



DATE: 18 March 05

TO: The Editor

**WHAT IS HARDER THAN ROCK YET SOFTER THAN WATER –
WATERJET CUTTING – CREATING A RELATIONSHIP THAT CONNECTS
THE VISION OF AN ARTIST WITH THE MECHANICS OF A MACHINE**

Science and engineering are constantly improving the way that things can be made while artists strive to harness new technologies to produce their creative visions. The challenge, inevitably, lies in the relationship between the needs of the artist to maintain individuality, and the mechanical constraints of machines and processes that are available to produce art.

Putting this relationship to the test Liz Lemon, a renowned public sculpture artist based in Nottingham, commissioned Control Waterjet Cutting, a Chesterfield based company, to work with her to help produce a number of public sculptures that required very precise and delicate cutting in stone and metal. The projects have included: The sculpture at The National Water Sports Centre, Holme Pierrepont, Nottingham; the Bolsover Gateway, Bolsover, Riverside Village, Chesterfield and currently a commission for Stoke-on Trent City Council

The Bolsover gate project presented some particular challenges that pushed the technological boundaries of the engineering processes available. The gate, based on the doors and lavish early seventeenth century gilded decoration found in Bolsover Castle, required intricate cutting that would have normally been done by hand.

Commenting on the challenges Liz said, "It is important that the work that is produced retains the individuality that has been breathed into the design by the artist. This was very important for the Bolsover gate design, which incorporates fine sculptures of birds, prehistoric dragonflies and signatures cut out of the steel panels in the gate and the stone surround. The process that we chose for cutting these had to have the flexibility to cope with this."

Due to the very fine nature of the cuts required there were a number of technical issues to be taken into account. The most difficult was the need to convert an artistic design, which had been crafted by hand, into a mechanical programme that could run a machine. In addition the process finally chosen had to offer low distortion of the surrounding material. After evaluating various processes waterjet cutting was chosen as the process because it cuts by erosion rather than burning, such as other processes like laser cutting, giving little heat and much more accuracy and control. Control Waterjet Cutting was appointed as the contractor due to their ability to programme very complex forms.

Continuing, Liz explained why Control Waterjet Cutting was the company chosen to help, "They gave me significant help from the beginning and were very proactive. Their engineers overcame the problem of programming with some innovative approaches to turning picture files into CAD drawings that the machine could read. A number of tests were conducted before a method was found to achieve the desired finish and accuracy while maintaining the creative feel and individuality of my design."

If you have a complex cutting requirement or would like to have further information regarding Waterjet's capabilities please call Ian Macpherson, Sales Manager of Control Waterjet Cutting, on 01246 284000

----- End -----

Notes to the editor: -

Photos are available on request

The Bolsover Gateway project is part of the Groundwork National Changing Places regeneration programme funded by the national lottery.

Contact details: -

For technical information and enquires please contact Mr Ian Macpherson Sales Manager: -



Control Waterjet Cutting
Unit 18 Speedwell Industrial Estate
Staveley
Chesterfield
Derbyshire
S43 3PF
Tel 01246 284000
Fax 01246 284003
Email: - ian@controlwaterjet.co.uk
Web: - <http://www.controlwaterjet.co.uk>

For all general information and requests for separation charges, please contact Peter Wilkinson at: -



Panther Interactive Marketing Ltd

45 Greenhill Road
Coalville, Leicestershire
LE67 4RL, UK

Tel No: +44 (0) 07041-471146
Fax No: +44 (0) 07041-471246
Mobile No: +44 (0) 07930-330125
Email: peter@panther.org.uk
Web: www.panther.org.uk