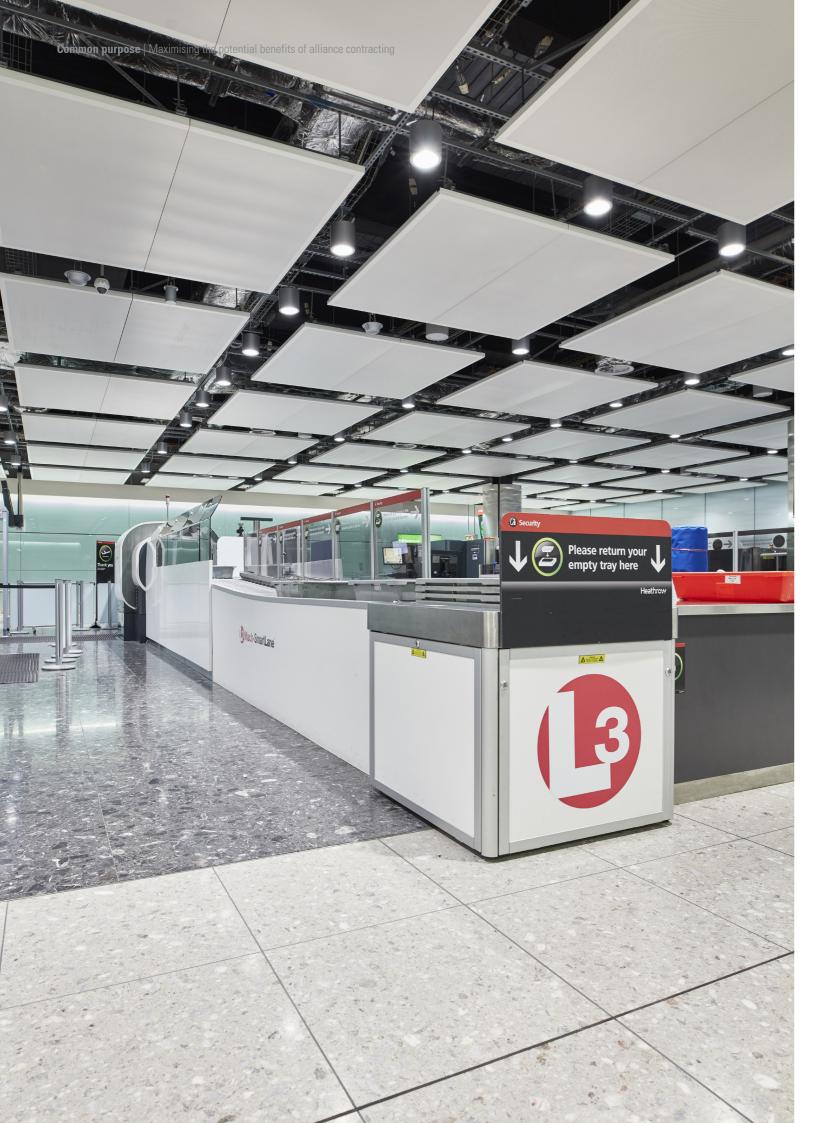# Common purpose

Maximising the potential benefits of alliance contracting

October 2019

Balfour Beatty

Foreword

Now gaining increasing traction, alliance contracting can create an environment of trust which encourages alliance members to go the extra mile in pursuit of the best outcomes.

Balfour Beatty has the financial strength, scale, depth and expertise to carry out large scale and complex infrastructure projects as a stand-alone entity, with a long successful history of doing so. However, there are a number of potential advantages that can be unlocked for all parties through an alliance approach, if the alliance is well-delivered. In particular, these include improved collaboration, risk sharing and incentivisation of innovative approaches which can result in improved outcomes for the customer and end-user.

Establishing an alliance is about creating a platform for success. But there are also many obstacles to overcome before an alliance can be declared a success. To deliver the benefits, alliance contracting requires those using it to move beyond the traditional contracting mind-set and take a more positive approach to working through the problems that arise on large, complex schemes, rather than getting caught up in disputes.

Differing from other, more familiar approaches such as Joint Ventures, due to: the equality between the members of the alliance; the fact that all parties have to align their objectives and values; the outcomes-based nature of an alliance and the fact that those commissioning the infrastructure share in the risk and benefits rather than standing alone, alliance contracting is also a way of working which requires a behavioural and cultural shift in the industry.

Balfour Beatty has a strong track record of delivering major infrastructure projects using alliance contracting in a range of sectors, including in the water (eight2o) and rail (Network Rail) sectors as well as on similar joint venture contracts for Highways England (A14 and M4). Balfour Beatty were also a key player in the Heathrow Terminal 5 agreement, which was a pioneering new way of contracting through collaboration and shared risk management. We are therefore fully aware of what it takes to make an alliance successful and have the right people and processes in place to quickly form successful alliances. We are closely involved in Project 13, which sets out a delivery model based on effective collaboration between customer organisations, contractors and other delivery partners, and are the first Tier 1 Infrastructure Construction Company to achieve the ISO 44001 international accreditation for collaboration across the Balfour Beatty Group and use this framework to work with our Strategic Design Consultant Partnership to deliver outstanding value for our customers.

This paper draws on some of Balfour Beatty's expertise in this area to recommend how the maximum benefit can be reaped through alliancing, where this is the best approach. Our key conclusion is that true integration and collaboration require both the correct contracting framework and the right partners, with the right mind-set and corporate structures in place. No less important however, are: leadership, which is vital in the forming and operation of alliances; a genuine focus on communication between alliance members; and cultural alignment. The success or failure of any alliance relies on all parties genuinely demonstrating collaborative behaviours over the long-term.

Dean Banks
Chief Executive, UK Construction Services

Key points and recommendations

1. The key to delivering complex and logistical activities as efficiently as possible, lies in the early engagement of and close cooperation between the client, designers and main contractors working together as a co-located team throughout the lifetime of the project from concept design through delivery and execution as happens in an alliance-type delivery model.

2. Simply adopting an alliance contracting approach is not enough. True integration and collaboration require the correct contracting framework and the right partners, with the right mind-set and corporate structures in place. All parties have to develop a new set of skills and to be genuinely prepared to move beyond the traditional contracting mind-set and culture.

3. Success requires clear governance and a determination to work together, to allow the Alliance Board – the alliance's decision-making body - to reach conclusions swiftly rather than getting caught up in lengthy discussion which delays progress.

4. Balfour Beatty has found self-forming alliancing based on existing established relationships with a clear leader to be the most effective, as this allows organisations to be aligned both culturally and in terms of expertise, resulting in a team that is considerably stronger than a group of individual teams simply working together as a "marriage of convenience".

5. Whilst alliancing contracts provide significant advantages, care should also be taken in the selection of such contract models as there will still be a need to demonstrate best value through the use of benchmarking and audit.

6. There should still be recognition of the strength of the companies and their ability to accept the risks associated with such collaboration. The parties entering into such alliances should also be carefully evaluated for their maturity and ability to work in a collaborative manner for the combined outcomes of the alliance as a whole.

7. Risk and reward sharing is a key element of the alliancing model and in driving collaboration. In an Alliance, any "gain" or "pain" is linked to good or poor performance overall rather than to the performance of individual parties. The success measures and payment mechanism must therefore be correctly established at the outset in order to truly incentivise contractors.

8. Likewise, the financial rewards must be significant enough and appropriately structured in order to act as an effective incentive for the Alliance parties. The aim is to establish the right, reliable budget that can reasonably be expected to be met, with contingency funds to protect against residual uncertainties. In our experience, this contingency must be substantial enough to provide a genuine incentive to the Alliance members to perform effectively.

9. To give alliances the best chance of success, leaders (clients and supply-chain partners) need to create safe environments, which allow trust to be built within organisations and between businesses. This facilitates change and empowers people to be bold and innovative and suggest new ideas rather than simply following tried and tested practices and methods.

10. Contrary to a traditional approach where a client sets out its needs and then measures the success of the other parties in delivering against them, empowering an alliance to succeed requires the client to set out a well-defined vision and then take a step back from the role of 'master' and become part of a team of equals working together to deliver. This can present a challenge if the client's representatives are not fully bought-in to or aware of the principles of the alliance model. In this regard, the success or failure of the alliance depends on the client.

Context

The infrastructure industry faces a number of challenges in delivering the next generation of large infrastructure projects. These include the need to better predict cost and deliver programme certainty; to encourage innovation and mainstream modern methods of construction; and skills shortages across almost every discipline.

In this context, commissioning authorities are increasingly moving beyond traditional contracting models to stimulate better ways of working and, as a consequence, better outcomes both in terms of individual schemes and in terms of the long-term sustainability of the industry.

Collaboration in the construction industry has been a hot topic in recent years, for a number of reasons. The sector is well-known for being fragmented. It is project based, focussed on getting the job done and moving as swiftly as possible to the next. Construction projects bring together a broad set of complex skills. They are characterised by multiple stakeholders, large, widely dispersed supply chains and large delivery teams of architects, designers, engineers and contractors who will often be working together for the first time. It is also an industry which has historically been adversarial in its operation, with a focus on blame allocation in the face of delays or cost overruns, and on risk transfer and claims.

However, not only can a failure to work effectively as one team with one common goal have serious consequences, putting at risk the efficient delivery of schemes: it can also mean that innovation and best practice take longer to become embedded across the industry. Furthermore, 21%[1] of all construction costs are thought to come from errors and defects, with other costs arising through issues such as duplication of resources, where teams of people on each side essentially 'man-mark' each other. All of these costs could be reduced by improving collaboration, resulting in a significant saving which can be passed onto the client.

In our experience, increasing collaboration, on the other hand, can lead to better project and portfolio outcomes, more efficient delivery of schemes, improved business performance and greater client satisfaction. This, in turn leads to increased benefit to the end user and the wider UK economy. It creates a culture that drives innovation and improved solutions to the unexpected challenges that inevitably arise during every major infrastructure scheme. Collaboration, then, can have a significant impact on the deliverability or otherwise of a scheme to time, scope and budget. It furthermore supports improved predictability and will reduce the time that projects are in the delivery phase.

Balfour Beatty has a wealth of experience across the whole range of construction and infrastructure sectors. This enables us to exploit the synergies and interconnections between different sectors and disciplines, building on alliancing best practice across sectors, understanding differences and similarities and maximizing the transferable skills of our workforce and supply chain.

Balfour Beatty also has significant experience of working on alliance projects in the water (eight2o) and rail (Network Rail) sectors as well as on similar joint venture contracts for Highways England (A14 and M4). We are fully aware of what it takes to make an alliance successful and have the right people and processes in place to quickly form successful alliances. We are the first Tier 1 Infrastructure Construction Company to achieve ISO 44001 Accreditation across the whole Group and use this framework to work with our Strategic Design Consultant Partnership to deliver outstanding value for our customers.

Our experience has shown that the key to effective delivery of complex and logistical activities as efficiently as possible, lies in the early engagement of and close cooperation between the client, designers and main contractors working together as a co-located team throughout the lifetime of the project from concept design through delivery and execution as happens in an alliance-type delivery model. This is known as 'left-shift'. The aim is to consider from the outset how end users will use the infrastructure being built and how construction companies will build and deliver, so design takes full cognisance of these early enough to positively influence the outcomes. Working as an alliance enables the delivery of infrastructure as quickly and efficiently as possible, while simultaneously providing significant opportunities for value management, value engineering and value enhancing methodologies at the most appropriate stages in the contract, and facilitating a deeper understanding of the delivery environment. In particular, for the client, the single point responsibility delivered through the Alliance reduces the number of contracts and interfaces which must be managed, which in turn keeps client costs and risk profile as low as possible.

Of course, this requires all parties to develop a new set of skills and to be genuinely prepared to move beyond the traditional contracting mind-set and culture. It also requires clear governance and a determination to work together, to allow the Alliance Board – the alliance's decision-making body - to reach conclusions swiftly rather than getting caught up in lengthy discussion which delays progress.

This paper shares some of our key learnings from schemes we have worked on and are currently working on.

Alliance contracting

Alliance contracting is of particular value on large schemes where there is significant interface between parties, presenting the possibilities of considerable delay and disruption at every decision point. It is an antidote to traditional contracts, which can restrict and disincentivise true collaboration.

"Balfour Beatty has found self-forming alliancing based on existing established relationships with a clear leader to be the most effective, as this allows organisations to be aligned both culturally and in terms of expertise, resulting in a team that is considerably stronger than a group of individual teams simply working together as a "marriage of convenience".

The table below outlines what, in Balfour Beatty's experience, are the key benefits for the parties of being involved in an alliance.

Balfour Beatty is increasingly seeing clients moving to fully integrated alliance teams, especially on complex schemes, where the number of contractors and other interfaces can become onerous, distracting and difficult to manage. An alliance model removes this layer of complexity, allowing a greater focus on delivery of the best possible outcome for the end-user.

Client Benefits	Contractor Benefits

Schedule savings
    Interfaces
    Planning
    Ownership
Financial savings
Client 'upskilled' in the work of the contractor
Reduced contractual change process
	Enhanced potential earnings
	
	Lower risk profile
	
	Reduction in required resource commitment
	
	Sharing of resources across the site

Collective Benefits
Management delivery focus not contract protection Incentivisation based on outperforming against shared goals and objectives – both sides gain financially Quicker decision making Collective problem solving Collaboration & shared values Conflict avoidance Reduced waste: no 'man-marking'; shared logistics, plant, risk pots, offices and project management Common focus on whole-life approach: opex and capex Risks allocated to the party best able to manage and support the overall outcome

Heart
—
Our emotions

Collaborating relentlessly at Balfour Beatty

We believe in and are committed to getting the best result by working together. We build trust, value others, are inclusive, flex our approach and work through conflict in order to get to the best outcomes.
—

Checklists – putting the model into action

Is there?
✓ Commitment to collaborative working
✓ Building trust
✓ Constructive conflict
✓ Communicating openly & genuine listening
✓ Self-awareness and awareness of others
✓ Empowerment within teams to collaborate

Measurement
:

Collaborating relentlessly at Balfour Beatty

We monitor how well we're working and course correct as needed.
—

Checklists – putting the model into action

✓ Progress towards shared objectives
✓ Monitor how we're working together

Head
—
Our logic

Collaborating relentlessly at Balfour Beatty

We have a clear shared vision and goal, know who we need to work with and how we're going to set ourselves up to work successfully together.
—

Checklists – putting the model into action

Do you have a shared view of:
✓ Customer needs and definition of value
✓ Vision, objectives, measures
✓ Integrated organisation structure with clear roles and responsibilities
✓ Key forums, decision making and governance

Hands
—
Our rigour

Collaborating relentlessly at Balfour Beatty

We know that collaborative working requires focus and discipline. We use the ISO44001 standard to benchmark and continuously improve our approach to formal collaborative relationships.

Checklists – putting the model into action

Are you making sure people are working together through:
✓ Formalising the collaborative working relationship where appropriate (ISO44001)
✓ Effective project management
✓ Continuous improvement mechanisms
✓ Appropriate reporting & documentation

Multi-Party "Enterprise" Alliance Contracting

An alliance contract is most common as a delivery framework for large multidisciplinary projects, focusing on a cooperative process which aims to promote openness, trust, risk and responsibility sharing, innovation, high performance and the alignment of commercial interests between parties. Its core aim is to deliver the project's shared outcomes in a collaborative and constructive way. The principles of alliancing are defined in accordance with the Improving Infrastructure Delivery: Alliancing Code of Practice, published in 2015 by HM Treasury[2].

The commercial risks of both the investors and the contractors associated with the delivery of the project must be considered when designing a contractual model for this approach at Sizewell C. The contracting parties may be unable to share certain risks arising from this complexity. The contractual model must ensure an appropriate balance of risk is retained, shared and transferred between parties to drive successful delivery, while taking these considerations into account.

A key factor in the initiation and set up of Alliance projects is to ensure that there is a clear understanding of the division of responsibilities between all parties and appropriate allocation of risk and liabilities. All parties must also commit to creating the right culture – a culture based on collaboration, building deep, effective relationships, sharing learning, and trust. It is this set of behaviours that ultimately drive high performance.

Whilst there are different contract conditions that support Alliancing models, the **NEC4 Alliancing Contract** has recently been issued. Although this has been tailored to Alliance-type contracts, it follows the same principle as others within the NEC suite, with familiar provisions, management processes and terminology. It has been written in line with the aspirations set out in "Project 13" - an industry led initiative aimed at designing and establishing a better business model for infrastructure delivery[3]. The creation of the Project 13 toolkit has brought the industry to life under a collective umbrella to achieve Alliance goal and true collaboration. It is something Balfour Beatty has been involved in and which we fully support.

The key benefits of using the NEC4 Alliancing Contracts include:

■ A deeper collaboration between all project partners, bound by common interests and reducing the potential for dispute

■ A multi-party contract with an integrated risk and reward model for achievement of alliance objectives set by the Client

■ All members of the Alliance are engaged on a single set of terms and conditions

■ Optional two-stage approach allows or early involvement to allow Alliance to develop Stage Two proposals and Budget, time, and performance targets are agreed.

The NEC 4 Alliance Contract is a cost reimbursable contract (defined cost plus fee) which promotes the delivery of optimal performance through co-operation. To achieve this, it uses an appropriate fee structure that incentivises and rewards the parties for delivering desired outcomes based on the achievement of performance and delivery milestones. Our experience has shown that these incentives create the right environment to promote both a strong culture within the team and develop collaborative working between all parties in the alliance. They also promote value-enhancing engagement with designers to ensure that buildability and constructability are incorporated into the drawings, thus ensuring that project schedules and estimates prepared by the alliance are achievable

Whilst such alliancing contracts provide significant advantages as outlined above care should also be taken in the selection of such contract models as there will still be a need to demonstrate best value through the use of benchmarking and audit. There should still be recognition of the strength of the companies undertaking such projects and their ability to accept the risks associated with such collaboration. The parties entering into such alliances should also be carefully evaluated for their maturity and ability to work in a collaborative manner for the combined outcomes of the alliance as a whole.

Case study: Network Rail

Network Rail was one of the first UK commissioning bodies to move to alliance contracting for major infrastructure works and has developed a suite of collaborative contracting models to support this approach.

Balfour Beatty has a longstanding, strong relationship with Network Rail. In March 2019, Balfour Beatty was selected as preferred bidder for Network Rail's £1.5 billion Central Track Alliance contract. Works are due to commence later this year.

Balfour Beatty has an 80% share in the ten-year alliance which will be responsible for the development, design and delivery of track renewals and crossings, as well as associated infrastructure works across the London North West, London North East and East Midland routes. Atkins has a 10% share and TSO has a 10% share.

The new geographically-focused alliance model will promote greater collaboration between Network Rail and its partners. Focusing delivery partners' on specific regions, the model will ensure dedicated attention on regional-specific rail requirements and works.

Bringing together the companies' deep domain knowledge and experience in critical rail infrastructure and track renewals, the alliance will deploy innovative working methods including a digital management platform incorporating mechanised processes and digital solutions to realise efficiencies and create a more reliable railway infrastructure.

Balfour Beatty is proud to be part of the alliance appointed to ensure reliability of the UK's rail network. Our expertise will be focused on driving innovative solutions that deliver sustainable, safer rail infrastructure. Network Rail's new alliance model is a great step forward in rail contract procurement.

The Alliance model aligns all parties to the same objectives, with contracts which underpin this. Key points associated with this type of Alliance model:

■ Minimises the impact of changes or updates to design as focussed on achieving common goals and objectives

■ Eliminates the need for bid costs from both client and supplier Organisations

■ Eliminates the need for resource duplication between supplier and client Organisations

■ Incentives aligned to key outcomes / KPIs required for the delivery of the project

[2] Alliancing in Infrastructure Delivery Code of Practice, HM Treasury and the Infrastructure Client Group, 2015

[3] https://www.ice.org.uk/news-and-insight/project-13

Breaking the link between turnover and margin

The construction and infrastructure industry continues to operate with low margins. The ratio of risk to reward in contracting is often imbalanced, while the industry's fragmentation, low barriers to entry to the sector and the historic tendency of commissioners to procure on the basis of the lowest price have resulted in an industry focused on adversarial, transactional behaviours. Balfour Beatty believes that this often comes at the expense of value for money and the best outcome for the customer.

Alliancing and increasing collaboration in the sector are key ways of rebalancing this, focussed around ways of working based on incentives rather than punishment. This means that employers can rely on Alliance partners to make the right project decisions and not be swayed by other influencing factors. The key principles of this incentives-based approach are:

1. The liability profile is lower in the Alliance

2. Fees are shared across Alliance members on an equitable basis

3. The work of the Alliance is aligned to the key 'outcomes / KPIs' required by the project (safety, quality, schedule, handover completion)

4. Self-delivery is prioritised wherever possible (no subcontracting of core activities – Project Management Office/site works, no agency/Ltd traders unless unanimously agreed by the members of the Alliance)

Risk and reward sharing is a key element of the alliancing model and in driving collaboration. In an Alliance, any "gain" or "pain" is linked to good or poor performance overall rather than to the performance of individual parties. The success measures and payment mechanism must therefore be correctly established at the outset in order to truly incentivise contractors.

Likewise, the financial rewards must be significant enough and appropriately structured in order to act as an effective incentive for the Alliance parties. The aim is to establish the right, reliable budget that can reasonably be expected to be met, with contingency funds to protect against residual uncertainties. Savings will be shared by the members of the Alliance. In our experience, this contingency must be substantial enough to provide a genuine incentive to the Alliance members to perform effectively. Aligning risk share means that there is a common approach for all Alliance partners, so if there is a problem, all engage to minimise it.

Case study: Balfour Beatty's IS044001 accreditation

In June 2018, Balfour Beatty was proud to achieve an industry-first with a company-wide international accreditation for collaboration.

The IS044001 accreditation, which is the first international standard for collaborative business relationships, is a result of the evolution of British Standard BS11000, which Balfour Beatty was accredited for in 2013. BS11000 has since evolved into international standard IS044001 to help organisations to build and develop effective competitive business relationships based upon a collaborative approach.

Balfour Beatty is now working to apply the standard to support effective relationships across the Group; from individual business relationships with customers to more complex relationships such as partnerships and joint ventures. The Company is using a collaborative business relationship management system, a tool which supports the delivery of best practice management approaches to help ensure that businesses of all sizes get the maximum value from working with each other to achieve a common goal or outcome[4].

Collaborative business relationships have been shown to deliver a wide range of benefits, including enhancing competitiveness and performance, through improved engagement and efficiencies, process strengthening and management of business risk with improvements as significant as 53%[5].

Assessment for the standard included review of related project performance on the Balfour Beatty Living Places contract for the servicing of local highways for Southampton Council.

The accreditation is further testament to the strength and importance of Balfour Beatty's company-wide values - 'talking positively, encouraging constantly and collaborating relentlessly'.

[4] ISO44001 Collaborative business relationship management – your implementation guide https://www.bsigroup.com/LocalFiles/en-GB/iso-44001/Resources/ISO-44001-Implementation-Guide.pdf

[5] Introducing ISO44001 Collaborative business relationship management https://www.bsigroup.com/LocalFiles/en-GB/iso-44001/Resources/ISO-44001-client-Guide.pdf

A cultural shift in the industry

Alliance contracting aims to foster an environment of openness and trust and to cultivate solutions-led thinking. It requires alliance members to operate in good faith, be prepared to communicate effectively and to put the scheme first when decisions are made.

This can be undermined if parties coming to the alliance retain the traditional, self-interested contracting mind-set and adversarial behaviours. Choosing the right partners – those who understand and demonstrate the necessary behaviours and are prepared to invest in achieving the cultural alignment required – is therefore imperative.

Given that an alliance model is a very different approach to traditional contracting, a key criteria for success is that those commissioning the infrastructure are prepared to change their own behaviours and culture and be an "intelligent client". To give alliances the best chance of success, leaders (clients and supply-chain partners) need to create safe environments, which allow trust to be built within organisations and between businesses. This facilitates change and empowers people to be bold and innovative and suggest new ideas rather than simply following tried and tested practices and methods.

Contrary to a traditional approach where a client sets out its needs and then measures the success of the other parties in delivering against them, empowering an alliance to succeed requires the client to set out a well-defined vision and then take a step back from the role of 'master' and become part of a team of equals working together to deliver. This can present a challenge if the client's representatives are not fully bought-in to or aware of the principles of the alliance model. In this regard, the success or failure of the alliance depends on the client.

Conclusion

Collaboration has been a buzzword in the construction and infrastructure industry for over a decade. However, in many cases, it has proven easier to talk about than to put into practice. Genuinely creating an environment which allows true collaboration, innovation and customer-focus to flourish is an ongoing challenge.

Alliance contracting is a way of working that genuinely allows those relationships of trust to be established, to the benefit of all parties – if all those involved have the mindset and experience to capitalise on the benefits.

Case study: The Anglian Water @one Alliance

In response to the challenge to reduce costs while delivering customer outcomes and effectively maintaining their assets, Anglian Water needed a new and more innovative way to deliver work. The tried and trusted traditional procurement and commercial models were not producing the reduction in cost base required, so it developed a collaborative alliance of designers and contractors with an incentivised commercial model.

The first iteration of the model was developed in 2004 and has now evolved into a mature alliance of consultants and contractors working together to deliver more than half of Anglian Water's capital investment programme. @one Alliance is responsible for designing and building around 800 schemes worth approximately £1.2billion between April 2015 and March 2020 (the AMP6 investment period), working closely with Anglian Water operations teams and other key stakeholders.

The alliance, which consists of six partners, including Balfour Beatty, working with Anglian, has a common programme pool to incentivise performance and promote the sharing of best practice across the entire supply chain. It has consistently exceeded the efficiency targets set by Ofwat for each investment period.

The contract is for the entire five-year regulatory period, from 2015 to 2020, with extensions which could take it to 2030, making it one of the longest collaborations in the sector.

Balfour Beatty provides both design and construction services across the whole of Anglian Water's region. Work is mainly focussed on clean water infrastructure (water mains), but also includes wastewater pipes and non-infrastructure projects, such as treatment works.

About Balfour Beatty

Balfour Beatty is a leading international infrastructure group. Our main geographies are the UK, US and Hong Kong. Over the last 100 years we have created iconic buildings and infrastructure all over the world including the London Olympics' Aquatic Centre, Hong Kong's first Zero Carbon building, the National Museum of the Marine Corps in the US and the Channel Tunnel Rail Link.

With 26,000 employees - 15,000 of them based across the UK - Balfour Beatty finances, develops, delivers and maintains the increasingly complex infrastructure that underpins the UK's daily life, with projects across transportation, power and utility systems, social and commercial buildings. We also have significant experience and understanding of the links between infrastructure investment and regeneration and economic growth.

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