

Dún Laoghaire-Rathdown Co. Co.

Screen/Blockage Impact & Risk Assessment



Contract Brief

JBA were appointed by DL RCC to identify, investigate, model and provide mitigation advice for 21 culverts within the county.

DL RCCs main requirements are centred on:

1. Understanding risk related to culvert screens and the appropriateness of their design;
2. Understanding the risk posed by blockage at culverts.

The information will then be used for;

1. Management of Screens/Culverts;
2. Emergency Planning;
3. OPW Minor Works Applications.



Services

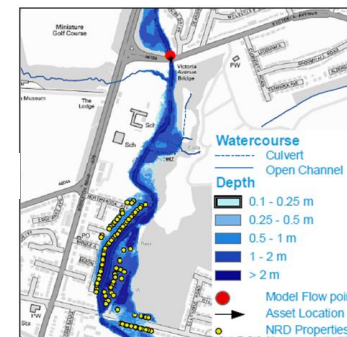
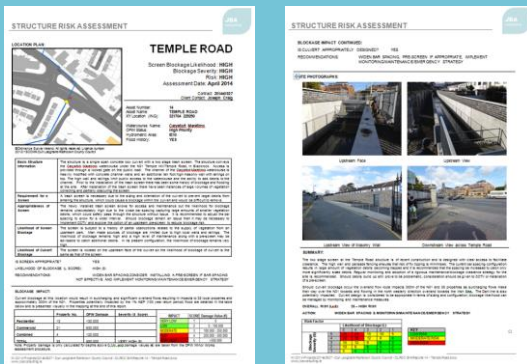
1. Flood history data collection;
2. Conduct a site visit of each culvert;
3. Assess the risk posed by the culvert screen and;
 - a. Determine whether the screen is appropriate, or;
 - b. If a screen is required for the culvert;
 - c. Recommend management/mitigation actions;
4. Assess the impact of blockage to the local area;
 - a. Provide a flow estimate at each site;
 - b. Conduct JFlow/JSscreen Hydraulic modelling;
 - c. Assess potential flooded property numbers
 - d. Investigate risk/economic costs;
5. Present standalone report for each site (OPW Minor Works compatible) highlighting risk and management options;
6. Provide a summary risk report (excel format) for all agreed sites including risk ranked summary for screen and culvert blockage.

Outcomes

The standalone reports in combination with the summary risk report in MS Excel have allowed Dún Laoghaire-Rathdown County Council (DLRCC) to better understand the scale and nature of potential screen and culvert blockage impacts across the county and adopt a risk based approach to the maintenance and mitigation of flood risk from their trash screens and culverts.

Focussing attention on structures that have been identified as posing a risk to property prior to an actual flood event taking place is a key benefit of the study. Identifying the appropriateness of trash screen design and positioning also assists with effective mitigation of debris collection.

JBA adopted a catchment based approach that has identified a potential attenuation storage area in an upstream parkland. This is now being investigated under a separate commission and will hopefully contribute to additional reductions in flood risk to downstream property.



24 Grove Island
Corbally
LIMERICK
Co Limerick
Tel 061 345 463

JBA Consulting
Engineers and
Scientists Ltd

Reg no: 444752

For more information

Please call us on 061 345 463 or email: info@jbaconsulting.ie

www.jbaconsulting.com

JBA project ref: 2014s0927



2012 finalists
Royal Academy of Engineering
The MacRobert Award
for innovation in engineering