



# DDA COMPLIANT HANDRAIL

Our DDA compliant handrail is designed to comply with part M of the building requirements. With an inherent 'warm to touch feel,' TouchSafe is a long-lasting, modular GRP handrail solution for stairs, ramps & walkways.



# INTRODUCTION

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According to the Office for Disability Issues and Department for Work and Pensions there are over 11 million people with a limiting long term illness, impairment or disability in Great Britain.

Disabled people contribute over £80 billion a year to the UK economy and account for up to 20% of the customer base for UK businesses, making it essential to have the correct facilities in place.

Under the terms of the Equality Act 2010, reasonable adjustments need to be made to commercial and public buildings to overcome physical barriers which prevent disabled access. One way to achieve this is to provide suitable handrails on external stairways as recommended in Part M of the Building Regulations.

# DDA HANDRAIL REQUIREMENTS

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Handrails should be provided to provide a safe means of access for all, particularly those who find it difficult to negotiate changes of level.

For wide flight of steps, handrails should be used to divide the flight into channels. On flights of steps wider than 1800mm, it is recommended that handrails are used to divide the flight into channels between 1000 and 1800mm. If the flight of steps consists of two or more risers, then a continuous handrail should be provided on either side. Where the stairway consists of two or more flights separated by landings, where possible handrails should be continuous throughout the series of the flight.

## DDA Handrail Height

When the height of the possible fall exceeds 500mm a guardrail must be installed. The minimum height of the handrail should be 1100mm, and the handrail should be parallel to the walking line.

The vertical height of the handrail on a stair should be between 900mm and 1000mm above the nosing on the step of the flight, and be a minimum of 1100mm above the walking level of the landing.

The handrail should include at least one intermediate knee rail, or equivalent protection. A toe plate with a minimum height of 100mm should also be placed 12mm maximum from the walking level and edge of the platform and stair landings.



# DDA HANDRAIL DESIGN

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In addition to the previously outlined requirements, handrails should also:

- have a continuous smooth surface and not cold to touch
- be circular or oval for ease of grip. Ideally, circular handrails should have a diameter of between 25mm and 50mm while oval ones should have a width of 50mm
- contrast visually with its surroundings without being highly reflective
- terminate the system in a way which reduces the risk of clothing being caught

Given the requirements of the Equality Act and Building Regulations, and the number of people who require access to commercial and public buildings, companies should aim to create a handrail system which children, the elderly, the disabled and even able-bodied adults can benefit from.

# HOW CAN RELINEA HELP?

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DDA regulations are stringent, but as an experienced DDA handrail supplier, you can rest assured that your Relinea DDA handrail design ticks all the boxes. From the continuous 45mm diameter handrail to the high-visibility finish and warm-to-touch feel, our DDA handrail systems keep your premises compliant, now and into the future.

Our handrail components are produced in lightweight fibreglass sections that are easy to transport and handle. The modular handrail systems can be prefabricated at our manufacturing facility and delivered to site for a simple and easy installation using standard hand tools, saving you time and money.

Suitable for both internal and external applications, our non-corrosive handrail is UV stable and designed to withstand harsh weather conditions. Handrail will not chip, peel or flake meaning zero maintenance. Tubular DDA fittings match the external diameter of the handrail for a smooth and continuous finish.

All our Handrail Systems are manufactured to EN ISO14122-3:2016 and can achieve Class 1 Fire Rating to BS476 part 7, EN 13501 and ASTM E84-19A.

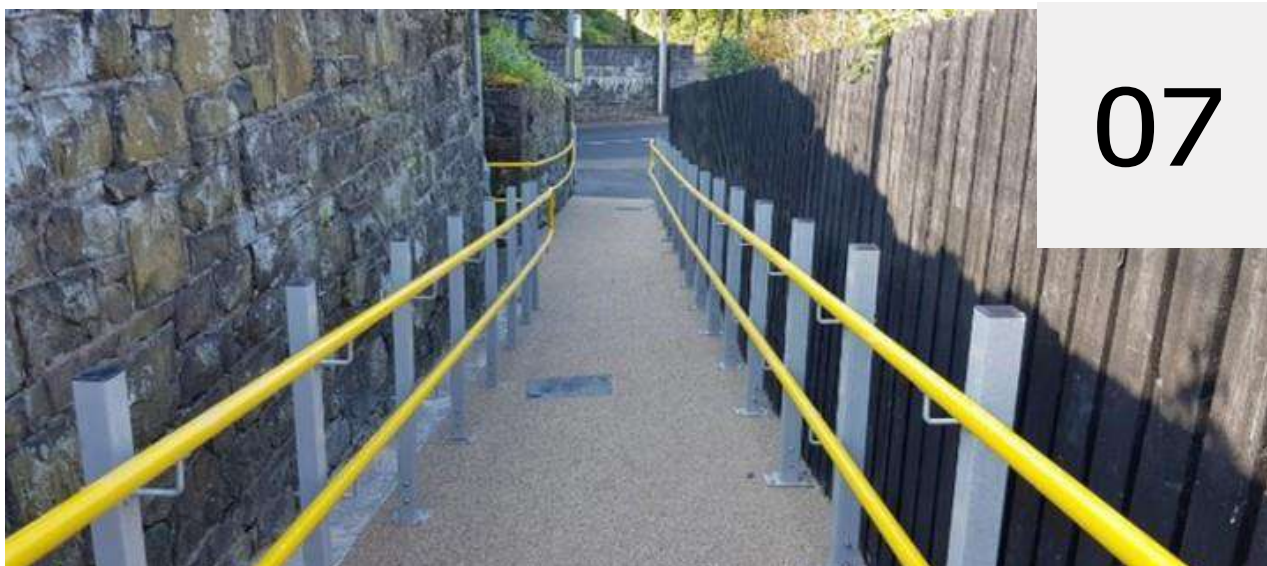




## CASE STUDY - DUNMURRY HALT RAILWAY WALKWAY

### Problem/Challenge

The new DDA compliant GRP handrails were to be installed onto the existing uneven walkway and rocky brick wall. Translink required the handrail to be continuous all around the walkway, and double level making it child-friendly, so small children could also hold on as they walk along. The rail was to be warm to the touch, avoiding any freezing feel on a cold day, and heat resistant to prevent burning in the summer. Due to the flexible features and benefits that GRP products possess; these objectives could be achieved with the well-thought-out design developed.



## Solution

Our experienced in-house design team worked closely with architects Hanna Hutchinson Consulting Engineers Ltd to develop a very detailed 130m ergonomic continuous handrail system. Our Re-Grab GRP handrail was successfully installed along the existing uneven walkway using knuckle joints along the handrail as connectors, and settle brackets as wall connectors.

The rocky brick wall would have challenged the installation of any type of handrail, however, the design and GRP product features allowed for a simple fix using settle brackets. The settle brackets were drilled onto the wall and fixed on allowing for a strong, secure, and solid attachment to the rocky brick wall.

At the end of the handrail, the design allowed for the use of 90° return pieces to connect the 2-level handrail, making it continuous and keeping it safe and child friendly as per the objectives of this handrail system.

Relinea's GRP Re-grab handrails outperform the conventional steel, aluminium, and wooden counterparts; virtually no maintenance, low installation costs, corrosion resistant, and manufactured to EN ISO14122-3:2016.

# BENEFITS OF GRP

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## Recyclable

GRP waste is often shredded and processed to create a high-grade alternative for the cement industry, where it is used as a fuel and mineral raw material. GRP products are also commonly upcycled for use in a wide range of non-standard applications.

## Long Lifespan

The thermosetting resins used in GRP are far stronger and more durable than other plastics, giving most GRP products a lifespan of more than 50 years.

## Low Carbon Footprint

GRP's CO<sub>2</sub> equivalent is less than half that of a concrete bridge and approximately a third of the CO<sub>2</sub> equivalent for a steel bridge. As a result, GRP's carbon footprint is also very favourable.

## Energy Efficient

75% less energy is needed to produce glass-reinforced plastic (GRP) than steel.

## Lightweight

GRP structures are 75% lighter than steel which means 50% less energy is needed for transport and assembly.

## Eco Friendly

GRP produces fewer greenhouse gasses and consumes less energy at the production stage than both steel and aluminum. The production of base resins and fibre rovings doesn't have the same impact on the environment as the production of metals. Pultrusion takes place in a fully-closed process, which minimises the evaporation of volatile compounds, and no smoke clouds or toxic air pollutants are created.







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Reliable, Resourceful.

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We innovate, design, and fabricate advanced technical GRP structural components to overcome weight, corrosion, and slip issues. With a revolutionary approach that uses intelligent GRP design and innovative composite manufacturing to challenge the conventions of construction, we work with our clients to find unique, long-lasting, sustainable solutions. From GRP design to installation, we are a specialist, one-stop resource.



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