



Project Fact Sheet

N5 SCRAMOGE TO CLOONMORE CO. ROSCOMMON



ABM Bridge Systems, Matière Opti Cadre 5.5m Span

Project	Bridge over live rail line
Client	Roscommon County Council
Completion Date	Matière structure completed September 2002
Design Team	McCarthy Acer Consultants Ltd
Description	Design and construction of bridge over live rail line.

FACTFILE

Structure	Matière Opti Cadre 5.5m X 4.0m
Span	5.5m (internal)
Height	4.0m (internal)
Length	20m (8 no. Units @ 2.5m wide)

REQUIREMENTS

- Bridge over live rail line
- Two-way road to run over bridge
- Minimum impact on rail line.

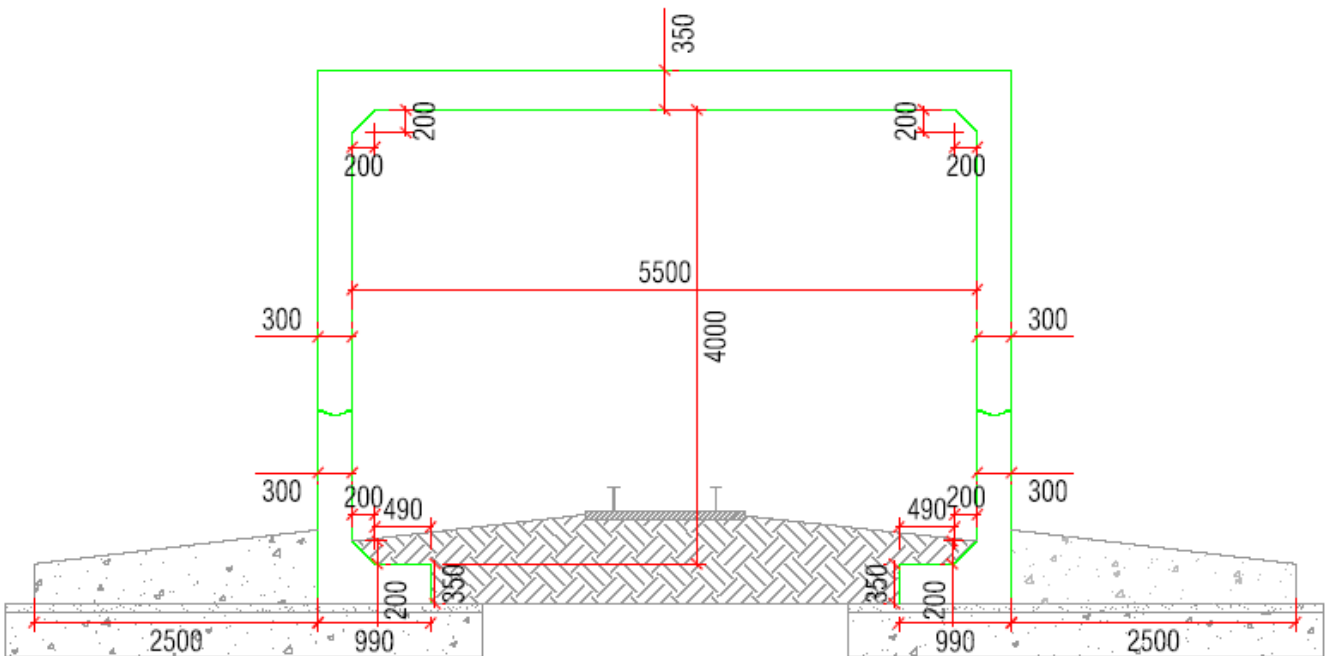
SOLUTION

- ABM designed a 5.5m span Matière Opti Cadre to span to rail line.
- Specially devised construction methodology allowed the rail to remain open during construction
- Using in-situ heels allowed the tracks to remain completely undisturbed during installation
- Wing walls were used to achieve soil gradient above the structure.

Matière®

The Matière system was originally developed in France for hydraulic structures in the 1980's, since then the system has been developed into a modular range of arch, box and portal frames for a wide range of transport and infrastructure applications. Indeed, some 10,000 structures already exist worldwide exploiting soil structure interaction to minimise section sizes and allow rapid, cost effective on-site installation with precast units.

ABM hold the licence for the Matière system in the UK and Ireland.





Project Fact Sheet

N5 SCRAMOGE TO CLOONMORE CO. ROSCOMMON

DETAILED SPECIFICATION

Upper Elements

Mould	Matière Opti Cadre
Span (internal point to point)	5.5m
Height (internal soffit to joint)	1.3m
Roof thickness	350mm
Number of units	8
Volume of units	9.4m ³
Weight of units	23.5 tonnes
Additional information	

Lower Elements Type

Mould	Matière Opti Cadre
Height (top of toe to ball/socket joint)	2.7m
Length of toe (from inside of wall)	690mm
Wall thickness	300
Toe depth	350mm
Number of units	16
Volume of units	1.8m ³
Weight of units	4.7 tonnes
Additional information	
Heel construction	In-situ concrete

Additional Information

Concrete Grade	C50
Cement type	CEM1
Reinforcement cover	30mm
Couplers	N/A
Finish	As struck from steel formwork



Dublin Office:
Unit 2B Feltrim Business Park,
Drynam Road, Swords, Co. Dublin.
Tel: +353 (0)1 890 0919
Fax: +353 (0)1 890 0932
Email:bridgesystems@abmeurope.com

UK Office:
Ollerton Road, Tuxford,
Newark, Notts, NG22 0PQ
Tel: +44 (0) 1777 872233
Fax: +44 (0) 1777 872772
Email:bridgesystems@abmeurope.com