

# PARTNERING HEATHROW TERMINAL 5

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The relationship between client and contractor is fundamental to the success of a partnered approach to procurement. BAA and Laing O'Rourke have been involved in a long term relationship in order to deliver the T5 project. The rationale behind the agreement and the overall objectives are to achieve a high quality terminal building. Under the T5 agreement BAA rewards Laing O'Rourke for completion under the target budget, consistency in safety and for time and quality performance. The agreement developed over a number of years has been designed to tackle the perceived barriers of 'culture change' and 'reluctance to acknowledge risk'. An in-depth study of the way the partnering agreement has been used throughout the delivery of T5 examines the issues that the project team have encountered. The benefits and negative aspects of the partnering are explored and the issues of integration and culture change are examined.

**KEYWORDS: Partnering, culture change, procurement route.**

## INTRODUCTION

BAA (British Airport Authorities) has welcomed the ethos of partnering for the delivery of better quality, better development value from the space built and better value for their money. BAA's objective for supplier relationships is to create an environment for success with collaborative, proactive management of risk and opportunity and joint ventures (BAA 2006). Furthermore, by 2016 it intends to invest a total of £9.5 billion to deliver major projects including the Heathrow East terminal. The delivery programme will be established via a framework of partners over a ten year period. BAA will be committed to its partnering approach and the new agreements will reinforce BAA's commitment to long-term relationships with its suppliers (Monaghan 2006). Moreover, BAA has been involved in the process of developing Heathrow terminal five with one of the delivery partners (LOR) Laing O'Rourke. The partnering agreement between the partners is referred to as the T5 agreement which affirms that suppliers are expected to work in integrated teams and display the behaviours and values akin to partnering. The T5 agreement is a unique experience for LOR due to the scale and complexity of the project. A partnering agreement with BAA was more suited because it would enable LOR to be in a stronger relationship with the client and remedy any problems that may occur with other procurement methods (Terminal 5, Heathrow 2006).

*‘The challenges and complexities of a prestigious global project like Heathrow terminal 5 have demonstrated the synergies that derive from ‘one team working’ (Ray O’Rourke LOR annual review 2007).*

The main purpose of this study is to examine the way in which LOR have performed their role in the T5 framework agreement and whether partnering with BAA has been successful. The T5 agreement is unique to the construction industry simply because of the size of the project and the various contractors and sub-contractors involved in the agreement.

## **BAA**

BAA was established over 40 years ago in 1965 and now owns and operates seven UK airports with additional management contracts in eleven airports outside of the UK. Due to the extensive nature of their projects, BAA is one of the major clients in the UK construction industry. Their approach to construction has evolved over time and their principles led them to move away from a traditional client/contractor relationship to a more integrated partnership. Their principles convey their focus on meeting their objectives through a series of processes and behaviours:

- Defining the product
- Long-term relationships
- Integrated project teams
- Following a defined process
- Measuring performance

In addition, these initiatives enabled BAA to participate in the government’s construction task force (chaired by BAA's former chief executive Sir John Egan) culminating in the Egan report. The report published in 1998 continues to influence both government and industry to develop improvements to benefit the construction industry as well as its clients (BAA 2007).

## **Laing O’Rourke – 1<sup>st</sup> tier supplier**

Laing O’Rourke goes back to the 1800s when the Laing business built its first home in 1848. Over 150 years later in 1978 R O’Rourke and son were formed. Both businesses joined forces and merged to become Laing O’Rourke main contractors in 2001. It now has three main hubs – European, Australian and the Asian and Middle East hub. LOR believes in working with the construction industry to improve performance in construction. LOR believe in adopting new attitudes to clients and supply partners to ensure value is driven from framework and partnership agreements (LOR Annual report 2007).

Commercially, framework arrangements are the most beneficial for Laing O’Rourke in comparison to the different procurement strategies used. The group commercial director states that the most attractive contract type is ‘frameworks’. A commercial basis is set

out at the beginning for a long-term relationship. The success is determined by how the company delivers against a set of performance indicators. The success of delivery determines how much work the client will give (Infoworks 2007).

Both client and contractor have been involved in framework agreements since the mid 1990s although R O'Rourke & Son were the suppliers at that time. In terms of T5, Laing O'Rourke can be described as a first tier supplier as the principle works contractors for the civil construction infrastructure and logistics delivery. Under the T5 agreement BAA rewards Laing O'Rourke for completion under the target budget, consistency in safety and for time and quality performance (T5 Handbook 2005).

## **PARTNERING ON T5**

*'Whichever way you view it, BAA's Terminal 5 project is mind bogglingly big'*  
(Milford 2006)

John Milford (2006), T5 head of buildings shares his view on the construction of Europe's largest and most complex construction project. The project has been in the pipeline since 1985 and approval for T5 was only reached after the longest public inquiry in British history of forty six months. Eventually on the 20<sup>th</sup> November 2001 the government announced its decision. The UK construction industry had never witnessed such a thorough examination of a project. The T5 agreement is the legally binding contract between BAA and its key suppliers. Described as groundbreaking, it is unique to the construction industry (BAA, 2007).

Developing Heathrow terminal five was perceived as crucial to meet the demand for travel and passenger growth. Heathrow airport accounts for almost 30 per cent of all passengers from UK airports and directly or indirectly supports 100,000 jobs. According to a progress report by the department of transport published in 2006 the government has set out a long term strategy for the development of air travel until 2030. In particular, the progress report recognises the importance of Heathrow airport to the national economy and its unique role in the UK as a major hub airport (Department for Transport 2006).

### **The T5 agreement**

The contract for T5 named 'the T5 agreement' is based upon the NEC contract incorporating the full suite of options. The T5 agreement is the legally binding contract between BAA and its key suppliers. The total cost of terminal five is reported to be around £4.3 billion (Morgan 2006). There are a total of 16 major projects and 147 sub-projects. The scale of the construction work and the risk of such a huge infrastructure project prompted BAA to use a new management approach for this project to ensure it was built on time and within budget. The agreement is based upon an open book commercial arrangement with fair profit for good performance and incentives for exceptional performance. Success is claimed to be rewarded and failure is shared by all.

Research conducted by BAA into major construction projects concluded two key areas that seemed to diminish progress. Culture barriers and the reluctance to acknowledge risk were identified as the main areas of weakness. The T5 agreement claims to be different because it tackles these areas by defining an integrated approach to partnering and the management of risk (T5 Handbook, 2007). In order to ensure integration exists on T5, all those working on the project are assembled in teams comprised of individuals from a variety of different companies. All are united under the single banner of T5 with a shared sense of values. BAA's decision to accept all risk has been vital in the development of the unique culture. As accountability is lifted, those working on T5 can work positively as the emphasis is placed on delivering solutions and results.

Many suppliers on the T5 project were involved from the early stages of the planning process. This enabled completely integrated expert teams to work together to identify potential problems and issues before designs were finalised and construction began. BAA only has a direct contractual relationship with 60 of the 'first tier' suppliers. The first tier suppliers are responsible for the appointment and management of 'second tier' suppliers or subcontractors. The second tier suppliers are also expected to adhere to the spirit of the T5 agreement (T5 Handbook 1999).

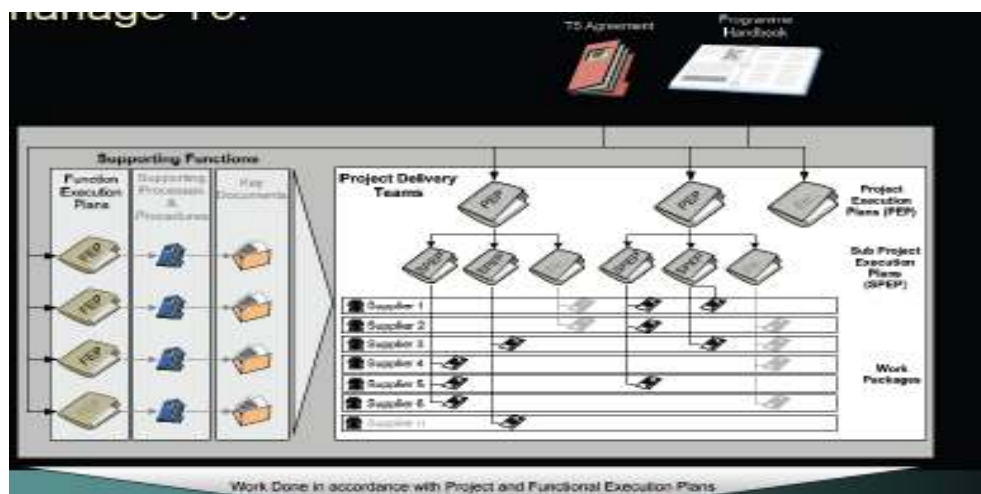


Figure 1: The T5 agreement and supporting documents (Riley 2005)

## RESEARCH DESIGN

The detailed examination of a framework partner provides the reader with Laing O'Rourke's perception as a contractor of the partnering relationship with BAA. The 'intrinsic case' study would best describe its status as this type of study does not generalise but tries to understand the case in its entirety and its context. To achieve this aim, a series of interviews and a questionnaire were undertaken.

The research questionnaire devised endeavours to capture the opinions and perceptions of those working on the T5 project. The questions have been developed in order to elicit

information which aims to explore the way in which the partnering arrangement is working. The questionnaire was piloted with a small number of people working on the T5 project to ensure the terminology correctly represented the context of the study. Constructive feedback from the respondents was received which was incorporated into the questionnaire before sending it to relevant members of the T5 project.

An interview was held with a production leader who had worked on T5 during the early delivery stages. A second interview was held with a LOR project manager. The interviews provide a rich source of contextual background to some of the issues emerging from the questionnaire and helped to gain a better understanding of the project

The questionnaire was sent to approximately sixty respondents who were working on the T5 project. A total of nineteen questionnaires were completed representing a 32% response rate and the response sample is included in the following table.

Table 1: Survey Respondents

Profession	Questionnaire issued	Responses
Director	2	0
Project Manager	14	2
Commercial Integrator	5	2
Production Integrator	6	3
Site Engineer	8	3
Quantity Surveyor	6	2
Planner	9	4
Other	10	3

## T5 FRAMEWORK IN PRACTICE

The production integrator described the T5 framework as being different from other framework agreements due to the scale of the project. Laing O'Rourke was chosen due to their size and scale and not many other contractors would have been able to complete a project such as T5. He described the partnering charter as a document stating the

*'prerequisites for involvement and a timetable for assessment and upgrading'*.

The project manager described the agreement as being a unique way of working together with the client and other suppliers. It had given LOR the opportunity to show that they

could be flexible and develop ideas with BAA which strengthened their relationship opening up new opportunities. This has allowed LOR to take a lead role on the project. Both felt the T5 framework as being distinctive from other projects due to the size of the project and the method of working.

**Benefits of Partnering**

*Benefits to BAA* – The benefits described by the production leader resembled some of the benefits of framework agreements evident in the body of literature on partnering. These included the construction and design partners working together on the project from the outset; and being involved on the project a year before it started helping the contractor establish the design process thus understanding the client’s quality and specification requirements. Cost reduction and adding value was another benefit to BAA.

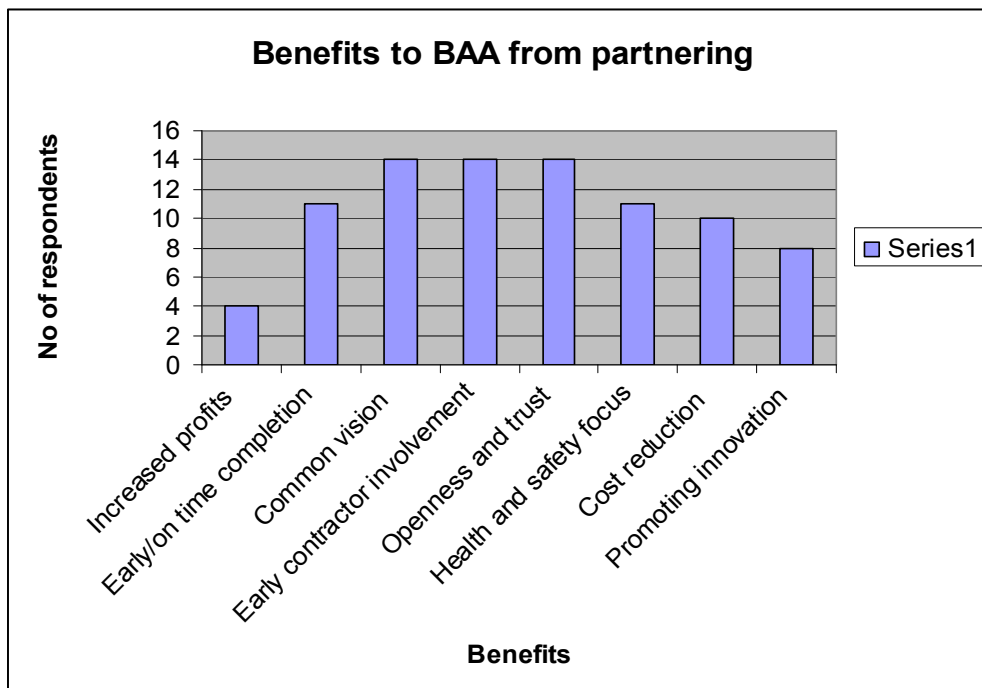


Figure 2: Benefits of Partnering to BAA

*Which of the following do you think benefits BAA from being in a partnering agreement?* A common vision; Early contractor involvement; and Openness and trust, were all identified as being the most beneficial aspects to BAA from the partnering agreement. One respondent stated that BAA benefited from improved performance:

*‘Good working relationship with BAA, LOR regarded as one of the suppliers more likely to follow the ideals of the agreement’*

*Benefits to LOR* – The production leader described the benefits contractors sought as being different benefits from the client. LOR’s benefits included being on a challenging project and working with a previous client thus they were familiar with the client’s style of working. BAA introduced initiatives, such as ‘Incident and Injury Free training’, which is adopted across all LOR sites. BAA has also sponsored LOR on productivity improvement research and a new IT system referred to as Project flow.

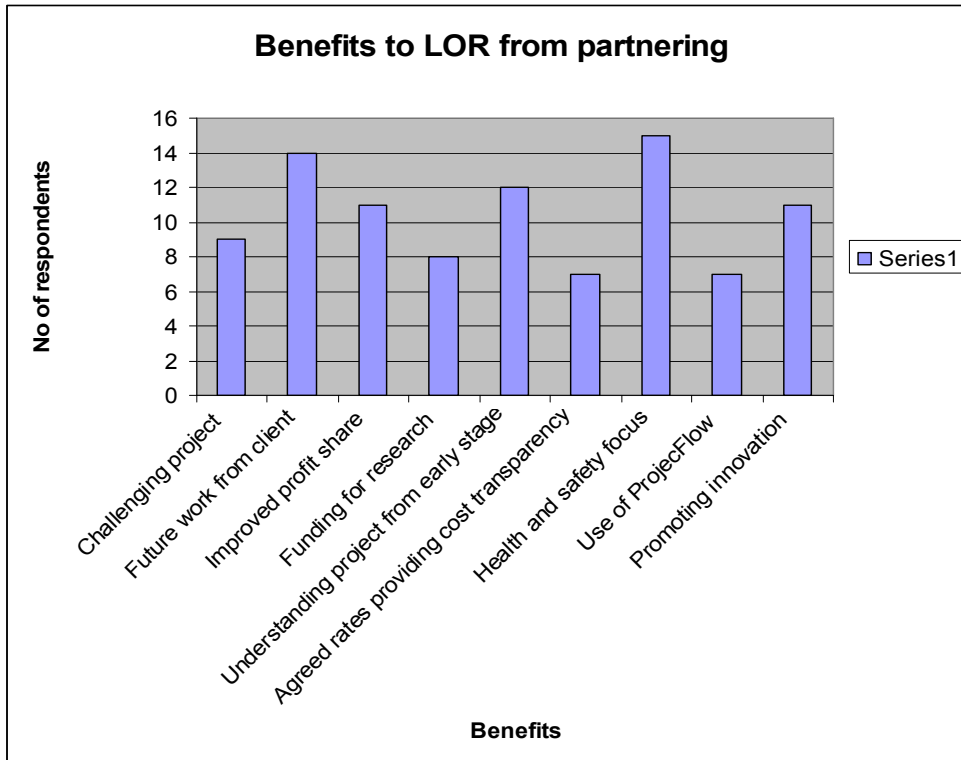


Figure 3: Benefits of Partnering to LOR

*‘Which of the following do you think benefits LOR from being in a partnering agreement?’* The largest benefit to LOR is the focus on health and safety which is in contrast to BAA who viewed health and safety focus as a secondary benefit. One respondent stated:

*‘Allowing the development of various innovative processes such as Project flow, Incident and Injury Free and 4D modelling and methods of working which would not have been achieved working on smaller projects and other clients’.*

Other major benefits included the potential for more work from the client. Understanding the project from an early stage was also perceived as highly beneficial.

*'It has given LOR opportunity to shown that they can be flexible and develop ideas with BAA which strengthens our relationship opening up new opportunities. This has allowed LOR to take a lead role on the project.'*

**Negative Aspects of Partnering**

Conflict arising from integrated team working and the 'Tying up of management resources were considered to be negative aspects of partnering on the T5 project. Delayed decision making and communication problems were also seen as a negative aspect of being in a large partnering arrangement. One comment from a respondent emphasised this:

*'Working in partnership with BAA has been helpful although when trying to work alongside other companies things get interesting. Every company wants the appearance of their employer to be better than the next and this can often hold back integrated teamwork'.*

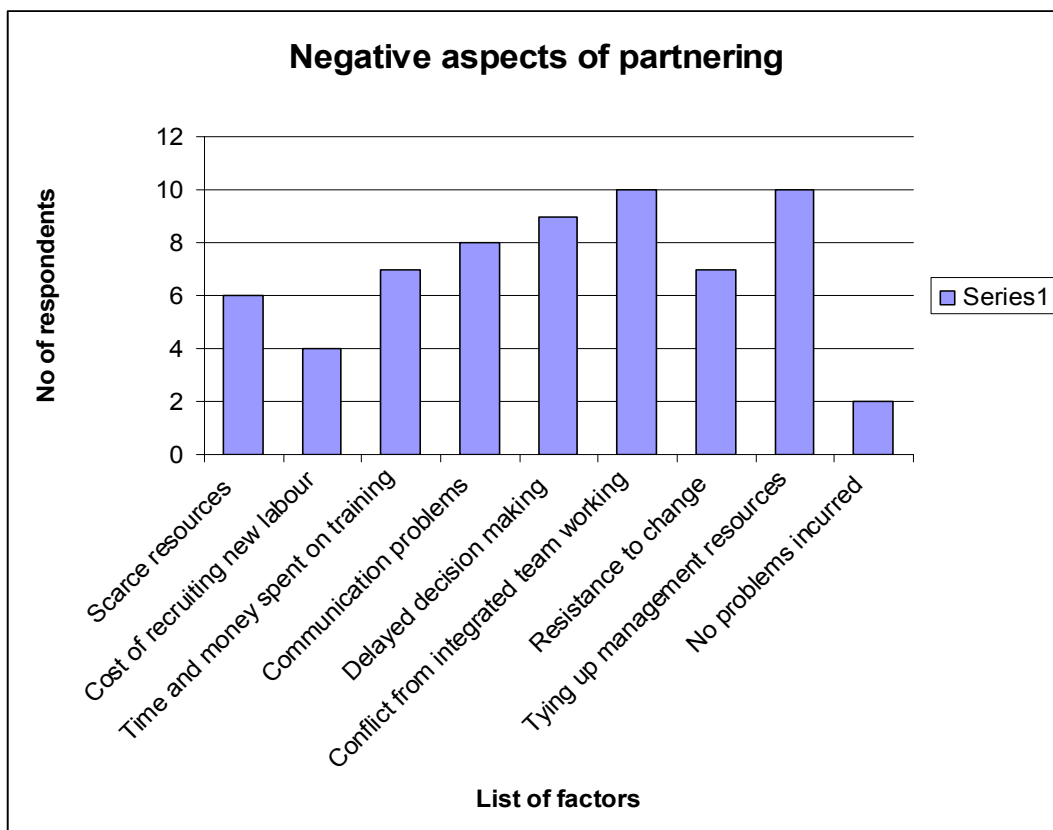




Figure 3: Negative aspects of Partnering

## Integration

‘Culture barriers’ and the ‘reluctance to acknowledge risk’ were identified as the most significant issues in the partnering arrangement. The manner in which BAA created an ethos of teamwork was established by arranging all partnering members in the one office and was known almost as a virtual company or project team. The project team were given T5 specific job titles i.e. production integrator or design integrator. A mindset was instilled that the individual was not working for BAA but for the project. Conflict was resolved by the project execution plan which details a problem resolution process. A conflict resolution procedure in the partnering charter is used when conflicts arise. Everyone has gradually worked together as a team towards a common goal with any confrontational issues placed to one side. The pain/gain share mechanism in terms of cost meant BAA took all the pain but BAA and the suppliers shared the gain. The target cost was for the whole project and not on individual companies’ target costs.

Building relationships between team members and changing the culture are viewed as methods of delivering the T5 project. Partnering literature suggests the process of integration can incur problems. Establishing trust between the partners can take time and honesty and openness can be difficult to attain. Respondents of the questionnaire responded to questions with regards to the development of a T5 culture on the project. The relationship between categories of response were explored and the link between ‘Listening to different views’ and ‘Integrated team working’, and ‘Continuous communication’ and ‘Mutual objectives’ both emerged strongly. The positive correlation may imply team working can only be achieved if the team members are able and willing to listen and understand other members of the team. It also suggests mutual objectives can only be shared and met if there is continuous communication between the team members. A strong link also emerged between respondents who believed ‘trust between all parties’ is effective in developing a partnering culture and those that believed ‘Continuous communication’ as essential to develop a partnering culture.

Table 2: Correlations from Partnering survey

		Q14 Integrated team working
Q13 Listening and understanding different views	Pearson Correlation	.775(**)
	Sig. (1-tailed)	0.000
	N	19.000
		Q16 Sharing mutual objective

Q15 communication team members	Continuous between	Pearson Correlation	.698 (**)
		Sig. (1-tailed)	0.000
		N	19.000

## CONCLUSIONS

Overall, the conclusion drawn from the correlations with regards to integrating teams and developing a partnering culture is positive. Team work and continuous communication appear to be the key sources of success for the partnering arrangements. Most of the respondents thought trust, continuous communication, listening and understanding other views were essential to develop a partnering culture and these clearly exist in the T5 project. In addition when the respondents were asked if they thought a partnering culture is a good way to manage teams on a project 95% replied 'yes'. The T5 handbook has also encouraged building relationships and changing the culture to deliver the project successfully. Nonetheless, respondents also thought there were negative aspects to integrated working. Conflict in teams is a major problem and 53% of the respondents felt conflict arising from working with integrated teams occurred at T5. A respondent who replied to the open ended questions claimed:

*'Some companies including design teams have been able to push the boundaries too far holding back others'.*

Another respondent commented '*Every company wants the appearance of their employer to be better than the next and this can often hold back integrated teamwork*'. This conveys the competitive environment which can exist when trying to develop a partnering culture. LOR acquired a specialist in-house mechanical and engineering company to work on T5. The impact on labour resources was the major issue where people who had previously worked on a BAA framework arrangement had more experience thus were called to work on T5 for a short period. Conversely, the T5 agreement did not suit every contractor because some did not fully understand the concept thus the benefits had not been realised and BAA are penalised with bad performance. The T5 agreement states all risk is given to BAA but it appears that contractors still have elements of risk. As with other partnering agreements fair risk sharing is being adopted to solve any problems timely and efficiently.

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