

Re: Barrow Navigation and Mitigating Works, to accommodate the River Barrow Abstraction Proposal, carried out at the Location of the Gas Pipe below Maganey September 2004.

1.



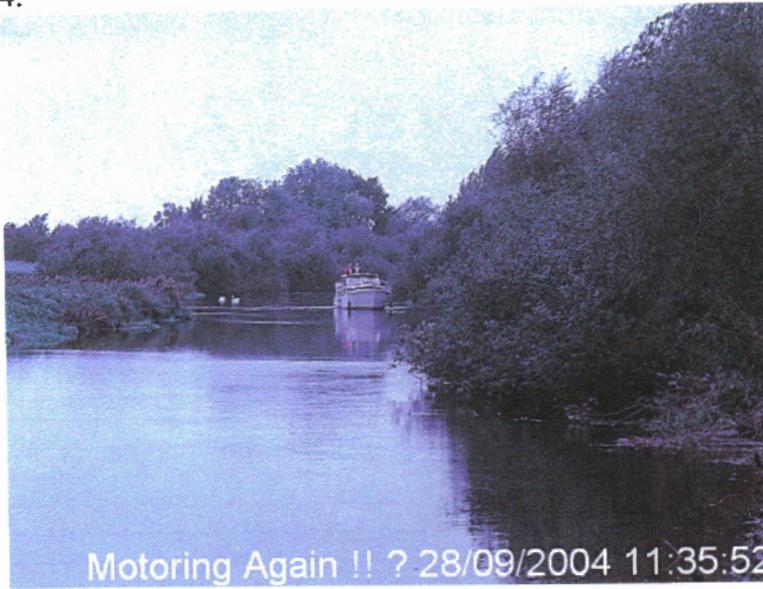
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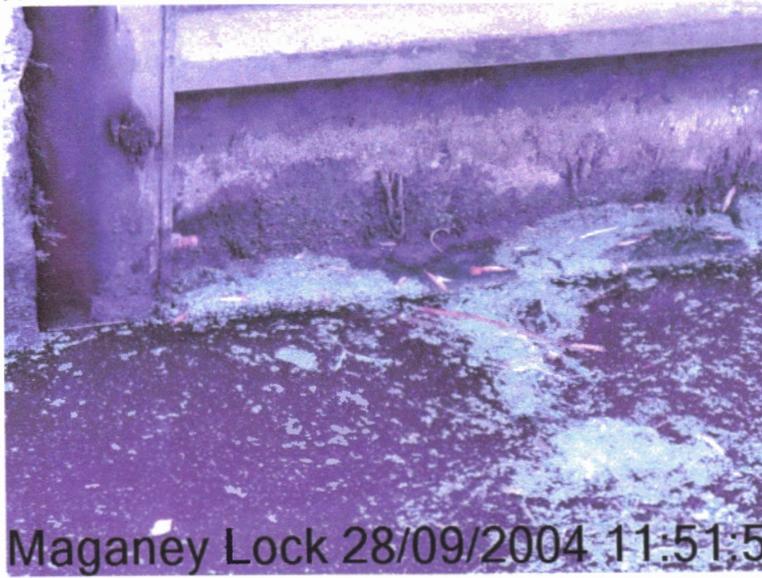
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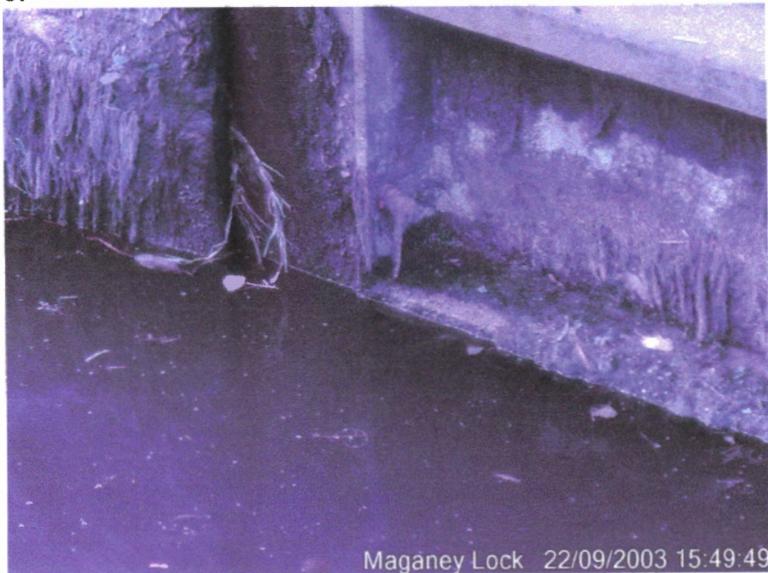
4.



5.



6.



6. Maganey lock showing water level on 22nd September 2003 this mark represented 28 inches or 710 mm over the Gas pipe.

Waterways Ireland have since dredged the area around the Gas pipe see photos dated 28/09/04

1.7 at Levitstown represents 28 inches or 710 mm at the gas pipe.

I refer to Exhibit 4 in Book of Pleadings Circuit Court item 1.(a)

Where Mr. John McKeown of Waterways Ireland said:

“the removal of any supply from the upper reaches of the navigation will have an effect locally but will have detrimental effect to the lower reaches of the navigation. If the navigable depth is reduced below a certain critical figure, for whatever reason, the navigation may have to be closed in the interest of safety.”

Contemporaneous Note from meeting of 2nd September 03 at Maganey Lock

(This was not a prearranged meeting.)

I introduced myself to Mr Brian Darcy operations manager of Waterways Ireland while the boat was rising up in the lock.

I asked him

“are you the man that would be making the decision to close the Navigation ?”

Brian said “that he knew nothing of the Navigation being closed”

..... “anyway that would be a local decision”.

I said I was concerned at the low water levels, that the James Gill (barge had hit the Bottom at the Gas pipe two weeks previous and we have had little or no rain since.

I asked from what point will the Navigation be closed.?

I enquired would that be John McKeown who would be making the decision. ? ans Yes. was John McKeown on board.

With that John pops out his head.

We exchanged greetings.

I repeated

I said I was concerned at the low water levels, that the James Gill (barge had hit the Bottom at the Gas pipe two weeks previous and we have had little or no rain since.

I asked from what point will the Navigation be closed.

That we were making do with 760 mm as in the Guide book.

John McKeown said “ that was only the draft of the boats.”

Brian Darcy intervened “we have travelled up from Graiguenamanagh and have had no trouble.”

Me “I was afraid that you might say that” what draft is that barge?

JM “you would know that better than anybody”.

Me “I was just checking to see would you have known, the James Gill is drawing about 34 inches. (I did not say whether the barge was fully laden or not when it hit the pipe line.)

Me “I maintain that the Navigation should be closed at present.” I just want to know from what point or marks will Waterways Ireland Be closing the Navigation.... Don't you think we (Canalways) should be made aware of what your Plan is?... that we should have some sort of a contingency plan in the event that the Navigation will be closed.

All I want to know is from what point or level is the Navigation going to be closed.

JM “Well if it goes much lower it will have to be closed.”

Brian Darcy intervened “that it would be a commercial decision by me (Canalways) or Arnie to run or not to run your Barges.....” I or we cant make rain, that the Navigation wont be actually closed” and Waterways will be sending out a Notice to inform us of the low water situation.

John McKeown said in reply to the first barrow abstraction proposal.- “ If the navigable depth is reduced below a certain critical figure, for whatever reason, the navigation may have to be closed in the interest of safety”

Me a but it was you guys that agreed the mitigation measures and approved the Barrow water Abstraction in full knowledge of up to six other proposed abstractions in the catchment.

So "I just want to know from what point or level will the navigation be closed".

Brian Darcy also said that if it is going through some formal process or procedure to leave it.

SIGNED MICHAEL HOFFY
Michael Hoffy



Mr Michael Hoey

17th October 2005

Reference: EIR032005

ABSTRACTIONS FROM THE GRAND CANAL

When the Canals were transferred to OPW from CIE in 1986 it is estimated that there could have been in the region 50 to 60 abstractions from the Grand Canal, ranging from Domestic, Watering Cattle, Factory Use, Agricultural, Industrial etc.

Many of these including major ones such as Bord na Mona, ESB, Meat Packers in Sallins, Kileen Paper Mills, Semperit Tyres and the Dublin Gas Company in Ringsend were cancelled or fell into disuse over the years

Abstractions which are likely to be active at this time are:-

Dublin Corporation at the 5th and 8th Locks

Readymix Concrete at 7th Lock Ballyfermot

CIE at Inchicore

There are also six small diameter (less than 50mm) pipes principally for agricultural use which may or may not be active at this time.

Brian Mullan

Environmental Information Request Officer

Karin and Michael @ Canalways

From: "Michael Hoey" <michael_hoey@eircom.net>
To: "Michael Hoey" <michael@canalways.ie>
Sent: 04 June 2004 23:52
Subject: FW: Operational Staff cannot provide the required details.

—Original Message—

From: Rosanna Nolan [mailto:rosanna.nolan@waterwaysireland.org]
Sent: 03 June 2004 17:48
To: Michael Hoey
Cc: Francie Gallagher
Subject: RE: Operational Staff cannot provide the required details.

Michael,

Your e-mail regarding the water level at the gas pipeline south of Maganey refers.

The gas pipeline you referred to is located immediately downstream of the confluence of the Douglas River with the Barrow and gravels are regularly deposited in this area. Our most recent survey was taken approximately 2 weeks ago and indicates that the highest point of the gravel shoal is immediately downstream of the marker. On the day of the survey there was 900mm of water at that location. We have now finalized arrangements with the Wildlife Service and we are currently consulting with an Bord Gáis regarding removal of this material which would guarantee the 760mm draft quoted in the Guide to the Barrow Navigation. X

Waterways Ireland is not in a position to provide you with the daily water level at the gas pipeline because we do not have a water level recorder at that location. We have begun a program of installing staff gauges at locks on the Barrow and Barrow Line and we will examine the possibility of putting a staff gauge close to the gas pipeline with the zero set to the highest level in the navigation channel. At present the closest water-level recorder to the gas pipeline is at Bestfield and this data is available from the EPA.

The lock-keepers and operational staff will give you whatever advice and assistance they can regarding the progress of the work and conditions prevailing in the Navigation.

Regards,

Rosanna

—Original Message—

From: Michael Hoey [mailto:michael_hoey@eircom.net]
Sent: 02 June 2004 14:46
To: Rosanna Nolan

05/06/04

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.

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