been completed. Due to the underlying thickness of subsoils, which provide a substantial protective layer to the underlying aquifer and the geophysical inference of good, clean noh-karstified limestone unqerlying the proposed extension site, the conclusion of the assessment process is that there will be no significant effects on groundwater quality as a result of the proposed development; and,*
• *During the operational phase, the hydrological regime at the site will be controlled by a range of sustainable drainage measures. There will be no cumulative impacts on surface water quality or quantity, with respect to the existing Drumc/jf cemetery (Section E) as a result of the proposed ·development. In terms of groundwater cumulative impacts, the burial and natural breakdown of remains within the proposed extension will lead to increased levels of certain nutrients such as Ammonia and Nitrate within the grave plots; Due to the thickness of subsoils (8.5-13.5m) and the low moderate permeability of the subsoil, cumulative impacts, with respect* to *the existing DrumcJiff cemetery, are not expected to occur.'*

11. "There is no evidence provided in the assessment to support this outcome. In the absence of a full geological assessment, including an accurate location of the karst conduit, the decision maker does not have the required information."

Altemar Response to 10 & 11: The majority of these items have been addressed in the HES response and above. However, specifically in relation to new items please note the following:

a) Ballyalia Lake pNHA. This has been addressed in the EcIA.

12) MD Comment "*I refute the conclusions arrived at in this NIS. There are numerous lacunae in the geological and hydrogeological information submitted.*"

Altemar Response: NPWS did not have any comment in relation to significant effects on Natura 2000 site and their Department was consulted through the DAU.

13) MD Comment "*There is no assessment for bats in this rural wooded location. While this location is well within the foraging area for bats identified to be roosting in local Natura 2000 sites the species are separately protected and there was no assessment for foraging, roosting or resting places within this proposed development.*"

Altemar Response: There is no lighting proposed or trees to be felled as part of the project. There will be no significant impact on local bat populations. As outlined in the EcIA "*The proposed development will change the local environment as some of the existing vegetation will be removed. No bat roosts or potential bat roosts will be lost due to this development and the species expected to occur onsite should persist. No lighting is proposed onsite. Impacts: Neutral / International / Not significant / long term.*"

14. MD Comment "There is no reference to potable source in the entire NIS not withstanding that an incredible volume of 30,OOOm^3 per day is extracted from Drumcliff Spring 650m from the site and treated in the contiguous water treatment plant approximately 15 m from the site boundary.

Altemar Response: See comments above.

15) MD Comment "*We are referred twice in the NIS to section 4 and 4.1 but ~here are no such sections in the report."*
Altemar Response: This section was directly quoted from the hydrology report and is clearly states as such and is in italics as a quote.

16) MD Comment "*Notwithstanding the sensitivities associated with the use of this development there is a crucial environmental matter to be considered for the protection of potable drinking water the town of Ennis and the Mid-Clare region. In many cases patients are being treated with highly toxic chemicals prior to their demise. These chemicals do not simply vanish. There is a very legitimate concern about burial which connectivity to a drinking water source which may not be sampling for potential chemicals, toxins and viruses*."

Altemar Response: This does not relate to ecology

17) *MD Comment "The following Prescribed Bodies have been notified with respect to the application for the proposed development in terms of Section 177 AE(4)(b) of the Planning & Development Act 2000 (as amended):*

1. *Minister for Housing, local Government & Heritage*
2. *Minister for Climate, Energy and the Environment*
3. *An Taisce*
4. *Uisce Eireann*
5. *The Heritage Council*
6. *Inland Fisheries*
7. *The Arts Council*
8. *Failte Ireland*
9. *Clare County Council*"

18) MD Comment "*While it appeared to Clare County Council to use its discretion to notify itself of the application it did not "appear" to it to notify the HSE. A reasonable observer, given the substantive use proposed for this development, could conclude that the HSE should have been notified. Art 121{1)(0) Planning and Development Regulations 2001Amended by Art 8(1)(q} by 5.1. No. 520/2013 - Planning and Development (Amendment) (No. 2) Regulations 2013.*
(q) where it appears to the authority that the development might have significant effects on
public health - to the Health Service Executive. Clare County Council is well aware of the issue of the conduit as I have raised it in the past in relation to a previous Part 8 application subsequently. withdrawal"

Altemar Response: This does not relate to ecology. However, it is acknowledged that the Minister for Housing, local Government & Heritage (i.e. NPWS) was consulted.

19. MD Comment "*The Planning Report and Statement of Consistency submitted by Consultants McCabe Durney Barnes makes no reference to potable water source or the Water Framework Directive. As with the NIS the application is flawed and deficient."*

Altemar Response: This does not relate to Altemar.

20. As to be expected the Ecological Impact Assessment (EcIA) is largely a cut & paste operation and makes no reference to the potable source or potential impacts on it.

Altemar Response: An EcIA is not expected to deal with Potable water and human health. As outlines in CIEEM Guidance "*EcIA is a process of identifying, quantifying and evaluating potential effects of development-related or other proposed actions on habitats, species and ecosystems*."

21) MD Comment "*The Hydro Environmental Services Report recognises the connectivity of the conduit under the proposed site and the potable source at Drumcliff Spring. However is does not properly address the likely impacts from the proposal on potable water quality. In 2.4.2 is states an extraction of 12,000 m3/d. My information is that this is 30,OOOm3 per day and that figure is approximately 15 years old. This should be easily clarified by the Coimisiun and in fact as a notified body UE should be providing this information*."

Altemar Response: This does not relate to Altemar and has been addressed in detail above in the HES report.

22) MD Comment "*An unsubstantiated observation such as this would not be' accepted in a wastewater site suitability assessment. The water table level is crucial ,in this assessment. The "thick layer of subsoil" has not been substantiated. The relevant "thickness" is below 2m BGL. There is no assessment of potential preferential flow paths. The trial holes are limited in extent and identification of the actual conduit is fundamental tom the assessment.*"

23) MD Comment "These are exactly the outcomes the Applicant required and commissioned."

Altemar Response: These comments do not relate to Altemar and has been addressed in detail above in the HES report.

24) MD Comment "*The Appendix 3 soakaway results are incomplete and do not provide appropriate information for the making of a decision. For example, if a site suitability assessment was submitted such as this for an on-site wastewater treatment, it would be summarily rejected. A site suitability assessment would have been a better option for this site but might not have provided the information to suit the applicant's cause. The results achieved are not consistent with the T value of 18 achieved in planning permission P20/297, which is 630m away. Neither are they consistent with what must have been achieved in order to grant permission in P03/1047 which includes an on-site wastewater treatment system located 120m from the subject site.*"

Altemar Response: As outlined in the HES Report "*The appropriate and relevant guideline has been used for the hydrological/hydrogeological assessment, i.e. Northern Ireland – Cemeteries Department of Agriculture, Environment and Rural Affairs & AE1 19 573678 Practice Guide – Cemeteries, Burials and the Water Environment (2019).*

There is no wastewater treatment system proposed at this site, therefore a site suitability assessment was not submitted. There is no requirement for a site suitability assessment and it would not be appropriate, nor necessary to submit such an assessment. The soakaway design instead is based on the infiltration rates generated by the 5 no. soakaway test performed on site.

It is not surprising that infiltration rates from a site 630m away differ to those recorded at the proposed site. The proposed site is situated on an area of elevated ground on the flanks of a drumlin.

Site specific data from trial pits and soakaway tests were used in the completed assessment. Where site-specific data is available the suggested use of data from remote sites is illogical."

25) MD Comment "*The times used in the BRE assessments are interpolated and the trial holes were not left open long enough to see if the water table established itself. Furthermore there was no assessment or comment on mottling in the trail holes which would indicate seasonal water table levels. The assessment was carried out in April 2022 which would not be representative of the most elevated groundwater levels*."

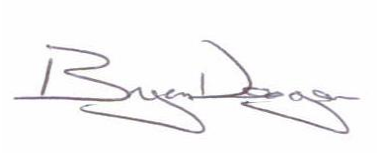
26. MD Comment "*There was no proper geological assessment of these lands. Neither the water table level nor the bedrock level were established. Both the Poulacorey swallow hole and Drumcliff Spring are relatively shallow with extensive outcrop ping of bedrock in the wider area. It is inconceivable that the suggested depths of 13.5m 'of soil/subsoil are available in this area. This requires proper geological borehole assessment in circumstances where graves must be excavated to a minimum 2m depth (as per CCC bye-laws). The relevant invert level is 2m BGl and the cover from this level to rock/bed rock/ conduit is critical to protect the potable water supply*."

Altemar Response: These comments do not relate to Altemar and has been addressed in detail above in the HES report.

The Altemar responses to the submissions are outlined above. In relation to ecological aspects it is important to note that the Development Applications Unit was consulted and NPWS had no comment in relation to the potential effects on designated sites. In addition, no lighting is proposed and no trees are to be removed. No impacts on bats are foreseen.

If you have any queries in relation to the above, please do not hesitate to get in contact.

Kindest Regards



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Bryan Deegan MCIEEM
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Marine and Environmental Consultants.