

VALUING SUSTAINABILITY IN AUSTRALIA: IMPLICATIONS FOR THE VALUATION PROFESSION

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ABSTRACT

There is an urgent need for sustainability to be incorporated into the valuation process in order to ascertain and accurately reflect the relationship between sustainability and market value, and increase large-scale sustainability investment in property. This predicament has been recognised and increasing emphasis from industry, valuation bodies and academia is being placed on valuers to incorporate sustainability into the valuation process. However, it is questionable whether valuers are adequately equipped with the knowledge and skills to incorporate sustainability into valuation practice.

This research investigates valuers' incorporation of sustainability in valuation practice and their knowledge of sustainability. It is anticipated that with the increasing need to report on sustainability, valuers' knowledge levels will need to develop. Warren-Myers (2010) found valuers at the time (in 2008) were inadequately skilled to incorporate sustainability into value assessments. The fundamental process of valuation practice is a complex relationship between art and science, and the building of strategic knowledge to develop the heuristics and judgement required in valuation takes time. This research endeavours to track valuers' sustainability knowledge development in Australia over time and will, consequently, lead valuers' to be more thorough in their comparative analysis and assessment of sustainability factors in property. The identification of a clearer relationship between sustainability and market value should result. The research method utilises a mixed-mode approach, using surveys built of open and closed questions that investigate valuers' perceptions of their own knowledge, their actions in practice, and tests their knowledge of sustainability. This paper presents the findings from the first phase of this research project.

The research found valuers in Australia are reporting on sustainability in valuation reports, and providing advice to clients on sustainability. However, it has also found that valuers are reliant on sustainability assessment tools, about which they have only limited knowledge. Compared to previous research where valuers were reluctant to address sustainability in valuation practice, this research has found a demonstrable change in the profession. However, there is cause for concern considering the level of knowledge and understanding valuers are displaying. Long-term, their lack of knowledge may cause more issues with the misapplication or judgements made in valuation regarding the relationship between sustainability and value. This research stresses the implications for the profession, should valuers be reporting and advising on concepts of which they have limited understanding, and should they be adapting or making judgements about sustainability in the valuation process, which ultimately affects the reporting of market value. This research highlights the urgent need for professional development in the property industry and, in particular, for valuers to develop their knowledge, understanding, assessment capabilities and judgement of sustainability in valuation practice.

Keywords: valuation, valuation practice, sustainability

INTRODUCTION

The prominent profile of sustainability in the commercial property market has reduced considerably since the beginning of the Global Financial Crisis in 2008, from which there is no clear pathway ahead yet. However, the need for sustainability and increasing sustainability in property has not. Increasing requirements to reduce greenhouse gas emissions, like the Mandatory Energy Efficiency

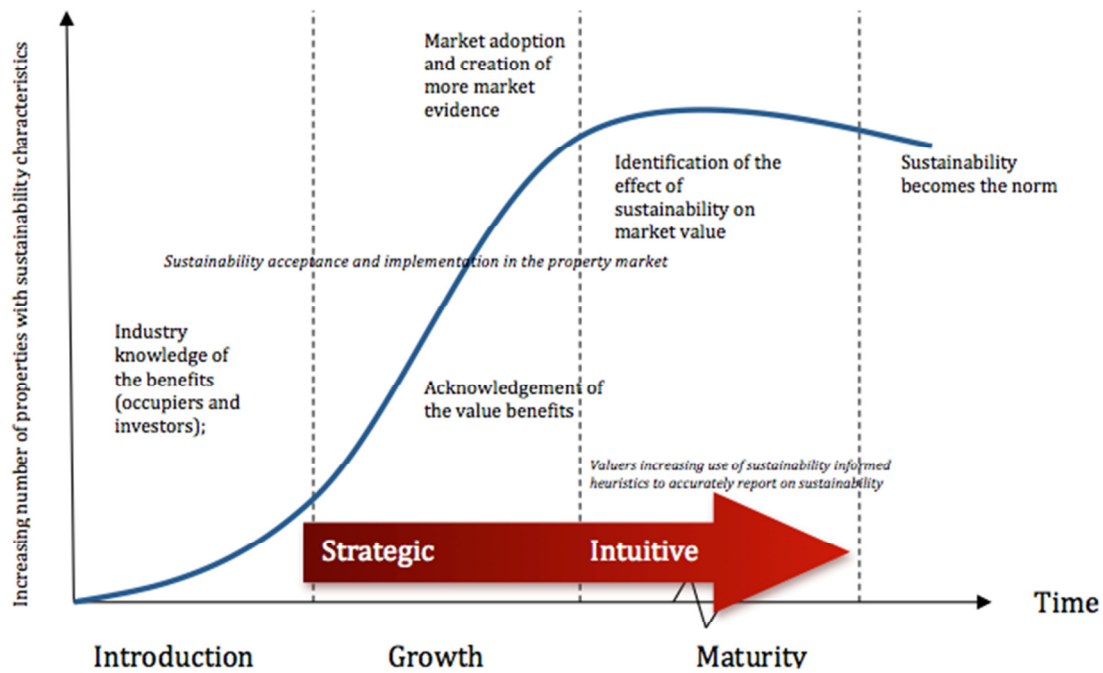
program and the carbon pricing regime in Australia, are having some effect on the industry, but is limited to cost-saving measures focused on energy (Warren-Myers 2012a). However, for greater broad-scale investment in sustainability, the relationship between sustainability and market value needs to be better identified. The lack of, or limited perception of this relationship, inhibits investors' ability and incentives to invest in sustainability initiatives in their property portfolios. Consequently, the industry is looking to the valuation profession to clarify whether sustainability has an impact on value.

It appears there is a limit to the level of sustainability investment owners and stakeholders are willing to undertake, and it is this disconnect or lack of value identification of these initiatives with the assets' value that prevents further investment. The identification and reporting of value, in various forums, is entrusted to valuers. Valuers have a pivotal role within the industry to reflect the market in the assessment of market value for a particular property. Market leaders have engendered change in the commercial property markets in particular, however, broad scale investment across the market is limited due to the lack of understanding of the relationship between sustainability and market value. Valuers do not direct the market in terms of providing a price or value on sustainability, however, they are responsible for thorough analysis of transactions to ascertain whether sustainability has or was a consideration in the transaction, and consequently a link or relationship between sustainability and value. If valuers are not acknowledging the contribution of sustainability to the property's market value, it is difficult for owners and other stakeholders to justify sustainability investment.

This research investigates, in Australia, whether valuers are considering sustainability in the valuation process, and the depth of reporting on it. Further, the research investigates whether valuers have the knowledge and skills to accurately report on sustainability in the valuation process. This paper discusses the first survey of a longitudinal research project aimed at tracking knowledge development in the valuation profession over time. Warren-Myers (2010) found evidence to suggest that knowledge development within the profession on sustainability in the built environment has similarities to the evolutionary development in McColl-Kennedy et al's (1992) product evolution model.

Further, the development of strategic knowledge and heuristics was pivotal in valuers being able to accurately incorporate the effects of sustainability on market value, as shown in Figure 1. In this study, expert intuition differs from heuristics. Expert intuition is where repeated processes, solving of problems and identification of patterns enables increased optimisation and efficiency, whereas, heuristics are the rules-of-thumb which are developed from expert intuition (Gladwell 2005, Duggan 2007).

The author found valuers (in 2008) had limited knowledge, understanding and skills to incorporate sustainability considerations into the valuation process. It was anticipated through the model that, over time, and with the increasing focus on sustainability from market stakeholders and the pressure from industry to incorporate and report on sustainability in valuation practice, valuers would develop the heuristics and judgement necessary to accurately address the implications of sustainability on market value assessments.



Sustainability Knowledge Development and Creation of Heuristics in Valuation Practice
Source: Warren-Myers (2010) Figure 5.3 adapted from McColl-Kennedy et al (1992)
Figure 8.4 and McColl-Kennedy and Kiel (2000) Figure 9.3.
Figure 1

LITERATURE REVIEW

Background

Sustainability is no longer a new term, if it ever was in the built environment. However, as a concept it has gained considerable traction in the property market in the last decade. There is broad acknowledgement that the building sector accounts for one third of the world's energy usage, is the single largest contributor to greenhouse gas emissions and contributes to 40% of the world's solid waste, consequently a significant effort is required to reduce these impacts within the sector (UNEP 2011). This should be a considerable driver to create change, however, there is limited investment in sustainability in the built environment. Although owners' are increasingly using some forms of 'sustainability' in their buildings, there is still limited broad scale investment that is not linked directly to cost savings (Warren-Myers 2011a). It is surprising that, considering all the information directed at society, owners, occupiers and investors about the benefits of increasing sustainability in either their occupied space, building, or portfolio, there is still a reluctance to more fully embrace sustainability.

There is growing recognition that the 'green' building movement, and sustainability investment has reached a ceiling, and that to proceed, the relationship between sustainability and value needs to be ascertained (personal communication Henley 1/11/2011). To encapsulate the values and identify the relationship between sustainability and value, Lorenz's (2008) 'Virtuous Circle' model highlighted the reliance of the industry and all its stakeholders on the valuation profession to identify this relationship to inform the market. Worldwide, the valuation profession has limited the inclusion of sustainability considerations in valuations (Lutzkendorf and Lorenz 2005, Warren-Myers 2010). However, this situation needs to change significantly in the near future, as stakeholders

progressively acknowledge the valuers' pivotal role in increasing sustainability investment globally. Consequently, this has directed valuation bodies and others to suggest methods of incorporating sustainability considerations into the valuation process (for example RICS 2009, 2011, Lutzkendorf and Lorenz 2011, Warren-Myers 2011a and Sayce et al 2010). The demand for sustainability as a consideration in valuations or appraisals as a component of value is gaining traction (Lutzkendorf and Lorenz, 2011). Changing market conditions, resulting from the climate change debate, have meant the introduction of mandatory disclosure of energy usage (UK, EU and Australia), carbon pricing proposals and an increasing number of empirical studies identifying significant correlations between sustainability ratings and value components (see, for example, Newell et al 2011, Pivo and Fisher 2009, 2010, Eichholtz et al 2009, 2010, Fuerst and McAllister 2008a,b, 2010 and Miller et al 2008). However, for valuers to incorporate sustainability as an investment characteristic to be included as a point of consideration, valuers need to be knowledgeable of and capable of assessment, comparative analysis and judgement in this regard.

The discussion around the relationship between sustainability and value is not a new area of research. There has been an abundance of research, both theoretical and applied, to suggest there is a relationship between sustainability and value. However, the applicability of this research to valuation is limited (see Warren-Myers 2012). The difficulties for the valuation profession and the lack of applicable research has led to only limited suggestions as to how to value sustainability, for example, Lutzkendorf, and Lorenz (2005), Bowman and Wills (2008), Lorenz and Lutzkendorf (2008), RICS (2009), Muldavin (2009, 2010), Lutzkendorf and Lorenz (2011), Lorenz and Lutzkendorf (2011), CBRE (2011), Warren-Myers (2011a) and RICS (2011). Increasingly, academics, industry and professional bodies are expressing the need for a thorough sustainability assessment and analysis in the valuation process. Directives in the form of guidance notes, valuation information papers, presentations, forums, and advice and models have been published to aid valuers in this challenge. However, it is unknown how much valuers are incorporating sustainability into valuation practice or to what extent, at present. Whether valuers have the knowledge and skills to be able to perform this assessment and analysis in the valuation process, and to accurately report on the effects sustainability may have on the value of an asset, is also unknown.

Role of the Valuer

At first glance, the initial perception is that valuers can have a crucial role in sustainability investment in a global environment, not just in property. It is the valuers' role primarily to assess market value for assets; market value is defined by:

“The estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.” (IVSC, 2007, 1, 3.1)

Valuation practice is not about leading the market, it is about reflecting the market in an assessment of value for a particular asset at a particular point in time, given the dynamics of the market and all relevant factors that may influence the reactions and actions of market stakeholders or market conditions (Adair et al 1996, Gallimore 1996, Mallison and French 2000). However, the reliance on these assessments of market value by the wider community infers the need to ensure the accuracy and reliability of valuations. The code of ethics that governs the valuation profession in professional conduct ensures that all valuations should and will be produced in accordance with the valuation standards and guidelines, and take into account any relevant factors that may affect the assessment of market value. Factors, ranging from economic, social, environmental, that affect market value are numerous, and not always easily assessable, however, they do need to be considered during the

assessment. Particularly if the market actors (buyers, sellers, landlords and tenants) are addressing these issues in their own processes of buying, selling, leasing or occupying.

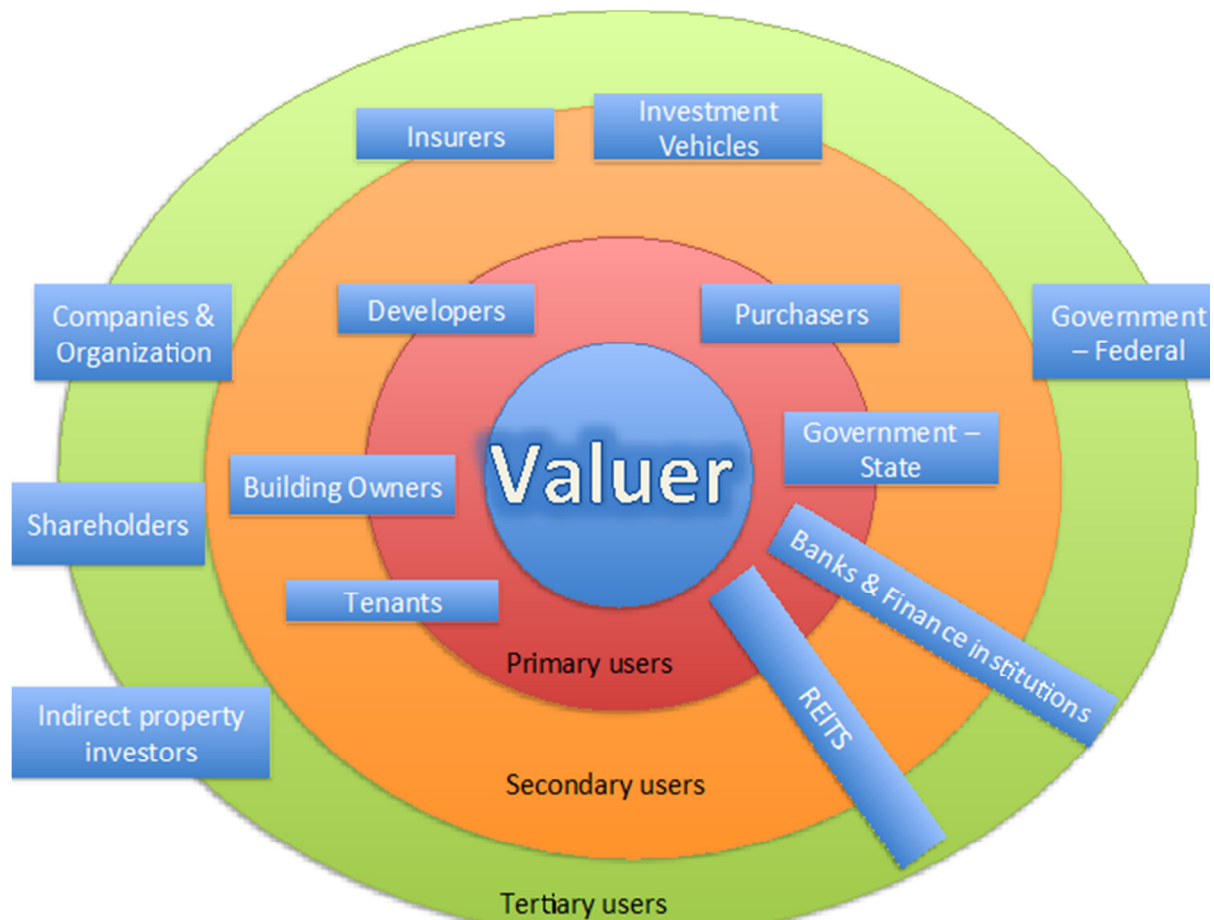
As shown in Figure 2, a valuer's primary role is initially the direct client relationship, with either an occupier regarding rental assessment or negotiation, or a building owner requiring a market valuation or rental assessment. However, the use of that information in the reports is more far reaching than that. As the figure shows, there are three tiers of users of valuation services - primary, secondary and tertiary. Some users branch across the sectors because of their varying use requirements for valuations and the multiple roles they play within the market. Primary users are as aforementioned and directly request valuation services. Primary users are numerous - developers, owners, tenants, purchasers to name but a few, and extend beyond those depicted in Figure 2.

However, secondary users are those like the banks who may not have directly requested the valuation, but rely on the reporting and accuracy of the information in a report provided by a building owner. Likewise, regarding the management of property portfolios, the portfolio manager did not request the valuation but uses the values and information to examine the portfolio performance and provides further reports in terms of the dollar value of funds under management (which is often publicly displayed for investment and reporting purposes).

Tertiary users are, for example, unit holders or shareholders, who buy shares in a Real Estate Investment Trust (REIT) on the stock-market, based on the performance of the REIT, which is reliant on the performance of the portfolio, and boils down to the individual valuation of the assets. Then there is the Federal government which taxes individuals based on the valuation that is undertaken on a state level (by the Valuer General), or requires valuation services for the administration of Capital Gains Tax (margin scheme adjustments). The reporting of statutory values are requested by the Valuer General but used by the State for Land Tax calculations and the Valuer General relies on the local government authorities who either have valuers on staff or outsource the work to valuation firms to undertake the valuations.

So the multiplicity in the role of the valuer and where a valuation may be used has far reaching consequences. Consequently, the implications of considering, or lack thereof, sustainability in the valuation process can be extensive, across multiple layers of stakeholders particularly if there is a relationship between sustainability and value. The relationship with sustainability, and assessment of the value of sustainability in buildings, is highlighted in Lorenz's (2008) model of the Virtuous Circle. Lorenz's model demonstrates that if valuers and advisors recognise the benefits of sustainability and reflect them in estimates of market value, it would create a positive incentive for sustainability to be incorporated into property. Consequently, the argument 'Why would I invest', is reversed to 'Why wouldn't I invest', as the relationship between sustainability and market value is evident.

However, from a valuation perspective, it is not the role of the valuer to create the positive perspective but to ensure that, when undertaking a valuation, all aspects and factors are considered and reflected in the assessment of market value. By adequately addressing the changing market perception and reactions of the market regarding sustainability in the valuation process, the market will be better informed to understand the impact on the value of their assets and furthermore this will create a foundation for future decisions relating to sustainability. Although Lorenz (2008) focuses on the positive aspect, a valuers' role is more about providing clarity and transparency in market value assessment, in the consideration of all factors that might affect the market value of a particular asset. As a consequence, sustainability as an increasingly important factor in the decisions and actions of market stakeholders needs to have accurate and adequate consideration in the valuation process.



The Pivotal Role of the Valuer

Source: Author

Figure 2

The Challenges of Assessing Sustainability in Valuation

Integrating sustainability information and characteristics into the valuation process is fraught with difficulty and, increasingly, the profession globally is adopting different practices, if at all, in different markets. Sustainability, integration and building technology development means buildings are becoming more efficient. There is an understanding that buildings that are not being upgraded or adapted are likely to depreciate at a faster rate and have higher levels of risk associated with them and, hence, be devalued (Warren-Myers 2010, Lutzkendorf and Lorenz 2011). Owners are aware and are acting to purchase, upgrade and retrofit their assets in order to increase levels of sustainability in their property portfolios, albeit at varying levels (Warren-Myers 2010).

However, this suggests that sustainability is a consideration in the actions of stakeholders in the market and consequently there are links to the value relationship. Sustainability unquestionably does and will continue to affect value; however, the question remains, how should the profession deal with the incorporation of sustainability into valuations? It is necessary that sustainability be incorporated and reflected in the valuation process, however, the validity of its inclusion is reliant on the capacity, expertise and experience of the valuer (Lorenz et al 2008).

The multiplicity of characteristics of sustainability, interlaid with the many characteristics and variables already present in valuation, make the assessment of sustainability as a singular factor difficult to encapsulate. Rating tools have gone some way towards identifying different sustainability elements, although generally more from environmental and social perspectives. However, issues raised by Warren-Myers and Reed (2010) highlight the impracticalities of relying on ratings tools to provide a 'be-all' answer to sustainability assessment.

Lutzkendorf and Lorenz (2011) compiled lists of traditional information characteristics and variables, and incorporated a list of sustainability issues, to create a 'new' list of information for valuation purposes. The incorporation and assessment of the additional variables within valuations will be as difficult, if not more so, than identifying a singular valuation input parameter (Muldavin 2009, Sayce et al 2010). Increasingly, there is a need for direction as to how valuers assess sustainability in building stock and how it is then addressed in valuations. Publications by industry bodies like the RICS and academics are helping to address the situation. However, it is questionable whether valuers are sufficiently informed of the sustainability parameters to effectively assess sustainability within buildings and to be able to accurately portray, compare and incorporate them into the valuation process.

The role of the valuer is far reaching and the implications of their lack of consideration of sustainability in valuation practice will cause levels of inaccuracy in the reporting process and beyond, potentially affecting larger markets. It is not the valuers' role to add value in the name of sustainability, or direct the markets as to the value of sustainability. Valuers firstly need to understand the role it plays in the market and the relationship with market value and then reflect this in valuation practice. By reflecting the relationship in the valuation process, valuers need to be justified in ascertaining this and considering it, as there needs to be evidence of any relationship to justify inclusion. However, valuers cannot find evidence or justify an inclusion of sustainability consideration, because they potentially lack the knowledge or skills to adequately incorporate the complexities of sustainability assessment into the valuation process.

Valuation practice is reliant on the 'art and science', of borrowing concepts and approaches from economic theory which are then applied to a heterogeneous asset which exists in an imperfect market. Although the science of valuation methods provides the structure and rigor, the unique characteristics of property and the interpretation and assessment of them is the art, which is dependent on the knowledge, experience and understanding of the nuances and intricacies of the market. Consequently, valuers' judgement is an integral part of the valuation process (Diaz, 1999). This research investigates the current extent of valuers' knowledge and understanding to address sustainability equitably in the context of valuation practice. The research project will endeavour to track this development over time.

RESEARCH METHODOLOGY

Different countries are presently at different stages about how integrated and prominent sustainability rating tools are used as a metric to define sustainability levels in property. Consequently, the differences have an impact on how sustainability is incorporated into valuation, especially in the early stages of getting valuers to include commentary on sustainability in their valuation reports of market value. This study investigates the Australian market and valuers' current incorporation of sustainability discussion and reporting in the valuation process, and then examines their knowledge and perception of sustainability.

This paper and associated study is the part of a larger research project, investigating the role of knowledge development in valuation practice. Warren-Myers (2010) surmised that the art in

valuation practice involved a strong reliance on heuristics; however, when there is a shift or change in the market, such as the adoption of sustainability occurs, it is unknown how new heuristics are developed to accurately portray the implications of the changes in market value. The purpose of the research project is to examine the change in valuers' knowledge of sustainability, and determine how knowledge development informs the valuation process and the inclusion of sustainability assessment and judgement in valuation practice. The study surveyed eighty valuers working in the Australian market in 2011, recruited through the distribution of online survey links through the professional bodies' newsletters, namely the RICS (Royal Institution of Chartered Surveyors) and API (Australian Property Institute) and at some industry functions. The survey consisted of both open and closed-response questions which investigated valuers' knowledge and ability to perform sustainability assessments and to report on and integrate sustainability into the valuation process. The survey is longitudinal and intends to track the change in valuers' knowledge development over time. This paper reports on the findings from the survey conducted in 2011.

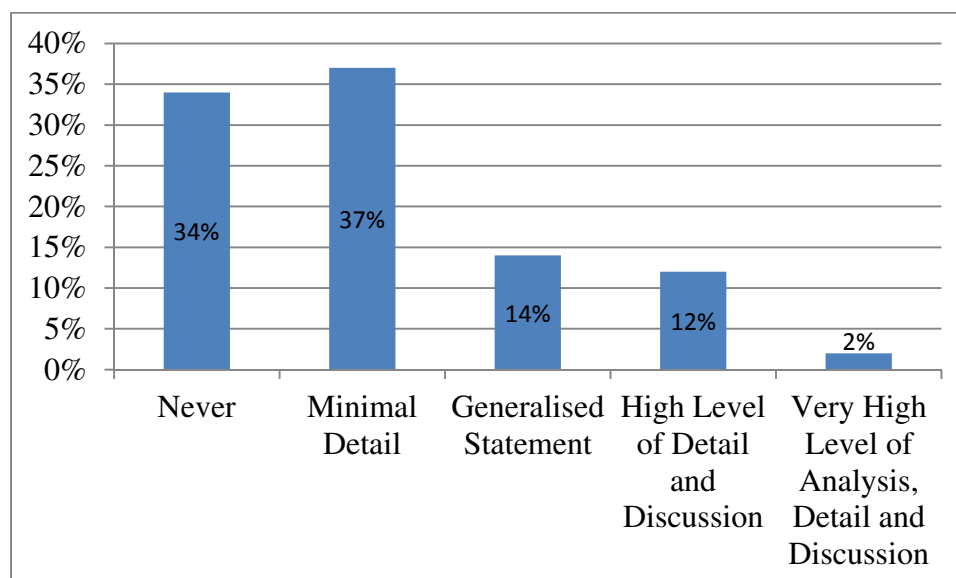
There are some limitations with this approach. Recruiting the sample population is inherently difficult and those valuers who do respond to the survey generally have an interest in, or are working in the field with, sustainability. Thus, there may be some bias in the survey findings, as the valuers who respond may be more informed or engaged in the context of sustainability in valuation.

RESULTS

This section reports results for four aspects of the survey:

1. valuers' actions in terms of reporting and advising on sustainability;
2. valuers' own perceptions of their knowledge of sustainability;
3. valuers' understanding of the concept of sustainability; and
4. how valuers would classify or assess sustainability in buildings.

The survey also included several 'test' questions, to interrogate the level of knowledge, with several key questions about the sustainability rating systems prevalent in the Australian marketplace.



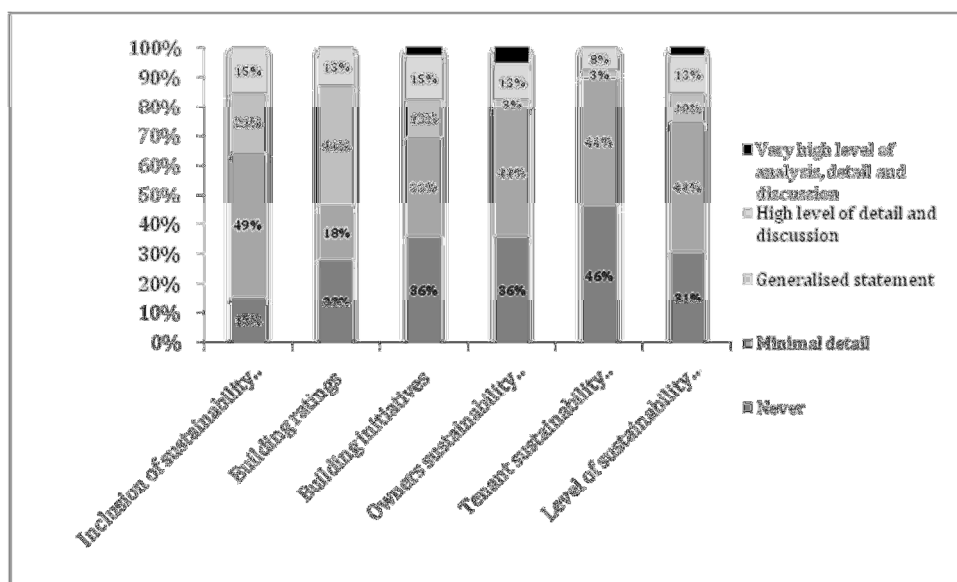
Sustainability Reporting in Valuation Reports

Source: Author

Figure 3

In 2008 it was found valuers rarely included any commentary or discussion about sustainability (Warren-Myers 2010). However, the current survey found that 66% of valuers are including some reference to sustainability in the valuation report (Figure 3). Only 34% indicated they never included any discussion or reporting of sustainability. The level of discussion and inclusion in reporting on sustainability was at a minimal level of detail regarding sustainability (37%), valuers demonstrating changes in their approach to this particular matter, and only 14% used generalised statements to discuss sustainability. Only a small proportion of the valuers surveyed indicated they reported on sustainability in some detail and discussed it within the report (12% at a ‘high level’ and 2% ‘very high level’). These findings demonstrate a shift in valuation practice as, previously very few valuers incorporated any discussion on sustainability in valuation reporting.

The survey investigated what particular elements valuers’ reported on in their valuation reports, and to what extent (Figure 4). The results show valuers reported on the fact that the building had ‘sustainability’, mainly in a minimal fashion (49%). However, valuers increased the level of detail to a ‘generalised statement’ when recording the building’s rating according to the rating tool, indicating a preference for reporting on sustainability through the use of a third-party assessment scheme (rating tool). Minimal detail was provided regarding owners’ sustainability initiatives, however, discussion of building initiatives and tenant sustainability were rarely reported.



Valuers’ Level of Detail on Reporting on Sustainability

Source: Author

Figure 4

Interestingly, 68% of valuers indicated they were advising clients on sustainability, yet a vast number are reluctant to report comprehensively on sustainability in their valuation reports. The differences between ‘advising’ clients on sustainability and incorporating the information into valuation reports may be due to different legal connotations in that valuers can be sued for incorrect information in a valuation report, whereas it is more difficult to be sued over advice.

Valuers were asked to rate their knowledge of sustainability concepts, attributes, rating tools, programs and legislation, using a 5-point scale, zero being nothing, 5 being very knowledgeable (expert) (Figure 5). Generally, valuers believed they had very good knowledge of sustainability as a concept and about sustainability in property. They also believed they had very good or developing knowledge of the Green Star rating tool and, to a slightly lesser extent, the NABERS rating tool. Valuers’ responses to the requirements in the building code and the Property Council of Australia

(PCA) quality grading matrix inclusion of sustainability were moderate, indicating they had limited knowledge. The recently introduced BEEC (part of the mandatory disclosure project), NatHERS (Nationwide House Energy Rating Scheme), BASIX (Building Sustainability Index) and Green Globes 21 had very low knowledge ratings, indicating they knew nothing, knew a little, or they had heard of it.

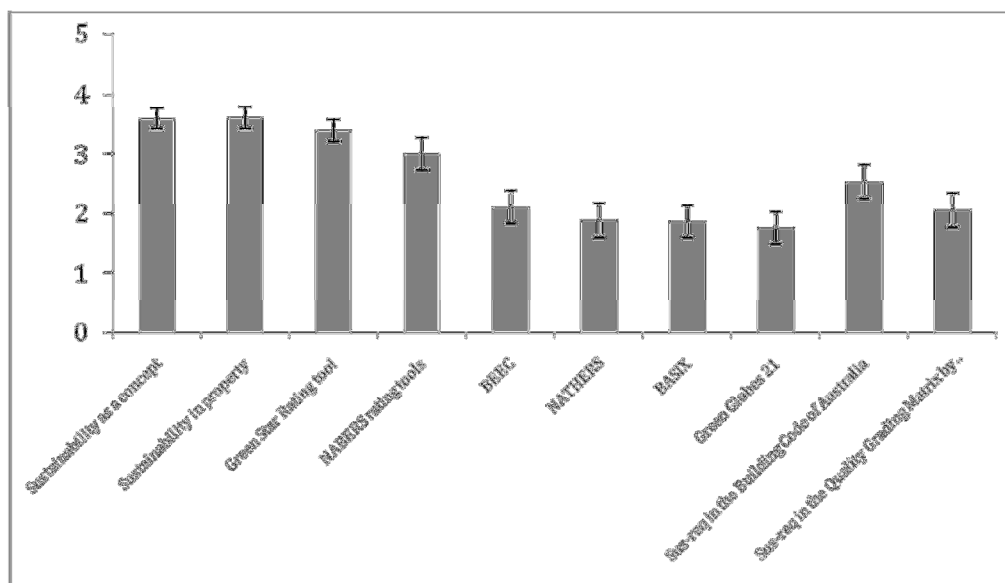
Name	Assessment	Star Rating	Rating frequency	Administrator	Date Introduced
NatHERS Nationwide House Energy Rating Scheme (residential)	Energy assessment (design)	0 – 10 stars	Once off	Department of Climate Change and Energy Efficiency (DCCEE)	1993
Green Globes 21 (International)	Sustainable management, social economic, cultural heritage, environmental	Award	On application	NSW 3 rd Party assessor GG	1997
NABERS National Australian Built Environment Rating System (office and building types)	Operational, measureable building data, energy, water, waste, IEQ.	0 - 6 stars (½ stars)	Annual	DECC (DEUS) NSW Government	1998 (ABGR energy)
Building Code of Australia (residential)	Energy assessment BASIX / NatHERS	Out of 10 stars As above As above	Once off Once off Once off	State and Territory governments DCCEE	2000 2006 2003
Green Star (office and others building types)	Design, holistic, targets 8 environmental categories	4 – 6 stars (No ½ stars)	Once off	Australian Green Building Council	2002
BASIX Building Sustainability Index (residential)	Design based, targets water, thermal comfort and energy	Scored on water, thermal comfort and energy	Once off	NSW Government	2004
Property Council of Australia Quality Grading Matrix (office)	ABGR (NABERS) requirements	0 – 5 (now 6) stars	Annual	NSW Government	2006
BEEC Building Energy Efficiency Certificate (office)	Uses NABERS energy + lighting assessment and general energy efficiency guidance	0 - 6 stars (½ stars)	Annual	Federal Government	2010

Overview of Key Characteristics of Significant Rating Systems Used in Australia
Source: Green Building Council Australia (2012), NSW Government (2012), NSW Government (2012a), Australian Greenhouse Office (2000), Australian Government (2012), Property Council of Australia (2006), Australian Building Codes Board (2012), Commonwealth of Australia (2012)

Table 1

Table 1 provides an understanding of key characteristics, introduction date and assessment styles across major rating systems used in Australia across the various property types. Considering the

length of time these tools have been available and used in the market, specifically NatHERS, BASIX and the requirements of the Building Code of Australia and the PCA Quality Matrix, it is evident that the knowledge and/or education of the valuers of the existence or use of these tools and requirements has not been significant across the valuation profession.



Valuers' Knowledge of Different Sustainability Elements

Source: Author

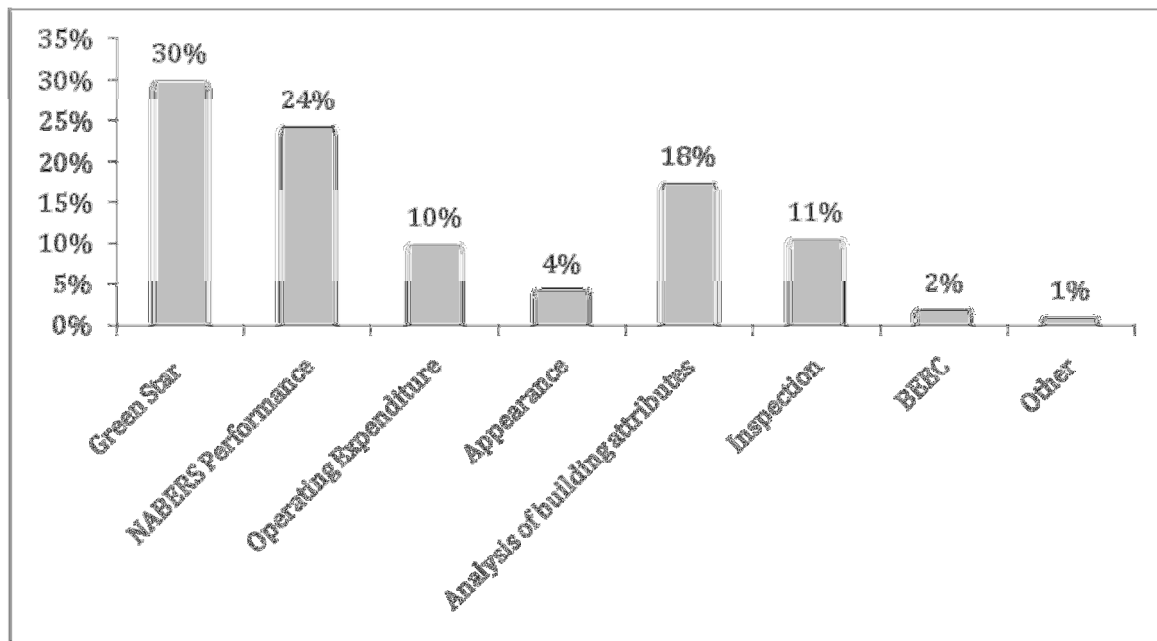
Figure 5

The primary assessment method used by valuers when discussing sustainability or assessing sustainability levels in buildings was the Australian Green Building Councils' Green Star rating tool (30%) (Figure 6). However, Green Star is a tool primarily for rating new buildings and has very limited application because of the exclusion of existing stock and the number of new buildings in comparison to the total building stock. This finding was even more surprising given that, in the last 12 months, the NABERS rating tool has received considerable profile and discussion through the mandatory energy disclosure program. (NABERS – National Australian Built Environment Rating System - also rates offices, hotels, retail, residential, schools, hospitals and transport based on performance in operation.) This disclosure program, up until November 2011, required a NABERS rating to be undertaken and the rating displayed in any advertising for buildings in excess of 2,000 sqm for sale or lease. (Since November 2011, this has been upgraded to a full Building Energy Efficiency Certificate (BEEC), which includes a NABERS assessment rating as one part of the certificate assessment criteria).

Considering the publicity the NABERS tool has received in the last 12 months, it was expected to have achieved a higher result than 24% and, in particular, a better result than Green Star, because of NABERS' applicability to all office buildings, new and existing. However, the results of this survey indicate that is not the case and Green Star is still perceived to be the tool to assess sustainability levels in commercial office buildings.

Finally, simple testing of knowledge was undertaken to ascertain what valuers actually knew about the key rating tools used in Australia. Valuers were asked key questions about the rating tools prevalent in Australia - namely, Green Star and NABERS. They were asked how many environmental categories Green Star had, the fundamental difference between Green Star and NABERS and the maximum level of stars that can be achieved in each of the rating systems. The

responses were then coded depending on the correctness of the answer. Many indicated they did not know the answer and that information has also been included in Figure 7, the importance of this response being that some valuers were willing to admit they did not know the answer to the question rather than guess and get it wrong.



Valuers' Sustainability Assessment Techniques

Source: Author

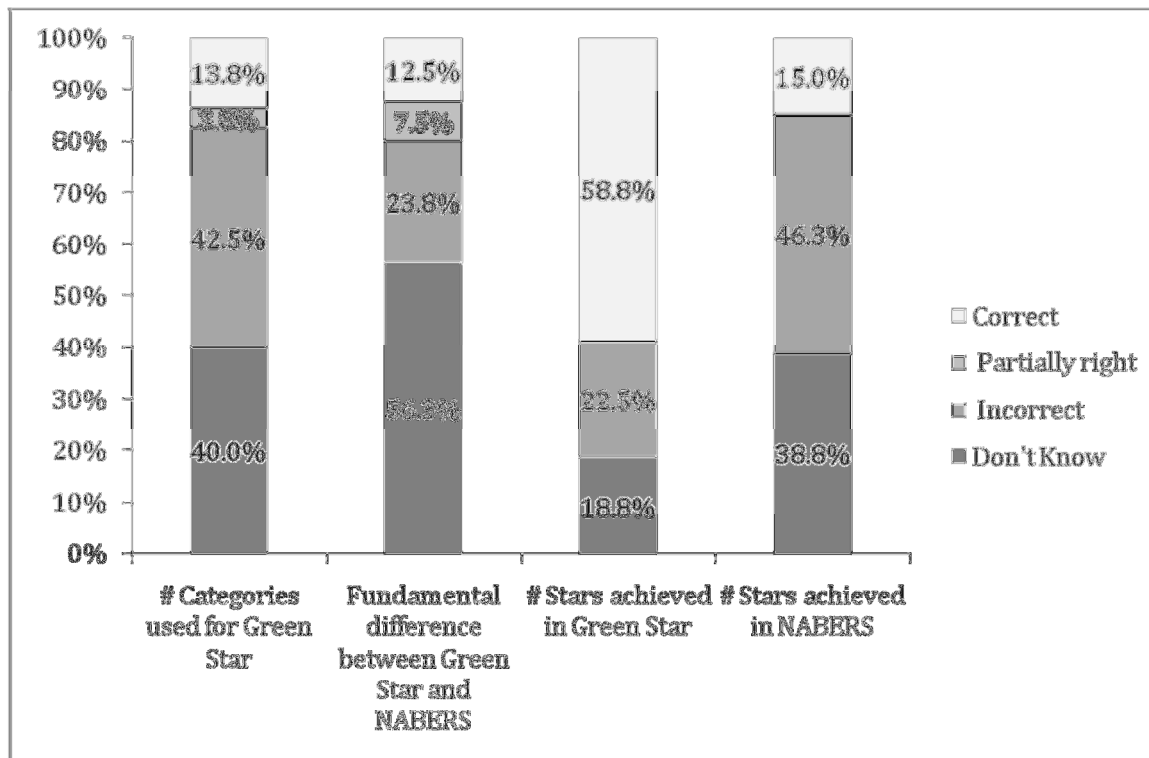
Figure 6

The number of stars achievable under Green Star had the highest proportion of correct answers (58.8%), which concurs with valuers' beliefs that they know about the Green Star rating tool. This finding may also explain why valuers are more favourable towards the use of Green Star as a sustainability assessment metric, rather than other tools or mechanisms, when discussing sustainability. However, on examination of further details of the Green Star tool, valuers are not so correct. When asked about the number of categories Green Star uses to rate buildings, only 13.8% were correct, 3.8% were partially correct, an overwhelming 42.5% were incorrect, and 40% didn't know. This indicates that valuers have a superficial level of knowledge about Green Star which they rely on when discussing and reporting on sustainability.

The lack of knowledge evident regarding the categories within Green Star is problematic in valuation, because the assessment mechanisms of Green Star mean that multiple approaches can be used to achieve the same star rating. This has major implications for valuation; two buildings, both with a 5 star Green Star rating, can have achieved the rating in entirely different ways, one mainly through achieving high points in the energy category and the other in a compilation of other categories. Fundamentally, they are very different buildings in a performance context, and also from an occupiers perspective, which has implications for the rental profile and letting-up judgements made in market value assessments (Warren-Myers and Reed 2010).

The questions asking whether valuers understood the difference between the Green Star rating system and the NABERS rating system also indicated a high level of valuers not knowing the difference (56.3%), with 23.8% being incorrect and only 12.5% knowing the difference between the two tools. The key differences are that Green Star rates potential performance based on the

assessment of the building's design and is usually for new buildings, whereas NABERS rates the actual performance of the building after 12 months of operation. There are other tools, but these were the two tools tested due to their prominence in the industry. As the Green Star and NABERS tools are the primary metrics valuers have identified as their sustainability assessment measures, it is a concern that their apparent knowledge of these metrics appears to be quite simplistic, and is, in fact, only at a superficial level.



Knowledge Testing of Sustainability Assessment Tools

Source: Author

Figure 7

The limited knowledge valuers are demonstrating of sustainability rating tools (and sustainability) in this context is concerning. They have indicated they are including some discussion and acknowledgement of sustainability in valuation reports and that 68% would advise clients on building sustainability. However, the evident lack of knowledge beyond how many stars the tools have got is of grave concern, particularly given the length of time these tools have been around in the market (over a decade). Valuers are demonstrating a severe lack of knowledge which may cause significant problems in the context of valuation because of the way valuation reports are used and relied on by more people and institutions than just the initial requester of the valuation report.

DISCUSSION AND CONCLUSION

Sustainability in the built environment is not a new phenomenon and there is an increasing need for sustainability in its various forms to be reported on in valuations. The implementation of the Mandatory Energy Disclosure program has increased the discussion on sustainability performance levels (insofar as energy efficiency is concerned), which should make the implication and discussion of sustainability a consideration in valuation assessments and reporting. Valuers also need to be aware and sensitive to the stakeholder actions and reactions in the market to ensure their valuations are informed (Peto et al 1996). It is apparent that stakeholders in the market are discussing and acting on sustainability according to Warren-Myers (2011a) and recent market

reports, research and indices on sustainable buildings in the commercial property market are highlighting a positive relationship between the NABERS energy rating scheme and values (Newell et al 2011, IPD 2012).

However, at present, valuers are still displaying a high level of ignorance when considering sustainability, also lack of acceptance of market changes and trends and although many believe they have a good understanding they have a very limited one. Neglecting to understand changes in the market and the influence of sustainability in the property market will lead to distorted valuations, which will be enhanced by valuers limited capability to be able to explain and justify their rationale and judgment in valuations regarding sustainability (Lorenz and Lutzkendorf, 2008). Valuers' lack of knowledge is not justification for their lack of consideration of sustainability, and as part of the Code of Conduct and rules and standards that govern valuation practice in Australia, valuers are required to seek the information, education and upskilling necessary to undertake any valuation. The lack of or misapplication of knowledge and the dangers for professionals who believe they know considerably more than they do and are willing to report and advise clients, highlight the potential for litigious implications for the profession in the future.

It is apparent valuers in Australia are having difficulty ascertaining the differences between sustainability assessment tools and the fundamentals of the Green Star and NABERS rating tools, yet rely on these tools as the primary metric for sustainability assessment in valuation. The directions from the RICS and other researchers such as Lutzkendorf and Lorenz (2011), who argue more advanced analysis of sustainability characteristics should be incorporated in the valuation process to more accurately report on estimates of market value, may be premature, particularly in light of the inadequate knowledge displayed by valuers in the Australian market. In order to incorporate sustainability within valuation, it is apparent a major professional education session is required in order to up skill valuers and during this process techniques for sustainability assessment, issues with sustainability assessment, and an overview of current research and its implications should also be discussed.

Valuers need to be aware of some of the pitfalls of the rating systems and the level of technicality within the rating tools when using these systems for comparison. It is essential valuers understand the rationale of decisions by market stakeholders for investment and property development associated with sustainability and rating tools, in order to provide direction as to the 'hypothetical buyer/seller' perspectives to adhere to the requirements of the definition of market value. It is crucial that new techniques and advances are made or process to be evolved to accurately reflect the market (French et al 1996). Sustainability as a new 'factor' for consideration, where the market is actively 'making' decisions on this basis, requires inclusion and discussion of sustainability in the valuation process. Consequently, there is an increasing and urgent need to create, develop or evolve current valuation techniques and processes to include sustainability considerations accurately.

When developing methods for assisting valuers in being able to undertake comparative assessments based on sustainability and other property attributes, attention needs to be paid to factors that are not necessarily included in sustainability assessment schemes, but are a major component of sustainability. Techniques, methods or decision models need to be created to enhance valuers' sophistication for sustainability assessment and comparison in valuation practice, however, knowledge development around sustainability is required first, otherwise there is a risk of misapplication and inappropriate judgement used in application.

Warren-Myers (2010), in her study of valuers and sustainability, found that valuers (at the time of the data collection in 2008) lacked the knowledge and skills to incorporate sustainability into valuation practice. Although the terminology and discussion in the industry have developed, and

valuers are increasingly reporting and advising on sustainability in valuation practice, it would appear that the knowledge of sustainability in the valuation profession has not improved sufficiently, and is very limited. Potentially, this survey identifies concerning trends where valuers are discussing, advising and making market value assessments in relation to sustainability when they have a limited understanding of sustainability and the sustainability assessment metrics.

This finding highlights a major concern about the way valuation reports are relied on by the wider market, as well as the far-reaching consequences of valuers inadvertently applying heuristics and judgment in their assessments of market value when sustainability is a consideration. The risk of valuers misapplying or making ill-informed judgments that affect value, based on a limited knowledge of sustainability, may result in the mispricing of assets. In turn, the misinformation will cause considerable apprehension in regard to investment in sustainability, the financing of sustainability initiatives or sustainable assets and could result in the valuation profession being put at risk with increasingly litigious consequences.

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