

Alan Baker

BSc (Hons) CEng MICE MCIHT

DETAILS

Position

Associate

Discipline

Civil Engineering

Languages

English

Qualifications

- BSc(Hons)
- Chartered Engineer
- Member of the Institution of Civil Engineers
- Member of the Chartered Institution of Highways and Transportation

Key Skills

- Bridge Design
- Bridge Inspections and Assessments
- Railway Bridges
- Highway Bridges and Structures

Years of Experience

39

URS Start Date

03/09/1973

SYNOPSIS

Alan Baker is an Associate with URS. In recent years he has been responsible for the design and contract preparation of structural schemes in the UK and abroad, and project manager for roads and bridges contracts in Central Scotland.

He joined URS after graduating from the University of Glasgow and became involved in a wide range of structural and roadworks projects, concrete and steel bridges, tunnels, water retaining structures, jetties and aqueducts, and proposals for structures and roadworks in Hong Kong, West Africa and the Middle East. He has assisted in the site supervision of a major motorway contract in Central Scotland, been Resident Engineer for a helicopter hangar extension in Shetland, and on an offshore oil production platform. In addition, he has worked in West Africa and Hong Kong on the survey and final design of roads contracts. He has supervised the design of multi-span elevated viaducts in Hong Kong, and was responsible for the design of all bridges on the M74 Motorway in Dumfries and Galloway. Subsequently he prepared the contract documentation for all new works associated with the M6 DBFO Project for upgrading the remainder of the A74 to motorway standard.

He has worked on proposals for the restoration of the Forth and Clyde, and Union Canals and was responsible for the design of all bridgeworks on the A96 Blackburn / Kintore Bypass near Aberdeen. He has undertaken structural investigations in Glasgow Schools, and bridge inspections and assessments for many Local Authorities in Scotland. He has assisted in proposals to re-open the Borders Railway and the Stirling - Alloa - Kincardine Railway in Scotland, and has worked on the upgrading of the West Coast Main Line, Trent Valley section, for Network Rail. More recently, he has managed the design process for bridgeworks on the Airdrie to Bathgate Railway; and the outline bridge designs for the A82 Pulpit Rock Improvement at Loch Lomond and Inveramsay Bridge Replacement north of Aberdeen. He is currently responsible for the delivery of detailed designs of railway overbridges on the Borders Railway Project.

SELECTED PROFESSIONAL HISTORY

BRIDGES

A82 Pulpit Rock Improvements

Optioneering and outline design of multi-span viaduct forming the key feature in the upgrading of a restricted section of road at Loch Lomond. Included discussions with client's aesthetic advisor, the preparation of contract documents and involvement in the tender appraisal process.

A96 Inveramsay Bridge Improvement

Optioneering and outline design of highway structures including railway overbridge in the upgrading of a section of trunk road to relieve a bottleneck beneath an existing railway bridge. Included discussions with Network Rail and client's aesthetic advisor.

Borders Railway Project

Project Manager for Civils work on proposals to re-open the Borders Railway, including outline designs of over 70 bridges, earthworks, major highway crossings. Subsequently member of Design and Build team during the construction phase acting as Contractor's Responsible Engineer for the delivery of detailed designs of railway overbridges.

A74(M)

Outline and detailed design for some 40 no. bridges between Beattock and Ecclefechan. Supervision-in-Chief during construction. Preparation of Contract Documents for some of the first DBFO commissions in Scotland.

South Lanarkshire Council

Supervision of Inspections and Assessments of highway and railway bridges.

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AIRPORTS**Sumburgh Airport, Shetland**

Resident Engineer for British Airways Helicopter Hangar extension at Sumburgh Airport, Shetland, including inspection visits to BA Flight Simulator Building, under construction at Aberdeen Airport.

Heathrow Airport Terminal 4

Supervising design, drawing and detailing of reinforced concrete departures ramps for London Heathrow Terminal 4.

BRIDGES**A82 Pulpit Rock Improvements**

Optioneering and outline design of multi-span viaduct forming the key feature in the upgrading of a restricted section of road at Loch Lomond. Included discussions with client's aesthetic advisor, the preparation of contract documents and involvement in the tender appraisal process.

A96 Inveramsay Bridge Improvement

Optioneering and outline design of highway structures including railway overbridge in the upgrading of a section of trunk road to relieve a bottleneck beneath an existing railway bridge. Included discussions with Network Rail and client's aesthetic advisor.

West Coast Route Modernisation

Project Manager for the outline and detail infrastructure design necessary to increase the capacity of the West Coast Main Line in the Trent Valley, Staffordshire. Includes some 40 no. new or reconstructed bridges. Extensive consultations with all interested parties, and provision of assistance during the public consultation process.

A74(M)

Outline and detailed design for some 40 no. bridges between Beattock and Ecclefechan. Supervision-in-Chief during construction.

Borders Railway Project

Project Manager for Civils work on proposals to re-open the Borders Railway, including outline designs of over 70 bridges, earthworks, major highway crossings. Subsequently member of Design and Build team during the construction phase acting as Contractor's Responsible Engineer for the delivery of detailed designs of railway overbridges.

Airdrie to Bathgate Railway and Linked Improvements

Supervision of bridge designs and technical liaison during construction.

Stirling – Alloa – Kincardine Railway

Project Manager for Civils work on proposals to re-open disused Railway, including outline design of remedial works to some 35 bridges.

Rambler Channel Bridge - Eastern Approach Viaducts

Supervision of the design of multi-span post-tensioned segmentally-constructed viaducts in Hong Kong.

National Cycle Network

Project Manager for part of National Cycle Network, including new bridges.

Millennium Project

Preparing outline bridge designs and contract documentation for the restoration of bridges on the Forth and Clyde Canal for British Waterways Scotland.

East Kilbride Development Corporation

Project Manager for the design of several bridges for East Kilbride Development Corporation. Supervision-in-Chief during construction.

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Blackburn and Kintore Bypass

Supervision of design of several bridges on Blackburn and Kintore Bypass, west of Aberdeen.

Route 3 Project, Hong Kong

In Hong Kong office, responsible for bridge design on Route 3 Country Park Section.

A50 Stoke to Derby Link

In Chesterfield Office undertaking outline highway bridge designs for the Doveridge Bypass.

RNAD – Coulport

Bridge design for Garelochhead Bypass and Northern Access Road and supervision-in-chief of bridges associated with the development of RNAD – Coulport. Supervision-in-Chief duties.

Channel Tunnel Rail Link

Feasibility studies for bridges and structures associated with the Channel Tunnel Rail Link Project.

Abuja Bridges

Supervising the design of post-tensioned prestressed concrete bridges for Abuja, Nigeria.

A6 Chapel-en-le-Frith Bypass & M42 Polesworth Section

Design of various prestressed and reinforced concrete bridges for the A6 and M42 roads contracts in the Midlands.

Hermiston Aqueduct, Edinburgh

Independent structural check and preparation of contract documents for prestressed concrete aqueduct.

Dumbreck Road Connection

Independent check of prestressed concrete railway overbridge, Glasgow.

Queen Elizabeth II Bridge, Aberdeen

Independent check of twin box-girder prestressed concrete bridge.

Basrah to Safwan Road, Iraq

Outline design of highway bridges.

Townhead Interchange Stage 2

Independent check of bridges and highway structures for Townhead Interchange contract, Glasgow.

Renfrew Motorway Stage 1

Design of reinforced and prestressed concrete bridges for Renfrew Motorway Stage 1, Glasgow.

North Lanarkshire Council

Supervision of Inspections and Assessments of highway bridges.

South Lanarkshire Council

Supervision of Inspections and Assessments of railway bridges.

Fife Council

Supervision of Inspections and Assessments of highway and railway bridges.

West Lothian Council

Supervision of Inspections and Assessments of highway bridges.

East Ayrshire Council

Supervision of Inspections and Assessments of highway bridges.

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Falkirk Council

Supervision of Inspections and Assessments of highway bridges.

Aberdeenshire Council

Supervision of Inspections and Assessments of highway bridges.

EXTRACTIVE INDUSTRY**Ninian Central Platform**

On secondment to Chevron Petroleum (UK) Ltd as Resident Engineer supervising the installation of modules and ancillary steelwork on Ninian Central Oil Production Platform.

MARINE & COASTAL**Tanker Berthing Facility**

Independent check of tubular steel tanker jetty.

POWER**Ejigbo Water Supply Scheme**

Supervising design and detailing of reinforced concrete structures, including dam spillway, for Water Supply Scheme in Nigeria.

PUBLIC BUILDINGS**Glasgow Schools**

Supervision of the structural inspection of some 20 no. schools in Glasgow.

RAIL**West Coast Route Modernisation**

Project Manager for the outline and detail Civils infrastructure design necessary to increase the capacity of the West Coast Main Line in the Trent Valley, Staffordshire. Includes bridges, highways and earthworks.

Borders Railway Project

Project Manager for Civils work on proposals to re-open the Borders Railway, including outline designs of over 70 bridges, earthworks, major highway crossings. Subsequently member of Design and Build team during the construction phase acting as Contractor's Responsible Engineer for the delivery of detailed designs of railway overbridges.

Airdrie to Bathgate Railway

Project Manager for bridges design work during construction phase.

Stirling – Alloa – Kincardine Railway

Project Manager for Civils work on proposals to re-open disused Railway. Includes bridges, highways and earthworks.

Channel Tunnel Rail Link

Feasibility studies for bridges and structures associated with the Channel Tunnel Rail Link Project.

RESIDENTIAL**Structural Inspections**

Structural inspections and repairs proposals for several domestic properties in Glasgow.

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ROADS**M6 DBFO**

Preparation of Contract Documentation for all New Works for major Trunk Road upgrading. Providing technical assistance to Scottish Office during construction phase.

Technical Reviews

Technical Reviews of Contract Documents for Roads Schemes for Fife Council and Highland Council.

Interchange Layouts, Iraq

Design of grade-separated highway interchange layouts.

Roads Rehabilitation, Ghana

In Ghana office, responsible for roads design, from survey to final design.

Renfrew Motorway Stage 1

Assistant Resident Engineer (Highways) engaged on supervision of roadworks construction on Renfrew Motorway Stage 1, Glasgow.

City Way Flyover, Nigeria

Grade-separated highway interchange design.

Glasgow Motorways

Outline highway designs for East and South Flanks and Ayr Motorways Stages 1 & 2.

TRANSPORTATION INFRASTRUCTURE**Glasgow Inner Ring Road**

Outline design proposals for a tunnel in the East Flank of Glasgow Inner Ring Road.

Cross-Harbour Tunnel, Hong Kong

Preparation of report to Hong Kong Cross-Harbour Tunnel Company indicating possible schemes to increase traffic flow across the harbour, including structural design of prefabricated steel and concrete mezzanine decks.

National Cycle Network

Project Manager for Glen Ogle Cycleway, Scotland, part of the National Cycle Network.

WATERWAYS**Forth & Clyde Canal, Scotland**

Outline design and contract documentation for canal restoration. Includes bridge designs.

Union Canal, Scotland

Outline design and independent structural check of Hermiston Aqueduct. Preparation of Contract Documents. Supervision-in-Chief for the construction of the works.

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ALTERNATIVE SYNOPSES**Inspections & Assessments**

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AWARDS, COMPETITIONS, PUBLISHED PAPERS**Awards**

Stirling Civic Trust 2003. Kendrum Viaduct - High Commendation.

Saltire Society Civil Engineering Awards 2000. M6 DBFO - Commendation.

British Construction Industry Awards 2000. M6 DBFO A74 (M) Paddy's Rickle Bridge to Cleuchbrae - Major Project High Commendation.

Institution of Civil Engineers 1999. M6 DBFO Project - Brunel Medal.

Saltire Society Civil Engineering Awards 1995. A74 (M) Cleuchbrae to Ecclefechan - Award.

The Association for the Protection of Rural Scotland 1988. Edinburgh City Bypass, Hermiston Aqueduct - Commendation.

Published Papers

West Coast Route Modernisation – River Tame Viaduct, published in the Institution of Civil Engineers Bridges Proceedings, December 2007

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CONTINUING PROFESSIONAL DEVELOPMENT

Course Title	Training Organisation	Date & Duration
Computer Application to Bridge Analysis	University of Strathclyde	1973
Concrete Bridge Design to BS5400	Cement & Concrete Association	1980
Core Management Programme	Reed Training	2006

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Inspections & Assessments

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