

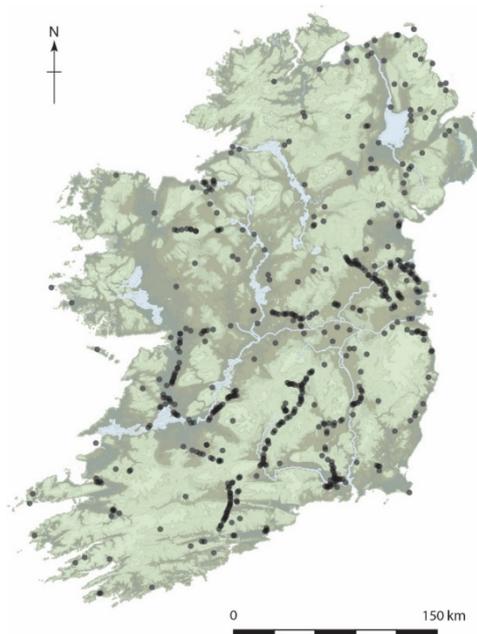
# Infrastructure, Innovation and Practice:

## The experience of TII Archaeology and Heritage

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In the past thirty years since the 1990's Ireland has undergone a significant transformation of its capital infrastructure, particularly its national road and motorway network. As a result of this work many significant archaeological discoveries have been made, these have been outlined in several recent works including Stanley et al (2017) and Carlin (2018). An example of such discoveries is aptly illustrated by Becker et al (2017) in their analysis of the Irish Iron Age, refer Figure 1. However these works have not happened in a vacuum rather they took place within a very specific context.



*Fig. 1 Distribution of new Iron Age sites, illustrating many of Iron Age sites discovered during archaeological works on motorways and national roads (Becker et al, 2017)*

In the late 1990's it was recognised by the National Roads Authority (NRA) that archaeology presented a potential risk to the delivery of its programme of work, and therefore it engaged with Ireland's statutory authorities for the protection of Archaeology to develop appropriate protocols, which would balance the objectives of the NRA to deliver on government transport policy and the Minister responsibility to protect Ireland's archaeological heritage. This led to one of the first codes of practice to be agreed between an infrastructure developer and responsible Minister (2000), in this case the NRA and the Minister for Arts, Heritage, Gaeltacht and the Islands.

Rather than taking the view of the cultural heritage institution this paper is from the perspective of the developer, namely Transport Infrastructure Ireland (TII) which arose following the merger of the agency responsible for light rail and metro (Railway Procurement Agency) with the NRA. While TII carries out its work in the overall context of European Directives and National Legislation, the Code of Practice is of critical

importance; as such, an updated Code of Practice for Archaeology was agreed between TII and the relevant Minister in 2017. The updated Code ensures that there is full consideration of archaeology throughout the lifecycle of any project.

In terms of policy, archaeology is also explicitly embedded in TII policy documents e.g. TII's Project Management Guidelines, while TII's archaeological technical documentation and guidelines are published on TII standards website, [tii.publication.ie](http://tii.publication.ie).

In practical terms, this has seen the establishment of project archaeologists. As members of project and design teams these project archaeologists actively manage the archaeological aspects of the projects from the initial planning and scoping phases, through the Environmental Impact Assessment Report (EIAR). They also oversee all of the archaeological works.

In planning such projects, a key principle is to avoid impacting upstanding archaeological remains in so far as possible, and to achieve preservation by avoidance. At this phase extensive use is made of LiDAR and archaeo-geophysical surveying with targeted testing to assist in the design process. By its nature, design for these schemes is an iterative process, and multiple factors will be considered in reaching the ultimate design for which an EIAR is prepared for submission to the planning authorities.

One of the most significant innovations related to the programming of works, in the 1990's the majority of archaeological works took place during the main works construction phase. This led to time delays and financial claims. With the appointment of Project Archaeologists, archaeological works were now carried out in advance of construction. On our greenfield projects such works comprise archaeo-geophysical surveying, archaeological testing, typically 12% of any route (refer Figure 2) and full excavation of any sites discovered, which are consequently preserved by record. This approach has the net effect that less than 10% of on-site archaeological works now take place during construction.



*Fig 2 Standard stage i. archaeological testing on the N69 Listowel Bypass (Aircam)*

The project archaeologists oversee the procurement of archaeological consultants to deliver these services. It is worth noting that the consultants are procured using a suite of contract documents that have been developed specifically for archaeological services and are now in use across the public service in Ireland. In recent years there has been a shift to procurement on the basis of quality rather than lowest price, thus archaeological contracts on TII Projects are awarded on the basis of 70% quality and 30% price.

These contracts not only address issues of site management and practice, they also emphasise the importance of dissemination, and this is achieved in multiple ways; through public events such as heritage week lectures, open days and pop-up exhibitions. TII has also commissioned videos, audio-books, and has published more than 34 archaeological books. In accordance with TII sustainability policies these books are being made accessible on the TII website.

A key criticism often made of infrastructural works, is that the archaeological reports are not easily accessible. To address this TII in partnership with the Discovery Programme and the Digital Repository of Ireland (DRI) created the TII Digital Heritage Collections. These collections provide open access in accordance with the FAIR principles to more than 2000 archaeological excavation reports. It is envisaged that this will become the home for all of the TII Heritage digital outputs and deliverables.

Ultimately, the archaeological works undertaken on TII's infrastructural schemes continues to make a significant contribution to our collective understanding of Ireland's Past.

## References

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