PROJECT PROFILE

Title	**Administration of Abnormal Vehicles**
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Description	Increasingly road authorities are investing significant percentages of their total budgets in the management of their existing infrastructure resource. Central to this management is a classification of the condition and consequently the load carrying capacity of structures under their control. In addition to assessing capacity on the basis of normal loading conditions, structures in most cases also require assessment for abnormal loading conditions, e.g. due to the passage of heavy or permit vehicles, which do not comply with the national regulations governing the maximum weights permitted without a licence, i.e. 42 tonnes on 5 axles or 44 tonnes on 6 axles with a maximum permitted axle weight of 11.5 tonnes (SI No. 5/2003).  In Ireland, any vehicle which falls outside the 2003 regulations requires a permit in accordance with SI No. 283/2007. Since March 2010 the codified abnormal load for the MIU Network is the SV196. Currently, the system for issuing permits for abnormal vehicles is administered by the Local Authorities. Ideally the methodology employed in this regard would have a consistent basis, facilitating an effective and coordinated approach to the administration of abnormal vehicles. Unfortunately this is not the case. Consequently, the aim of the proposed study has been defined as the development of a simple, easy to use and efficient management system for the issuing of permits and the administration of abnormal vehicles on the MIU network. Ultimately, the project will develop a software tool to allow the local authority Engineer, without specialist knowledge, to input details of the abnormal vehicle seeking a permit (e.g. GVW, No. of axles, axle weights, axle spacings etc.) and to receive, as output, the criteria for routes on the MIU network which the vehicle may safely traverse.
Objectives	The aim of this study was to develop a simple and efficient process for verifying the load carrying capacity of structures on the Irish Major Interurban (MIU) Network, considering the codified abnormal vehicle loadings which they have been designed to carry (e.g. HB loading per BD37/01 or LM3 loading per the Eurocodes) and allowing comparison with the actual abnormal vehicles which may feasibly be anticipated on these routes. As a result it is intended to develop a simple, easy to use and efficient management system for law enforcement agencies and other authorities for the issuing of permits and the administration of such vehicles on the network.
Benefits	The importance for a national road administration to understand (i) the range of abnormal vehicles traversing its network of structures and (ii) the ability of those structures to safely carry the abnormal loads, is clear from the description section above. Having an efficient system in place to administer permits for those vehicles will be of benefit to TII, law enforcement authorities, permit issuing authorities and to the haulage industry itself.

Outputs	The results of this study will facilitate the production of (i) a Green Motorway Map, (ii) the development of a simple software tool to compare individual abnormal vehicle silhouettes to the characteristic classes developed in the study and (iii) the development of an Irish Standard for the Assessment of Highway Bridges and Structures for the effects of Abnormal Vehicles.