



Renew | Protect | Maintain

Highways CAPABILITY OVERVIEW



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commitment to
NET ZERO



70+ years of **sustainable growth**

During the past 70 years, Concrete Repairs Limited (CRL) has prospered and grown from a small waterproofing and concrete repair business located at 34 Millbank, London, into a major multi-disciplined national repair and refurbishment contractor.

Ernest Mark, born on the 13th May 1891 in Cork, originally founded Concrete Repairs Limited with the financial assistance of Roger Wilment. After the Second World War, whilst working with a company called Quickset he became involved in bomb damage repairs. Ernest first became aware of the specific need for specialist concrete repair during a visit to Salisbury Racecourse, when a significant piece of the material became detached, narrowly missing many of the race goers.

Also at Quickset was another Irish engineer, Albert Hill. Albert had joined the company after the Second World War. He had served as a Royal Navy Captain in the Mediterranean convoys.

A true gentleman and a clever contractor, Albert joined forces with Ernest and established Concrete Repairs Ltd in May 1955.

Our **Mission**

CRL's mission is to keep strategic road networks moving by extending the life of bridge and highway structures through safe, high-quality repair and refurbishment. We deliver engineered solutions that improve durability, resilience and whole-life value, with minimal disruption to road users and neighbouring communities.

We achieve this by combining specialist contracting expertise with early technical input, robust planning and disciplined delivery in live environments. We prioritise repair over replacement wherever feasible, because it is typically safer, faster and more sustainable. We also embed carbon reduction, waste minimisation and environmental controls into every stage, from survey and design support to handover.



Our **Values**

Safety first, always - Nothing is so important that it cannot be done safely and sustainably. We empower our teams to plan properly, control risk and stop work if conditions change.

Right first time quality - We deliver durable outcomes through consistent workmanship, strong assurance and controlled processes aligned to recognised standards such as BS EN 1504.

Collaboration - Accredited to ISO 44001, we work openly with clients, designers, maintainers and supply chain partners, providing early buildability input, clear communication and collaborative problem-solving.

Professional integrity - We act responsibly, communicate transparently and deliver what we say we will, from mobilisation through to handover.

Sustainable delivery - We reduce embodied and operational carbon through repair-led solutions, efficient methods, waste reduction and measured environmental controls.



LEADERSHIP



Sanjay
Patel
Managing Director



Adrian
Pike
Global
Framework Director



Steve
Jones
SHEQ & Business
Director

Daren
King
Operations Director



Paul
Quinlan
Highways
Framework Manager



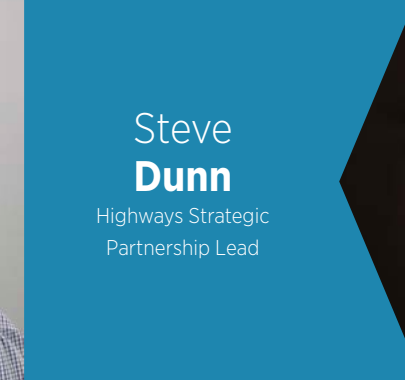
Mike
Lloyd
Highways Commercial
Manager

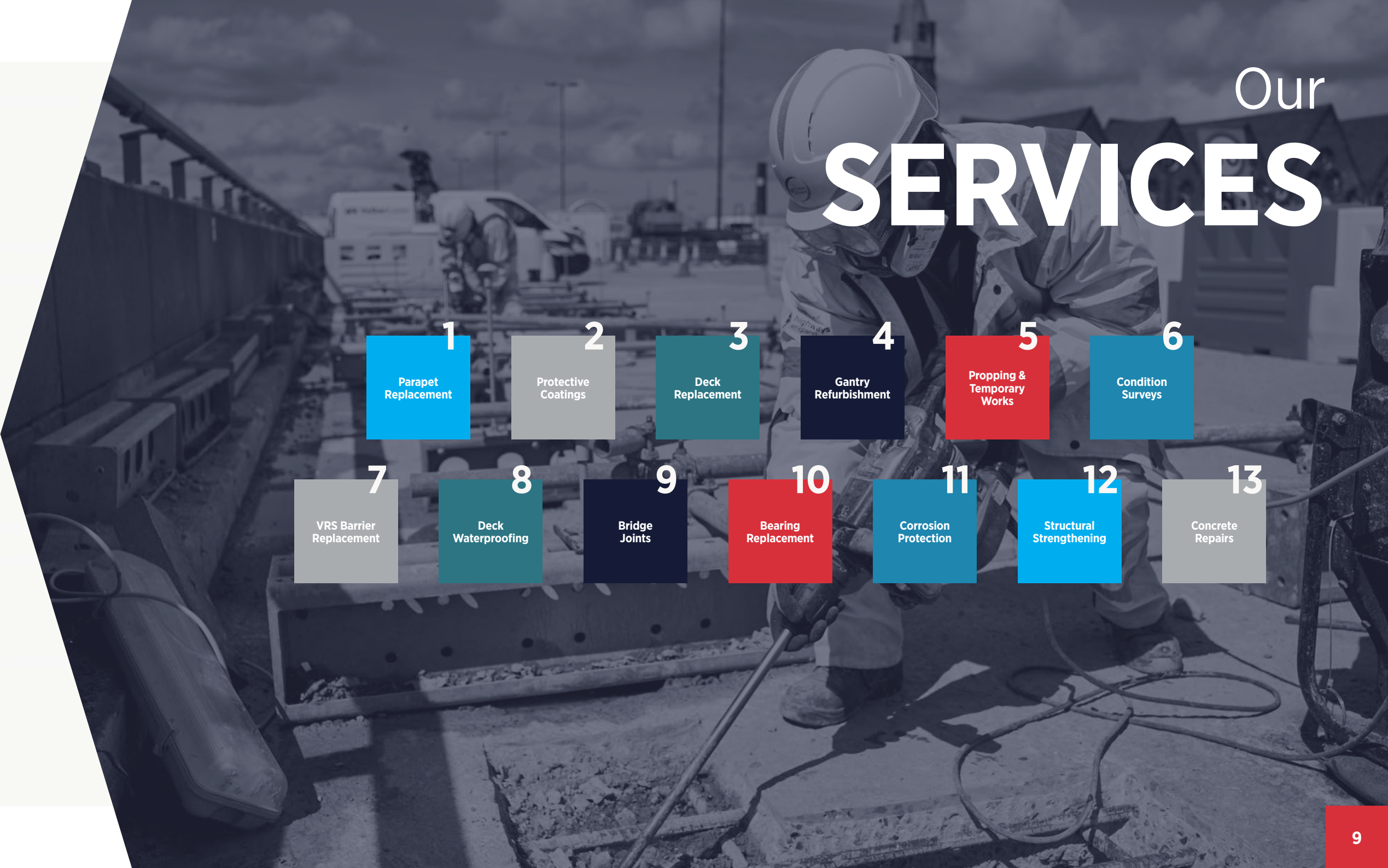
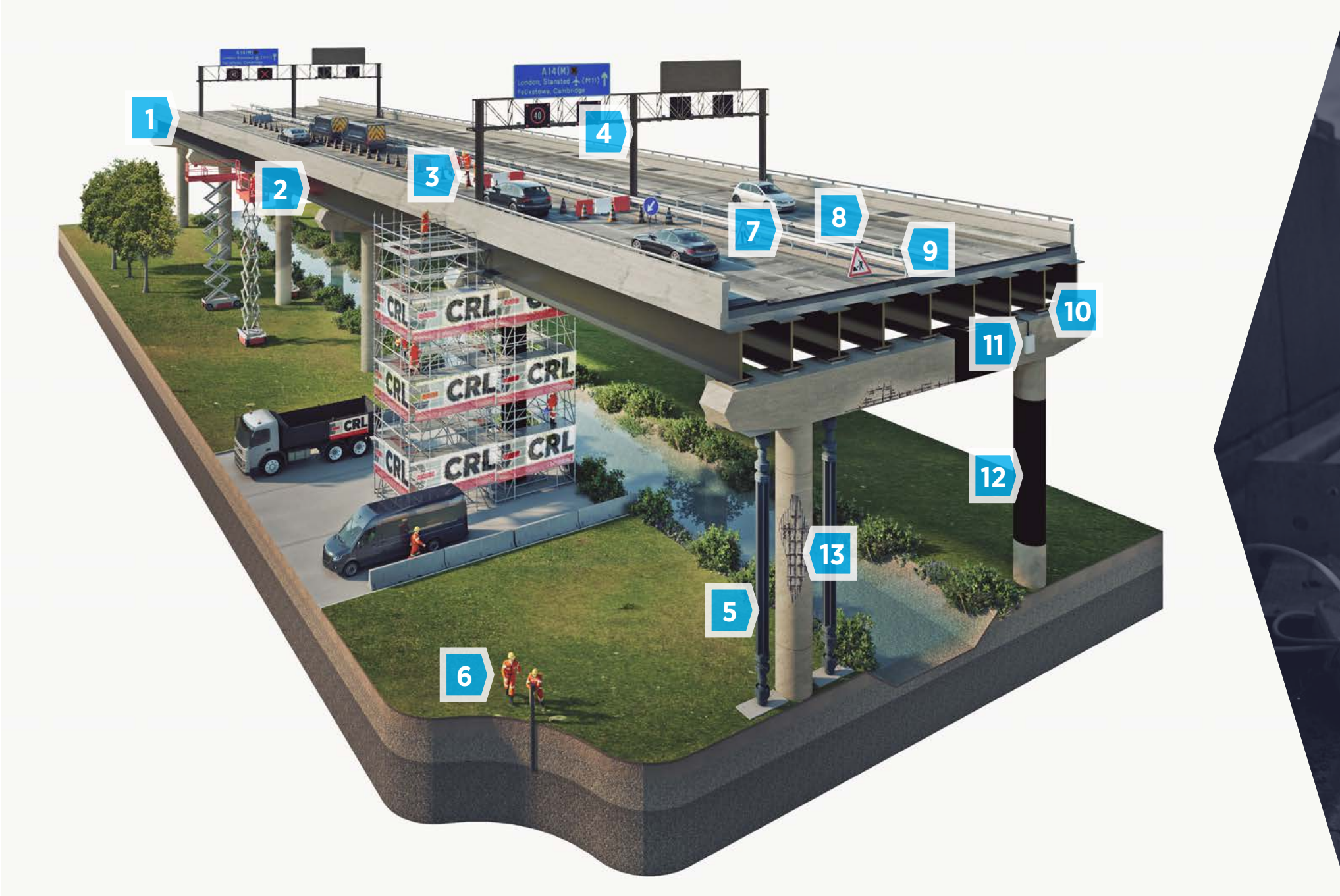


Simon
Dewsbury
Highways
SHEQ Manager



Steve
Dunn
Highways Strategic
Partnership Lead





Our SERVICES

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Proven
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Setting the
Standard
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Trusted by
National Highways
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Core COMPETENCIES





Maintaining & Strengthening

The UK's roads, bridges, tunnels, and culverts form the backbone of national connectivity by supporting commerce, travel, and everyday life. As this vital infrastructure continues to age under ever-increasing traffic demands, effective highway maintenance and bridge repair have never been more important.

Around the world, recent bridge failures and large-scale strengthening projects serve as a reminder of the critical need for planned maintenance, inspection, and rehabilitation to protect public safety and extend asset life.



Proven Expertise

With more than 70 years of experience, CRL is recognised as one of the UK's leading specialists in highways infrastructure repair, strengthening, and refurbishment. Our multidisciplinary teams combine technical excellence with innovative thinking to deliver cost-effective, sustainable engineering solutions across the transport sector. From condition surveys and inspections to structural strengthening and concrete rehabilitation, we offer a complete service for the assessment, protection, and enhancement of highway assets.

Through Early Contractor Involvement (ECI) and close collaboration with our clients, we ensure every project is delivered efficiently, safely, and with minimal disruption to road users.

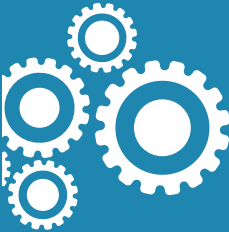


Understanding Structural Deterioration

All concrete highway structures experience deterioration over time, typically caused by corrosion of steel reinforcement, chloride attack, and water ingress. In Northern Europe, where winter road salts accelerate these mechanisms, the challenges are even greater. Early identification and treatment of defects are essential to ensure that bridges, culverts, and tunnels remain structurally sound, durable, and compliant with their intended design life.



Services and Capabilities



All works on reinforced concrete structures are delivered in accordance with BS EN 1504, the European Standard for concrete repair and protection.

Concrete Repair & Rehabilitation

Hand-applied mortars, sprayed concrete (gunite), or flowable self-compacting concrete for large-volume restoration.

Corrosion Control & Protection

Advanced cathodic protection systems and corrosion inhibitors to maximise durability and reduce whole-life costs.

Structural Strengthening

Use of carbon fibre reinforced polymer (CFRP) composites and stainless-steel reinforcement systems to restore and enhance load-bearing capacity.

Bridge & Tunnel Repair

Strengthening through embedded stainless-steel anchors, resin grouting, and internal lining systems to improve waterproofing and stability.



Setting the
Standard

CRL set the standard in highway maintenance and bridge rehabilitation and as one of the UK's foremost highway maintenance and bridge repair contractors, CRL is committed to maintaining, repairing, and strengthening the nation's road infrastructure for future generations.

Our experience, collaborative ethos, and investment in new materials and techniques ensure that we continue to set the standard in highway structure repair, refurbishment, and asset management.



Trusted by
National Highways

CRL's reputation for quality and reliability is reflected in our long-term partnerships across the UK road network. We currently hold National Highways SDF Frameworks in Areas 1, 2, 7, 9, 10 and 12, having delivered over £70 million of concrete repair and cathodic protection works across the highway network.

These achievements demonstrate our ability to deliver safe, efficient, and sustainable infrastructure repairs that keep the UK's highways operating at peak performance.





Early Contractor INVOLVEMENT



BENEFITS



Early Technical Input to De-risk Delivery & Improve Whole-Life Value

CRL uses Early Contractor Involvement (ECI) to shape safe, buildable, and value-for-money solutions before works start on site. Working collaboratively with the Client, Principal Designer, key suppliers and stakeholders, we test options, validate constraints and agree on the most efficient methodology for live network delivery. ECI outputs typically include surveys and investigations, temporary works development, risk workshops and a clear risk and issues register with ownership and mitigation actions. This disciplined front-end planning supports ALARP decision-making, reduces rework and abortive costs, shortens programmes, and minimises disruption, carbon, and environmental risk through repair-led solutions.

Principal CONTRACTOR



70+ Years of Experience

As Principal Contractor, CRL delivers end-to-end bridge refurbishment in live highway environments, from early contractor involvement and surveys through to construction, commissioning and handover. Established in 1955, we bring over 70 years' experience repairing and upgrading concrete and steel bridge assets, including decks, parapets, bearings, joints, abutments and substructures.

We provide programme and commercial management, temporary works coordination and rigorous SHEQ governance, supported by competent, directly employed teams. Our delivery is proven in constrained access locations, over water and adjacent to operational assets, using robust planning and clear stakeholder communication to deliver safely, right first time with minimal disruption to road users.



STRUCTURAL STRENGTHENING



Strengthening & Load Capacity Upgrades

CRL designs and installs structural strengthening solutions for bridges and highway structures where deterioration, impact damage, changing standards or increased loading has reduced capacity or serviceability. We deliver strengthening that restores integrity and extends service life while avoiding unnecessary demolition.

Our capabilities include fibre-reinforced polymer (FRP) composites and complementary strengthening techniques, integrated with concrete repair and corrosion management. We apply strict quality controls, defined inspection and test plans and robust workmanship to achieve reliable long-term performance.

Sprayed CONCRETE



High Output Bridge Repair & Reinstatement

CRL delivers sprayed concrete repairs for bridges where high-output reinstatement, overhead work or complex geometry demands efficient, consistent application. Our service covers controlled breakout, reinforcement preparation and reinstatement with proprietary repair mortars compliant with BS EN 1504.

In accordance with good industry practice, we implement trial panels, coring, and UKAS laboratory testing to verify compressive strength and application quality. This approach supports repeatable performance on multi-phase bridge repair programmes and helps maintain programme certainty.

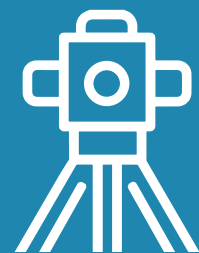
Condition **SURVEYS**



Evidence Led Diagnostics for Targeted Intervention

CRL provides condition surveys that inform safe, targeted and cost-effective bridge refurbishment. We combine visual inspection with non-destructive testing and, where required, laboratory analysis to identify deterioration mechanisms, quantify defects, and support the selection of repair strategies.

Outputs are presented in clear, decision-ready formats that support budget planning, prioritisation and whole-life asset management.



Targeted Opening Up to Confirm Condition & Reduce Delivery Risk

Where condition surveys identify uncertainty or elevated risk, CRL undertakes intrusive investigations to confirm reinforcement condition, construction detailing and durability risks. This includes targeted opening-up, cover measurement, carbonation depth testing and chloride ion sampling supported by UKAS laboratory analysis.

Intrusive surveys reduce delivery risk, improve cost certainty and allow repair scopes and corrosion management measures to be tailored accurately to the structure.



Intrusive **SURVEYS**



Grouting & INJECTION



Crack Sealing & Void Filling to Restore Integrity & Control Water Ingress

CRL provides resin injection and grouting to address cracking, voids and water ingress that can accelerate deterioration of bridge elements. These methods are delivered under controlled procedures to ensure effective sealing and stabilisation, particularly where access is limited or structures must remain operational.

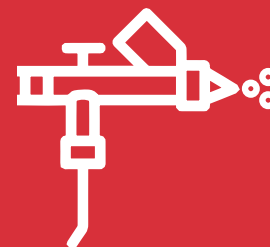
Resin and grout repairs are commonly integrated with concrete repairs, waterproofing and coatings to provide a coordinated refurbishment solution.



Controlled Surface Preparation for Durable Repairs, Coatings & Waterproofing

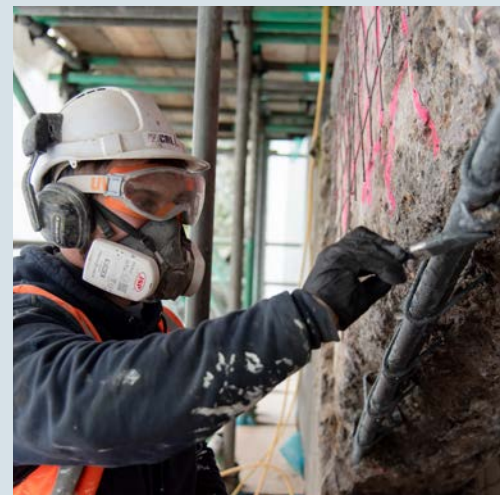
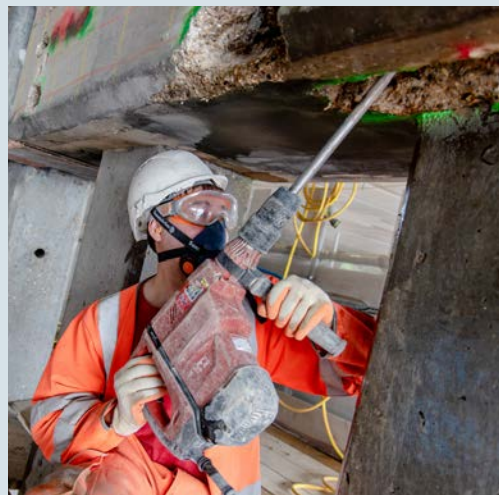
Bridge durability depends on preparation quality. CRL undertakes surface preparation to achieve sound, clean substrates for repairs, cathodic protection and coatings. Methods include hydro-demolition for efficient breakout and removal of de-laminated concrete, together with mechanical preparation where appropriate.

We implement strict environmental controls to manage debris and wastewater, recycling wherever possible ensuring that the prepared surfaces are suitable for long-term bond and performance.



Cleaning & PREPARATION





Concrete REPAIRS

Structural Repairs to Restore Section and Extend Service Life

CRL undertakes structural concrete repairs to bridge decks, beams, columns, abutments and soffits, including phased repairs designed to maintain stability and keep networks operational. Our approach follows BS EN 1504 principles and focuses on long-term durability rather than short-term patch repairs.

We combine controlled breakout, reinforcement preparation, appropriate repair materials and effective curing, then integrate corrosion mitigation where required to reduce the risk of further deterioration adjacent to repairs.



Bonded Waterproofing Systems to Prevent Ingress & Protect the Deck

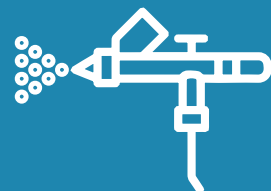
CRL installs bonded waterproofing systems to bridge decks, preventing water ingress and reducing deterioration, especially where de-icing salts drive chloride-related damage. We integrate waterproofing with joints, drainage interfaces and edge details to provide a complete system. By preventing water tracking beneath the membrane and controlling interfaces, our approach supports longer maintenance intervals and improved whole-life performance.



Deck
WATERPROOFING



Protective COATINGS



Anti-Carbonation and Protective Coatings to Extend Life-to-First Maintenance

CRL applies protective coating systems to concrete and steel bridge assets to enhance durability and extend the life to first maintenance. This includes anti-carbonation coatings and specialist corrosion protection coatings, delivered under strictly controlled preparation and application regimes.



Parapet REPLACEMENT

Safety Critical Parapet Upgrades Delivered with Minimal Network Disruption

CRL delivers parapet replacement and associated safety upgrades, coordinating sequencing, temporary works and traffic management to minimise disruption and maintain safety. Our teams manage interfaces for waterproofing, joints, drainage, and surfacing to deliver integrated solutions.

We plan for constrained work zones above live carriageways and implement robust segregation and edge protection to protect operatives and the travelling public.



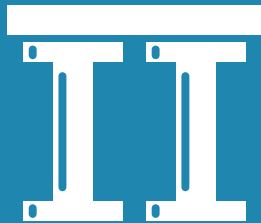
Bridge PROPPING



Temporary Support Solutions to Maintain Stability During Refurbishment

Where temporary support is required during bridge refurbishment, CRL develops and implements propping solutions through robust temporary works governance and careful sequencing. We coordinate specialist design input, verification and inspections to maintain stability throughout.

Our preference is always to reduce reliance on propping through repair phasing and buildable solutions that lower risk, cost and disruption.



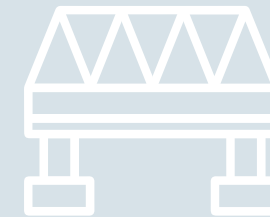
Bearing REPLACEMENT



Jacking & Bearing Renewal Delivered Under Controlled Lifting & Monitoring

CRL delivers bearing replacement schemes including jacking, bearing shelf repairs and associated deck works. We implement detailed sequencing, monitoring and controlled lifting operations, supported by appropriate temporary works and access solutions.

This integrated approach enables safe replacement, reliable reinstatement and robust handover documentation to support ongoing asset management.



Corrosion PROTECTION

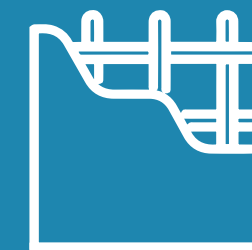


Cathodic Protection & Corrosion Mitigation to Reduce Whole-Life Cost

CRL is a specialist provider of corrosion mitigation for bridge structures, delivering galvanic and impressed-current cathodic protection (ICCP) systems to extend service life and reduce whole-life costs. We integrate corrosion control with concrete repairs, overlays and protective coatings to address

underlying deterioration mechanisms.

Our services include continuity testing, half-cell surveys, bespoke design of anode selection and spacing, controlled installation and commissioning and, where required, monitoring capability to support long-term performance.





Local Business

At CRL, we work with our clients and supply-chain to support their social value ambitions and increase our overall social value delivery. Collaborating with local community organisations as well as our clients and supply-chain helps us to better understand local needs where our efforts should be focussed.



Community Support & Engagement

CRL actively encourages employees to contribute to the communities in which they live and work. Through our Community Projects Scheme, all employees are entitled to three days of paid leave each year to support community-based initiatives and charitable activities that are meaningful to them. Our employees have been involved in a wide range of community projects, including fundraising initiatives, environmental improvement schemes, and support within care and educational settings.



Environmental Stewardship

For us, sustainability is about more than carbon reduction. It means building resilient communities, improving air quality, protecting habitats and biodiversity, reducing resource demand, diverting waste, and creating a circular economy.



Health & Wellbeing

Our long-established No Compromise culture is recognised externally through numerous industry accolades. Most recently, CRL received its 21st RoSPA Gold Award and sixth Order of Distinction, internationally recognised achievements that reflect our sustained commitment to excellence and continual improvement in health and safety performance.



Career Guidance

Career Guidance is at the heart of CRL's commitment to creating lasting social value. Through partnerships with organisations like Youth Build, Building Heroes, Career & Schools Engagement programmes, and STEM initiatives, we help young people explore careers in construction, engineering, and the wider built environment. Our activities include interactive workshops, site visits, mentoring sessions, and hands-on experiences that give students a real insight into the industry.

Social Value

At Concrete Repairs Limited we recognise that, now more than ever, businesses have a crucial role to play in shaping the future of our society. We embrace this responsibility and take pride in contributing to our communities, whether that is by working with social enterprises in our supply chain, helping local people get into employment, protecting surrounding environments, or through a variety of other ways.

As a medium sized company, we recognise that alongside our own activities, we have a role to play in helping our clients achieve their social value ambitions. It also means collaborating with our communities to develop long-standing relationships. By strengthening community

engagement, we can understand their needs respond to the specific challenges they face.

We are members of the Supply Chain Sustainability School, an award-winning, industry-wide collaboration which offers a wide range of sustainability and social value resources and training.

We are committed to integrate social value into all aspects of our work and encourage involvement from everyone at CRL. From our sites to our offices we consider how we can maximise our positive impacts and find innovative ways to create social value and play our part in the communities we work in, as well as the wider world.



SUSTAINABILITY



Commitment to **Net Zero**

CRL have a reputation based on quality and innovative engineering underpinned by our commitment to health, safety and sustainability.

As a business, we recognise the urgent need to act on climate change. The built environment plays a significant role in national emissions, and we recognise our role and contributions to those emissions.

Our Carbon Reduction Plan sets out not just our targets, but our wider commitment to becoming a lower-carbon, more sustainable business. This is not a box-ticking exercise, it is a strategic response to the challenge ahead, embedded into how we operate,

deliver projects, and engage with our supply chain.

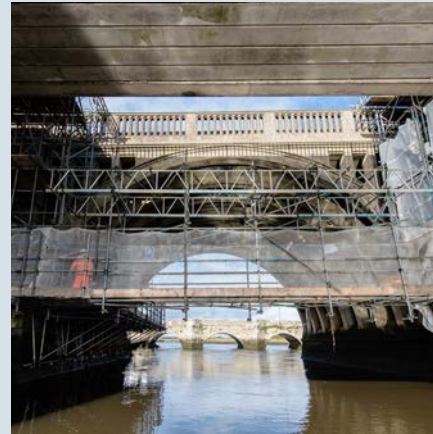
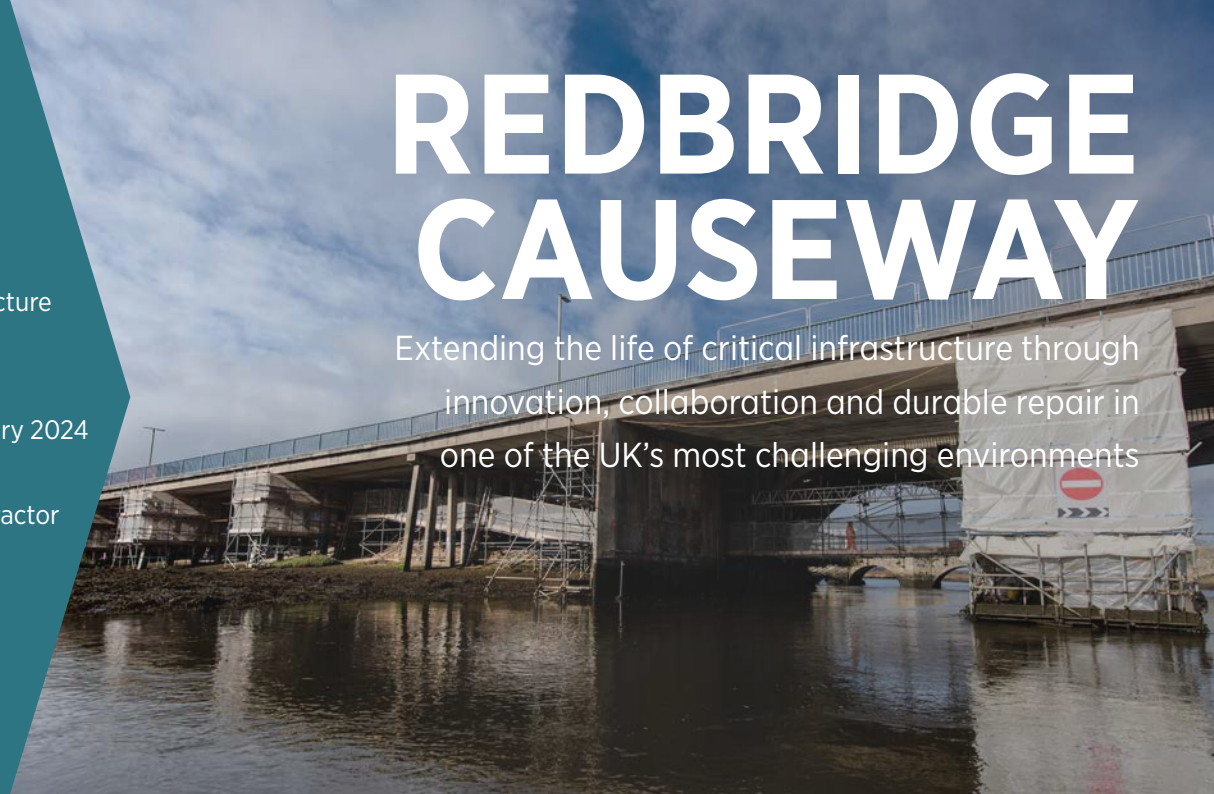
We know that the road to Net Zero will require continued focus, investment, and innovation. That's why we've set clear milestones on our journey to 2045 and are already taking practical steps to reduce emissions in the areas we can control.

Through consistent measurement, collaborative working, and a determination to improve year-on-year, we are committed to delivering meaningful change, not just for compliance, but for the long-term benefit of our clients, communities, and the environment.

Nothing is so **important**
that it cannot be done **safely**
and **sustainably**

REDBRIDGE CAUSEWAY

Extending the life of critical infrastructure through innovation, collaboration and durable repair in one of the UK's most challenging environments



CLIENT: Milestone Infrastructure Limited
VALUE: £5.1m
DURATION: March 2019 - January 2024
LOCATION: Southampton
ROLE: Specialist Subcontractor

SERVICES UNDERTAKEN



ECI



Concrete Repairs



Corrosion Protection



Condition Surveys

The £5.1 million refurbishment of Redbridge Viaduct, a key section of the A35 Redbridge Causeway linking Totton, Southampton and the M271, was undertaken to address concrete deterioration and reinforcement corrosion affecting this vital transport asset. Delivered between 2019 and 2024, the project involved Hampshire County Council, Milestone Infrastructure, Atkins and CRL.

Working within a sensitive tidal estuary environment, CRL carried out hydrodemolition, sprayed concrete repairs using Fosroc Renderoc DSR, and installation of an Impressed Current Cathodic Protection (ICCP) system incorporating titanium mesh, discrete anodes and remote monitoring. Repairs were completed in carefully phased sequences to accommodate tidal constraints while maintaining

traffic flow. Specialist cantilever and enclosed scaffold systems enabled safe access to tidal piers. Through Early Contractor Involvement and close collaboration with project partners, CRL delivered durable repairs, enhanced corrosion protection, reduced future maintenance requirements and significantly extended the viaduct's operational service life.

CLIENT: Rhondda Cynon Taff County Borough Council
VALUE: £3.25m
DURATION: May 2022 - July 2024
LOCATION: Pontypridd, Wales
ROLE: Principal Contractor

BERW ROAD BRIDGE

Restoring Pontypridd's Grade II* White Bridge: CRL delivered heritage sensitive repairs, galvanic protection and durable coatings, safeguarding the bridges long-term performance



SERVICES UNDERTAKEN



ECI



Concrete Repairs



Corrosion Protection



Coatings

Berw Road Bridge (the White Bridge) in Pontypridd is a Grade II* listed landmark. Built in 1907, it is one of the first reinforced-concrete arch bridges, designed by L G Mouchel & Partners and constructed using the Hennebique system. Following a detailed survey and structural assessment with WSP, CRL assisted the Council developed a practical, heritage-sensitive repair

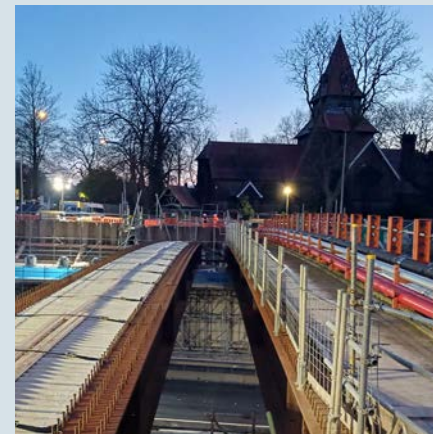
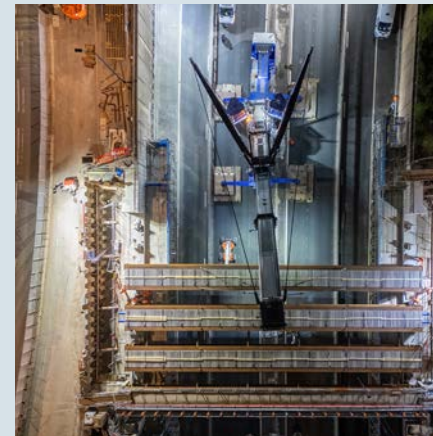
strategy targeting a 50-60 year design life. The early contractor involvement included trials to confirm the safe removal of the failing 1960s gunite, to check the condition of the mesh, and to agree on matching replacement finishes with Cadw. The main works comprised of the design and erection of scaffolding, followed by systematic gunite removal,

close inspection for cracking, water ingress and allowance for spalls beneath the coating. CRL delivered concrete repairs to soffits, beams, columns, and abutments; installed galvanic anodes and replaced corroded mesh; then dry-sprayed Renderoc DS to achieve at least 50 mm of cover beyond the mesh; and applied Dekguard protective coatings.

M67 ST ANNES BRIDGE

Collaborative, hydrodemolition-enabled abutment modification and composite deck replacement

CLIENT: National Highways
VALUE: £3.2m
DURATION: Aug 2023 - Oct 2025
LOCATION: M67 Manchester
ROLE: Specialist Subcontractor



SERVICES UNDERTAKEN



ECI



Concrete Repairs



Condition Surveys

The St Anne's Road Bridge at Junction 2 of the M67, Hyde, Greater Manchester, was a single-span half-joint bridge that had been managed under BD79 Interim Measures since 2013 and required a fully compliant repair or replacement solution. Following Early Contractor Involvement from 2021, CRL worked collaboratively with National Highways, Amey, Tilbury Douglas, all utility providers and

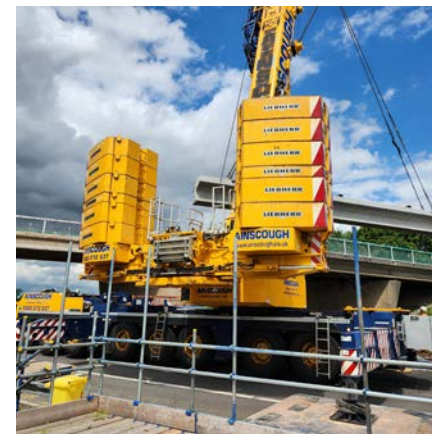
specialist supply chain partners to plan safe, buildable delivery in a constrained motorway and urban environment. The scheme required the diversion of a variety of protected major services, including a strategically important large-diameter water main. The existing deck and cantilevers were then demolished, while the abutments were retained and modified. Precision

hydrodemolition enabled controlled removal of the concrete to form new bearing shelves and plinths for a semi-integral steel-and-concrete composite deck. The benefits included a 25 to 30% reduction in high-risk exposure, a circa 15-week programme savings, an estimated £150,000 to £250,000 in cost savings, a 120 to 160 tCO2e reduction, and fewer motorway closures.

CLIENT: National Highways
VALUE: £1.7m
DURATION: Jan 2024 - Sep 2024
LOCATION: Beltoft, Doncaster
ROLE: Principal Contractor

M180 MUTTON LANE

A complex bridge beam replacement delivered safely above live motorway, with £100k savings and two week programme reduction



SERVICES UNDERTAKEN



ECI



Condition Surveys



Concrete Repairs



Beam Installation

Concrete Repairs Limited (CRL) was appointed by National Highways to repair M180 Mutton Lane Bridge, a four-span reinforced concrete overbridge carrying Outmill over the M180 between Junctions 2 and 3 near Beltoft and Derrythorpe, after a lorry strike compromised a main beam. Following Early Contractor Involvement, CRL collaborated with National Highways and the Principal

Designer (Kier) to plan closures, temporary works and supply chain inputs, minimising disruption on this critical route. Works included detailed surveys, controlled demolition of the damaged element and installation of a new 20.7m long precast edge beam (c.42 tonnes), alongside concrete repairs, bearing inspection, parapet replacement, bridge deck waterproofing, surfacing, white lining and associated

reinstatement activities. Off-site fabrication and careful lift planning supported safe, efficient delivery, including use of hard shoulder and night-time closures. When third-party design issues required re-manufacture, CRL fast-tracked the replacement, shared a pre-booked weekend closure and achieved c.£100k cost saving. The scheme was completed two weeks ahead of programme.



A19 TEES VIADUCT

The A19 Tees Viaduct (Tees Flyover) in Stockton-on-Tees is a strategically important six-lane dual-carriageway structure that carries the A19 across the River Tees and serves key interchanges in the area.

ECI

Concrete Repairs

Corrosion Protection

Condition Surveys

CLIENT: Autolink
(Sir Robert Alpine)

VALUE: £12m

DURATION: October 2020 - 2025

LOCATION: Stockton-on-Tees

ROLE: Specialist Subcontractor

Opened in 1975, the viaduct’s reinforced concrete piers suffered long-term deterioration driven by chloride-laden water ingress through poorly detailed joints, which resulted in the accelerated corrosion of the steel reinforcement. Intervention works were required in order to protect this vital infrastructure asset whilst ensuring minimum disruption to the road user.

Working as a specialist subcontractor to Sir Robert McAlpine (SRM), the Tier 1 maintenance contractor to Autolink under the National Highways DBFO arrangement, CRL was brought in through Early Contractor Involvement (ECI) to help reshape the solution from an originally demolition-led approach into a sustainable repair strategy. In close collaboration with SRM and AECOM, CRL developed and delivered a phased methodology combining targeted concrete repairs with Impressed Current Cathodic Protection (ICCP) to arrest corrosion and extend structural life.

CRL’s scope included survey and testing, hydrodemolition and surface preparation, reinforcement cleaning, concrete repairs, sprayed concrete works and full ICCP installation with encapsulation overlays.

The programme was delivered in three phases: Phase 1 (Oct 2020



to June 2021, £506k), Phase 2 (June 2022 to July 2023, £2.54m) and Phase 3 (Dec 2022 to May 2025, £4.78m), with a total value of £7.83m.

A key success factor has been delivering these complex works under and adjacent to live carriageways, whilst maintaining traffic flows for approximately 100,000 vehicles per day. The ICCP solution provides long-term durability and enables remote monitoring, supporting an estimated 40 to 50-year extension of pier service life. The project also demonstrated strong sustainability performance, with reported embodied carbon reductions relative to demolition and rebuild of 98% for concrete elements, 99% for steel, and 97% for timber, alongside meaningful community and STEM engagement activities.

The approach also supported a strong whole-life value proposition for the asset, by prioritising targeted intervention and long-term corrosion control rather than short-term, repetitive repairs. Through careful sequencing and proactive planning, the team maintained safe access, consistent quality and reliable programme delivery in a highly constrained environment. Importantly for the travelling public and local network, these improvements were achieved whilst keeping the route operational, helping to protect journey time reliability and reduce disruption for road users, businesses and surrounding communities.



“The key to the ongoing success of this project is due to the collaboration between CRL, Sir Robert McAlpine, and the Designers AECOM. This has helped with forming an excellent understanding between all parties, resulting in everyone working to achieve the same goal. This strong partnership has been key to overcoming challenges, achieving cost-effective solutions, and ensuring the sustainability and safety of the viaduct for years to come”



MIDLAND LINKS

The Midland Links Motorway Viaducts (MLMV) is one of the world's largest and most established concrete repair and cathodic protection programmes. Built as part of the Midlands motorway network, the MLMV comprises 1,200 bridge supports carrying over 13 miles of elevated motorway around Birmingham, creating a direct transport link between the M1, M5, and M6 while minimising urban demolition.

SERVICES UNDERTAKEN



ECI



Concrete Repairs



Corrosion Protection



Condition Surveys



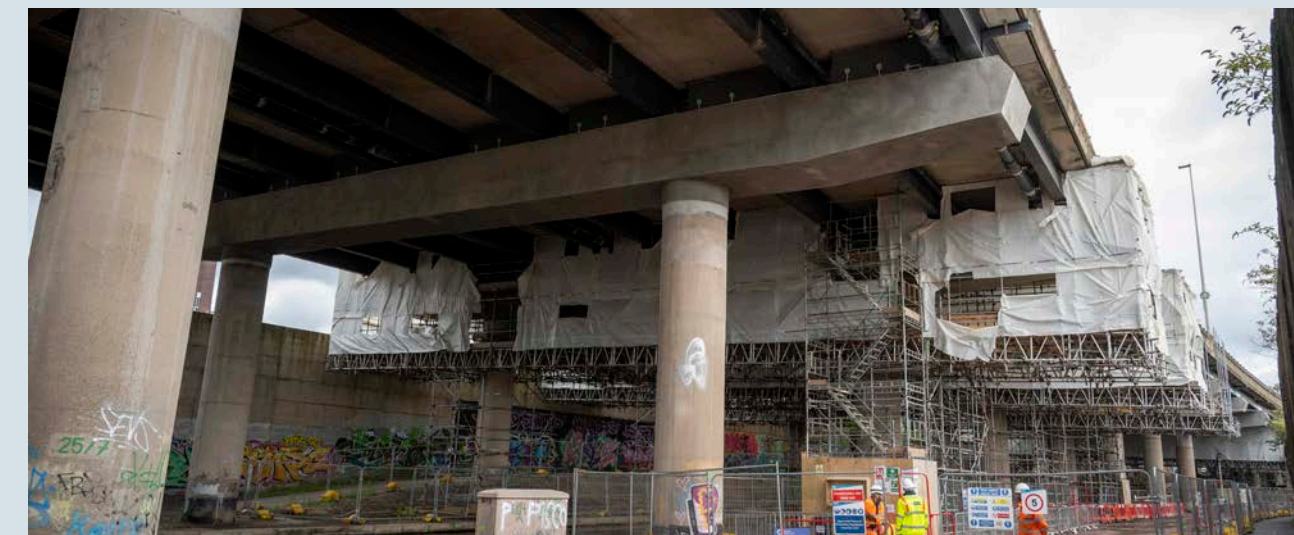
Coatings

The direct route of the Midland Links required the construction of a series of viaducts, including what was then Britain's longest continuous viaduct. Between Gravelly Hill and Castle Bromwich (M6 Junctions 6–5), the structure extended 3.5 miles over the River Tame through an industrial area. Urban space constraints strongly influenced the viaduct and junction designs.

Numerous natural and man-made obstacles, including canals, the Rivers Tame and Rea, and multiple railway lines, meant many viaducts required individual designs. Where possible, a standard 50 ft span

was adopted, supported by four reinforced concrete columns and cast-in-place crossbeams. The route included 17 junctions, notably 'Spaghetti Junction', linking the M6 and A38(M) into central Birmingham and becoming one of the UK's most recognisable motorway interchanges.

Concrete deterioration appeared early due to expansion joints allowing water and de-icing salts onto reinforced concrete crossbeams. Chloride ingress reduced concrete alkalinity, broke down reinforcement passivation, and caused corrosion, leading to widespread spalling and



delamination across structural elements.

Initial mitigation measures included gutters, enhanced inspections, alternative de-icing agents, structural assessments, hydrophobic treatments, and concrete repairs. Although beneficial, these measures were insufficient as a permanent solution and highlighted the need for a longer-term asset management approach.

In 1986, Impressed Current Cathodic Protection (ICCP) was successfully trialled and became a core corrosion management strategy. The first operational

ICCP system was commissioned in 1991 using conductive coating anodes, now gradually replaced with MMO titanium systems. To date, approximately 950 crossbeams and over 100,000 m² of concrete have been protected.

CRL joined the programme in 1989 and has remained continuously involved since, including delivery of the £100m+ Oldbury Viaduct renewal in 2017/18. More recently, CRL completed the £11.5m P65 Oldbury Viaduct scheme, involving removal of existing cathodic protection, hydrodemolition, concrete repairs, drainage renewal, and installation of new

ICCP systems.

Extensive planning, environmental controls, bespoke temporary works, and stakeholder collaboration enabled delivery without affecting local businesses or waterways. Evidence gathered over 34 years confirms ICCP significantly reduces future repairs and reinforcement replacement. Combined with wider asset management measures and sustainable construction practices, the MLMV remains a globally recognised example of long-term infrastructure preservation and durable concrete asset management.



“WORKING IN COLLABORATION AS ONE TEAM WITH EFFECTIVE COMMUNICATION HAS BEEN INSTRUMENTAL IN ACHIEVING OUR COMMON GOAL TO SUCCESSFULLY DELIVER THE SCHEME.”

ANDY BUTTERFIELD
HEAD OF SERVICE DELIVERY
NATIONAL HIGHWAYS

Why choose



CRL is a specialist bridge repair and refurbishment contractor with 70+ years' experience working on safety-critical assets in live highway environments. We provide a complete service from condition and intrusive surveys through to repair, strengthening, waterproofing, bearing and parapet works and corrosion protection.

AWARD WINNING

CARBON REDUCTION MANAGEMENT

COLLABORATION

COMMERCIAL

COST EFFICIENCIES

CUSTOMER FOCUS

DIGITALISATION

ECI

EFFICIENT & LEAN

ENVIRONMENTAL

GOOD PRACTICE

IMPROVED SAFETY

INNOVATION

PROGRAM & DELIVERY ON TIME

QUALITY

REDUCED CONTRACT ADMINISTRATION

REDUCED DISRUPTION TO ROAD USERS

SOCIAL VALUE

TRAINING

WHOLE LIFE COST BENEFITS

We are known for safe, right-first-time delivery, supported by ISO 9001, ISO 14001, and ISO 45001-certified systems and a strong behavioural safety culture. Our delivery model relies on a highly skilled, directly employed workforce, complemented by specialist supply chain partners where required for specialist plant or activities. We bring early technical input, collaborative planning and practical innovation to reduce programme risk, improve buildability and minimise disruption. Sustainability is embedded through repair-led solutions, controlled waste management and measured carbon reduction.

Industry CERTIFICATIONS & MEMBERSHIPS

CRL's highway capability is underpinned by independently certified management systems including ISO 9001 (Quality), ISO 14001 (Environmental), ISO 45001 (Occupational Health and Safety) and ISO 44001 (Collaborative Business Relationships). These provide the governance and assurance expected on safety-critical bridge refurbishment.

We hold industry recognised Health and Safety, and procurement accreditations whilst maintaining active memberships of key industry

bodies, including the Concrete Repair Association, the Corrosion Prevention Association, the Sprayed Concrete Association, CECA, and the Concrete Society. These memberships support continuous improvement, technical competence and alignment with industry best practice.

Our work is further evidenced through project award recognition for major repair and refurbishment schemes, reflecting strong performance in safety, quality, collaboration and sustainable delivery.

ISO 9001



ISO 14001



ISO 45001



ISO 44001



CHAS



Highways Passport Gold



Concrete Repair Association



Corrosion Prevention Association



Sprayed Concrete Association



CECA



Supply Chain Sustainability School



Constructionline





2004

2022

2023

2024

2025



Concrete Society Award (Project of the Year)

Boulby Mine Refurbishment
Best Repair & Refurbishment Project



Historic Bridge & Infrastructure Awards

Bideford Bridge
Refurbishment/Preservation of
bridges etc.



Concrete Society Award (Project of the Year Over £1M)

M6 River Dane Bridge
Refurbishment (Phase 1 -3)
Best Repair & Refurbishment Project



Southwestern Community Awards, Team Award

M5 Almondsbury
Interchange/Patchway
Highly Commended Team Award



CECA (Northeast) Awards Subcontractor of the Year

Tees Viaduct Substructure
Refurbishment (TVSR) project



LRCTG Awards (London Region Construction Training Group)

River Dane Project
Best Performance in Continual
Improvement



Corrosion Prevention Association (CPA) (Project of the Year)

M6 River Dane Bridge Project
(Phase 1 - 3)
Highly Commended



Bridges Award Ethos Award

A19 Tees Viaduct Project Team
Ethos award showing the team's
"outstanding approach to staff
wellbeing" and the general health
and safety on the project.



Considerate Constructors Scheme - Most Considerate Site Award in the UK

Pilgrim Hospital Refurbishment
CRL set a benchmark by winning the
UK 'Most Considerate Site' award
years ahead of the industry's focus
on social value.



Concrete Repair Association (Project of Year)

M6 River Dane Bridge (Phases 1 & 2)
Best Repair & Refurbishment Project



Concrete Repair Association (Project of the Year)

M6 River Dane Bridge
Refurbishment (Phase 1 -3)
Best Repair & Refurbishment Project



Southwestern Community Award - Collaborative Project of the Year

A30 Avers Junction Project Winner
CRL Part of the Team



IStructE Structural Awards

Gala Fairydean Rovers
Netherdale Stand
shortlisted, showing recognition



LRCTG Awards (London Region Construction Training Group)

Recognition of apprentices and
project managers



LRCTG Awards (London Region Construction Training Group)

Company Commitment
to Training Award



Yorkshire Northeast Highways Community

Highways UK Excellence Awards
Team of the Year



RoSPA 27th Consecutive RoSPA Order of Distinction

27th consecutive RoSPA win
Health & Safety excellence (occupa-
tional safety)



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