An Taisce
The National Trust for Ireland

EPA licensing,

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Johnstown Castle Estate,

Wexford.

Uploaded on website, and sent by email to:

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28th May 2020

Re: Westland Horticulture Limited IPC Licence Application P0914-01

Dear Madam/Sir,

Preliminary to EPA licencing requirements, the Environmental Impacts Assessment and Natura Impact Assessment status of any extraction on this site needs to be addressed through a Substitute Consent application to An Bord Pleanala.

An Taisce has assessed the NIS and EIAR submitted by Westland Horticulture in applying for an IPC licence, and we have the following comments.

1. NIS

1.1. NIS Overview

We submit that the NIS is flawed, errs in its interpretation of Article 6(3) of the Habitats Directive, lack relevant information and citations, contains lacunae in the data, relies on out of date water quality data, fails to carry out a proper cumulative assessment and misunderstands what a mitigation measure is. In summary, we submit that it is not fit for purpose, and cannot provide the relevant authority with the necessary level of detail to conclude beyond reasonable scientific doubt that the works will not impact the integrity of the SPA.

The requirements under art.6(3) of the Habitats Directive were made clear by CJEU ruling for C-404/09[1] [Commission v Spain] which held that

> *"[a]n assessment made under Article 6(3) of the Habitats Directive cannot be regarded as appropriate if it contains gaps and lacks complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the SPA concerned."*

1.2 Modelling data

We submit that there are a range of weaknesses in the modelling data which the applicant relies on, too numerous to list exhaustively, but we will endeavour to highlight some of the main ones below.

a. Rainfall data and discharge modelling

The applicant relies on average annual rainfall from a rainfall gauge geographically removed from the site. For modelling of this sort, this is not detailed enough to produce a usable model. Rainfall patterns have altered significantly in the last few years as a result of climate change, and as such an average over a lengthy time period will be skewed, and will not reflect recent fluctuations, with far more intense rainfalls.

The NIS also outlines:

> *"The retention time provided by the settlement basins at the Clonsura and Coole peat harvesting sites is at a minimum, capable of removing solids from surface water arising from a 20-year return period storm of 24-hour duration."*

We submit that a 20 year return period is questionable, and is likely to be more along the lines of a 1 in 10 year flood event with current altered weather patterns. We are frequently having 1 in 100 year storm events, and the sedimentation ponds should be designed to adequately deal with that. The recent flooding in the midlands is a stark reminder of how much rain can fall in a relatively short period of time. Rainfall intensity in one of the factors in the NIS calculation of run off rate:

> *"The run off rate arising from the 24 hours was determined using the 'Rational Method' (Q=CIA), where Q=Flow, C=Runoff Coefficient, I = Rainfall Intensity and A=Catchment Area"*

[1] Case C-404/09, European Commission v Kingdom of Spain, Unreported Judgment of the Court (Fourth Chamber) of 24 November 2011 [para.100]

If based on average long term rainfall events the rainfall intensity is likely to be far underestimated.

Further, it is outlined that:

> *"The potential emission rates have been extremely conservative by assuming a number of day's consecutive rainfall giving rise to a continuous discharge from both facilities"*

We would observe that several days consecutive rainfall is not at all unusual in Ireland, and there is nothing conservative about this approach.

The NIS also makes reference to 'mass surface loading rate' in their calculations. An Taisce assumes that the applicant means surface loading rate here, as opposed to mass surface loading which is a measure related to the deformation of the earth's surface by means of oceanic, atmospheric and hydrological loading.

b. Sedimentation pond design

The sedimentation ponds are the main mitigation measure for reducing the sediment load to the nearby river and Derravaragh SPA.

> "*Provision of sedimentation ponds of adequate size, significantly reduces the potential for the discharge from Westland to affect the quality of the receiving water."*

The NIS and EIAR frequently assert that the sedimentation ponds are designed to a certain standard, but at no point in either document is this detailed. The storage capacity is indicated, but no further information is provided, besides reference to the Draft BATNECC Guidance Note:

> "[sedimentation ponds] *have been designed with due regard to the 'Draft BATNEEC Guidance Note for the Extraction of Peat' and to Agency accepted standards on IPPC peat harvesting sites throughout Ireland."*

We would note that the BATNEEC guidelines[2] are over 25 years old, and are only in draft format. Further to that, there are no specific measures outlined, with very broad suggested mitigations measures, e.g. sedimentation/filtration/flotation, and coagulation/flocculation are the measures suggested for water quality, with no further design detail given. As such,

[2] http://www.epa.ie/pubs/advice/bat/Extract%20of%20peat.pdf

having regard to these does not indicate what measures are actually being utilised. What's more, the 'agency accepted standards' are not referenced, and it is unclear what these pertain to. This does not provide the necessary information to assess the potential efficacy of these methods.

The applicant also references Finnish design guidelines:

> *"the basins at Westland have been compared against more detailed Finnish design guidelines developed from a study commissioned by the 'Central Finland Regional Environment Centre' between 2002-2004 on 'Furthering of Implementation of New Methods Developed for Water Treatment at Peat Harvesting Areas'* **"**

These design guidelines are not properly referenced, and as such this cannot be verified. Further, it is our considered opinion that reliance on methods based on bogs in boreal landscapes, which would be frozen for much of the year would inevitably lead to disparity in efficacy of the results.

While the NIS seeks to rely on the Environmental Management structure:

> *"Management and Operational procedures put in place as part of the facilities Environmental Management Structure (EMS) ensure that the sedimentation ponds are operating to their design specification, which has been determined to be adequate for treatment of runoff from the facility"*

It is unclear who has determined the adequacy of the treatment, nor by what standard. The EMS does not appear to have been provided for review as part of this licence application.

The complexity of sediment erosion from bogs has been elucidated by Li et al (2018)[3] in a recent study, finding that:

> *"Improved process understanding and more data on rates of erosion at different scales are urgently needed in order to improve model development and enable better predictions of future peat erosion under climate change and land management practices"*

In summary, we submit that beyond the capacity of the sedimentation ponds it is difficult to ascertain any other details, as none have been provided or adequately referenced.

[3] Li, Changjia & Grayson, Richard & Holden, Joseph & Li, Pengfei. (2018). Erosion in peatlands: Recent research progress and future directions. Earth-Science Reviews. 185. 10.1016/j.earscirev.2018.08.005.

c. Flood retention

An Taisce submits that the flood retention capacity of the drains and sedimentation ponds is not adequately assessed, and the data is not provided. There are assumptions within the NIS:

> *"Once the silt ponds reach capacity, water will start to back up in the perimeter drains, drainage ditches and peat harvesting land banks and in effect this gives Westland the potential to retain water within the site for long periods if required"*

and:

> *"It is noted that the discharges from the sedimentation ponds at the Westland facility can be controlled by an adjustable weir. This allows the facility to limit or stop all discharges from the site. Once the silt ponds reach capacity, water will start to back up in the perimeter drains, drainage ditches and peat harvesting land banks and in effect this gives Westland the potential to retain water within the site for long periods if required."*

We would note that no details are given of the weir design, and no storage capacity calculations are provided for the sedimentation pond and drainage network. As such, the risk of the weirs being breached in high flow situations cannot be ruled out, and this risk has not been assessed in the NIS.

Further to that, the benefits of storage within the drain network for sedimentation may not be valid:

> *" […] facilitates sedimentation of suspended material in drains in advance of the sedimentation ponds. It also reduces the volume of suspended material in the water column arising from erosion of land peat land banks and drains"*

However, we would note that drainage ditches often contribute to the sediment load, and research has demonstrated that ditch erosion and bank collapse have been found to occur in drained peatlands.[4]

[4]Marttila, H., Kløve, B., 2010a. Dynamics of erosion and suspended sediment transport from drained peatland forestry. J. Hydrol. 388 (3), 414–425.

1.3 Dust emissions

The NIS makes this assumption:

> *"Dust particles from peat harvesting operations are not considered to be a significant emission. To date there have been no dust complaints for the site."*

but then acknowledges that there is no monitoring data for dust:

> *"There are Bergerhoff gauges on site to monitor dust emissions from the site. To date it has not been possible to obtain a representative result of dust deposition for the site as the Bergerhoffs gauges have been interfered with."*

Despite this, the NIS includes assertions in regard to the protection of the river from dust pollution:

> *"The incidence of wind-blown peat particles entering the main river channel is reduced by the set back distances (all storage areas are at a minimum of 75m-200m from any watercourse) adhered to when stockpiling peat."*

We submit that there is a clear lacuna in the data, particularly given the known risks of pollution by dust from peat works. Further, to present the lack of dust complaints as proof of a lack of dust is scientifically flawed, and while the setback distance may reduce the incidence of dust, this is impossible to enumerate given a lack of any monitoring data. We submit that this entirely undermines this assertion in section 8 of the NIS:

> *"While there are no monitoring results for dust it is considered that dust emissions can be minimised by good site management, and good working practices. Dust monitoring will be undertaken as part of the EPA Licence to ensure that the site is within emission limit values."*

1.4 Water Quality

The water quality data provided would appear to be out of date, and disjointed. There are frequent references to various data, but these are not referenced, and the provenance of these is not clearly indicated. Indeed, there is also a reliance on predicted water quality values:

> *"Cumulative discharges from the Coole harvesting site downstream are calculated to increase the BOD by a further 0.031 mg/l to 0.099 mg/l."*

But the methodology for this calculation does not appear to have been provided. Further to that, there is a reliance on historical water quality data, from 2010, which is much too outdated to be utilised for this purpose. While we acknowledge that there was a follow up visit in August of 2019, this occured at a time when the peat harvesting was not underway, and as such will not be indicative of the levels when the works are taking place. Further to that, water chemistry is not generally a robust measure of river health, as it occurs in pulses, and it is easy to miss the peaks. This is why the Water Framework Directive relies on the use of macroinvertebrates and other biological elements, as they are indicative of the long term health of the river. No recent WFD biological monitoring is available, and the applicant has failed to generate any biological monitoring data as part of this process. As such, it is not possible to draw conclusions based solely on water chemistry data, much of which is largely out of date.

As such, we submit that the conclusion:

> *"The nutrient conditions support a good status watercourse, which confirm that the nutrient loading from Westland is not causing an impact on the downstream water quality"*

is premature and not scientifically robust.

Further, in regard to the silt levels in the river, the NIS includes this statement:

> *"OPW personnel undertaking dredging works on the River Inny in 2010 commented on the absence of peat deposits in dredged material in comparison to other years"*

This is historical hearsay, and in our considered opinion it has no place in a scientific document. The NIS also refers to the assimilative capacity of the river, but again fails to provide the necessary detail. It would appear that this is based on average discharge, which does not account for the peak flows which are likely to occur in flood situations, and would likely have a very significant sediment load.

1. 5 Bird Impacts

It would appear that the applicant has misinterpreted the legal test for Article 6(3) of the Habitats Directive. In reference to an unreferenced 2009 report by the 'special protection unit' of the NPWS (by which we assume they meant the Site Protection Unit), they outlined:

> *"The report notes that based on the information there is no firm evidence in the water bird dataset that can directly link the adjacent peat extraction activities with waterbird declines"*

However, the legal test is whether reasonable scientific doubt remains as to the absence of adverse effects on the integrity of Lough Derravaragh SPA (see the judgment in Case C-127/02), which is not the same thing. The burden of proof is in demonstrating beyond reasonable doubt that there is no adverse impact on the integrity of the Natura site. Absence of proof is not absence of doubt.

The report they cite provides figures of a dramatic decline in bird populations in the SPA, and outlines that:

> *"possible pressure from one or more source impacting the waterbirds of the site, an insufficiency of bird data to accurately quantify the waterbird populations of the site or a combination of both."*

It would appear to An Taisce that more bird data is necessary to determine the impact of the works on the SPA.

1.6 In-combination impacts

The chapter assessing in-combination impacts focuses on historical water chemistry results, in addition to other EU policy such as the Water Framework Directive. We submit that this is not sufficient for carrying out an in-combination assessment. In the bird survey by the NPWS the applicant quotes it outlining the multiple potential pressures on the SPA:

> *"changes in bird populations can be multifactorial. Potential factors for this include: a change in the overall ecology of the wetland system due to natural succession, eutrophication or other forms of pollution; recreational disturbance impacting on a broad scale or targeted to specific areas of the lake; hunting pressure on game species; or even changes in waterbird survey emphasis and /or effort."*

None of these pressures were included in the in-combination assessment. In addition, the NIS refers to the widening and dredging of the river channel, presumably by the OPW, as

they are referred to elsewhere in the NIS in regard to siltation of the river. These works are also referenced in the EIAR:

> *"The Inny was subject to an arterial drainage scheme between 1959 and 1963 by the OPW and the channel has been maintained for drainage purposes by the OPW since then."*

However, these OPW works are not assessed in combination with the peat extraction works.

Further to that, the extraction site is surrounded on all sides by large areas of extraction by other companies and individuals. The only mention this gets is in Table 9.3.5. where it outlines that:

> *"Other peat extraction/milling operations in the immediate vicinity of the designated site do not currently have Licences."*

With the risk outlined:

> *"Potentially a negative impact if conditions of any IPPC upstream are not met. No impact if conditions are adhered to."*

However, the applicant has clearly outlined that there are a number of peat extraction operations in the area which do not currently have licences. As such, an assessment on the potential for cumulative impact with them is entirely omitted from this report. An Taisce is aware of one such operation by Harte Peat in Derrycrave which the EPA sought an injunction against due to the risk posed to water quality and impacts on the Derravaragh SPA.

As such, we submit that it cannot be excluded, on the basis of objective information, that Westland Horticulture's works will have a significant effect on Lough Derravaragh SPA in combination with other plans or projects, as they haven't assessed them.

1.7 Mitigation measures

Seven mitigation measures were proposed in the NIS, and An Taisce submits that six of those are not adequate to be classified as such, as outlined in the points below.

- The applicant lists the River Inny Management Unit Action Programme as a mitigation measure, with an apparent reliance on it to ensure that the quality of the river is not compromised, and doesn't negatively impact on Lough Derravaragh. A mitigation measure is a measure which the developer puts in place specifically to

offset any adverse impact on a Natura site, and one which they have direct control over. While this programme may indeed be beneficial for the water quality, it is not a mitigation measure, and it is legally inaccurate to present it as such.

- The applicant also relies on the sedimentation basins as a mitigation measure, with the use of turbidity and suspended sediment meters to check their performance. We have already indicated the paucity of data in regard to the design and efficacy of the sedimentation basins, and there is no indication of what the applicant will do should their performance be found to be failing in the field. As such, this isn't a robust mitigation measure.

- The mitigation measures refer to a habitat rehabilitation plan, however we would highlight that this is not a mitigation measure, it's a rehabilitation plan for when all works are complete, it will in no way mitigate for any adverse impacts on the SPA at the time of the works.

- The applicant also refers to the use of wetland plants. However, this is the first time these were mentioned in the NIS, and no further detail is provided. As such neither their purpose or their efficacy can be assessed.

- The applicant also seeks to rely on an IPC Licence as a mitigation measure. An Taisce does not need to highlight to the EPA that the purpose of an IPC licence is to control emissions. While this provides protection to the receiving environment/water, it is not the same as preventing any adverse impact on a Natura site, which is a far higher threshold, and a more specific and targeted level of protection.

- The applicant outlines that a dust monitoring and control programme should be developed to monitor dust emissions at dust sensitive locations to ensure compliance with EPA limit values, with procedures to ensure that fugitive dust emissions from harvesting operations are avoided and contained as far as practicable. However, the applicant has already indicated that their dust monitors aren't effective, and without enumerating the scale of the current dust emissions, the efficacy of the mitigation measures cannot be assessed. An Taisce would also question how the applicant would intend to manage the new dust monitors to ensure they don't fail like their predecessors.

As such, it would appear to An Taisce that the applicant does not fully understand the legal purpose of a mitigation measure, and we submit that these should not be considered as valid for the purposes of AA.

1.8. Conclusions for NIS

The applicant concludes that:

> *"Based on the above assessments it can be objectively concluded on the basis of best scientific knowledge that the proposed project on its own, and in combination with other plans and projects will not adversely affect the integrity and conservation status of any Natura 2000 site or annexed species once the mitigation measures and recommendations are adopted."*

and:

> *"Having satisfied itself that the AA Screening Report and Natura Impact Statement is complete and objective, the Environmental Protection Agency, will undertake the Appropriate Assessment Screening and Appropriate Assessment on the basis of this document and any other necessary information."*

The requirements under art.6(3) of the Habitats Directive were made clear by CJEU ruling for C-404/09[5] [Commission v Spain] which held that

> *"[a]n assessment made under Article 6(3) of the Habitats Directive cannot be regarded as appropriate if it contains gaps and lacks complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the SPA concerned."*

An Taisce submit that the information provided in this NIS is not complete, the data is frequently out of date and its provenance isn't clear (particularly with the water quality data), calculations and modelling data are largely absent, no adequate in-combination assessment has been completed, the mitigation measures are largely invalid, and documents are frequently poorly referenced, or not referenced at all. As such, in our considered opinion, this NIS is not fit for purpose, and cannot be relied upon by the EPA for carrying out an appropriate assessment.

2. EIAR

[5] Case C-404/09, European Commission v Kingdom of Spain, Unreported Judgment of the Court (Fourth Chamber) of 24 November 2011 [para.100]

Many of the same issues arise in the EIAR as in the NIS, with reliance on the same water quality data and modelling data. However, there are some issues which are further elucidated in the EIAR, which we wish to highlight.

2.1. Water Quality

The EIAR outlines, in regard to silt and macroinvertebrates:

> *"the presence of deep, soft, highly mobile peaty silt throughout the entire section of the Inny River assessed (i.e. from upstream of the Clonsura peat harvesting area as far downstream as Lough Derravarragh) seems likely to be due to a significant extent to anthropogenic factors … **If Westland operations have contributed at all** to the peat/silt in this section of the Inny, (which cannot be concluded from the results of the present survey), **it is clear that this contribution is insufficient to cause perceptible additional impact** on biological water quality over and above the impact already caused by activities in the catchment upstream."* [An Taisce emphasis]

It is unclear to An Taisce how the applicants have reached such a definite conclusion regarding their lack of culpability in this instance. The fact that there was silt present upstream does not preclude the possibility that Westland are responsible for a reasonable extent of the siltation adjacent and downstream of the site. We submit that any such statement must be grounded in strong scientific data and reason, which we believe is not the case in this instance.

Further, the applicant outlines "*it is not considered that the existing operation is significantly affecting water quality on the basis of historical monitoring results of both the Inny River and the discharges."* We submit that this logic is flawed. The presence of historical water quality problems does not exculpate Westland Horticulture from potential present data water pollution.

2.2 Air quality

In the EIAR the applicant supplies slightly more information on dust monitoring in this statement:

> *"Existing ambient air quality at the two sites is likely to be good and well within Air Quality Standards, based on the monitoring results observed in 2020 at stations representative of rural conditions (Zone D)"*

An Taisce would question how air quality measurements which are broadly representative of rural conditions, and not in any way linked to this specific site, have any relevance for the assessment of dust pollution in this EIAR. An EIAR should deal in scientific fact and not conjecture based on very general trends.

Further to that, the applicant outlines in the EIAR that:

> *"Wind breaks of trees will also be planted along the banks of the Inny River as a further dust minimisation precautionary measure"*

These were not mentioned in the NIS, and An Taisce would highlight that any such measure must be assessed in view of its potential impact on the bank structure, with the risk of subsequent sedimentation assessed under the NIS.

The EIAR also outlines that there is an existing 30 metre buffer adjacent to the Inny River with natural vegetation present which will be maintained:

> *"The following measures for reduction of airborne peat dust **are already implemented** but listed for completeness:*
>
> *• The 30-metre buffer zone adjacent to the Inny River will be maintained with natural vegetation species planted."* [An Taisce emphasis]

However, at one of the few places near the site where Google street view affords a view of the river and the site (Figure 1), the area directly adjacent to the river Inny has been tracked and there is little in the way of buffering vegetation between the peat extraction processes and the river. As such, to present this as a measure already in place is inaccurate, in this location at least.

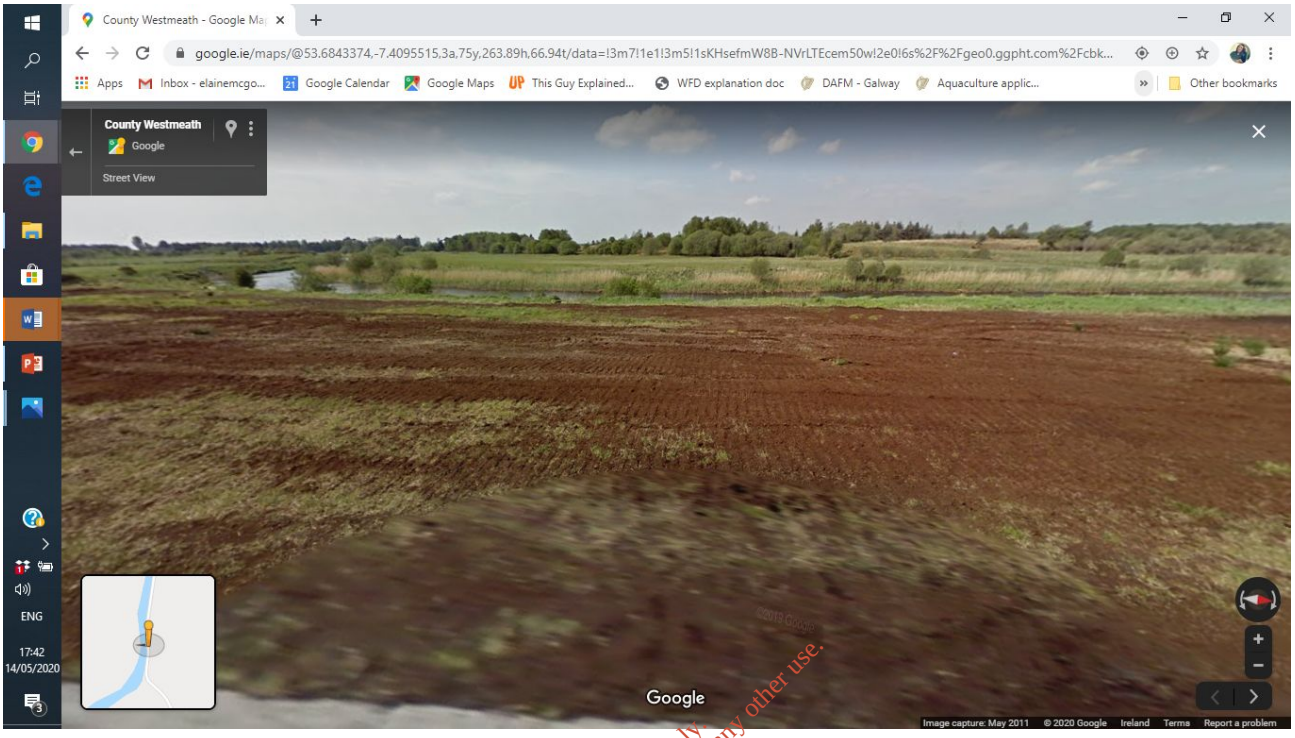

Figure 1: Google Street view directly adjacent to the site (point 53.684668, -7.409637, accessed May 28th 2020)

2.3 Sedimentation Basins

Similar to issues outlined with the NIS, in the EIAR they state:

> *"Sedimentation basins are a commonly used, well established, internationally used method of removing suspended solids from peatland runoff"*

In this case, unlike in the NIS, a reference document is provided. However, An Taisce would highlight that it is a citation for a 22 year old Finnish study comparing two different methods of removing suspended solids in a small scale laboratory setting. It is not an official methodology, as indicated.

2.4 Consideration of Alternatives

The provided EIAR did not assess any alternatives in this case, just listing reasons why they didn't need to under each heading. This does not comply with the requirements of the EIA Directive. An analysis of their reasons is outlined below:

- **Do Nothing Scenario.** The applicant outlines: *"The 'Do Nothing' alternative is this case is not applicable as the activity is established."* An Taisce submits that the applicant should have assessed the impact of carrying out no further works. Under this scenario the applicant should have examined the trends currently happening on the site, and the impacts of changing conditions, such as climate change, on these trends.
- **Alternative Locations.** Not considered as this is a historical peat removal site
- **Alternative layout** For the Alternative Layout assessment, the applicant also failed to do this, outlining: *"Alternative layouts or uses of the land are not considered a realistic alternative for discussion in this EIAR on the basis that Westland lease as opposed to own the sites and would not be leasing it if peat could not be harvested. Therefore, the consideration of alternative uses is irrelevant in the context of this EIAR."* However, An Taisce submits that under this heading the applicant should look objectively at the site and determine if some sites are more environmentally sensitive than others, with a view to arranging different elements on the site with different design and environmental implications.
- **Alternative Designs.** The applicant outlines: "*Westland is committed to the aftercare of the site and a number of strategies will be examined in conjunction with the landowner. Key objectives will be to enhance biodiversity and ensure the ecological and hydrological functionings of existing habitats of importance is unaffected. The preferred option is a matter for future approval."* An Taisce would highlight that this is an aftercare plan, not an alternative design.
- **Alternative process.** The applicant outlines *"It is noted that the company has invested significantly in the move toward peat-free growing media and compost, to a point where approximately 70% of inputs to these products come from non-peat sources."* However, An Taisce would observe that that has no bearing on the current application which is purely for peat extraction, with no ecological benefit offered by an alternative process. As such we submit that no alternative process was effectively considered.

In summary, it would appear to An Taisce that the applicant has not effectively considered any alternatives, and while we acknowledge there may be specific constraints, that does not preclude any consideration under each of the different headings. The EIA Directive 2014/52/EU requires an EIAR to contain:

> "*A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.*"

We submit that the EIAR, in failing to meaningfully assess any alternatives, has failed in its obligation under Article 5(1)(d) of the EIA Directive.

2.5 Modelling data

The same issues arise in the EIAR as in the NIS in regard to modelling for flow, rainfall and discharge, and the same critique as outlined above applies. This statement in particular is of relevance in highlighting the lack of definite findings:

> *"The quantities of recharge and exfiltration will vary from peatland site to peatland site and as the Coole and Clonsura sites are hydraulically altered, these quantities are difficult to estimate."*

To our knowledge this statement was not included in the NIS, but is very relevant in terms of highlighting a lack of definite findings. We would observe that there is a notable paucity of data in the modelling calculations, and they are based on rough rainfall data, rendering the modelling very approximate, and in our experience likely to be unreliable.

In summary, we submit that both the NIS and the EIAR fail to provide the level of scientific data and critique necessary for the EPA to carry out either an AA or an EIA. This is particularly pertinent in the instance of AA, where the legal obligations on the decision maker have been clearly elucidated in numerous legal rulings both nationally and in the European Courts. An Taisce submits that any license granted by the EPA on foot of the data provided in the current NIS would be in contravention of Article 6(3) of the Habitats Directive, and will be open to legal challenge. A similar challenge could arise on EIA grounds.

Please acknowledge our submission and advise us on any decision made.

Is mise le meas,

Elaine McGoff

Natural Environment Officer

An Taisce – The National Trust for Ireland