THE DEVELOPMENT OF A TENDER ANALYSIS SUPPORT TOOL FOR USE IN SOCIAL HOUSING BEST VALUE PROCUREMENT

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A number of studies have highlighted the problems and challenges that have been encountered with the analysis of best value tenders carried out in the UK public sector. This research has developed a methodology which enables project stakeholders to streamline the tender analysis procedure allowing tenders to be dealt with effectively and efficiently whilst also creating a transparent and auditable decision making process. A robust support tool has been developed which aids the multi objective decision making process by provoking rational discussion with respect to; the construction industry's key performance indicators (KPI's), the client's attitude to risk and provides a transparent audit trail of the decisions taken. The underlying rationale for the support tool is based on a combination of the analytic hierarchy process (AHP), multi utility attribute theory (MAUT) and whole life costing (WLC). The methodology has been developed into user friendly software and the paper demonstrates the practical utility of the tool in operation.

Keywords: best value, contractor selection, factor analysis, multi attribute utility theory, whole life cycle costing.

INTRODUCTION

Changing world markets, coupled with the introduction of new technology and a rise in clients expectations have stimulated reviews of how the construction industry delivers value. The International Council for Research and Innovation in Building and Construction has clarified the definition of 'revaluing construction' as "the maximization of value jointly created by stakeholders to construction and the equitable distribution of the resulting rewards" (Barrett 2005). For the purposes of this paper stakeholders are defined as groups, or individuals, who have a stake in, or expectation of a projects performance (Newcombe 2003). Within the UK this global concept of revaluing construction has been applied to many sub-sectors of the industry, particularly public sector projects. In 2003 the Gershon Review examined the process of acquisition in the public sector and indicated that these changes to the method of procurements could deliver value for money gains of £1 billion. This research focuses on the effect that the implementation of best value procurement has had on the structure and operation of the tendering process within the social housing sector and examines how best value procurement can be approached more effectively and efficiently to assist in delivering the savings identified by the Gershon Review. The social housing sector was identified for research as it is responsible for a

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programme of construction, maintenance and refurbishment works currently valued at £1 billion GBP (DTI 2003) with a significant proportion of those works being financed by the public purse.

BACKGROUND

Social Housing provision within the UK operates under the control of two main groups of organizations. The first is the housing provided and managed by Local Authorities (commonly called council housing), and the second is the housing provided and managed by Housing Associations and other organizations, which together form the “voluntary housing movement”. The welfare of these housing associations falls under the umbrella control of the Housing Corporation, which is a central government financed quango formed to promote and assist the development of housing associations. The term “registered social landlord” (RSL) is used as a collective term for both housing associations and local authorities as providers of social housing.

RSL’s are regular procuring clients to the construction industry. In 1998 the Egan report identified that their corporate strategy and operational procedure could be influenced and regulated by Government policy so that these organizations could offer better value. The Government has taken positive steps to ensure that the public sector have to embrace value based procurement and on the 1st April 2000 new legislation was enacted so that Local Authorities in England and Wales must implement the best value process to all the public services that they control and requires them to be reviewed. This compelled them to develop and to show continuous improvement with respect to the efficiency, effectiveness and economy of their procurement practices. The Housing Corporation has issued similar instructions so that Housing Associations must aim to deliver continuous improvements and value for money in their services by using best value techniques. These include challenging what they do, making comparisons with others, consulting people affected by their services and providing the services at competitive standards and prices. The wishes of residents and others are balanced against available resources within a clear and transparent framework according to the principles of best value (Housing Corporation 2005). The edict from the housing corporation and the change in legislation has lead to a significant departure from traditional lowest bid tendering and introduces new variables into the decision making process. When selecting a best value proposal the RSL’s should carefully balance the procurement objectives and value for money criteria within the need to comply with public procurement principles and governing rules/regulations in a public accountability framework (Palaneeswaran *et al.* 2003). Ideally, service users and stakeholders should also be proactively involved at all stages of the procurement and service design /delivery process to enable them to exercise informed choices upon the project cost and quality (Housing Inspectorate AC 2005).

The processes of change is never easy and, historically, there are acknowledged problems with large public sector organizations embracing change (Thomas Cain 2003).Therefore there is no reason why the cultural change required in implementing best value procurement should have been received any differently by the public sector. A literature review was carried out and the following challenges were identified as currently being encountered by public sector client organizations when implementing value based procurement;

- Most procurement is not carried out by designated procurement staff, the procurement staff are often consulted too late in the procurement process and the majority of procurement staff do not hold professional qualifications. (National Audit Office 2004).
- Creating a consensus vision between key stakeholders is problematic but maintaining this over time and achieving progressive implementation is harder still (Barrett 2005).
- The difficulties being encountered are exacerbated by the number and diversity of best value attributes that can be considered by the various stakeholder groups (Austin 2005).
- If too many attributes are considered the process of evaluation will become paralysed with too many options to consider (Woodhead and McCuish 2003).
- Contractors have a negative perception that the best value tender interview is a game of appearance and marketing skills and there is insufficient time to conduct a relatively standard tender evaluation process. (Griffith *et al.* 2003).
- The failure of RSL's to provide clear and transparent audit trails of their best value tender analysis process has lead to arbitration tribunals finding against them in service charge disputes, resulting in a financial loss for the RSL's concerned. (Phillips *et al.* 2004).

THE AIM AND OBJECTIVES OF THE RESEARCH

A research project was established with the overarching aim of developing a robust, transparent methodology to assist RSL's and their stakeholders in analysing best value tender documents in the social housing sector. It was intended that the methodology should address, both, the identified problems and be used as the underpinning rationale to produce a tender decision support tool. Prior to developing the methodology it was important to establish a definition of best value that could be readily adopted for use by the RSL's. There is no universal definition for the term 'best value' (Choi 1999) but for the purpose of this research the following definition produced by the Office of Government Commerce for use within the UK public sector has been applied;

> *" [Best Value is] the optimum combination of whole life costing and quality (or fitness for purpose) to meet the users requirements, as it is the relationship between long-term costs and the benefit achieved by clients that represents value for money." (Office of Government Commerce 2003)*

On establishing the best value definition the main objectives for the development of the support tool were set as follows; (a)Establish the core value attributes assessed during the tender analysis process, (b)Identify and develop a transparent and robust method for subjectively measuring best value which assess multi attribute criteria and utilizes whole life costing rather than simply using the initial capital costs of the project, (c) utilize the identified core value attributes and the developed methodology to develop a software tool to provide a transparent audit trail of the best value analysis process and (d) validate the tool by pragmatic application.

THE DEVELOPMENT OF THE METHODOLGY FOR THE TENDER ANALYSIS SUPPORT TOOL

Establishing the core value attributes

There were two consistent themes that ran through the identified problems: (a) the number of different attributes to be considered are causing difficulties in the decision making process of tender panels and (b) that the high volume of tenders cannot be dealt with effectively as there is a lack of professional staff/support to assist in the new procurement process. It was envisaged that the use of a smaller number of named core attributes could increase the efficiency of the tender analysis procedure and assist the non-professional support staff in their understanding of the process. The use of standard criteria to lighten the selection burden for both clients and contractors has been mooted before in 2000 by Wong *et al.* but this is the first time that research has been undertaken to identify standard criteria for contractor selection with respect to value criteria. A comprehensive literature review was carried out and 35 independent attributes were identified as potentially being considered by stakeholders during a best value tender analysis process.

To obtain information on these 35 attributes a postal questionnaire survey was undertaken. The attributes were listed in the questionnaire and the respondents were requested to provide an opinion on the importance of each attribute. Responses to each question were measured on a 5-point Likert scale from ‘Vital’ to ‘Not Required’. In total 195 questionnaires were sent to known individual contacts operating within the UK social housing sector representing a cross section of the five stakeholder groups comprising: (i) RSL’s, (ii) contractors, (iii) construction consultants and residents (end users) divided up into (iv) leaseholders and (v) tenants. 79 questionnaires were returned in a useable format and the response rate of 42% was considered favourable compared with the norm of 20-30% expected from most postal questionnaire surveys of the construction industry. The responses to the questionnaire were collated and were subjected to analysis using the Statistical Package for Social Sciences (SPSS) v.15 for Windows. Principal component analysis [PCA] was chosen as the data reduction method for two main reasons (i) to reduce the number of attributes and (ii) to identify or detect a structure in the relationship between the attributes and classify the attributes into sets of factors. The analysis produced a ten factor (or core attribute) solution with eigenvalues greater than 1, explaining 71.3% of the variance. A varimax orthogonal rotation was used to further interpret the 10 factors. Rotation techniques, such as the varimax method, transformed the component matrix produced from an unrotated principal component matrix into one that was easier to interpret.

The nature of the items loading on the 10 principal factors was analysed to interpret the core element being measured by the groupings around each factor and consequently to provide a collective name for the factor. The results are shown in Table 1 which represents the 10 core attributes to be assessed in a contractors best value tender bid.

Consideration of Multi Attribute Criteria

In best value procurement analysis the individual attributes need to be assessed as to how important they are with respect to a specific project. There are many methods of considering and assessing competing multiple objectives in decision making (DTLR 2000). When a rational decision involves the consideration of multiple objectives (and

Table 1: The 10 Identified Core Attributes.

Component Number.	Name of Component Grouping	% of Variance	Cumulative %
1	Understanding of Clients Objectives.	28.146	28.146
2	Innovative management.	8.232	36.377
3	Successful track record.	6.623	43.000
4	Innovative on-site practices.	5.820	48.820
5	Quality management procedures.	4.837	53.658
6	Transparency of cost data.	4.234	57.891
7	Understanding of Partnering.	3.840	61.732
8	Established Policy. (Health &Safety, Environmental)	3.446	65.178
9	Understanding of Best Value.	3.161	68.340
10	Technical Ability.	2.968	71.308

it must do if the OGC definition of best value is used) then multiattribute utility theory (MAUT) may be used as the basic foundation for applying decision analysis. The theory explicitly addresses the value trade-offs and uncertainties that are invariably the focus of multiple objective decisions. (Keeney and Raiffa 1976). This approach was developed by Keeney (1992) into a set of procedures that combines the main advantages of simple scoring techniques and optimization models. (Hatush and Skitmore 1998). Utility is a measure of desirability or satisfaction and provides a uniform scale to compare the clients various value attributes against each other. In general, it provides a method of comparing manifestly different types of attributes on a ‘like for like’ basis which is essential in best value decision making as tender panels are expected to judge the relative benefits of diverse attributes such as health and safety and innovative construction methods on a level playing field The key to understanding the application of utility in this way is to appreciate that if a rational decision maker’s direct preferences over consequences can be defined, then they can be used to order the desirability of the actions open to him/her. If an appropriate utility is assigned to each possible consequence and the expected utility of each alternative is calculated then the best course of action is the alternative with the highest expected utility. The importance of the Keeney and Raiffa work (ibid) is that they produced a linear additive model of the expected utility theory that mathematically can be shown as;

$$U_i = p_1 u_{i1} + p_2 u_{i2} + \ldots + p_n u_{ix} = \sum_{j=1}^{n} p_i u_{ij}$$

Where: **Error! Objects cannot be created from editing field codes.**is the overall utility (preference score of option i). **Error! Objects cannot be created from editing field codes.** is the utility of option i, if having chosen option i, it actually transpires that the state of the acting subject j occurs.**Error! Objects cannot be created from editing field codes.**is the decision makers’ best judgement of the probability that the future state of the world j will occur. This says that the overall utility,**Error! Objects cannot be created from editing field codes.** of an option i is calculated in a relatively simple way; as the mathematical expectation (the probability-weighted average) of the elementary utilities, **Error! Objects cannot be created from editing field codes.** of all the associated consequences. The equation is also simply additive over the states of the acting subject providing the attributes being considered are mutually preferentially independent of each other. (Hirshleifer and Riley 2002).The advantage of the additive form is its simplicity e.g. In order to determine the overall utility function for any alternative a decision maker need only determine n utility functions for that alternative ,where n= the number of criteria used.(Hatush and Skitmore ibid).

A utility function can be constructed by assuming that there are best and worst alternatives, b and w. and we can fix the parameters of the utility function u by the arbitrary choice u (w) =0 and u(b) =1. Since utility is an ordinal rather than a cardinal concept these utility values are arbitrary, therefore the 0 does not mean utter worthlessness, but simply designates the lowest score and, similarly, 1 represents the highest score. It is helpful if the utility function is depicted graphically as the shape of the resulting utility curve can be divided into three broad categories dependent upon whether the decision maker is risk averse, risk neutral or risk prone .It is also important to note that an individual will probably have a different utility function compared to a group and utility evaluations of individuals cannot simply be added together to obtain group utility. The optimum solution is for the client organization to give guidance on their risk attitude or simply compare the results for each risk attitude prior to making the final decision.

Whole Life Costing

The final part of the best value definition to be considered was that long-term costs over the life of a building are more reliable indicators of best value than initial construction cost because money spent on appropriate materials and products can be saved many times over in the construction and maintenance costs. Whole Life Costing [WLC] is an economic evaluation method that accounts for all relevant costs over the investor's time horizon adjusting for the time value of money. The relevant costs include; (i) the investment costs such as construction costs, fees, development grants (ii) energy costs and (iii) Maintenance costs including planned cyclical maintenance and servicing and unplanned maintenance and repair. The investor's time horizon is the period for which the investor has an interest in the buildings life and the time value of money is shown by calculation of the present value of the relevant costs expended over the specific time horizon using the standard Present Value formula. In the public sector it is usual for the Treasury discount rate to be applied to the calculation. (Martin and Kelly 2006)

THE FUNCTIONALITY OF THE SUPPORT TOOL

The support tool methodology has been developed into a software package which Optimizes Value In Decision-making for Best Value and has become known by the acronym of OVID-BV. It has been successfully used by RSL's and their stakeholders to provide a transparent audit trail of the tender analysis decisions in a number of projects. This section provides an overview of the operation and functions of OVID-BV during the best value decision making process but does not reproduce the complete tender analysis process. The initial step is for the stakeholders to choose their project specific attributes from a drop down menu which includes not only the ten core attributes identified by the PCA but also all the other value attributes established by the literature review. The attributes are mutually preferentially independent of each other which allow the additive form of the utility function to be used. The software also provides a facility for new attributes to be added as necessary. In this example the stakeholders decided that it was appropriate to consider 7 key project specific attributes. (Figure 1).

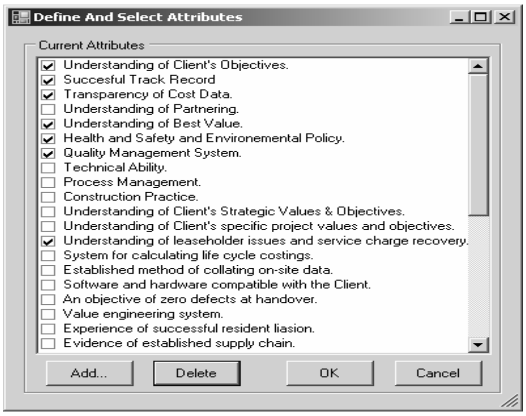
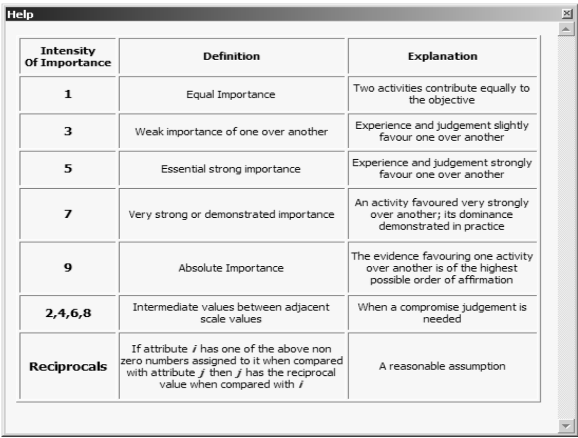


Figure 1: Attribute Choice Screen.

The assessment process commences by determining the relative importance of each attribute in meeting the client organizations project specific goals, by making pair-wise comparisons between them. The pair wise comparison method utilizes the analytic hierarchy process (AHP). The process was developed by Thomas Saaty (1980) to assist individuals and groups deal with multi –attribute decision making problems and Saaty's scoring system is shown in Figure 2. The weighting of each attribute is calculated using the Geometric Mean Square method and shown in Figure 3.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Intensity Of Importance	Definition	Explanation
1	Equal Importance	Two activities contribute equally to the objective
3	Weak importance of one over another	Experience and judgement slightly favour one over another
5	Essential strong importance	Experience and judgement strongly favour one over another
7	Very strong or demonstrated importance	An activity favoured very strongly over another; its dominance demonstrated in practice
9	Absolute Importance	The evidence favouring one activity over another is of the highest possible order of affirmation
2,4,6,8	Intermediate values between adjacent scale values	When a compromise judgement is needed
Reciprocals	If attribute *i* has one of the above non zero numbers assigned to it when compared with attribute *j* then *j* has the reciprocal value when compared with *i*	A reasonable assumption

Figure 2: The Attribute Scoring System (Saaty 1980*).*

AHP is a popular decision tool supported by a large group of practitioners (Bedford and Cooke 2003). The strengths of the AHP method lie in its; (1) ability to decompose a complex decision problem into a hierarchy of sub problems, (2) versatility and power in structuring and analysing complex decision problems and (3) simplicity and ease of use (Fellows and Liu 2003). The strength of the pair wise comparison technique in regard of the best value tender analysis process is that it promotes debate between the members of the tender selection panel with respect to the relative importance of each of the value attributes. In addition, non–specialist users find the pair wise comparison data entry procedures of AHP attractive and easy to undertake (DTLR 2000).

Attribute weighting

	Understanding of Client's Objectives.	Succesful Track Record	Transparency of Cost Data.	Understanding of Best Value.	Health and Safety and Environemental Policy.	Quality Management System.	Understanding of leaseholder issues and service charge recovery.	Total	Weight
Understanding of Client's Objectives.	1	2	4	4	1	1	6	2.1193	0.2343
Succesful Track Record	1/2	1	1	2	1/3	1/3	2	0.8066	0.0892
Transparency of Cost Data.	1/4	1	1	1	1/7	1/3	1	0.5310	0.0587
Understanding of Best Value.	1/4	1/2	1	1	1/4	1/3	1	0.5210	0.0576
Health and Safety and Environemental Policy.	1	3	7	4	1	4	7	3.0313	0.3351
Quality Management System.	1	3	3	3	1/4	1	4	1.6013	0.1770
Understanding of leaseholder issues and service charge recovery.	1/6	1/2	1	1	1/7	1/4	1	0.4356	0.0482

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Figure 3: Pair Wise Comparison Scores of the Chosen Attributes.

The next stage is to assess the contractor's tender submissions with respect to each of the chosen attributes. One of the innovative aspects of the tool is that in MAUT the utility function uses a uniform scale to assess the RSL's value attributes against each other and provides a method for comparing and scoring different types of attributes on a 'like for like' basis. As utility is a measure of desirability or satisfaction each of the contractor's tender submissions is scored against the chosen attributes on the basis of the decision maker's satisfaction (or belief) that the contractor could successfully deliver on the claimed benefit to the end users made within the tender documentation. The point's score system used was as follows: 0-4 = very unlikely; 5-8= unlikely, 9-12=fair: 13-16=very likely, 17-20=certainty. Numerically similar systems are currently being used within the UK construction industry though they assess content of the tender submission documents rather than belief in successful delivery by the contractor. The importance of scoring in this manner is that it allows the decision maker to incorporate his/her personal experience, preferences, heuristics and biases as part of the contractor selection process and should promote discussion between members of the tender analysis team. In terms of an audit trail it also provides a transparent indication of the way in which the panel viewed each contractor's submission and how they perceived the contractors chance of successfully delivering the product. In addition it was decided, where possible, to link the scoring of each attribute to key performance indicators (KPI) which measure factors critical to the success of projects. Benchmark scores produced from KPI's are stated as percentages and are an indication of performance relative to the whole construction industry. If a benchmark score for a specific contractor is given as 49% this means that 49% of projects nationally have equal or lower performance and 51% of projects have higher performances (Constructing Excellence 2006).

The assessment of each contractor's anticipated performance against the value attributes was then carried out. For example with respect to criteria number 5 addressing a contractors environmental policy a contractor stated in their bid documents that the estimated annual energy use for a refurbishment scheme is 919kg CO_2/ 100m2. By using the Constructing Excellence KPI Graph this equates to a benchmark score of 65% which was deemed acceptable within the contract specification. The tender panel then assessed from the content of the bid submission their belief as to whether or not the contractor could deliver the stated quality standard and marked the submission accordingly. The benefits of using this scoring method are envisaged as: (i) a contractor will provide realistic technical details including calculations to support their bid submissions. (ii) It encourages the contractor to utilize their specialist knowledge for the benefit of the client and end user. (iii) The KPI forms the basis for both monitoring the contractor's performance and providing feedback to drive continuous improvement. (iv) The scorecard highlights potential anomalies in the assessment of the bids. If a contractor has stated they could achieve a high KPI percentage score, say 95%, for a particular attribute but are only awarded a low performance score, say 8 or less, this will be highlighted and can be discussed further between the tender panel members. It is acknowledged that the scoring system is subjective but it is based upon quantifiable measures i.e. KPI's and Utility.

Subject Scores

	Contractor A.	Contractor B.	Contractor C.	Contractor D.
Understanding of Client's Objectives.	12	16	14	15
	0.0000	1.0000	0.5000	0.7500
Succesful Track Record	17	16	17	15
	1.0000	0.5000	1.0000	0.0000
Transparency of Cost Data.	7	8	10	14
	0.0000	0.1429	0.4286	1.0000
Understanding of Best Value.	12	12	11	15
	0.2500	0.2500	0.0000	1.0000
Health and Safety and Environemental Policy.	18	16	18	17
	1.0000	0.0000	1.0000	0.5000
Quality Management System.	12	18	10	7
	0.4545	1.0000	0.2727	0.0000
Understanding of leaseholder issues and service charge recovery.	9	12	18	11
	0.0000	0.3333	1.0000	0.2222

Show Results | Calculate Utility | Show Graph | Help | OK | Cancel

Figure 4: Contractors Bid Submission Scores per Attribute.

The software calculates a utility function for each of the attributes and assigns a utility value of 1 for the best contractor score and a utility value of 0 for the worst score, though as utility is an ordinal concept the 0 does not mean utter worthlessness. In Figure 4 each attribute has two scores shown against it, the upper figure is the score given by the tender assessment panel whilst the lower figure is the utility score. The software can also depict each attribute's utility function graphically for audit trail purposes and as it was decided that the RSL's group attitude to risk was neutral the utility function was depicted as a straight line. As the additive form of the utility function has been used the contractors utility scores for each attribute are first multiplied by the previously calculated attribute specific weighting shown in the far right column of Figure 3 and then added together to produce an overall score.(Figure 5)..

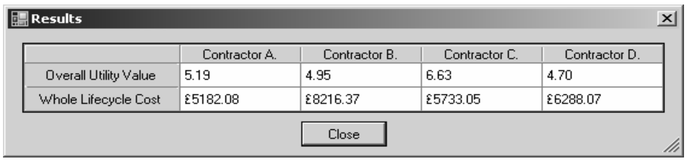
Results

	Contractor A.	Contractor B.	Contractor C.	Contractor D.
Overall Utility Value	5.19	4.95	6.63	4.70
Whole Lifecycle Cost	£0	£0	£0	£0

Close

Figure 5: The Contractors Overall Utility Scores

Though the expected utility theory states that the rational course of action would be to appoint the contractor with the highest overall utility value the OGC definition of Best Value requires that the successful contractor should provide the 'optimum combination of whole life costs and quality to meet the users' requirements'. The importance of cost could, in theory, have been considered as one of the original project specific attributes, but the OGC have stated that the recommended approach to Best Value evaluation is to differentiate the financial and non-financial criteria for consideration in separate strands and that attempts to balance these criteria during the process are to be avoided (OGC 2004).Therefore OVID-BV addresses the question of the importance of cost at the end of the process not at the beginning. There are a number of software packages that can calculate whole life costs though OVID-BV calculates the required costs using a specially adapted Excel spreadsheet. Finally, the results screen presents the Overall Utility Value score for each contractor assessed against the calculated Whole Lifecycle Cost for that contractor. (Figure 6). Self evidently the results provide guidance only with respect to the choice of the successful contractor and the support tool cannot and should not replace management review and judgement.


Results

	Contractor A.	Contractor B.	Contractor C.	Contractor D.
Overall Utility Value	5.19	4.95	6.63	4.70
Whole Lifecycle Cost	£5182.08	£8216.37	£5733.05	£6288.07

Close

Figure 6: The Comparative Results Screen

CONCLUSIONS

OVID-BV has met the original aim and objectives of the research in providing a standardized format for analysing Best Value tenders in the UK social housing sector with the use of a comprehensive but standard set of value attributes allowing the tender analysis process to be carried out in a more expeditious and efficient manner. Whilst MAUT has proved to be a notoriously difficult concept to explain, the sub-concepts of satisfaction, belief, and end user benefit have been readily understood and embraced by the various stakeholder groups in trialling the support tool which has allowed them to carry out the scoring process with a minimum of difficulty. Though not all the users of OVID-BV have been able to grasp the concept of the additive utility function, the concept of the value attributes being assessed on a ‘level playing field’ has been ,almost, universally accepted by the users. The windows based software has not only made the tender analysis process more user friendly for non professionals but has also assisted the stakeholders in understanding that best value is not simply about measuring capital cost or quality but is concerned with the optimum combination of whole life costing and quality (or fitness for purpose) to meet the users requirements. The limitations of the methodology are acknowledged and further research is addressing these issues. Research is being undertaken to move away from the subjective scoring of an attribute using KPI values and try and link the KPI percentage to a particular score on the 0-20 scale currently being used. Even if this can be achieved it is acknowledged that it may not be possible to link all the attributes with a specific KPI and the scoring will remain, for these attributes at least, subjective. Similarly further research needs to be undertaken to bottom out the differences that occur when individual decision makers’ decisions are used instead of using the unitary group approach as put forward by this paper. Similarly additional research is being undertaken to provide guidance to RSL’s as to how to define the ‘optimum combination’ between whole life cost and quality which , it is anticipated will reduce contractor manipulation of the price/quality mechanism. The support tool has already been used for a wide spectrum of projects ranging from repair and maintenance contracts through to the analysis of multi million pound residential estate regeneration schemes not least because the BV tender analysis process is fundamentally the same regardless of the project type it is applied to. Manifestly the support tool can also be used in areas other than tender analysis and the methodology has already been used to assist a London Borough Council in their decision to renew or repair window units throughout the whole of their Borough. It is also anticipated that the support tool will be used (i) to short list a limited number of contractors for subsequent detailed appraisal (ii) to rank contractors, or (iii) simply to distinguish acceptable from unacceptable possibilities.

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