



grasscrete

CASE STUDY

PROJECT:	Manchester Metro Link, Salford Quays, Manchester, England
CLIENT:	Greater Manchester Passenger Executive/Atram
FUNCTION:	Access to Light Rail System
MAIN CONTRACTOR:	Laing/Ansaldo JV
SUB-CONTRACTOR:	Chantry Contractors Limited
SYSTEM:	GRASSCRETE GC3 (76mm thick)
QUANTITY:	4200 m²
CONSTRUCTED:	1999





Casting GRASSCRETE slabs with formwork boxes over rail lines

With a phase of the light rail system passing through the prestigious Salford Quays. The aesthetic impact of a rail system was a major consideration. With a decision to increase the “greenspace” Grass Concrete Limited were called into design consultation with the Project Managing Joint Venture, Laing/Ansaldo.

Design influences were:

- ❑ To provide an access between the lines for light commercial vehicles.
- ❑ To permit nature's drainage, even though a solid concrete slab was to be laid below the sleepers.
- ❑ To create a surface that could not be vandalised.
- ❑ To provide sufficient flexibility in plan profile to cater for the varying layout of the track.
- ❑ The ability to incorporate signalling loops within the structure

In consideration of these key factors, a pre-cast system was rejected and instead cast on site, GRASSCRETE was introduced. To enable casting, a formwork system was designed that framed a box over the rail line. Crossfall drainage was catered for by a sand/gravel bedding layer between the underside of the GRASSCRETE and the lower solid concrete slab. This was contained at each line by a fluted concrete kerb under the GRASSCRETE, designed and manufactured by Grass Concrete Limited. As well as forming a clearance gap between the paving and the line, this permitted crossfall drainage collection, via French Drains.

With limited access for construction, the concrete placement and topsoiling operations were undertaken by using a road railer 360° excavator.

With Manchester's reputation for rainfall, the establishment of a green landscape quickly followed.