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## Construction Clients Olympic

Three different case studies namely: (1) Olympic stadium; (2) Wembley stadium; and (3) Arsenal Emirates stadium have been specifically chosen to critically analyse different psyches and make ups of construction clients as well as the procurement routes discussed in previous chapters. The evaluation seeks to find out how the construction clients have influenced the delivery of projects; how the construction client have adhered to the recommendations of the government and industry's reports and how the adopted procurement routes have helped in improving the UK construction industry performance.

This chapter basically relies on the issues discussed in preceding chapters in critically appraising the way the projects procurements were carried out. The author's commentaries have been given in green while the case studies notes predominantly obtained through the internet are given in the normal black.

CASE STUDY 1: THE LONDON 2012 OLYMPIC STADIUM

All the case study materials for the Olympics stadium were obtained from only one source which is the internet.

The Project

The Olympic stadium is a project that is part of an intricate Olympic programme which is embodied by a compulsory timetable and programme of works that affects the development of each of the facilities that makes up the Olympic programme. Get help with your essay from our expert essay writers...

The delivery of the London 2012 Olympic and Paralympics games facilities is regarded as the biggest and most intricate project embarked on in the UK for a very long time (MPA, 2006). The site for the Olympics will be Europe's largest regeneration project (LSC, 2007). The hub essence of the project is the development of facilities for the games as well as the regeneration of the section of eastern part of the capital city, London (BBC, 2008a). According to WLB (2006), the development of the Olympic facilities and their legacy transformation includes (1) five permanent venues construction namely- Olympic Stadium, Aquatic Centre, Velopark, Handball Arena and Eton Arena; (2) three temporary sporting venues (Basketball Arena, Hockey and Fencing Venues); (3) International Broadcast Centre/Main Press Centre construction; (4) permanent and temporary structures, roads and bridges; (5) site-wide utilities infrastructure; earthwork and extensive landscaping; and (6) extensive post games legacy regeneration works.

The Olympic stadium brief was drafted to produce an amazing 80, 000-seater stadium for the hosting of the track and field events as well as the opening and closing ceremonies for both the Olympic and Paralympics games (WLB, 2006). After the games it would be demounted or perhaps reduced to 25, 000 seats, but still retains the maintainable and rational capacity of hosting ranges of sporting, educational, cultural and community events with athletics being its core use (WLB, 2006a). The knack of conversion of the stadium from an 80, 000-seater venue to a 25, 000-seater venue with 55, 000 demounted immediately the Olympics ends is regarded as highly innovative and espouses great forward thinking (BBC, 2008a).

The £496 million Olympic stadium design is motivated by a commitment made during London's bid to bequeath a world class athletics legacy rather than a succession of flamboyant edifice as exemplified in previous Olympics (Guardian, 2008). While considering how to reduce and come up with a reasonable cost and make the demounting of the stadium (as outlined in the project brief and shown in Fig 5. 2a) less complicated, the majority of the services usually found within the stadium such as catering, bars, toilets and merchandise stalls was designed to be located in " pods" on the forecourt outside the stadium (Guardian, 2008).

According to BBC (2008a) the main features of the design are (1) a sunken bowl built into the ground for the field of play and lower permanent seating, designed to bring spectators close to the action;(2) 25, 000 permanent seats + 55, 000 demountable; (3) a cable-supported roof that will stretch 28 metres the whole way around the stadium, providing cover for two-thirds of spectators; (3) a fabric curtain will wrap around the stadium structure, acting as additional protection and shelter for spectators; and (4) facilities such as catering and merchandising will be grouped into self-contained 'pod' structures.

The Olympics Minister, Tessa Jowell MP in her words extols the virtues of the concept and stated that " Once the Games are over this will then be translated into a stadium that will not only host grand prix athletics events and other national sport events but will also serve the communities of the boroughs " (BBC, 2008a). After completion the stadium will supplement and complements other grand stadia around London such as Wembley, the Emirates and the Twickenham stadia (BBC, 2008a).

The Client

The Olympic programme involves a complex array of 5 key stakeholders (MPA, 2006) as shown in Fig. 5. 2c and bidding for the Olympic has to be in conformation with the International Olympic Committees' (IOC) guidelines (Guardian, 2008b). The Olympic board comprises of the Secretary of State for Culture, Media and Sport, the Mayor of London, Lord Moynihan, Lord Coe and Jack Lemley (MPA, 2006). The first two people mentioned chair the board alternatively while the rest of the board acts in advisory capacity (MPA, 2006).

The Olympic Board Steering Group (OBSG) comprises of senior officials of the 5 key stakeholders namely: (1) ODA; (2) the London Organising Committee of the Olympics Games (LOCOG); (3) the Greater London Authority (GLA); (4) British Olympic Association (BOA); and (5) the Government (MPA, 2006). Their main functions are to collectively advice and provide assurance to the board (MPA, 2006). These stakeholders have differing perceptions as to what constitute success. While they all have different responsibilities towards the success of the game, their individual objectives has to be met. It is worth noting that their varying objectives were well reconciled as per the game. Shared understanding was created among them and reconciliation of objectives was easy because one of the predominant overarching aims of both the UK government and IOC for the games is sustainability. As discussed earlier in chapter 4, the Egan report recommends sustainability which is in consonance with the stadium construction aims.

IOC parameters stipulates that the construction costs had to be given in prices in the year of the bidding (2004) rather than the likely overall costs in hosting year of 2012 (Guardian, 2008b). This led to the £280 million bid book price to the IOC (Guardian, 2008b). It augurs that prices had to be going up constantly due the inflation in the UK construction industry which ran at 6. 5% as at late 2007 (Guardian, 2008b). The issue of the under budgeting which created widespread criticism was partly as a result of the IOC's strict guidelines of presenting costing within a certain parameters. The inflation in the construction industry is currently running on close to 7% as against a lower one in 2004 when the estimate was made. The IOC ought to have considered economic terms and allowed for future prices to be made as in most accounting future predictions. It is rather surprising and somewhat disheartening to note that IOC had to wait this long to change the negative presentation of using bidding year costing as the actual cost of stadium to be built in 8years time!. With prevailing interest rates which tends to force cost escalation gave the public negative opinion and views with cost rising up to 100% increase!

The demounting cost of the stadium as well as value added tax (VAT) were not included in the initial £280 million cost submitted to IOC which meant the venue was always going to cost more than originally figured (Guardian, 2008b). The brief was hurriedly made which never tallied with the tactical issues of the whole concept. The author reckons that there was no comprehensive one at the time! The strategic issues and the tactical issues were not in unison because of the prevalent atmosphere of uncertainty surrounding winning the bid. Irrespective of the chosen procurement routes, changes in brief will definitely lead to changes in cost. Moreover, while offering plausible reasons for the demounting and being optimistic of a possible buyer of the demountable parts, it is still seen that finding a possible buyer could be onerous or perhaps impossible. Designs and technology change rapidly and likewise innovations which tends to leads to changes in materials. Today's innovation can be tomorrow's error!

The vision and strategic objectives are well spelt out. According to MPA (2006) the vision is " To host an inspirational, safe and inclusive Olympic and Paralympics games and leave a sustainable legacy for London and the UK ".

As shown in the Fig. 5. 2c above, the ODA is the public body responsible for the development and construction of all the new venues and infrastructure for the Games and thus represents the clients on the project (MPA, 2006). The ODA was considered to be a comparatively small organization structure and an industry representative called the private delivery partner was chosen to take up the balance of the mishmash of resources provision and management (MPA, 2006). CLM was however chosen as the private delivery partner. Though they are knowledgeable and experience client, as discussed in chapter 2, they still engage external expertise to augment their in-house assemblage. This was a smart approach in the right direction considering the magnitude of the project at hand.

The CLM is a consortium of Laing O Rourke Plc, Mace Ltd and CH2M Hill and was appointed to work with the ODA to project manage the venues and infrastructure programme for the games. Their functions include the integration of design, construction, commissioning, procurement, scheduling and cost management (MPA, 2006). The consortium signed performance based contract where profit will be earned if targets are met thus making it a reward structure linked with delivery.

5. 2. 3 The Analysis of the Procurement Process

ODA launched a procurement policy that highlights both high quality and value for money as core values for procuring contracts for all the 2012 Games venues and infrastructural developments (WLB, 2006b). ODA chose a competitive process to procure an Integrated Design and Construct Team for the design and construction of the Olympic stadium so as to ensure top quality design, construction and completion, commissioning, testing and licensing of the stadium for the Games (Creative Match, 2006).

The procurement policy has themes such as security measures, sustainability and legacy and thus allows all businesses bidding for contracts to be rated according to a balanced scorecard (WLB, 2006b). The policy is expected to result in an excellent working relationship with shared values and objectives of sustainability and lasting legacy withthe best of businesses and companies found in the UK construction industry (WLB, 2006b). It is envisaged that the successful bidder must have an innovative design flair, capacity, experience, technical expertise, financial and economic strength (Creative Match, 2006). This was successfully achieved through the appointment of the preferred bidder.

The ODA preferred tendering option was the Electronic tendering (E-tendering), a two stage competitive process which allows companies to take part in tenders in a secured and efficient way (WLB, 2006a). In consonance with the EU guidelines (WLB, 2006a), 7 national and international applications/bids were received to pre-qualify for the contract (NAO, 2008). Consequently, in compliance with the public contracts regulations, ODA sets prequalification criteria which were only met by Sir Robert McAlpine Ltd submission (WLB, 2006a) and was considered both viable and compliant with requirements (NAO, 2008). It is however worth noting that competition was not keen because of the progress of only one successful tenderer to the next stage. The use of two stage tendering is to give chance for competition which never materialised. To the authors' consternation it is a shame to the industry. The Australian company, Multiplex would have provided a stiff competition to Sir McAlpine had they successfully executed the Wembley national stadium project.

Moreover, negotiations started between ODA and Sir Robert McAlpine Ltd and a Memorandum of Understanding (MoU) which is legally binding was signed to both design and build the Olympic stadium (WLB, 2006a). To the dismay of ODA, a particular bidder team was without a construction contractor despite the core requirement for an integrated design and build bid (NAO, 2008). Again, this is a shame to the UK construction industry which produces 6% of the nation GDP. The action does not exemplify professionalism. The integrated design and construction approach will reduce risk and potential cost overruns (Creative Match, 2006). However, as it turned out an additional £29 million pounds which translates to £525 million is expected to be the potential final cost! ODA reckons that the lackadaisical interest was as a result of the risk perception of high profile stadium project in the UK public sector and also the advance knowledge that Team Stadium was also a bidder (NAO, 2008). However, due to the failure of other bidders, ODA entered into a single tender basis with Team Stadium (NAO, 2008). The failure of Multiplex to produce a successful Wembley stadium resulted in its non consideration.

The MoU entails the key commercial terms which created the basis of the full integrated design and build contract and records the terms on which the contractor agreed for further design development before the signing of full contract (WLB, 2006a). Considerable design and value engineering was carried out on the project and the signing of the MoU allowed the development of design which necessitated the early procurement of commodities such as steel needed to build the Stadium (London2012, 2007). It is worth giving kudos here that, as observed in chapters 3 and 4, one of the averred recommendations of the government and industry reports is the early supply chain assemblage. Also, the use of value management in removing unnecessary design and cost as discussed in chapter 4, which is a key theme in NAO modernising construction report of 2001, is a welcome adherence.

The Sir Robert McAlpine Ltd and their designers are known as the Team Stadium (WLB, 2006a). According to WLB (2006a) the Team Stadium comprises of: (1) Sir Robert McAlpine Ltd (Construction contractor); (2) HOK Sport Ltd (Architect and Sport venue designer); and (3) Buro Happold Ltd (Structural and services engineers) (WLB, 2006a). The three companies have at different times worked together on different projects namely: (1) Arsenal stadium (Sir Robert McAlpine Ltd, Buro Happold Ltd and HOK Sport Ltd; (2) ExCeL Exhibition Centre (Sir Robert McAlpine Ltd and Buro Happold Ltd); and (3) The Eden project (Sir Robert McAlpine Ltd and Buro Happold Ltd). This demonstrates integration of supply chain, long term relationship and collaborative workings as dictated in all the previous chapters.

Consequently, a design and build contract was signed with the Team Stadium on 17 March 2008 (NAO, 2008). This demonstrates single point responsibility and adherence to government directives of 3 effective procurement routes that exemplifies value for money as observed in chapter 2 and 3. A forecast of potential cost of £525 million was envisaged in March 2008 which reflects the uncompetitiveness of the procurement process and the changes in the design and scope requirements as a result of roof amendment (NAO, 2008). Therefore, £525 million stands as the potential final cost and £496 million as the budget (NAO, 2008). This is common to all design and build route and its variants as discussed in chapter two. Design changes and variations are costly.

5. 2. 4 Lessons Learnt

It is still premature to ascribe failure to the Olympic stadium because of the besmirched and unpleasant information available to the public. With cost also escalating every seconds of the day, these has eroded the mind of the public and cast bad impression about the stadium success. Most messy projects always have time and cost overrun attached to them which always leads to adversarialism. When a project involves multiple stakeholders with little time to bid for the Olympics, there are bound to be hurried assembly of bids which might not be absolutely impeccable. This indicates that lesson should always be learnt from the limitation of previously held Olympics. The IOC has taken a wonderful timely reversion of presenting bid costs in the year of hosting rather than in the year of bidding which is a welcome action.

Smart approaches are been taken to erase the bad impression and re-create public confidence. The time table have been reset with the project starting three months ahead of schedule which is hoped to make the stadium available before the scheduled time. Also, the early assembling of the teams is really helping the progress of the project.

The procurement policy which is in consonance with the stakeholders objectives of sustainability and legacy derivation is seen to be a right move in the right direction. It has resulted in excellent working arrangement of the assembled team. Moreover, it is worth acknowledging that any endeavour that is worth doing should be done well. The Sir McAlpines' past achievement record was the overarching consideration of their success, while Multiplex shame delivery of the Wembley hindered them from even tendering for the project.

The design and build can be seen to be the right route for the stadium delivery. While its limitation of not been so good in quality can be enhanced by close monitoring of project managers, its time and cost certainty for the stadium delivery is a forte attached to it which is most important for the stadium delivery.

CASE STUDY 2: THE WEMBLEY NATIONAL STADIUM

The Project

There is the worldwide believe that the Wembley national stadium has always had an exceptional place in the annals of the UK as an event and entertainment centre (Quintain, 2004). During the late 20 th century, the Wembley national stadium hosted series of major park, theatre and funfair events such as the 1924 British Empire Exhibition, the 1934 Empire Games, the 1948 Summer Olympics, the 1996 World Cup Finals, the 1978 Eurovision Song Contest, the 1996 European Championships and several other events staged in between (Quintain, 2004).

The stadium was demolished in 2002 and rebuilt in 2006 to a 90, 000-seater stadium (WNSL, 2008). The new £757 million Wembley national stadium (NAO, 2003) is now almost thrice as large as its former size with its arch positioning 140 metres beyond its concourse, which is considered enormous enough to roll the London eye beneath!(Quintain, 2004). Though the arch replaced the twin towers which were the stadium's symbol, the Wembley national stadium is still considered as an icon just as the old Wembley stadium (SPG, 2008a). Though controversy trailed the demolition of the iconic twin towers, but it is worth giving kudos for the eventual settlement of the uproar with the impeccable choice of the arch.

The project was triggered in 1996, by the clamour for a new English national stadium and consequently after national competition, Sport England overwhelmly selected Wembley as the preferred site (House of Commons, 2004). Sport England overarching objective was support the development of an iconic stadium for three major sports namely football, rugby league and athletics (NAO, 2003).

The principal uses of the Wembley national stadium are football and rugby league (NAO, 2003). It is mandated that after five years of the stadium's operation, 1% of its annual turnover will be donated by WNSL for the delivery to sports education and other projects (NAO, 2003).

The Client

The Football Association (FA) was at the forefront of the stadium project and the stadium was eventually brought to life by its subsidiary, WNSL (House of Commons, 2004). WNSL was responsible for its construction and consequently charged with operating and owning the new stadium (NAO, 2003). The Wembley National Stadium project was wholly undertaken by private sector organisations and was mostly financed by private capital (NAO, 2003).

The public sector contribution towards the construction of the stadium was £161 million with the breakdown of: (1) £120 million from Sport England; (2) £20 million from the Department for Culture, Media and Sport (DCMS); and (3) £21 million from the London Development Agency (NAO, 2003). The full contributions of the key stakeholders (both the public and private sectors) and the various uses of the funds are as shown in Fig. 5. 3b and 5. 3c respectively.

Profits generated from the operation of the Wembley National Stadium are used by the FA for the benefit of football (NAO, 2003). The issue of track inclusion in the design created a bit of acrimony between Sport England (SE) and WNSL (House of Commons, 2004). However, it was later decided that athletics consideration (track) should be withdrawn which SE was persuaded to accept unwillingly (NAO, 2003). This act is seen to be unfair. As one of the key stakeholders a meeting ought to be called and sought the view of SE before taking any decision. Perhaps value management exercise ought to have been carried out as discussed in one of the industry report and all the stakeholders especially SE would have a shared understanding as to why the track is to be removed.

The Analysis of the Procurement Process

On 14 th July 1999, WNSL threw open bids submission for contractors for the Wembley national stadium (Building, 2008). Mowlem, HBG, Sir Robert McAlpine and Bovis/Multiplex were the companies that responded to the invitation (Building, 2008). In early 2002, Cyril Sweett was hired by WNSL as the independent consultants and the firm consequently gave Multiplex contract a clean sheet as providing value for money (SPG, 2008a). Initially, Multiplex was agreed as the preferred contractor on a guaranteed maximum price (GMP) design and build contract of £326. 5m (which does not include design fees) with a 31/4-year programme to construct the Wembley stadium (Building, 2008). The Wembley National Stadium project was completed in 2007 at an amazingly high cost of £757 million (House of Commons, 2004) with the stadium eventually gulping £445 million (NAO, 2003). The project overran on time and cost.

The design of the stadium was carried out by architects Foster and Partners and HOK Sport whileSir Norman Foster designed the arch and the roof structure (SPG, 2008a). According to Building (2008) the tendering process started with the appointment of Bovis/Multiplex consortium in 2000 as the preferred contractor which was later dissolved and Multiplex was appointed. Bovis opted out when it envisaged that the agreed price was not tenable or visible (Building, 2008). This was the genesis of the stadium's problem. As a deeply rooted company in the UK, Bovis understood very clearly that construction was not visible at that cost. However, owing to the plausible smart play of WNSL and the ubiquities of mischief associated with the design and construct route were contractors bid low in order to wait for claims and variations to improve their profit. WNSL fell for the trap and an agreement was signed. But this turned out to be adversarial leading to numerous accusation and court cases. Moreover, Tropus was first appointed as Wembley project manager whose contract ran out and was consequently replaced by Symonds (Building, 2008).

Due to the clamour in 1996 for a national stadium, Wembley was consequently chosen as the preferred site (House of Commons, 2004). Two years later, SE awarded £120 million towards the development of the project (House of Commons, 2004). It was however envisaged in 1998 that the construction cost would be in the region of £320 million and to be completed within 4 years (House of Commons, 2004).

However, in year 2000 the project suffered financial setback and a request for additional public fund was initiated by the FA in 2001, but the Secretary of State for Department for Culture, Media and Sport (DCMS) declined and asked Mr Patrick Carter to review the project (House of Commons, 2004). A staggering sum of £1. 6 million was squandered in reviewing the project (House of Commons, 2004). From the author's viewpoint, expending such an amount of money in reviewing does not exemplify value for money. A report from Tropus should have been taken serious and re-tendering ordered instead of spending the money on reviewing and coming out with little effective report.

It was noted during the course of the review, that there was lapses on the project by WNSL and DCMS was also cognisant of concerns about features of the management such as the procurement process which resulted in the appointment of Multiplex as the main contractor to build the stadium (House of Commons, 2004).

This concerns led to its investigation by Mr David James CBE stemming from the request of the then Chairman of Wembley National Stadium Limited (House of Commons, 2004). While no speck of evidence of impropriety was found, serious concerns were raised as to whether equal opportunity was granted to all the bidders (House of Commons, 2004). A conclusion was however reached that the procurement process did not meet the highest standards expected in the industry (House of Commons, 2004). It was noted that a comprehensive formal procurement process was not enacted by WNSL and it was also seen that for the award of the same contract, they ran two separate corresponding tendering processes on dissimilar terms (House of Commons, 2004). To buttress the non enforcement of level playing ground, it was also noted that they had dialogue with Multiplex before the commencement of the formal procurement process (House of Commons, 2004). As a client of the construction industry, the action is seen to be against best practice. As an industry seen to be besmirched with image problem, a favourable and fair level playing ground is expected to be provided by the construction client for active involvement of all and sundry.

It was therefore concluded by the then Secretary of State for Culture, Media and Sport that the availability of further public funding would be hinged on meeting series of tests by both the FA and WNSL (House of Commons, 2004). However, these tests were later met and the project was considered commendable of further support (House of Commons, 2004).

DCMS thought of re-tendering the construction contract as a condition of further support was discarded on the ground that no likelihood of savings to the public purse would be achieved (House of Commons, 2004). This was a wise decision considering that £1. 6 million has been expended on review and more time might be wasted in re-tendering.

Two reports were published by Tropus and James and they both concluded that WNSL never followed best practice thereby bereft of best value (Building, 2008). It was however argued that players in the UK industry were not given ample chance to compete for the project (Building, 2008).

The archconstruction started in 2003 and its fabrication was done on-site using steel modules manufactured by steel subcontractor Cleveland Bridge. However, irreconcilable differences erupted between Cleveland Bridge and Multiplex and the former had to leave the project and was replaced by another steel subcontractor called Hollandia (SPG, 2008a). Cleveland Bridge was unsure if they would be paid for the materials to be employed (SPG, 2008a). This later resulted into a court case (SPG, 2008a). This reinforced the issue of long time relationship and effective supply chain integration as discussed earlier in previous chapters. The author reckons that Bovis/Multiplex consortium would have provided strong supply chain ties needed for success. Bovis is a deeply rooted company that understands the UK industry and has a strong supply chain leaning unlike the Australian company. While accepting the EU directives, it is also more important to look at the antecedence of magnitude of projects executed by the company in the country under consideration. If there had been strong supply chain ties between Multiplex and its steel sub-contractor, the issue of distrust of payment would never have arose.

Lessons Learnt

The design and build and its various variants are expected to be produce cost and time certainty which were never on the Wembley stadium. The novated design and build which was employed on the case study was expected to allow the client the opportunity to have great input into the design before novating the designer to the contractor after output specification would have been fully specified. From the case study, the GMP novated Design and Build contract was hurriedly assembled by WNSL without fully establishing its requirement. This is considered inappropriate and as discussed in previous chapters, can lead to adversarialism. Consequently, the project was characterised with numerous court cases.

It was also noted that the project was full of adversarial relationship both on the sides of the client and contractor and the contractor and sub-contractor. All the benchmark reports as discussed in chapter four advocated for long term relationship and effective supply chain management. Knowledge of UK construction industry terrain is very essential which as noted in the case study was not quite and fully understand by Multiplex. WNSL too never made matter easy by allowing Bovis to walk out of the process and rushing into agreement with only the Australian company. As noted in the case study, Multiplex is partially or perhaps bereft of the modus operandi of the UK construction industry and the author reckons that was why multiplex entered into a consortium with Bovis. However, WNSL action and consideration of multiplex could be seen to be based on price alone and perhaps very low cost consideration which is not in consonance with best practise. Strong and effective supply chain was devoid in the project leading to massive rift between the supply chain due to lack of long term relationship.

As noted in case study one of the Olympic stadium, Multiplex image has been besmirched by its unsuccessful execution of the Wembley national stadium. It can be concluded that for a construction company continued existence and progress in the volatile UK construction industry, successful and unsuccessful past project execution will surely play significant role in its successful bidding for project.

Lastly, the project was seen to lack effective stakeholders management. Due consideration needs to be given to all stakeholders before changing any aspect of the project. Effective and timely consideration needs to be the watchword.

CASE STUDY 3: THE ARSENAL EMIRATES STADIUM

The Project

The Emirates stadium is a 60, 000-seater stadium constructed in Ashburton Grove as a replacement for the Highbury stadium which was the former ground (SPG, 2008b). The Emirates stadium is the home of premier league Football Club called Arsenal.

Announcement was made in late 2004 that the new stadium would be known as the Emirates stadium