

# Midleton Flood Relief Scheme

Progress Bulletin November 2017



COMHAIRLE CONTAE CHORCAI  
CORK COUNTY COUNCIL



## **Recent and Upcoming Works and Surveys**

A number of separate works and survey contracts have been progressed by Cork County Council over recent months. These include a LiDAR survey, a geophysical survey, treatment of Japanese Knotweed and ground investigation works. All of these surveys provide crucial information which is required in order to progress the development of the Flood Relief Scheme for Midleton and surrounding areas.

### **LIDAR**

In May 2017, Bluesky Ireland carried out a LiDAR survey of Midleton and the surrounding area. LiDAR stands for Light Detection and Ranging and is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth. A sample of the Digital Surface Model and the Digital Terrain Model which was developed from the survey information is presented on the opposite page.

The Digital Surface Model includes terrain features, buildings, vegetation, etc., while the Digital Terrain Model represents the bare earth / underlying terrain of the earth's surface. Both sets of data are available in resolutions down to 0.5m grid sizes. This data will be used to represent the floodplain of the Owenacurra and Dungourney river catchments, which will form part of the 2-dimensional component of the hydraulic model.

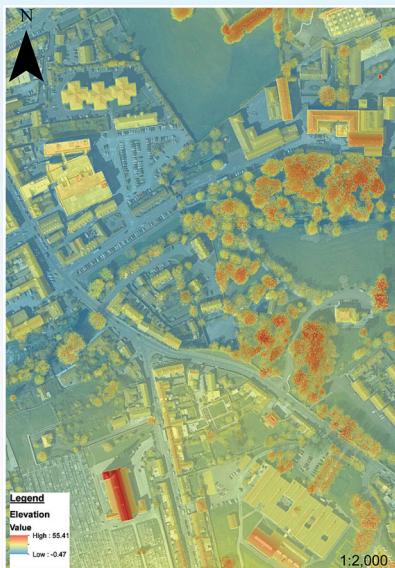


Figure 1 Digital Surface Model

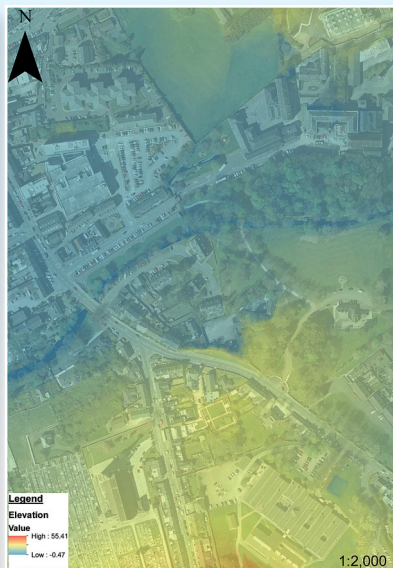


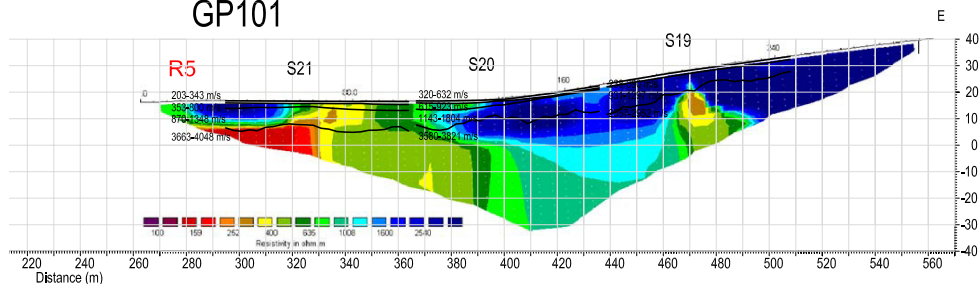
Figure 2 Digital Surface Model

## Geophysical Survey

Cork County Council appointed Apex Geoservices Ltd. to carry out a geophysical survey in the study area. The geophysical survey consisted of 7 survey lines covering a combined length of nearly 4.5 km across a mixture of urban, residential and agricultural land. The survey will aid the geotechnical and hydrogeological investigation of the Flood Relief Scheme.

The survey provides information on the width, depth and extent of the paleochannel (an ancient river channel now filled with sediment) between rock valleys, the type and thickness of the overburden (the material lying over the bedrock) and the depth to bedrock. A sample of the geophysical survey results with geological interpretation is shown overleaf.

# GP101

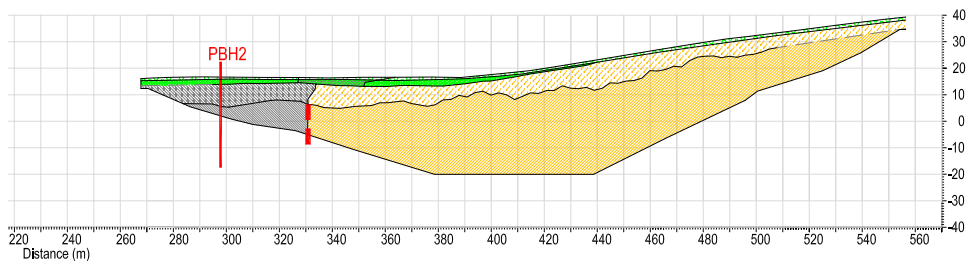


## Legend

Seismic refraction layer with  
1254-1288 m/s interpreted P-wave velocity

- Soft sandy gravelly SILT/CLAY
- Firm sandy gravelly SILT/CLAY
- Loose clayey SAND/GRAVEL
- Medium dense clayey SAND/GRAVEL
- loose SAND/GRAVEL
- Medium dense SAND/GRAVEL

- Highly-Moderately Weathered SANDSTONE
- Slightly Weathered to Fresh SANDSTONE
- Highly-Moderately Weathered SHALE
- Slightly Weathered to Fresh SHALE







## **Japanese Knotweed Treatment**

Cork County Council appointed a specialist Contractor - Japanese Knotweed Ireland - to carry out Japanese Knotweed Advance Treatment Works within the study area. These Advance Treatment Works took place in two stages. The initial round of treatment took place in August, with additional treatment carried out in September.

The treatment of Japanese Knotweed along riverbanks will reduce flood risk due to blockages in advance of the main Flood Relief Scheme.

Please remember not to cut/trim Japanese Knotweed if you encounter it.



## **Ground Investigation**

Cork County Council has appointed Priority Geotechnical Ltd. to carry out Ground Investigation works in the Midleton area. The works will involve drilling boreholes, excavation of trial pits and testing and monitoring (both on site and in laboratory). The purpose of this contract is to obtain information in relation to the geology and hydrogeology of the study area, which will allow a greater understanding of the interaction between flooding mechanisms and groundwater.

Works are ongoing since late October, and are programmed to take place over the course of 9 weeks, with additional monitoring and testing following the main works. The works are programmed to take place between late October and December of this year. The locations for the drilling have been determined based on information gathered during the geophysical survey carried out earlier this year.

Priority Geotechnical Ltd. will be in contact with landowners in advance of the works to arrange access to monitoring locations, and your co-operation with these works will be greatly appreciated.

This contract is a further important step towards developing a robust Flood Relief Scheme for the Midleton area.



## Overall Timeline

It is anticipated that the current stage, Stage 1 - Scheme Development, will be completed by early 2019, with the remaining 4 Stages to follow as outlined below:

Stage 2	Design and Planning, including Public Exhibition of the Scheme	Due for completion by Q4 2019
Stage 3	Detailed Design, Confirmation and Tender	Due for completion Q4 2020
Stage 4	Construction	Commencing Q4 2020, completion Q4 2022
Stage 5	Handover of Works	Q4 2022 to Q4 2023

## Ongoing communication

*Cork County Council, the design team and contractors carrying out the above works have been in ongoing contact with affected landowners and concerned members of the public. We are grateful for all co-operation to date, and hope that we can continue to rely on the support of the public.*

## Additional Information

*Additional information in relation to overall progress, current news items and project reports can be found on the Midleton Flood Relief Scheme project website: [www.midletonfrs.ie](http://www.midletonfrs.ie).*

*The project team can be emailed at the following email address: [midletonfrs@arup.com](mailto:midletonfrs@arup.com)*



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