



Case Study 4: Team Briefing The Use of Technology in Briefings

Executive Summary

The use of iPad's or computers by engineers and foremen is becoming increasingly common across the construction industry, facilitated by BIM and other digital developments. The ability to access electronic information on a portable device or use a site office computer to display information has significantly improved the way Skanska is carrying out team briefings and toolbox talks. Video's, photographs, diagrams, 3D modelling can all be used as visual aids to explain the task, providing a further understanding of the activity and environment surrounding it.



Introduction

It is mandatory on construction sites for every team to be briefed at the start of every shift or different task they are carrying out. Briefings are specific to the activity/team and should be carried out by the supervisor responsible for that task BEFORE starting any works.

The main purposes of team briefings are:

- Explain the activity being carried out by that team including details on how it will be carried out and who is responsible/qualified for each task
- Set the targets that need to be achieved in that shift
- Explain standards of practice
- Review and understand the risks involved covering anything from machinery breakdowns to health and safety.
- With health and safety all possible hazards are identified and any first aid or emergency instructions are reviewed
- Notify workers about any changes in their work environment from previous day
- Act as a record of who was working on the group task and proof they received the required instructions
- Allow feedback from the team and gain insight from their experience
- Check everyone has the correct PPE and equipment



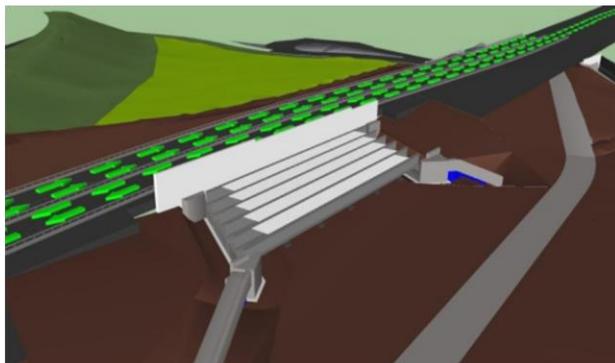
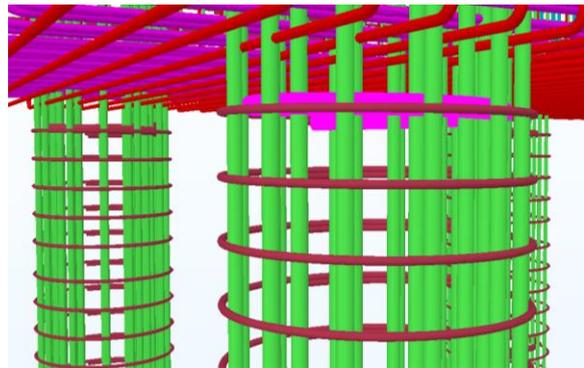
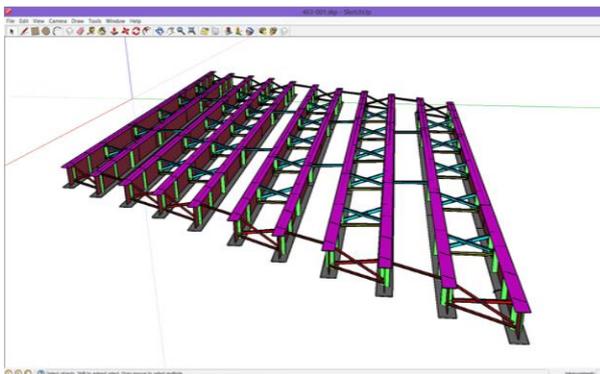
What we did

In today's site management, it is becoming common practice to use digital technology in communicating effectively with the workforce. Listed below are some of the resources we have developed or optimised to aid in team briefings across our constructions sites.

BIM – Building Information Modelling

Skanska decided that the use of BIM as a visual aid briefings would provide a greater understanding of the construction methodology and how the task fits into the surrounding environment. The BIM 3D model allows the team to visualise the work at hand. This can be through giving a breakdown of the task into its different components, show the order of construction, give a 3D representation of what the finished product should look like, and how it should fit into the area around it.

Currently we are developing the use of BIM PODS on site. These are focal areas on site allowing the engineers and manager to produce site briefs, tool box talks and any other meetings and briefings that would benefit from access to a fully coordinated model, maps, drawings or any design documentation. All engineers and most foremen have iPad's which allow them to record any briefs/toolbox talks given on site as well as communicate to anyone on the project team. In the office we have access to an interactive white board that allows us to navigate all BIM models, google maps and documentation as if it was a large iPad. We also have the ability to deliver briefs directly from the iPad onto monitors and TV screens. As all of the project information is now contained on the electronic device, anything can be briefed in the field that would be briefed on the office without the need to produce wasteful drawings.

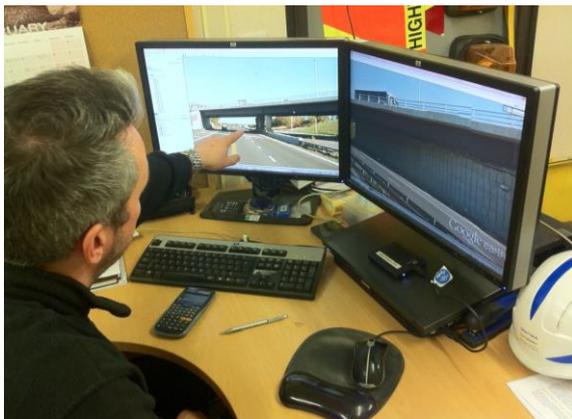




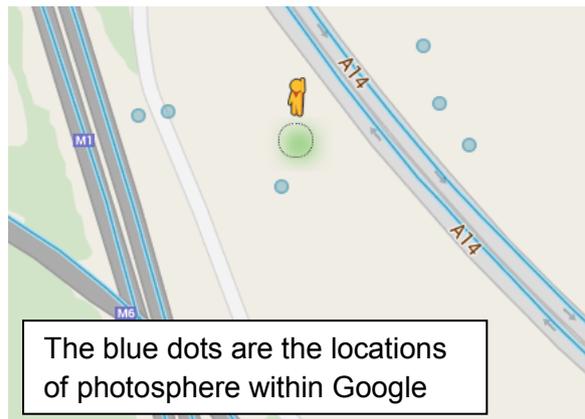
Google Streetview and Photosphere 360

Google Earth, Google Maps and Google Streetview is commonly used by companies to aid planning, site visits and briefings. However they rely on Google to update the imagery which can be outdated. The google images for the M1 J19 were from 2009, prior to the demolition and construction of the new the Cathorpe Viaduct meaning they were significantly out of date. Skanska commissioned Google Streetview to update all the routes that were affected by the construction of the M1J9 which means that the most recent images can be viewed and used by the Design and Construction teams.

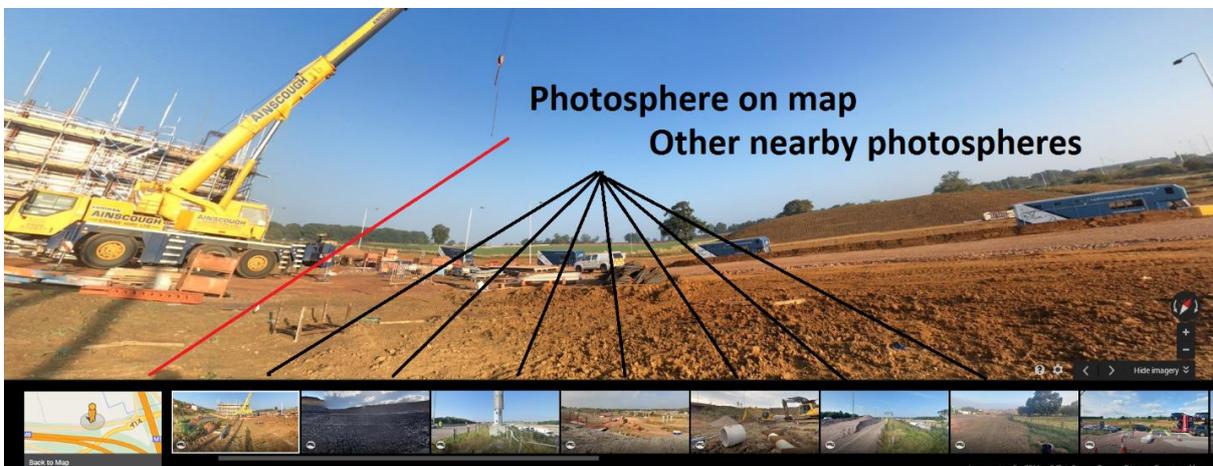
Photosphere is an application that works in much the same way as Google StreetView. Google photosphere produces Geo-tagged 360 degree photographs that are uploaded, stored and displayed on a map within google maps. Photosphere gives the impression of being at the location while looking at a computer screen. As you rotate the image it appears that you are looking behind yourself. The immersion into the 360 image provides a clear and current image of the site which can be used to explain scenarios during briefings before visiting a site.



Using Google Streetview in the office



Google Photosphere 360





Benefits and Outcomes

- Provides a greater understanding of the end result and tasks to be achieved
- Makes sharing of large pieces of information and images such as drawings or work plans more effortless
- Enhances the quality of communication between multiple disciplines
- Encourages a “one-team” approach by engaging everyone involved in the task
- Contributes to a more sustainable way of working
- Puts the briefing into perspective of the job in discussion as workers are in the topic environment
- Ability to give one-to-one training to all staff there and then

Further Information

Google Streetview and Photosphere

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