

Delivering Major Infrastructure in the UK - A Case Study

A14 Cambridge to Huntingdon Improvement Scheme

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This paper will present a case study of the A14 Cambridge to Huntingdon Improvement Scheme, one of the largest archaeological projects undertaken in the UK in recent years. This 23km road scheme in Eastern England, undertaken for a consortium of civil engineering contractors for Highways England, is one of many infrastructure projects underway or planned for the UK (Ref 1). The archaeological work was carried out by MOLA Headland Infrastructure, a partnership between two of the UK's largest contractors, Museum of London Archaeology and Headland Archaeology.

The mitigation project started alongside construction, leading to many complex logistical, safety and commercial interfaces. The scale of the mitigation work required a team of 250 archaeologists on site and a further 50 in support over a period of 18 months. In total, 40 large scale excavations covering almost 300 hectares were completed generating vast quantities of site records, finds and environmental data. The project covered everything from Palaeolithic through to industrial archaeology. The scale and fast track programme raised a number of challenges for the project, and also many opportunities. This paper will look at some of these in more detail with a view to inspiring debate about the successful management of massive infrastructure projects.

Resourcing this project with enough suitably skilled archaeologists was a considerable undertaking. The project was divided into several sections managed by a separate engineering consortium. All had different priorities and it took skilled management to avoid major peaks and troughs in the overall workload. Even so, it took a lot of hard work to build such a large team, reaching out across Europe and other contractors, setting up traineeships and building careers within the project.

A decision was made early in the planning for the project to aim for deep integration of working practices between partner organisations. This would offer consistent products and the greatest flexibility in terms of allocating work efficiently. All companies have different working practices not just in field recording systems but also in salaries, roles and responsibilities, terms and conditions of contract. MOLA Headland Infrastructure essentially created a new company with roles specifically designed for the partnership and different to the roles in the parent companies.

Another significant challenge was training and skills development, particularly in the light of major skills shortages in the heritage sector (Ref 2). A large proportion of the workforce were recent graduates with less than 6 months' work experience but having to work to a fast track programme. There was also a language factor with many of the archaeologists working on the scheme continental Europeans, primarily from Spain, Portugal and Italy. Several methods were devised to help make new people feel welcome and to provide the tools they needed to produce an excellent record of the archaeology.

To provide feedback to the field teams and to keep up with the vast quantities of finds and other data recovered meant setting up a brand new resource centre on the scheme. Thousands of soil samples and tonnes of finds were processed here with the results fed back to the field teams. Up to 50 people worked behind the scenes to support the 250 working on site.

Finally, managing health and safety was a critical consideration to the client - working safely on a vast, live construction scheme. Archaeology is one of the last remaining large scale manual operations and so archaeologists regularly suffer from slips and trips, bad weather, muscle strains and occasionally, accidents. All have to be reported which make the statistics look particularly bad. Huge efforts were made to bring the

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figures down to an acceptable level, from training and daily briefings, reviewing clothing and equipment to regular stretching exercises.

Within 3 months of finishing off the last of the major excavations, all of the site data, finds and environmental samples had been processed and less than 6 months later, the archaeological assessment and design for full analysis and publication had been completed and submitted to the client for review. This paper will look at how that was achieved.

The paper will also look at some of the key learnings from the project and how these are being applied to other large infrastructure projects. For example, should archaeological works be undertaken during construction or in advance of construction? How do you build in flexibility to a design that has to be approved prior to works commencing? How can we reduce the reliance on trained archaeologists? Can we use technology and innovation to work faster and smarter?

References

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Fig 1 – A small section of the A14 under construction (© MOLA Headland Infrastructure)



Fig 2 – The project team prepared a printed manual to help staff when using the integrated recording systems. This was valuable to both those new to archaeology and core staff from the partner companies. (© MOLA Headland Infrastructure)