roads and bridges
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For over 60 years we have successfully delivered numerous physical and social infrastructure solutions, and engineering design projects to our clients in Africa, Asia, Europe, Latin America, Middle East, the Caribbean, and the Pacific.

Our dedicated and experienced staff are key to the successful delivery of the services we provide. As a result we have earned an enviable reputation for innovation, efficient and cost effective design solutions and project delivery.

Our mission is to be a leading consultancy, exceeding Client expectations through staff innovation, staff development and financial stability.

Our independence ensures a personal business relationship with Clients. We recognise that the key elements of service include:

- Sound technical knowledge of the services involved
- A high level of co-operation, co-ordination and communication with both Client representatives and end users
- Fast and effective response
- Development and implementation of cost effective solutions to the diverse problems that may be encountered
- Ensuring that all works are carried out to programme and within budget
- Maintaining the highest standards throughout the project life time
- In-depth understanding of complex specifications and project environments
An independent organisation founded in 1952, Roughton has built a reputation for efficiency, value for money, innovation and timely project delivery.

Excellent client relationships and long term fostered business partnerships worldwide have made Roughton a unique brand.

In the UK our public sector client list includes numerous NHS trusts, local authorities and ministries. Banks and major construction contractors are found amongst our growing private sector list.

Further afield, Roughton has successfully delivered projects funded by all the major IFIs. Projects include; urban development project in Lagos in Nigeria, asset management projects in Uganda, development of the Jamaica Inner City Basic Services, Institutional Strengthening projects for the Frontier Highways Authority of Pakistan, the China to Europe highway in the Republic of Kazakhstan, various infrastructure projects in India, Sri Lanka and over 100 other countries.

We are providing Transaction Advisory services on PPP and PFI projects for several governments and private developers in a number of countries including Georgia, Nigeria and India.

From undertaking the smallest bridge inspection to providing expertise on the largest and most complex infrastructure projects, we will provide the same level of professionalism and client care.
In the last twenty years alone, we have completed over 300 projects in 88 countries, many of which have been major infrastructure projects. Others have been smaller but locally vital transport links.

Whatever the size of the project, we take an equal pride in the quality of our service delivery. Every project has a member of the Senior Management Team engaged, to ensure the best possible lines of communication with Clients, contractors, construction teams and funding agencies.

The following gives a snapshot of the diversity in geography and complexity of some of our current road, highway and bridge projects:

- South West Roads Project Construction Supervision, Kazakhstan
- Transaction Advisory Services for the Construction of the 2nd Niger Bridge, Nigeria
- Supervision of Access Road to Tumba College of Technology, Rwanda
- Construction Supervision Consultant for SK-CW1 Sikkim, India
- Set up of an RMS in Liberia
- Montserrat ROMAPS Lite update, Montserrat
- Framework for Concessions (Contracts) for Performance based Road Maintenance, Georgia
- 6-Laning Krishnagiri to Walajahpet Section, India
- Lunsemfwa Bridges, Zambia
- Supervision of Corridor 5c Motorway, Sub-section Zvirovici-Bijaca, Bosnia & Herzegovina
- Supervision of the Construction for Firat TDZ, Turkey
- Kabwe-Picadilly Circus-Mkushi, Zambia
- Kasempa-Kaoma Road, Zambia
- Oxbow Supervision Km0-km67, Lesotho
- Design Review and Construction Supervision, Western Region, Sri Lanka
- Supervision of Priority Infrastructure Works, Sierra Leone
- Lenders Monitoring Consultant, Albania
- Kiribati Road Rehabilitation Project, Kiribati
- Implementation Assistance, Moldova
- Marakabei (Joel's Drift) to Monot'sa Road to Bitumen Standard, Lesotho
- Matotoka - Yiye Supervision of Rehabilitation, Sierra Leone
- Construction Supervision of Bedele - Metu Road Upgrading Project, Lot 1, Ethiopia
- Port Vila Urban Development Project, Vanuatu
Roughton can demonstrate extensive project experience in terms of both geography and range of bridge engineering services. Our expertise enables us to determine cost-effective solutions appropriate to the use of the bridge, its location and the experience of the constructor.

Our expertise includes:

- Hydrology and hydraulics
- Design and construction
- Maintenance and management
- Inventories and condition surveys
- Assessment for structural integrity and load capacity

We have carried out the following bridge projects in the past 10 years:

- Malaita Rural Infrastructure Project (MRIP), Soloman Islands
- Shikapur and Doarika Bridges Construction Project, Bangladesh
- Mobogo Bridge Project, Botswana
- Dreenan Bridge Replacement Project, EIRE
- Samoa Infrastructure Asset Management Project - Bridge Component, Samoa
- Disaster Assessment Mission, Cook Islands
- Post Conflict Emergency Rehabilitation Project, Soloman Islands
- National Highways Programme, Year 3 Civil Works Bridges Rehabilitation, Trinidad & Tobago
- King and Lodoni Roads Upgrading Project, Fiji
- Technical Assistance Road Infrastructure Programme, Costa Rica
- Rewa Bridge Demolition, Fiji
- Vanuatu Transport Infrastructure Development Project, Vanuatu
- Assessment of Critical Transport Projects in Nigeria
- Bridge Condition Surveys 2006-2011, Zambia
- Transaction Advisory Services: River Benue Bridge at Ibi - PPP Study, Nigeria
- Gaborone - Molepolole Road Improvement Project, Botswana
- Feasibility Study for Guto - Bagana Bridge, Approach, Link Roads and Two Eco Tourism Villages, Nigeria
- Transaction Advisory Services: Katsina Ala Bridge at Buruku - PPP Study, Nigeria
- Transaction Advisory Services for the Construction of the 2nd Niger Bridge, Nigeria
- Lunsemfwa Bridges, Zambia
- Provision of Training in Lusas Engineering Bridge Design for Members of the Nigerian Institute of Civil Engineers, Nigeria
Roughton's highways experts work as a team with a holistic approach that identifies innovative ideas at the early stages of a project. Our appropriate design software and approach ensures accuracy and, with our project management skills, provides cross discipline collaboration where we are trusted to attain cost effective, sustainable solutions, to meet our Client’s goals and aspirations.

Roughton has extensive expertise in the provision of the following services:

- Bridge engineering
- Construction supervision
- Contract administration
- Design review
- Detailed design
- Economic feasibility and analysis
- EIA
- Engineering review
- Feasibility study
- Feasibility study review
- Geotechnical engineering
- Highway engineering
- Pavement evaluation
- PPP viability study
- Preliminary engineering design
- Project management
- Provision of Resident Engineer
- Provision of Team Leader
- Resettlement
- Technical assistance
- Transaction Advisory Services

Illustrated by the following list of 25 recent highway and expressway projects:

- Four-Laning of NH2 - Bihar, India
- EN1 Rio Save Highway Rehabilitation Project, Mozambique
- Highway Rehabilitation San Lorenzo-Muhan, Nicaragua
- Four-Laning of Grand Trunk Road, Agro-Sarai Ikdil Section of NH2, India
- West Bengal Corridor Development Project, India
- Four-Laning of Dhawar-Belgaum Section of NH4 Karnataka, India
- Four-Laning of Haveri - Hubli and Belgaum Bypass Sections of NH4, Karnataka, India
- Detailed designs for the Rehabilitation of Meerzorg - Albina Highway, Suriname
- Four-Laning of Tumkur-Chitrtradurga Section of NH4 Karnataka, India
- Southern Transport Corridor Road Rehabilitation Project, Kyrgyz Republic
- Transaction Advisory Services: PPP Lot 2 Shagamu-Benin, Nigeria
- Transaction Advisory Services: PPP Lot 2 Benin-Asaba, Nigeria
- Design of Reghin Bypass, Romania
- Four Laning of Ayodhya to Gorakphur Section of NH28, Uttar Pradesh, India
- Feasibility Report for 2 Lane National Highway, NH-79 and NH-113, India
- Rreshen - Kalimash Motorway, Albania
- Transaction Advisory Services: Modernisation of Onitsha-Enugu Road, Nigeria
- Four Laning of NH17B and Four Laning of Baina Road, Goa, India
- Transaction Advisory Services for the Lagos-Ibadan Expressway, Nigeria
- Transaction Advisory Services: Murtala Airport (MMA) Road, Nigeria
- 6-Laning Krishnagiri to Walajahpet Section, India
- Road Network Improvement Project: Construction Supervision, Sri Lanka
- Design Review and Construction Supervision, Western Region, Sri Lanka
- Supervision of Corridor 5c Motorway, Sub-section Zvirovici-Bijaca, Bosnia & Herzegovina
- Design and Construction Supervision of Lot B: DN15 Reghin - Toplita and DN12 Toplita - Chichis, Romania
Roughton has been providing consultancy services to rural and low volume road projects for over 50 years, mainly for Government Ministry and Funding Agency clients.

In recent years, Roughton has been educating Clients in the advantages of rehabilitating rural roads utilising the concept of Environmentally Optimised Design. A holistic approach that focuses resources on the areas of a road network that need it - tailoring designs to varying engineering and environmental problems, utilising locally available materials. This enables all-year round accessibility to be attained in the most economical way.

The benefits from improving the rural road networks and providing year-round, reliable access include; social, environmental, and whole life cost benefits, one of the most important being the long-term benefit of poverty alleviation.

The construction of roads in rural areas also provides an excellent opportunity to introduce Labour-Based Methods. As well as the off-carriageways elements (stormwater drainage channels, channel linings, culverts, small bridges, hardstandings, crash barriers, environmental works) the main carriageway can be constructed by hand. This is because the traffic counts are at sufficiently low levels to allow the specifications to be adapted to suit labour-based methods of working.

Road maintenance, particularly in rural settlements, is also well suited to labour-based methods. We have employed the use of the Lengthman System in many developing countries, which allows the maintenance of between 1 and 3 kilometres to be handled by a local person. Each Lengthman is given a basic kit including overalls, hard hat and a number of hand-tools and he or she is required to maintain a specific portion of the road network. During heavy rains or monsoon periods, it is usual to double up on the number of Lengthmen employed due to the increased workload. During this period, more serious maintenance may be needed including spot improvements and minor emergency repairs. In our experience, these activities are best left to small local contractors who have the flexibility of carrying out the needed maintenance works at short notice.
The extent of our rural road experience is too huge to capture in a list, since the projects tend to be smaller, but extremely prolific. However, our rural road Client list is impressive, extending to over 50 national road authorities/government ministries, most of the major international funding agencies as well as several private and banking clients. Most of our clients are long-standing and many projects have included elements of institutional strengthening or capacity building.

We are proud of our approach to these projects, which provides a legacy for locals in terms of new skills and the ability to implement simple strategies for maintaining their own road networks.
road and bridge services

- Appropriate technology
- Axle load studies
- Bridge engineering
- Capacity building
- Concrete pavement design
- Condition surveys
- Construction supervision
- Design and build
- Financial management
- HDM IV
- Institutional strengthening
- Labour based road construction
- Legal and regulatory reform
- Organisation and management studies
- Pavement engineering
- Performance based management
- Pre-contract services
- Quality management
- Road asset management
- Road maintenance
- Road safety
- Road user charges
- Technical audits
- Thin bituminous surface treatments
- Traffic regulations
- Traffic studies
- Training
- Transport economics
- Transport planning
Background to nROMAPS

nROMAPS is a Road Asset Management System that improves the efficiency of road maintenance planning within institutional frameworks, and consists of a series of interconnected modules that can be implemented at various levels of complexity.

The system reduces the need for extensive institutional resource whilst making optimal use of modern technology for the operation and maintenance of road networks. The system is adaptable to national maintenance policies and regulations, and standardises maintenance practice countrywide.

nROMAPS provides a tool for budgeting, planning and management of emergency, routine, periodic and preventative maintenance. Also provided is a complete pavement management system and the ability to export data to RDM 4, in order to implement economic evaluations.

nROMAPS manages detailed inventory and condition data and can also operate using data at Information Quality Level (IQL) 4. IQL 4 data is based on visual assessment and is particularly suitable where rapid data collection is required, enabling district staff to carry out the data collection with basic training and minimal resources.

nROMAPS can be used either as the principal national maintenance management system, or as a regional or district maintenance management system.
Other Roughton Services

- Air quality
- Asset management
- BIM
- Bridge engineering
- Building services
- Building surveying
- CDM coordinator
- Civil engineering
- Construction supervision
- Contract administration
- Due diligence
- Drainage design
- Economic feasibility
- Energy efficiency
- Environmental impact
- Expert witness
- Facilities management
- Feasibility studies
- Flood risk assessments
- Geotechnical investigations
- Highway engineering
- Hydrological studies
- Infrastructure design
- Intermodal appraisal
- Landscape architecture
- Masterplanning
- Pavement engineering
- Planning
- PPP & PFI
- Programme management
- Project management
- Public health engineering
- Quantity surveying
- Rail engineering
- Risk management
- Secondment of professional staff
- Structural engineering
- Transportation planning
- Wastewater
- Water
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