Full document details: NR NR-CIV-SD-FORMB-520 ISSUE 2010

CERTIFICATE OF DESIGN AND CHECKING

FORM B

for

STANDARD TUNNEL REPAIR DETAILS

on behalf of

NETWORK RAIL

March 2010

Doc. No. NR/CIV/SD/FORMB/520

Donaldson Associates Limited
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Date	Revision	Pages	Appendices	Originator	Check	Approved
15/01/09	B01	5	-	NLJ	RH	CJS
27/04/09	B02	5	-	NLJ	RH	PH
26/06/09	B03	5	-	NLJ	RH	PH
29/03/10	B04	5	-			

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NETWORK RAIL (Civil Engineering Standard Designs & Details)
FORM B: CERTIFICATE OF DESIGN AND CHECKING

Title of Scheme: Standard Tunnel Repair Details			
Location: Various			
ELR: N/A	Mileage: N/A	O.S. Grid Reference: N/A	Structure No.: N/A

Part 1: **Design** **Design organisation:** Donaldson Associates Limited

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 signed by the Designated Project Engineer (Part 4) – Senior Design Engineer Andy Cross on 18th January 2010, the Civil Engineer (Part 5) – Senior Design Engineer Alan Dray on 18th January 2010, the Asset Engineer (Part 6) – Senior Technology Engineer (Tunnels) Colin Sims on 21st January 2010 and signed on behalf of the Professional Head of Civil Engineering (Part 7) by Colin Sims on 21st January 2010.

(b) complies with the Design standards, codes and methods stated on the above Form A (including any stated deviations or dispensations), with the following amendments and/or additions:

(c) Is accurately described by the following drawings, schedules, performance, materials and workmanship specifications and other documents:

Drawing No.	Rev	Drawing Title
NR/CIV/SD/520	A	Specification for the works
NR/CIV/SD/521	A	Standard brickwork bonds
NR/CIV/SD/522	A	Re-casing of defective brickwork in tunnel linings greater than 4 rings with header bonding between rings
NR/CIV/SD/523	A	Re-casing of defective brickwork in tunnel linings up to 4 rings
NR/CIV/SD/524	A	Single ring re-casing of defective brickwork in tunnel lining up to 4 rings
NR/CIV/SD/525	A	Tunnel lining cross pining and grouting
NR/CIV/SD/526	A	Stitching of cracks between spandrel/ voussoirs and tunnel lining
NR/CIV/SD/527	A	Stitching of cracks
NR/CIV/SD/528	A	Stitching of transverse cracks in brickwork
NR/CIV/SD/529	A	Spot replacement of bricks
NR/CIV/SD/530	A	Typical centring arrangements
NR/CIV/SD/531	A	Re-casing jack arches in cut and cover tunnels
NR/CIV/SD/532	A	Stone masonry refurbishment
NR/CIV/SD/533	A	Re-casing vertical walls
NR/CIV/SD/540	A	Sprayed concrete patch repair to walls
NR/CIV/SD/541	A	Sprayed concrete patch repair to crown / haunch

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