



PROJECT CASE STUDY • RAIL INFRASTRUCTURE



GRP access shaped to a demanding embankment

Glendouglas • QTS Group project

CLIENT

QTS Group project

LOCATION

Glendouglas, Scotland

APPLICATION

Embankment stairs and walkway

SECTOR

RAIL INFRASTRUCTURE

DELIVERY

ESTABLISHED GROUP PROJECT EXPERIENCE

COMPLETED

PROJECT EXPERIENCE

A long, multi-direction route across steep and uneven ground

The original timber access was split by a gravel path and had become dangerously slippery. The replacement GRP route used stairs, mesh landings, handrails, safety gates and a connecting walkway shaped around the changing terrain.



The access challenge

The first section followed a relatively gentle slope but required a 34 m route to descend 9.6 m, with a 45-degree direction change at the bottom. A steeper lower section required four further changes of direction, while a grating walkway replaced the gravel link between the two stair sections.

Our approach

- Mapped steep, uneven topography and route changes
- Combined mesh steps, landings, profiles and handrail
- Used lightweight components suited to difficult access

Technical scope

SYSTEM

GRP STAIRS / LANDINGS / CONNECTING WALKWAY

INTERFACES

STEEP, UNEVEN RAIL EMBANKMENT

MATERIAL

GRP MESH TREADS / PROFILES / HANDRAIL

PROGRAMME

**34 M UPPER ROUTE WITH FIVE DIRECTION CHANGES
OVERALL**



One continuous access system across difficult terrain

The completed arrangement replaced slippery timber stairs and a gravel link with a coordinated GRP access route.

Project outcomes

The upper stair flight follows the gentler slope before changing direction to meet the ground-level route. A grating walkway then connects to the steeper lower section, where intermediate landings and further direction changes manage the descent toward the trackside access point.

Key benefits

- Topography and safe access points informed the route
- Stairs, landings, walkway, handrails and gates
- Lightweight GRP components suited difficult handling conditions
- Standard GRP elements configured for a non-standard slope



APPROVED TESTIMONIAL OR VERIFIED DELIVERY RESULT

The finished route combined a 34 m upper section, a linking walkway and a steeper multi-landing descent.

Established group project experience. No testimonial used.

Evidence-led project delivery

This project demonstrates why embankment access cannot be treated as a standard staircase: topography, unloading points, route changes, intermediate landings and trackside interfaces need to be coordinated as one system.

Project checks

- Slope, levels, safe unloading point and trackside route
- Flights, landings, ground interface and supports
- Handrails, intermediate landings and safety gates
- Outdoor exposure and slip-resistant walking surfaces
- Alignment, direction changes and continuous route review

Evidence retained

- Recorded site topography and access points
- Project-specific stair and walkway arrangement
- Configured GRP stairs, landings and handrails
- Completed-installation case-study photography

This completed-project story is not project-specific engineering advice. Requirements must be confirmed for each site.

Continue the technical journey

- Rail infrastructure — grpexpress.co.uk/sectors/rail-infrastructure/
- GRP access stairs — grpexpress.co.uk/grp-access-stairs/
- How to specify GRP — grpexpress.co.uk/how-to-specify-grp/
- GRP standards — grpexpress.co.uk/grp-standards-specification/
- Assurance Centre — grpexpress.co.uk/assurance-centre/
- Technical support — grpexpress.co.uk/technical-product-support/
- Vital GRP specialist projects — vitalgrp.co.uk

NEED A SURVEYED GRP ACCESS SOLUTION?

Share the site constraints, access requirement and programme with the GRP Express technical team.

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