



LORDGATE ENGINEERING

## PRODUCT PROFILE

# BODYSIDE SKIRTS FOR RAIL VEHICLES

### • PROJECT

### CORADIA DMU

### • OBJECTIVE

Working with the vehicle designers and both the electrical and mechanical underframe engineers, the project objective was to provide adequate cooling ventilation and equipment access whilst achieving a product that could enhance the vehicles appearance and contribute to the performance levels.



### • DIMENSIONS

Total skirt length per vehicle	28m
Total skirt weight per vehicle	225kg

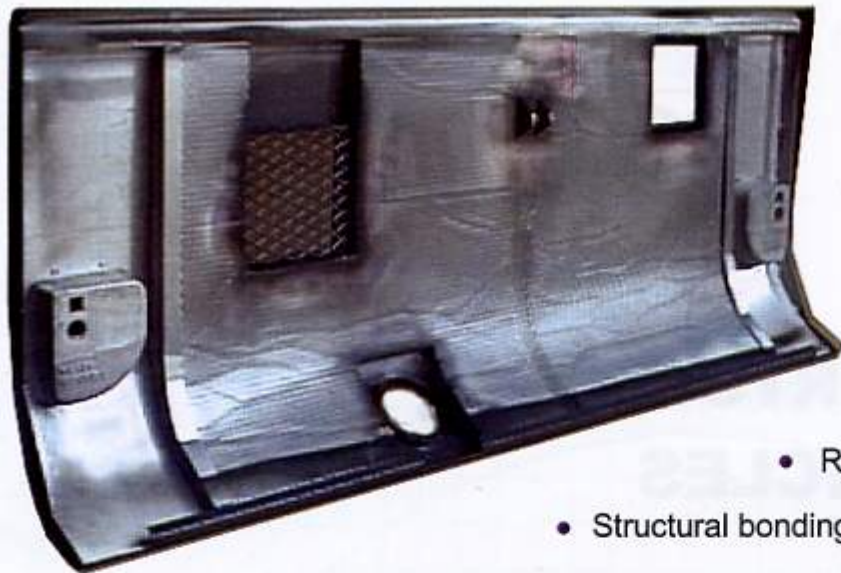
### • DESIGN CONSTRAINTS

With the gauge profile parameters carefully defined and the mounting arrangement determined by the vehicles body builder, it was necessary by using CAD modeling techniques to be compliant with the following aspects of the design.

- Compliance with Rail Group Standards including the provision of approved locks
- Compliance with the Space Envelope
- Management of underframe temperatures
- Management of noise generation
- Weight targets

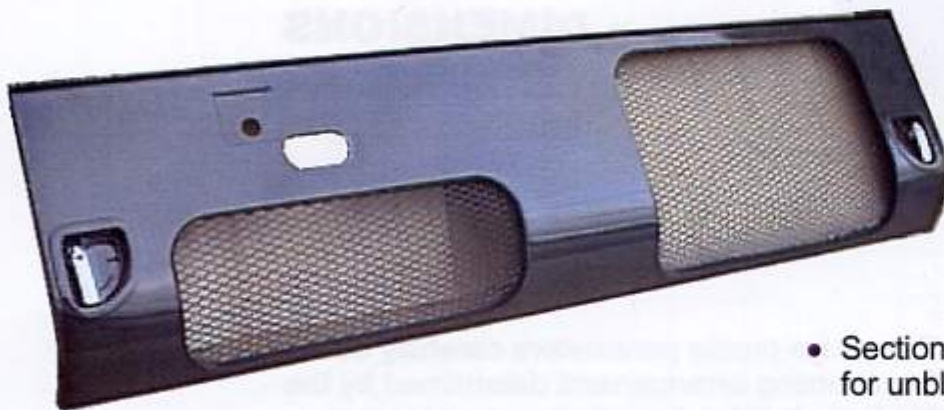
### • PROCEDURE

Detailed overleaf is the respective information for the final product prior to installation, with the characteristics and construction details alongside the assembly views.



## INTERIOR VIEWS

- Coded aluminum MIG welding in accordance with BS4872, Part 1 & 2, Tests 1 & 2.
- Expanded mesh ventilation grilles.
- Rolled and formed profile supports.
- Structural bonding of pivot support.
- Fibrous insulation formed and retained with adhesive and mechanical fixings.
- Bonded longitudinal stiffening sections with secondary weld retention.



## EXTERIOR VIEWS

- Stretch formed grille and access surrounds.
- Environmentally compliant paint system.
- Extruded aluminum hinge section.
- Section profile formed in match tooling for unblemished surface finish.
- Cast aluminum lock surrounds with high visibility quick release handles.

With the preferred modern assembly procedures of line-side deliveries being adopted by the main train building companies, we are happy to incorporate this requirement into customized stillages to remove the requirement of disposable packaging and inefficient double handling