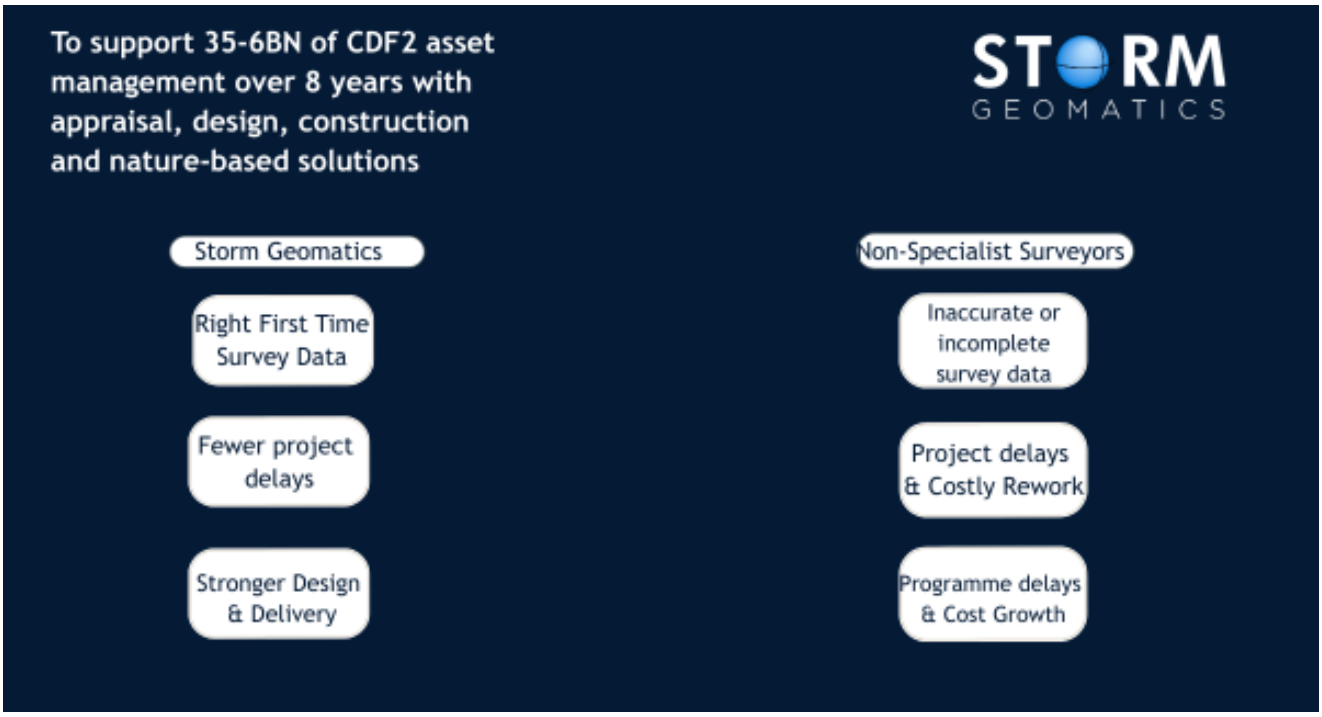
CDF2 Survey Strategy Playbook

1. Why This Playbook Exists

Survey data is the foundation of asset management, design and nature-based solutions. Choosing specialists is critical, Storm Geomatics has concentrated on surveying the UK's rivers and assets for 20 years.

CDF2 requires accurate, model-ready survey data across Flood & Coastal Risk Management, navigation, water, land and biodiversity assets. This Playbook provides a structured EA-aligned approach to reduce risk, improve program certainty, and support both nature-based and engineered interventions.

CDF2 will span 8 years, this strategy is prepared not only with longevity in mind but also with adaptability to ensure it is client led.

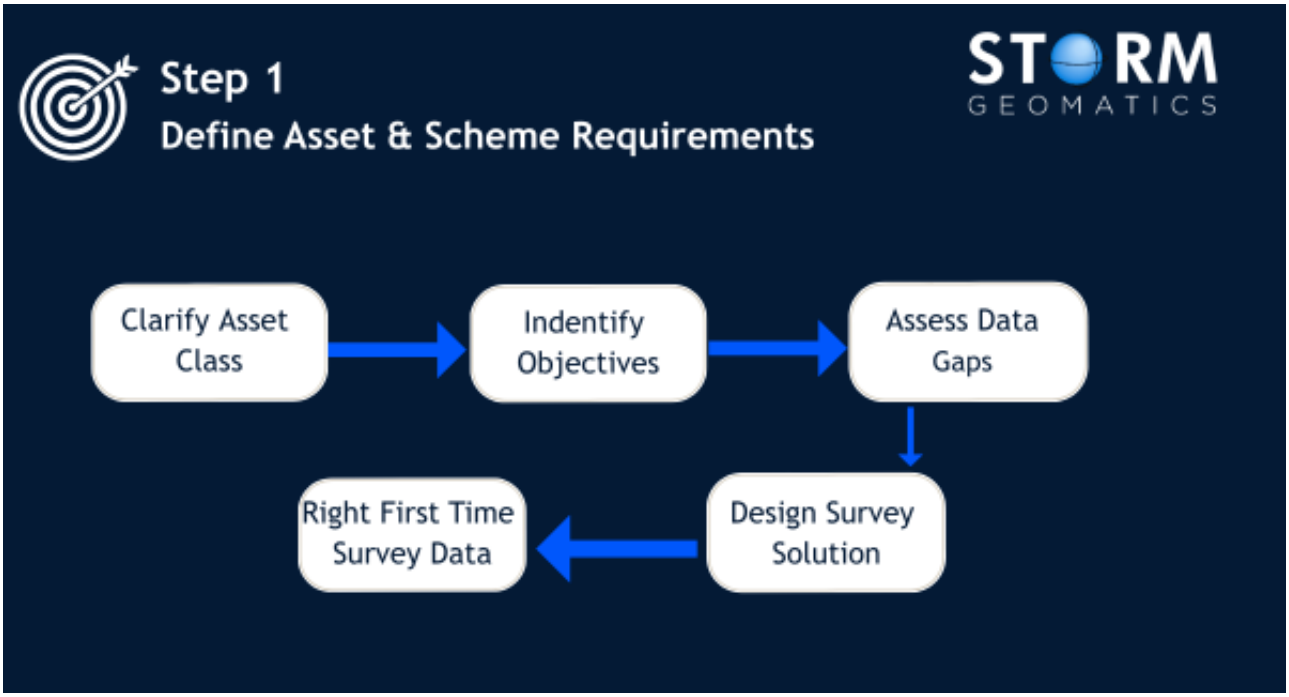


2. The CDF2 6 Step Survey Strategy

Step 1 — Define Asset & Scheme Requirements

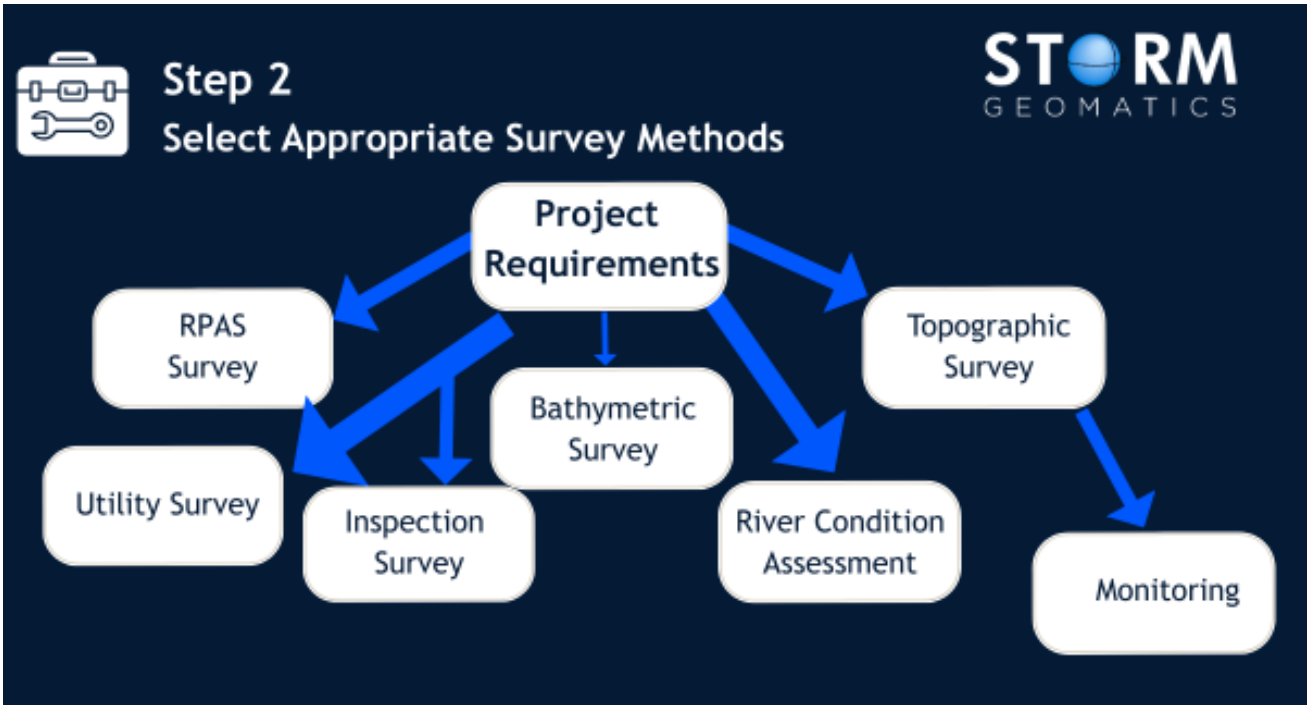
CDF2 scope includes Flood and Coastal Risk Management (FCRM), navigation infrastructure and water/ land biodiversity assets

Storm Geomatics will begin by clarifying the asset class in your project and work through the 6-step process to deliver Right First Time Survey Data. Experience is key at this stage.



Step 2 — Select Appropriate Survey Methods

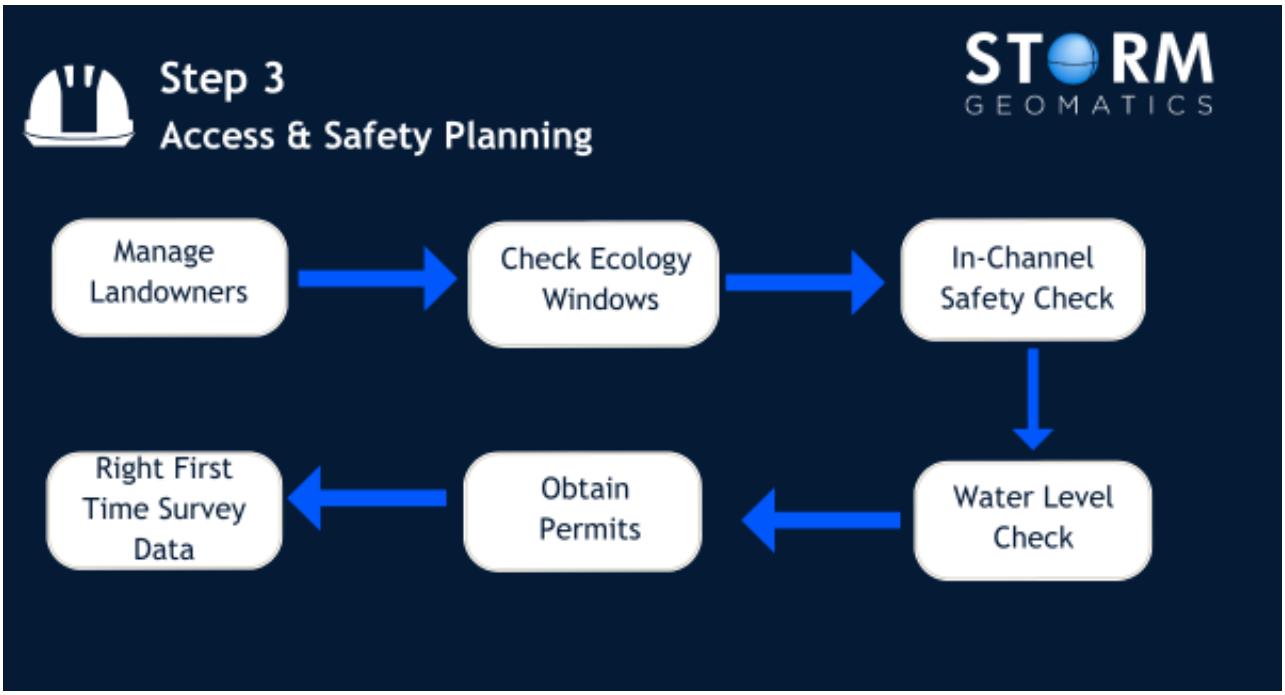
Match survey systems to modelling and engineering needs; agree tolerances. This will align data delivery exactly to requirement of engineer/ modeller. Subject to health and safety and site limitations.



Step 3 — Access & Safety Planning

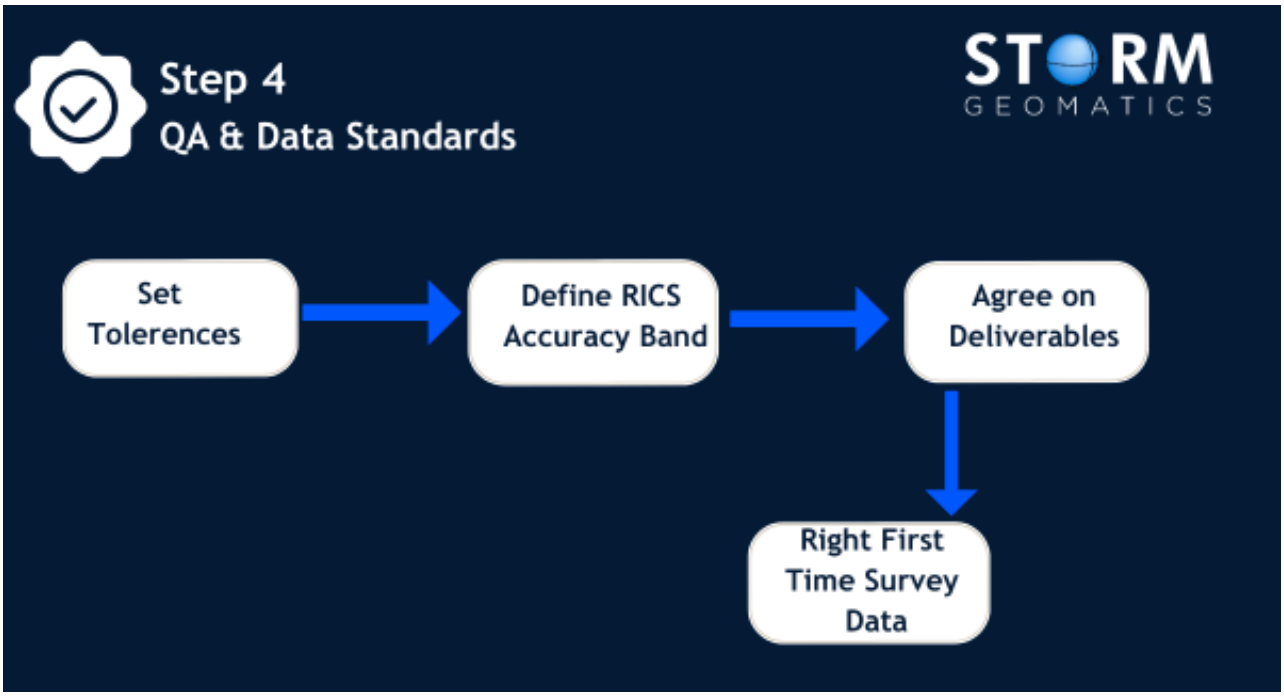
Storm Geomatics have flexible nationwide resources to fit into project windows. These could include weather-depending rivers or ecological windows that need to be avoided. All site personnel are DEFRA Level 2 water safety trained, allowing for agile, safe movement around the project.

Storm has a proven system of contacting landowners and arranging access directly. This significantly speeds up mobilisation onto site and gives the surveyor direct communication with the landowners, mitigating unnecessary third-party land access arrangements.



Step 4 — Apply QA & Data Standards

Set EA aligned tolerances and accuracy thresholds that match the project objectives. This will mean all output deliverables are complaint across the 8-year framework. RICS accuracy survey bands must be considered and stipulated for every CDF2 project. Required deliverables and data formats are to be agreed between surveyor and client before commencement of the works.



Ref: Environment Agency Technical Specification Version 5.01 Section 6

6.0 Accuracy and completeness

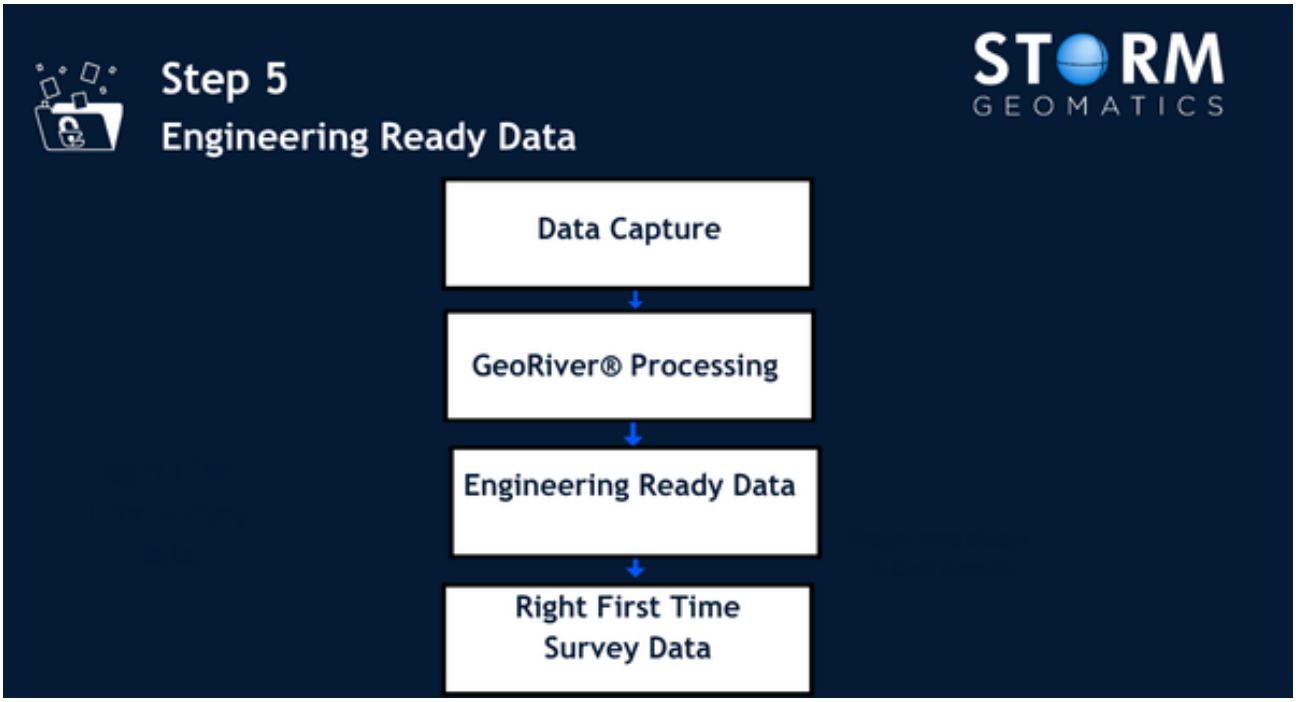
6.1 Accuracy specifications quoted throughout this specification are for 1 sigma (σ). This is a measure of the error present in observed data and includes residual systematic errors remaining after they have been measured and removed. Residual systematic errors shall be minimised by removing as much systematic error as possible. For example, if the specified accuracy is stated as 0.09m, this means that there is a 68% probability that any surveyed value will be within 0.09m of the 'true' value, there is a 95% probability that it will be within 0.18m and a 99.7% probability that it will be within 0.27m of the true value.

Step 5 — Engineering Ready Data

Storm have developed, over 15 years, the river model preparation software GeoRiver®.

This is a result of collaboration with engineers to refine optimal outputs that seamlessly run in a multitude of hydraulic modelling systems. Our experience, expertise and unique insight as river surveyors means we know what is needed to produce intuitive and highly valuable outputs. Storm is the only UK Geospatial surveying company that have specialised in the delivery of this data, and this is recognised across the hydraulic engineering marketplace. GeoRiver® reduces processing time of raw survey data exporting easily into all industry standard formats – Flood Modeller Pro/ TUFLOW/ HEC-RAS. Exactly to engineers' specifications.

With every project Storm deliver there is the opportunity to offer delivery in GeoRiver® and get a 30-day free trial for our clients to use, this is an efficient way to navigate around the dataset without having to open multiple windows and software applications.

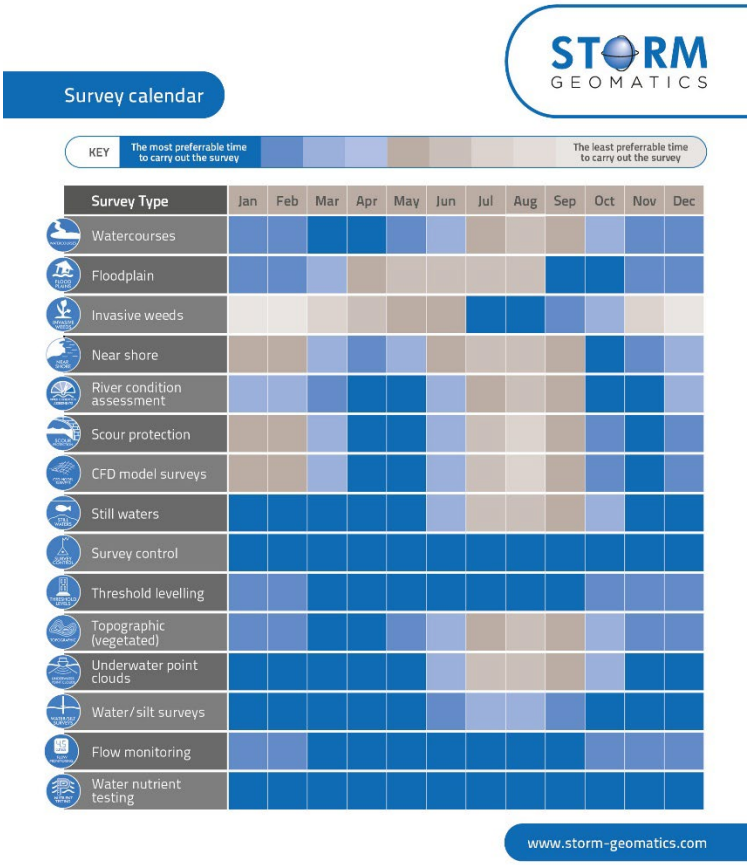


Step 6 — Scheduling & Mobilisation

Seasonal planning can determine success or failure of projects. An ongoing collaborative approach is adopted from early in the project lifecycle.

Storm Geomatics offer flexible, nationwide resources to fit into project windows and weather dependent rivers. Storm have many specialist teams.

One useful resource is our Yearly Survey Planner



3. Case Studies

Engineering-ready data is our standard at Storm Geomatics. These case studies show how organisations facing complex watercourse challenges achieved faster modelling, reduced manual processing steps and improved project certainty by working with our specialist team. They demonstrate why our clients consistently trust Storm Geomatics as the leading survey company to deliver solutions for CDF2.

Example 1: **Middle Nene** survey project was a substantial survey covering most of the fluvial Nene from South Bridge in Northampton to the tidal limit at the Dog-in-Doublet, Cambridgeshire. The team managed complex access, large-scale coordination and significant survey challenges to supply accurate datasets that made engineering modelling easier, faster and more reliable. A multidisciplinary, multi asset survey to support flood risk modelling and improve flood mapping. Consisting of

- 1,769 cross sections
- 326 structures; weirs, sluices, bridges
- Environment Agency specification 5.1v compliant
- 3 x 3 man survey teams

Example 2: **Rapid Response to East Midlands Flooding** For emergency flood surveys, rapid response time are crucial. Flood evidence diminishes quickly. Deployment and data collection strategy is paramount to the success of data collection. For this project Storm Geomatics implemented real-time data collection and output for Environment Agency teams awaiting the information.

Example 3: **Survey Replaces Divers at Nafford Sluice & Weir** This project demonstrates removing risk and improving safety whilst still delivering high-resolution 3D data. Storm replaced risky diver inspections by producing a **full 3D river model** of the Nafford Sluice & Weir. High-resolution geospatial data allowed asset managers to assess ageing structures safely and accurately, while providing engineers with reliable information for long-term planning and modelling.

4. Nature Based Solutions (NBS)

Nature-Based Solutions are right now reshaping how flood risk, habitat restoration, water quality and catchment resilience are managed.
Storm Geomatics is **not just a survey provider**, but a **partner enabling environmentally responsible decision-making** through accurate, ecology-aligned data.
Creators of the **River Digital Twin ®** (link to RDTV2), a sophisticated data-driven replica of a river system. Anticipate changes in river behaviour, including flood risks and erosion patterns.

By integrating NBS early, we can support your environmental commitments, improve biodiversity and create visible benefits for local communities.

5. Book Your Survey Surgery Session

Our 45-minute CDF2 Survey Surgery gives you and your leadership team a clear, streamlined view of how survey data can directly support better planning, delivery, and assurance. The session highlights where geospatial data can drive efficiency, reduce risk, and strengthen visibility across your programme. It's practical, focused and aligned to your priorities.

If you would like to understand how geospatial survey data can unlock efficiency and reduce delivery risk, book a surgery with one of our senior team at a time convenient to you.

Book 45 minutes surgery with Mike Hopkins

Book 45 minutes surgery with Anthony Pritchard

Book 45 minutes surgery with Toby Moyse