

Local Highways Maintenance Challenge Fund



Department
for Transport

Expression of Interest Form: 2020/21 proposals

This form is for proposals over £5 million to be funded by DfT in 2020/21.

The closing date for Expressions of Interest is **31 October 2019**.

For proposals submitted by components of a Combined Authority a separate EOI form should be completed for each one, then the CA should rank them in order of preference.

Applicant Information

Local authority name: Stockport Metropolitan Borough Council

Manager Name and position: Sue Stevenson, Head of Highways and Transportation

Name and position of officer with day to day responsibility for delivering the proposal.
Alex Bremner, Design and Improvement Manager, Highways and Transportation

Contact telephone number: 0161 474 4834

Email address: alexander.bremner@stockport.gov.uk

Postal address: Stopford House
Piccadilly
Stockport

Postcode SK1 3XE

Combined Authorities

If the proposal is from a local highway authority within a Combined Authority, please specify the contact and ensure that the Combined Authority has submitted a Combined Authority Application Ranking Form.

Name and position of Combined Authority Co-ordinator for CA proposals: Mike Purcell

Contact telephone number: 0161 244 1121

Email address: Mike.Purcell@tfqm.com

Postal address: Transport for Greater Manchester,
2 Piccadilly Place,
Manchester

Postcode M1 3BG

SECTION A – Description of works

A1. Name of proposal: Greek Street Bridge Replacement

A2. Geographic area:

Please provide information about the location of the proposal (in no more than 50 words)

Greek Street bridge supports the Armoury roundabout over the West Coast Mainline which connects Manchester with London. The junction is located within Stockport Town Centre which links Kings Street West, Greek Street and Mercian Way it currently has limited pedestrian / cyclist facilities.

OS Grid Reference: **SJ 8925 8952**

Network Rail Reference CMP2 - 1A @ 182.1425 B/O Greek Street.

Postcode: SK3 8BD

You might wish to append a map showing the location (and route) of the proposal, existing transport infrastructure and other points of particular interest. **See appendices**

A3. Description of existing problems and how the proposal would address them. Please set out which other options have been considered:

Greek Street bridge structure, in Stockport, is owned and maintained by Network Rail and sits in the recently announced Stockport Mayoral Development Corporation area. The structure supports the Armoury roundabout over the West Coast Mainline (WCML) which connects Manchester with London. The junction is located within Stockport Town Centre and carries an annual average daily traffic (AADT) flow of over 12,000 vehicles, of which 8.3% are heavy goods vehicles. The existing roundabout on the bridge is a source of traffic congestion and has poor pedestrian and cycle facilities. This route being restricted in terms of weight limit would result in congestion within the Stockport area due to the need to divert vehicles on to already highly trafficked routes.

The scheme involves demolishing the existing CMP2/1A Network Rail Greek Street roundabout/Edgeley Station bridge and its supporting retaining structures and construction of an off-line replacement bridge and associated structures. As part of the scheme works will be carried out to make passive provision for future rail and rapid transit extensions through the junction. The junction will be completely re-modelled and include modern facilities for walking and cycling.

The existing bridge is an aged, two-span supported structure comprised of pre-stressed and post-tensioned elements of very limited residual life. The bridge was found to be in a poor condition and has suffered from severe corrosion to its reinforcement and substantial loss of concrete section. Recent surveys have found that the main deck reinforcement and tendons are at continued high risk of corrosion because of the very high Chloride Ion levels. Water seepage into the deck voids is detrimental to the long-term integrity of the structure. The structure will continue to deteriorate, increasing the risk to life, structural failure, damage to service infrastructure, the highway network and extensive disruption to the operation of the WCML with over 16 passenger services an hour.



Bridge to be removed	
New bridge structure	
Stockport new highway layout design envelope	
Future rail and rapid transit sub-surface corridor	

Figure 1: Potential infrastructure phasing and responsible party from each area

SECTION B – The Business Case

B1. The Financial Case – Project Costs and Profile

Please indicate the anticipated cost of the proposal in the table below. **Figures should be entered in £000s** (i.e. £10,000 = 10).

Funding profile (Nominal terms)

£000s	2020-21	2021-22
<i>DfT Funding Sought</i>	£18,000	<i>DfT funding is not available in 2021-22</i>
<i>Other Contribution</i>	£350 (5% of the Network Rail cost)	
<i>Other Third-Party Funding</i>		£5000 - £6,650 (Network Rail)

Notes:

- 1) Department for Transport funding will be granted in the 2020-21 financial year, but local highway authorities may carry that funding over to following financial years if necessary.*
- 2) There is no specific amount for a local contribution by the local authority and/or a third party but if additional funding is proposed please state what this is expected to be.*

B2. Timetable

Proposed start date – 2020/21 – Design, public consultation and approval process, commence property acquisition / CPO process, costing, preparation / submission of OBC, commence tender progress (D&B)

Estimated completion date – 2023/24 – Q1 (Easter possession)

B3. Strategic Case and Economic Case

The rationale for making the investment, evidence of the existing situation and why the asset needs to be repaired or renewed. It should also include how it fits into the overall asset management strategy for the authority and why it cannot be funded through the annual Highways Maintenance Block Funding grant.

Why the asset is in need of urgent funding?

The original bridge structure was built in the 1800s, with extensive modification undertaken around 1959 – 1960 to presumably raise the clear height to accommodate the proposed electrification works and to incorporate the introduction of the Armoury roundabout above. There are 4 roads feeding in to this roundabout, which all form part of the Strategic Road Network (SRN) to the south of Stockport.

The existing bridge is an aged, two-span supported structure comprised of pre-stressed and post-tensioned elements of very limited residual life. The bridge was found to be in a poor condition and has suffered from severe corrosion to its reinforcement and substantial loss of concrete section. Based on the Stockport / Railtrack Bridgeguard 3 Assessment Report conducted in 2001, the overall bridge rating for this structure is Qualitative Failure that needs urgent replacement. A further Post Tensioned Special Investigation (PTSI) was undertaken in May 2005, it also concludes that the tendons are not fully grouted and are in poor condition because of water/contaminates ingress. The main deck reinforcement and tendons are at continued high risk of corrosion because of

the very high Chloride Ion levels. Water seepage into the deck voids is detrimental to the long-term integrity of the structure. The structure will continue to deteriorate, increasing the risk to life, structural failure, damage to service infrastructure, the highway network and extensive disruption to the operation of the WCML with over 16 passenger services an hour in each direction.

The early observation of the structural failure reported warrants early intervention before the risks materialise. The current capacity shortfall can be managed in the short term, however if the structure is not replaced in the next 3 years, operating restrictions (weight restrictions) will need to be implemented. If the asset condition suddenly dictates a weight restriction or a closure of the highway, then this could also potentially increase the risk of a like-for-like replacement being installed, which is not the solution that Stockport, TfGM and Network Rail have development plans for.



Figure 2: General view of the bridge and spalling to the deck of span 1, with exposed rebar.

Current Problems to be addressed by the scheme?

The current span includes a central support which limits flexibility and capacity for the railway and is too narrow to allow for any future Metrolink extensions to run parallel with the railway. A like for like replacement by Network Rail would be very disruptive to the local network during the construction stage and would not address congestion, walking or cycling issues. At a later date, the possible future tram-train/metro extensions would also require interventions in this area which would again cause significant highway maintenance problems.

The new bridge replacement will provide an opportunity to re-configure the current junction layout to enhance junction capacity and promote active modes of transport. The new layout (final design still to be finalised) will provide segregated pedestrian and cycle-controlled crossings on all arms and segregated cycleways on both sides over both bridges. These will allow connection between Shaw Heath and Edgeley via an off-road route with a two-stage crossing and between Edgeley and the Station and into Stockport via a single stage crossing. Other movements may require up to four crossings, however the timing of the signals with short cycle times and two stage operation will minimise any waiting times.

What Options have been considered and why have alternatives been rejected?

Investigations conducted so far have demonstrated that the condition of the tendons is below acceptable levels and has reduced the capacity of the structure to below Network Rail's liability. No economical remediation or repair method is available. In addition, this would require significant demolition of property on Castle Street to accommodate an extended roundabout junction. Traffic management and utility diversions will be the key delivery challenges whilst maintaining the highway function during the construction stage.

It is recommended that an off-line replacement could be built which provides a greater span to allow for potential Metrolink/rail extensions and addresses congestion, walking and cycling issues. It would

also be much less disruptive to build as the existing bridge could remain in operation during construction. Reconstruction is the only viable option to achieve the greatest whole life costs and eliminate risk.

The alternative would be a replacement of the existing structure in its current location. This would be potentially very disruptive to Stockport residents and the railway network for an extended period whilst the current bridge is removed and then replaced with a sub-optimal solution for the highway, the railway and the wider Stockport area. There are also potential inefficiencies in terms of cost and time because if a new bridge is required in a new location in the future there would be another period of disruption during the works as well as the cost of building a new bridge a relatively short time after constructing a replacement for the existing bridge.

What are the expected benefits / outcomes?

The expected benefits and outcomes of this scheme are to:

- Increase future highway capacity
- Improve safety environment for road user and the public
- Improve on street Non-Motorised User (NMU) provision in the area of the scheme; and
- Provide passive provision for future rail expansion into Stockport, and thus minimising future works and disruption to highway users

The new bridge structure proposed in this EOI in a new location to that of the existing structure will limit the highways impacts of the construction phase, remove a risk from the West Coast Mainline railway and allow for the passive provision of a future rail and rapid transit extensions to reach and connect through to Stockport town centre.

The proposed scheme would minimise the short-term disruption to traffic during construction and provide a design which minimises the impacts when future projects are implemented. In addition, it also provides opportunities to address highway congestion including providing capacity for future walking and cycling aspirations and promoting active modes of transport, within the boundary of the scheme.

The bridge sits over the West Coast Mainline which is a vital piece of national infrastructure and the implementation of this scheme reduces the risk of service disruption should the bridge fail. It also provides opportunities to improve the future maintenance and operation of this critical section of railway line.

The re-modelled junction would contribute towards the development of the proposed 'Stockport West' residential area of up to 3,000 new homes which lies immediately adjacent to the scheme. This will be by provision of highway capacity, walking and cycling links. The junction will also improve access to Stockport Station by provision of improved walking and cycling links to the Edgeley side.

Greater Manchester has adopted the 2040 Transport Strategy which sets out the short, medium and long-term proposals to create a cleaner, greener, more prosperous city region through better connections and simpler travel. There are several schemes in the Draft Delivery Plan 2020-2025 that require either future highway and rail access into and around Stockport. This scheme provides passive provision to facilitate these schemes, and reduce future disruption by providing updated highway infrastructure.

As mentioned above, rail capacity through Stockport railway station is already severely limited by the existing infrastructure constraints. The introduction of additional HS2 services from the late 2020's onwards will only exacerbate the current issues if no additional infrastructure is added to the network

in this area. Inevitably more infrastructure will be required at this location in the future and this bid recognises that need.

There are currently five railway lines that pass under Greek Street bridge and up to sixteen trains an hour use these lines. The railway network in this area is currently operating at its maximum capacity, which limits passenger numbers due to that lack of opportunity introduce new rail services. Growth therefore happens in a less sustainable manner. Indeed, the existing franchise commitments by the Train Operating Companies (TOCs) cannot presently be met by the current railway capacity. Stockport rail capacity is insufficient now and franchise commitments from the TOCs are not being delivered. In the medium term, the arrival of HS2 classic compatible services on the WCML (3 an hour) and the retention of existing Pendolino services (1 an hour) will exacerbate current issues, if not making the network potentially unworkable with such high service frequencies.

In the longer term, a rapid transit service is proposed in the 2040 Transport Strategy to operate between Stockport and Manchester Airport, and potentially Hazel Grove to East Didsbury. No direct rail link currently exists between these two locations despite them only being less than 6 miles apart. The relocation of the Greek Street bridge would allow a wider railway corridor to be constructed beneath it in the future, which would create the extra tracks needed for Stockport rail capacity including the Stockport to Manchester Airport scheme. A study is underway to consider a rapid transit scheme between Hazel Grove, Stockport and East Didsbury, which could also use this new infrastructure.

This bid aligns entirely with the core objectives of the Greater Manchester 2040 Transport Strategy and the Greater Manchester Clean Air Plan proposals. Greater Manchester is working hard to tackle air pollution, which is damaging our health. To achieve this Greater Manchester wants 50% of all journeys in the region to be made on foot, by bike or using public transport by 2040. Linked to this, a key part of reducing harmful nitrogen dioxide (NO₂) levels on Greater Manchester's road network is to give people viable alternatives to switch from the most polluting cars, HGVs and vans.

SECTION C: Declarations

C. Senior Responsible Owner Declaration

As Senior Responsible Owner for [proposal name] I hereby submit this request for approval to DfT on behalf of [name of authority] and confirm that I have the necessary authority to do so.

I confirm that [name of authority] will have all the necessary powers in place to ensure the planned timescales in the application can be realised.

Name: **MARK CLYNN**

Signed:

Position: **Director of Place Management**



Submission of Expression of Interest:

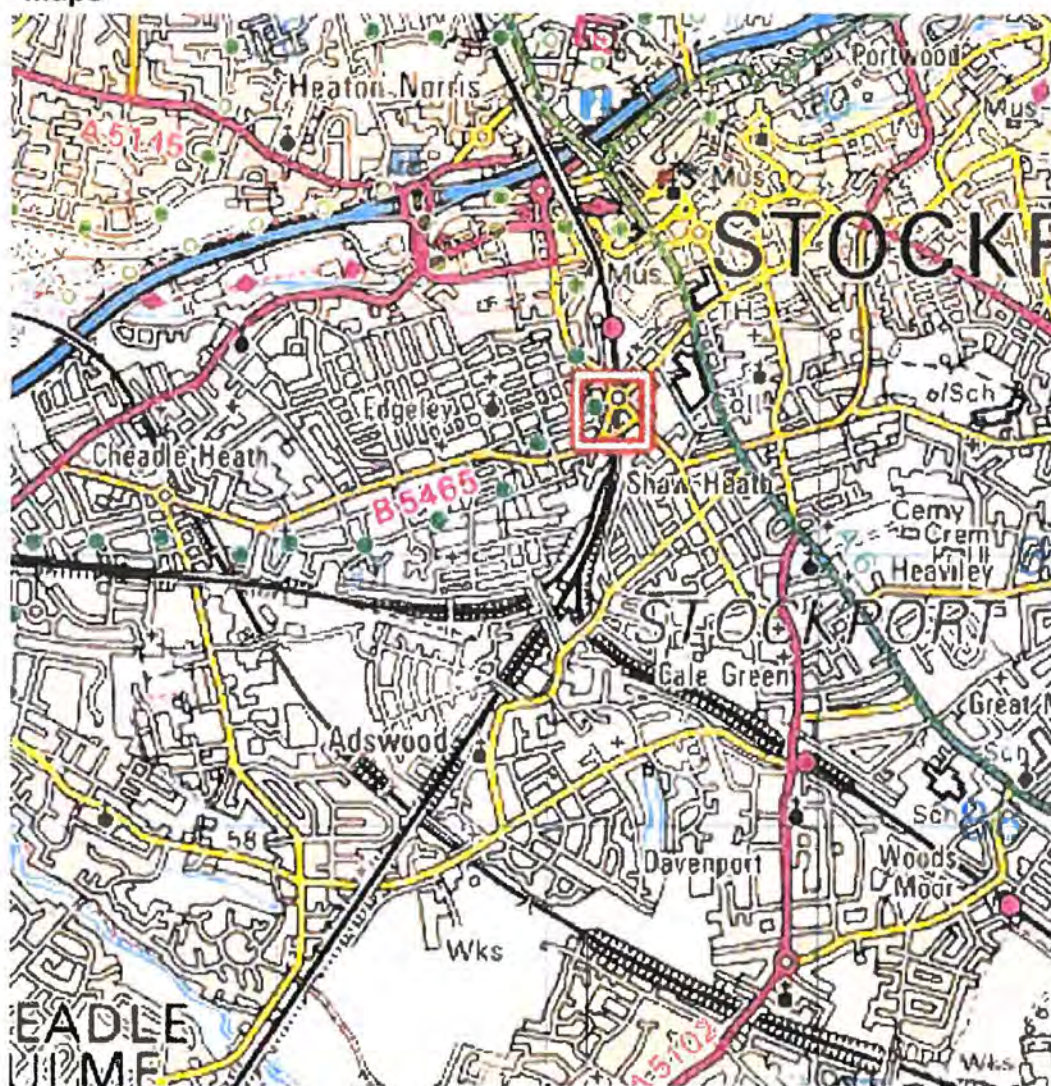
The deadline for the Expression of Interest submission is 5pm on **31 October 2019**

Successful proposals for EOIs in Tranche 2B are to be funded by DfT in 2020/21.

An electronic copy of the EOI should be submitted to:

roadmaintenance@dft.gov.uk copying in Paul.O'Hara@dft.gov.uk

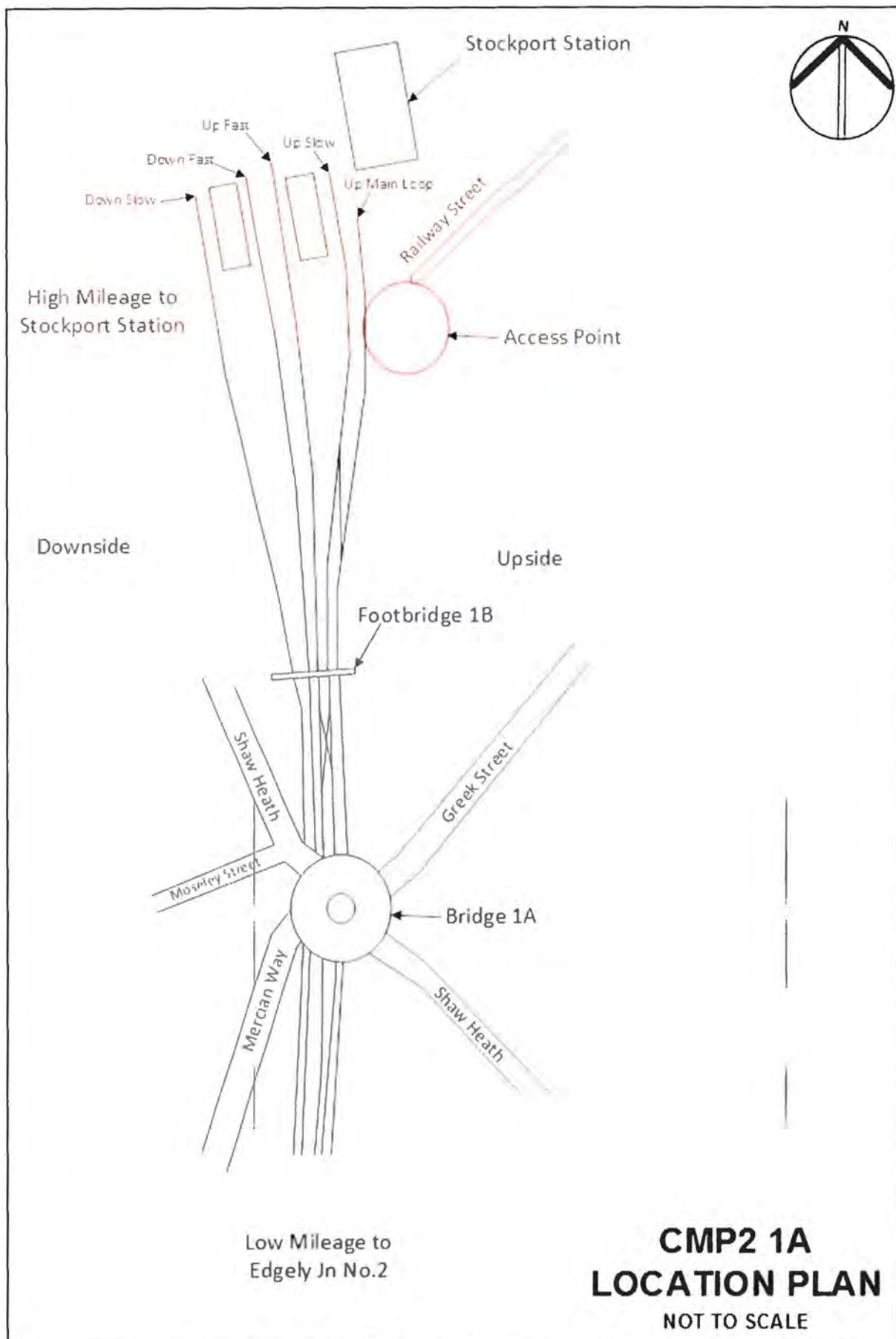
Appendix A - Maps



OS Map showing area in question and wider Stockport highway network



Stockport Mayoral Development Corporation area



Location Plan of existing road and rail layout for the structure in question



Transport for Greater Manchester
2 Piccadilly Place
Manchester
M1 3BG

Network Rail
Square One
4 Travis Street
Manchester
M1 2NY

Reference: GREEK/OUT/LET/001

Date: 24th October 2019

For the attention of Matthew Riley

CC: Simon White, Martin Lax, Sue Stevenson

Dear Sir,

Title: Greek Street Bridge Highways Maintenance Fund Bid

Network Rail understand that a bid will be shortly made for funding to the Highways Maintenance Fund to redevelop and improve Greek Street Bridge in Stockport.

Any future works concerning the bridge would need to not detrimentally impact on the maintenance or operation of the railway. As long as this is met the Network Rail can foresee no detrimental impact upon the scheme on our assets.

Network Rail look forward to working with Stockport Council and TfGM on these proposals to create a mutually beneficial scheme that improves the surrounding environs and continues to enhance Stockport for visitors and residents.

If you have any queries on this matter please do not hesitate to contact myself.

Yours Faithfully,

A handwritten signature in black ink, appearing to read 'Rory Kingdon', written over a horizontal line.

Rory Kingdon

On behalf of Network Rail

