



# The Box Culvert Specialists



# Why Croom?



- ▶ Croom Concrete has for many years been acknowledged as one of the market leaders in the Irish Market for the design & manufacture of precast concrete box culverts, providing a high quality service, sound technical expertise and contract administration. We are committed to partnering concept through experience gained in operating long-term framework type contracts with national contractors and water companies etc.
- ▶ This expertise and manufacturing capability has been built up over the last 30 years since the use of box culverts became recognized as a practical solution for drainage solutions..
- ▶ We are regularly involved in design/build & PFI contracts as well as the more conventional supply only approach. Our flexibility and constant strive to offer Added value to our customers has led to the development of a standard range of culvert sizes ranging between 1000mm & 6000mm spans, offering the market's widest choice to suit specific hydraulic requirements. Standard units can also be supplied with special features such as access openings, solid end walls, dry weather flow channels and tapered units for radial deployment.
- ▶ Croom Concrete has supplied a large amount of precast culverts and bespoke precast to the Water Industry, working on schemes that have involved most of the local Water Authorities. We have also supplied significant amounts of precast culverts and bespoke precast for the Highways Agency and the Local Authorities on infrastructure schemes



# Pricing Guidance

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- ▶ Croom accepts emailed, faxed or posted enquiries which we aim to price within 7-10 days of receipt. Depending on current workloads this timescale can often be significantly reduced if requested. Please be aware that because of the bespoke nature of culvert pricing each enquiry will take at least a few hours to prepare once started and possibly several days for more complex schemes.
  - ▶ In the first instance quotations will be returned by email if an address is supplied followed by a hard copy in the post.
  - ▶ To assist us ensuring that our quotations are as accurate as possible we request that your enquiry is accompanied by as much information relating to the culverts as is available. We can provide budget quotations with minimal information.
    - ▶ Such as size, length of run and location, but firm prices will require additional detail.
    - ▶ Location of project
    - ▶ Culvert size (internal dimensions)
    - ▶ The length of culvert run
    - ▶ Minimum/Maximum fill depths above the culvert – Invert and Ground Levels preferably
    - ▶ Loading conditions (Field loading, HA, HB, Eurocode etc)
    - ▶ If the culvert is to be used as a storage tank, and if any special inverts are required
    - ▶ Design class (XD1, XD2, XD3 etc)
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# Product Range

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- ▶ Croom has a modular mould range of vast amount of different possible combinations. Some sizes are more common than others and therefore more moulds are available in those sizes. Unit sizes range from 1000mm to 6000mm in width and 600mm to 4000mm in height. Units as standard have a flat invert however special inverts and channels are available upon request.
  - ▶ Please note that special inverts are built up off of smaller moulds therefore the shallowest Dry Weather Flow channel available would be 750mm, and the shallowest Shallow V invert would be 675mm. The internal height of a special unit is always measured from the base of the invert.
  - ▶ Units can be supplied tapered to enable bends in culvert runs, typically no more than 10° per unit. Manhole openings and
  - ▶ Pipe access holes can be produced on request, and runs can be capped with an integral end wall to form a tank. Channel units are also available.
  - ▶ All box culverts are manufactured to order and to the specific required design criteria. The external loading conditions will govern the wall, roof and floor thickness, unit length and reinforcement content.
  - ▶ With some exceptions the stated widths and heights can be combined to create the internal size of your choice. All measurements are internal sizes. External measurements will be dependant upon design conditions.
  - ▶ Please contact us to discuss your specific requirements.
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# Case Studies



## Parallel Box Culverts Provide Solution

Two 4.2 metre box culverts running parallel to each other make 8.4 meter bridge crossing possible at Red Strand, Clonakilty, County Cork. Cumnor Construction was commissioned by Cork County Council to install the culverts. Croom Concrete culverts were used to make what would be a difficult and time consuming job into a safer and quicker solution for replacing the bridge. All culverts arrived on site and were fitted on the same day.



## Croom Install Box Culverts for Mayo County Council

Croom Concrete has installed 12m of precast box culverts to create a river crossing in Mayo. Croom was commissioned by Mayo County council to install and manufacture the four, 3m wide, 1.5m high box culverts. The end culverts had head walls precast into them, this meant less work before the road could re-open.

All of the culverts used in this job were made to the eurocode design standards, which are Britain and Ireland's standards for structural design. Croom Concrete culverts were used to make what would be a difficult and time consuming job into a safer and quicker solution for replacing the bridge.

Mayo county council allowed two days for the job but the culverts were installed in just under three hours after arriving on site. Kieran Erwin from Mayo County Council said "The culverts installed were of exceptional standard and they fitted together perfectly in very little time".



# Case Studies



## Croom Supply Box Culverts to OPW Flood Relief System Clontarf

- ▶ Croom Concrete supplied over 150 linear metres of box culverts to the flood relief system in Clontarf Co. Dublin. The system which is being installed by the Office of Public Works includes culverts ranging from 1.5mts sq to 2.1mts sq. The installation took place in the Summer 2014 in the grounds of Clontarf Golf Club.
- ▶ This project took place under the Arterial Drainage Act 1945 and the Arterial Drainage Amendment Act 1995. The purpose of this system is to “minimise the flood risk exposure of households and businesses from coastal flooding”. The golf course’s 12 hole green is to be raised by over two metres and set back into the mound in order to avoid flooding after the relief works are complete. Any proposed works will be undertaken on a zero cost basis to Clontarf GC.
- ▶ Overall OPW were very happy with the culverts and the service supplied by Croom.



# Frequently Asked Questions

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## **Is there a minimum/maximum order value?**

- ▶ Our factory facility has the capacity to support even the largest schemes. Likewise, we are happy to supply smaller projects where only minimal numbers of units are required. Note that there are fixed costs in the design and manufacture of culverts that make larger schemes more economical than smaller ones.

## **Do you supply your own designs?**

- ▶ Croom will supply full design calculations and drawings once appointed as a supplier. Normally this is a full order to design and manufacture the culverts however if workload allows we can occasionally take on design-only orders at a cost of £500.00 per set of calculations (contact the team for costs for Eurocode specified projects). If the project ultimately leads to a full supply order this charge of €500.00 will not be payable.

## **How quickly can you deliver the culverts to site?**

- ▶ Several factors determine how quickly units can be delivered to site. Typically designs can be issued within two weeks of an order being placed and only once the approval of these designs is received will manufacture commence. From there the number of units required and availability of our moulds will dictate delivery times. Current order levels will affect both design and manufacturing processes so deliveries vary. Please contact the team to discuss your delivery requirements, and remember that delivery dates are valid on day of offer and may need to be renegotiated as necessary. In all cases Croom supplies bespoke precast culverts that are specific to your requirements therefore we do not carry stock in any size.

## **Will Croom supply an Approval in Principle (AIP) document?**

- ▶ Our expertise in the design and manufacture of box culvert units enables us to offer information within Section 5 of the AIP to enable the purchaser to complete the document. We are not able to offer interpretive recommendations from the ground surveys soils reports in respect of ground bearing pressure, settlement or ground water effects, etc. It should be noted that the box culvert units have a unique design for each project and that this design, and the associated detail drawings, will only become available after an order has been placed. A design certificate for the box culvert units can be issued in accordance with the signed Approval in Principle.
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# Frequently Asked Questions

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## **What information do you need to be able to give me a quotation?**

- ▶ We are able to offer a budget price against the minimal information of culvert sizes, length of run and location of project. For an accurate formal quotation we request design information including the minimum/maximum fill depths, loading conditions, design class, profile shape, use of units (storage tank, crossing etc) and details of any specific requirement such as changes of direction, openings or coatings. Drawings and specifications are the best way to ensure a compliant bid. We also ask that in all cases you provide full contact details to ensure we can contact you if we have further queries and that the quotation arrives safely.

## **Do you offer an installation service?**

- ▶ Unfortunately we do not install precast culvert units, we are simply the manufacturer. This is usually carried out by a ground worker/contractor and we will deliver the units to site in accordance with their programme. We can supply you with a copy of the Box Culvert Association's Guide to Site Practice which offers information relating to the installing of the culvert units.

## **Can I see my culverts being manufactured?**

- ▶ If you wish to view the manufacture of the precast culverts we would be more than happy to arrange to guide you around our factory. We are centrally based with excellent transport links, located just a few minutes from Limerick City in Croom.

## **Are your culverts designed to Eurocode standards?**

- ▶ By default our precast culverts are designed to Eurocode standards as presently the majority of projects are requiring this.



# Our Contact Information

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## Our Contact Information

Croom Concrete

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Co.Limerick

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**If there is anything further that you wish to know about Precast Culverts or any of the other products that Croom Concrete can offer then please contact one of the team.**

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