

REPORT TO AN BORD PLEANALA

Re: Application by Kildare County Council to An Bord Pleanala under Section 8 of the Water Supplies Act 1942 for a Provisional Order for the Abstraction of a maximum of 40,000 cubic metres of water in any 24 hour continuous period from the River Barrow at Srowland Co Kildare made on 1 April 03 and

Application for Approval of the proposed development under Part X of the Planning and Development Act 2000, involving abstraction of water together with the construction of water treatment works in respect of which an EIS has been prepared, made on 7 April 03.

Board Refs: PL.09.PW2001 and 09.EL2015 respectively

REPORT OF

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1 September 03

3 (b), including effects on human beings, terrestrial and aquatic fauna and flora, fisheries, soils, hydrology and navigation water quality, noise, landscape and material assets.

It is clear from the documentation and the oral evidence, and I am also satisfied that the requirements of the legislation in relation to the format and content of the EIS have been complied with. My comments on the findings of the EIS are contained elsewhere in this report.

In the event, given the type of project proposed, the aspects likely to be significantly affected by the proposed development were navigation and fisheries/aquatic flora and fauna. While hydrology was possibly of equal importance its importance basically stemmed from the effects on the aforementioned navigation and fisheries. The effect on landscape in an area designated as one of high amenity might have been a significant issue but as I have already stated, I do not feel that it was significant.

Effect on navigation

This was arguably the issue of most concern to the objectors and fortunately one that engaged the Council in a major way both in the preparation of the scheme and at the Hearing itself.

The most significant point made by the Council, in my opinion, is that the Barrow is an engineered waterway, using weirs and locks to establish the necessary draft. Each weir serves to maintain a backwatered pool upstream, and it is this pool that provides the available draft, between bed and water level, for boat traffic travelling to the (next) upstream lock. Boats and barges must be able to cross the cill of the lock upstream. The water surface upstream of the weir would be horizontal if there were no flow in the river. Otherwise, the water surface forms a backwater profile from the weir, extending upstream to the next control feature, and the shape of that backwater profile is characteristic of the flow and of the channel shape and gradient. In a situation of low flow, therefore, with virtually no flow over the weirs, navigation is determined by the difference in level between each weir and the level of the respective cill of the lock upstream. (The objectors felt that this assessment of the Council was not right. Boats have been encountering increasing difficulties. The objectors were also concerned that the Council had not engaged anyone with a knowledge of navigation). Nevertheless as far as I am concerned the logic of the Council's engineers is irrefutable.

The declared minimum draft on the Barrow, quoted by the navigation authority, Waterways Ireland, in the published guidebook for boat users is 760mm. (I don't accept that the 1.2m maximum draft quoted in the Canals Act has any relevance in that context and the Council engineers were of the opinion that it would never have been the norm for boats of 1.2m to navigate the Barrow). From their investigation of the entire length of the river bed, the Council determined that, apart from some silting up of the channel, there were two locations where, at times of low flow, this draft was not available, i.e. at the Bagenalstown lock cill (510mm) and the Bord Gais pipeline crossing. While the Council consider that they would feel obliged to remove 20mm from the bed of the river in order to *maintain* the existing navigation conditions, an option nevertheless that was neither practical nor desirable for the safety of fish

stocks, they propose instead to carry out significant mitigation works at Bagenalstown lock and the gas pipeline to give a material overall improvement by removing these navigation impediments. The difference between the level of the top of the gas pipe crossing and bottom of the river above is of the order of 2.5m. I see no reason why Bord Gais will object to removing of the order of 300mm from the bed of the river at that point and there is no indication that they are in any way opposed. Having regard to the contacts that have taken place between the Council and Bord Gais, the opposite would appear to be the case (see correspondence with Bord Gais submitted – tabbed W).

According to the Council, in the post works regime, at the one-in-50 year drought severity, the reduction in depth at weirs, compared to the present position, varies from 10mm at Bestfield (the weir with greatest depth) to 5mm to 6mm everywhere else.

The foregoing “effect on navigation” is a very short summary of the mass of evidence produced and which I have already summarised. I am not convinced that the proposed development will have any significant effect on navigation and indeed, I feel that the overall effect, arising from the mitigation measures, will be positive. I have dealt with this aspect before going on to look at the whole question of the accuracy of the forecasts of river flows and the effects of groundwater abstractions because I feel that together with the guarantee of minimum flows tendered by the Council, the precise flow in the river is not an issue here.

X It is significant, I feel, that the navigation authority, Waterways Ireland, have not objected to the proposal.

Effect on fisheries/aquatic flora and fauna

This issue has increased relevance by virtue of the Barrow and the Barrow valley now being (candidate) SACs. Nevertheless, it is significant here also that neither Duchas (who did not object but made certain recommendations) nor the Heritage Council have any objections to the proposal.

While the Barrow would typically be a coarse fish river, *migratory* salmon do pass upstream and downstream. Salmon do not move during periods of low flow. Fish being delayed reaching the optimal spawning grounds is highly unlikely. There should not be any shortage of water between November and January, the period when the fish move to the spawning grounds. In relation to the *resident* fish population, the “nature of the reach downstream is such that the effect on surface water levels will be negligible”. Reference was made to the cross section of the river being more U-shaped than the flat V-shaped of most rivers. The same area of wetted habitat will be available to those fish upstream and downstream of the abstraction point during periods of low flow. Reference was also made to a variation of half a metre in the level of the river in a matter of hours. In that context a variation of 10mm or so would be imperceptible. It is clear from the evidence that there will be little effect on the fish in the river.

The U-shape of the river cross section is also important in relation to other aquatic flora and fauna. The most significant invertebrate discovery is the presence of freshwater crayfish. In Annex II of the Habitats Directive is a list of “Animal