

Title of Scheme: <i>Standard Brickwork and Masonry Repair Details - Phase 1</i>			
Location: <i>Network Rail Infrastructure</i>			
ELR: <i>N/A</i>	Mileage: <i>N/A</i>	OS grid ref.: <i>N/A</i>	Structure No.: <i>N/A</i>
Document No: NR/CIV/FORMB/101			Revision: P3

This Addendum to the Form B Certificate is to be used to facilitate the transformation of Territory level Civils Standard Design and Detail drawings for use at a National level. This Addendum only applies where the design has already been subjected to full formal technical approval in accordance with Network Rail Company Standard NR/SP/CIV/003 (formally RT/CE/S/003).

Design in the context of this Addendum deems only to include the transfer of existing design information, as well as the provision of supplementary Health, Safety and Environmental Risk Assessment information, onto a new national Civils Standard Design & Detail drawing.

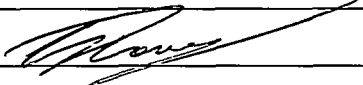
Part 1: Design **Design organisation:** *Tony Gee and Partners LLP*

I certify that reasonable professional skill and care have been used in the Design of the Scheme (or part of Scheme) identified above, with the objective of ensuring that the Design:

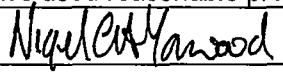
- (a) complies with the Approval in Principle recorded on Form A (ref BE6629/R/71310/001) signed by I.M. Frostick on 5 May 2004, including associated comments by the Professional Head of Civil Engineering in giving endorsement;
- (b) complies with the Certificate of Design and Checking recorded on Form B signed by Frank Cotter on 19 May 2004, design standards, codes and methods stated on the above Form A (including any stated departures or dispensations).
- (c) is accurately described by the following drawings, schedules, performance, materials and workmanship specifications and other documents:

NR/CIV/SD/101	Rev. P3	Specification for the Works
NR/CIV/SD/102	Rev. P3	Standard Brickwork Bonds
NR/CIV/SD/103	Rev. P3	Re-Casing of Defective Brickwork in Arches & Tunnel Linings Greater than 4 Rings with Block Bonding between Rings
NR/CIV/SD/104	Rev. P3	Re-Casing of defective Brickwork in Arches and Tunnel Linings up to 4 Rings
NR/CIV/SD/105	Rev. P3	Single Ring Re-Casing of Defective Brickwork in Arches and Tunnel Linings up to 4 Rings.
NR/CIV/SD/106	Rev. P3	Brick Arch Ring and Tunnel Lining Cross Pinning and Grouting System.
NR/CIV/SD/107	Rev. P3	Stitching of Longitudinal Cracks in Arches & Tunnel Lining between Brick Spandrel/Voussoir & Arch Barrel
NR/CIV/SD/108	Rev. P3	Stitching Rotational Cracks
NR/CIV/SD/109	Rev. P3	Stitching of Shear Cracks
NR/CIV/SD/110	Rev. P3	Stitching of Longitudinal Cracks in Brickwork
NR/CIV/SD/111	Rev. P3	Spot Replacement of Bricks
NR/CIV/SD/112	Rev. P3	Temporary Works Arrangements
NR/CIV/SD/113	Rev. P3	Re-Casing Jack Arches
NR/CIV/SD/114	Rev. P3	Temporary Works Arrangements using Shoring for Live Load Conditions
NR/CIV/SD/115	Rev. P3	Masonry Refurbishment
NR/CIV/SD/116	Rev. P3	Re-Casing Vertical Walls
NR/CIV/SD/TUM/101	Rev. B	Technical User Manual for Brick and Masonry Repair Standard Detail & Design Drawings

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Signed 	Title: Engineer
Name: Geoff Rowan	Date: <i>19TH May 2006</i>
To be signed by the Designer or other person authorised to sign on behalf of the organisation responsible for the Design.	

I certify that the staff who have prepared the above Design are competent to carry out their duties and that they have used reasonable professional skill and care.

Signed: 	Title: Executive Director
Name (Print): N.G.A. Yarwood	Date: <i>19 May 2006</i>
To be signed by the Director or other person authorised to sign on behalf of the organisation responsible for the Design to whom the Designer is responsible.	

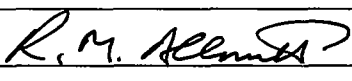
Part 2: Check

Checking organisation: *Tony Gee and Partners LLP*

I certify that reasonable professional skill and care have been used in checking the Design of the Scheme (or part of Scheme) identified in Part 1 of this certificate, with the objective of ensuring that the Design:

- (a) complies with the Approval in Principle recorded on Form A (ref BE6629/R/71310/001) signed by I.M. Frostick on 5 May 2004, including associated comments by the Professional Head of Civil Engineering in giving endorsement;
- (b) complies with the Certificate of Design and Checking recorded on Form B signed by Frank Cotter on 19 May 2004, design standards, codes and methods stated on the above Form A (including any stated departures or dispensations).

I confirm that the Design was checked as Design Check category II and that the Design Check has been carried out with the independence specified in NR/SP/CIV/003 (formerly RT/CE/S/003).

Signed 	Title: Principal Engineer
Name: Martin Allnutt	Date: <i>19TH May 2006</i>
To be signed by the Checker or other person authorised to sign on behalf of the organisation responsible for the Design Check.	

I certify that the staff who have completed the above check are competent to carry out their duties and that they have used reasonable professional skill and care.

Signed 	Title: Executive Director
Name: Nigel Yarwood	Date: <i>19 May 2006</i>
To be signed by the Director or other person authorised to sign on behalf of the organisation responsible for the Design Check to whom the Checker is responsible.	

(Note: for categories I and II checks the signature above may be the same as that in Part 1.)