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25 OCT 2019

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OUR REF: 7799/15

YOUR REF: -

DATE: 24th October 2019

An Bord Pleanála,
64 Marlborough Street,
Dublin 1.

Re: Case No: 302885 and Case No 302848, Annette and Michael Kerin, Compulsory Acquisition of Lands, 11 Ard Na Locha, Dangan, and Adjacent Site.

NOTICE LETTERS Reference No's: 517 & 521.

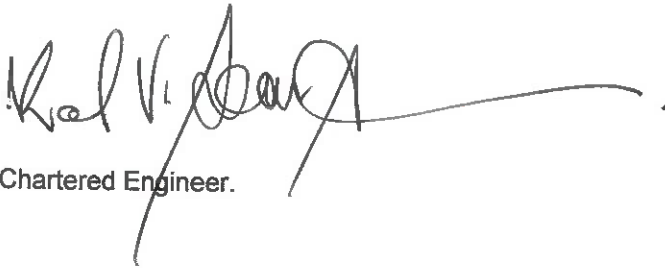
Noise Assessment.

I have deliberated over the further clarification re the above property and the potential consequences should the project proceed as planned/envisaged. I recognize three aspects, as follows:

1. It is planned that an ESB sub-station is to be located directly across on the site to be acquired from the Kerins' family home. Details are not to hand as to the electrical potential (voltage) of this sub-station. There are possible tonal emissions associated with sub-station transformers, particularly at frequencies of 50 Hz, 100 Hz and higher harmonics. Additionally there are potential corona discharge effects (associated with glass insulators) should the high tension in-feed cabling be overground. I have been involved in the upgrading and measurement (in association with the ESB) on issues such as this in the past but I recommend that full details - together with specifications of acoustic treatment on the outer surrounds of the sub-station's boundary be clarified immediately. Such details are essential so that the potential for sub-station emanations and possible corona discharge (during damp weather) be identified at this design stage and be appropriately accommodated.
2. I have reviewed photographs taken from the front of the Kerins' home looking across to the raised portion of the propose construction - i.e. to that portion it is proposed be acquired and on which the sub-station is intended to be located. The gate will need to be increased in height to about 2.0m overground and be in-filled with close fitting and overlapping hardwood. Substantial hedgerows at the boundary will need to be planted up to a height of 2.0m. Immediately behind same top quality acoustic barriers will need to be erected and on the inside of these further planting will be required. The nett upshot and purpose of this "sandwich" is to ensure that an acoustic "wall" is presented at the boundary of the Kerins so that the amenity of their garden and outdoor area is preserved, save only when the close fitting gates are opened, for example when a car is driven in or out.
3. The upstairs glazing of the bedrooms is indeed of a high standard as the very low in-bedroom noise levels demonstrate. The barriers envisaged for the boundary of the property will not provide protection for the upstairs noise-sensitive rooms. Fresh air admission is required. I have use (and indeed obtained good results) in respect of specialist silenced acoustic air vents in locations of relatively high exterior noise where appropriate in-bedroom levels were required - along with fresh air. Alternatively a specialist feed and extract system taking fresh air from the "sheltered" side of the house can be constructed - with appropriate control systems - so that the fresh air admission is firstly under control and secondly does not conduit in undesirable ambient noise.

I believe these precautions are appropriate and practical so that the amenity of this high-quality family home - **indoors and outdoors** - may be preserved during constructional and operational phases of the proposed project.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'R. V. ...', with a long horizontal flourish extending to the right.

Chartered Engineer.

