Loading Bay Modifications – Lichfield Project

Project Overview

Amey Dock & Door Specialists delivered a consultant-led, engineering solution to address repeated loading bay damage and improve operational safety at a site in **Lichfield**.

Snapshot
Location: Lichfield
Issue: Repeated loading bay damage from vehicle impact and unsuitable bay geometry
Key risks: Dock shelter failure on taller trailers, trailer override due to low bumpers, and limited upgrade options due to warehouse cladding constraints
Delivered: Bespoke collapsible dock shelters, above-dock bumpers with reinforced brackets, and optimised bay alignment for safer unloading and improved sealing

Client Challenge

The site experienced **repeated loading bay damage** caused by vehicle impact and unsuitable bay geometry, driving ongoing disruption and repair costs.

Key technical constraints and failure points included:

- **Short dock shelters failing on taller trailers** — existing short shelters were being torn and crushed when higher trailers made contact during reversing and docking.
- **Low dock bumpers enabling trailer override** — the existing low bumper arrangement allowed vehicles to ride over the bay, increasing the likelihood of structural impact and damage.
- **Façade limitation from warehouse cladding** — low level cladding prevented installation of standard taller shelters, restricting the use of typical off-the-shelf solutions without modifying the building exterior.

Engineering Solution Provided

Amey Dock & Door Specialists engineered a specification-led modification package focused on impact protection, geometry correction, and improved dock-to-trailer interface performance.

The solution included:

- **Custom taller collapsible dock shelters** — bespoke collapsible shelters sized to better suit taller trailer profiles, improving dock sealing while reducing shelter damage during docking events.
- **Precision cut outs and infills** — shelters were manufactured with precision cut outs and infills to accommodate the low level cladding, enabling installation **without modifying the façade**.
- **New above-dock bumpers** — above-dock bumper protection was installed to prevent trailer override and manage impact loads at the correct contact point.
- **Reinforced brackets** — bumper supports were strengthened with reinforced brackets to improve durability under repeated loading bay impacts.
- **Optimised bay alignment** — alignment was adjusted to support safer pallet truck unloading and improve the consistency of trailer sealing at the dock face.

Key Outcomes & Results

Following implementation, the site achieved practical, measurable improvements in damage reduction, operational reliability, and dock environmental performance.

Outcome area	Result
Structural & shelter damage	Reduced recurring damage to bay structure and dock shelters caused by impact and misalignment.
Trailer override risk	Eliminated trailer override through above-dock bumper protection and strengthened support.
Ongoing repair costs	Lower recurring repair bills through improved protection and more resilient components.
Weather protection	Improved trailer sealing and weather protection at the dock face.

Technical Specifications

The delivered scope included the following engineered components and constraints-driven adaptations:

- **Bespoke collapsible dock shelters** for container and standard trailer heights.
- **Above-dock bumpers** with reinforced support brackets to prevent override and improve impact resistance.
- **Custom cut outs and infills** to accommodate low level cladding and enable installation **without modifying the building façade**.

Before & After Comparison

Area	Before	After
Dock shelter suitability	Short shelters were torn and crushed by taller trailers.	Taller, bespoke collapsible shelters improved compatibility and sealing.
Impact protection	Low bumpers allowed vehicles to ride over the bay.	Above-dock bumpers and reinforced brackets eliminated trailer override.
Installation constraints	Warehouse cladding prevented standard taller shelter installation.	Precision cut outs and infills accommodated cladding without façade modification.
Unloading & sealing	Geometry and alignment increased risk during pallet truck unloading and reduced seal performance.	Optimised alignment improved safe unloading and trailer sealing.

Next Steps

- [ ] Schedule periodic inspection of shelters, bumpers, and brackets to confirm fixings remain secure and impact surfaces are performing as intended.
- [ ] Confirm trailer approach guidance and driver instructions align with the optimised bay geometry to minimise off-centre impacts.
- [ ] Review damage and maintenance records after an agreed monitoring period to quantify reductions in repair frequency and cost.
- [ ] If required, apply the same engineered shelter-and-bumper specification to additional bays with similar geometry and cladding constraints.

For further information contact us enquiries@ameydds.com www.ameydds.com