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CONFERENCE PAPER Climate Change Related Labour Market Implications for the Construction Industry Authors; Peter J Glynn, Dr Ros Taplin

Abstract:

Climate change will have a considerable impact on the construction and property industries. More specifically, policies and regulations made with regard to construction labour have future implications for the availability of *climate adaptive property*. Construction is an industry that is labour intensive, highly regulated and a significant adopter of the latest technology. The link between climate change and the labour market was recognised by the governments and others when they included provision for a "just transition" in the negotiating text for the now unrealised United Nations Framework Convention on Climate Change (UNFCCC) Agreement for COP15. The International Trade Union Confederation (ITUC) in its Statement to COP15 articulated its belief that climate change was an issue for the workplace and that it was therefore an issue for collective bargaining.

This paper examines the implications of climate change for the construction industry. Are policymakers and regulators sufficiently informed and aware to accommodate the workplace impacts of climate change and the requirements of a low carbon workplace? Are actors in the workplace sufficiently informed to effectively implement government initiatives?

Issues that are explored in the paper include:

- consultation with social partners and communities,
- training for workers in the area of adaptive construction and new cleaner technologies
- the role of collective bargaining, and
- green and "decent" job creation

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Climate Change Related Labour Market Implications for the Construction Industry

Introduction

Climate change will have a considerable impact on the construction and property industries. More specifically, policies and regulations made will impact on construction labour and have future implications for the delivery of climate adaptive property. This paper examines the implications of climate change policy for the construction industry labour market. The issues of whether policymakers and regulators are sufficiently informed and aware to accommodate the requirements of a low carbon workplace and are actors in the workplace sufficiently informed and able to effectively implement the technical, regulatory and social reform are discussed. The paper concludes that the current initiatives are individually suitable but the government's model is incomplete, lacks cohesion and so does not deliver to the extent required by industry or the workplace actors.

The paper further recommends that construction industry employer organisations and unions have an important role to play. They must be informed and active in their representation of the industry and the provision of relevant and timely facts to their members.

The paper does not discuss the science of climate change. Society and business is already changing to accommodate energy efficiency and a low carbon economy. In that case and for the present purposes, confirmation or denial of the science is incidental.

Disaster management is outside the scope of this paper. The recent Australian drought was a major concern, but a sudden major disaster requires a completely different response by the property and construction industry in regard to its management of labour. This industry does, as does all of industry, have an obligation to the community to have a plan for such contingencies.

The link between climate change and the workplace

The very public nature of the climate change debate, its focus on the science and international agreements has the effect of diverting attention away from the related and consequential issues. The labour market impact from climate change is one such issue. Further, and whereas workplace policy in Australia is developed in tiers from the national level to industry sectors and the workplace, as it relates to climate change the framework for workplace issues is being shaped by these international discussions.

The link between climate change and the labour market is demonstrated of in different spheres of influence:

- International climate change fora
- Domestic labour market management
- Technical and occupational regulation

Cohesive labour market initiatives are important to the domestic economy. The viability of business and industry and therefore their ability to continue to employ and sustain standards of living are dependent on the availability of skilled labour. It is therefore imperative that Australian labour market policy delivers on the requirements of a low carbon workplace.

• International climate change fora

Three separate initiatives have come together to ensure the labour dimension of climate change will be a factor in the discussions that surround international climate agreements. The initiatives, in chronological order are: the International Trade Union Confederation (ITUC) submissions to the 13th Conference of the Parties

(COP 13) to the United Nations Framework Convention on Climate Change (UNFCCC) in Bali (December, 2007) and to the UNFCCC COP 15 in Copenhagen (December, 2009); the United Nations Environment Programme (UNEP) commissioned Report, *Green Jobs: Toward decent work in a sustainable, low-carbon world* in 2008 which presented the potential labour market impacts of climate change; and the provision for a "just transition" in the negotiating text for the as yet unrealised UNFCCC COP 15 Copenhagen Agreement

The International Trade Union Confederation (ITUC) has been active at the UNFCCC COPs since they commenced in 1995 and has established a reputation as a credible advocate supporting environmental initiatives. In its report to the UNFCCC COP 15 the ITUC (Ryder 2009, p. 2) submits that "climate change raises important questions about social justice, equity and human rights …", that "...climate justice, the defence of rights and social protection are crucial to a fair and sustainable transition". These are strong statements to a global forum, but one assumes they were intended to have an impact. However and importantly the submission made reference to the effects of climate change on employment. It called for the establishment of a "just transition fund" (Ryder 2009, p. 12) to provide retraining and compensation for those whose employment is affected together with creation of climate adaptation programs that are labour intensive.

The Green Jobs: Towards decent work in a sustainable, low-carbon world (Worldwatch Institute and Cornell University ILR School 2008) provides quantitative evidence that the labour market is already changing as governments and industry seek to reduce their dependency on fossil fuels and adapt to the environmental impacts of carbon emissions. It finds that there will be net employment growth, that jobs will be created, employment will be substituted (move from one industry to another), jobs will be eliminated and existing jobs will transform into green jobs. The report's findings and policy messages, published separately (United Nations Environment Programme 2008) argue that there will be a redefinition of many jobs across the board.

The report findings emphasise the need for policy to ensure that change can be achieved efficiently and fairly. The point is also made that "coherent environmental, economic and social policies are critical and will require commitment at the highest political level" (United Nations Environment Programme. 2008, p 24). In commenting on workplace issues the report emphasises the inclusion of social reform and the goal of a just transition in the policy framework for a low carbon economy.

It defines a just transition as "a new mode of production and consumption that allows for greater social inclusion, equity and opportunity" and describes the scope (United Nations Environment Programme. 2008, pp. 278-280) as covering:

- workers rights
- decent work
- social protection
- social dialogue
- sustainable business

Negotiating text for the UNFCCC draft COP 15 Copenhagen Agreement. The Bali Action Plan directed the Ad Hoc Working Group for Long Term Cooperation and Adaptation (AWG LCA) to "launch a comprehensive process to address...the economic and social consequences..." (UNFCCC 2007, p. 1) and to prepare text for the draft of the Agreement that would be debated at the COP 15 two years later. The AWG LCA submitted to the UNFCCC that the negotiating texts include provision for the following:

"Recognising that economic and social consequences may result from response measures taken by any party; ... and

Recognizing the importance of avoiding and minimizing negative impacts of response measures on social and economic sectors, promoting [an effective][a gradual] and just transition in the most affected sectors, the creation of decent work and quality jobs, and contributing to building new capacities for both production- and service-related jobs." (UNFCCC AWG LCA 2009, p. 38)

While the agreement expected from the COP 15 did not materialise, the work of the Committee to fulfil its remit is ongoing.

In the context of Australian industry and workplaces, these three initiatives are important insofar as:

- Climate change policy has become linked to international agreements due to governments commitment
- International trade union policy has defined the union movement's bargaining framework for climate change and is being advocated by the ACTU President.
- Australia is a signatory to the Kyoto Protocol and has committed to the UNFCCC international negotiating process.

Neither the international climate agreements nor ITUC policy currently has any direct impact on domestic workplace policy in Australia. In fact, it is unusual for the labour agenda in Australia to be defined by international activity, and particularly a matter that derives from science or the environment. It is the nature of interest in climate change that has created the situation whereby domestic social and labour policy is measured against an international scale of acceptable behaviour.

• Domestic labour market management

In Australia predictions of a construction boom or a spike in construction activity invite questions about where the extra labour is to be found and will this labour have the skills to do the work to the standard required?

There are three recent studies that attempt to count the numbers required for green activity: the previously mentioned UNEP Green Jobs Report (Worldwatch Institute and Cornell University ILR School 2008); the EU Report *Links between the environment, economy and jobs*(GHK Consulting and Cambridge Economics and Institute for European Environmental Policy 2007); and the ACTU Report *Creating Jobs-Cutting Pollution: A roadmap for a cleaner, stronger economy* (National Institute of Economic and Industry Research, 2010). All predict a major adjustment in the labour requirements across sectors due to climate change. The UNEP report forewarns that the effect of greening enterprises will be the "redefinition of many jobs across the board" (United Nations Environment Programme 2008, p. 9) and in respect of the construction sector, it believes that the new green jobs will be performed by people who come from the industry and are retrained. It further observes that skills gaps and shortages are a "binding constraint' on the construction sector in Australia, and "the majority of architects and engineers worldwide are unaware of the materials, design and construction techniques available for energy efficient buildings and are therefore unable to put them into use in their projects" (United Nations Environment Programme 2008, p. 19).

The Global Financial Crisis (GFC) stimulus package of labour market programs developed by the Rudd Labor Government included the Home Insulation Program (HIP) and Building the Education Revolution (BER) program. Each has tested the sector's ability to meet the challenges of quantity and quality of labour. The HIP was designed to future-proof domestic residences against rising energy requirements, and to provide employment for low skilled labour (Combet 2010). The program was introduced with a short lead time and the nature of the work triggered the involvement of most levels of regulation of the sector's labour market:

- vocational training system and accreditation
- occupational registration
- business registration
- state-regulated consumer protection for domestic building and maintenance
- occupational health and safety mechanisms procedures
- technical standards and product approvals systems

The program was withdrawn amidst health and safety concerns, claims of fraudulent commercial transactions, poor workmanship and sub standard products (Combet 2010). The project management by the bureaucracy was also criticised as was the Minister responsible, Peter Garrett (Hawke 2010). The BER, while not withdrawn, has attracted similar criticisms.

The results of the HIP debacle provide sufficient grounds for the sector to re-evaluate its ability to meet increased demands for labour in terms of both quantity of workers and quality of work, and very importantly the supporting systems of regulation.

The Australian Council of Trade Unions (ACTU) has declared its intention to pursue issues of climate change and business practice in collective agreements (Morris 2010). To achieve this arguably would require a change to the workplace relations legislation regarding the definition of an allowable industrial matter (Commonwealth of Australia 2010). This is perhaps unlikely, but the declaration from the ACTU creates ambit for the pending discussions.

Employer organisations in Australia have remained quiet about the issue of climate change. The International Organization of Employers (IOE) believes this is a matter to be decided at the workplace and contests that it is a subject for collective bargaining, proposing social dialogue as the medium in the instance that workers wish to raise issues (International Organisation of Employers 2009).

Neither federal nor state governments in Australia have sought to enter the discussion of climate change implications for the country's labour force. The experience with the HIP, its reflection on the suitability of labour market structures, and the ACTU claim has left a lot of issues not satisfactorily settled.

• Technical and occupational regulation

The Australian workforce is highly regulated, the construction sector more so. Occupational licensing and registration is still required in many occupations, for instance electrical worker licensing and plumber registration.

The principles that underscore the regulation are technical competence ensuring safety to the installer, user and property. Regulation also requires that products used conform to specification and are fit for purpose. Australia has committed to conformance on technical matters with international standards.

Regulation can also prove to be a significant barrier to entry, particularly if there is more than one responsible regulatory authority. For example, electrical worker licensing is based on (i) the technical standard AS/NZ 3000 2007 Electrical Installation, known as the Wiring Rules (Standards Australia 2007) and (ii) state electrical safety regulation. It is an efficient relationship but the potential for a problem exists if the authorities lose sight of the required outcome and get lost in the bureaucratic process.

The change of many standards to adopt relevant energy efficiency, sustainability and carbon emission measures has occurred quickly. Standards developed through Standards Australia are the product of panels of technical experts, nominated through the relevant representative organisations. It is incumbent on the construction sector that its interests are effectively channelled through these intermediaries to ensure occupational, product and other standards meet the needs of industry to deliver an energy efficient, low carbon property in a cost effective manner.

The global marketplace means that supply chains can link many countries to one commercial transaction. The UNEP Report (Worldwatch Institute and Cornell University ILR School 2008) describes the restructuring of industries in six sectors in developing and developed economies. Australian industry will restructure along similar lines, for the same reasons given in the report. While the implications for the labour market are evident, the labour market planning process is not in place to be certain the transition will be smooth and fair to all affected.

Actions necessary to achieve a smooth and fair transition.

The quantitative work commissioned by UNEP, the EU and the ACTU establishes that there will be significant shifts in demand and provide information relevant to overall climate change planning. The terms of reference for climate change policy and planning must consider:

- the impact on the labour market and workplace
- regulators are informed and considerate of the workplace impacts
- actors in the workplace are informed and capable of implementing change

Research has been conducted to inform the policy-making process, including:

- Examination of the way other nations with a like social and labour market profile have approached the issue. The sample could be European Union, France and Britain; United States; and New Zealand.
- A review of the needs of the actors
- Consideration of whether financial implications are an impediment to any reform initiatives.
- Examination of the way other nations with a like social and labour market profile have approached the issue

The EU Heads of State in their climate and energy package have adopted the 20-20-20 targets:

- a reduction in emissions of 20% below 1990 levels
- 20% of energy is to come from renewable sources (wind, solar, wave)
- 20% reduction in primary energy consumption^{*} to come from energy efficiency measures

To be achieved by 2020.

The program is supported by a suite of complementary legislation including strengthening the EU Emissions Trading Scheme, binding renewable energy targets and carbon capture and storage (Europa website 2010).

The EU has in place complementary labour market programs and offers funding support to member states. EU research to quantify the labour market found that changes due to adaptation and mitigation will produce net job gains, consistent with the findings of UNEP and the ACTU.

France, under its Grenelle 1 and 2 programs committed to the EU 20-20-20 targets and decided to go further by setting a target of 23% for renewable sources (Euractive Newsletter 2010). Its strategy is developed across 13 sectors: building, planning, transportation, energy, water, agriculture, biodiversity, health risks, waste, research, consumption, governance and overseas (Europa website 2010).

France's Green Growth Mobilisation Plan (Ministère de l'Écologie, de l'Énergie du Développement durable et de la Mer 2010) provides for action in respect of jobs growth through recruitment requirements; quality and quantity of labour required; publicity and promotion of the occupations in demand; incorporating green growth in all training; and the training of teachers. The Plan crosses the three portfolios of education, business and regional development.

The United Kingdom's (UK's) philosophy is reflected in its 2050 Pathways Analysis that evaluates the choices that will need to be made over the next 40 years (Department of Energy and Climate Change 2010). The UK has been aggressive in its commitment to meeting the climate challenge. Its Climate Change Act 2008 resolves to cut UK emissions by 34% by 2020 and 80% by 2050. It's "UK low carbon transition plan" is built around five higher order principles of protection, preparation, limitation, activity and support (Department of Energy and Climate Change 2009).

A UK Plan for workplaces and jobs encourages businesses to internally become low carbon emitting businesses and externally as the providers of goods and services to a low carbon market place. It proposes that the education system support the workplace by teaching the skills for the emerging low carbon businesses.

The United States (US), like Australia, has declared only a broad statement of intent with regard to the Copenhagen Accord. Its suite of programs to support the intent includes reducing emissions in public buildings, promoting technology and research and international cooperation (Environmental Protection Agency 2010).

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^{*} OECD Definition: Primary energy consumption refers to the direct use at the source, or supply to users without transformation, of crude energy, that is, energy that has not been subjected to any conversion or transformation process (United Nations 2001).

New Zealand's commitment to climate change and its programs are linked to its emissions trading scheme (ETS) which began in July 2010 on a phased-in basis. It has committed to reduce emissions up to 20% below 1990 levels by 2020. The New Zealand greenhouse gas emissions profile is unique given that half its emissions are generated in the agriculture sector which at present is exempted from the ETS, and it has one of the highest proportions of renewable energy generation in the world (Ministry for the Environment 2009).

In comparing the strategies of New Zealand with the EU and its member states, the EU has strong detailed policy, and the ETS as the mechanisms for measurement and central control whereas New Zealand is relying on the ETS alone as the measurement and control mechanism. Australia and the US have not committed to a strategic framework or control mechanisms. In the instance of a climate crisis, the EU and NZ are arguably better placed to meet the challenge because they have in place mechanisms for adaptation, mitigation and funding and accordingly the capacity to better absorb the economic and social impact.

From the perspective of the actors in the workplace, the strategies of EU governments are much more accommodating of their needs, are responsive to the changes in the structure of industry that are occurring and provide the resources to balance the supply and demand for labour.

• A review of the needs of the actors

The actors relevant to this discussion will be confined to government, public sector and regulators, industry and labour/management at the workplace. Others such as consumers, society and supply chains are very important but it will be assumed for this purpose that their interests are taken into account through the actors nominated.

Government

The EU and its member states have strong wide-ranging policies. They recognise the need to manage the labour market and also the need to fund the activities.

Australia has chosen the path of consensus via the medium of the newly established Climate Change Committee, and a range of ad hoc programs including skills training. The Council of Australian Governments (COAG) at its December 2009 meeting endorsed the National Green Skills Agreement. The Agreement committed to the revision of training packages to reflect the green dimension of an occupation and training teachers to deliver the skills. Much of this work is to be managed by the industry training advisory boards, and will also feed into the sectoral labour market planning (Council of Australian Governments 2009).

In the present political climate and in the absence of bipartisan support it is unrealistic to expect the Australian government will act other than through its Climate Change Committee. The Committee's terms of reference are wide ranging enough to satisfy all community interests, and its timeline for reporting in December 2011 is reflective of the volume of work to be undertaken. However industry, the actors in the workplace and the community must be concerned that these efforts may not produce outcomes in sufficient time to avoid the pending problems. The research by the EU, UNEP and the ACTU has found that the restructuring across industry is already advanced and accordingly the need for green job ready workers must be pressing. It may be that green skilled migration and temporary visa labour programs are required to provide a solution for the short term.

• Public sector and regulators

The implementation of recent Australian Government climate and energy initiatives has been criticised from within and outside the public sector. It is unclear why these particularly were problematic or whether it was a confluence of unrelated factors, but nevertheless serious gaps appeared in its service delivery standards. In summary:

- the Home Insulation Program was withdrawn amid concerns about worker and consumer safety, and fraudulent business behaviour
- the Green Loans Program was withdrawn under severe criticism from the Australian National Audit Office (Hawke 2010)

• the value of the domestic renewable energy subsidies program was challenged when it was found to be many times more expensive than the savings made

Of particular concern is that industry provided warnings of the pending problems that were overlooked by the managing authorities. Consultation with industry is a fundamental source of on the ground information that is important for the effective delivery of a program.

Regulators also carry some responsibility for the failure of the programs. Although independent, the regulators are integral to the effective management of the affairs of the industry. Regulation of the construction sector is comprehensive, ranging from business registration and insurance, through technical regulations covering product permitted for use and installation practices, occupational health and safety and occupational licensing and registration. There were failures across this comprehensive suite of controls, particularly business approval, product approval, safety and competency-based assessment for occupational registration.

This is a serious concern for the sector that relies on the integrity of these systems, and invests considerable intellectual and physical capital for the development of the technical performance measures that form the basis of the regulatory instruments.

• Industry

The key elements of the enabling framework for business that is also supportive of climate policy implementation (International Organisation of Employers 2009) are described by the IOE as:

- economic diversification to build resilience
- protecting the ability of the private sector to provide goods and services
- employment strategies
- education and training to ensure skills are maintained
- involvement in the global marketplace

It also speaks of competitiveness and trade measures which are a reflection of its concerns that carbon market mechanisms may be a potential barrier to trade.

The International Chamber of Commerce (ICC) statement to the COP 15 supports the IOE position and as well promotes the need for integrated climate change policies (ICC Commission on Climate and Energy 2009).

If we look back at the policy approaches by the governments, it is the EU governments that conform to these guidelines, whereas the US and Australia programs lack the cohesion and certainty.

Industry has an important role to play in the development of appropriate public policy by submitting its strategy and advising the public sector what is necessary.

• Labour and management at the workplace

The IOE posit that a "unique feature of climate change as an element in business strategic planning is its 'whole of industry' and 'whole of enterprise' dimension (in the sense that the changes required will affect significantly every aspect of business). However, as an issue for labour and management, climate change does not add a 'condition' to existing labour agreements. Where business decisions arise that involve the social partners (employers organisations and unions), they should be addressed through the normal consultation process." (International Organisation of Employers 2009, p. 3)

The international trade union movement is calling for a just transition and social protection. The Australian peak union body has declared its intension to negotiate climate change through collective bargaining. Both employers and unions are agreed on the need for retaining, skilling the workforce and being prepared for the new low carbon workplace.

At the company level, it is important that management is informed about the new technologies and products, and that it complies with all the regulatory and licensing requirements.

• The role of employers' organisations and unions

The common thread that links all the actors mentioned above is the employers' organisations and unions, oftentimes referred to as the social partners. They are the representative organisations of business and the workers.

Employers' organisations and unions are accepted across the community as the representative voice and opinion for their sector and as such are often invited to provide input to public policy development and its implementation. Regarding climate change, the views about appropriate policy vary, even amongst their own constituencies. Those views could be based on self interest, employment retention, commercial opportunity or philosophy.

The responsibility of these organisations is extensive. They must be informed advocates, they must present opinion or policy that is reflective of their membership's opinions and they must interface with their membership in a way that keeps them informed of the issues.

• Consideration of whether the financial implications are an impediment to any reform initiatives

The widely acclaimed economists, Nicholas Stern and Ross Garnaut, recommended in their detailed modelling of the economics of climate change that a price should be attached to carbon, that there was a cost, and that pricing carbon allowed the cost to be born equitably (Stern 2007 and Garnaut 2008). The reports from the EU and UNEP, and the ITUC submissions to UNFCCC COPs also talk about the need for a price on carbon. The UNFCCC in its Kyoto Protocol makes provision for pricing mechanisms (UNFCCC 1997). The Protocol, through its common but differentiated responsibilities principle has also allocated funds to be collected from the rich countries for the developing economies (UNFCCC 1997).

In relation to the labour market, there is a cost of adapting to a low carbon economy which is not yet part of the Australian public budgeting and taxing considerations. The question is whether that cost should attach directly to construction industry goods and services, or should it be part of a wider reform? The question will remain unanswered until a stronger political will to seriously address climate policy emerges at the federal level in Australia.

Strong policy and a well-defined implementation strategy are required to underpin cohesive and effective progress towards the stated objectives. While the broader economy would benefit from such an enabling framework, the labour-intensive construction sector must have certainty that the labour requirements can be met in the numbers and of the quality required.

Conclusions and recommendations

What is the appropriate next course of action that the industry may consider? The construction and property industry is ahead of the field in Australia. It has adopted the principles that deliver energy efficient low carbon buildings, developed its own measurement and recognition framework, adapted its technical standards and regulations and its skill requirements. However the labour market issues have not rated the same priority. Questions of quantity, quality and accreditation of labour are still unanswered. International and domestic actors in the labour market have issued warnings that as yet are unheeded. If we accept the HIP as a toe in the water test for the construction industry labour market and its small business sector, we are not ready.

The policy measures needed to encourage energy efficiency, to mitigate dependence on non renewable energy sources and to reduce the carbon footprint are foremost in public and private sector specifications. Accordingly, these are the terms under which any supplier of goods or services in Australia should operate.

The absence of a policy framework and a definitive position on the pricing of carbon is depriving the private sector of information necessary for its business planning. Further, and potentially more important, it is inhibiting the public sector from initiating the medium to long term programs necessary to meet contingencies such as the future labour intensive Home Insulation Programs.

Industry is already adapting to a changed marketplace that reflects a requirement for a low carbon footprint. The studies indicate the job market will on balance increase but there will be winners and losers. All occupations will be affected. Present indications are that industry will not be able to meet these requirements.

As noted by UNEP, skills shortages in the construction sector are common, and generally the professions are out of touch with the newest technologies. Technical and occupational regulation has demonstrated it is responsive to this new market requirement. Whilst it has not been a barrier to change, and in fact has been at the forefront of industry adaptation, flaws in its administration have been identified when put under the pressure of programs introduced with a short lead times and high volume activity.

In this period of "normal" economic and construction activity, there is no spare capacity in the labour market for trades and professionals. If there is a disruption to the supply of suitable labour as is foreshadowed in the EU, UNEP and ACTU reports, the demand for labour will again outstrip supply.

Given its dependence on labour from the low skilled through to the professional levels the construction sector must insist on a policy framework in the terms proposed by the IOE of long term stable policy that encourages economic activity, encourages the private sector, and includes employment strategies and strategies to ensure the maintenance of skills through education and training.

The construction industry would have a reluctance to engage with the government in further social stimulus programs. The experience with the Home Insulation Program must not be allowed to be repeated. To this end, it is the responsibility of the industry to work with government and the public sector to create a delivery model that suits the requirements of government for accountability, equity and outcomes.

The provision of a just transition, social dialogue and collective bargaining for climate change are not addressed in any program of public or private sector dialogue. Accordingly it remains a dangerous "sleeper" particularly for the labour intensive and very sensitive construction sector. It is a variable that could affect pricing and ultimately commercial viability.

The industry must accept the responsibility and work to achieve the policy conditions that it wants. It therefore must provide a model to government that delivers stable policy which encourages the investment in labour market and skills development.

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