Glenfield Footpath Bridges – 9 Year Performance Review

In 2017, three pedestrian Bison bridges and a boardwalk were installed on the public footpath linking Blackthorn Road in Glenfield. The route passes through a wooded corridor with a small watercourse, providing a popular walking route for local residents and dog walkers.

At the time the decision was taken to install Re-Life recycled plastic bridge systems rather than traditional timber structures. The aim was to provide a durable, low-maintenance crossing that could cope with the damp woodland environment.
Nine years later, we returned to site to see how the bridges have performed in real-world conditions.


Bison bridge images, installed 2017

The Challenges of Woodland Environment
The bridges sit within a shaded woodland corridor where moisture, limited sunlight and organic debris create consistently damp conditions.
These environments are particularly demanding for traditional bridge materials. Timber components often remain wet for extended periods, accelerating biological decay and reducing service life.
Timber decking in these environments is widely recognised to have a limited service life. At the Forest Engineering Group Symposium (2025), it was reported to the forestry industry that timber bridge decking in some forest locations was lasting as little as ten years.

Timber bridges in similar locations often suffer from:
•Rot and structural decay
•Algae and moss build-up
•Worn decking surfaces
•Regular maintenance requirements
The Glenfield bridges have also been subject to continuous pedestrian traffic for almost a decade.

Structural Performance After 9 Years
Structurally the bridges remain in very good condition.
The deck remains level with no visible sagging, twisting or distortion of the structural members.
A common concern with recycled plastic products is that they may creep or warp over time, particularly when exposed to temperature changes. After nine years in service, there is no evidence of movement or deformation in either the structure or deck boards.

UV Stability and Colour Retention
Another question that is often raised with plastic materials is how they cope with sunlight over time.
Despite being exposed to outdoor conditions for nearly a decade, the deck boards show very little colour change or UV degradation.
There is no surface cracking, chalking or bleaching visible, indicating strong long-term UV stability.

Biological Growth
As expected in a woodland setting there is some lichen and organic growth on parts of the structure.
This is entirely normal and is seen on almost all materials in shaded environments, including timber, steel and concrete.
Importantly the growth is superficial only and does not affect the structural integrity or performance of the material.

Deck Wear After Nearly a Decade
One of the most interesting observations relates to the deck boards themselves.
To check for wear, a new Re-Life deck board was placed directly on top of the existing bridge deck for comparison.
The ribbed anti-slip profile on the original deck boards remains clearly defined and is almost identical to the new board. There is no visible rounding or smoothing of the ribs, which is often the first sign of wear on traditional bridge decking.
After nearly ten years of pedestrian traffic, the deck shows minimal measurable wear. The hardened moulded surface has retained both its shape and slip-resistant properties.

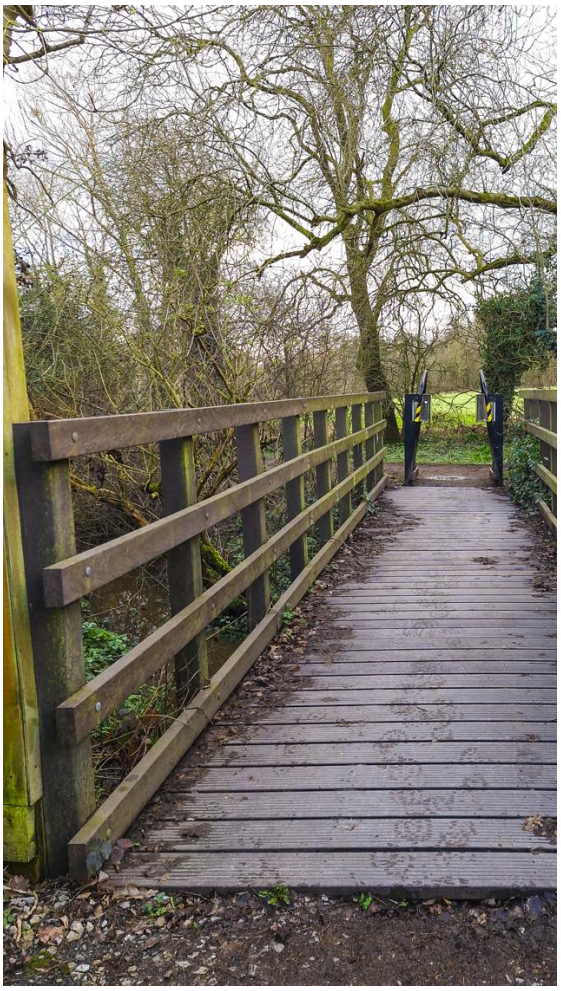
Microplastic Concerns
Occasionally questions are raised about whether recycled plastic structures might shed microplastics as they wear.
However, the condition of the deck boards indicates that surface abrasion is minimal.
The ribs and grooves remain intact and there is no visible degradation of the surface material.

Overall Performance
Nearly a decade after installation the bridges remain fully functional with no signs of structural or surface deterioration.

Key observations
•No warping or distortion
•No UV degradation
•No structural movement
•Minimal surface wear
•Slip resistant deck profile fully intact
Aside from natural biological growth typical of woodland environments, the bridges appear largely unchanged from when they were first installed.

Bison bridge images, 2026

Why Re-Life Recycled Plastic Performs Differently
While recycled plastic materials are increasingly used in outdoor infrastructure, not all recycled plastics perform in the same way. Standard recycled plastic products can sometimes suffer from issues such as:
•Creep or deformation under load
•Surface wear over time
•UV degradation
•Loss of slip resistance



Re-Life material used in Bison bridge systems has been specifically developed to address these concerns.
The material is produced using a scientifically formulated recycled polymer blend, engineered to provide the strength and durability required for structural pedestrian infrastructure. The components are manufactured as hardened extruded sections and are:
•Tested for 5.0kN/m pedestrian live load capacity
•UV stabilised to resist long-term sunlight exposure
•Designed for an expected 40–50 year service life

Proven Performance in Real-World Conditions
The condition of the Bison pedestrian bridges at Glenfield, after nearly a decade of use, provides practical evidence of how the material performs in a real-world environment.
Despite continuous exposure to moisture, biological growth and regular pedestrian traffic, the bridge shows:
•No structural deformation
•No measurable deck wear
•No degradation of the slip-resistant surface

This demonstrates how engineered recycled plastic materials can offer a durable, low-maintenance alternative to traditional timber bridges in woodland and public footpath environments.

Secure, Reliable Infrastructure That Lasts
From initial design through to installation and long-term performance, the Glenfield bridges reflect a consistent outcome: infrastructure that performs as expected, without ongoing issues or maintenance concerns.
For organisations responsible for public spaces, this reliability removes uncertainty and reduces long-term costs.

If you are planning a bridge or access project and need a solution that performs long after installation, get in touch with the Bison team on 01530 242 405 / www.builtbybison.co.uk