



John Bowes

Director

Personal summary

Year of birth: 1971

Nationality: British

Languages: English

Qualifications:

- Fellow of ICE (FICE)
- Chartered Engineer
- BEng (Hons) Civil Engineering

Key skills:

Engineering and technical knowledge across a broad range of disciplines.

Ability to identify and manage risk, programme, cost and commercial aspects to ensure works are delivered to an agreed budget and timescale.

Proactive in the delivery of innovative solutions and will promote potential approaches and designs that 'challenge the norm' and deliver best value.

Exceptional communication and interpersonal skills, able to inspire, motivate, develop and lead team to achieve increased levels of performance and achievement.

Project management, contract management, procurement and managing teams to deliver design specifications, drawings and implement challenging engineering construction projects.

Summary of Key Skills and Services

John has over 30 years of experience of working on a variety of road, rail and light rail transport schemes as a contractor and designer. This experience provides him with a unique understanding of project delivery from a contractor's and designer's perspective which allows him to effectively provide a variety of services to support your project at any stage.

A summary of his skills and services is provided below, a detailed list of schemes he has worked upon with the services identified is on the following pages.

Value Engineering and Alternative Solutions

John has a proven ability to identify alternative solutions and savings on any project through reviewing the scheme objectives and assessing these against the current design option(s) to reduce the cost of the scheme and also making it more sustainable and easier to build.

Examples include the Great North Way in Doncaster where an alternative solution reduced the cost of construction from £81m to £37m whilst delivering 90% of the scheme objectives – this scheme was not affordable in its original form. He also developed a suite of standard solutions for the NRTS motorway communications project which saved significant design time, reduced delivery cost and offered a product approach. In rail John utilised his bridge construction experience to provide an alternative bridge solution within the constraints of the existing level crossing to remove the need for a bypass around Tallington.

CRE Constructability

The Constructability CRE role can be undertaken at high level during early GRIP stages of a rail project through to detailed studies as to how a scheme will be built. John has a strong understanding of all rail disciplines and is able to use this to assess the impact construction will have on rail operations, local highways and residents. He is also able to develop staging solutions which reduce the disruptive impact of the construction activities and utilised normal rules of the route possessions and maximise the volume of work undertaken during normal working hours.

As demonstrated on the Northern Powerhouse Rail commission John was able to add value to his CRE duties as the options were developed by suggesting design solutions that removed or lowered the impact of these as well as reducing risk and cost. He also undertook the role on two Crossrail depots and was one of the tender assessment panel members where he assessed each tenderer's submissions against set constructability criteria.

D&B Support

Support can be provided during a tender or after contract award and is also applicable ECI forms of contract.

At tender stage the lowest cost of construction and the understanding or reduction of risk is often key to winning as many contractors are able to produce strong quality documentation. John has the ability to find alternative solutions and develop methods of construction that reduce the overall construction cost and shorten the programme to reduce prelim costs. He also has a full understanding of project risks be it from construction, design and third parties so can assist contractors to mitigate these.

On the A14 J7-9 tender John developed £4.2m of value engineering savings and also reduced the length of traffic management from 7km to 4.5km shortening the programme by 6 months. On the Werrington grade separation scheme John worked as part of a collaborative tender team to develop an alternative solution that reduced risk and the impact on the ECML railway during construction.

Challenge

John has led a number of challenge workshops on both major trunk road and local authority highway schemes. The composition of these varies depending upon the size and complexity of the scheme but can include the client organisation and their stakeholders, safety and maintenance advisors and the delivery contractor and design team. John is able to plan and facilitate these workshops and report on the outcome.

The aim of the challenge is to assess the developing scheme against the objectives and offer support and guidance as to how the design should be progressed for example highlighting any areas that should be considered further. The challenge will where appropriate challenge the scheme objectives to remove waste that adds little value and offer alternatives that are lower carbon, lower cost and more sustainable.

ECI

John is able to work with clients and offer the benefits of ECI without having the contractor appointed. This approach can be adopted at any stage of a project but is most successful during early options stages as changes become harder to make as the scheme is more defined.

Buildability and Construction Methodology

Understanding how a scheme will be built will enable the impact it may have on settlements, road / rail users and the environment for example to be assessed allowing mitigations to be developed or the impacts to be communicated. The assessment may simply include an assessment construction traffic may have on the local road network to a detailed implementation plan which develops the stages of construction with a detailed programme.

Project Experience – Listed in Chronological Order	Value Engineering	Alternative Solutions	Challenge	Construct'n Methodology	D&B	CRE
NPR (Northern Powerhouse Rail): Constructability CRE on all six packages across the north. Providing accessibility, environmental impact, buildability and safe by design support on proposed route options and hubs.	✓	✓				✓
A38 Derby Junctions: Approached by BAMN to initial look at Little Eaton Junction where an alternative solution saving up to £25m was provided. Subsequently looked at Mark Eaton where an alternative that reduced disruption to road users during construction and a 1 lane reduction in the underpass offered a lower carbon solution.	✓	✓	✓		✓	
M42 J6: In order for Skanska to agree the target cost with Highways England they needed to value engineer the solution that had gone through DCO. John undertook a full paper based review of the scheme and provided a number of significant cost reduction opportunities for the team to investigate further	✓	✓	✓		✓	
A494 River Dee Crossing: A £120 million scheme to replace the existing life expired bridge across the River Dee and improve capacity beneath the adjacent railway. Worked with the team to develop options and provide traffic management and construction methodology.	✓	✓		✓		
A629 Phase 1b: Bid director supporting Interserve on their tender submission and tender design. Developed alternative layouts that saved a £1m BT diversion, demolition of a public house and removed the need to widen an existing bridge.		✓			✓	
Leeds Public Transport Investment Project: £90m package of improvements along key corridors into Leeds. Sat on project board with BAMN to provide support to delivery team which also involved chairing and participating in challenge workshops.	✓	✓	✓		✓	
Anglia Level Crossing Closures: Project director responsible for a large team delivering a Transport and Works Act Order for twelve level crossings. Three submissions made in Essex, Cambridgeshire and Sussex to very tight deadlines and pressures.		✓	✓			
Scheme Challenge Lead – M6 J10, A47 Schemes, A1 Scotswood, A417 Air Balloon, LPTIP, M42 J6: Led a small team of experienced staff to challenge the ongoing solutions for several Highways England schemes through stages 1-4. This provided alternative approaches as well as confirming that the most efficient options had been adopted.		✓	✓			
A500 Etruria: Bid director supporting contractor on their tender submission. Developed alternative layout that saved 30% of central reserve replacement and a 450m length of sheet pile retaining structure.	✓	✓			✓	
A417 Air Balloon: Undertook a challenge of the proposed preferred route prior to consultation. Provided alternative location for traffic to cross the new highway which reduced the foot print and height of retaining walls of the scheme if adopted and several minor changes to reduce cost.		✓	✓			
Crewe Hub: Constructability CRE for the Grip 3 study at the station for HS2's arrival. Provided programme, risk, phasing and buildability support to inform the preferred option. Also supported three other streams including sidings re-modelling, independent line re-signalling and station enhancement for Cheshire East Council.		✓		✓		✓
A1 Scotswood: Provided buildability, value engineering and design challenge to the £70 million widening scheme bringing lessons learned and innovations from the A14 J7-9 and M6 J10.	✓		✓			
M6 J10: Challenge team lead providing guidance and direct input into the delivery approach, innovation and value engineering. The team has responded to comments made and provided a safer NMU route through the junction. Value engineering generated £6m savings on the £50m scheme. Also developed innovative traffic management which utilised the smart motorway technology.	✓		✓			
Nexus Depot Replacement: Mott MacDonald undertook the preliminary design of the depot. John provided construction phasing and construction impact assessment as CRE.				✓		✓
A14 J7-9 Widening: Working as the project director, responsible for the delivery of detailed design and site certification for the £25m scheme. Worked with the contractor to develop the optimum phasing and efficiency savings, which led to £4.2m savings being identified and a programme reduction of five months.	✓	✓		✓	✓	
East Coast Maine Line (ECML) Level Crossing Closures: Project director leading the development of options for the closure of over 35 level crossings throughout Doncaster, Nottinghamshire and Lincolnshire. The scheme involves diversions and the provision of new pedestrian, equestrian and highway bridges.		✓		✓		
M18 J5 Pinch Point: Project director responsible for the delivery of detail design, contract procurement and construction phase of the £4m junction capacity improvement scheme. Also provided advice on traffic management and construction methodology and assisted with value engineering of the scheme.	✓			✓		
Finningley and Rossington Regeneration Route Scheme, Doncaster: Project director responsible for the delivery of the £56m dual carriageway relief route between the M18 J3 and Robin Hood airport. Led a major VE exercise that reduced the scheme cost from £81m to £37m and subsequently working with the ECI contractor.	✓	✓				
Thickthorn Interchange: Capacity improvement to the interchange between the A47 and A11. Undertook a review of the outline design and produced an affordable alternative solution.		✓	✓			
Pudding Mill Lane: Led a small team to compare the temporary works and possession requirements for the current slab track design and an alternative ballasted solution. Also assessed the Capex and Opex costs, possession requirements and overall programme and risk.						✓
Iford Depot, Crossrail: Grip 4 design to introduce new siding for Crossrail rolling stock within the existing depot site. Provided lead role in determining the proposed staging and construction methodology for the project, agreeing staging plans with key stake holders, developing the outline programme and providing buildability advice.				✓		✓
M62 J26: Developed low cost alternative to the options developed by Highways England's consultant which utilised the existing infrastructure. When assessed against the other options it scored highest in the evaluation matrix and provided £120m to £180m saving.		✓				
Carr Lodge Farm Development, Doncaster: Project director for the delivery of the Main Street of this Homes & Communities Agency development. An objective of the scheme was to focus movement along a Main Street connecting formerly isolated developments around the site to each other and bringing vitality to a new village square.						
Doncaster to Water Orton Rail Improvement: Project director responsible for the delivery of the GRIP 5 detail design for bridge renewals and track lower and slew schemes to increase the rail gauge through 55 separate sites from Water Orton to Doncaster for Carillion Rail.		✓				
Linton Bridge Stabilisation: Following a flood event one of the piers settled 200mm placing the structure in danger. Unable to place the workforce at risk John developed a falsework solution that was floated underneath the unstable arch and jacked into position to allow it to support the arch and provide a safe working platform for repairs.			✓	✓	✓	
Manchester 2nd City Crossing, GMPTE: Working with the design team to develop options and solutions that minimise the impact upon existing operations, vehicular traffic and construction costs for a new tram route across Manchester city centre. Developed detailed construction implementation plan.			✓	✓		
NET Phase Two, Nottingham Tram Extension: £330m extension of the Nottingham light rail system. Implementation manager providing construction advice to manage scheme risk/opportunity and ongoing discussion and agreement of methodology with Network Rail, Highways England and the local highways authorities.				✓		✓
Sheffield Highways Maintenance Private Finance Initiative (PFI): Project director managing a team of technical advisors from Sheffield and Southampton. The role included working with Sheffield City Council to evaluate and score the tenderers throughout each phase of the procurement process.			✓			
Sheffield and Leeds Building Schools for the Future: Overall technical and management support to the infrastructure elements for several schools and colleges within Sheffield and Leeds. Undertook technical reviews during design development, provided buildability advice and managed the highways deliverables, programme and costs.				✓		
Leeds New Generation Transport (NGT): Developed implementation plan for the proposed 27km rapid transit network for Leeds. This included construction sequences and programme, deliveries to and from site, and liaison with third parties and was used to form part of the TWAO submission.	✓	✓	✓	✓		
Various Park and Ride Sites: Project director supporting a number of park and ride sites throughout South Yorkshire for South Yorkshire Passenger Transport Executive. Works ranged from feasibility, detail design to site supervision.	✓			✓		
A361 Banbury Road Raising: Raising of 800m of carriageway along the A361 within the existing boundary whilst minimising the impact upon existing hedgerows and trees. Was successfully completed where the provision of a nil-detriment solution was agreed with the Council to avoid improving the corridor to current design standards and reduce cost and environmental impact.	✓		✓			
National Roads Telecommunications Service (NRTS): Managed the implementation of highways NMCS2 communication projects for new duct routes, cabinet sites and control buildings. Responsible for the civil design team in the north of the UK. Developed full understanding of motorway communications systems.	✓	✓				
M27 J3 to J4 Tender Design: Project manager for the delivery of the tender design for the widening of the M27 between junctions 3 to 4. Worked with the contractor to deliver the design for pricing purposes in a very tight timescale. Working within the confines of the environmental statement, was able to develop two innovative solutions to reduce the export of material from site and deleting the requirement for 500lm of sheet piling.	✓	✓				

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A66 Hartington and M1 J25 to 28 ECI Bids: Project manager for the ECI tender, working with the contractor to develop the quality submission and address the identified risks. Developed an alternative solution that reduced cost by 30%.	✓	✓			✓	
Newfield School Bridge, Sheffield: The £1.3 million scheme included the design of a new access bridge into the school through sensitive ancient woodland. Undertook a value engineering review of the proposed bridge replacement and provided a contractor's view upon the scheme by offering advice upon buildability, programme and risk. Evaluated contractors' tender programmes for time and commercial risk.	✓	✓				
Shaftholme Rail Chord, Doncaster: Produced construction methodology and programme for a new twin track railway chord connecting the Skellow and Knottingley lines to the north of Doncaster. The £50 million scheme consists of 2.5km of new embankment plus an eight-span viaduct over the East Coast Main Line.				✓		✓
Old Oak Common Depot, London: Worked with the Crossrail team on a £30 million new depot on an existing site at Old Oak Common in London. Developed a full implementation plan for the scheme including programme and staging drawings.			✓	✓		
1993 – 2005 AMEC Civil Engineering						
External design consultant and general engineering management – Undertook the role and responsibilities of the associate director for engineering, responsibilities fell into two areas: 1. External design consultants – Responsible for the appointment and relationship with all design consultants discussing future opportunities and dealing with the commercial and legal aspects. Monitoring performance through the use of KPIs and performance reviews and working with them to improve the efficiency of design delivery. 2. Engineering – Provided engineering support to both the estimating and proposals function and continued this through to successful projects. This included developing economical solutions, resolving problems and proposing alternatives whilst minimising the effects of change and working with clients to obtain approvals. Developed and updated design management procedures and provided training and guidance for design managers involved with projects. Also fulfilled the role of supervising civil engineer for a number of graduates and temporary works manager for northern civils. Whilst undertaking this role, provided the engineering input for a number of ECI packages for Highways England and other tender submissions within the rail and water sectors. Also contributed to best practice and continuous improvement activities. Was involved with Highways England's CAT assessments and also led AMEC's internal EFQM assessments for the civils business.	✓	✓	✓	✓	✓	
M1 Westlink DBFO Tender, Belfast: Managed the designer Mott MacDonald, to deliver the tender design and produce the design budget and programme for the construction phase. Actively involved in risk and opportunity, client consultation meetings and liaison with the future maintainers and operators.	✓	✓			✓	
M60 Junction 5 to 8: Design manager for the £130 million works included the widening of the M60 and the construction of 16 bridges, 13 retaining walls and 24 sign gantries. A very good working relationship was developed with the HA and their representatives which led to savings in excess of £6 million being realised upon a structures budget of £40 million.	✓			✓	✓	
Doncaster North Bridge Project: Chief Engineer for construction of a 600m viaduct crossing the River Don, the East Coast Main Line (ECML) and a navigable canal and the subsequent demolition and replacement of the existing North Bridge. Became fully conversant with Network Rail possession requirements and managing a consultant to deliver a complex design.	✓	✓		✓	✓	
Manchester South Capacity Improvement Project: Infrastructure upgrading and improvement to signalling on the West Coast Mainline route between Cheadle Hulme and Longsight. Design co-ordinator responsible to the engineering manager. The role involved the co-ordination of six design disciplines, including permanent way, OHLE, civils, power, communications and signalling.					✓	
Cerestar, Trafford Park, Replacement Grain Silos: Chief Engineer for the construction of four reinforced concrete (RC) slip-formed silos for grain storage together with associated structural steelwork elements, hard and soft landscaping and minor infrastructure works.	✓				✓	
A1 (M) DBFO, Alconbury to Peterborough: Temporary works coordinator and traffic manager preparing temporary works designs, dealt with suppliers. Also involved with the permanent works design process looking at buildability and value engineering. Traffic management included liaison meetings with third parties, planning all traffic movements and supervising the production of traffic management schemes.		✓		✓	✓	
Jubilee Line Joint Venture, London: Seconded to the Balfour Beatty/AMEC Jubilee Line Joint Venture for a period of one year spent within the onsite temporary works department. Responsible for the design of practical and economic schemes to enable construction of the £157.8 million works. Schemes included formwork and falsework, structural steelwork, temporary shafts to tunnels, sheet piling and temporary propping to existing structures.				✓	✓	