

Introducing GeoRiver® version 1.5.7: A Problem-Solving Guide

Key Features and How They Address Common Problems of Surveyors & Engineers

1. Google Mapping Integration

- **Problem:** Difficulty in visualising river projects within their geographic context.
- **Solution:** Incorporate Google Maps directly into your projects to enhance visual accuracy and geographic context. Use this feature to overlay river data on real-world maps, improving the understanding of project locations and their surroundings.

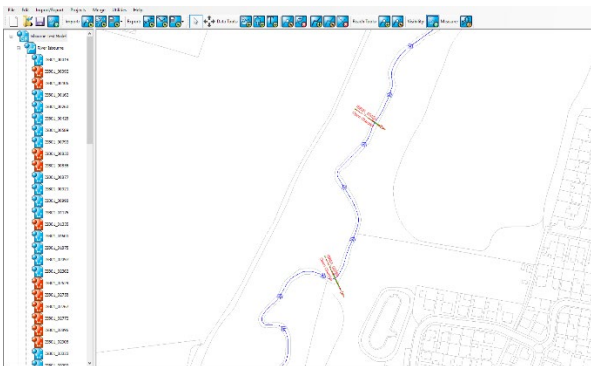


Photo 1. Mapping DXF

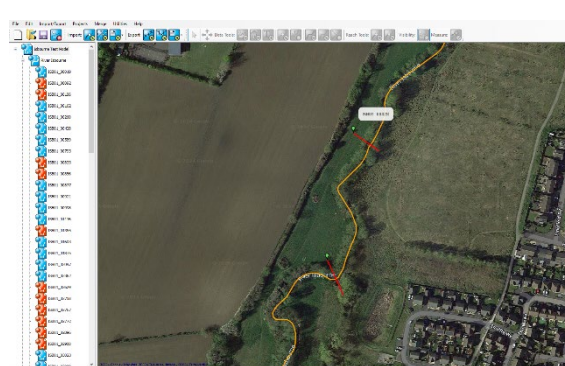


Photo 2. Mapping Google

2. Auto Tunnel Length and Skew Angle Production

- **Problem:** Manual calculation errors in tunnel lengths and skew angles.
- **Solution:** Utilise the automatic calculation feature to save time and remove typo errors, ensuring precise measurements are quickly available and automatically displayed within the export drawings.

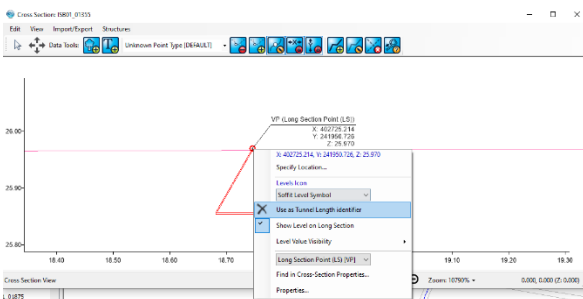


Photo 3. Tunnel Length

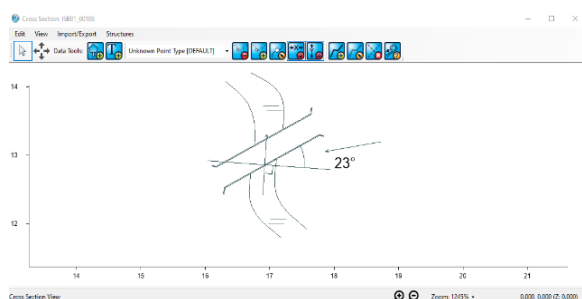


Photo 4. Skew Angle Production

3. Elevation Level Visibility with Ghosting

- **Problem:** Challenges in visualising and editing elevation levels post-export.
- **Solution:** Use the ghosting feature to effectively visualise elevation levels without the need for post-export editing, streamlining the workflow. This feature allows for a faster and more effective assessment of structures.

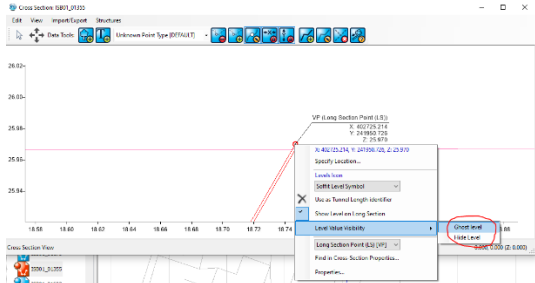


Photo 5. Ghost-Hide Level

4. Cranking on Through Sections with Item Selection

- **Problem:** Text overwriting & manual editing to produce comprehensive & intuitive through sections.
- **Solution:** Auto created through section with no overwriting. Increased efficiency by using the item selection tool for intuitive and error-free through section production.

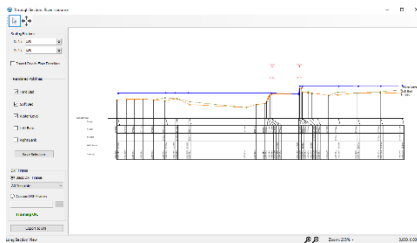


Photo 6. Cranking Through Section

5. Copy and Reassign Points Between Sections

- **Problem:** Inefficient workflows when managing survey points.
- **Solution:** Quickly copy and reassign points between different sections to streamline the modelling process. This feature helps in managing data points more efficiently, facilitating quicker adjustments and revisions.

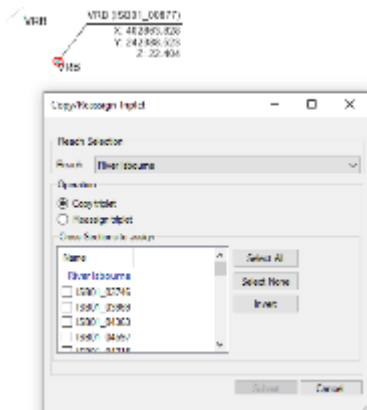


Photo 7. Copy Reassign

6. Export for Original Data

- **Problem:** Raw data files are often added to/amended within the processing journey and therefore the creation of a final export with original eastings and northings is time consuming and open to manual errors.
- **Solution:** Use the export feature to preserve all original data positions with a single click. This ensures that the raw survey data remains intact and can be referenced or reviewed without any loss of information/errors.

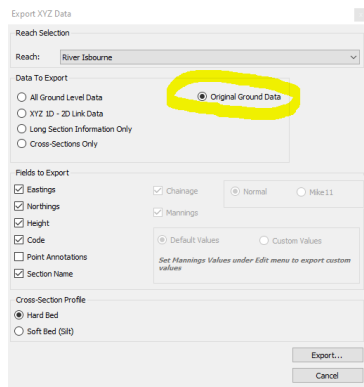


Photo 8. Original Data

7. Export Open Channel Data Only for Flood Modeller

- **Problem:** Creating a model with and without structures is time consuming and open to versioning issues.
- **Solution:** Using the same GeoRiver® model the user can now export separate Flood Modeller files, with and without structures, at a click of a button ensuring data integrity throughout.

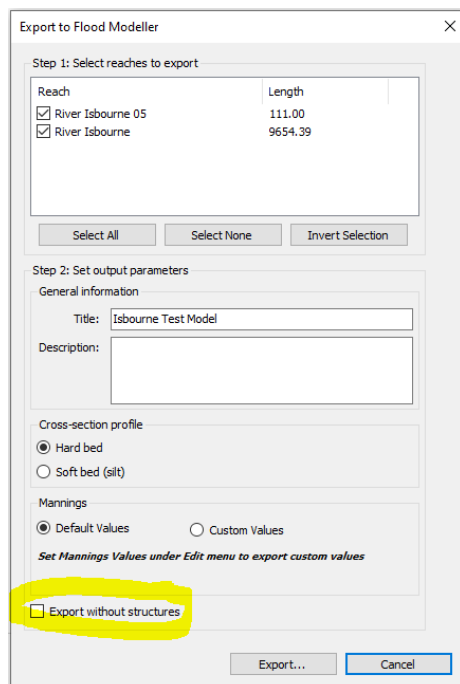


Photo 9. Flood Modeller Export without Structures

8. HEC-RAS Low Chord Structure

- **Problem:** Limitations in modelling complex hydraulic structures within existing tools to produce HECRAS structures in the .prj file export.
- **Solution:** Developments now allow different low chord drawing tools to be used for Tuflow and HECRAS structure creation allowing complete models to be produced.

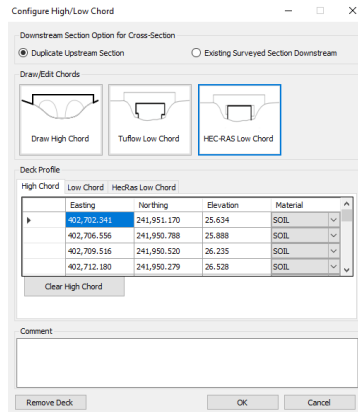


Photo 10. HECRAS Low Chord

9. Environment Agency (EA) Product Codes Added to Exports

- **Problem:** Manual input of EA product codes, leading to potential compliance and reporting issues. Often promoting manual error.
- **Solution:** Streamline compliance and reporting by automatically adding EA product codes to exports. This feature facilitates better integration with external systems and standards, reducing the need for manual input and minimising errors in compliance documentation.

Products Table - Digital Data Files

Product *	Data format	Reference **	Comments	Code ***
2.5D TIN DTM	DWF (zipper)	Sect III / 2.4.4 (iv)		FTN
2.5D Grid DSM data with cell size 0.5m	csv (E,N,H (zipper) and Ext ASCII)	Sect III / 4.0 Sect 3.1		FDS
2.5D Grid DTM data with cell size 0.5m	csv (E,N,H (zipper) and Ext ASCII)	Sect III / 4.0 Sect X / 5.4.7		FDT
3D point cloud with intensity and / or RGB values (point spacing less than 10mm). Data to be delivered on hard disk / retained by supplier as required by the contract. Other	LAZ	Sect X / 5.4.6		FPC
3D point cloud with intensity and / or RGB values (reprojected to a mean point spacing of 100mm)	LAZ	Sect X / 5.4.6		FPC
3D mesh (without photo texture)	DWF (zipper)	Sect X / 5		FME
3D mesh (with photo texture)	FBN	Sect X / 5		FMR
Orthophoto of area shown on COORDINATE/NAME with GSD 10mm	GeoTIFF	Sect X / 5		POK
Orthophoto of area shown on COORDINATE/NAME with resolution 30mm	GeoTIFF	Sect X / 5	Produced from higher resolution orthophoto	POK
Photographic images for photogrammetric survey and associated photos control	JPG (GSD 10mm)	Sect X / 5	Images are also to be supplied with GSD 30mm	PAP
Flood defence crest level string and cross-section data	csv	Sect III / 3.1	Crest levels to be provided at 10m intervals. Cross-section to be provided at 50m intervals	PCR
Flood defence string DTM	csv	Sect III / 3.2		FST
Building Threshold data	Threshold.xls	Scope 2.4.4 (i)		FTH
Channel Survey Data with CES data	EACSD	Scope 2.4.5 Section IV / 1.1	With validation certificate	FCE
Channel Survey observed point data	csv (E,N,H)	Section IV / 1.3		FDA
Channel Survey Data (proprietary data formats)	Point Master / HECRAS / hlvWorks etc	Scope 2.4.5 Section IV / 1.2	Separate files for hard and soft bed data	FCS
Collect Survey Data	XLSX	Scope 2.4.4(i)	Using CollectForm.xls Template	FCU
New table to be compiled / existing table to be revised	XLSX or other	Scope 2.4.5		FBE
Information survey results	GaugingStation.xls	Section V / 1.3 and 2.2		FRY

Photo 11. EA Product Codes

Putting each of these potential problems into a real-life scenario highlights the profit and time-saving possibilities that GeoRiver® offers users.

Put simply, liberate your time, improve profit in every project by creating superior solutions. Case study examples can be found here: <https://www.storm-georiver.com/case-studies/>

Head to <https://www.storm-georiver.com/download/> to get your free trial or purchase further licences.

To schedule a demo, contact Anthony Pritchard support@storm-georiver.com