

Briefing Paper: The Built Environment Skills Collaboration Framework

**DRIVING INDUSTRY-LED COLLABORATION ON
SKILLS IN THE BUILT ENVIRONMENT**

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For background and detail on the proposals set out in in this Briefing Paper, see the *Sustainability Skills Collaboration Framework* report (ASBEC, 2013).

Disclaimer:

While ASBEC's Jobs & Skills Task Group endeavour to provide reliable analysis and believes the material it presents is accurate, it will not be liable for any claim by any party acting on such information.

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INTRODUCTION

The sustainability agenda is critical to Australia's ability to respond to the challenges associated with climate change, maintaining competitiveness in a global market, and ensuring our cities are great places to live and work.

Australia's built environment sector has the opportunity to initiate a step change in the productivity, liveability and sustainability of the urban landscape.

The tangible benefits of investing in sustainability are already being experienced in some parts of Australia's built environment. In the commercial building sector, green buildings attract tenants more easily; command higher rents and sale prices; save money through reduced energy and water use; lower long-term operation and maintenance costs; and improve worker productivity and occupants' health and well-being. These benefits are typical of the dividends that accrue from smart investments in sustainability across the built environment.

However, skills gaps are seriously limiting the capacity of the sector to realise opportunities like these across the economy.

Attempts to address sustainability skills gaps are not uncommon. However government agencies, industry bodies, professional associations and educational institutions have often found themselves starting from scratch each time a new intervention is attempted. Often programs, materials and information developed by separate entities are not properly shared and disseminated, resulting in the same discussions occurring again and again with key stakeholders, resulting in frustration and a lack of significant progress.

Given the scale and urgency of the challenge, current efforts to address these skills gaps are unlikely to deliver the necessary improvement across the sector. A framework for effective collaboration is essential to overcome these inefficiencies and address skills gaps at the necessary rate.

THE CASE FOR A BUILT ENVIRONMENT SKILLS COLLABORATION FRAMEWORK

Sustainability skills are essential skills

Sustainability skills are the "the technical skills, knowledge, values and attitudes needed in the workforce to develop and support sustainable social, economic and environmental outcomes in business, industry and the community".¹

Education for sustainability helps build people's capacity to innovate and implement solutions. Sustainability is a way of approaching work; a way of thinking about and analysing work, and about how workers apply existing skills. Because sustainability issues are intrinsic to the built environment, the need to address them isn't an optional extra; it is central to the process of adapting to the changes that are shaping the built environment sector in the twenty-first century.

Significant progress has been made in promoting sustainability skills in certain sections of the built environment sector workforce. However an integrated, sector-wide approach is needed if workers are to gain the required skills at the rate necessary.

There are four key reasons that a sector-wide collaboration framework is needed to move the sustainability skills agenda forward:

- Sustainability skills deficits are leading to productivity losses in the built environment sector
- Vocational and tertiary training is important, but ongoing learning is just as important
- Coordination of resources is required to efficiently address learning needs
- Collaboration is the most effective way of coordinating resources

Sustainability skills deficits are leading to productivity losses in the built environment sector

Deficits in skills for sustainability reduce the built environment sector's ability to improve productivity, deliver government policy and meet community expectations.

There is substantial evidence for the link between increased sustainability and productivity.² Notably, a report by Cambiar Consulting (2008) concluded that, with the right market settings, six Australian market sectors (renewable energy, energy efficiency, sustainable water systems, biomaterials, green buildings and waste and recycling) then valued at \$US15.5 billion and employing 112,000 people could grow by 2030 to a value of \$243 billion and 847,000 jobs.

The capabilities needed to unlock these opportunities encompass both 'soft' skills and specific technical skills, including (but not limited to):

- Building design and construction
- Waste reduction and management
- Water management
- Energy efficiency in lighting, heating, ventilation and cooling
- Procurement
- Indoor air quality
- Facilities management

¹ Council of Australian Governments (2009).

² This literature is well documented in *Our Cities, Our Future – A national urban policy for a productive, sustainable and liveable future* (2011) and the *Australia in the Asian Century White Paper* (2012).

Skills needs are constantly changing as technology evolves and the importance of sustainability is increasingly recognised. Embedding sustainability skills across the economy means having an ongoing (rather than one-off) capacity to identify and address skills deficits. To properly understand the causes of deficits in sustainability skills, it is important to consider the barriers which inhibit both the supply of and demand for sustainability skills (Table 1).

Supply side	Demand side
<ul style="list-style-type: none"> • VET sector training does not meet the needs of business • Lack of access to appropriate training providers, and a lack of trainers with the required skills • Research does not accurately reflect skills shortage across all states and territories • TAFE/VET funding model does not facilitate development and delivery of qualifications and courses that do not return an immediate financial benefit • Funding model does not cater to upskilling existing workers 	<ul style="list-style-type: none"> • Employers often don't understand what 'sustainability skills' are and why they are important • Market demand for sustainability skills is low due to lack of understanding of upsides. • Limited investment in up-skilling (especially in SMEs) • Sustainability skills overshadowed by the general skill shortages • Cost of training is prohibitive • Lack of policy / regulations to drive demand in training

Table 1: The barriers which inhibit both the supply of and demand for sustainability skills

Vocational and tertiary training is important, but ongoing learning is just as important

The built environment sector needs a more informed and skilled workforce that treats sustainability as a core focus, not an optional extra.

Vocational and tertiary training plays an important role in achieving this goal, and has been the rightful focus of much attention. However sustainability skills are not only gained at the beginning of an individual's working life. Lifelong learning is especially essential in the built environment sector, as it is so sensitive to technological and social change.

The economic, environmental and social drivers of sustainability demand that the sector's workers continually update their skills and knowledge. However moving 'lifelong learning' from catchphrase to reality will require sustained focus and co-ordination on strategies that improve availability and take-up of training across the sector.

Coordination of resources is required to efficiently address learning needs

There are many individuals that make an incredible contribution to addressing the skills needs of the sector's workforce. These people work for industry, governments, education providers and other key stakeholders, and operate through many different formal and informal networks. Their roles and responsibilities vary greatly, from high-level policy and program design to 'at the chalkface' teaching. So does their focus, from sustainability issues being at the core of their job role, to sustainability being a minor part of their role.

With such a diversity of individuals, organisations, roles, responsibilities, foci and definitions, significant issues arise. To mitigate these issues in addressing sustainability skills, better coordination of continuing professional development, education and training is needed.

Greater coordination will result in:

- Easier and quicker discovery of sources of information and advice, potential partners; relevant case studies, and learning and other opportunities;
- More efficient and effective activity to increase sustainability, and;
- Improved educational outcomes for new and existing workers.

Collaboration is the most effective way of coordinating resources

Collaboration within the built environment sector and with external stakeholders provides the most efficient means for improved coordination of resources to meet sustainability skills learning needs.

Overcoming the multiple barriers to the uptake of sustainability skills requires an integrated and collaborative response that tackles both supply and demand side barriers.

This includes collaborations within the built environment sector (large enterprises and SMEs, industry associations, professional associations, peak bodies, industry skills councils), and with external stakeholders - education and training providers (higher education, VET, non-accredited training), and government (Federal, State) to identify skill gaps and the most appropriate delivery mechanisms to upskill workers, as well as the funding mechanisms to support the training.

OVERVIEW OF THE COLLABORATION FRAMEWORK

The Built Environment Skills Collaboration Framework sets out the structures and processes to enable effective communication and collaboration between diverse stakeholders to address skills issues in the built environment.

The purpose of this framework is to facilitate effective collaboration on skills issues between key stakeholder groups that are in a position to catalyse change across the built environment sector. These groups include:

- Peak bodies;
- Professional and industry associations;
- Industry skills councils;
- Companies (large and SMEs);
- State, territory and federal governments;
- VET and higher education providers and practitioners.

The framework seeks to do this through the implementation of 4 strategies:

1. Forming collaborations

Forming collaborations within the built environment sector, and with government and education and training providers is critical to the uptake of sustainability skills in the existing and new workforce across the country

2. Ensuring skills availability

Effective coordination between stakeholders across the built environment sector to identify and prioritise key sustainability skills, and ensure that appropriate delivery mechanisms are available and effectively resourced.

3. Encouraging skills demand

Partnerships between industry associations and professional associations to facilitate and support continuing professional development across the workforce, with enabling structures for the workforce to access training.

4. Creating a market for sustainability

Driving demand for a more sustainable built landscape through sector-wide collaboration

The framework proposes pursuing these four strategies via a comprehensive set of actions aimed at transforming the supply and demand for sustainability skills in the built environment sector (Table 2).

<p>1. Forming collaborations Forming collaborations within the built environment sector, and with government and education and training providers is critical to the uptake of sustainability skills in the existing and new workforce across the country</p>	<p>2. Ensuring skills availability Effective coordination between stakeholders across the built environment sector to identify and prioritise key sustainability skills, and ensure that appropriate delivery mechanisms are available and effectively resourced</p>	<p>3. Encouraging skills demand Partnerships between industry associations and professional associations to facilitate and support continuing professional development across the workforce, with enabling structures for the workforce to access training</p>	<p>4. Creating a market for sustainability Driving demand for a more sustainable built landscape through sector-wide collaboration</p>
<ul style="list-style-type: none"> • Hold a one day facilitated workshop with aim to get commitment to undertake the framework actions • Conduct a mapping exercise of sustainability skills stakeholders and influencers in the built environment • Establish a Built Environment Skills Advisory Group • Engage with Federal Government to define a collaborative structure to build on the gains of the Green Skills Agreement 	<ul style="list-style-type: none"> • Commission a study into the sustainability skills training needs of SMEs in the built environment sector • Develop pilot projects where universities and registered training organisations partner with industry 	<ul style="list-style-type: none"> • Provide support for professional associations to define minimum sustainability standards where these have not been addressed • Professional associations, informed by industry associations, to review accreditation of university degrees to ensure sustainability skills are embedded in the curriculum • Develop a knowledge brokerage service on to promote sustainability skills in the built environment sector 	<ul style="list-style-type: none"> • Establish a built environment entity similar to Constructing Excellence (builds on ASBEC’s application for a Built Environment Industry Innovation Precinct) • Link with relevant research programs (e.g. CRC Low Carbon Living) where significant investment is targeted at a similar outcomes • Educate customers, particularly non-premium commercial sector, on business case for sustainability

Table 2: Key strategies and related framework actions

FRAMEWORK ACTIONS AND TIMELINE (SUMMARY)

This section provides an overview of the proposed framework actions and how they could be sequenced for best effect.

Phase 1: Building consensus

Phase 1 outlines the initial steps that are required to ensure that the full range of stakeholders have the opportunity to participate and buy into the subsequent action. Phase 1 requires government or private investor funding to ensure that the first phase of activity is completed efficiently through the use of dedicated project managers and specialists. *Timing: 2nd quarter 2014 onwards*

1. Hold a one day facilitated workshop with aim to get commitment to undertake the framework actions	Led by:	ASBEC in partnership with other built environment sector peak bodies
	Partners:	Federal and State Government, and Education and Training providers
	Funding:	Government funding (estimated at around \$15,000) and industry in-kind
2. Conduct a mapping exercise of sustainability skills stakeholders and influencers in the built environment sector	Led by:	ASBEC in partnership with other built environment sector peak bodies
	Funding:	Government grant & industry in-kind (time and intellectual capacity)

Phase 2: Establishing the framework

Phase 2 establishes the foundation for long-term activities, including setting up education and training frameworks that will be utilised by a wide range of industry and professional stakeholders.

Timing: 3rd quarter 2014 onwards.

3. Establish a Built Environment Skills Advisory Group	Led by:	Built environment sector peak bodies
	Partners:	Federal and State Government, and Education and Training providers
	Funding:	Industry and Government funding
4. Commission a study into the sustainability skills training needs of SMEs in the built environment sector	Led by:	Built Environment Skills Advisory Group
	Funding:	Government grant & industry in-kind
5. Engage with Federal Government to define a collaborative structure to build on the gains of the Green Skills Agreement	Led by:	Built Environment Skills Advisory Group
	Partners:	Federal and State Government, linking in with COAG process
	Funding:	In-kind
6a. Professional associations, informed by industry associations, to review accreditation of university degrees to ensure sustainability skills are embedded in the curriculum	Led by:	Professional associations
	Partners:	Built Environment Skills Advisory Group
	Funding:	Professional associations
6b. Provide support for professional associations to define minimum sustainability standards where these have not been addressed	Led by:	Built Environment Skills Advisory Group
	Partners:	Professional associations
	Funding:	In-kind from professional associations

Phase 3: Consolidating the framework

Phase 3 includes the remaining options for action canvassed in the detailed *Framework* report. Actions in Phase 3 may be revised as the Built Environment Skills Advisory Group ensures that each is appropriate and congruent with the work undertaken in Phases 1 and 2. *Timing: 3rd quarter 2015 onwards.*

7. Educate customers, particularly non-premium commercial sector, on business case for sustainability	Led by:	Built Environment Skills Advisory Group
	Partners:	Non-premium commercial sector landlords, tenants, facilities managers
	Funding:	Government grant and industry

8a. Establish a built environment entity similar to Constructing Excellence to drive innovation and change in the sector	Led by:	Built Environment Skills Advisory Group
	Members:	Australian Construction Industry Forum and ASBEC industry members, unions, industry associations, industry skills councils, companies
	Partners:	Federal and State Government, and Education and Training providers
	Funding:	Industry and Government seed funding, industry funding in long term

8b. Develop a knowledge brokerage service to promote sustainability skills in the built environment sector	Led by:	Constructing Excellence Australia
	Partners:	Companies, Education and training providers
	Funding:	Government grant & industry

9a. Link with relevant research programs (e.g. CRC Low Carbon Living) where significant investment is targeted at a similar outcomes	Led by:	Built Environment Skills Advisory Group
	Partners:	CRCs and other research partnerships
	Funding:	In-kind from Industry and education and training providers

9b. Develop pilot projects where universities and Registered Training Organisations partner with industry	Led by:	Built Environment Skills Advisory Group
	Partners:	Individual or groups of universities and companies and SMEs
	Funding:	Industry (providing support for student placements) and Government funding (by establishing UICs)

FRAMEWORK ACTIONS (DETAIL)

This section outlines the framework actions in more detail, including an indication of the roles of different stakeholders (who is to lead, and implementation partners), and source of funding where relevant.

For background and information on the proposals set out in in this Briefing Paper, see the *Sustainability Skills Collaboration Framework* report (ASBEC, 2013).

Phase 1: Building consensus

Phase 1 outlines the initial steps that are required to ensure that the full range of stakeholders have the opportunity to participate and buy into the subsequent action. Phase 1 requires government or private investor funding to ensure that the first phase of activity is completed efficiently through the use of dedicated project managers and specialists.

1. Hold a one day facilitated workshop with aim to get commitment to undertake the framework actions

The first step in implementing this framework is to run a facilitated one-day workshop with stakeholders from the built environment sector (peak bodies, professional associations, unions, ISCs etc.) and government and education and training stakeholders, with the aim to get commitment from parties to form working groups and commit funding to undertake the remaining framework actions.

Led by:	ASBEC in partnership with other built environment sector peak bodies
Partners:	Federal and State Government, and Education and Training providers
Funding:	Government funding (estimated at around \$15,000) and industry in-kind

2. Conduct a mapping exercise of sustainability skills stakeholders and influencers in the built environment sector

A mapping exercise should be conducted to identify key networks, existing collaborations, and opportunities for new collaborations in the built environment sector.

The mapping would address:

- key organisations (including relevant policies, activities, partnerships and resources)
- key roles within these organisations
- relevant networks of individuals and organisations (including statements of purpose, terms of membership, activities and resources)
- relevant case studies about building sustainability skills and applying them to the other actions.

Led by:	ASBEC in partnership with other built environment sector peak bodies
Funding:	Government grant & industry in-kind (time and intellectual capacity)

Phase 2: Establishing the framework

Phase 2 establishes the foundation for long-term activities, including setting up education and training frameworks that will be utilised by a wide range of industry and professional stakeholders.
Timing: 3rd quarter 2014 onwards.

3. Establish a Built Environment Skills Advisory Group

A Built Environment Skills Advisory Group (BESAG) should be established that includes industry (peak bodies, associations, unions, industry skills councils, companies), education and training providers, and government to oversee the outcomes of collaborations and share knowledge and best-practice across the sector. The BEASG would:

- be comprised of high-level representatives of the built environment sector, higher education, vocational training and the three spheres of government
- report directly at Ministerial level
- be supported by a dedicated and properly resourced secretariat that can coordinate cross-sector, cross-jurisdictional and cross-departmental action as appropriate
- provide a platform for dialogue on the skill needs of the built environment sector, using this framework as the basis for action
- facilitate the exchange of information and closer collaboration on skill development strategies.

Led by:	Built environment sector peak bodies
Partners:	Federal and State Government, and Education and Training providers
Funding:	Industry and Government funding

4. Commission a study into the sustainability skills training needs of SMEs in the built environment sector

Whilst there has already been research conducted on skills gaps and opportunities, these have not been sector-wide. It is important to develop a thorough understanding of the current initiatives across the whole built environment sector, and in particular, the skills needs of SMEs. This research should identify the skills training needs, barriers, and delivery mechanisms for SMEs in the built environment sector, and partnerships required to overcome skills deficit.

Led by:	Built Environment Skills Advisory Group
Funding:	Government grant & industry in-kind

5. Engage with Federal Government to define a collaborative structure to build on the gains of the Green Skills Agreement

To maintain momentum from the Green Skills Agreement, the industry needs to take a leading role in shaping the agenda for sustainability skills, and working with Federal and State government, through COAG or in a similar structure, ensure that actions are undertaken nationally. The Australian Education for Sustainability Alliance (AESA) has an active consultation process in advancing the higher education sector’s focus on reorienting the sector to equip the workforce to work for a sustainable future. A key achievement in collaboration would be to join up the Green

Skills Agreement process with the AESA initiative, which would make tangible the intent of the action plan to engage with higher education sector.

Led by:	Built Environment Skills Advisory Group
Partners:	Federal and State Government, linking in with COAG process
Funding:	In-kind

6a. Professional associations, informed by industry associations, to review accreditation of university degrees to ensure sustainability skills are embedded in the curriculum

Linking with the previous action, professional associations informed by industry associations who would provide input on the knowledge and skills required by the workforce, would review the criteria with which they endorse certain university degrees to ensure that the requisite sustainability skills are embedded in higher education qualifications.

Led by:	Professional associations
Partners:	Built Environment Skills Advisory Group
Funding:	Professional associations

6b. Provide support for professional associations to define minimum sustainability standards where these have not been addressed

The Built Environment Skills Advisory Group should engage with professional associations that have not developed CPD focussing on sustainability skills to identify minimum standards for ongoing learning. Professional associations that have developed sustainability CPD could play an important role on sharing their knowledge and experience with other associations.

Led by:	Built Environment Skills Advisory Group
Partners:	Professional associations
Funding:	In-kind from professional associations

Phase 3: Consolidating the framework

Phase 3 includes the remaining options for action canvassed in the *Sustainability Skills Collaboration Framework* report. Actions in Phase 3 may be revised as the Built Environment Advisory Group ensures that each is appropriate and congruent with the work undertaken in Phase 1 and 2.

7. Educate customers, particularly non-premium commercial sector, on business case for sustainability

There is an opportunity to spread the demand for more sustainable buildings to the non-premium commercial sector, as outlined in ‘The Next Wave’ Report (Davis Langdon, 2013) commissioned by Sustainability Victoria.

Educating the non-premium commercial sector would need to be developed in consultation with the target group to ensure it is effective. However, one approach could be to develop a knowledge brokerage service as outlined in the following action.

Led by:	Built Environment Skills Advisory Group
Partners:	Non-premium commercial sector landlords, tenants, facilities managers
Funding:	Government grant and industry

8a. Establish a built environment entity similar to Constructing Excellence to drive innovation and change in the sector

The establishment of a sector-wide entity similar to Constructing Excellence³ would build on an application ASBEC has put forward under the ‘Industry Innovation Precincts’ fund. This application is to develop a Built Environment Industry Innovation Precinct (BEIIP). BEIIP would bring together leading researchers, pioneering companies, and the most creative thinkers to come up with the innovations and practices that will help the industry succeed in the Asian Century.

Led by:	Australian Construction Industry Forum and ASBEC
Members:	Australian Construction Industry Forum and ASBEC industry members, unions, industry associations, industry skills councils, companies
Partners:	Federal and State Government, and Education and Training providers
Funding:	Industry and Government seed funding, industry funding in long term

8b. Develop a knowledge brokerage service to promote sustainability skills in the built environment sector

Building on the mapping exercise previously described, the knowledge brokerage service, consisting of a secretariat and an online portal, to (a) assist businesses to access independent information on

³ Constructing Excellence was formed in the United Kingdom in 2003 from uniting numerous industry bodies to form a powerful, influential voice for improvement in the built environment sector. Constructing Excellence is the single organisation charged with driving the change agenda in construction. The organisation exists to improve industry performance in order to produce a better built environment. It is a cross-sector, cross-supply chain, member led organisation operating for the good of industry and its stakeholders. For more detail, see the *Sustainability Skills Collaboration Framework* report (ASBEC, 2013).

relevant and appropriate training products (accredited and non-accredited), resources, and services, and (b) inform customers about benefits of investment in built environment sustainability would allow businesses to access the right information at the right time.

Led by:	Constructing Excellence Australia
Partners:	Companies, Education and training providers
Funding:	Government grant & industry

9a. Link with relevant research programs (e.g. CRC Low Carbon Living) where significant investment is targeted at a similar outcomes

There are a number of research partnerships such as the Cooperative Research Centre (CRC) for Low Carbon Living and CRC for Water Sensitive Urban Cities that link universities and other research centres with industry. The research undertaken as part of these CRCs will lead to a demand for skills in order to apply the research findings across the built environment sector. The proposed BESAG would engage with the CRCs and other research partnerships to link the potential demand for skills with the supply side.

Led by:	Built Environment Skills Advisory Group
Partners:	CRCs and other research partnerships
Funding:	In-kind from Industry and education and training providers

9b. Develop pilot projects where universities and Registered Training Organisations partner with industry

There is a need for increased collaboration between industry and education and training providers in the areas of teaching, student placement, and best-practice knowledge sharing between industry and teaching staff. To develop a stronger partnership between Universities/RTOs and Industry, the following actions are required:

- Developing generic legal frameworks and risk assessments for university-industry collaborations (UICs) to facilitate collaboration
- Companies to provide job placement opportunities for university students so that knowledge is translated to practical application of skills
- Developing networks between industry and education and training providers (lecturers and trainers) to share knowledge and best-practice
- Developing pilot projects where universities and RTOs work with industry to have industry experts as guest lecturers, as well as industry upskilling trainers and lecturers about best-practice sustainability skills

Led by:	Built Environment Skills Advisory Group
Partners:	Individual or groups of universities and companies and SMEs
Funding:	Industry (providing support for student placements) and Government funding (by establishing UICs).

About ASBEC

ASBEC is the peak body of key organisations committed to a sustainable built environment in Australia.

ASBEC's membership consists of industry and professional associations, non-government organisations and government observers who are involved in the planning, design, delivery and operation of our built environment, and are concerned with the social and environmental impacts of this sector.

ASBEC provides a forum for diverse groups involved in the built environment to gather, find common ground and intelligently discuss contentious issues as well as advocate their own sustainability products, policies and initiatives.

ASBEC is a non-profit volunteer organisation. Members commit their time, resources and energy to developing practical opportunities for a more sustainable built environment.

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