

COMPLEX CHALLENGES ... MADE SIMPLE

RoC Consulting is a highly experienced and qualified team of civil, structural, geotechnical & geo-environmental engineers

CASE STUDY

RHS GARDEN, BRIDGEWATER

Key facts

Project
RHS Garden Bridgewater

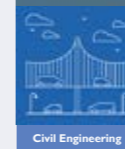
Client
Royal Horticultural Society

Architect
Hodder & Partners

Garden Designer
Tom Stuart-Smith

Value
£30m

Project duration
2016 - Completed 2020
Opened May 2021
(due to pandemic)



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BACKGROUND

The Royal Horticultural Society (RHS) is the world's leading gardening charity, inspiring passion and excellence in the science, art and practice of horticulture. As part of a 10-year, £160 million investment programme the RHS pledged to find and develop a site for a fifth Garden, in the North West of England and in November 2015 the RHS announced that they had selected the former Worsley New Hall in Salford site. This fifth garden is called RHS Garden Bridgewater and will be a major new tourism and horticultural destination which aspires to welcome and inspire up to 700,000 people a year within a decade.

The plan is to create a stunning new 63 ha (157 acre) garden in the heart of the North West by bringing back to life the lost historic grounds at Worsley New Hall. The RHS has appointed world-class landscape architect Tom Stuart-Smith to create the overall master plan for the garden which will include the eventual restoration of one of the most impressive terraced gardens in England, stepping down 20 m from the site of the historic Hall to the lake. Phase 1 of the scheme includes the restoration of the magnificent 11 acre walled garden and ancillary buildings, the creation of a visitor centre and a new lake. A new horticultural yard is to be constructed to support the gardens and the provision of visitor car parking and associated access roads and infrastructure restoration.

PROJECT OVERVIEW

RoC was appointed as civil & structural engineers by the Royal Horticultural Society in 2016 for the fifth garden at RHS Garden Bridgewater. Our civil, structural and geotechnical teams delivered the technical solutions to turn RHS's vision and the architect's designs into reality.

Responsibility for the design of all onsite highways and drainage for the scheme lies with our civil engineering team. The design for the surface water drainage system is entirely SUDS based including permeable car park construction, swales for storm water attenuation and a bio-retention pond before discharging to the local watercourse at green-field run-off rates. Our civil engineering team also developed the design of the new feature lake.

Our Earth Sciences team undertook the site investigations of the underlying sub-strata in order to inform foundation and pavement design. This involved developing with practical and cost effective solutions for ground improvement to address the soft/weak soils that underline the site.

Our structural engineers have brought their wealth of experience in historic buildings to this project, in the refurbishment of the old potting sheds and stable buildings, turning them into a new retail outlet and cafe/restaurant facilities. We worked with the Architectural team working on the structural design for the new £12m Visitor Centre, which includes ticketing, educational, café and retail spaces, incorporates a timber glulam roof supported by freestanding concrete columns.

Rainwater harvesting, a green roof and ground source heat pumps are integral to the sustainable strategy.

Awards:

- MSA Design Award 2017
- Architect of the Year Structural Timber Awards 2020
- Project of the Year Structural Timber Awards 2020

