

An  
Bord  
Pleanála

## Observation on a Planning Appeal: Form

### Your details

**AN BORD PLEANÁLA**  
LDG- 031086-20  
ABP- \_\_\_\_\_  
**24 SEP 2020**  
Fee: €        Type:         
Time: 11.40 By: Courier

**1. Observer's details (person making the observation)**

Your full details:

(a) Name

David Murray

(b) Address

Kiltartan, Gort, Co. Galway, Ireland

### Agent's details

**2. Agent's details**

If an agent is acting for you, please **also** provide their details below. If you are not using an agent, please write "Not applicable" below.

(a) Agent's name

Not applicable

(b) Agent's address

Not applicable

## Postal address for letters

3. During the appeal process we will post information and items to you **or** to your agent. For this observation, who should we write to? (Please tick ✓ one box only.)

**You (the observer) at the address in Part 1**

☒

**The agent at the address in Part 2**

☐

## Details about the proposed development

4. Please provide details about the application you wish to make an observation on. If you want, you can include a copy of the planning authority's decision as the observation details.

**(a) Planning authority**

(for example: Ballytown City Council)

Galway County Council

**(b) An Bord Pleanála appeal case number (if available)**

(for example: ABP-300000-19)

ABP-308019-20

**(c) Planning authority register reference number**

(for example: 18/0123)

Click or tap here to enter text.

**(d) Location of proposed development**

(for example: 1 Main Street, Baile Fearainn, Co Abhaile)

Derrybrien, Co. Galway

## Observation details

I have concluded the following key observations that firmly detract from this Remedial Environmental Impact Assessment

1. The Flood Risk Assessment is based of inaccurate and incomplete information even though relevant information was provided to the ESB.
2. The cumulative effects of forestry felling has not been considered in the EIA or Flood risk assessments
3. The lack of public consultation
4. This report is in contradiction of EU Legislation

The information is detailed below and includes 2 Appendices.

Regards,

- David Murray



## **The Flood Risk Assessment is based on inaccurate and incomplete information**

With reference to :

Remedial Environmental Impact Assessment Report

Chapter 11 - Hydrology and Hydrogeology

Appendix 11A – Flood Risk Assessment

Under Section III. Historic Floods, the developers indicate that they undertook a desk review of historic flooding primarily using OPW website floodinfo.ie. Users of floodinfo.ie are asked to *"accept, acknowledge and agree that the Commissioners make no representations, warranties, guarantees or undertakings, whether express or implied, that the information on the Website is, without limitation, accurate, complete, free from error, secure, up to date, free from bugs and/or viruses or other technologically harmful material that may infect your computer equipment, programs and/or system or fit for any particular purpose."* In other words, there is no degree of accuracy guaranteed with this method.

The report suggests that *"The nearest area downstream affected by extensive flooding in the catchment draining the south side of the wind farm is over 20 km downstream close to Gort."* **This information is incorrect.** The nearest area downstream affected by extensive flooding is Dereen (10km from Windfarm) and Beagh (12km from the Windfarm)

On Fri, Apr 7, 2017, The ESB was sent a letter of complaint (Appendix 1) by the South Galway Flood Relief Committee that highlighted the concerns of both flooding and silting of the South Galway lowlands including Beagh and Gort. This was also highlighted in a Blog Post, in January 2020 on South Galway Floods Blog site (an extensive knowledge base on South Galway Flooding,) (Appendix 2) (<https://southgalwayfloods.wordpress.com/2020/01/19/the-flooding-of-beagh-and-gort/>)

The South Galway Flood Relief Committee (SGFRC) was in close contact with the ESB at several times through 2017 but, despite repeated calls for clarification and engagement on the Remedial EIA process, we were given no access to people or information.

If the ESB had included a public consultation process as part of the Remedial EIA process this information would have been highlighted again, however the ESB not only failed to include this public consultation process but also choose to ignore valuable information that had been supplied to the ESB directly as well as information that was on a public domain blog (A simple google of 'flooding beagh' would have provided links to the information. They also choose to ignore the local community by not engaging with them on the production of this report. If they had then they would know the flooding dynamics around the bridges at Deereen, which received funding after 2009 flood events- *"OPW Minister Brian Hayes last week announced an investment of €22,500 at Deereen, Gort for the removal of blockages, pruning back of overhanging trees & removal of trees on the local river bank."*, Connacht Tribune, December 20, 2013. ( More flood relief works earmarked for Galway)

The information that this report has relied upon have proven to be incomplete (as warned in the OPW disclaimer) and therefore the overall flood risk assessment is not of the standard required to make conclusions on flooding impacts, especially given the hydrological connectivity to many SACs.

As some of the flooding involves water discharging into and out of abattoirs, farmyards and slatted sheds, (as it did in 2009) and eventually connecting to downstream SACs, then applying the precautionary principle, the exclusion of this analysis voids this EIA



## Impact on Current Flood Regime in Downstream Watercourses, (Chapter VI : 11A-54)

Under 'Estimated impacts of tree felling', Page 11A-61, the following statement was made - "It should be noted that for the purposes of this assessment, **only the impact of felling associated with the wind farm project was considered and any other felling carried out in the area during construction and following commissioning is beyond the study scope.**"

We disagree with this statement as guidance from the NPWS for Appropriate assessment indicates "each plan or project, when being considered for approval at any stage, must take into consideration the possible effects it may have in combination with other plans and projects when going through the process known as appropriate assessment." ( **Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities, NPWS\_2009\_AA\_Guidelines**)

It is very clear from Appendix 11a, Figure 21 that there have been and continue to be forestry operations in close vicinity of the windfarm and Owendalulleagh Catchment. From Table 1 below (supplied at request to the Irish Forest Service), we see that prior to Windfarm construction there has been significant afforestation, thinning and clear-felling (TUF). In the 8 years previous to the windfarm development, there have been 987 hectares of afforestation, 1,852 hectares of clear Felling, and 1,209 hectares of Thinning. These forestry operations would have a continued impact

Year	Ballycahalane					Beagh (Owendalulleagh)					Owenshree					Total					
	<5	5-15	>15	TUF	Thin	<5	5-15	>15	TUF	Thin	<5	5-15	>15	TUF	Thin	<5	5-15	>15	TUF	Thin	Total
1989	96	214	1,469	0	84	202	452	3,114	138	192	36	152	486	16	25	333	817	5,070	155	302	6,676
1990	114	201	1,442	47	84	377	442	3,111	188	192	48	156	482	20	25	539	799	5,035	255	302	6,930
1991	42	267	1,426	72	84	651	384	3,111	125	192	74	152	468	22	25	768	803	5,006	220	302	7,098
1992	77	254	1,437	39	84	804	439	3,119	93	192	77	168	465	21	25	959	861	5,021	154	302	7,296
1993	101	240	1,419	47	84	888	480	3,054	109	192	93	184	465	4	25	1,083	904	4,937	159	302	7,385
1994	90	228	1,385	104	84	752	640	3,066	131	192	133	153	511	1	25	975	1,022	4,962	236	302	7,496
1995	160	214	1,376	101	81	819	904	3,036	133	157	153	126	558	1	31	1,133	1,244	4,971	235	269	7,852
1996	203	259	1,376	67	46	1,174	1,122	2,941	208	152	184	136	552	21	27	1,561	1,517	4,869	296	224	8,468
1997	266	279	1,272	93	99	1,317	1,244	2,923	200	114	158	166	488	86	25	1,741	1,690	4,683	380	238	8,732
1998	347	293	1,193	129	106	1,440	1,281	2,846	173	142	125	223	477	77	24	1,913	1,797	4,517	379	272	8,877
1999	387	319	1,227	81	112	1,228	1,600	2,641	289	187	162	244	393	109	36	1,777	2,163	4,261	479	335	9,015
2000	369	375	1,182	89	111	799	2,112	2,600	341	163	143	282	410	110	19	1,311	2,769	4,191	539	293	9,103
2001	294	456	1,076	195	108	792	2,371	2,496	302	140	257	283	397	29	19	1,343	3,110	3,970	526	267	9,216
2002	332	475	1,077	222	76	740	2,551	2,456	206	156	246	307	392	17	25	1,318	3,333	3,924	445	256	9,277
2003	387	577	1,084	114	74	776	2,620	2,408	189	137	216	374	365	51	17	1,379	3,570	3,857	354	227	9,389
2004	452	648	1,098	21	47	690	2,716	2,448	216	87	221	393	384	56	5	1,363	3,757	3,929	293	140	9,482
2005	477	635	961	77	47	563	2,794	2,481	138	66	179	495	376	15	5	1,219	3,924	3,818	230	118	9,310
2006	357	765	944	72	59	612	2,647	2,656	193	59	197	481	387	24	7	1,167	3,893	3,986	289	125	9,461
2007	284	887	962	42	55	535	2,599	2,863	155	54	159	516	408	15	4	978	4,001	4,233	212	113	9,537
2008	168	999	986	33	56	600	2,511	3,008	57	41	162	518	420	24	4	930	4,027	4,414	113	101	9,586
2009	163	1,023	964	23	70	476	2,598	3,044	85	23	88	537	472	27	4	726	4,158	4,479	134	97	9,594
2010	151	963	1,029	29	72	301	2,432	3,175	73	244	90	522	518	8	4	541	3,917	4,722	110	320	9,611
2011	84	967	1,088	48	62	253	1,953	3,495	83	442	79	488	519	28	29	415	3,407	5,102	159	533	9,617
2012	68	901	1,075	119	85	124	1,794	3,615	166	527	77	522	493	35	53	270	3,217	5,183	320	665	9,654
2013	77	838	1,100	100	134	155	1,633	3,767	122	549	102	499	492	35	53	333	2,971	5,359	257	735	9,655
2014	153	727	1,217	30	122	225	1,505	3,589	90	816	74	450	517	60	79	453	2,681	5,323	180	1,018	9,655
2015	148	682	1,185	40	193	191	1,406	3,854	129	646	95	423	514	46	102	434	2,512	5,554	214	941	9,655

Table 1 : Forestry operations in Slieve Aughty Catchments, Irish Forest Service , 17th June 2019 (All figures are Hectares, TUF = Felling)

This report also has not made any detail of forestry operations planned at the time of the windfarm developments that would have an effect 'in combination with' felling and drainage of the Windfarm site during development and operation. We can see from diagram below some significant forestry operations in the different sub-catchments (source Geohive : <https://bit.ly/360jM89> ) and from

Forest Service data we can see that approximately 736 hectares was felled and 348 hectares was thinned from 2003-2006. This lack of consideration is in clear conflict with the guidelines for Impact Assessments.

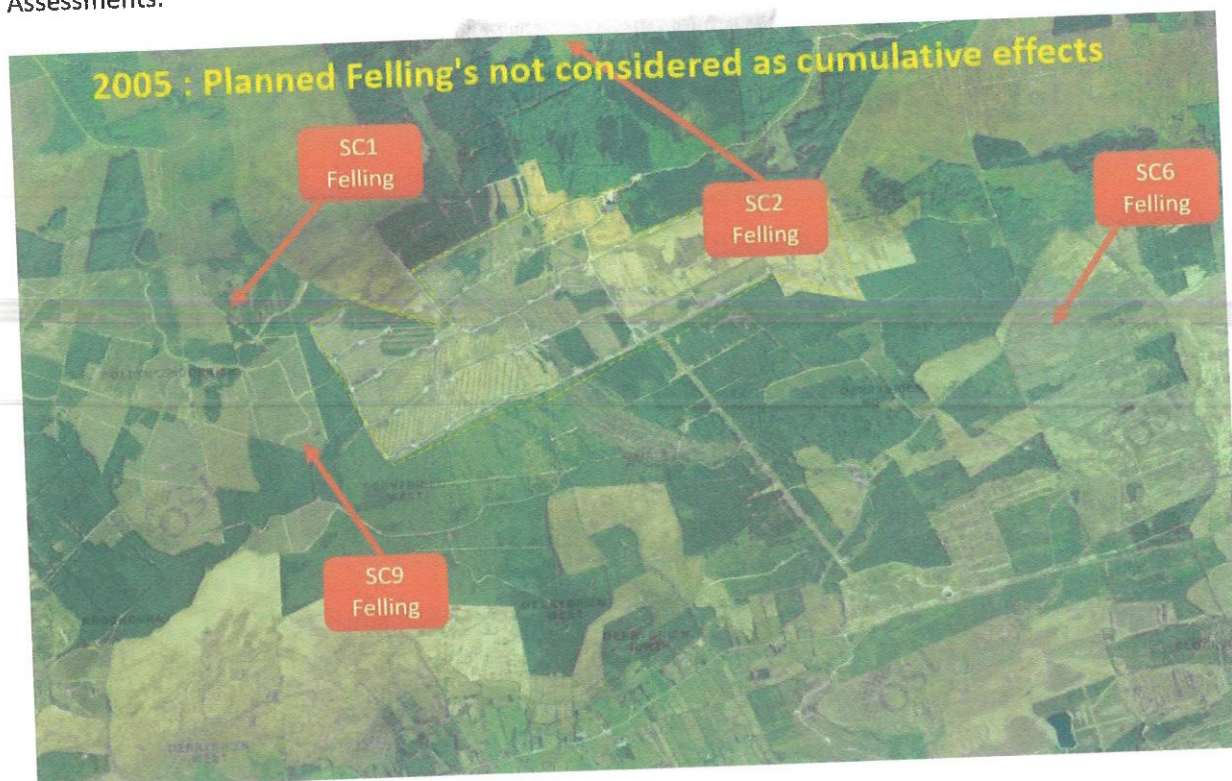


Figure 1:

As part of the EIA for Doughill Forest Property, Windfarm development (201-2021) -An agreement has been reached on future forestry planning "With the exception of 2 sales, no thinning will be scheduled in the property before 2021 to help minimise the windthrow risk."

It should be expected that a Remedial EIA should consider the Catchment Forestry operations that have progressed alongside the Windfarm Development.

**Water Directive Framework/Irish Forestry Code of Best Practice , The Irish 'Water Framework Directive, Western River Basin District, Programme of Measures and Standards For Forest and Water'** gives an overview of potential pressures on water from forests and forest activities together with the pathways and possible receptors involved. It highlights that forests may give rise to negative pressure on aquatic ecosystems but that proper forestry management can deliver programmes of measures with positive benefits. Section 4.7 of the above introduces potential pressures from Hydromorphological Change. It states that; "Where forests are established in the catchment area of water abstractions or water dependent habitats and species potential impacts on the water resource may occur both with reduced flow levels and reduced water table and also through washout with increased and more rapid flood peak height. It indicates that there may be hydrological changes due to site preparation, clear-felling. In particular to clear-felling it states that there can be substantial increases in hydraulic flow (e.g. 15%) which can give rise to "stream surge resulting in physical (hydro-morphological) impacts in receiving streams leading to bank erosion and stream widening. The pressure potential may be more pronounced for older forest stands which are clear-felled due to the absence of buffer zones and drainage networks extending into the aquatic zone."



This gives a guidance of 15% in hydraulic flow and in discussions between Coillte and TCD on the South Galway Flood Relief Scheme, the open drains of forestry can continue to have the negative impact for up to 10 years.

**The Windfarm development must therefore take into consideration the possible effects it may have in combination with these forestry operations and as this has not been considered, and this EIAR is therefore void.**

The chapter continues on 11A-63 indicates the link between "forests and river flooding remains conflicted". It highlights that the UK's Centre for Ecology & Hydrology (CEH) report on this matter concluded that for decreasing tree cover, there is a significant difference between categories of influence on flood peak, arising largely as a result of the lack of recorded statements for peak flow increase. Applying the precautionary principle should guide the report that if the impact is unknown, the assumption should be that the worst-case scenario is applied. This did not happen in the case.

11A-63 states "A simple statistical analysis indicated that a 10-15% decline in forest cover can increase the runoff. In general, with all other hydrological factors being equal, a catchment with 30% forest cover has a 25% higher water retention than an equivalent catchment with forest cover of 10%. Water retention is 50% higher in catchments with 70% forest cover than where forest cover is 10%." There is significant detail missing from these statements. Forest Cover is not a standard metric. A forest of <10 years old will typically degrade water retention, not increase it and as the scope of this EIA report considered "only the impact of felling associated with the wind farm project", then this analysis continues to be void.

It recommends 10% runoff increase rate which contradicts the 15% mentioned in the Water Framework Directive.

11A-65 concludes with "Considering the Owendalulleagh catchment in isolation, the total catchment area to where all the wind farm subcatchments (SC6 to SC9) meet this river is 64 km<sup>2</sup> (Figure 22) (EPA Ref: 29\_136\_2). The total area felled within this for the wind farm site was 1.37 km<sup>2</sup>. Including the felled trees associated with the 2003 peat slide (0.25 km<sup>2</sup>) and the construction of the OHL (0.31 km<sup>2</sup>) in the catchment, this area increases to a total of 1.93 km<sup>2</sup>. This represents 3% of the catchment area at this location. The FSU-calculated QMED at this point of the river system is 24 m<sup>3</sup>/s (corresponding to a QBAR of 25.7 m<sup>3</sup>/s) while the IH124-calculated QBAR is 34 m<sup>3</sup>/s. As such, by the most conservative estimate, the Project has resulted, in the most conservative analysis, a 1.8% increase in the peak mean annual flow rates at this scale."

I disagree with the statements of 'conservative estimates' and 'conservative analysis' and this analysis appears strong geared toward lowering the perceived increase in the peak mean annual flow rates.

In Chapter 11 - Hydrology and Hydrogeology, Impacts which have occurred (11-39) under Felling and Forestry the report details "As the felled areas intersect a large number of sub-catchments and the total area felled is small in any one of them, it can be reasonably assumed that the impact of this felling on the hydrological flow regimes of the Project areas would likely have been Slight to Moderate and Temporary to Short-term and not persisted beyond the construction phase of the project."



This clearly shows the limitations imposed by the assessment analysis because this only considers the felling **within** the windfarm and does not consider the current state of the actual catchment which we have estimate as having 987 of afforestation, 1,852 HA of clear Felling, and 1,209 Hectares of Thinning in the preceding 8 years and also no consideration of planned forestry as well as the impacts of planned forestry.

Also, the timeframe given is also incorrect as it assumes that the effects of the felling do not persist beyond the construction phase (indicate as June 2003 – March 2006) - seen as there is no attenuation proposed and replacement afforestation was implemented in other catchments (e.g. Tipperary) , this assumption has no foundation.

Even if we could move beyond the conflicting limitations imposed by this report there is an underlying fundamental assumption that needs to be challenged. Just because the analysis says that impact would be **Slight to Moderate** does not take into consideration the affect this increment can have on a system under pressure.

At peak rainfall then having an additional 10% runoff (estimate) could be enough to flood Derreen ,Beagh or Gort. (with the former 2 missing from the Flood-Risk Assessment) . In fact this table from analysis at TCD in <https://www.gsi.ie/en-ie/publications/Pages/Groundwater-Newsletter-Issue-53-March-2016.a>, it shows that **Gort Town flood Threshold** is a flow rate of 40M3/s on the Beagh river and is thus very susceptible to increases in flow rates.

Therefore, while the impact may be incremental - it can be enough to cause an overall significant impact

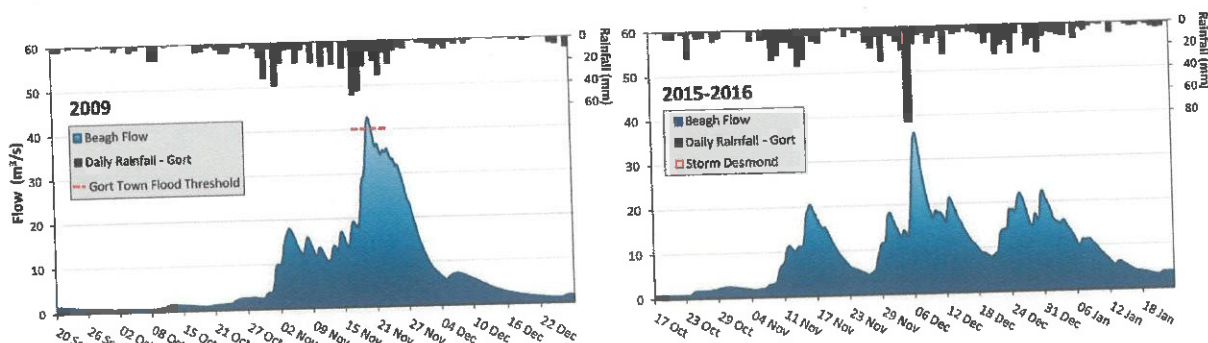


Figure 3: Beagh River discharge (based on TCD rating curve) and precipitation (2009: Met Éireann, 2015: TCD) over 100 day periods in 2009 and 2015-2016

The only way to negate the impact of increased flows is to provide some type of mitigation measure against them. This is a standard for best-practice windfarm development. For instance the Environmental Impact Report for Doughill Forest Property (2017-2021) , had mitigation measures for increased run-off "Stilling ponds are designed to reduce the flow velocity of discharge water. Inspection and maintenance of these structures during construction phase is critical to their functioning to stated purpose. The stilling ponds are designed to store water until a storm has receded and these ponds are designed for a 1 in 100 year return period rainfall event with retention times of 24 hours. The stilling ponds will still remain post construction to provide storm water attenuation."

The above solutions may not suit the Derrybrien Windfarm site but there could be alternative measure downstream. However, no such measures have been proposed on the Derrybrien Windfarm site or further downstream.