MILIMA



RAILTRACK

STRENGTHENING OF RAILTRACK OWNED HIGHWAY BRIDGES

GUIDANCE FOR IMPLEMENTATION

STRENGTHENING OF RAILTRACK OWNED HIGHWAY BRIDGES GUIDANCE FOR IMPLEMENTATION March 1999

March 1999





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GUIDANCE FOR IMPLEMENTATION

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INTRODUCTION

Following the successful negotiations between CSS and Railtrack on the Joint Venture Agreement for carrying out bridge assessments, the Local Government Association supported the CSS as its representative to lead the negotiations on strengthening.

The CSS/Railtrack Liaison Group developed five scenarios which were accepted by the Local Authorities Association and Railtrack Liaison Group as representing all possible outcomes from a Bridgeguard 3 assessment. These scenarios are detailed in full in this document. It was recognised that the difficult scenario was scenario 3, which required the Council and Railtrack to jointly fund necessary strengthening work.

The main Liaison Group established a Working Group to examine how many different possible cost-sharing options could arise under scenario 3 and to recommend to the Liaison Group easily applied criteria for the options identified.

This document sets out the conclusions reached by the various groups, together with follow-up work on:-

- 1) Works agreements relating to the execution of work under each option.
- 2) The potential for Council takeover.
- 3) Responsibility for future maintenance.
- 4) Assessment of commuted sums where applicable.

The document is backed by the Local Government Association, the Convention of Scottish Local Authorities, the Welsh Authorities and Railtrack and is recommended for use when implementing strengthening work following a Bridgeguard 3 assessment. The aim is to produce an acceptable standardised approach to the strengthening of Railtrack owned bridges which will minimise the time required to process a scheme and at the same time minimise the inconvenience to road users due to substandard bridges.

Different Councils may prefer different words in the Agreements appended to this document. These agreements have been the subject of detailed negotiation between CSS and Railtrack and represent an mutually agreed position. Attempts to review the clauses are likely to lead to disputes which may adversely affect the position of both sides, with a consequent delay in progressing schemes.

Members of the CSS/Railtrack Liaison Group:-

David Lynn Warwickshire County Council & Chairman of CSS Bridges

Group

Richard Fish Cornwall County Council & Secretary to CSS Bridges Group

Jim Irons Perth & Kinross Council

David Ventry Railtrack - up to 1998

Kim Teager Railtrack - from 1998

Brian Bell Railtrack

Andrew Packham Railtrack - up to 1997

Members of the Working Group:-

Richard Fish Cornwall County Council

Steve Tart Manchester City Council

Colin Palmer London Borough of Redbridge

Andrew Packham Railtrack

Brian Bell Railtrack

Steve Pearson Derbyshire County Council

ASSESSMENT PHASE

Railtrack's load bearing obligations are those detailed in Section 117 of the 1968 Transport Act supplemented in England and Wales by SI 1705/1972.

The assessment criteria used to compare existing carrying capacity with Railtrack's obligation, are specified in S1 1705/1972 as those contained in Ministry of Transport Memorandum (BE4). It should be noted that BE4 does not contain a requirement to check for accidental wheel load effects on footways and verges or any requirements in relation to parapets. Any localised failure due to such considerations would not therefore be taken into account in deciding whether or not a bridge fails to meet Railtrack's obligations. It should be remembered that BE4 is not a current assessment document and is used as a comparator only. It should not be used as a basis for any weight restrictions.

Following receipt of the assessment, the Council determines what carrying capacity it requires. This will determine under which of the following senarios the bridge should be processed.

The five possible outcomes from a Bridgeguard 3 assessment are:-

- Bridge fails to meet Railtrack's obligations, permanent weight restriction according to calculated capacity acceptable to Council. (Railtrack to fund any work necessary.)
- 2. Bridge fails to meet Railtrack's obligations, Council do not require a capacity higher than Railtrack's obligation. (Railtrack to fund all work necessary.)
- 3. Bridge fails to meet Railtrack's obligations, Council require capacity higher than Railtrack's obligations. (Railtrack and Council to jointly

fund all work necessary.)

- 4. Bridge meets (or exceeds) Railtrack's obligations, Council content with capacity available. (Council to fund any work necessary.)
- 5. Bridge meets (or exceeds) Railtrack's obligations, Council require capacity higher than that available. (Council to fund all work necessary.)

In the above scenarios, work is defined as:-

- strengthening
- reconstruction of part or of whole
- weight restrictions
- width restrictions
- resurfacing
- reprofiling to change vertical alignment

It is anticipated that this will be agreed by correspondence between the parties involved and that no meeting will be required at this stage.

Bridges under scenarios 1, 2, 4 and 5 need no further consideration prior to scheme implementation other than to consult on matters of design and construction principles, decisions on ownership and completion of the appropriate agreements.

SCENARIO 3 - COST SHARING CRITERIA

Principle

The parties determine "in principle" which cost sharing option is to be followed by deciding whether strengthening is feasible to meet the Railtrack obligation and whether reconstruction is necessary to meet the Council capacity requirement. The Council and Railtrack should also decide on which alternative engineering schemes should be explored by the detailed feasibility study required under options c) or d) and agree on the long term ownership of the bridge. To assist in the understanding of these processes, a simple flow chart has been produced, which is attached as Appendix A.

In considering alternatives under scenario 3 the following definition shall apply:

- strengthening shall be defined as increasing the capacity of an existing structure to carry the required loading.
- reconstruction shall be defined as the removal of the whole or part of the primary members of an existing structure and replacement by new construction.
- a) Bridge can be strengthened using the same methodology to meet both the Railtrack load bearing obligation and Council load bearing aspirations.
 - Council contribution to be assessed as a fixed percentage of the total final scheme cost, the percentage being based on the assessed cost of the additional strengthening material and its inclusion in the works and any extra costs due to extended contract duration.
- b) Bridge must be reconstructed to meet both the Railtrack load bearing obligation and Council load bearing aspirations.

- In the absence of any better information, it is recommended that the Council contribution shall be 5% of the total final works cost for simple redeckings.
- For other schemes the Council contribution is to be assessed as a fixed percentage of the total final works cost, the percentage to be agreed on a scheme by scheme basis.

Examples of simple redecking are:-

- simply supported single or multi span bridges up to individual span lengths of
 30 m.
- continuous multi span bridges having individual span ratios nowhere exceeding
 1:2.
- spans supported on existing sub-structures to which only minor work is required to receive new bearings.
- deck construction using slab or beam/slab techniques in steel and or reinforced concrete or pretensioned concrete.
- deck units and materials placed using standard construction methods for instance lifted into position.

Specifically excluded shall be decks requiring:

- The use of materials other than those mentioned above. (This includes post tensioned concrete.)
- the use of construction techniques such as deck sliding or launching.
- c) Bridge can be strengthened to meet the Railtrack load bearing obligation but must be reconstructed or require a different strengthening method to meet

Council load bearing aspirations.

- Council contribution to be assessed as a fixed percentage of the total final scheme cost, the percentage being based on the marginal cost difference between feasibility estimates produced for agreed alternative schemes.
- The feasibility estimates should be produced by the assessing engineering consultancy, if independent of both parties.
- d) If betterment is required to meet either Railtrack or Council aspirations, then:-
 - the process to follow that outlined for option c) but sufficient feasibility estimates to be produced to accurately assess the marginal costs of each option;
 - with each party to be under a duty to declare betterment proposals already included in firm forward programmes.

Betterment is defined as an enhancement of the facility, such as:-

- lifting for rail developments;
- widening for highway developments;
- improving aesthetics;
- parapet strengthening.

Process

If the assessing engineering consultancy is not independent, the feasibility schemes should be drawn up by that consultancy but the estimating undertaken by the other party's consultant.

To minimise disputes and ensure that only realistic alternative schemes are considered, the feasibility estimates should also show that the chosen option has the lowest total

whole life cost, based on the principles set out in Highway Agency documents BD36/92 and BA28/92 or subsequent editions. However, this whole life cost is not to be used in assessing the contribution percentages.

Decisions should be reached without the need for detailed engineering analysis and should include the assessing and checking consultants.

In considering alternatives, the effect of third party involvement is to be assessed and allowed for when agreeing cost-sharing percentages.

Typically, third party involvement may arise from property developments, DBFO road procurement and other commercially driven developments.

In calculating the marginal cost of achieving the Council's aspirations, the following rationale is to be considered:-

"The estimated scheme cost to meet Railtrack's obligations and aspirations, which should include betterment, divided by the estimated total scheme costs shall form the proportion payable by Railtrack. The estimated cost will be determined at feasibility stage. Railtrack's calculated proportion shall be applied to the actual scheme cost to determine their contribution to the scheme. The balance of the scheme cost will be payable by the Council."

ie: X = estimated cost at feasibility stage of Railtrack's obligations including betterment

Y = estimated cost of scheme at feasibility stage

Z = actual cost of scheme

Railtrack pay Z (X/Y)

Council pay Z (Y - X)/Y

The scheme cost is to be a total scheme cost and include for feasibility if not funded elsewhere, design, site supervision, statutory undertakers' costs, possession costs, administration costs and any other costs contributing the final overall cost of the project.

Whoever owns the bridge at the t		onsible for

MODEL WORKS AGREEMENTS

Model works agreements have been agreed between Railtrack PLC and CSS to cover four options related to original scenarios 3 and 5 and are included in appendix C

Option 1: Bridge meets BE4; Council require higher capacity than available (all work at cost of Council). Council take over bridge and do work.

Option 2: As Option 1 but Railtrack retain ownership and do work.

These options relate to outcomes under scenario 5 (Bridge meets or exceeds Railtrack's obligations. Council require capacity higher than that available. Council to fund all work necessary) extended to include future ownership and maintenance responsibilities.

Option 3: Bridge fails BE4; Council require higher capacity than BE4 (work jointly at cost of Council and Railtrack). Council take over bridge and do work.

Option 4: As Option 3 but Railtrack retain ownership and do work.

These options relate to outcomes under scenario 3 (Bridge fails to meet Railtrack's obligations; Council require capacity higher than Railtrack's obligations. Railtrack and Council to jointly fund all work necessary) extended to include future ownership and maintenance responsibilities.

No works agreements are required for bridges under scenarios 1, 2 and 4.

COUNCIL TAKEOVER

Individual Councils may wish to take over ownership of a bridge and its future maintenance liabilities so that they have primary control of the highway network.

This may take place at any time in the life of a structure such as:

- prior to Bridgeguard 3 assessment in which case the Council will be responsible for carrying out the assessment. It will be necessary to liaise with Railtrack with regard to possession times and costs but Railtrack would not act as Technical Approval Authority. Work required to meet the Council's requirements will be funded by that Council together with future maintenance.
- After the Bridgeguard 3 assessment but prior to any subsequent works being carried out. The principles incorporated in the Joint Venture agreement or the general conditions for the assessment of Railtrack bridges would apply.
 - Work required to meet Councils' requirements over and above BE4 will be funded by that authority together with future maintenance.
- After the Bridgeguard 3 assessment and the completion of work required under scenarios 1 to 5. Councils' funding liabilities will be determined by the appropriate scenarios. The Council will meet future maintenance costs.
 - A Council takeover is not expected to be a common occurrence and any Council contemplating such a move should carefully compare the advantages and disadvantages to their particular circumstances.
 - If a takeover is favoured then a transfer agreement will need to be negotiated with Railtrack on the basis of individual structures.

Recommendation on a general transfer agreement is considered outside the scope of this document.

FUTURE MAINTENANCE

The model works agreements covering option 2 (Bridge meets BE4, Council require higher capacity than available - all work at cost of Council) and option 4 (Bridge fails BE4, council require higher capacity than BE4 - work jointly at cost of Council and Railtrack) under which Railtrack retain ownership and maintenance liabilities contain a clause 10.2 giving alternative methods of dealing with future maintenance liabilities to ensure that the designed load bearing capacity in excess of Railtrack's legal obligation is protected.

The adopted method shall be by mutual agreement between the parties and be based on one of the following:

- (a) At Railtrack's own cost where there are no readily identifiable additional costs, or
- (b) Where there are readily identifiable additional costs, the payment by the Council of a contribution based on percentage of the future maintenance costs. This contribution may be commuted with the agreement of both parties.
 - The percentage to be that determined under Chapter 3 (Scenario 3 cost sharing criteria) section (b), (c) and (d).
- (c) The payment by the Council of a commuted sum based on the methodology presented in Chapter 7 (commuted sums).

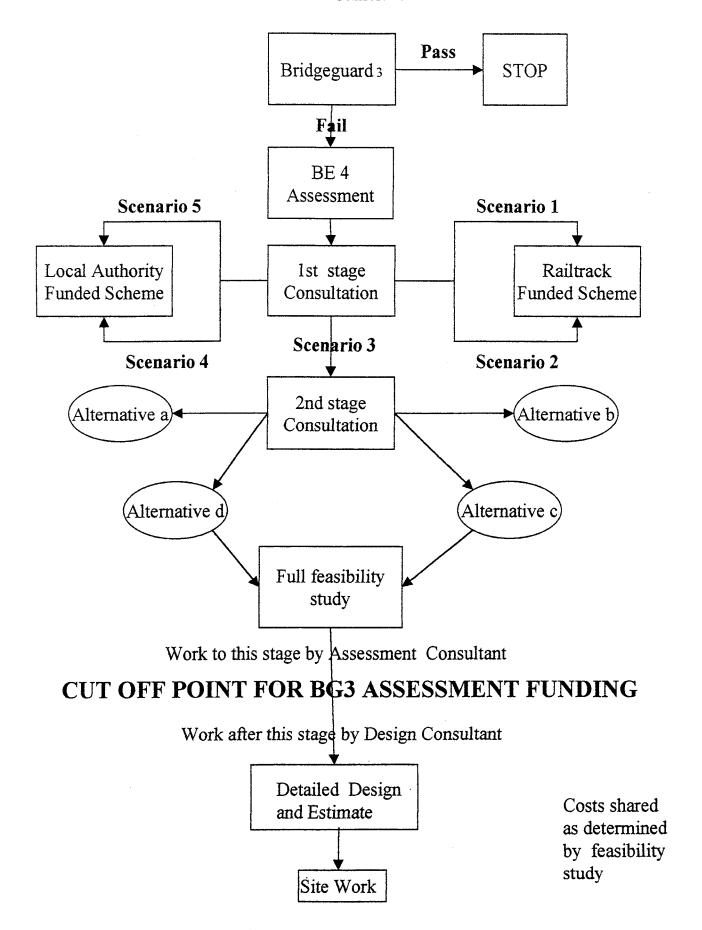
Each individual council will need to assess the advantages and disadvantages of the contribution methods outlined in (b) and (c) above in relation to their particular financial requirements. For instance payments under (b) are likely to be revenue funded while payments under (c) commuted sums are likely to be capital funded.

COMMUTED SUMS

A suggested method for the determination of commuted sums is included under Appendix D. The methodology as presented has not been agreed with Railtrack but is included as a basis for future discussions.

Appendix A

FLOW CHART



Appendix B

4982

STATUTORY INSTRUMENTS

1972 No. 1705

HIGHWAYS, ENGLAND AND WALES

The Railway Bridges (Load-Bearing Standards) (England and Wales) Order 1972

Made -

8th November 1972

Coming into Operation

11th December 1972

The Secretary of State for the Environment as respects bridges in England (excluding Monmouthshire), and the Secretary of State for Wales as respects bridges in Wales (including Monmouthshire), make this Order in exercise of their powers under section 117 of the Transport Act 1968(a) as amended by paragraph 1 of Schedule 3 to the Transport (London) Act 1969(b) and of all other enabling

Commencement and citation

1. This Order shall come into operation on 11th December 1972 and may be cited as the Railway Bridges (Load-Bearing Standards) (England and Wales) Order 1972.

Interpretation

2.—(1) In this Order, unless the context otherwise requires:—

"the Act" means the Transport Act 1968;

"the appropriate Minister" means, in relation to England (excluding Monmouthshire), the Secretary of State for the Environment and in relation to Wales (including Monmouthshire), the Secretary of State for Wales;

"existing", in relation to a railway bridge, means existing when this Order comes into operation;

"new", in relation to a railway bridge, means constructed after this Order has come into operation (including constructed by way of reconstruction or replacement of a railway bridge in existence, whether or not such bridge is an existing railway bridge for the purposes of this Order);

"principal road" means a road which is classified by the appropriate Minister under section 27(2) of the Local Government Act 1966(c) as a principal road for the purposes of advances under section 235 of the Highways Act 1959(d);

"railway" includes a railway which has ceased to carry traffic and the site of a railway from which the track has been removed;

"railway bridge" means a bridge, or (in so far as section 117 of the Act applies thereto by virtue of section 122(1) thereof) a tunnel or other structure,-

⁽a) 1968 c. 73. (c) 1966 c. 42.

- (a) which carries a road over any one or more of the following, that is to say,
 - (i) a railway of the British Railways Board,
 - (ii) a railway of the London Transport Executive,
 - (iii) a railway of any subsidiary of either of those bodies.
 - (iv) any other installation or land used by either of those bodies or by any such subsidiary in connection with a railway or an inland waterway,
 - (v) any installation or land used by the National Freight Corporation or by any subsidiary of that Corporation in connection with a railway, and
- (b) to which section 117 of the Act applies or will, on completion, apply,

(including any abutments or other parts of the bridge, tunnel or other structure and, if the body or subsidiary in question is responsible for the maintenance thereof, any embankment, retaining wall or other work or substance supporting or protecting the surface of the road carried by, or giving access to, the bridge, tunnel or other structure); and

"road" means a highway which is maintainable at the public expense (whether by virtue of section 116 of the Act or otherwise howsoever) and which has a made-up carriageway as defined in the Highways Act 1959.

- (2) References in this Order to the construction or reconstruction of a railway bridge at a particular time, or in relation to a particular date, are (except in paragraph (5) below) references to the completion of the construction or reconstruction (as the case may be).
- (3) Where a railway bridge consists of more than one separately supported span, each span, together with its supports and its superstructure, shall for the purposes of this Order be treated as a separate railway bridge.
- (4) Where it is necessary to determine for the purpose of any provision of this Order (other than paragraph (4) of Article 3) whether a bridge, tunnel or other structure is an existing or a new railway bridge and that determination depends on whether the way carried thereby is a road, regard shall be had to the position current as respects that way—
 - (a) when this Order comes into operation, in the case of an existing railway bridge, and
 - (b) when the bridge, tunnel or other structure is constructed or reconstructed, in the case of a new railway bridge.
- (5) References in this Order to a road carried by a railway bridge as being classified, or not classified, in any particular class or category, are references:—
 - (a) where the bridge is an existing railway bridge, to the position as respects the classification of that road current when this Order comes into operation, and
 - (b) where the bridge is a new railway bridge, to the position as respects the classification of that road current when the construction or reconstruction (as the case may be) of the bridge is undertaken.
- (6) References in this Order to any enactment are references to that enactment as amended by or under any subsequent enactment.

(7) The Interpretation Act 1889(a) shall apply for the interpretation of this Order as it applies for the interpretation of an Act of Parliament.

Load-bearing standards for existing railway bridges

- 3.—(1) Subject to the provisions of this Order, the load-bearing standards for existing railway bridges shall be as follows:—
 - (a) where the bridge was constructed or last reconstructed on or after 1st January 1962 and the bridge is not one of those listed in Schedule 2 to this Order, the standard which would be applicable to it under Article 4 of this Order if it were a new railway bridge the construction of which was undertaken immediately after this Order has come into operation;
 - (b) where either:--
 - (i) the bridge is one of the bridges listed in Schedule 2 to this Order, or
 - (ii) the bridge was constructed or last reconstructed on or after 1st January 1955, but before 1st January 1962, and paragraph (a) above does not apply to it,

the standard specified in Part II of Schedule 1 to this Order;

- (c) where the bridge was constructed or last reconstructed before 1st January 1955 and neither paragraph (a) nor paragraph (b) above applies to it, the standard specified in Part I of Schedule 1 to this Order.
- (2) The load-bearing standard prescribed by paragraph (1)(b) or (c) of this Article for an existing railway bridge shall only apply in relation to that bridge until it is reconstructed or replaced and shall not apply for determining the standard to be complied with by the bridge as reconstructed or by the bridge which takes its place.
 - (3) The foregoing provisions of this Article—
 - (a) shall not apply to any existing railway bridge where at the coming into operation of this Order there is in force in relation to the road carried by that bridge a prohibition under section 1, 6, 12 or 17 of the Road Traffic Regulation Act 1967(b) as respects the weight of the traffic using that road, and shall remain inapplicable to that bridge so long as such prohibition as respects weight of traffic remains in force (whether in the same or some altered form), and
 - (b) shall not apply to any of the existing railway bridges listed in Schedule 3 to this Order pending the placing on the road carried by that bridge of a prohibition under section 1, 6, 12 or 17 of the Road Traffic Regulation Act 1967 as respects the weight of the traffic using that road, and so long as such prohibition as respects weight of traffic remains in force (whether in its original or some altered form),

but when such prohibition expires or is revoked and is not immediately replaced by another prohibition under one of the said sections of the said Act as respects the weight of traffic, then, as from the date of such expiration or revocation, the foregoing provisions of this Article shall (subject to paragraph (4) of this Article) apply to that railway bridge.

(4) Nothing in paragraph (3) of this Article shall be taken as applying the provisions of paragraphs (1) and (2) of this Article to any railway bridge listed in Schedule 3 to this Order and asterisked in that Schedule (such marking in that Schedule indicating that doubts exist whether the way carried by that bridge is a highway) unless, when the prohibition mentioned in paragraph (3) of this Article expires or is revoked, the way carried by the bridge is then a road as defined in Article 2(1) of this Order.

Load-hearing standards for new railway bridges

- 4. Subject to the provisions of this Order, the load-bearing standards for new railway bridges shall be as follows:—
 - (a) where the road carried by the bridge is a principal road and is also specially classified by the appropriate Minister under section 27(2) of the Local Government Act 1966 as a 45 HB unit road for the purposes of this Order, the standard specified in Part IV of Schedule 1 to this Order:
 - (b) where the road carried by the bridge is a principal road but does not fall within paragraph (a) above, the standard specified in Part III of Schedule 1 to this Order;
 - (c) where the road carried by the bridge is not a principal road, the standard specified in Part II of Schedule 1 to this Order.

Continuance of load-bearing standards

5. Where, by virtue of Article 3 or 4 of this Order, a load-bearing standard has been applied to an existing railway bridge, or to a new railway bridge on its construction, the standard shall continue to apply to the bridge until it is reconstructed or replaced, notwithstanding that the classification of the road carried by the bridge is thereafter altered or discontinued.

Determination of disputes

6. If any question arises as to the requirements to be fulfilled by a particular railway bridge in order to comply with the relevant load-bearing standard prescribed by this Order (being a standard prescribed by reference to a document published by the British Standards Institution or by a Government department), the matter shall be determined, in the case of dispute, by a certificate of the appropriate Minister.

Signed by authority of the Secretary of State for the Environment 8th November 1972.

A. D. Holland, Chief Highway Engineer in the Department of the Environment.

Signed by authority of the Secretary of State for Wales 8th November 1972.

D. A. R. Hall,
Director of Highways
Welsh Office

SCHEDULE 1

LOAD-BEARING STANDARDS

PART [

The 1969 Construction and Use Regulations Standard

The bridge shall be such that when it is assessed in accordance with the relevant requirements of the Ministry of Transport Technical Memorandum (Bridges) No. B.E.4 dated January 1967 (as amended up to 11th November 1970) it shall be found capable of carrying (in addition to the materials which constitute the highway on the bridge):—

- (a) the train or trains of three four-axled vehicles each of which has a laden weight of 24 tons (together with, in a case where the length of the bridge exceeds the length of the vehicle train or trains, a uniformly distributed load of 50 lbs. per square foot on so much of the highway on the bridge as would be unoccupied by the train or trains),
- (b) individual vehicles which transmit to the surface of the highway by wheels in line transversely on one axle a load of 11 tons, and
- (c) individual vehicles which transmit to the surface of the highway by wheels in line transversely on two axles, where the distance between the axles is 4 feet, a load of 9 tons per axle,

all as described in the said Memorandum (the foregoing requirements being requirements the satisfaction of which by a bridge shows that the bridge is able to carry, in the circumstances most adverse to its stability which are likely to occur, the heaviest vehicles which, under the Motor Vehicles (Construction and Use) Regulations 1969(a), can lawfully use the highway on the bridge).

PART II

Type HA (equivalent lane loading) Standard

The bridge shall be such that it can carry, in accordance with the relevant provisions of the British Standard Specification 153, Part 3A, Loads (Edition of 1954 as amended up to 1968) as supplemented and modified by the provisions of the Ministry of Transport Memorandum No. 771 (Standard Highway Loadings) (Edition of 1961, reprinted 1968), (except paragraph 4(i), (ii) and (iii) thereof), the standard highway loading Type HA (equivalent lane loading).

PART III

Type HA (equivalent lane loading) and 37½ units of Type HB (abnormal unit loading)

Standard

The bridge shall be such that it can carry, in accordance with the relevant provisions of the British Standard Specification referred to in Part II above (supplemented and modified as aforesaid):—

- (a) the standard highway loading Type HA (equivalent lane loading), and
- (b) 37½ units of the standard highway loading Type HB (abnormal unit loading).

PART IV

Type HA (equivalent lane loading) and 45 units of Type HB (abnormal unit loading)

Standard

The bridge shall be such that it can carry, in accordance with the relevant provisions of the British Standard Specification referred to in Part II above (supplemented and modified as aforesaid):—

- (a) the standard highway loading Type HA (equivalent lane loading), and
- (b) 45 units of the standard highway loading Type HB (abnormal unit loading).

(a) S.I. 1969/321 (1969 I. p. 829).

SCHEDULE 2

Existing rallway bridges constructed or reconstructed on or after 1 January 1962 and carrying principal roads where HA Load-bearing standard alone is to apply

AILWAYS
 E E

LONDON MIDLAND REGIO	NOC	₩ E	LAN	D RE	GION	2	O.S. MAP REF
Bridge No.	Š	8	arryi	8 carrying the A50	: A5013	313 Eccleshall Road over the Crewe-Stafford line at Great Bridgeford in Staffordshire	SJ 883270
2	:	63	:	=	A671	_	SD 831327
:	=	23	:	=	A646	9	SD 814322
:	=	11	:	=	A407	77 Walm Lane , , , Marylebone—Harrow line in the London Borough of Brent	TQ 234848
:	:	49	=	=	A410	10 Uxbridge Road "	TQ 131913
:	:	45	=	=	A409	09 at Harrow Station over the London-Rugby ,, ,, , , , , , , ,	TQ 155894
=	=	42	=	=	A409	09 " " EustonWaiford " " " " " " " " " " " " " " " " " " "	TQ 155894
:	=		=	=	A409	09 " " " Stanmore Branch " " " " " " " " " " " " " " " " " " "	TQ 155894
:	=	22	:	=	A219	19 Scrubs Lane , , London-Rugby , , , , , Hammersmith	TQ 223827
:	=	22	:	=	A219	9 " " Euston—Watford " " " " " " " " " " " " " " " " " " "	TQ 223827
=	=	∞	:	=	A4201,	201, Parkway " " LondonRugby " " " " Camden	TQ 286836
=	=	'n	=	=	Λ400	00 Hampstead Road , , , , , , , , , , , , , , , , , , ,	TQ 292831
=	=	7	=	=	A400	30 Junction Road , , Tottenham-Hampstead , , , , Islington	TQ 292861
=	٠.	79	:	=	B567	7 Spencer Bridge Road over the Roade-Rugby line County Borough of Northampton	SP 746610
:	:	11	:	:	A53	3 Etruria Road over the Macclessield Colwich , , , City and County Borough of Stoke on Trent	SJ 865470
:	:	8	=	=	A 5035	35 Trentham Road, " " "	SJ 884411
=	=	8	=	2	A53	3 Leek Road ", Biddulph Valley line ", " "	SJ 894502
:	=	175	:	=	A422	22 Newport Road London-Rugby Buckinghamshire	SP821414
=	=	-	=	=	A422	22 ". ". Newport Pagnell Branch line in "	SP821414
:	2	3	=	=	A607	77 Syston Bridge Leicester-Trent Leicestershire-West Span only	SK621110
:	=	7	=	=	135092	192 Wilmslow Road, " Macclessfeld Branch " "Cheshire-Span over Tracks	SJ 912837
=	=	53	=	=	A538	38 Prestbury Lane, " " " " " " " " " " " " " " " " " " "	SJ 904774
:	=	23	=	=	A4031	31 Walsull Road ,, ,, Grand Junction ,, the County Borough of West Bromwich	SP 016952
=	=	75	=	=	A422	2 Banbury Road, Banbury over the Didcot-Chester line in	SP 461407

EASTERN REGION			The state of the s
Bridge No. S1/35 carrying the A632;	the A632.		over the Woodhouse Junction—Murylebone line in Derbyshire 5N 426703
S28/8	A619		" Chicken line in Decree of Challed County Decree of Challed CK 317805
540/6	A621		Dore—Chiniey line in the City and County bolough of shellield 3N 303
S68/4	" A633		" Aldham Curve " Torkshire, West Rights SE 38204/
" L21/1395	. A503	Ferry Lane	". "Beinnai GreenNorwich line in the London Borougn of Harringey Com Such Tracks
		•	CCOLC At
" Te/e21 "	" A1011	A1011 Manor Koad	" " Straitord E & W—Woolwich line (Staings) III the London bolough
" " NH50/258	" A1067	A1067 Fakenham Road	" " Norwich City-Melton Constable line in Norfolk TG 175139
SOUTHERN REGION			
Bridge No. 1 carrying the	the B310		Ecclesion Bridge Road over the Victoria Wandsworth line in the City of Westminster 2 spans over
	i		
401	" B2070		" Ashlord—Ham Street " " " Orban District of Ashlord IN 011423
" 17 "	., A244	Windmill Road "	" Upper Hallilord Hall—Shepperton line in Sulfey
37	A310	London Road	
	B3011		
	A 245		
:		Croudon Board	st Wick
	7774 "	Cloydon Noad	
NOIDE MESTER			
WESTERIN REGION Bridge at mileage 30m-74	carrying	g the A361 Devizes Road o	WESTERIA RECTORA Bridge at mileage 30m-741c carrying the A361 Devizes Road over the Andoversford line in the Municipal Borough of Swindon, Wilts. SU 156834
LONDON TRANSPORT EXECUTIVE	T EXECU	JTIVE West Food Road over the Ru	LONDON TRANSPORT EXECUTIVE 1. 1111 carrying the B455 West End Road over the Ruislin—Ickenham line in the London Borough of Hillingdon TQ 094870
Bildge 140. Old callying			
NOTE: The Ordnance Survey r	nap refere	nces above refer to the O.S.	OTE: The Ordnance Survey map references above refer to the O.S. National Grid system, medium scale maps.

SCHEDULE 3

Existing railway bridges carrying roads in relation to which a prohibition under section 1, 6, 12 or 17 of the Road Truffic Regulation Act 1967 as respects the weight of the traffic using that road may be imposed.

BRITISH RAILWAYS

*Bridge No. 5 carrying Grovebury Road over the Denton Junction—Crowthorne Junction line in the Urban District of Audenshaw,
S. 918976
Lancashire S. 918976 LONDON MIDLAND REGION

O.S. MAP REF

LONDON MIDLAND REGION—Continued Bridge No. 13 carrying Stamford Road (B6177) over the H Lancashire	ONDON MIDLAND REGION—Continued Bridge No. 13 carrying Stamford Road (B6177) over the Huddersfield—Manchester line in the Municipal Borough of Mossley, Lancashire	SD 974020
EASTERN REGION *Bridge No. 24 over the former Axholme Joint Line at Haxey is	xey in Isle of Axholme Rural District, Lincolnshire	SE 772000
•Bridge No. 21 carrying a way (Unstone New Bridge) over the Confide No. 1 carrying a way (Staveley Compuny's) over the Confidence No. 1 carrying a way (Staveley Compuny's) over the Confi	*Bridge No. 21 carrying a way (Unstone New Bridge) over the Chesterfield.—Sheffield line in the Urban District of Dronfield, Derbyshire SK 363779 *Bridge No. 1 carrying a way (Staveley Company's) over the Clowne Branch line in the Urban District of Staveley, Derbyshire SK 422753	SK 363779 SK 422753
*Bridge No. 29 carrying a way (wards) over the former Culders *Yorkshire *Bridge No. 30 carrying Dudley Street over the former Gilderse Yorkshire	*Bridge No. 29 carrying a way (wards) over the former Clidersome Branch line in the Municipal Borough of Fudsey, west retaing of	SE 193323 SE 194324
 Bridge No. 44 carrying a way (Windhill) over the Leeds—Colr Bridge No. 141 carrying a way (Allens Junction) over the Leeds—Burham 	•Bridge No. 44 carrying a way (Windhill) over the Leeds—Colne line in the Urban District of Shipley, West Riding of Yorkshire •Bridge No. 141 carrying a way (Allens Junction) over the Leeds—Newcastle line nr. Egglescliffe in the Rural District of Stockton, County Durham	SE 157380 N7 419144
•Bridge No. 144 carrying a way (Witham Hall) over the LeedsN Durham		y NZ 423154
•Bridge No. 15 carrying a way (Witham Hall) over the Darlington County Durham	Bridge No. 15 carrying a way (Witham Hall) over the Darlington—Saltburn line nr. Preston on Tees in the Rural District of Stockton,	NZ 423154
 Bridge No. 305 carrying Ellison Main Gardens over Leeds—Ne Bridge No. 226 carrying Low Flatts Road over the York—Newc 	*Bridge No. 305 carrying Ellison Main Gardens over Leeds—Newcastle line in the Urban District of Felling, County Durham -Bridge No. 226 carrying Low Flatts Road over the York—Newcastle line in the Urban District of Chester-le-Street, County Durham	NZ 285620 NZ 272529
SOUTHERN REGION Bridge No. 10 carrying Old Godstone Road over the Upper W Bridge No. 8 carrying a way (Mill Ash) over the Coulsdon So *Bridge No. 34 carrying Hunts Slip Road over West Dulwich—.	SOUTHERN REGION Bridge No. 10 carrying Old Godstone Road over the Upper Warlingham—Sanderstead line in the London Borough of Croydon Bridge No. 8 carrying a way (Mill Ash) over the Coulsdon South—Merstham line in the Municipal Borough of Reigate, Surrey *Bridge No. 34 carrying Hunts Slip Road over West Dulwich—Sydenham Hill line in the London Borough of Southwark	TQ 335596 TQ 292536 TQ 332724
WESTER N BESTON		

WESTERN REGION

NOTE:

In the case of bridges shown marked with an asterisk above, doubts exist whether the ways which they carry are highways. The inclusion of such a bridge in this Schedule is not to be taken as constituting any recognition of the status of the way carried by the bridge.

The Ordnance Survey map references above refer to the O.S. National Grid system, medium scale maps.

EXPLANATORY NOTE

(This Note is not part of the Order.)

This Order lays down the load bearing standards for bridges which belong to the British Railways Board or the London Transport Executive and which carry roads in England and Wales over their railways. The standards are laid down for existing bridges in Article 3 and for new bridges in Article 4. Details of the standards are given in Schedule 1. Provision is made in Article 5 for the continuance of the application of a standard, notwithstanding a change in the classification of the road. Article 6 provides for the determination of disputes. Schedules 2 and 3 contain lists of bridges in relation to which special provision has had to be made.

The power of the Secretary of State for the Environment to make this Order was vested in him by the Secretary of State for the Environment Order 1970 (S.I. 1970/1681).

Appendix C

WORKS AGREEMENTS

Version 1 - Bridge meets BE4, Council require 40 tonne capacity (all work at cost of Council) - Council take over bridge and do work

DATED [] 199[]

RAILTRACK PLC

-and-

[] COUNCIL

AGREEMENT

-in respect of-

the [reconstruction] [strengthening] and future maintenance of the bridge over the railway at

THIS AGREEMENT is made the [] day of [] One thousand nine
hundred and ninety []		1

BETWEEN

- (1) RAILTRACK PLC ("Railtrack") (registered in England under number 2904587), whose registered office is Railtrack House Euston Square London NW1 2EE
- (2) [Name] COUNCIL ("the Council") of [Address]

WHEREAS

- (A) The bridge ("the Existing Bridge") which carries [road name] over Railtrack's [] railway line ("the Railway") in the position shown on the attached plan at Ordnance Survey reference [], which is referenced by Railtrack as [bridge number [] at] [] miles [] [chains/yards] [elr] and by the Council as [], was constructed by Railtrack's predecessors and passed into Railtrack's ownership by virtue of the Railways Act 1993.
- (B) Under the terms of an agreement dated [] between Railtrack and the Council, the carrying capacity of the Existing Bridge has been determined.
- (C) Under the terms of a further agreement dated [] between Railtrack and the Council, Railtrack has transferred the ownership of, and all rights and obligations attaching to, the Existing Bridge to the Council.
- (D) The Council now wishes to increase the carrying capacity of the Existing Bridge.
- (E) Railtrack is prepared to enter into the following arrangements to permit the increase of the carrying capacity of the Existing Bridge.

NOW IT IS AGREED in exercise of the powers conferred on the Council by [Section 94 of the Highways Act 1980/Section 79 of the Roads (Scotland) Act 1984] and of all other relevant powers as follows:-

Definitions and Interpretation

- 1.1 In this Agreement, unless the context otherwise requires:
 - 1.1.1 "the Existing Bridge" means the bridge referred to in recital (A) of this Agreement;
 - 1.1.2 "the Modified Bridge" means the Existing Bridge after the execution of the Works;
 - 1.1.3 "the Special Requirements" means the Special Requirements in Relation to Railtrack and the additional contract clauses all as included in the Secretary of State for Transport's "Model Contract Document for Highway Works Contracts" by virtue of [Highways Agency Guidance Note 30];

- 1.1.4 "the Tender Documents" means the documents issued to tenderers by the Council in respect of the Works (including, without limitation, the Special Requirements and any other clauses which Railtrack reasonably requires) and;
- 1.1.5 "the Works" means the increase in the carrying capacity of the Existing Bridge and includes all tasks incidental thereto.

1.2 In this Agreement:

- 1.2.1 the Clause headings shall not affect the interpretation of this Agreement;
- 1.2.2 references to "Clauses" are references to a clause in this Agreement;
- 1.2.3 the use of the present tense implies the relevant time or as the case may be from time to time during the relevant period;
- 1.2.4 the singular implies the plural and vice versa and the masculine includes the feminine; and
- 1.2.5 references to statutory provisions shall be construed as references to those provisions as amended or re-enacted, or as their application is modified by other provisions, from time to time and shall include references to any provisions of which they are re-enactments (whether with or without modification).

Design of the Works

2.1 The Council shall:

- 2.1.1 before appointing a designer for the Works consult with Railtrack and take due cognisance of any observations made by Railtrack regarding the suitability or experience of any designers on the Council's short list;
- 2.1.2 consult with Railtrack to ensure that the design of the Works complies with Railtrack's requirements;
- 2.1.3 after consulting with Railtrack, prepare an approval in principle submission, and submit it to Railtrack for acceptance as regards railway requirements only;
- 2.1.4 amend the design criteria for the Works to take account of any comments made by Railtrack on the approval in principle submission; and
- 2.1.5 prepare at the appropriate times within the design and construction processes all the documentation required to enable Railtrack to make submissions for approval for the Works in accordance with the requirements of [The Railway and Other Transport Systems (Approval of Works, Plant and Equipment) Regulations 1994] and the ["Guide to the approval of railway works, plant and equipment"] issued by the Health and Safety Executive and

when necessary modify the design or construction processes to ensure that approval is obtained, PROVIDED THAT:

2.1.5.1 Railtrack shall not be liable to the Council for any costs or delays occasioned by a failure to receive timely approval, unless such delay is due to the negligence of Railtrack.

Construction of the Works

- 3.1 The Council shall:
 - 3.1.1 consult with Railtrack over the timing of the construction of the Works and agree with Railtrack what services, if any, are to be provided by Railtrack directly or indirectly to the Council in connection with the execution of the Works PROVIDED THAT
 - 3.1.1.1 where the services relate to railway safety, Railtrack's decision shall be final;
 - 3.1.2 prepare the Tender Documents and submit them, together with a list of contractors (and nominated sub contractors if appropriate) who are to be invited to tender for the Works to Railtrack and take due cognisance of any observations made by Railtrack regarding the contents of the Tender Documents or the suitability or experience of any of the contractors proposed;
 - 3.1.3 after Railtrack has confirmed its approval of the Tender Documents, invite tenders for the Works, PROVIDED THAT
 - 3.1.3.1 any approval given by Railtrack shall not affect the Council's obligations and liabilities under this Agreement;
 - 3.1.4 not accept any non compliant or qualified tender for the Works without first consulting with Railtrack and taking due cognisance of any observations made by Railtrack;
 - 3.1.5 take such reasonable steps to enable the Works to be carried out as railway traffic requirements permit;
 - 3.1.6 arrange with the appropriate party for any necessary temporary or permanent diversion of any sewers pipes cables or other media which may be affected by the Works;
 - 3.1.7 superintend and cause the Works to be completed with reasonable dispatch;
 - 3.1.8 to the satisfaction of Railtrack temporarily erect fencing to protect Railtrack's property in the immediate vicinity of the site of the Works from trespass. On completion of the Works permanent fencing of a type stipulated by Railtrack shall similarly be erected in positions decided by Railtrack;
 - 3.1.9 provide and fix to the Modified Bridge so as to be readily visible from the railway and the road numerical identification plates in accordance with details and specifications submitted to the Council by Railtrack:

- 3.1.10 obtain Railtrack's prior acceptance to any significant variations to the specification or design of the Works;
- 3.1.11 on completion of the Works certify to Railtrack that they have been completed fully in accordance with the agreed specification and design; and
- 3.1.12 within 6 months of the completion of the Works provide to Railtrack for record purposes a copy of the Health and Safety file for the Modified Bridge.

Access

- 4.1 The Council's representative shall at all reasonable times have access to Railtrack's premises in the immediate vicinity of the bridge for the purpose of superintending the Works and for their subsequent inspection, maintenance, repair, alteration or renewal, subject to prior arrangements being made with Railtrack.
- 4.2 Railtrack's representative shall at all reasonable times have access to the site of the Works for the purpose of inspecting the Works. If, in the course of such inspection, Railtrack's representative detects any deficiency, he shall immediately inform the Council.

Council to make good property of Railtrack

5.1 During the Works if Railtrack so requires or on completion of the Works and any subsequent repair or remedy of them during the Contractor's [maintenance/ defect correction] period the Council shall at its own cost and to the satisfaction of Railtrack make good any property of Railtrack which may have been damaged or interfered with during the carrying out of the Works and shall remove all surplus material occasioned by the Works or brought on to Railtrack's land in connection with the Works by the Council or the Contractor.

Railtrack to safeguard Railway if Works not completed

- 6.1 Railtrack may at any time during the construction of the Works or the [maintenance/defect correction] period and after giving reasonable notice to the Council take whatever action Railtrack considers necessary either to complete the Works or to safeguard Railtrack's interests by reason of failure of the Council or the Contractor to complete the Works or because Railtrack considers the safety of the Railway to be at risk and all costs reasonably incurred by Railtrack in connection with this Clause shall be included in Railtrack's incidental costs for the Works PROVIDED THAT
 - 6.1.1 in a situation where Railtrack judges that an emergency exists Railtrack shall use its best endeavours to give notice to the Council but the absence of such notice shall not invalidate Railtrack's action under this Clause.

Abandonment or Postponement of Works

7.1 In the event of notification by the Council to Railtrack of the abandonment of the Works before commencement or of the postponement of

the Works before commencement for a period exceeding three years from the execution of this Agreement:

- 7.1.1 Railtrack shall notify the Council of any costs incurred and any sums remaining due to Railtrack under the terms of this Agreement shall be borne by the Council; and
- 7.1.2 this Agreement shall become null and void and any subsequent revival of the Works shall be the subject of a new Agreement.

Railtrack's incidental costs

- 8.1 All costs charges and expenses incurred by Railtrack consequent upon or in connection with the Works (and the subsequent inspection maintenance repair alteration and renewal of the Modified Bridge) including in particular (without affecting the generality of the application of this Clause) those listed in Clause 8.2 below shall paid by the Council.
- 8.2 The costs charges and expenses mentioned in Clause 8.1 above include those incurred:
 - 8.2.1 in the use of directly employed staff for professional, administrative and management services in connection with the Works;
 - 8.2.2 in the provision under contract to Railtrack of services by any third party (including the supply of materials by Railtrack to the Council's contractor if appropriate) in connection with the works; and,
 - 8.2.3 in consequence of any possessions special traffic working or speed restrictions that may be necessary or in substituting or diverting services during the progress of the Works and if necessary for a reasonable time afterwards (including any performance payments or other costs or losses incurred by Railtrack by virtue of being unable to deliver in timely manner any train paths for which Railtrack shall have contracted with third parties or for which Railtrack might reasonably be expected to have contracted but for the prospect of the works being carried out) and in respect of which Railtrack shall provide such evidence as the Council may reasonably require.

Railtrack's Obligations with regard to its costs, charges and expenses

- 9.1 Before the commencement of the Works, Railtrack shall prepare an itemised estimate and a spend profile of its costs charges and expenses, which shall be submitted to the Council. In the case of costs estimated for Clause 8.2.3 Railtrack shall indicate the likelihood of each item of expenditure actually being incurred.
- 9.2 If it becomes apparent that the actual costs are likely to exceed the estimate provided by Railtrack under Clause 9.1 by more than 10%, or that the time scale for completion of the Works has changed significantly, a revised estimate and spend profile shall be provided to the Council.
- 9.3 The Council shall pay Railtrack's actual costs charges and expenses whether they are greater or less than the estimated sum.

Payments

- 10.1 The following arrangements shall apply to payments made under this Agreement.
- 10.2 For the purposes of this Clause and subject to the contents of Clause 10.9, "Period" shall be taken as either:
 - 10.2.1 one calendar month commencing on the 1st day of the calendar month first following the commencement of:
 - 10.2.1.1 the Works; or
 - 10.2.1.2 the inspection, maintenance repair alteration or renewal of the Modified Bridge: or
 - 10.2.2 where the Council estimates that the duration of an individual item of inspection, maintenance repair alteration or renewal of the Modified Bridge to be less than 45 days:
 - 10.2.2.1 the end of the individual item of work, and
 - 10.2.3 the computation of Period shall start afresh for each individual item of work.
- 10.3 As soon as practicable after the end of every Period Railtrack shall submit to the Council an itemised statement in a form approved for that purpose, supported by such documentation as may be agreed in advance between the parties, showing (at the end of that Period):
 - 10.3.1 the total anticipated Railtrack expenditure on the Works or on the inspection, maintenance, repair, alteration or renewal of the Modified Bridge as appropriate;
 - 10.3.2 the aggregate of any payments received; and
 - 10.3.3 any sums invoiced but outstanding.
- 10.4 Any sums falling to be paid under the terms of this agreement shall be due for payment 7 days after the issue of the itemised statement referred to in Clause 10.3.
- 10.5 The final date for payment of the sums falling to be paid under the terms of this agreement shall be 42 days after the date the payment becomes due. Should any sum not be paid by the final date then the payment due shall, in addition, bear interest at the rate of two percent above the Midland Bank base rate from the date that the payment became due up to the date of payment.
- 10.6 Not later than 12 days after the receipt of the itemised statement the Council shall give notice to Railtrack specifying the amount of the payment it is proposing to make against the statement. The notice referred to herein shall (if appropriate) give the ground(s) on which the Council proposes to withhold any payment and the amount attributable to each ground.
- 10.7 Payment shall be subject to the addition of Value Added Tax at the rate currently in force if and where applicable on production of a Value Added Tax invoice.

10.8 On certification by the Council that the Works, or an individual item of inspection, maintenance repair alteration or renewal of the Modified Bridge, have been completed, Railtrack shall determine its actual final cost and the payments received (if any). The date of such determination shall be deemed to be a Period end for the purposes of this Clause and any sum remaining outstanding from the Council to Railtrack or overpaid by the Council to Railtrack shall be treated accordingly.

Ownership of Modified Bridge

11.1 For the avoidance of doubt, the Modified Bridge shall remain the property of the Council, who shall undertake all future inspection, maintenance, repair, alteration or renewal at its own cost.

Council's maintenance obligations to Railtrack

- 12.1 The Council shall regularly examine the Modified Bridge in accordance with its normal procedures and shall, when requested by Railtrack, certify the date of the most recent inspections in each of its inspection categories. If during the course of its normal activities Railtrack becomes concerned about the condition of the Modified Bridge it may call for a sight of the most recent examination report(s) and discuss the desirability of remedial action with the Council.
- 12.2 In carrying out inspection, maintenance, repair and renewal of the Modified Bridge the Council shall comply with the Special Requirements and such other conditions as Railtrack may impose for the protection of rail traffic and the safety of persons working on or near the track and shall ensure that the clear headroom and lateral clearances to rail of the Modified Bridge are not reduced thereby (unless agreed by Railtrack for temporary works).
- 12.3 In maintaining the carriageway and footways over the Modified Bridge the Council shall ensure that the effective height of the parapets to the highway is not reduced (unless agreed by Railtrack) below that shown on the accepted drawings.
- 12.4 In the event of acts of vandalism occurring on or from the Modified Bridge or its approaches which endanger the safety of rail traffic or the safety of persons working on or near the track the Council shall take such preventative and/or defensive action as shall be agreed between the parties to be reasonably practicable (such agreement not to be unreasonably withheld) having regard to the incidence and nature of the acts of vandalism and the cost of such preventative and/or defensive measures.

Provision of lighting etc.

- 13.1 In lighting the highway and erecting illuminated road traffic signs in the immediate vicinity of the Modified Bridge the Council shall consult with Railtrack to ascertain its reasonable requirements having regard to its signalling arrangements and;
 - 13.1.1 comply with such requirements; and

13.1.2 use its best endeavours to ensure that any lighting or signs erected in the immediate vicinity of the Modified Bridge by other parties entitled so to do also comply with such requirements.

Future widening and alterations of the Railway

- 14.1 If, at any time after the completion of the Works, Railtrack incurs additional expense in connection with the widening, operation or alteration of the Railway on lands now vested in it, or possessed by it, or in the exercise of powers now possessed by it, over and above that which would have been incurred had the bridge not been modified, such additional expense shall be defrayed by the Council.
- 14.2 Any alterations to the Modified Bridge necessitated by the widening, operation or alteration of the Railway as referred to in Clause 14.1 shall be carried out by the Council in accordance with the terms of this Agreement, PROVIDED THAT
 - 14.2.1 Railtrack shall contribute to the Council a sum equivalent to that which it would have incurred had the bridge not been modified, unless the cost of the work is less than such sum in which case Railtrack shall contribute the actual cost of the work.

Effect of Mineral Workings

- 15.1 If Railtrack or the Council reasonably apprehends that the working of any mines or minerals is likely to cause the Modified Bridge or any works of Railtrack over under or adjacent to it to sink or otherwise suffer damage by reason of subsidence or if such working causes the Modified Bridge or any such works to sink or otherwise suffer damage then Railtrack and the Council before taking any steps to prevent guard against or make good such damage shall consult with each other with a view to agreeing the measures necessary to be taken.
- 15.2 If Railtrack considers as a result of the workings of any mines or minerals the condition of the Modified Bridge is such as to make it a danger to Railway traffic or to any adjoining structures or other works of Railtrack to such a degree that immediate measures must be taken Railtrack shall inform the Council and agree on the measures which shall be taken by the Council and/or Railtrack.
- 15.3 At any time after the expiry of twenty one days (or one calendar month if the minerals are vested in the Coal Authority) of the Council having been first notified by Railtrack under Clause 15.1 above Railtrack may (unless otherwise agreed) take such steps to prevent guard against limit or make good damage to the Modified Bridge as Railtrack considers necessary for the operation of railway business.
- 15.4 If in carrying out any measures agreed between Railtrack and the Council or considered necessary by Railtrack in accordance with the preceding provisions of this Clause Railtrack reasonably incurs costs which it would not have incurred had the bridge not been modified those costs shall be paid by the Council to Railtrack.

Law

16.1 This Agreement shall be governed by and construed between the parties in accordance with [English/Scots] Law.

_	IN WITNESS of which Railtrack and the Council have executed this agreement as first dated above.
- -	Signed by:
-	(a person duly authorised by Railtrack)
- -	in the presence of:
-	Signed by:
-	(a person duly authorised by the Council)
-	in the presence of:-
-	
_	
_	

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Version 2 - - Bridge meets BE4, Council require 40 tonne capacity (all work at cost of Council) - Railtrack retain ownership and do work

DATED [] 199[]

RAILTRACK PLC

-and-

[] COUNCIL

AGREEMENT

-in respect of-

the reconstruction of bridge number [] over the railway at []

THIS AGREEMENT is made the day of One thousand nine hundred and ninety [] BETWEEN

- (1) RAILTRACK PLC ("Railtrack") (registered in England under number 2904587), whose registered office is Railtrack House Euston Square London NW1 2EE
- (2) [Name] COUNCIL ("the Council") of [Address]

WHEREAS

- (A) The bridge ("the Existing Bridge") which carries [road name] over Railtrack's [] railway line ("the Railway") in the position shown on the attached plan at Ordnance Survey reference [], which is referenced by Railtrack as [bridge number [] at] [] miles [] [chains/yards] [elr] and by the Council as [], was constructed by Railtrack's predecessors and passed into Railtrack's ownership by virtue of the Railways Act 1993.
- (B) Under the terms of an agreement dated [] between Railtrack and the Council, the carrying capacity of the Existing Bridge has been determined.
- (C) The Council now wishes to increase the carrying capacity of the Existing Bridge.
- (D) Railtrack has agreed to arrange for the design and [reconstruction strengthening] of the Existing Bridge subject to the terms of this Agreement.

NOW IT IS AGREED in exercise of the powers conferred on the Council by the Highways Act 1980 and of all other relevant powers as follows:-

Definitions and Interpretation

- 1.1. In this Agreement unless the context otherwise requires:
 - 1.1.1 "the Contractor" means any person or company to whom a contract for any part or all of the Contract Works is let and of whom Railtrack is the employer;
 - 1.1.2 "the Existing Bridge" means the bridge referred to in recital (A) to this Agreement;
 - 1.1.3 "the Modified Bridge" means the bridge on completion of the Works:
 - 1.1.4 "the Tender Documents" means the conditions of contract drawings estimates specifications and bill of quantities; and
 - 1.1.5 "the Works" means the [reconstruction/strengthening] of the Existing Bridge including all ancillary and incidental works.
- 1.2 In this Agreement:
 - 1.2.1 the Clause headings shall not affect the interpretation of this Agreement;

- 1.2.2 references to "Clauses" are references to a clause in this Agreement;
- 1.2.3 the use of the present tense implies the relevant time or as the case may be from time to time during the relevant period;
- 1.2.4 the singular implies the plural and vice versa and the masculine includes the feminine; and
- 1.2.5 references to statutory provisions shall be construed as references to those provisions as amended or reenacted, or as their application is modified by other provisions, from time to time and shall include references to any provisions of which they are re-enactments (whether with or without modification).

Design of the Works

2.1 Railtrack shall:

- 2.1.1 before appointing a designer for the Works consult with the Council and take due cognisance of any observations made by the Council regarding the suitability or experience of any designers on Railtrack's short list;
- 2.1.2 consult with the Council to ensure that the design of the Works complies with all relevant current highway design codes and standards and the Council's requirements;
- 2.1.3 after consulting with the Council, prepare an approval in principle submission, and submit it to the Council for acceptance as regards highway requirements only:
- 2.1.4 amend the design criteria for the Works to take account of any comments made by Council on the approval in principle submission; and
- 2.1.5 obtain all approvals necessary under The Railway and Other Transport Systems (Approval of Works Plant & Equipment) Regulations 1994.

Construction of the Works

3.1 Railtrack shall:

- 3.1.1 following acceptance of the design by the Council, consult with the Council over the timing of the construction of the Works;
- 3.1.2 prepare the Tender Documents and submit them, together with a list of contractors (and nominated sub contractors if appropriate) who are to be invited to tender for the Works to the Council and take due cognisance of any observations made by the Council regarding the contents of the Tender Documents or the suitability or experience of any of the contractors proposed;

- 3.1.3 after the Council has confirmed its approval of the Tender Documents, invite tenders for the Contract Works, PROVIDED THAT
 - 3.1.3.1 any approval given by the Council shall not affect Railtrack's obligations and liabilities under this Agreement;
- 3.1.4 notify the Council which tender (or tenders) for the Contract Works it proposes to accept, and not accept any non compliant or qualified tender for the Works without first obtaining agreement from the Council;
- 3.1.5 take such reasonable steps to enable the Works to be carried out as railway and road traffic requirements permit;
- 3.1.6 superintend and cause the Works to be completed with reasonable dispatch;
- 3.1.7 to the extent that it can legally do so arrange for any necessary temporary or permanent diversion of any sewers pipes cables or other media which may be affected by the Works whether these belong to Railtrack or to any other person;
- 3.1.8 obtain the Council's prior written agreement to any significant variations to the specification for the Contract Works.

Right of Council to inspect Works

- 4.1 The Council's representative shall at all reasonable times have access to Railtrack's premises in the immediate vicinity of the bridge for the purpose of inspecting the Works subject to prior arrangements being made with Railtrack.
- 4.2 If, in the course of such inspection, the Council's representative detects any deficiency, he shall immediately inform Railtrack.

Postponement or Abandonment of Works

- 5.1 In the event of notification by the Council to Railtrack of the postponement or abandonment of the Works before the commencement of any site works the Council shall pay to Railtrack such sums as shall be commensurate with the services rendered by Railtrack up to the date of postponement or abandonment whatever the reason for such postponement or abandonment.
- 5.2 If the Works are postponed for a period exceeding six months but not exceeding three years and are then revived the Council shall pay such additional costs as may be incurred in;
 - 5.2.1 checking the design previously completed for adherence to brief;
 - 5.2.2 updating of such previous work to current standards;
 - 5.2.3 the preparation of revised estimates; and
 - 5.2.4 the recapitulation necessary before progress can be made from the stage at which the Works were postponed.
- 5.3 If the Works are postponed for a period exceeding three years from the execution of this Agreement the Works shall be considered to be abandoned.

- If the Works are abandoned or considered to be abandoned under the provisions of Clause 5.3;
 - 5.4.1 all costs charges and expenses remaining due to Railtrack under the terms of this Agreement shall be paid by the Council; and
 - 5.4.2 this Agreement shall become null and void and any subsequent revival of the Works shall be the subject of a new Agreement.

Failure of Contractor to complete the Works

6.1 If the Contractor fails to complete the Contract Works (unless such failure is due to the negligence of Railtrack) the Council shall reimburse any extra expense to which Railtrack has been put in consequence of such failure in so far as such expense is not provided for elsewhere in this Agreement or cannot be recovered under the terms of the contract between Railtrack and the Contractor.

Railtrack's costs

- 7.1 All costs charges and expenses incurred by Railtrack consequent upon or in connection with the Works including in particular (without affecting the generality of the application of this Clause) those listed in Clause 7.2 below shall paid by the Council.
- 7.2 The costs charges and expenses mentioned in Clause 7.1 above include those incurred:
 - 7.2.1 in the use of directly employed staff for professional, administrative and management services in connection with the Works;
 - 7.2.2 in the provision under contract to Railtrack of services by any third party (including the supply of materials by Railtrack to the Contractor if appropriate) in connection with the works; and,
 - 7.2.3 in consequence of any possessions special traffic working or speed restrictions that may be necessary or in substituting or diverting services during the progress of the Works and if necessary for a reasonable time afterwards (including any performance payments or other costs or losses incurred by Railtrack by virtue of being unable to deliver in timely manner any train paths for which Railtrack shall have contracted with third parties or for which Railtrack might reasonably be expected to have contracted but for the prospect of the works being carried out) and in respect of which Railtrack shall provide such evidence as the Council may reasonably require.

Railtrack's obligations with regard to costs, charges and expenses

- 8.1 Before the commencement of the Works, Railtrack shall prepare an itemised estimate and a spend profile of its costs charges and expenses, which shall be submitted to the Council. In the case of costs estimated for Clause 7.2.3 Railtrack shall indicate the likelihood of each item of expenditure actually being incurred.
- 8.2 If it becomes apparent that the actual costs are likely to exceed the estimate provided by Railtrack under Clause 8.1 by more than 10%, or that

the time scale for completion of the Works has changed significantly, a revised estimate and spend profile shall be provided to the Council.

8.3 The Council shall pay Railtrack's actual costs charges and expenses whether they are greater or less than the estimated sum.

Payments

- 9.1 The following arrangements shall apply to payments made under this Agreement.
- 9.2 For the purposes of this Clause and subject to the contents of Clause 9.9, "Period" shall be taken as one calendar month commencing on the 1st day of the calendar month first following the commencement of the Works.
- 9.3 As soon as practicable after the end of every Period Railtrack shall submit to the Council an itemised statement in a form approved for that purpose, supported by such documentation as may be agreed in advance between the parties, showing (at the end of that Period):
 - 9.3.1 the total anticipated Railtrack expenditure on the Works or on the inspection, maintenance repair alteration or renewal of the Modified Bridge as appropriate;
 - 9.3.2 the aggregate of any payments received; and
 - 9.3.3 any sums invoiced but outstanding.
- 9.4 Any sums falling to be paid under the terms of this agreement shall be due for payment 7 days after the issue of the itemised statement referred to in Clause 9.3.
- 9.5 The final date for payment of the sums falling to be paid under the terms of this agreement shall be 42 days after the date the payment becomes due. Should any sum not be paid by the final date then the payment due shall, in addition, bear interest at the rate of two percent above the Midland Bank base rate from the date that the payment became due up to the date of payment.
- 9.6 Not later than 12 days after the receipt of the itemised statement the Council shall give notice to Railtrack specifying the amount of the payment it is proposing to make against the statement. The notice referred to herein shall (if appropriate) give the ground(s) on which the Council proposes to withhold any payment and the amount attributable to each ground.
- 9.7 Payment shall be subject to the addition of Value Added Tax at the rate currently in force if and where applicable on production of a Value Added Tax invoice.
- 9.8 On certification by Railtrack that the Works have been completed, Railtrack shall determine its actual final cost and the payments received. The date of such determination shall be deemed to be a Period end for the purposes of this Clause and any sum remaining outstanding from the Council to Railtrack or overpaid by the Council to Railtrack shall be treated accordingly.

Ownership and maintenance of the Modified Bridge

- 10.1 The Modified Bridge shall remain the property of Railtrack and, on or after the expiration of the period of maintenance or defect correction as provided in the contract for the Works, Railtrack shall inspect, maintain, repair, alter and renew the Modified Bridge in accordance with its normal procedures.
- 10.2 In inspecting, maintaining, repairing, altering and renewing the Modified Bridge Railtrack shall maintain the designed load bearing capacity (which is in excess of its legal obligation) [followed by

either provided that the Council contribute % of the future maintenance costs as and when incurred by Railtrack.

or provided that the Council pay to Railtrack a commuted sum of £or at its own cost.]

Council to maintain the road

- 11.1 The Council shall maintain the carriageway and footways over the Modified Bridge without cost to Railtrack and in so maintaining;
 - 11.1.1 shall, unless agreed by Railtrack, not raise the level of the highway or reduce the effective parapet heights or otherwise increase the permanent loads upon the Modified Bridge;
 - 11.1.2 shall advise Railtrack of each occasion on which it is intended to repair or remake the Road.

Restriction as to lighting of road

- 12.1 In lighting the highway and erecting illuminated road traffic signs in the immediate vicinity of the Modified Bridge the Council shall consult with Railtrack to ascertain its reasonable requirements having regard to its signalling arrangements and;
 - 12.1.1 comply with such requirements; and
 - 12.1.2 use its best endeavours to ensure that any lighting or signs erected in the immediate vicinity of the Modified Bridge by other parties entitled so to do also comply with such requirements.

Vandalism

13.1 In the event of acts of vandalism occurring on or from the Modified Bridge or its approaches which endanger the safety of rail traffic or the safety of persons working on or near the track and which can be attributed to the modification of the bridge, Railtrack may, at the cost of the Council, take such preventative and/or defensive action as shall be agreed between the parties to be reasonably practicable (such agreement not to be unreasonably withheld) having regard to the incidence and nature of the acts of vandalism and the cost of such preventative and/or defensive measures.

Future railway alterations

14.1 If, at any time after the completion of the Works, Railtrack incurs additional expense in connection with the widening, operation or alteration of

the Railway on lands now vested in it, or possessed by it, or in the exercise of powers now possessed by it, over and above that which would have been incurred had the bridge not been modified, such additional expense shall be defrayed by the Council.

New Roads and Street Works Act procedures

15.1 The Council shall advise Railtrack on completion of the Works and from time to time afterwards what protective provisions under the New Roads and Street Works Act 1991 (if any) are to be applied to the [street/road] in the immediate vicinity of the Modified Bridge.

Law

16.1 This Agreement shall be governed by and construed between the parties in accordance with [English/Scots] Law.

IN WITNESS of which Railtrack and the Council have executed this agreement as first dated above.
Signed by:
in the presence of:
Signed by:

Authorised by the Council:-

in the presence of:

Version 3 - Bridge fails BE4, Council require 40 tonne capacity (work at joint cost of Council and Railtrack) - Council take over bridge and do work

DATED [

] 199[]

RAILTRACK PLC

-and-

[

] COUNCIL

AGREEMENT

-in respect of-

the [reconstruction] [strengthening] and future maintenance of the bridge over the railway at

THIS AGREEMENT is made the [] day of [] One thousand nine
hundred and ninety []		

BETWEEN

- (1) RAILTRACK PLC ("Railtrack") (registered in England under number 2904587), whose registered office is Railtrack House Euston Square London NW1 2EE
- (2) [Name] COUNCIL ("the Council") of [Address]

WHEREAS

- (A) The bridge ("the Existing Bridge") which carries [road name] over Railtrack's [] railway line ("the Railway") in the position shown on the attached plan at Ordnance Survey reference [], which is referenced by Railtrack as [bridge number [] at] [] miles [] [chains/yards] [elr] and by the Council as [], was constructed by Railtrack's predecessors and passed into Railtrack's ownership by virtue of the Railways Act 1993.
- (B) Under the terms of a separate agreement dated [] between Railtrack and the Council, the carrying capacity of the Existing Bridge has been determined.
- (C) Under the terms of a further separate agreement dated [] between Railtrack and the Council, Railtrack has transferred the ownership of the Existing Bridge to the Council.
- (D) The Council and Railtrack have agreed to share the cost of increasing the carrying capacity of the Existing Bridge, with the Council contributing []% and Railtrack [] % of the total cost of the work.
- (E) Railtrack is prepared to enter into the following arrangements to increase the carrying capacity of the Existing Bridge.

NOW IT IS AGREED in exercise of the powers conferred on the Council by [Section 94 of the Highways Act 1980/Section 79 of the Roads (Scotland) Act 1984] and of all other relevant powers as follows:-

Definitions and Interpretation

- 1.1 In this Agreement, unless the context otherwise requires:
 - 1.1.1 "the Existing Bridge" means the bridge referred to in recital (A) of this Agreement;
 - 1.1.2 "the Modified Bridge" means the Existing Bridge after the execution of the Works;
 - 1.1.3 "the Special Requirements" means the Special Requirements in Relation to Railtrack and the additional contract clauses all as included in the Secretary of State for Transport's "Model Contract Document for Highway Works Contracts" by virtue of [Highways Agency Guidance Note 30];

- 1.1.4 "the Tender Documents" means the documents issued to tenderers by the Council in respect of the Contract Works (including, without limitation, the Special Requirements and any other clauses which Railtrack reasonably requires;
- 1.1.5 "the Works" means the increase in the carrying capacity of the Existing Bridge and includes all tasks incidental thereto.

1.2 In this Agreement:

- 1.2.1 the Clause headings shall not affect their interpretation;
- 1.2.2 references to "Clauses" are references to a clause in this Agreement;
- 1.2.3 the use of the present tense implies the relevant time or as the case may be from time to time during the relevant period;
- 1.2.4 the singular implies the plural and vice versa and the masculine includes the feminine; and
- 1.2.5 references to statutory provisions shall be construed as references to those provisions as amended or re-enacted, or as their application is modified by other provisions, from time to time and shall include references to any provisions of which they are re-enactments (whether with or without modification).

Design of the Works

2.1 The Council shall:

- 2.1.1 before appointing a designer for the Works consult with Railtrack and take due cognisance of any observations made by Railtrack regarding the suitability or experience of any designers on the Council's short list;
- 2.1.2 consult with Railtrack to ensure that the design of the Works complies with Railtrack's requirements;
- 2.1.3 after consulting with Railtrack, prepare an approval in principle submission, and submit it to Railtrack for acceptance as regards railway requirements only;
- 2.1.4 amend the design criteria for the Works to take account of any comments made by Railtrack on the approval in principle submission; and
- 2.1.5 prepare at the appropriate times within the design and construction processes all the documentation required to enable Railtrack to make submissions for approval for the Works in accordance with the requirements of [The Railway and Other Transport Systems (Approval of Works, Plant and Equipment) Regulations 1994] and the ["Guide to the approval of railway works, plant and equipment"] issued by the Health and Safety Executive and when necessary modify the design or construction processes to ensure that approval is obtained, PROVIDED THAT:

2.1.5.1 Railtrack shall not be liable to the Council for any costs or delays occasioned by a failure to receive timely approval, unless such delay is due to the negligence of Railtrack.

Construction of the Works

- 3.1 The Council shall:
 - 3.1.1 consult with Railtrack over the timing of the construction of the Works and agree with Railtrack what services, if any, are to be provided by Railtrack directly or indirectly to the Council in connection with the execution of the Works PROVIDED THAT
 - 3.1.1.1 where the services relate to railway safety, Railtrack's decision shall be final:
 - 3.1.2 prepare the Tender Documents and submit them, together with a list of contractors (and nominated sub contractors if appropriate) who are to be invited to tender for the Works to Railtrack and take due cognisance of any observations made by Railtrack regarding the contents of the Tender Documents or the suitability or experience of any of the contractors proposed;
 - 3.1.3 after Railtrack has confirmed its approval of the Tender Documents, invite tenders for the Works, PROVIDED THAT
 - 3.1.3.1 any approval given by Railtrack shall not affect the Council's obligations and liabilities under this Agreement;
 - 3.1.4 not accept any non compliant or qualified tender for the Works without first consulting with Railtrack and taking due cognisance of any observations made by Railtrack;
 - 3.1.5 take such reasonable steps to enable the Works to be carried out as railway traffic requirements permit;
 - 3.1.6 arrange with the appropriate party for any necessary temporary or permanent diversion of any sewers pipes cables or other media which may be affected by the Works;
 - 3.1.7 superintend and cause the Works to be completed with reasonable dispatch;
 - 3.1.8 to the satisfaction of Railtrack temporarily erect fencing to protect Railtrack's property in the immediate vicinity of the site of the Works from trespass. On completion of the Works permanent fencing of a type stipulated by Railtrack shall similarly be erected by in positions decided by Railtrack;
 - 3.1.9 provide and fix to the Modified Bridge so as to be readily visible from the railway and the road numerical identification plates in accordance with details and specifications submitted to the Council by Railtrack;
 - 3.1.10 obtain Railtrack's prior acceptance to any significant variations to the specification or design of the Works;

- 3.1.11 on completion of the Works certify to Railtrack that they have been completed fully in accordance with the agreed specification and design; and
- 3.1.12 within 6 months of the completion of the Works provide to Railtrack for record purposes a copy of the Health and Safety file for the Modified Bridge.

Access

- 4.1 The Council's representative shall at all reasonable times have access to Railtrack's premises in the immediate vicinity of the bridge for the purpose of superintending the Works and for their subsequent inspection, maintenance, repair, alteration or renewal, subject to prior arrangements being made with Railtrack.
- 4.2 Railtrack's representative shall at all reasonable times have access to the site of the Works for the purpose of inspecting the Works. If, in the course of such inspection, Railtrack's representative detects any deficiency, he shall immediately inform the Council.

Council to make good property of Railtrack

5.1 During the Works if Railtrack so requires or on completion of the Works and any subsequent repair or remedy of them during the Contractor's [maintenance/ defect correction] period the Council shall at its own cost and to the satisfaction of Railtrack make good any property of Railtrack which may have been damaged or interfered with during the carrying out of the Works and shall remove all surplus material occasioned by the Works or brought on to Railtrack's land in connection with the Works by the Council or the Contractor.

Railtrack to safeguard Railway if Works not completed

- 6.1 Railtrack may at any time during the construction of the Works or the [maintenance/defect correction] period and after giving reasonable notice to the Council take whatever action Railtrack considers necessary either to complete the Works or to safeguard Railtrack's interests by reason of failure of the Council or the Contractor to complete the Works or because Railtrack considers the safety of the Railway to be at risk and all costs reasonably incurred by Railtrack in connection with this Clause shall be included in Railtrack's incidental costs for the Works PROVIDED THAT
 - 6.1.1 in a situation where Railtrack judges that an emergency exists Railtrack shall use its best endeavours to give notice to the Council but the absence of such notice shall not invalidate Railtrack's action under this Clause.

Abandonment or Postponement of Works

7.1 In the event of notification by the Council to Railtrack of the abandonment of the Works before commencement or of the postponement of the Works before commencement for a period exceeding three years from the execution of this Agreement:

- 7.1.1 Railtrack shall notify the Council of any costs incurred and any sums remaining due to Railtrack under the terms of this Agreement shall be borne by the Council alone; and
- 7.1.2 this Agreement shall become null and void and any subsequent revival of the Works shall be the subject of a new Agreement.

Railtrack's incidental costs

- 8.1 All costs charges and expenses incurred by Railtrack consequent upon or in connection with the Works (and the subsequent inspection maintenance repair alteration and renewal of the Modified Bridge) including in particular (without affecting the generality of the application of this Clause) those listed in Clause 8.2 below shall be included in the calculation of payments due under this Agreement.
- 8.2 The costs charges and expenses mentioned in Clause 8.1 above include those incurred:
 - 8.2.1 in the use of directly employed staff for professional, administrative and management services in connection with the Works;
 - 8.2.2 in the provision under contract to Railtrack of services by any third party (including the supply of materials by Railtrack to the Council's contractor if appropriate) in connection with the works; and,
 - 8.2.3 in consequence of any possessions special traffic working or speed restrictions that may be necessary or in substituting or diverting services during the progress of the Works and if necessary for a reasonable time afterwards (including any performance payments or other costs or losses incurred by Railtrack by virtue of being unable to deliver in timely manner any train paths for which Railtrack shall have contracted with third parties or for which Railtrack might reasonably be expected to have contracted but for the prospect of the works being carried out) and in respect of which Railtrack shall provide such evidence as the Council may reasonably require.

Council's costs

- 9.1 All costs charges and expenses incurred by the Council consequent upon or in connection with the Works including in particular (without affecting the generality of the application of this Clause) those listed in Clause 9.2 below shall be included in the calculation of payments due under this Agreement.
- 9.2 The costs charges and expenses mentioned in Clause 9.1 above include those incurred:
 - 9.2.1 in the use of directly employed staff for professional, administrative and management services in connection with the Works:
 - 9.2.2 in the use of any materials provided by the Council for inclusion in the Works; and,

9.2.3 in the provision under contract to the Council of services by any third party (including the services of specialist consultants) in connection with the Works.

Obligations with regard to costs, charges and expenses

- 10.1 Before the commencement of the Works, each Party shall prepare an itemised estimate and a spend profile of its costs charges and expenses, which shall be submitted to the other Party. In the case of costs estimated for Clause 8.2.3 Railtrack shall indicate the likelihood of each item of expenditure actually being incurred.
- 10.2 If it becomes apparent that the actual costs are likely to exceed the estimate provided by either Party under Clause 10.1 by more than 10%, or that the time scale for completion of the Works has changed significantly, a revised estimate and spend profile shall be provided to the other Party.
- 10.3 Except for the costs, charges and expenses mentioned in Clauses 7.1.1 and 10.4, each Party shall pay its agreed contribution (as defined in recital (D)) to the actual costs charges and expenses whether they are greater or less than the estimated sum.
- 10.4 After the completion of the Works, the Council alone shall pay all costs associated with subsequent inspection maintenance repair alteration and renewal of the modified bridge.

Payments

- 11.1 The following arrangements shall apply to payments made under this Agreement.
- 11.2 For the purposes of this Clause and subject to the contents of Clause 11.10, "Period" shall be taken as either:
 - 11.2.1 one calendar month commencing on the 1st day of the calendar month first following the commencement of:
 - 11.2.1.1 the Works; or
 - 11.2.1.2 the inspection, maintenance repair alteration or renewal of the Modified Bridge: or
 - 11.2.2 where the Council estimate that the duration of an individual item of inspection, maintenance repair alteration or renewal of the Modified Bridge to be less than 45 days:
 - 11.2.2.1 the end of the individual item of work, and
 - 11.2.3 the computation of Period shall start afresh for each individual item of work.
- 11.3 As soon as practicable after the end of every Period the Parties shall submit to each other (or for costs associated with the inspection, maintenance repair alteration or renewal of the Modified Bridge Railtrack shall submit to the Council) an itemised statement in a form approved for that purpose, supported by such documentation as may be agreed in advance between the Parties, showing (at the end of that Period):

- 11.3.1 their total anticipated expenditure on the Works or on the inspection, maintenance, repair, alteration or renewal of the Modified Bridge as appropriate;
- 11.3.2 the aggregate of any payments received; and
- 11.3.3 any sums invoiced but outstanding.
- 11.4 Any sums falling to be paid under the terms of this agreement shall be due for payment 7 days after the issue of the itemised statement referred to in Clause 11.3.
- 11.5 The final date for payment of the sums falling to be paid under the terms of this agreement shall be 42 days after the date the payment becomes due. Should any sum not be paid by the final date then the payment due shall, in addition, bear interest at the rate of two percent above the Midland Bank base rate from the date that the payment became due up to the date of payment.
- 11.6 Not later than 12 days after the receipt of the itemised statement the Party in receipt of the itemised statement shall give notice to the other Party specifying the amount of the payment it is proposing to make against the statement. The notice referred to herein shall (if appropriate) give the ground(s) on which the Party proposes to withhold any payment and the amount attributable to each ground.
- 11.7 Each Party shall pay to the other its agreed contribution to the other Party's expenditure (as defined in Recital (D)) after making allowance for sums already paid, or invoiced but not paid, PROVIDED THAT
 - 11.8.1 it shall be permissible to offset a lesser payment against a greater such that only one Party makes an actual payment to the other in any one Period.
- 11.8 Payment shall be subject to the addition of Value Added Tax at the rate currently in force if and where applicable on production of a Value Added Tax invoice.
- 11.9 On certification by the Council that the Works, or an individual item of inspection, maintenance repair alteration or renewal of the Modified Bridge, have been completed, each Party shall determine its actual final cost and the payments received (if any). The date of such determination shall be deemed to be a Period end for the purposes of this Clause and any sum remaining outstanding from one Party to the other shall be treated accordingly.

Ownership of Modified Bridge

12.1 For the avoidance of doubt, the Modified Bridge shall remain the property of the Council, who shall undertake all future inspection, maintenance, repair, alteration or renewal.

Council's maintenance obligations to Railtrack

13.1 The Council shall regularly examine the Modified Bridge in accordance with its normal procedures and shall, when requested by Railtrack, certify the date of the most recent inspections in each of its inspection categories. If

during the course of its normal activities Railtrack becomes concerned about the condition of the Modified Bridge it may call for a sight of the most recent examination report(s) and discuss the desirability of remedial action with the Council.

- 13.2 In carrying out inspection, maintenance, repair and renewal of the Modified Bridge the Council shall comply with the Special Requirements and such other conditions as Railtrack may impose for the protection of rail traffic and the safety of persons working on or near the track and shall ensure that the clear headroom and lateral clearances to rail of the Modified Bridge are not reduced thereby (unless agreed by Railtrack for temporary works).
- 13.3 In maintaining the carriageway and footways over the Modified Bridge the Council shall ensure that the effective height of the parapets to the highway is not reduced (unless agreed by Railtrack) below that shown on the accepted drawings.
- 13.4 In the event of acts of vandalism occurring on or from the Modified Bridge or its approaches which endanger the safety of rail traffic or the safety of persons working on or near the track the Council shall take such preventative and/or defensive action as shall be agreed between the parties to be reasonably practicable (such agreement not to be unreasonably withheld) having regard to the incidence and nature of the acts of vandalism and the cost of such preventative and/or defensive measures.

Provision of lighting etc.

- 14.1 In lighting the highway and erecting illuminated road traffic signs in the immediate vicinity of the Modified Bridge the Council shall consult with Railtrack to ascertain its reasonable requirements having regard to its signalling arrangements and;
 - 14.1.1 comply with such requirements; and
 - 14.1.2 use its best endeavours to ensure that any lighting or signs erected in the immediate vicinity of the Modified Bridge by other parties entitled so to do also comply with such requirements.

Future widening and alterations of the Railway

- 15.1 If, at any time after the completion of the Works, Railtrack incurs additional expense in connection with the widening, operation or alteration of the Railway on lands now vested in it, or possessed by it, or in the exercise of powers now possessed by it, over and above that which would have been incurred had the bridge not been modified, such additional expense shall be defrayed by the Council.
- 15.2 Any alterations to the Modified Bridge necessitated by the widening, operation or alteration of the Railway as referred to in Clause 15.1 shall be carried out by the Council in accordance with the terms of this Agreement, PROVIDED THAT
 - 15.2.1 Railtrack shall contribute to the Council a sum equivalent to that which it would have incurred had the bridge not been modified, unless the cost of the work is less than such sum in which case Railtrack shall contribute the actual cost of the work.

Effect of Mineral Workings

- 16.1 If Railtrack or the Council reasonably apprehends that the working of any mines or minerals is likely to cause the Modified Bridge or any works of Railtrack over under or adjacent to it to sink or otherwise suffer damage by reason of subsidence or if such working causes the Modified Bridge or any such works to sink or otherwise suffer damage then Railtrack and the Council before taking any steps to prevent guard against or make good such damage shall consult with each other with a view to agreeing the measures necessary to be taken.
- 16.2 If Railtrack considers as a result of the workings of any mines or minerals the condition of the Modified Bridge is such as to make it a danger to Railway traffic or to any adjoining structures or other works of Railtrack to such a degree that immediate measures must be taken Railtrack shall inform the Council and agree on the measures which shall be taken by the Council and/or Railtrack.
- 16.3 At any time after the expiry of twenty one days (or one calendar month if the minerals are vested in the Coal Authority) of the Council having been first notified by Railtrack under Clause 15.1 above Railtrack may (unless otherwise agreed) take such steps to prevent guard against limit or make good damage to the Modified Bridge as Railtrack considers necessary for the operation of railway business.
- 16.4 If in carrying out any measures agreed between Railtrack and the Council or considered necessary by Railtrack in accordance with the preceding provisions of this Clause Railtrack reasonably incurs costs which it would not have incurred had the bridge not been modified those costs shall be paid by the Council to Railtrack.

Law

17.1 This Agreement shall be governed by and construed between the parties in accordance with [English/Scots] Law.

IN WITNESS of which Railtrack and the Council have executed this agreement as first dated above.
Signed by:
(a person duly authorised by Railtrack)
in the presence of:
Signed by:
(a person duly authorised by the Council)
in the presence of:-

•

Version 4 - - Bridge fails BE4, Council require 40 tonne capacity (work jointly at cost of Council and Railtrack) - Railtrack retain ownership and do work

DATED [] 199[]

RAILTRACK PLC

-and-

] COUNCIL

I

AGREEMENT

-in respect of-

the reconstruction of bridge number [] over the railway at []

THIS AGRI		s made the	day of	One thousand nine
BETWEEN	i			
` '		, , ,	egistered in England s Railtrack House Eu	d under number ston Square London
(2) [Nar	me]C	OUNCIL ("the	Council") of [Address]
WHEREAS	6			
Railtrack's shown on referenced [chains/ya	the attach by Railtrands] [elr] predeces] railwa ed plan at Ord ack as [bridge and by the Co ssors and pass	ay line ("the Railway nance Survey refere number [] at] [] uncil as [ence [], which is
				een Railtrack and the as been determined.
the carryin	ng capacity	y of the Existin		e the cost of increasing ouncil contributing [
` '		_	nge for the design an e subject to the terms	
			the powers conferrent other relevant power	ed on the Council by s as follows:-
Definition	s and Inte	rpretation		
1.1.	In this Ag	reement unless	s the context otherwis	se requires:
			ill of the Contract Wo	or company to whom a orks is let and of whom
		"the Existing B Agreement;	ridge" means the bri	dge referred to in recital
	1.1.3 Works;	"the Modified E	Bridge" means the bri	idge on completion of the
	1.1.4 drawings		ocuments" means the cifications and bill of	e conditions of contract quantities; and
	1.1.4 Existing E		eans the [reconstruc g all ancillary and inc	tion/strengthening] of the idental works.

1.2 In this Agreement:

1.2.1 the Clause headings shall not affect their interpretation;

- 1.2.2 references to "Clauses" are references to a clause in this Agreement;
- 1.2.3 the use of the present tense implies the relevant time or as the case may be from time to time during the relevant period;
- the singular implies the plural and vice versa and the masculine includes the feminine; and
- 1.2.5 references to statutory provisions shall be construed as references to those provisions as amended or reenacted, or as their application is modified by other provisions, from time to time and shall include references to any provisions of which they are re-enactments (whether with or without modification).

Design of the Works

2.1 Railtrack shall:

- 2.1.1 before appointing a designer for the Works consult with the Council and take due cognisance of any observations made by the Council regarding the suitability or experience of any designers on Railtrack's short list;
- 2.1.2 consult with the Council to ensure that the design of the Works complies with all relevant current highway design codes and standards and the Council's requirements;
- 2.1.3 after consulting with the Council, prepare an approval in principle submission, and submit it to the Council for approval as regards highway requirements only;
- 2.1.4 amend the design criteria for the Works to take account of any comments made by Council on the approval in principle submission; and
- 2.1.5 obtain all approvals necessary under The Railway and Other Transport Systems (Approval of Works Plant & Equipment) Regulations 1994.

Construction of the Works

3.1 Railtrack shall:

- 3.1.1 following acceptance of the design by the Council, consult with the Council over the timing of the construction of the Works;
- 3.1.2 prepare and submit the Tender Documents to the Council for approval, and provide the Council together with a list of contractors (and nominated sub contractors if appropriate) who are to be invited to tender for the Contract Works. The list shall be drawn from a list previously submitted to the Council and modified to take due cognisance of any observations made by the Council regarding the suitability or experience of the contractors on the list;

- 3.1.3 after the Council has confirmed its approval of the Tender Documents, invite tenders for the Contract Works, PROVIDED THAT
 - 3.1.3.1 any approval given by the Council shall not affect Railtrack's obligations and liabilities under this Agreement;
- 3.1.4 notify the Council which tender (or tenders) for the Contract Works it proposes to accept, and not accept any non compliant or qualified tender for the Works without first obtaining agreement from the Council;
- 3.1.5 take such reasonable steps to enable the Works to be carried out as railway traffic requirements permit;
- 3.1.6 superintend and cause the Works to be completed with reasonable dispatch;
- 3.1.7 to the extent that it can legally do so arrange for any necessary temporary or permanent diversion of any sewers pipes cables or other media which may be affected by the Works whether these belong to Railtrack or to any other person; and
- 3.1.8 obtain the Council's prior written agreement to any significant variations to the specification for the Contract Works.

Right of Council to inspect Works

- 4.1 The Council's representative shall at all reasonable times have access to Railtrack's premises in the immediate vicinity of the bridge for the purpose of inspecting the Works subject to prior arrangements being made with Railtrack.
- 4.2 If, in the course of such inspection, the Council's representative detects any deficiency which could affect safety, he shall immediately inform Railtrack.

Postponement or Abandonment of Works

- 5.1 In the event of notification by the Council to Railtrack of the postponement or abandonment of the Works before the commencement of any site works the Council shall pay to Railtrack such sums as shall be commensurate with the services rendered by Railtrack up to the date of postponement or abandonment whatever the reason for such postponement or abandonment.
- 5.2 If the Works are postponed for a period exceeding six months but not exceeding three years and are then revived the Council shall pay such additional costs as may be incurred in:
 - 5.2.1 checking the design previously completed for adherence to brief;
 - 5.2.2 updating of such previous work to current standards;
 - 5.2.3 the preparation of revised estimates; and
 - 5.2.4 the recapitulation necessary before progress can be made from the stage at which the Works were postponed.
- 5.3 If the Works are postponed for a period exceeding three years from the execution of this Agreement the Works shall be considered to be abandoned.

Vandalism

13.1 In the event of acts of vandalism occurring on or from the Modified Bridge or its approaches which endanger the safety of rail traffic or the safety of persons working on or near the track and which can be attributed to the modification of the bridge, Railtrack may, at the cost of the Council, take such preventative and/or defensive action as shall be agreed between the parties to be reasonably practicable (such agreement not to be unreasonably withheld) having regard to the incidence and nature of the acts of vandalism and the cost of such preventative and/or defensive measures.

Future Railway alterations

14.1 If, at any time after the completion of the Works, Railtrack incurs additional expense in connection with the widening, operation or alteration of the Railway on lands now vested in it, or possessed by it, or in the exercise of powers now possessed by it, over and above that which would have been incurred had the bridge not been modified, such additional expense shall be defrayed by the Council.

New Roads and Street Works Act Procedures

15.1 The Council shall advise Railtrack on completion of the Works and from time to time afterwards what protective provisions under the New Roads and Street Works Act 1991 (if any) are to be applied to the [street/road] in the vicinity of the Modified Bridge.

Law

16.1 This Agreement shall be governed by and construed between the parties in accordance with [English/Scots] Law.

IN WITNESS of which Railtrack and the Council have executed this agreement as first dated above.

Signed by:

in the presence of:

Signed by:

Authorised by the Council:-

in the presence of:

OR

The Corporate Seal of the [] Council was affixed in the presence of:-

- 5.4 If the Works are abandoned or considered to be abandoned under the provisions of Clause 5.3;
 - 5.4.1 all costs, charges and expenses remaining due to Railtrack under the terms of this Agreement shall be paid by the Council; and
 - 5.4.2 this Agreement shall become null and void and any subsequent revival of the Works shall be the subject of a new Agreement.

Railtrack's costs

- 6.1 All costs charges and expenses incurred by Railtrack consequent upon or in connection with the Works including in particular (without affecting the generality of the application of this Clause) those listed in Clause 6.2 below shall be included in the calculation of payments due under this Agreement.
- 6.2 The costs charges and expenses mentioned in Clause 6.1 above include those incurred:
 - 6.2.1 in the use of directly employed staff for professional, administrative and management services in connection with the Works;
 - 6.2.2 in the provision under contract to Railtrack of services by any third party (including the supply of materials by Railtrack to the Contractor if appropriate) in connection with the works; and,
 - 6.2.3 in consequence of any possessions special traffic working or speed restrictions that may be necessary or in substituting or diverting services during the progress of the Works and if necessary for a reasonable time afterwards (including any performance payments or other costs or losses incurred by Railtrack by virtue of being unable to deliver in timely manner any train paths for which Railtrack shall have contracted with third parties or for which Railtrack might reasonably be expected to have contracted but for the prospect of the works being carried out) and in respect of which Railtrack shall provide such evidence as the Council may reasonably require.

Council's incidental costs

- 7.1 All costs charges and expenses incurred by the Council consequent upon or in connection with the Works including in particular (without affecting the generality of the application of this Clause) those listed in Clause 7.2 below shall be included in the calculation of payments due under this Agreement.
- 7.2 The costs charges and expenses mentioned in Clause 7.1 above include those incurred:
 - 7.2.1 in the use of directly employed staff for professional, administrative and management services in connection with the Works;
 - 7.2.2 in the use of any materials provided by the Council for inclusion in the Works; and,

7.2.3 in the provision under contract to the Council of services by any third party (including the services of specialist consultants) in connection with the Works.

Obligations with regard to costs, charges and expenses

- 8.1 Before the commencement of the Works, each Party shall prepare an itemised estimate and a spend profile of its costs charges and expenses, which shall be submitted to the other Party. In the case of costs estimated for Clause 6.2.3 Railtrack shall indicate the likelihood of each item of expenditure actually being incurred.
- 8.2 If it becomes apparent that the actual costs are likely to exceed the estimate provided by either Party under Clause 8.1 by more than 10%, or that the time scale for completion of the Works has changed significantly, a revised estimate and spend profile shall be provided to the other Party.
- 8.3 Except for the costs, charges and expenses mentioned in Clauses 5, 10 and 13 each Party shall pay its agreed contribution (as defined in recital (D)) to the actual costs charges and expenses whether they are greater or less than the estimated sum.

Payments

- 9.1 The following arrangements shall apply to payments made under this Agreement.
- 9.2 Subject to the provisions of Clause 9.9 for the purposes of this Clause, "Period" shall be taken as one calendar month commencing on the 1st day of the calendar month first following the commencement of the Works.
- 9.3 As soon as practicable after the end of every Period each Party shall submit to the other an itemised statement in a form approved for that purpose, supported by such documentation as may be agreed in advance between the Parties, showing (at the end of that Period):
 - 9.3.1 its total anticipated expenditure on the Works;
 - 9.3.2 the aggregate of any payments received; and
 - 9.3.3 any sums invoiced but outstanding.
- 9.4 Any sums falling to be paid under the terms of this agreement shall be due for payment 7 days after the issue of the itemised statement referred to in Clause 9.3.
- 9.5 The final date for payment of the sums falling to be paid under the terms of this agreement shall be 42 days after the date the payment becomes due. Should any sum not be paid by the final date then the payment due shall, in addition, bear interest at the rate of two percent above the Midland Bank base rate from the date that the payment became due up to the date of payment.
- 9.6 Not later than 12 days after the receipt of the itemised statement the Party in receipt of the Itemised Statement shall give notice to the other Party specifying the amount of the payment it is proposing to make against the statement. The notice referred to herein shall (if appropriate) give the ground(s) on which that Party proposes to withhold any payment and the amount attributable to each ground.

- 9.7 Payment shall be subject to the addition of Value Added Tax at the rate currently in force if and where applicable on production of a Value Added Tax invoice.
- 9.8 On certification by Railtrack that the Works have been completed, the Parties shall determine their actual final costs and the payments received. The date of such determination shall be deemed to be a Period end for the purposes of this Clause and any sum remaining outstanding from one Party to the other shall be treated accordingly.

Ownership and maintenance of the Modified Bridge

- 10.1 The Modified Bridge shall remain the property of Railtrack and, on or after the expiration of the period of maintenance or defect correction as provided in the contract for the Works, Railtrack shall inspect, maintain, repair, alter and renew the Modified Bridge in accordance with its normal procedures.
- 10.2 In inspecting, maintaining, repairing, altering and renewing the Modified Bridge Railtrack shall maintain the designed load bearing capacity (which is in excess of its legal obligation) [followed by

either provided that the Council contribute % of the future maintenance costs as and when incurred by Railtrack.

or provided that the Council pay to Railtrack a commuted sum of £
or at its own cost.]

Council to Maintain the Road

- 11.1 The Council shall maintain the road without cost to Railtrack and in so maintaining:
 - 11.1.1 shall not raise the level of the highway or reduce the effective parapet heights or otherwise increase the permanent loads upon the Modified Bridge;
 - 11.1.2 shall advise Railtrack of each occasion on which it is intended to repair or remake the Road.

Restriction as to lighting of Road

- 12.1 In lighting the highway and erecting illuminated road traffic signs in the immediate vicinity of the Modified Bridge the Council shall consult with Railtrack to ascertain its reasonable requirements having regard to its signalling arrangements and;
 - 12.1.1 comply with such requirements; and
 - 12.1.2 use its best endeavours to ensure that any lighting or signs erected in the immediate vicinity of the Modified Bridge by other parties entitled so to do also comply with such requirements.

Appendix D

METHOD OF CALCULATION

The basic principle is that the commuted sum should be the amount required at current prices to provide for future maintenance and reconstruction of the structure over the next 150 years. The figure is computed using standard discounting techniques at an agreed rate which takes into account interest rates and inflation over an extended time period.

The commuted sum comprises two elements:

- (a) Sum to provide ultimate reconstruction(s) $\sum A$
- (b) Sum to service predictable maintenance $\sum P$

Commuted sum = $\sum A$ + $\sum B$

Assumptions

The discount rate is based on an assessment of average interest and inflation rates over the last 50 years or so.

Interest rate 8%. Inflation rate 5%

Effective interest rate = $\frac{108-105\%}{105}$ = 2.8571429%

 $Sum = \frac{Present works cost}{1.028571429} y$

where y = no. of years to incurrence of expenditure

Values of 1000 are listed in Table 1 1.028571429

A. SUM TO PROVIDE ULTIMATE RECONSTRUCTION

Costs relate only to structural content and roadworks actually supported on the structure.

All reconstructions up to and including 150 years from ownership transfer are taken into account.

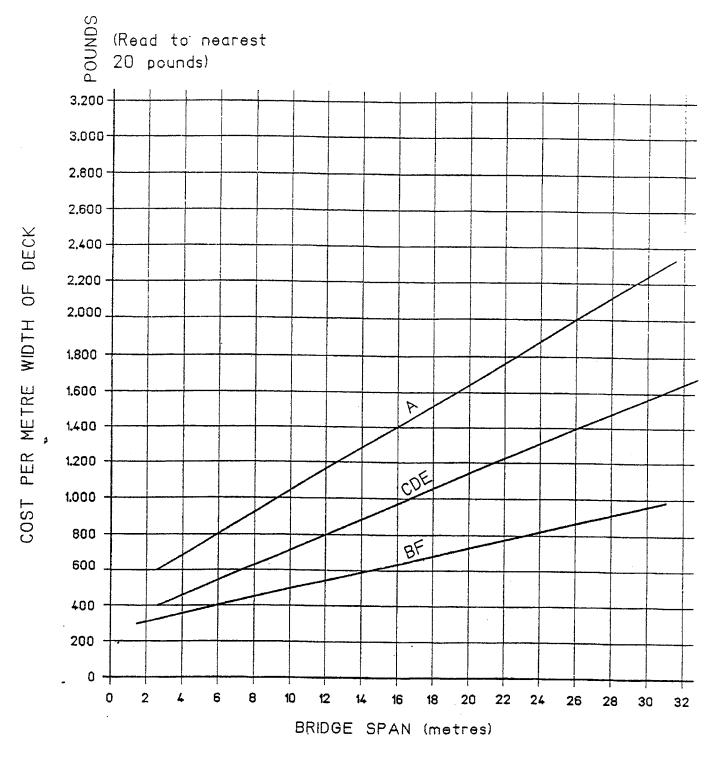
Sum A = $\sum \frac{\text{cost of reconstruction at current prices}}{1.028571429}$

for each y up to and including 150 years

CONCRETE REPAIR COSTS (1996 PRICES).

KEY TO CURVES:-

- A. Insitu concrete
- B. Pretensioned P.S. Beams (Infilled)
- C. Post tensioned P.S. Beams
- D. Composite steel/concrete
- E. As "B" but spaced (e.g. M Beams)
- F. Precast concrete box culverts



N.B. Cycle Time: Salted Roads - 30 Years, Non Salted Roads - 40 Year

<u>Example</u> A culvert has an expected life of 20 years and will then be replaced by a corrugated steel buried pipe at a present estimated cost of £18,000 with a life of 120 years.

$$y_1$$
 = 20 years y_2 = 140 years $\sum A = 18(569.26 + 34.03) = £10,859$

B. SUM TO SERVICE PREDICTABLE MAINTENANCE

Average maintenance costs and anticipated intervals at which they are incurred for a range of structural types and elements are listed in Table 3. Table 3 can be used in conjunction with Table 2 to calculate the present sum of money required to meet the cost of predictable maintenance throughout the next 150 years $\sum_{i=1}^{\infty} B_i$.

N.B. This sum is adjusted from 1986 to current prices on the summary sheet.

CALCULATION OF COMMUTED SUM				
PARISH ROAD NO.		o.s.	REF	· · · · · · · · · · · · · · · · · · ·
STRUCTURE				
SUMMARY SHEET				
Reconstruction (Σ A)				
Cost of reconstruction at current price	:S =		(R)	
Time to first reconstruction =			(t ₁)	
Sum to provide first reconstruction cos		x <u>1000</u> 1.0285		(see Table 1)
	=	x	=	(A ₁)
Total time to second reconstruction		=		(t ₂)
Sum to provide second reconstruction cost (if t_2 < 150 years)	= <u>R</u> 1000	× <u>10</u>	00 571429 ^{t2}	(see Table 1)
	=	×	==	(A_z)
If $t_2 > 150$ years, $A_2 = 0$				
Reconstruction element of commuted sum ;	$\Sigma A = A_1$	+ A ₂		
	•			
Maintenance (ΣB)				
B at 1996 prices (from Table 3)	*			(B)
*Adjustment factor to present prices	=			(PF)
ΣB at current prices = B x PF	= £		···	-
COMMUTED SUM = ΣA + ΣB	= £			
DATE	• • • • •			
CALCULATION BY				
*Adjustment factor derived from the Depa Output Price Index (Non Roads)	rtment c	f the En	vironment	Public Works
26991 h70				

TABLE 1 COMMUTED SUM PER £1000 PRESENT COST

у	1.028571429 [¥]	у	1.028571429 ^Y
0	1000.00	75	120.90
2	945.22	80	105.01
5	868.62	85	91.22
10	754.49	90	79.23
15	655.36	95	68.82
20	569.26	100	59.78
25	494.47	105	51.93
30	429.50	110	45.10
35	373.07	115	39.18
40	324.06	120	34.03
45	281.48	125	29.56
50	244.50	130	25.68
55	212.38	135	22.30
60	184.47	140	19.37
65	160.24	145	16.83
70	139.18	150	14.62

MAINTENANCE DISCOUNT FACTORS

Calculation Example

Maintenance Interval 15 years, Reconstruction after 120 years

Discount factor = 0.65536 + 0.42950 + 0.28148 + 0.18447 + 0.12090 + 0.07923 + 0.05193 + 0(reconstruction year) + 0.02230 + 0.01462

= 1.83979

The figures in Table 2 have been derived in this way. This method of calculation should be adopted for other cases as appropriate.

TABLE 2

MAINTENANCE DISCOUNT FACTORS (Used in table on next page)

Maintenance Interval (years)	Discount Factor D (Reconstruction after 120 years)	Discount Factor D (No reconstruction)		
2 5 7½ 10 15 20 30 40	16.96731 6.48060 4.15444 2.99426 1.83979 1.26196 0.70782 0.42907 0.30428	17.00134 6.51463 4.18847 3.02829 1.87382 1.29599 0.74185 0.46310 0.31890		

Table 3 Commuted Sum Maintenance Costs for Highway Structures

S TRUCTURE ELEMENT	RATE	QUANTITY	COST	CYCLE	DISCOUNT	MAINTENANCE
	(at 1996 prices)		EACH	TIME	FACTOR	SUM
			OCCASION	(YEARS)	D	CXD
1. CONCRETE DECK	per metre		C			
REPAIRS	width of bridge	'''	ĺ			
(See graph)						
2. REPLACE ALUMINIUM	£200 per metre	m		40	 -	
PARAPET	length of parapet					
3. PAINT STEEL PARAPET	£70 per metre	m		10		
	length of parapet			<u> </u> .		
4. REPLACE STEEL	£200 per metre	m		50		
PARAPET	length of parapet					
5. REPLACE BRIDGE JOINT (a) SPAN LENGTH < 20M						
(b) SPAN LENGTH >20M	£340) Per metre			(00)		
(3) 51 7 (14 EZING111 > 2010)	£580) of			a (20)		
	movement	m		b (15)		
	ioint	}				
RE-WATERPROOF	£56 per square	sq. m		20		
DECK	metre			20		
1	(TOTAL DECK					
7.0755	AREA)					
7. STEEL BEAM REPAINTING	005					
AREA = 3 X BEAM HT X LENGTH X NO	£35 per sq.m	m		15		
8. AS 7 BUT PATCH	C17 225 22 72				· · · · · · · · · · · · · · · · · · ·	
PAINTING	£17 per sq.m	sq.m		15		
9. ADDITIONAL COST OVER 7						
AND 8 WHERE ACCESS	£10 per sq.m	sq.m		71/2		
OVER WATER	(TOTAL DECK	-4		. /2		
	AREA)		÷			
10. BRICK/MASONRY ARCH-						
REPOINT AND REPLACE	£65 per sq.m of	sq.m		30		
BRICKS	total surface area*	}				
11. CONCRETE REPAIRS TO	£120 per sq.m of	,				
ABUTMENTS, WING	total surface area*	sq.m		40		
WALLS, HEADWALLS, RETAINING WALLS					•	
12. CORRUGATED PIPES	1,					
CONCRETE PIPES	11					
STEEL SHEET PILES) NO MAINTENANCE	COSTS				
BURIED PILES						
BURIED FOUNDATIONS) REPLACEMENT CO	ST INCLUDED	IN ELEMENT	(A)		
13. MASONRY/STONE-WORK	EACH CASE ASSES	SED ON				
14. SPECIAL	MERIT		····	<u> </u>		
CONSIDERATIONS				1		
(If applicable)				1		
e.g "Listed" Structure]				
15. ROUTINE INSPECTIONS	£40 per inspection	-		2		
16. ACCESS COSTS	Include sums for work	s		-	 	
(e.g. Rail Possessions)	and inspections acce	ss				·
						j
	MAINTENANCE ELEI	MENT OF COM	IMUTED SUM A	T 1996		٤
	PRICES				В	

^{*} These rates are applied to total surface area but are based on assumption that entire area will not requir repairs on every occasion.