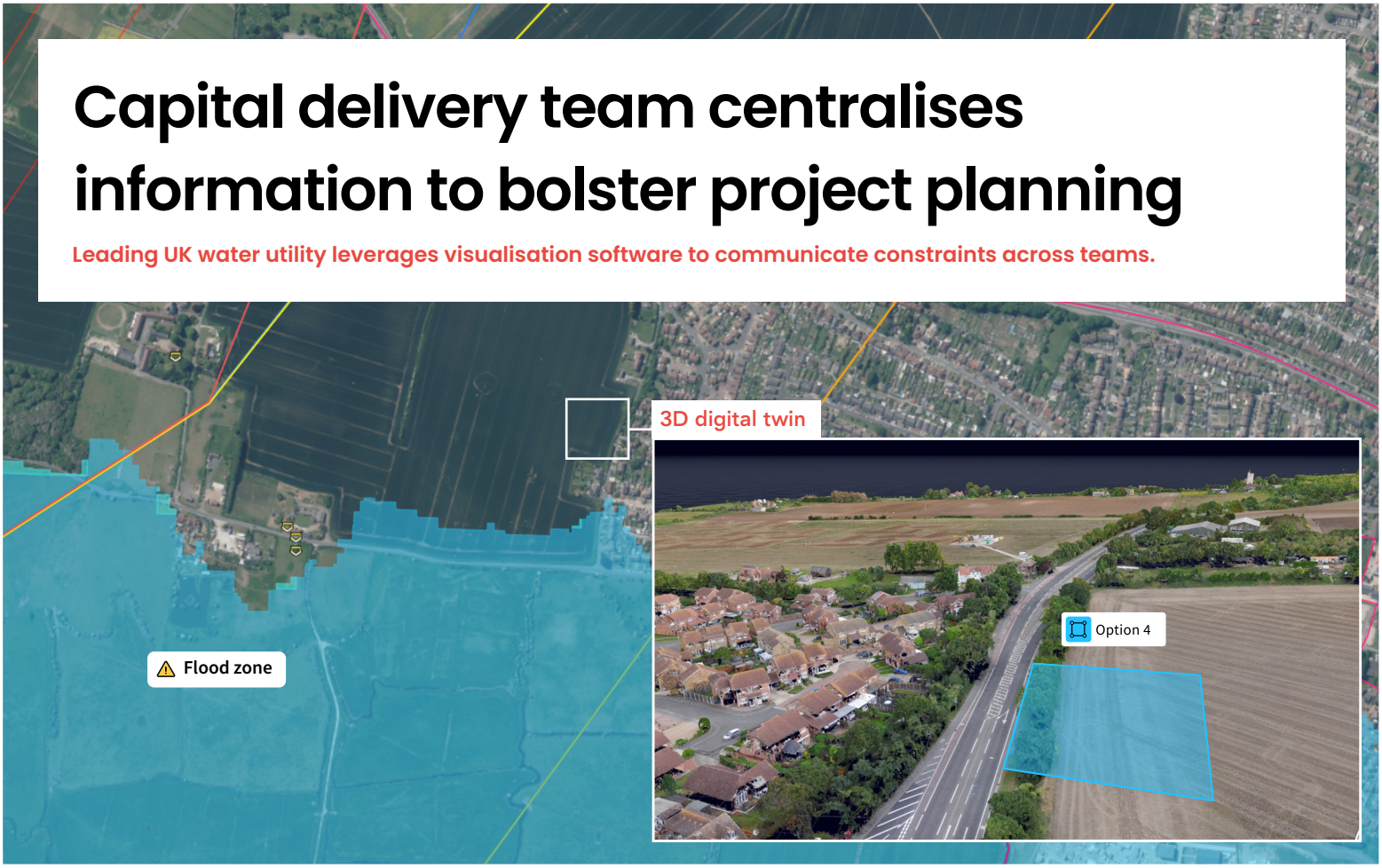
Capital delivery team centralises information to bolster project planning

Leading UK water utility leverages visualisation software to communicate constraints across teams.



Above Digital twin created using CAD models of exisiting undergound utility data visualised over the backdrop topographical survey in Sensat [demo environment due to data sensitivity].

> **Trying to explain to people the effects of a fault is a nightmare [...] the fact that these fault lines were 300-500m deep, it is critical for the design team to understand because the material quality around the fault lines is unpredictable and we need to understand that risk.**
>
> **Ground Investigation Specialist** Tier One Water Company*

Challenge

A major water company in England has been planning an infrastructure enhancement project over the past two years. Despite efforts, the project faced a major setback when the initial design was rejected. The project faced 3 major challenges:

- **Complex site:** The site lay in a historical coal mining area, which introduced substantial risks to designs due to the complex underground mining network. The project area also faced other constraints such as dense residential areas, making it difficult to integrate plan assets.
- **Disparate information:** Crucial data sat across various platforms including local drives, Asite, ACC, ArcGIS, EA sites, Coal Authority data, and Navisworks. This fragmentation made it difficult to gain a holistic view of the site. Subsequently, the team struggled with confident decision-making.
- **Specialist communication:** With numerous technical teams involved including design, ground investigation and the project manager, it was challenging to communicate project decisions across teams due to the technical and reputational risks involved. This resulted in lengthy, frustrating meetings and project delays.

*Anonymised for customer confidentiality

sensat

Solution

To address these challenges, the water company has partnered with Sensat to centralise data for more thorough interrogation. Teams upload data from the coal authority, design teams, geological information, underground utilities. This information has then been overlaid over a backdrop of the real world to create a comprehensive digital twin of the project site.

The unified, interactive digital twin provides the entire team with centralised access to essential data, resulting in several benefits.

Benefits

Over 50% faster

Teams handed back plans to the client in 6 weeks what has typically taken 3 months.

More Informed Decision-Making

Centralised data access allows stakeholders to make faster, more confident decisions. The elimination of information silos facilitates strategic planning and execution, freeing the team to focus on high-priority tasks rather than managing disparate data sources.

Improve Risk Assessment

Sensat's digital twin enables project managers to compare designs against real-world conditions, offering a clearer understanding of potential risks during design. This improved visibility helps teams to estimate the risk budget more accurately.

Better Communication

The visual site representation allows specialists to share concerns and challenges more effectively. Using a backdrop of reality as a visual prompt for conversations reduces the need for long explanatory meetings, streamlining collaboration across different teams.

Below Digital twin created using CAD models of exisiting undergound utility data visualised over the backdrop of 3D driven LiDAR data [demo environment due to data sensitivity].