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2014 Edition 4



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- Message from new AIB National President Norman Faifer LFAIB
- AIB Address by Lt General Professor Peter Leahy AC HFAIB (ret)
- AIB's Commitment to Industry Adoption of BIM by Alastair Brook



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An introduction to the Australian Institute of Building

The Australian Institute of Building (AIB) is incorporated by Royal Charter and is the preeminent professional body for building professionals in Australia and the Asia-Pacific region. The AIB has a long and proud history of supporting and serving the building profession. For more than sixty years the Institute has worked with the building and construction industry, government, universities and allied stakeholders to promote the building profession, support the development of university courses in building whilst promoting the use of innovative building techniques and a best-practice regulatory environment.

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A Message from the National President Norman Faifer FAIB



Welcome to my first column as National President of the Australian Institute of Building, it is an honour to be elected to the position and I will strive to both uphold the integrity and dignity of the Institute and the position of respect that the Institute is now gaining amongst our industry stakeholders and peers, governments and our regulators.

These are testing times in the building and construction industry, this Institute not being immune to such times too. I thank each and every one of our members for promptly renewing their membership of the AIB, the life blood of any organisation is receiving its renewal subscriptions in a timely fashion, as well as conducting relevant, informative and cost effective events (seminars, site visits, addresses and CPD sessions etc.) for its members.

Whilst the Members Advantage scheme was recently introduced to provide more value to our membership, your Council will be endeavouring to provide even more value to members concentrating on education, developing relevant Continuing Professional Development and Chartered Builder programs, course accreditation and the tough nut of recognition of our corporate members in the licensing, registration and/or accreditation of builders by the various regulators around the country.

Parts of the Institute's brand has been trademarked, whilst other parts are in the process of being applied for. This branding and trade marking may be of particular interest to those corporate members seeking to further enhance their membership.

The Institute will continue to seek representation and participation with the many allied industry bodies around the states and country to represent the Institute and where appropriate your personal professional views on matters of interest to you.

Just prior to the Institute's National Annual General Meeting in September 2014, the now Immediate Past President, Robert Whittaker AM FAIB, and our two Vice Presidents, Dr. Ron Webber FAIB and Damian Rogers FAIB attended an audience and afternoon tea with the Governor General, HE General Sir Peter Cosgrove AK MC (ret) at Yarralumla where the Governor General presented the Institute's newest Honorary Fellow, Lt General Professor Peter Leahy AC HFAIB (ret), with his Institute membership certificate. This audience and presentation is evidence and recognition of the Institute's increasing presence and acceptance by our peers and the highest levels of government.

Of further interest are the opportunities to establish relationships with kindred organisations and universities overseas particularly in southern China and South Africa from where we have received several inquiries.

Our sphere of influence is also increasing through our Hong Kong Chapter where a Branch of the Overseas Chapter has been formed in Macau with some 50 "founding" members joining. Further, Memorandums of Understanding and Cooperation will be signed shortly with the Hong Kong Institute of Engineers and the Hong Kong Institute of Construction Managers. This all bodes well.

The Singapore Institute of Building Limited has indicated that they wish to continue and enhance our previously signed Memorandum of Understanding with them. All of these overseas activities will be attended to in due course so as not to overstretch our resources. Like every other organisation this Institute does have limits too.

At its recent meeting, the Council reviewed the strategic imperatives for the Institute looking forward five years and I am pleased to say this work is continuing in a positive direction and I am sure I will have more to say on these initiatives in future editions.

You will have by the time you receive this journal been asked by our CEO to complete a short survey. I have worked with the CEO on this survey, as it will be my focus not on me or the Council, but on you the members, and I need to know what you are thinking and what you would like from your Institute. So if you have not already completed the survey, please do so as its results will be an important contributor to the Institute's course over the next twelve months.

As always I am very keen to hear from members on their opinions and I am always available to be emailed at president@aib.org.au

I am looking forward to serving you, the members of this fine Institute.

Yours fraternally,

Norman Faifer FAIB FAIS FIAMA

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Command Leadership and Management

AIB Address by Lt General Professor Peter Leahy AC HFAIB (ret)

August 2014 at the University of New South Wales

As an ex-soldier I come from a culture where leadership is key to achieving success. In the Army leadership is taught, expected and rewarded.

The other side of the equation is that leadership is earned.

I often wondered why men and women keep going forward into battle risking life and limb.

It is not because they are ordered or forced to go there. It is because they are well led. They make a conscious decision to be part of a team and willingly go forward into battle. They follow a leader.

This evening I want to give you a soldier's perspective of the state of leadership in Australia today and talk about my ideas of what makes an ideal leader.

I will talk about command, leadership and management.

I will speak from a perspective which will emphasise the pride I have in what the Australian Army and what it has achieved throughout its history. These achievements have been based on great leaders at all ranks of the organisation.

Today many leadership theorists seem to combine leadership and management and elevate management above leadership. This is not the case in the Australian Army. Of course management is required but leadership is the most prized skill.

The myths and legends of the Army are built around great leaders, not great managers and soldiers aspire to be leaders rather than managers.

If you say leadership to someone in the Army they will understand you to be talking about the art of influencing and directing people to achieve willingly the team or organisational goal.

They will understand you to mean that the essential task is to build a team based on trust, mutual respect and a desire to contribute to the achievement of an accepted and agreed mission.

Sounds like a prescription that is applicable to Australian business, industry, politics, families and the broader community in general.

I will present a view that, while accepting civil management theories, will continually focus back on the military environment because that is where leadership is at its most raw and most difficult.

Today I want to make the case that the military have something to offer the Australian community.

It is a case about an ethos of service to the nation, an acceptance of and adherence to a set of values and a code of behaviour that focuses on the team and a desire to be a force for good in Australia and when asked the world.

It is about service before self.

In doing this I will focus on my own experiences. They will be different from

yours but I hope that you will find cause to think about how they might help you become a leader in your own chosen field of endeavour.

Leadership Culture

So my talk will be about leadership and leadership culture.

A leadership culture is an environment in which a broad range of factors operate in ways that make it possible for leaders to get things done.

This is an important realisation for all of us. Leadership is not solely about you. What is important is your ability to build and sustain a leadership team and make things happen

An Army colleague of mine Brigadier Nick Jans has the view that the ideal leadership environment depends on:

|||| Leadership – we all know about this – or do we – more to follow.

|||| Followership – a leader is useless without people who follow him. They need to be ready, willing and able to support the leader. It is best that they do this because they believe in the leader and they think he is taking them to the right place. Nothing so devastating than to set off on a path to the future and to look around and see that no one is following.

|||| Leadership architecture – this is the organisation, structure, operational and communications procedures, and technology, that supports the leader.

|||| Social capital – sense of cohesion, trust, mutual respect and teamwork. A shared view of the world and a common ethos, values and understanding of required behaviours. In some ways this is the tribal nature of the organisation.

In his work, Nick suggests that leadership becomes increasingly difficult and complex the higher up an organisation you go.

We need leaders in all human endeavours. We need leaders in families, in schools, faith communities, business and politics.

We all have experiences of leaders, good and bad.

Most of us think we are good leaders and have robust criticisms of others and their leadership failings.

Case Study

In February 2009, a disastrous series of bushfires swept across Victoria and 173 people were killed and hundreds of homes were destroyed. On 31 July 2010, a Royal Commission into the event made its report and delivered 67 recommendations. The report found serious problems with the state's leadership over the time of the fire.

The report criticised the Police Commissioner, the Country Fire Authority Chief and the head of the Department of Sustainability and Environment. The report found they used the term coordination to describe a "passive style of management or to avoid responsibility" rather than display

What lies beneath?

Prior to entering into a construction contract, a 'good' builder has a plan for the management of all known risks. However, a 'great' builder also has a plan for the unknown risks.

Latent conditions are generally understood to be the physical conditions of a site which differ materially from the physical conditions which should reasonably have been anticipated by a competent Contractor at the time of tender.

This definition is founded upon three key variables:

- |||| What are the physical conditions of the site, including whatever exclusions have been agreed by the parties?
- |||| What information regarding the site's physical conditions has the Principal provided to the Contractor, and what other enquiries has the Contractor made (or should reasonably have made)?
- |||| What constitutes a material difference in the physical conditions?

Standard terms and conditions should be amended to clarify any ambiguities in these variables, and to establish how the parties intend to act should a latent condition arise. Commonly, latent conditions concern geological and ground conditions which have not been accurately identified prior to the Principal engaging a Contractor to undertake the works. Contamination, for example, can have significant impacts not only on the cost of disposing of bulk

excavation waste, but also on:

- |||| safety of your employees and subcontractors, particularly in the instance of asbestos;
- |||| treatment or capping of in-situ materials (if they are to remain on-site); and
- |||| performance and management of all works in or around the contaminated area.

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No one has a crystal ball, but with experience comes the ability to foresee likely issues. Fundamentally, contracts are about the allocation of risk between two parties. Prior to entering into any contract, a Builder must consider what are the unique, physical features and risks of this project; and how the cost of those risks is to be carried by the parties.



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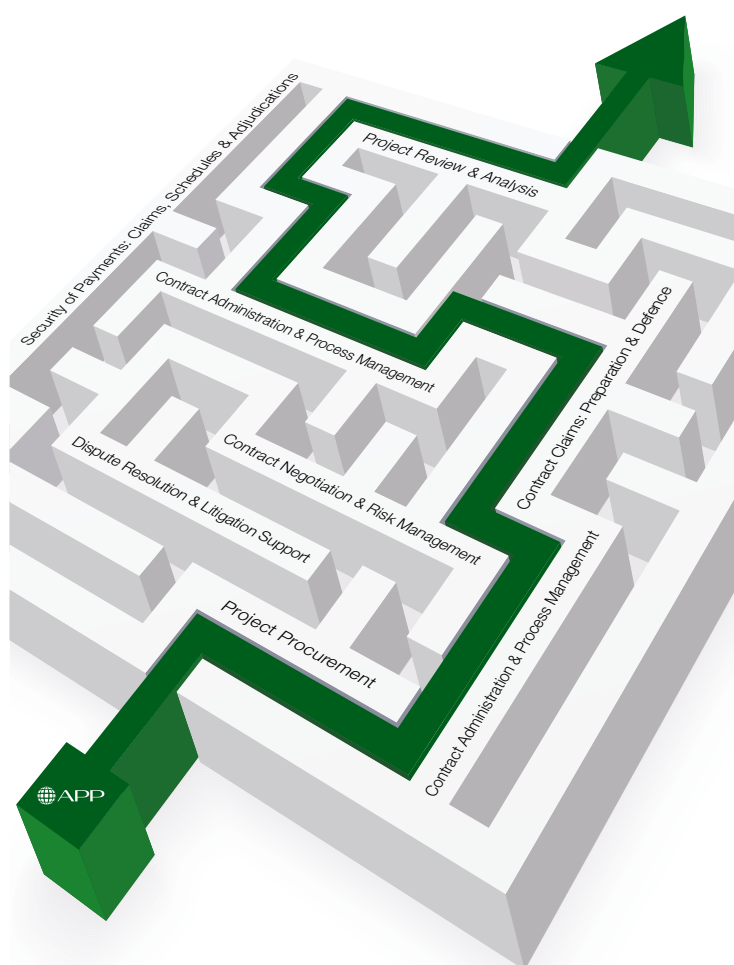
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leadership. The report spoke of the Police Commissioner's "hands off approach" and mentioned that the Country Fire Authority Chief did not speak to the incident controller of any of the major fires.

The report was scathing about the lack of leadership and said the two emergency service chiefs went missing. We know the Police Commissioner went for a haircut, had dinner and met with her biographer during the height of the fires.

During the fires, many were killed and lives and livelihoods destroyed.

No one seemed responsible – three government agencies shared responsibility – Police, Country Fire Authority and the Department of Sustainability. Their operating procedures were different and there were difficulties in communicating between operational elements of the agencies.

No one seemed prepared to lead – I am not sure they even knew how to lead. In many places, management and bureaucracy seem to have replaced leadership.

Like functions were shared between departments – depending where the fire was it belonged to a different department.

The Premier said that systems failed.

An evident problem occurs when you prepare for the worst in the good times. People do not understand how a system can be stressed and overloaded.

Leaders are essential in a time of crisis.

Simple understanding of command and control was missing. In times of peace too many compromises had been made. The leadership architecture was all wrong.

||||| Unity of command was missing,

||||| Communications were split,

||||| Interoperability was not established,

||||| There were no standard operational procedures or clearly defined doctrine,

||||| The system was far too complicated,

Some views on leadership

When I was Chief of Army I enjoyed visiting the Royal Military College Duntroon and spending some time with the graduating class who were about to be commissioned as Lieutenants in the Australian Army.

When I spoke to them about leadership I told them that I could put the rank on their shoulders but I could not make them leaders. I told them that every day they had to earn their position as a respected, effective and inspiring leader.

Australians are an egalitarian, irreverent and even cynical people and unlike other nations where leaders are followed because of their position, our leaders are followed because people respect them and want to follow them.

In the First World War in the dark days of the Somme as the junior leaders were killed the diggers took to having elections for their new leaders. This was the egalitarianism of the shearing sheds coming through. This egalitarianism is still out there today. In the Army, the officers eat last.

You have to work at leadership and continually apply yourself.

To me it is as simple as setting and maintaining the standards every moment of every day. You are always on show and must always be at your best. If you are going to hold others to account you must be above reproach yourself.

I think we are all leaders. All human interaction requires leadership of some type. We might be leaders at work, in our community or in our family life.

Our community needs more people prepared to accept the responsibility and hard work required to be a leader.

At its simplest leadership is about showing the way. The dictionary simply says,

"direction given by going in front..."

The Army manual on leadership defines it as,

"The art of influencing and directing people to achieve willingly the team or organisational goal."

Let me give you some more ideas from Viscount Lord Slim;

Leadership is of the spirit, compounded of personality and vision; its practice is an art.

He goes on and refers to management;

Management is of the mind, more a matter of accurate calculation, of statistics, of methods, time tables and routine: its practice is a science. Managers are necessary; leaders are essential.

What is important here is to realise that leadership and management are not the same. You can be a great manager and an absolute dud as a leader, and vice versa.

To make things a little bit more complicated let me introduce another element which is particularly important to the military and to those young officers I used to meet. This third element is command.

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Just a short note to remind you of the discounts you can receive by supporting the Australian Institute of Building **Construct** magazine.

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Command is the authority bestowed on an appointment. It is defined as:

"The authority which a commander in the military Service lawfully exercises over subordinates by virtue of rank or assignment. Command includes the authority and responsibility for effectively using available resources and for planning the employment of organising, directing, coordinating and controlling military forces for the accomplishment of assigned missions. It also includes responsibility for health, welfare, morale and discipline of assigned personnel."

Let me stress here that in my view, command is the last refuge of a bad leader. If you have to rely on your authority to order people to do something you are in a bad place. Leadership is not about giving orders, it is about building a team and it is about empowering people to be part of that team.

In the United States Army the cry of the infantry leader is;

"Follow Me."

This says a lot. I am prepared to go first. I will show you the way.

The casualty rate for Israeli young Army officers is far higher than for their soldiers. This is because they have been taught to lead from the front.

People often ask, are leaders born or are they made?

I am not sure if there is a direct and definitive answer to this question but my tendency is to say that there is an element of leadership in everyone. During my career I have seen many leaders, some good and some bad. But what I have seen repeatedly is that someone who was not considered to be a leader emerged when required.

What is required is the right time, the right place and the right situation.

There are many classical examples. Churchill emerged from a rather lacklustre career as a junior officer and politician to be the leader required by Britain at their darkest hour.

I am also sure that people can improve their leadership by study and application.

Of course there are bad leaders. This is because leadership is about influence. It is about engaging at a deeper, more personal level where it rests heavily on trust and mutual understanding. Not everyone can do this.

Let me leave you with one final thought on management and leadership.

Management is doing things right, leadership is doing the right things.

During my career I saw many young Australians who were great leaders. What impressed me the most is that there was no real pattern. They were all ages, all ranks, both genders, doing different jobs, and came from widely varied backgrounds.

Right now in Afghanistan, East Timor and the Solomon Islands, young Australian men and women are leading. They do it in difficult, dangerous and demanding conditions willingly giving of themselves for their nation, the Army, their unit but most importantly for their soldiers - for those who they lead.

To me this is the most important element of leadership. It is an acceptance of service before self.

In December 2004 I visited our deployed forces in Iraq at a place called Talafar. It is a very isolated place way to the north of the country. There I met a young Lance Corporal in the Cavalry who had just led his section in a particularly dangerous mission where they had been ambushed by a strong enemy force. He showed leadership by willingly exposing himself to enemy fire and by staying composed and calm throughout. He set the example of courage and commitment for his soldiers by showing them the way. They completed their mission and returned safely to base. This was but one of many dramatic incidents he and his section experienced during

their six month deployment.

I would ask that you also consider his leadership role during the dull, boring and tedious routine of operations. He lived with his soldiers and was required to be a leader every moment of the day and night.

Leadership is a lonely place; it requires constant application and vigilance. There is almost no rest and very little privacy or respite. You are on show all of the time and must constantly, by personal example and action, set and maintain the standards of the organisation.

Leadership is not about being popular or liked. It is about being admired, respected and followed.

In November 2006 I visited Afghanistan to see our Special Operations Task Group deployed at a place called Tarin Kowt. This is a very remote and dangerous place and as you may have heard our special forces excel in this environment. During one 395 day deployment they spent over 305 days in the field on over 105 different missions. They were in almost constant contact with the enemy.

Each of the over 200 men and women on this mission were required to be leaders. This is one of the hallmarks of the Special Forces. While there may be a formal rank structure there is a ready acceptance that the best person for the task will emerge as the leader. They are trained so well and have so much trust and confidence in each other that this is an easy thing to accept and achieve.

Notwithstanding this I want you to think just for a little while about the command and leadership responsibility vested in the Special Force Major – not much older than you are - who commanded this detachment. He was in mid 30s, commanded the best part of 200 men and women from a variety of nations and conducted combat operations almost every day. When I saw him he was calm and determined and very much the leader. He led with an easy and measured style which engendered confidence and respect.

He was responsible for the lives of his soldiers. They enacted his plans and gladly accepted the risk because they trusted him. In return he insisted that they were full partners in the development of the combat plans. He listened to them and was prepared to follow their advice.

The resources at his disposal were mind-boggling – all the way from B1 and B52 bombers to the most secret of our intelligence and communications assets. Think for just a while of the pressures on this young man. He stood fast and did himself, his men and our Army proud. He was a leader. He was one of many.

Don't for a moment think that this style of leadership came easily or naturally to him. I am sure he had doubts about his leadership abilities, just as anyone would. He was probably aching for one of his subordinates to tell him how much he admired and respected him. Not going to happen. Just get on with the job.

As I warned you I have spent a considerable amount of time talking about the military and leadership. But the lessons that I learned are I think applicable right across the broader community.

The military deal with the notions of command, leadership and management on a routine basis. The end point of the military craft is the application of lethal force in battle. This cannot be adequately covered by management and leadership literature as it applies to the business world or academia.

Lord Moran, Winston Churchill's doctor, wrote,

"Leadership is the ability to frame plans that will succeed and the faculty to persuade others to carry them out, in the face of all difficulties – even death."

But in the new security agenda this type of leadership is increasingly applicable to police, intelligence and security personnel. As the barriers

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between defence and security continue to open I expect that what we could call security leadership will be expected of more and more individuals in our community.

Robert Kabacoff head of research for management research group MRG believes that the linchpins of effective leadership can be summarised in a handful of key competencies.

- ||||| Strategic vision
- ||||| Bring energy passion and excitement to the job.
- ||||| Developing fellowship by being persuasive and bringing people on board and aligning them with your view of where you need things to go
- ||||| Clarity of expectations – provide people with information from the top on where they are going
- ||||| Management focus – being comfortable in a leadership role and recognising the requirements, being willing to exert power and comfortable in a glass bubble where everything you do is going to be watched and evaluated

Interestingly, in an increasingly globalised world Kabacoff goes on to say that the suite of skills for good leaders can vary across different countries and from sector to sector. He also suggests that good leadership can be varied and dependent on context. With regard to our earlier discussion he states that leadership can be learned.

Other writers have given their own guide to good leadership.

In the book *The First XI – Winning Organisations*, by Heap, Hubbard, Samuel and Cocks among the findings as to what constitutes good leadership, in Australia were:

- ||||| Effective execution – do what you say and deliver
- ||||| Alignment – deliver over and over again
- ||||| Adapt rapidly
- ||||| Leadership not leaders – It is often the decisions of leaders that start the journey, but it not a single charismatic leader whose own actions are the cause of success
- ||||| Right people committed and proud
- ||||| Manage the downside
- ||||| Balance everything

Another author is Tom Peters who wrote, In *Search of Excellence*

- ||||| A bias for action
- ||||| Be close to the customer
- ||||| Foster autonomy and entrepreneurship
- ||||| Productivity through people
- ||||| Hands on and value driven
- ||||| Stick to the knitting
- ||||| Simple structural form, lean head office staff
- ||||| Simultaneous loose and tight – centralised and decentralised

Also, *Built to Last: Successful Habits of Visionary Companies*, by Collins and Porras recommends

- ||||| Build the organisation, don't focus on what to do with it
- ||||| Success is more than profits
- ||||| Preserve the core / stimulate progress

- ||||| Try a lot of stuff and keep what works

- ||||| Big Hairy Audacious Goals

- ||||| Cult like cultures

- ||||| Home grown management

- ||||| Good enough never is

Let me now turn to a great Australian leader, Peter Cosgrove. In an interview he stated six key attributes of a good leader. They were:

- ||||| Committed
- ||||| Motivated
- ||||| Feel responsible for the enterprise and the people in it
- ||||| Calmness and assurance
- ||||| Social and cultural awareness
- ||||| Professionalism

As I start to draw to a close, let me give you a view of my own ideas on leadership.

First and foremost is the recognition that leadership is not about you.

Yes, it is a privilege to be in a leadership position but never forget that you will not be there forever.

I saw my leadership role in the Army as being a temporary steward of an important national institution. It must be maintained and nurtured and then passed on, hopefully in better shape than when you received it.

I was surprised by the number of people who asked me, “What is it like to be the leader of the Army?”

My reply was that I didn't see myself leading the Army. I emphasised to people who asked me the question that I felt that I was being led by the Army. It was my job to serve our soldiers to ensure that they had the best training, best equipment, best preparation and best leaders we could deliver. They have a demanding and dangerous task and it was my duty to ensure that they have the best chance of doing their job and coming home safely to family and friends.

Having said this there is of course much to be done and there are some tricks to the trade. Here are my 15 secrets to being a good leader;

1. Have a vision. Where do you want the organisation to be and what is your plan to take it there.
2. The art of the achievable. Don't try and achieve too much.
3. Be committed. There is no room for second thoughts or ambivalence.
4. Develop a team. You need people around you who understand you, share your vision and are comfortable working with you.
5. Delegate. You cannot do it all yourself. Army has a command philosophy called mission command. Give your subordinates a task, the resources required to complete the task, the time to do the task and then get out of their way. Most importantly though ensure that they understand your overall intent and are traveling in the same direction as you are. How else will you make leaders if you do not trust them and let them learn and this means making mistakes.
6. Prepared for risk. Nothing is gained without risk but it must be carefully calculated and not reckless.
7. Understand the environment up and down. This includes the social, economic and political nature of our broader community as well as the internal dynamics of the institution are in.

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8. Robust. You have to be able to take a few knocks and get back up again. This includes knocks from the lovely ladies and gentlemen of the Press.

9. Good health. The work is relentless so you need good health and must make an effort to keep yourself fit.

10. Competent. You might not be the best at everything that happens in Army but you have to be competent and prepared to give everything a go. It does not mean you have to be the best machine gunner but you better try the hardest and get out and give it a go.

11. Team player. You are part of a broader team. In my case I had to always be conscious of the joint and coalition nature of the military. I might have been the Chief of Army but my priorities were what is good for the nation, what is good for the ADF and then what is good for the Army.

12. Be consistent. You must get on song and stay on song. In my case having an extended period in command was most useful. First as Deputy Chief of Army and then as Chief of Army, I had the term to be able to put across a consistent story.

13. Approachable. You have to know what is happening inside the organisation. Don't rely on others to tell you what is going on. You must go out of your way to take the pulse of the organisation yourself. This means travel and talking and putting yourself in situations where people can talk to you in a relaxed and open manner. Of interest is a growing use of electronic communications such as web pages and blogs. Go there.

14. Communicator. You have to be a good communicator able to convince people of a course of action.

15. Be enthusiastic.

Let me return to values and behaviour. I strongly believe that the performance of any leader depends very much on who they are as a person.

Performance as a leader is almost solely dependent on individual character, values, behaviour and skills developed through a commitment to service and to others.

I expected that Army's leaders and commanders would live the Army's ethos and values, and behave ethically and morally in everything that they did.

Behaviour is built on values – we have great underlying values as a nation. I say underlying because it is difficult to find any substantive discussion on what our values are. A DFAT white paper of 2003 put forward a few ideas and Kevin Rudd had a go at a speech in Sydney in 2008.

I think we would be better off as a community if we had a public and continuous discussion of who we are and what we stand for as a country.

The Army values are distinctly Australian and are proudly held in trust for the nation. They are;

- ||||| Courage
- ||||| Initiative, and
- ||||| Teamwork

Also acknowledged is the ANZAC commitment to;

- ||||| Sacrifice
- ||||| Perseverance, and
- ||||| Mateship

The ethos of the Army is that of the soldier serving the nation: empathetic and discriminatory, mentally and physically tough, and with an unrelenting courage to win. The Army fights as part of a team and are inspired by the ANZAC tradition of fairness and loyalty to mates. The Army is respected

for professionalism, integrity, *esprit de corps* and initiative.

Let me draw towards my conclusion by saying that each and every one of us has the ability to be a leader. It is an unrelenting task of application and service. For most people it does not come easily and it is hard work. But the rewards are enormous and right now our community needs leaders.

In recent years we have not been well served by our banking and financial leaders. They have put their personal interests, maybe greed, ahead of their responsibilities to the community.

Is this leadership or selfishness?

The one thing I learned that I was most proud of as I travelled the world and saw our soldiers on operations was that as Australians, and I say that again, as Australians – not as soldiers – they stood out.

As well as the Army values and behaviour they were doing something distinctly Australian. This came from our families, our schools, and our community. I think it is enormously important. As you make your way in life, as leaders, these Australian values will guide you.

- ||||| Egalitarianism,
- ||||| Accepting of other cultures,
- ||||| A fair go approach,
- ||||| Outward looking
- ||||| Wanting to help
- ||||| Inquisitive,
- ||||| A work ethic,
- ||||| Wanting to get on with the job,
- ||||| Pride in country, and
- ||||| A sense of humour and only slightly repressed larrikinism.



The Governor General, HE General Sir Peter Cosgrove AK MC (ret) (third from left) presents Lt General Prof Peter Leahy AC (ret) (far left) with his certificate as an Honorary Fellow of the AIB, with senior AIB members (from left) Ron Webber FAIB, Damian Rogers FAIB and Adjunct Prof Robert Whittaker AM FAIB also present, as well as Lee Leahy and Lynne Cosgrove.

Photo courtesy of Government House, Canberra.



“The most important project I’m managing is my own career.”

Kylie Rivers, Consultant at Thinc, Bachelor of Business, Master of Project Management, QUT.

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AIB's Commitment to Industry Adoption of Building Information Modelling

*By Alistair Brook, BIM Manager – Construction,
B.App.Sc (CM&E Hons), Dip BD&T, MAIB*



In support of the AIB's policy on Building Information Modelling (BIM), the institute has committed to effecting the widespread adoption of BIM across the industry. As a result, members of the AIB will reap significant benefits during the construction stage, following BIM's implementation. For those of you yet to touch BIM, it will not be too far away! Nationally, a number of major projects are currently being delivered with BIM, including the New Royal Adelaide Hospital, Perth Children's Hospital, New Perth Stadium, the list goes on. In these instances, the client has requested BIM and each contractor has, or is in the process of, upskilling to deliver these projects. These are all significantly large projects, however, others are now appearing with full BIM deliverables at total build values of \$15 million. This, combined with the recent attendance of second and third tier builders at BIM conferences over the past six months, and a number of these organisations undertaking BIM pilot projects, speaks volumes that BIM is here. The institute has acknowledged this, tasking me to represent the AIB at a national level and report back to policy and education managers in the creation of BIM frameworks, adoption strategies and education competencies. This is a summary of the institute's involvement with the Australasian Procurement Construction Council (APCC) & Australian Construction Industry Forum (ACIF), attendance at national BIM conferences, work with research organisations and the future body of work to be participated in by the institute.

The institute was invited to attend and partake in the joint APCC & ACIF BIM Summit on the 6th August 2014, along with a number of industry stakeholders including clients, government, facility managers, contractors, design consultants and regulatory bodies. Collaboratively, this group will develop and publish "A Framework for the adoption of Project Team Integration (PTI) and Building Information Modelling". This document is being prepared with an awareness of the need for optimal delivery outcomes that eliminate waste, maximise end user benefits, enhance industry participants and also increase the productivity of the Australian and New Zealand economies. In these countries, BIM awareness is high and the drive for productivity is facilitating increased integration and collaboration of project teams. However, the commitment to the utilisation of BIM and PTI is still relatively infantile here, compared to other countries. For Australia and New Zealand to achieve maximum benefits from the adoption of PTI and BIM, a number of activities need to be addressed with appropriate government or industry bodies taking a leadership role in championing delivery. In summary, this document is targeted at ministers, general managers and CEO's to better understand BIM, specifically how, why and when to use it, as well as the most effective way in which it can be used. It also highlights benefits, barriers, change behaviours, BIM and procurement, standards and technology. This document is due for publication and release by the end of the year.

This body of work has identified current barriers, which include difficulty in recruiting staff with suitable BIM experience, as well as inadequate training from companies and the education sector. The AIB, as the key body accrediting the 13 construction management courses across Australia, recognises these barriers and is now represented on the newly formed APCC and ACIF working group to formulate national BIM competencies. These competencies will define the necessary skills required for all BIM stakeholders, from CEOs to construction managers, to project engineers to site staff, graduates and sub-contractors. These competencies will then be reviewed and incorporated into the accreditation process of the CM&E degrees to ensure our profession receives graduates with the tools required to effectively deliver BIM projects. This could not be better relayed by comments from key government personnel, who have emphasised that BIM needs to be taught within CM&E degrees, as the contractor's role is key to the effective use and adoption of BIM. If the contractor has the required skill set, then their engagement of a 'BIM capable' consultant team and sub-contractors will reap benefits, allowing their own internal BIM workflows to flourish.

The AIB has furthered its industry engagement by attending national BIM forums with the first being the BIM-MEPAUS conference in Melbourne on the 7th & 8th of August, 2014, hosted by the Air Conditioning and Mechanical Contractors' Association (AMCA). This was targeted at improving the uptake of BIM across mechanical, electrical and plumbing sub-contractors, and has evolved to represent the broader building and construction industry. This shift has coincided with recognition that innovative building practices generally

requires greater collaboration across the supply chain. The BIM-MEPAUS initiative - which stands for Building Information Modelling - Mechanical, Electrical, and Plumbing - aims to address some of the barriers to greater collaboration, through the development of standardised protocols for the sharing of building data. The presentations from sub-contractors showed an unsurpassed level of skill and eagerness with BIM, dispelling some myths that subcontractors will struggle with BIM adoption. Once again, the international guests were surprised at the level of cooperation in this area, stating that Australia is a world leader in the development of BIM standards. In a keynote presentation delivered on day one, Mr James Barrett, Director of Integrated Building Solutions with international giant Turner Constructions, dispelled the myth that BIM adoption is impeded by limitations in the interoperability of software. Implored attendees to consider BIM as a verb, Mr Barrett demonstrated Turner are using multiple technologies to deliver innovative building practices across projects, utilising a mix-and-match approach to software selection depending on what objective is being pursued. Mr Barrett also discussed how Turner is using BIM to give themselves a commercial edge by reducing construction programs by three months with a saving of \$3 million, which allows a more competitive tender submission.

The most recent attendance was at the BIM Day Out over 3 and 4 October 2014, which is marketed as a festival of BIM and spans across a variety of BIM involved industries, from educators to facility managers. The BIM Day Out endeavours to create connections in a traditionally segmented and sometimes adversarial industry. This year, there were a vast number of panel sessions on differing topics, but all ended with the same conclusion – that there needs to be more work done in the education sector to provide graduates with the necessary skills, as well as a need to stop talking about BIM and just do. This was further discussed to define initial BIM implementation to be staged to allow companies to see the change in workflow and benefits before implementing more and more BIM workflows. In essence, and for example, start with taking some quantities off the model to assist the current estimating process, until the process is understood and the model is used more and more for estimating purposes.

The key learnings from these conferences were:

- ||||| Contractors and sub-contractors can use BIM to create a commercial advantage
- ||||| There needs to be a multiple industry level approach to implementing BIM as different skill sets are required for design consultants vs builders vs sub-contractors
- ||||| Client/main contractor must provide strong and experienced BIM leadership to pre-empt any BIM related misunderstandings
- ||||| Prepare a project specific detailed BIM Execution Plan, describe roles, responsibilities and key uses of BIM
- ||||| Establish a collaborative environment with the BIM being the central tool for all issue resolution, including the client
- ||||| Leveraging the BIM as the predominant tool for communication between all stakeholders
- ||||| Leveraging the BIM to shorten the construction schedule and reduce construction cost and risk
- ||||| Inclusion of facility manager requirements into the BIM, to ensure fit for purpose
- ||||| Engagement of a BIM consultant earlier, or the timely and early adoption of the required skills before modelling starts
- ||||| Include BIM deliverables in all contracts
- ||||| The use of BIM on site is, via tablets is key to finding efficiencies. Demonstrated by the use of BIM 360 (field application software) by contractors such as Laing O'Rourke, John Holland, Hansen Yunken & Grocon.
- ||||| Clearly setting out and managing requirements and obligations to deliver as-built models

||||| BIM capability assessment on design consultants & sub-contractors before engagement

||||| Design management data critical – if it's not in the model, it's not done

||||| Main contractor's staff need to be immersed in the model as it is the go-to position for resolving issues

||||| Onsite verification of works a must to avoid disparate modelling

||||| Common theme of earlier engagement of sub-contractors to assist design consultants to ensure the models created during design can be used and further developed by the subcontractors, limiting remodelling. A recommendation from design consultants

||||| Software interoperability is no longer an issue. There is a variety of BIM software and a process just needs to be written to define what each one will be used for and how it ties into the overall BIM deliverable

The AIB is committed to assisting its members through lobbying government and education sectors to provide the standards, products and graduates the industry needs to adopt BIM. Currently there are a number of State organisations such as NSW Health, which have defined their BIM deliverables, as well as States themselves currently defining what BIM means to them with the aim of mandating it on their projects. Parts of the industry still hold belief that current methods are better or have a resistance to change internally to adapt to a BIM methodology. This in turn creates a lack of understanding of the ramification of the defined BIM deliverables. For example, if the client has requested an as-built model but the contractor is still reviewing and approving 2D shop drawings with no inspection of what has been modelled, disparities will occur. The result, being the possible rejection of the final as-built model by the client, causing costly remodelling. For this reason, the AIB is partaking in a steering group for a case study research program by the Sustainable Built Environment National Research Centre, reviewing three major projects in light of BIM for design, BIM for construction and BIM for facility management. These results will be circulated when made available. The AIB will continue to be involved in this area to ensure the BIM competencies for the education sector are reviewed, the latest developments with BIM standards are circulated and provide the information required to assist in industry adoption of BIM.

About Alastair Brook: Alastair Brook has over eight years' experience working in construction management, design & construct management, strategic estimating, draftsperson & building design, BIM and project management. After completing his diploma and working as an architectural modeller creating large Revit retail & commercial projects, Alastair furthered his studies completing a Bachelor of Applied Science (Construction Management & Economics) with Honours, focusing on main contractor's views and perceptions of BIM; benefits, barriers & implementation strategies. He completed this degree while working as a strategic estimator on traditional, design & construct and public private partnership commercial construction bids, valued up to \$230 million. His studies and industry experience have prepared him for his current position as BIM Manager – Construction, working on projects valued up to \$1.2 billion (Perth Children's Hospital), where his roles vary from the day to day management of BIM, through to the development and implementation of BIM plans and strategies, liaising with a variety of project stakeholders. His background of design and cost management allow him to specialise in utilising BIM, to add value and increase efficiencies for the pre-contract and design management teams. Alastair is an active member of the Australian Institute of Building, previously holding the position as President of the Young Builders Alliance, an Australian Institute of Building initiative and currently representing them on the Australian Procurement Construction Council & Australian Construction Industry Forum BIM Summit. He also currently resides on the Central TAFE AEC BIM Qualification Industry Advisory Panel and Curtin Universities Construction Management & Economics Course Industry Advisory Board as well as lecturing in BIM at Curtin University.

AIB Hunter Region evening seminar 'The future is here – BIM'

By Professor Peter Davis, Chair of Building, University of Newcastle NSW

The Hunter Regional Committee of the Australian Institute of Building recently organised an event described as a field technology update. Approximately sixty members ranging from University of Newcastle (UON) students to experienced practitioners and academics attended the evening held at the UON Business School in the CBD. Three keynote speakers presented papers and Hansen Yuncken's Trevor Nye chaired the evening. The first speaker was Andrew Bagnall from GHD, Senior Mechanical Engineer and ESD Consultant who has been developing and using BIM systems for over eight years. Daniel Smith and Michael Parkes, Systems Innovation and Development Managers from Hansen Yuncken followed, show-casing the results of their company's major systems technology and training investment, 'HYway' over the last five years.

Andrew drew the participant's attention to issues of productivity that have troubled our industry for a number of decades. He identified BIM as having a number of key attributes including design, communication, coordination and estimating to name a few. Overall he says it can be a repository for project information capable of reducing schedule and cost overruns in construction projects by between 7% and 10%. Andrew described a BIM database as a single point of truth evident in a model that is, in actuality, a very detailed database of objects that have their own identity and associated properties. Examples of the utilisation of BIM were provided including city information modelling, architecture, visualisation, structural/civil, MEP and ESD.

Daniel from the Hansen Yuncken (HY) team identified some key attributes of BIM that enables communicating knowledge and information to their clients, using a number of examples such as drone technology to illustrate these points. He also identified benefits to the estimating process, "getting



the quantities right first time", constructability, maintenance in facilities management and opportunities to enhance HVAC. It was suggested in all of the above that preliminary coordination was the key to success.

Michael, who has managed the systems innovation development for HY since its inception, provided a case study to the audience using tools developed by the company at an enterprise level and showcasing their 'HYway' system. HYway was shown to provide decision-makers with real-time status of construction projects through dashboards and 'free reporting' via tablet or smart phone technology. This ability to utilise fully integrated digital management systems and building information modelling adds value through construction project execution and beyond. Its value was discernable in design detailing, manufacture, set-out, planning, safety and quality efficiencies across the whole supply chain. Additional benefits for clients, design consultants, construction teams and subcontractors were noted to include collaboration, transparency and inclusivity in their overall operations and across all of their projects. The 'future' is already 'here' with these remarkable innovations in use today by GHD and Hansen Yuncken.

It was apparent that the evening was an outstanding success and all the participants continued their discussion for some time afterwards over drinks and nibbles.

The University of Newcastle is currently undertaking research on BIM uptake and usage in construction. We would appreciate your completion of a survey that may be found at <https://www.surveymonkey.com/s/BTFPVJD>



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Deakin School of Architecture + Build Environment Hosts Distinguished Lecture on Construction Management

Press Release: 23rd September 2014

Professor Anthony Mills, Head of School of Architecture and Build Environment recently hosted more than 100 staff, students and guests from industry for the Australian Institute of Building (AIB) Distinguished Lecture; Dr Ron Silberberg Cox AO (pictured) was the speaker.

Dr Silberberg is the former Managing Director of the Housing Industry Association of Australia, a role he held for 13 years. In the early 1980s, Dr Silberberg designed the first incarnation of the First Home Owners Grant, and convinced then Prime Minister Bob Hawke to introduce the measure. Dr Silberberg has been heavily involved in every major housing policy initiative over this period ranging from taxation reform, immigration, housing affordability measures, first home buyers' assistance, social housing initiatives and environmental programs.

Dr Silberberg received the Office of the Order of Australia in 2010 for service to the building and construction industries through the promotion of housing affordability, contributions to improved public and social housing and the development of youth training programs.

In his lecture entitled 'Housing Affordability: A Policy Choice?', he addressed the enduring theme that Australians are a nation of people driven by the dream of home ownership. He commented "That has never changed but the landscape of how we live, where we live, what we build and who will build it, is evolving rapidly with many influences at play".

Professor Anthony Mills FAIB, Head of School and Chair of Construction Management at Deakin University, commented that Dr Silberberg provided an inspiring lecture, which illustrated the challenges in housing policy. The full text of this talk can be read in the last edition of **Construct**. Professor Mills reaffirmed his view that Deakin's School of Architecture and Built Environment is inextricably linked to our industry.

The event was also an opportunity to celebrate the role the School plays within the University. The School offers both undergraduate and post-graduate degrees in construction management. Professor Mills also took the opportunity to promote the Construction Management School at Deakin. The School aims to promote innovative thinkers, with vision that shapes tomorrow's construction industry.

The AIB Distinguished Lecture Series has been established to recognise and promote excellence in the built environment professions. To conclude the event, David Burnell, AIB Victorian Chapter President, presented Ron with a framed Distinguished Lecture Award.

Further Information:
Professor Anthony Mills
(03) 5227 8311
anthony.mills@deakin.edu.au



Pictured from left: Dr Ron Silberberg AO, former CEO of the housing Industry Association, addressing Construction Management students at Deakin University

The B in BIM is really for BANG for your BUCK!

By Christopher James Mouflard

Let's imagine two scenarios. To paint the picture of the first scene, you are catching up with your friend (and competitor) who has just delivered a project for a client. Adam is ranting and raving about how he beat the budget and the time to deliver – the quality has never been better – all his subs were aligned on delivering the project – what is more, is that the client has already hired him for the next job. A little envious and very curious you ask Adam how he did it. Adam responds simply, "well I used BIM." Unfortunately, this does not really resonate with you.

Now consider our second scene. A completely different set of events is about to transpire. Now you are walking up to a podium at a prestigious construction awards ceremony. You are about to receive an innovation in construction award for your new project. You stand up, pull the mic close to your lips, thank your team and family and announce that you utilised "3D BIM on this project to drive better collaboration – while the initial investment from our team might be viewed as untraditional, the result means we are now winning more work by using BIM than ever before." It will be very hard to forget that win.

including Virtual Construction™ or BIM as part of our project delivery system. Think about it: since in our jobs we build 3D things – houses, offices, restaurants, pergolas – it makes sense that we design what we make our dollars from, in the same way that we build them.

This is the entry point to BIM. It does not stand alone, but rather it is a methodology of visualising what we might build. From 2D we create 3D and so from 3D we can create 2D. Hindmarsh construction have innovated the South Australian construction industry by using 3D BIM to create comprehensive delivery systems on their projects.

Just ask them how they make more dollars – by

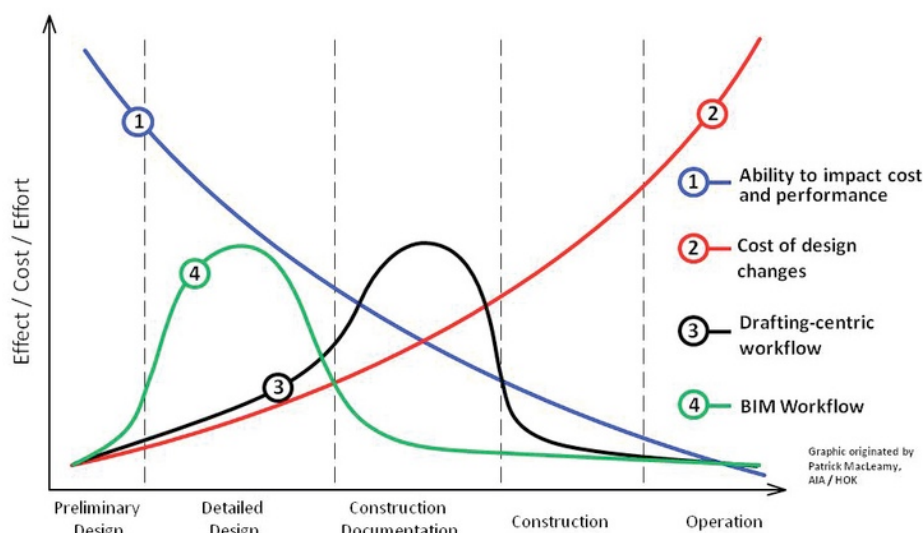


Fig 2: MacLeamy Curve of construction investments versus cost savings and efficiency

What is hitting home is that now we are placing ourselves in the driver's seat. The only difference to our traditional process is that now we are

using 3D models they can undertake a more vigorous design checking, review and analysis process – from the very beginning of the project they have already reduced their risk profile. What we get from 3D is a clearer picture of the reality of the design and the build ahead. It becomes very clear what 3D building member is running into what other 3D building member – this is not as easy with 2D line work.

Remember in 3D we can actually see where that duct is hanging in relation to that king stud. Check out the results in the figure 1 hospital case study comparing BIM to 2D. In turn, this reduces the numbers of admins they need on a job because it reduces the total number of RFIs; they provide better design feedback to architects, so they get better drawings to site for construction; they improve project team collaboration because we see in 3D; and a finally a better product for the client. Not to mention the entire time they are improving safety, decreasing their insurance costs and winning the next job.

We have all been waiting for the 'BUT', so here it is. What we need to become more open to is our



Fig 1: Case study project savings from BIM process versus traditional process

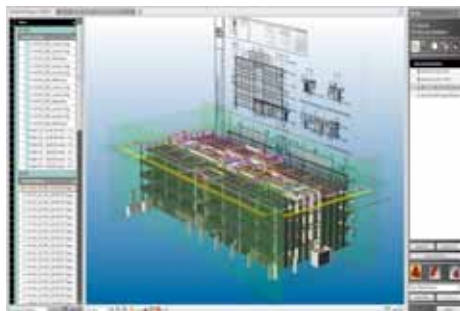


Fig 3: Vico Office Document Controller for Manager 2D and 3D design

risk profile when making profit. Check our figure 2 – checkout line 4 vs 3. In order to make more we need to consider a different way to invest or “de-risk” our projects. In this way we will be facing some investment costs early in the project that we did not have before. For example the cost of developing a 3D model [or get some experience using a free product like www.SketchUp.com] to undertake a more detailed review of what we are being asked to build. The estimated ROI on a well for construction 3D model can be as high as ~10 times! This is real dollars. Plus you have

probably solved approximately 50% of the RFIs and you have not even dug a hole (figure 3). It's a no brainer.

Jan Goetze, from Hindmarsh, says “we are the only industry in the world that builds the real life model and the prototype at the same time”. I love this quote because it is incredible to think of all the potential waste! Wasted time, trashed materials, poor workmanship – we put ourselves through the retrospective glass and blame it on an incomplete design. We need to change and be more proactive or at least be aware of what we are investing our and our client's capital when undertaking projects.

The buck doesn't stop there. 3D not only opens you to more innovative ways to use robotic total stations for layout (improving layout time in some cases by as much as 200%; and reducing errors by up to 95%). It also helps



Fig 4: Trimble Robotic Total Station for Layout

automate quantity takeoff and costing (known as 5D BIM, which can make it possible to calculate complete bills of quantity in anywhere from a few minutes to one hour, while also reducing estimate time by nearly 8 hours per estimate*). 3D also enables the creation of construction schedules and simulations which are integrated to the entire process (known as 4D BIM – which can save 7-12% in overall planned construction time and improve actual on site production by about 3-5%*).

Email and smartphones have changed how we use technology; communicate with friends, and the way we do business. As it turns out this technology is that simple to use and is already changing the face of our industry.

The reality is that BIM is here for the long haul. So, we invite you to join us along this BIM path – because when we break it down, it is all about the dollars and sense.

(*Case Study by Klorman Construction)



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BIM Technology: A Catalyst for Business Change

By Rob Stummer, Managing Director, IFS Australia & New Zealand

As Australia nears the end of a huge construction boom driven by the mining and resources sectors, the time has come to take steps to ensure our continued competitiveness. The best way to do this is for governments and industry to encourage innovation.

That is why we should pay close attention to what is happening in the United Kingdom right now with Building Information Modelling (BIM) and seriously consider adopting it here as well. In the UK, the government will require all project and asset information, documentation and data on its projects to be BIM-compliant by 2016.

Despite much debate about what BIM is, the UK government has clearly taken a data-driven approach to changing how the building and construction industry works. The goal is to make both construction and assets more efficient to reduce upfront and operational through life costs.

IFS sees great potential for efficiency improvements in the construction of these assets from the data-driven approach to process efficiencies that BIM encourages. These efficiencies are at three levels: within building and construction companies themselves, throughout the supply chain more generally, and in the ongoing management of the assets that are constructed.

It is not that the industry is not already using technology. Everyone now has access to computing devices of one sort or another to enhance their individual productivity. But due to underinvestment and a lack of innovation, the systems most people use do not talk to each other and many opportunities for enterprise or supply chain efficiencies are lost.

While technology is only part of the solution – people and processes are equally if not more important – technology can act as a catalyst for change and innovation. This is certainly how things are playing out right now in the UK with BIM. Instead of thinking about it as a 3D design model – probably a fair assessment of how it is mostly viewed in Australia – the UK government and industry are now talking about how to capture and share data throughout the construction and asset management supply chain to encourage new, more collaborative and more efficient ways of working.

What has become clear to industry is that BIM is not about buying a 3D modelling product. What BIM is really about is better management and use of information across all stages of an asset's life. It involves the integration of processes, information and technologies. It is more about changing the way we do business and embracing continuous improvement based on a more integrated systems approach.

In particular, BIM is driving a move away from primarily document-driven processes to an integrated data-driven approach. The adoption of more sophisticated information inputs enables organisations – and potentially entire supply chains – to move away from isolated business processes, with their corresponding information silos, to processes that are integrated throughout the whole design, construction and asset management lifecycle.

Ultimately this requires an integrated systems approach that supports accurate and timely information management across business processes including Tendering, Estimating, Design, Program Management, Procurement, Construction, Sub Contract, Plant and Equipment, Materials Management, Risk, Progress, Cost Control, Quality, Health and Safety, Asset & Facilities Management, Document Management, Human Resources and Finance.

Of course, there is a cost to something like BIM. The initial investment is not

huge in terms of dollars, but it is larger in terms of people and processes and the integrated information systems to support them. We can see from the UK that there is some pain involved with predictions that some construction companies may fail to make the transition in time and be locked out of government business until they do.

Even if we do not see BIM mandated by Australian federal, state or local governments in the short term, the industry can still learn from the UK experience about the changes that more pervasive use of technology will bring. As the industry in that country is discovering, many of the changes that need to take place are cultural, including:

- |||| A need to invest in innovation and education
- |||| Embracing new ideas from the younger generation
- |||| Learning from other industries (e.g. Lean Construction, Workface Planning)
- |||| Encouraging a collaborative and open culture and eliminating the fear of sharing data
- |||| Challenging traditional ways of working (e.g. Bill of Quantities based contracts)

While there is nothing to stop Australian companies adopting BIM right now, the lack of skills and expertise mean the benefits to a single early adopter will not be as great as those that would flow from the UK scenario where the government kick-starts innovation. It is a classic case for government action, where the benefits of the initial investment flow to the entire economy. As a single large actor, a government can quickly create critical mass where individual companies cannot.

Given traditional cultural and business ties, Australia is also well placed to benefit from what is happening in the UK. Similar initiatives here would undoubtedly see significant skills transfer between the two countries that would accelerate BIM adoption. This process has already started in a small way. IFS has already been asked by local construction companies about what BIM support we can offer, due to the fact that they have operations in the UK.

We have also seen an uptick in technology investment generally by firms that have benefitted from the resources investment boom. Many of them understand the need to improve their enterprise information systems in order to compete and survive in the times ahead. Mandating BIM would give these firms an extra incentive and a focus to their investments. It would also ensure better quality and more complete information for sharing along the supply chain and with the eventual asset owner.

Action on BIM on the part of the Australian government – perhaps not as an absolute trailblazer like the UK but as a fast follower looking to capitalise on what has been learnt there – would spark much needed innovation and change in our own industry with benefits to the economy as a whole.

About the Author

Rob Stummer is Managing Director, Australia and New Zealand for global enterprise applications company IFS, achieving significant growth over the last five years. He holds a Masters in Information Technology from Melbourne University and has consulted to many of Australia's Top 500 companies. See: www.ifsworld.com/en-au



AUSTRALIAN STEEL INSTITUTE

Meet Australian steelwork's best

This supplement profiles the winning and highly commended projects recognised in this year's National Steel Excellence Awards which mostly attracts building and construction project entries.

The awards are conducted every two years by the Australian Steel Institute (ASI) and in keeping with our role as the peak industry body representing the complete steel supply chain, they recognise members right across project teams as integral to delivering that excellence.

The projects that vied for the top honours were those which topped one of five State award programs in their entry category from:

- Buildings - Large Projects - over \$5,000,000 for application component
- Buildings - Small Projects - up to \$5,000,000 for application component
- Steel Clad Structures - including warehouses, industrial building façades
- Engineering Projects - infrastructure, resources and mining

These awards come when there are more steel framed multilevel projects under construction than ever since the Institute was established, around 20 at the latest count.

I convey a huge thanks to all those individuals who took the time and made the effort to enter these significant projects on behalf of their teams and to those ASI member companies which came on board as national sponsors displaying exceptional support for our industry; OneSteel (Buildings – Large Project), Konecranes (Buildings – Small Project), Fletcher Building (Steel Clad Structures) and BlueScope (Engineering Projects).

Video presentations of each of the four winning and two highly commended projects can be viewed at <http://steel.org.au/events/national-steel-excellence-award-winners-2014/>.

The ASI is also rolling out a series of special complimentary presentations on some of these projects in the coming months that will be listed in the Events area of our website and I hope to see you at some of those.

David Ryan

National Manager Marketing
Australian Steel Institute

Teamwork triumphs for steel's tops nationally

Close cooperation and deft planning shone through as key factors in selecting the winners of the 2014 Steel Excellence Awards in four categories announced on 15 September at the Marriott Surfers Paradise.

The awards are organised every two years by the peak body representing the complete local steel supply chain, the Australian Steel Institute (ASI) and recognise project teams associated with winning entries.

In choosing the Star City Events Centre in Sydney as the winner in the Buildings - Large Project category sponsored by OneSteel, the judges described it as "an elegant solution especially difficult on an existing structure whilst it was still operational involving a high degree of team coordination".

The judges also commended Queensland's Global Change Institute for considerable architectural merit and attention to sustainability in that category.

Teamwork was also a key factor in the Scenic Railway Upgrade at Katoomba in the NSW Blue Mountains winning in the Engineering Projects category sponsored by BlueScope, cited by the judges as "a most complex project (accomplished) to the credit of the high level of coordination of the whole team involved". They were impressed by the technical and innovative solutions applied on a rugged landform in redeveloping what is the world's steepest railway with most components installed via helicopter.

The judges also commended the Melbourne Star observation wheel as having considerable engineering and fabrication merit in that category.

Careful planning prevailed for the AGL Lakeside Pavilion located at the Botanical Gardens at Mount Annan in regional NSW that topped the Buildings – Small Project category sponsored by Konecranes, regarded by the judges as "a logical solution well thought out in concept and construction".

Topping the Steel Clad Structures category sponsored by Fletcher Building was the IGLU Central Student Accommodation building on a confined Sydney CBD site applying weathering steel panels for a striking façade adorned with simple self-tapping connections to speed construction.

The projects shortlisted for the national program are those which won in their respective categories from the five state programs conducted earlier in the year.

Awards convenor, ASI National Manager Marketing David Ryan said the awards attracted high interest with 104 separate entries submitted at State level across Australia.

Further details: Alan Marshall on 02 9931 6606/0409 227 909 or Email: alanm@steel.org.au

National Steel Excellence Awards 2014

PROFILES

The Star Events Centre

(WINNER: Buildings – Large Projects)

Submitted by: Brookfield Multiplex, ICPM, and Taylor Thomson Whitting

This 3000-seat facility sits atop of the existing casino directly over the main gaming floor. Comprising over 1000 tonnes of new structural steel, the building is a braced steel frame supported on eight existing columns and two new columns positioned between two large existing post-tensioned transfer beams. It encloses 2400sqm with 16 metres clear internal height housing three suspended levels. The internal floor structure hangs from an external ring truss which transfers back to the primary columns. Works were carried out immediately adjacent to and over the existing 24/7 operational building. Site bolting was utilised for the connection of prefabricated elements across the site reducing onsite welding to an absolute minimum.

PROJECT TEAM

Client: Echo Entertainment
Engineer: Taylor Thomson Whitting
Architect: fitzpatrick+partners
Steel Fabricators: S&L Steel, Cullen Steel, Pacific Steel, Sebastian
Builder: Brookfield Multiplex
Steel Detailer: Elmasry Steel Design & Detailing
Coatings: Giovenco Industries, Industrial Galvanizers
Steel Supply: Southern Steel, BlueScope, OneSteel
Structural Steel Project Management: ICMP Steel Structures

Iglu Central Student Accommodation

(WINNER: Steel Clad Structures)

Submitted by: Bates Smart, Grindley Construction and Taylor Thomson Whitting

Iglu Central is eight storey student accommodation built on a confined CBD site. The most striking feature of the building is the extensive use of modular thin weathering steel plate as façade. The steel is supported on lightweight metal frames using top hat sections that created a small cavity to ensure weather tightness. The characteristic ochre brown patina complements the brick façades of many of the area's buildings whilst producing a natural oxide layer to slow and eventually stabilise corrosion. A perforated metal layer was added to several areas to add detail, scale and texture to the building as well as serving as a privacy screen enabling natural light to filter into the space. Each panel was designed relatively large and fixed with simple self-tapping connections to speed installation.

PROJECT TEAM

Client: Iglu
Engineer: Taylor Thomson Whitting
Architect: Bates Smart
Steel Fabricator: Dunsteel
Builder: Grindley Construction
Steel Detailer: Dunsteel

Global Change Institute

(HIGHLY COMMENDED: Buildings – Large Projects)

Submitted by: Bligh Tanner and HASSELL

The Global Change Institute is Australia's first carbon-neutral building. Steel is an integral part of the building's strength, architecture and sustainability, making up the soaring atrium structure, central floating stairs and sun shading façade. Breezes are 'inhaled' via walls of glass louvers to flow through a steel framed central atrium and flushed out through a 'thermal chimney'. The arched roof beams are fabricated from combinations of rolled circular hollow sections and flat plate stitched together with intermittent vertical steel plates for stiffer sections. Steel frames several sustainable features in the building including the green wall which is composed of steel trusses that filter air which flows through the atrium. A vast array of solar panels is supported by lightweight steel posts and beams.

PROJECT TEAM

Architect: HASSELL
Structural Engineer: Bligh Tanner
Head Building Contractor: McNab
Steel Fabricator: BridgeFab
Steel Supplier: CMC Steel Distribution
Steel Detailer: JBD Group
Coatings Supply: A&I Coatings

AGL Lakeside Pavilion, Mount Annan

(WINNER: Buildings – Small Projects)

Submitted by: Hunter Galvanizing

The AGL Pavilion at the Australian Botanic Garden in regional NSW made almost entirely of steel draws together a semi-permanent theatrical marquee and more permanent utility shed. The main steel was entirely fabricated off-site and assembled with bolted connections to avoid welding onsite and maximise speed of construction. Galvanized steel was selected to provide long-time excellent corrosion protection. Steel sections were designed in modular design for ease of transport to ensure fit within galvanizing bath size capability. As galvanized steel members were received they were ready for use onsite. Standard size steel sections were used to simplify fabrication and plate profile cutting for increased fabrication efficiency.

PROJECT TEAM

Client: Australian Botanic Garden - Mount Annan
Engineer: Cardno
Architect: Kennedy Associates
Steel Fabricator: BRH Steel Constructions
Builder: Zadro Constructions
Steel Detailer: BRH Steel Constructions
Coatings: Hunter Galvanizing
Steel Supplier: CMC Steel Distribution
Metal Building Contractor: Bay & Coast Metal Roofing

YES—IT'S
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Scenic Railway Upgrade, Katoomba

(WINNER: Engineering Projects)

Submitted by: Jacobs SKM

Steelwork was prominently used to upgrade the railway listed by Guinness Book of Records as the world's steepest with new top and bottom stations whilst minimising disruptions to allow the tourist attraction to continually operate on a steep escarpment with limited access for construction equipment. A 3D laser survey of existing structures gave accurate modelling to deal with the loose and environmentally sensitive terrain leading to an innovative use of steel casing in micropiles for new foundation works. Steelwork was designed for construction staging and placement by helicopter onsite. The project comprised 17,855 individual steel components representing 205 tonnes of fabricated steelwork. The project was completed with no safety incidents to the public and zero Loss Time Injuries.

PROJECT TEAM

Client: Scenic World

Engineer: Jacobs SKM

Architect: PMDL Architecture & Design

Steel Fabricator: Combell Steelfab

Builder: Grindley Construction

Steel Detailer: Southline Design & Drafting

Coatings: Nepean Galvanising

Steel Supply: Southern Steel, OneSteel

Melbourne Star

(HIGHLY COMMENDED: Engineering Projects)

Submitted by: Arup and International Paint (separate entries)

Around 1200 tonnes of structural steel contributed to the largest observation wheel in the Southern Hemisphere. Located in the city's Docklands precinct, it is the largest tubular frame compression wheel of its type in the world. The steel truss frame supports 21 passenger viewing cabins providing 360 degree views. The only giant observation wheel in the Southern Hemisphere, its design boasts a 110-metre diameter triangular rim truss spanning between seven diamond spokes set out in a seven pointed star with tube to tube connections. Following rectification design investigation of defects found in the original structure, the decision was made to dismantle and replace the wheel frame whilst retaining the original supports and spindle/hub structure. The new wheel's geometry and design provides for efficiency in fabrication, erection, performance and maintenance. A fast curing two-coat system saved project construction time and tight project deadline.

PROJECT TEAM

Structural Engineer: Arup

Head Building Contractor: Sanoyas Rides Corporation

Steel Fabricators: Alfasi, Haywards and BMC Fabrication & Erection

Coatings Supply: International Paint

Steel Tube Supply: Orrcon Steel

JUDGING PANEL

Alan Fozzard (ex-Fozzard Engineering)

Tim Hogan (ex-SCP Consulting)

Dr Peter Key (ASI National Technical Development Manager)

Alan Nightingale (Steel Compliance Australia General Manager)

Graeme Smith (ex-Rice Daubney architects)

Don't Gamble on Your Coating Selection

Background. The redevelopment of The Star entertainment facility beside Sydney's Darling Harbour is an Award-winning application of Hot-Dip Galvanized (HDG) steel in a high profile project.

The use of galvanized structural steel is becoming increasingly popular, and was a key design feature of the new Multi Use Entertainment Facility (MUEF). HDG from Industrial Galvanizers was chosen as the project required a corrosion protection system that would remain maintenance-free for at least ten years.

The MUEF is a forty-by-sixty metre complex geometric structure that utilizes a 300 tonne steel frame to support internal walls and an external glass façade, which is internally lit at night to spectacular effect. The structure is located on the roof of the existing casino, which continued operation during the entire construction period.

Why Hot-Dip Galvanized Steel? There were a number of challenges and constraints that made the choice of Industrial Galvanizers' HDG very suitable for this application: a tight schedule; limited laydown area; and the need to continue normal trading operation in a twenty-four hour, year-round operation directly below the construction zone, made HDG an ideal solution:-

Tight Construction Schedule – a complete HDG coating can be applied in hours, at off-site facilities, by experienced operators: this reduces delays from poor weather during on-site construction. Industrial Galvanizers average nationwide turnaround time has been less than 4 days over the past year*, maximising schedule adherence: reduced delays translate to lower project costs.

Off-site preparation - potentially disruptive work, such as steel preparation, needed to be done off-site to minimise the impact of dust and fumes from surface preparation and coating. The tough coating of HDG steel allowed it to be prepared off-site and then craned into position with minimal (or no) post-construction touch-up – saving money and time.

Limited Lay-down Area - Storage space was limited and available lay-

down locations were constrained by the load capacity of the concrete slabs. Project success depended on off-site preparation and steel delivery to a tight, daily schedule. Use of HDG steel achieved both outcomes; delivering on time and reducing costs.

A cost-effective and low-maintenance Corrosion Protection System. The Star is exposed to a C3, or "Medium" corrosivity marine environment. Despite being partially enclosed, the steel frame requires a protective coating to prevent unsightly corrosion, minimise maintenance and maximise the life of the asset.

HDG from Industrial Galvanizers was chosen as the project required a proven corrosion protection system that would remain maintenance-free for at least ten years.

The durable nature of the HDG coating ensures it will exceed this warranty period, providing maintenance-free service you can bet on!

* Industrial Galvanizers internally audited data

Alex Spillett is National Business Development Manager for Industrial Galvanizers Corporation Pty. Ltd.

Initially qualified with a B.Sc. (Hons) Degree in Metallurgy from the University of Newcastle-upon-Tyne in the UK, he later added an M.B.A from the University of Wollongong, NSW.

Alex is an Associate Member of the Australian Marketing Institute (A.M.A.M.I) and a Fellow of the Australian Institute of Management (F.A.I.M).

He has over 30 years' experience in operations, sales, marketing, administration and logistics within domestic and international organizations and across a number of industries including steel, zinc, paper, glass and automotive. Alex has co-authored a number of Technical Papers on subjects including iron-making and health and safety in the labour-hire industry.

AGL Lakeside Pavilion, Mount Annan

The structure is a raw, robust design which makes a real statement from where it is situated overlooking the lake.

There is a heavy concentration of steel in the material selection from the screw piles, reinforcement in the concrete, exposed galvanised steel frame and insulated colourbond steel roofing. The selection of materials require very little maintenance because no surfaces are painted and the "timber look" screening is a composite material with long lasting properties.

Three rainwater tanks have been installed side by side on the southern end of the structure and two of these tanks have been fitted out as

disabled accessible toilets whilst still maintaining the tanks original shape. The third tank is a functioning water recycling system which is used by The Australian Botanic Garden staff for irrigation.

This building has created a very comfortable space within the harsh climate of Mount Annan because the insulated roofing system keeps it very cool in summer. Even the local wildlife like to congregate under the shelter in the hot summer months.





A HISTORY OF SUCCESS

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Founded around 1930, Cullen Steel is one of the longest established steel fabrication companies in Australia. Over the course of their extensive history, they have refined their skills by working in a variety of markets - including mining, multi-level commercial, industrial, public infrastructure and more.

“We do work for almost anybody, but we concentrate on medium-to-large buildings,” says Ron Barrington, the company’s Managing Director. “We’re driven by our commitment to delivering exactly what the client has ordered. Our clients can hand us a job and not worry about it, because they know we’ll look after it”.

Barrington began his longstanding career at Cullen Steel in 1970. Before joining the company, he worked as a project manager for Jaques - a Victorian-based manufacturer of mining equipment that had purchased Cullen Steel many years earlier. Another group called Clyde Industries took over Cullen Steel in late 1970s, and in 1986, Barrington and a few of his colleagues decided to purchase the company for themselves. The business has progressed from there.

Case Study

Glistening skin gives style to tropics

Background

A university building in North Queensland proves once again that hot dip galvanized (HDG) surfaces can lift the appeal of prominent architectural features without additional treatments required.

This project joins the Lavarack Barracks, Daintree Discovery Centre and Cairns Futsal Stadium where HDG provides corrosion protection, durability and a stunning visual impact. It has already been the subject of a seven-page spread in the Architecture Australia magazine's March-April 2014 edition and was a finalist in the 2014 GAA Sorel Awards.

The Cairns Institute building is encompassed by a super-sized hot dip galvanized steel lattice skin, or 'trellis', shielding the building whilst connecting it to its tropical rainforest setting. Among other elements it comprises over 4km of HDG strapping and 10,000 structural bolts with around 58 tonnes of galvanized steel in total.

The landmark building supports James Cook University's aim to become one of the world's leading research universities in the tropics by facilitating research activities in social sciences, humanities and other related fields of tropical knowledge.

Inside the trellis, the tall two-storey structure is essentially three buildings; a long rectangular research and office wing and two oval 'pods', the lecture theatre, and the seminar pods, all of which are linked together by a two-storey high exhibition and display foyer.

Visually Stunning

This project is a visually stunning example of the appropriateness of HDG for a tropical environment. While the galvanizing in this project was not particularly difficult or unique, comprising mainly straight RHS and flat sections, all the galvanizing is visible, both from the outside and inside of the building.

The HDG used to protect the trellis encapsulates aesthetics and sun control. There were also more



standard items galvanized such as interior stairs. All external steelwork was HDG treated which presented logistical challenges as the nearest galvanizing plant is 350 kilometres away.

Design Features for Durability The Cairns Institute features key design attributes to maximise durability of the trellis. The bolts are insulated where required and have special heavy duty galvanized washers in key locations.

In addition, the interface with the concrete plinth has been well considered and includes a non-conductive barrier paint applied above and below the surface. This ensures any moisture penetration into the porous concrete does not significantly reduce the life of the steel structure by accelerating the rate of corrosion of the galvanized post.

Teamwork

The galvanizer's professional in-house software and communication procedures with the local contractors meant the project was seamless from

a customer viewpoint. The company worked closely with the steel fabricator to achieve the exact finish required and coordinate the processing and delivery to site to meet construction time lines.

PROJECT TEAM

Developer/Owner: James Cook University
Architects: Woods Bagot, RPA Architects
Urban Design: Andrew Prowse Landscape Architect

Civil and Structural Engineer: Flanagan Consulting Group

Project Manager: Hansen Yuncken

Main Contractor: Hansen Yuncken

Steel Fabrication and Detailing: CSF Steel Fabricators

Hot Dip Galvanizer: Australian Professional Galvanizing

Photography: GAA

Case Study: Alan Marshall (ASI) / GAA

For further examples of the durability of hot dip galvanizing please visit www.gaa.com.au

This Case Study is intended to keep readers abreast of current issues and developments in the field of galvanizing. The Galvanizers Association of Australia has made every effort to ensure that the information provided is accurate, however its accuracy, reliability or completeness is not guaranteed. Any advice given, information provided, or procedures recommended by GAA represent its best solutions based on its information and research, however may be based on assumptions which while reasonable, may not be applicable to all environments and potential fields of application. Due and proper consideration has been given to all information provided but no warranty is made regarding the accuracy or reliability of either the information contained in this publication or any specific recommendation made to the recipient. Comments made are of a general nature only and are not intended to be relied upon or to be used as a substitute for professional advice. GAA and its employees disclaim all liability and responsibility for any direct or indirect loss or damage that may be suffered by the recipient through relying on anything contained or omitted in this publication.



A smart solution to house smart people

Paradise is a great place for a university. The Cairns Institute in Australia's Far North Queensland is located in such a place, but the extreme tropical climate makes for a corrosive environment. That is why Hot Dip Galvanized steel was a very smart solution that delivers perfect protection.

Compared to any other protective coating for steel, hot dip galvanizing is unmatched in its superior corrosion resistance, strong and tough coating, proven performance, and lifetime cost benefits.

It also has very high sustainability credentials, with Zinc and steel being 100% recyclable, and is immune from UV damage. Hot dip galvanized steel contains no volatile organic compounds (VOC's) and does not emit ozone depleting gases, but its strength is its length of protection – with many examples where HDG steel has been in operation for over 70 years.

Hot Dip Galvanizing – First and last line of defence

For further examples of the durability of hot dip galvanizing please visit www.gaa.com.au or scan the QR code.





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Winning Strategy for Local Industry

The recent ASI Award winning Star City project is setting a new direction for steel contracts of the future.

Specialist steel contractors ICMP Steel Structures Pty Ltd won the Star City steel contract by splitting the tender for fabricators into eight smaller packages.

Managing Director of ICMP, Chris Mathews spoke to OneSteel about the methodology behind the contract and why it works well, particularly for large projects which otherwise may be destined for fabrication overseas. He also expressed his views on the cost benefits and reduced risk of using locally supplied product and fabrication.

OneSteel: Chris, what made The Star project different to the typical large steel project in Australia?

Chris: I think you could put it down to two main differences.

The fast track design and construct approach despite the complexity of the building; and the way the steel fabrication was split into tranches to utilise each of the fabricator's specific and specialised skills in steel fabrication.

OneSteel: How would a steel project typically be handled?

Chris: Normally, the main contractor and its consultants would produce a set of drawings which are released for tender. Fabricators put in their bids, which are assessed by the head contractor. For a large project the difference in price between the highest and lowest bid can be over 100%.

OneSteel: Why is there such a big difference?

Chris: Two reasons, the devil is in the detail for a fabricator. Tender drawings don't generally have enough detail to provide accurate fabrication estimates without making assumptions. The more complex the structure the more varied the assumptions and hence the prices. The second reason is some of the prices were for fabrication overseas.

OneSteel: Would it be safe to presume overseas tenders were the lowest, and if so why were these fabricators/steel contractors not used?

Chris: Yes, overseas fabricators appeared to be the lowest if you consider their tender prices alone without the additional indirect costs associated with importing fabricated steel (IFS). The approach I take considers this while some builders may omit it.

OneSteel: Can you elaborate on the indirect costs?

Chris: The additional costs a builder and their consultants will incur for imported fabricated steel include additional QA and product compliance costs; storage and reloading to deliver to site and associated paint touch up. Also there are cash flow considerations arising from having to pay for imported product up front rather than after it's erected and hedging costs for the foreign exchange rate. Perhaps the greatest risk to be costed is the program risk.

For the consultants, drawing reviews approval and the language barrier increase their cost which will ultimately be passed onto the builder.

OneSteel: How was splitting the tender into smaller packages used to close the gap and make it the best option for The Star?



Chris: It relates back to the two main differences I spoke of earlier between The Star and a typical project. We offered the builders, Multiplex, our ability to dissect a large project into smaller simpler packages that reduced the overall uncertainty for each fabricator tendering despite the fast track nature of the project.

We assessed the site constraints and the building structure with the builder and the structural engineers, TTW, to formulate a construction sequence which enabled the project to be segmented into eight discrete phases. These eight phases provided a clear erection process which each package simply followed. This reduced the assumptions that the fabricators would otherwise have made and solidified an erection process that was analysed to ensure the steelwork's stability during erection. The result was a significant reduction of the contingencies in the fabricators and erection pricing.

Smaller packages also meant specialised fabricators who are geared up for a specific type of fabrication are able to tender for a particular package more keenly. Additionally it meant their fabrication shops weren't overloaded by a large 800+ tonne project.

OneSteel: So can anyone fill the role ICMP played?

Chris: Well yes and no. Yes because in reality it's just like a project management role. It's about splitting the fabrication package, organising the sequence and who does what and knowing how to pull it all together to the program. The real challenge is to know how to split the packages based on the project's requirements and the fabricator resources available, so every project will usually be different and have a different split.

OneSteel: So does it mean this approach is only competitive for large complex projects such as The Star?

Chris: I believe this methodology will work for most large projects. It really is about how to most effectively split a large package into segments that reduce uncertainty for fabricators and/or improve their efficiency.



How long is a building professional's liability for defects, really?

Recently, the Victoria Court of Appeal resolved a long-unanswered question: is the 10 year limitation period in the Building Act a 'long-stop' date on claims for negligence, or does it also replace the 6 year limitation period for breach of contract? The case, *Birek Industries Pty Ltd v McKenzie Group Consulting (Vic) Pty Ltd*,^[1] held that the limitation period for ALL building actions in Victoria – including breach of statutory warranties – is 10 years from completion of the building.

Why do I care about a Victorian case – I work in the ACT!

A similar unresolved question exists in the ACT. However, for a number of reasons set out below, *Birek* is unlikely to have the same impact here as it does in Victoria.

An explanation of the unresolved question about limitation periods

Generally speaking, the limitation period for bringing any court proceedings is 6 years from the date the cause of action accrues.

In relation to claims for breach of contract, the cause of action accrues at the time of the breach. For building defects that is usually the date the works are handed over with defects in them - i.e. completion.^[2]

In relation to claims for negligence, however, the cause of action accrues at the date the damage is suffered. Numerous cases have held that for building defects, the damage is suffered at the time that the defect becomes manifest. This could be several years after the completion of the building, creating a long trailing period of liability in negligence for defects.

For this reason, all Australian states and territories have introduced legislation which says that no claim for a building action can be brought more than 10 years after the date of completion of the building. In *Birek*, it was argued that the 10 year cap was just a 'long-stop' date to protect builders from trailing negligence claims, but that the shorter 6 year period for breach of contract still applied. That argument was rejected.

The precise wording of the relevant legislation varies significantly from jurisdiction to jurisdiction. In the ACT:

¶¶¶ There is a 10 year limitation for any 'building action' (s 142 of the Building Act 2004 (ACT)).

¶¶¶ Statutory warranties are implied into every residential building contract, and the warranties 'end' at the end of the warranty period (2 years non-structural and 6 years structural) (s 88 of the Building Act 2004 (ACT)).

¶¶¶ An action is not maintainable if commenced more than 6 years after the cause of action accrues (s 11 of the Limitation Act 1985 (ACT)).

¶¶¶ But, where the damage is latent, the court has a discretion to extend a limitation period for a further period not exceeding 15 years from the date the cause of action accrued (section 40 of the Limitation Act 1985 (ACT)).

There are no cases in the ACT that give guidance as to how these various sections are to be read together.

What does *Birek* mean for Victoria?

The decision means that in Victoria a claim for breach of contract is now

longer for a building dispute (10 years) than any other contract dispute (6 years).

Importantly for Victoria, because the legislation implying warranties into residential building contracts did not expressly specify any limitation period on bringing claims for breach of those warranties, it means that the limitation period for breach of statutory warranty is now 10 years from completion.

Does *Birek* answer the question in the ACT?

No. There are two important differences between the ACT and Victorian legislation.

First, the ACT statutory warranties expressly 'end' after 2 and 6 years. Whilst this is not as clearly worded as similar provisions in NSW, Queensland, South Australia and Tasmania (which all expressly say that a claim must be commenced within the warranty period), our view is that the end of the warranty period acts as limitation on bringing any claims. That is, our statutory warranty provisions have their own limitation periods, and do not simply rely on the limitation period for breach of contract like the Victorian legislation.

Second, the 10 year cap in the Victorian Building Act is expressed to operate '[d]espite anything to the contrary in the Limitation of Actions Act 1958 or in any other Act or law'. The court placed considerable weight on these words in *Birek*. No such express overriding words exist in the ACT legislation – and in fact our legislation specifically says that the 10 year period does not apply if a shorter limitation period applies under another Territory law. So the shorter 6 year period is preserved and the 10 year period in the ACT is in fact a 'long-stop' date.

Less clear, however, is whether the court's discretion to extend a limitation period for up to 15 years for latent damage also applies to building actions.

What do I need to do?

If you work in Victoria, you need to be aware that the limitation period on any building action is now 10 years, and factor this risk in when pricing your jobs or signing contracts with subcontractors.

For ACT builders, the *Birek* case serves as a reminder that the various limitation periods for building claims are overlapping. If you have a possible building action, or an action is being threatened against you, it is important that you seek early advice to make sure that you understand the relevant limitation dates.

For more information contact the Construction Dispute Resolution Team:

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^[1] [2014] VSCA 165 (*Birek*).

^[2] This does, however, depend on the contract and whether obligations to remedy defects have arisen during the course of the works.

Address to the 2014 AIB NSW Professional Excellence Awards Dinner

4 July 2014

By Len Rouwhorst, LTCOL, Commanding Officer/Chief Engineer, 19th Chief Engineer Works

Thank you for the kind invitation to speak at tonight's Professional Excellence Awards (PEA) dinner. Tonight's association with the Australian Institute of Building (AIB) originated at last year's PEA Dinner, when one of my Senior Project Engineers, Major Jonathan Haling, discussed the idea of a 'Defence Force Personnel Shadow Program' with AIB.

I will talk about this a bit more later, but firstly, a little bit about myself before I also talk briefly about building in the Army.

I am currently in my third (and final) year as the Commanding Officer and Chief Engineer at 19th Chief Engineer Works (19 CE Works), Army's only deployable design and project management agency. Since completing my Engineering studies at the Australian Defence Force Academy back in the mid 90's, I have had 18 years of experience as an officer in the Royal Australian Engineers (RAE).

In that time, I have covered the full breadth of Army construction engineering postings, from leading tradesmen on the ground as a Troop Commander, through to project managing major domestic Defence infrastructure projects. I have been fortunate to have delivered works both domestically and overseas, usually always in remote locations, and in such exotic places as Tonga, East Timor and the East Kimberleys.

Most recently I commanded the Engineering Unit tasked to deconstruct and remediate the Australian military base in Tarin Kowt, Afghanistan last year. I thought I would talk briefly to you tonight about my current unit, 19 CE Works, who we are and what we do.

Building in the Army is conducted by the RAE, which is broadly divided into Combat Engineering and Construction Engineering capabilities. The former directly support the close fight with Infantry and Armour, enhancing their mobility via clearance of obstacles, such as minefields and Improvised Explosive Devices, and gap crossing with equipment bridges, as well as obstructing the enemy's mobility.

Construction engineering provides a deployed military force with the ability to sustain and protect itself, via the construction of hardened accommodation facilities, the establishment of forward operating bases, and the opening and maintenance of roads, rail and port facilities, both air and sea.

Army's regular construction capability is resident in two main units, with the Construction Squadrons in the 6th Engineer Support Regiment, and my unit, 19th Chief Engineer Works.

First established on an ad hoc basis back in the early 1960's as 19 Commander Royal Engineer (CRE) Works for the purposes of coordinating and commanding Army construction works on the battlefield, 19 CRE Works was formed as a permanent unit in 1963 for deployment to the Territory of Papua and New Guinea to act as the Public Works Department for the Northern District, and based initially out of Popondetta.

Over 50 years later, 19 CE Works (as is now known) is based at Randwick

Barracks here in Sydney, and our role is to plan, design, coordinate, control and deliver engineering projects to support land and joint operations, ranging from expeditionary facilities such as military camps and airfields, to reconstruction projects in war-damaged regions.

The unit comprises about 35 technical staff, ranging from professional engineers to senior trade supervisors and surveyors and draughtsmen. From this, we provide a ready deployable group of about 10 staff that form what we call a Works Section. This is led by a Major Senior Project Engineer, and has two Project Management Teams, each led by a Captain Project Engineer.

Our reason for existence is to provide facilities and infrastructure engineering support to deployed elements of the Australian Defence Force. This can be delivered by in-house Army construction elements, or we can procure and manage local and expat civilian companies (or a mixture of both). We have been heavily committed in the past six years to support of Australia's forces deployed in the Middle East and Afghanistan under Operation SLIPPER. This photo shows the construction site of a Unmanned Aerial Vehicle runway at our former base at Tarin Kowt in 2011.

Another aspect of our support to recent operations has been with the provision of reconstruction projects to improve the lives and influence the local population in support of the Coalition forces. For example a river crossing was constructed last year as part of a major road upgrade project in Uruzgan province.

In order to be ready to deploy and deliver these types of projects, we need to develop and maintain our skills with other, non-operational projects.

One long running program has been the Army Aboriginal Community Assistance Program, or AACAP, which has been operating since 1996 and seen Army deliver a combination of construction works, health support and training to improve remote Indigenous communities across Australia. This year, our 21st deployment sees 17th Construction Squadron and a Project Management Team from 19 CE Works currently deployed to Wutunugurra in central Northern Territory for five months. These projects usually involve about \$5 million of works on such things as housing, community facilities, road or air strip upgrades and power and waste water systems, all aimed at improving the environmental health of the communities.

Since our establishment over 50 years ago in support of development in PNG, we have continued to support Defence engagement in our region via the various Defence Cooperation Programs with neighbouring militaries. Currently we are delivering a five year program of works in PNG to refurbish their soldiers' married quarters. Past works across the South West Pacific and East Timor have included such things as wharf upgrades and barracks developments.

We also develop and deliver small to medium works in support of the wider Defence Estate here in Australia. We try and focus on the development of our Training Areas, but sometimes will support Army's priorities for base works too. Examples of this has been the construction (by BMD Constructions) of an Explosive Hazards Training Area up near Townsville, and our current management of the provision of new facilities for the relocation of 2 Cavalry

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Regiment from Darwin to Townsville, currently in the design stage.

Aside from the experiential learning from these real-world projects, we also invest heavily in continuing professional development. A critical component of this has been obtaining experience from civil industry in areas that we may not otherwise get from routine Army tasking.

Army has had a long-term association with civil industry for professional development, via its annual detachment of a Captain Project Engineer to John Holland Group for the past 40 years.

More recently, following from discussions at this same dinner last year, we have re-instated a program of short-term industry secondments that allow our project engineers, works supervisors, draughtsmen and surveyors to spend a shorter period onsite, usually from two to six weeks, shadowing site personnel and learning from current industry best practice.

I would like to thank AIB for its support in the establishment of our Short-Term Industry Secondment Program. Currently we have established agreements with several construction companies, including Hansen Yunken, John Holland and Lend Lease, plus a specialist surveying firm, Cardno Hard and Forester.

As our extant projects and normal training program allows, we will be placing some of our staff at local jobsites with these companies throughout the year. There is potential to support several more agreements into next year, and I welcome any expressions of interest from the gathering tonight.



LTCOL Len Rouwhorst and one of his Project Engineers, CAPT Cameron Hawkins, at the Hansen Yunken site at Port Botany in March this year, whilst CAPT Hawkins was attached to Hansen Yunken for six weeks as part of the Army's Industry Secondment Program.

Richard Smith FAIB Presented With 50 Year Service Award

The South Australian AIB Chapter recently had the opportunity to present Richard Smith FAIB with his 50 year service award at their Annual General Meeting. Richard brings a wealth of experience to the AIB, and also has been one of the main organisers to bring a 19th century 'City of Adelaide' sailing ship hull from Scotland to Australia this year to be restored.



New publication on Construction Products Procurement Best Practice



The AIB, as part of its membership of the Australian Construction Industry Forum (ACIF), is very supportive of the work being done on product procurement. On 1 September 2014, the Australasian Procurement and Construction Council (APCC) and ACIF launched a new publication called Procurement of Construction Products - A guide to achieving compliance. AIB highly recommends all members download a copy from the APCC website and read this publication.



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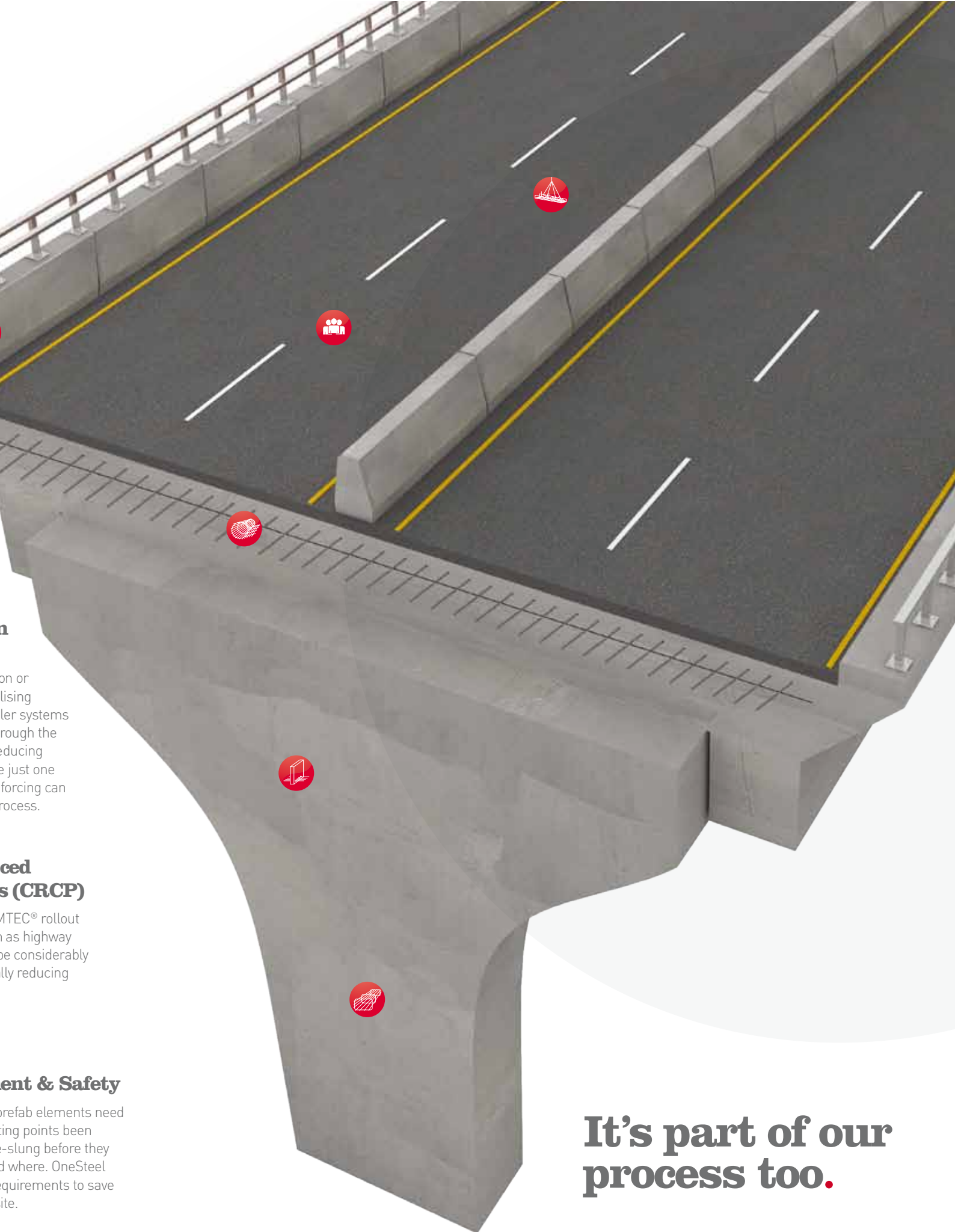
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Alarm Installations

Loss Prevention (plain clothes) & Crowd Control

Labour hire manpower services (sub-contract)

Recent changes to residential building laws in NSW that may affect you

What are the changes that I need to know about?

On 5 June 2014, the Home Building Amendment Act 2014 (NSW) (Act) received Royal Assent and will come into force once a commencement date has been proclaimed. The changes are extensive, and will have a wide impact on the residential building industry in NSW.

Changes to statutory warranties

The distinction between 'structural' defects (6 year statutory warranty) and 'non-structural' defects (2 year statutory warranty) has been discarded. Instead the statutory warranty period will depend on whether the defect is a 'major' defect, which requires the defect to be both:

- a defect in a major element of a building (which expressly includes not only structural load bearing elements but also fire safety systems and waterproofing); and
- likely to cause the building to be uninhabitable or unusable, or threaten the destruction or collapse of the building.

The amendments also help protect builders by:

- broadening the defences available where a builder has reasonably relied on instructions given by a professional (e.g. an architect) acting for the owner;
- expressly requiring home owners (and owners corporations) to mitigate their loss by making reasonable efforts to notify the builder in writing of an alleged breach within 6 months of the breach becoming apparent;
- imposing a duty on home owners not to unreasonably refuse a builder access to the site to rectify defective work; and
- extending the application of statutory warranties to subcontracts. Previously the statutory warranties were only implied into the contract between the builder and the owner, but now the builder will be able to pursue a subcontractor for breach of a statutory warranty.

Changes to the home warranty insurance scheme

The home warranty insurance scheme will be renamed the Home Building Compensation Fund.

The insurance has always protected home owners where the builder has died, disappeared or become insolvent (and also in the case of certain license suspensions) but the meaning of 'disappeared' has never been clear. The amendments expressly state that 'disappeared' means 'cannot be found within Australia'.

Claimants will now also be able to make a claim on the insurance when the builder was a partnership and one of the partners becomes insolvent.

As a result of increasing fraud in relation to insurance certificates, the amendments also set up a public register of certificates which can be searched by home owners and potential purchasers.

Restrictions on progress payments

There will now be a blanket 10% cap on deposits (previously 5% for contracts under \$20,000 and 10% for contracts over \$20,000). In addition, there is now a requirement for any contract over \$20,000 to include a progress payment schedule, and builders are restricted to claiming either:

- milestone payments linked to completion of specified stages of work, which stages must be described in clear and plain language in the contract; or
- payments for work performed, and the claim for payment must be supported by invoices, receipts or other documents to support the claim, (called 'authorised payments').

It will be an offence to ask for a payment that is not an 'authorised payment'.

Other contract changes

In addition to the existing written requirements for the contract, builders are also now required to include a statement in their contracts that the parties have a right to terminate the contract in circumstances provided by the general law (in addition to any other express rights of termination).

Increased licensing penalties

There will also be greater penalties not only for individuals who undertake residential or specialised building work and are not licenced to do so, but also more serious consequences for builders and developers who hire unlicensed persons, including potential imprisonment.

What do I need to do?

The legislative changes to required contract terms apply from any contract entered into after the amendments take effect. If you are using a standard HIA or MBA building contract for NSW, you need to make sure the relevant body has updated the contract, and that you are using the updated version when the amendments take effect. If you have your own building contract, you should seek legal advice now to make sure your contract terms are compliant, and that your progress payment schedules will be authorised.

If your contract does not comply with the legislation you could be fined up to \$110,000 – plus you risk committing an offence by unintentionally making unauthorised claims for payment.

We will notify our construction clients of the commencement date once the changes take effect.

Contact our team if you require advice on whether your contracts are compliant, or if you would like more information about your rights and obligations in respect of defects, or any licensing issues.

For more information contact the Construction Dispute Resolution Team

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Understanding the similarities and differences between Project Alliancing and Early Contractor Involvement (ECI) delivery methods

Part 2 of 3: behavioural characteristics

Farshid Rahmani 1, Malik M.A. Khalfan, Tayyab Maqsood, School of Property, Construction and Project Management, RMIT University, Melbourne 3001

Introduction:

Understanding the reason why a relationship-based delivery method is selected for a particular project is vital by those who are involved in the project. It is also important to maintain the behaviour required for that type of delivery method throughout the project. Obviously different delivery methodologies require different set of individual and organisational behaviours however understanding the similarities and differences between various types of delivery methods can be useful for the project participants specially when dealing with a relationship-based delivery system, which supposedly share many similar characteristics. It would be useful to explore expected project team behaviours helping us understand what is expected of teams and reasons why one procurement form may be suitably deployed over another (Walker and Lloyd-Walker 2012). Knowing these similarities and differences can help organisations who have experienced a type of relational contract, evaluate their individual and organisational behaviours to ascertain they are adequately capable to adopt another type of collaborative oriented contract. This paper, therefore, aims to investigate similar and different behavioural characteristics required for two types of relationship-based delivery systems namely Alliancing and Early Contractor Involvement (ECI). This paper is part of a three-part series exploring three main aspects of the mentioned delivery systems. The first part has focused on the contractual arrangement of both methods and the third part will look at the involvement of each party at different phases of the project life cycle. This part is structured in three sections. The first section briefly describes the behavioural characteristics of an alliancing followed by a section that briefly explains ECI behavioural characteristics and conclusion with an analysis on the similarities and differences between those two methods. This series is part of the literature review of a bigger progressive PhD research study by the first author.

The key behavioural characteristics of an alliance

The concept of collective responsibility is essential to creating a “Virtual Organisation” that has been a key characteristic of an alliancing arrangement. Regardless of any particular project participant’s performance, if the outcome does not meet the Key Result Areas (KRAs), it is seen to be a collective problem of the alliance, not the fault of any individual participant (Ross 2003). This mindset of “swim or sink together” encapsulates what the key characteristics of the behaviours should be demonstrated under

an alliance. Greenham (2007) listed these characteristics as co-operation and collaboration; teamwork; mutual support and respect; accountability; outcome and problem resolution focus; and a ‘best for project’ focus. A study commissioned by the Alliancing Association of Australasia (AAA) and prepared in partnership between RMIT University Melbourne, Victoria University Melbourne and the AAA, was conducted an extensive research into the key profile characteristics of alliance managers by some world-renowned researchers in this field in 2011. This research project was established with the aim of identifying attributes of professional excellence in alliance management and of building a model of competencies and skills required of excellent alliance managers. This study introduced seven authentic leadership characteristics/attributes (Soft Skills) including reflectiveness; pragmatic; appreciative; resilience; wisdom; spirited; and authentic and three skills and experience required of Alliance Managers (Hard Skills) namely technical skills and experience; project management skills and experience; and business skills and experience. The full range of identified AM knowledge, skills, attribute and experience (KSAE) is presented in Figure 1.

The key behavioural characteristics of an ECI Model

The nature of the conditional preconstruction phase agreement in the context of contract theory embedded in the ECI model is the key difference to the alliancing approach. Some authors see this as the weakness of ECI framework as it breaks the continuity of the contractual system and requires two separate deals to be concluded (Walker, Hampson et al. 2000, Mosey 2009). On the other hand, some other authors argue that alliancing has not been embraced by all governments’ authorities for various reasons the chief among which are concerns over demonstrating value for money and having Target Outturn Cost instead of a lump sum contract price. Hence they find the ECI model as a framework which follows a collaborative approach without moving radically from the traditional forms of contracts (Swainston 2006, Edwards 2009).

Mosey (2009) in his book Early Contractor Involvement in Building Procurement suggests that published standard form construction phase building contracts which appear to assume the availability of complete project information at the point when they are created cannot do the whole job that a contract can and should do. This shortage can be seen as the reason for a need for a new type of contract governing two-stage procurement.

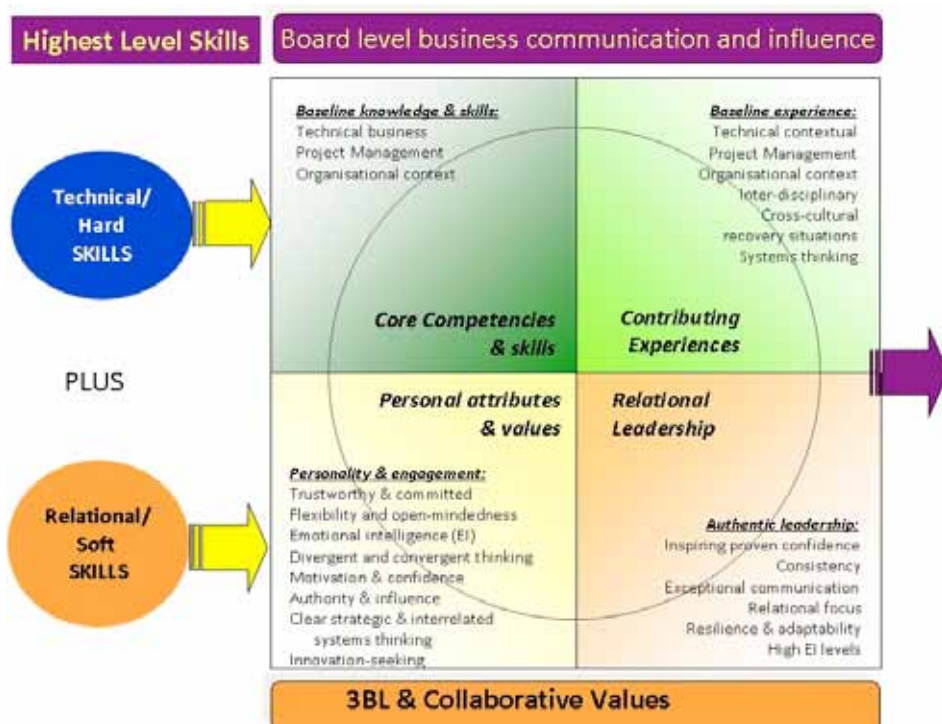


Fig1. Alliances Managers KSAE (Source: Walker and Lloyd-Walker 2011, p8)

He defines the main characteristics required of ECI as client leadership; effective programing and communication system between parties; and preconstruction commitments which can be facilitated by the involvement of client in preconstruction phase. Bennett (2013), however, argues that the mentality of the free market which can regard even the notion of cooperation or agreement of common interests is bureaucratic or interventionist and therefore undesirable. The features of personal attitudes that may or may not be changed through persuasion, education and training are also seen as the other obstacles to the early involvement of contractors (Mosey 2009). Other behavioural characteristics defined by other authors include good communication and understanding of the project by all parties involved leading to the increased opportunity for innovation; contribution of all participants in a team environment; and adequate skills and experience of the client enabling him to be continually challenging the contractors' proposed concepts to ensure the best outcome is obtained (Swainston 2006, Edwards 2007).

Conclusion and Discussion

In this part, we tried to investigate the key behavioural characteristics of Alliancing and ECI framework individually. Both models are considers as relationship-based procurement method which is not only about systems and methods but also essentially about people, enabling them to operate more efficiently, effectively and economically. However, the key elements of Alliancing distinguish this model from other relational delivery process and whilst the

fundamental components of all of them lie in the formalised mutual objectives; agreed problem resolution methods; and an active search for continuous measurable improvements, in reality they have little similarities with the key principles of an Alliance.

Since the ECI framework owns both relational and transactional attributes, it shares many characteristics with Alliancing, especially during the preconstruction phase which the arrangement is very much similar to an Alliance. Nevertheless, the transitional issue from a pure relational environment during the preconstruction phase into a formal traditional environment in the construction phase has drawn many professionals' concerns. For instance, a research conducted by Scheepbouwer and Humphries (2011) focused on the concerns and problems associated with implementing ECI which are held by the owner, designer and contractor. The result suggested that despite the general agreement on the improvement of quality and innovation when an ECI is adopted, the necessary collaborative culture is not present in the construction industry for adopting 'open book' costing, often practiced in ECI. Swainston (2006) has questioned the ECI as whether having a first phase based on alliance principles, followed by a traditional contract (i.e. D&C) for the second phase, would give the benefits of each strategy or the process would be compromised to the point where it was the worst of both strategies.

However, even though the most challenging stage in implementing an ECI is the move from

a relational approach in the pre-construction phase to a traditional risk allocation approach in construction phase, the teamwork and collaboration have been developed during phase 1, has generally continued into phase 2. The factors such as contractor's sense of belonging and commitment to the project success coupled with the improved communication and discussion mechanism without contractual status are resulted by implementing a collaborative contract in phase 1 (Swainston 2006).

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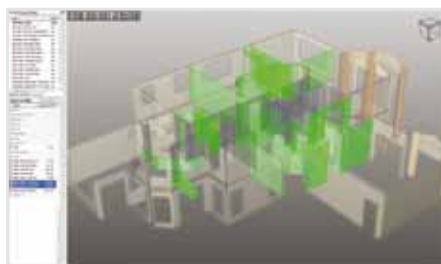
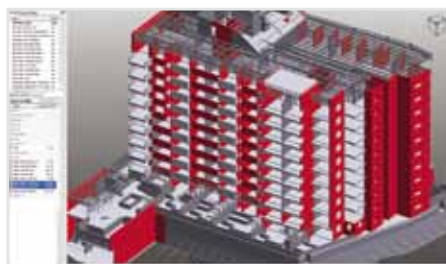
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10 YEARS OF INNOVATION

Six storeys built in 10 days for Perth-first project

Media release from Hon Bill Marmion BE MBA MLA, Western Australia

Friday, 25 July 2014

A Perth-first modular housing project has delivered a six-storey apartment building containing 77 homes in just 10 days.

Housing Minister Bill Marmion said the innovative venture, supported by the Department of Housing, cost less, could cut construction time in half and was 30 per cent more energy efficient. The Adara Apartments building is the third stage of the Department of Housing's Stella Village.

"The one-and two-bedroom apartments - each weighing 22 tonnes and measuring 16 metres by 4.5 metres - are factory fabricated, meaning the apartment complex can go up in just 10 days," Mr Marmion said.

"The whole project will take 12 months to complete, from sod-turning to market. Already there has been keen buyer interest in these apartments and I firmly believe this project gives us a glimpse into the future of quality, affordable housing.

"The apartments go together a bit like Lego blocks and on average, 15 can be erected per day, but this is top-quality construction and an important step forward for the Liberal National Government's affordable housing strategy."

The State Government's first 'Affordable Housing Strategy 2010-2020: Opening Doors to Affordable Housing', aims to deliver at least 20,000



BGC Modular Technology Launch Day

affordable homes by 2020. With more than 15,400 new affordable housing opportunities having already been created, the Government is on schedule to exceed the 2020 target.

The Stella Village project is close to Cockburn Central train station, the Cockburn Gateway Shopping City and the Kwinana Freeway. The apartments are 20 minutes from the CBD by train and one stop away from the new Fiona Stanley Hospital and Murdoch University.

"This project is an exciting first for both Perth and our affordable housing strategy," the Minister said.

"The modular design is an effective and affordable product for higher density and urban infill projects that will make more housing available at an attractive price for future Perth home owners."

Fact File

- \$22million apartment building a major boost for affordable housing
- Up to 12% construction cost savings, 50% less building waste
- The 77 Adara Apartments have floor areas ranging from 50sqm to 75sqm
- Purchase prices range from \$335,000
- Eight will be available through a shared equity scheme to further boost affordability



Official opening of the first modular homes in Perth, with WA Minister for Housing the Hon. Bill Marmion MLA (left) and BGC Residential CEO Kelvin Ryan (right)

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Can You Get Out Of Liquidated Damages?

By Stephen Smith, Managing Partner and Principal Advocate at Lovegrove Smith & Cotton

August 2014

Introduction

Time = \$\$\$ in building projects because a delay in one element of the project often transfers onto the next. Delay is caused by all manner of things such as permit delays, latent conditions, on site accidents and can mean that building contractors can be liable for thousands of dollars per day in liquidated damages.

Liquidated damages are fixed amounts of money, specified in the contract, which must be paid by the defaulting party to the innocent party. The “prevention principle” as it is known has sometimes been brought up by parties as a defence to get out of paying liquidated damages.

What is the Prevention Principle?

In general terms, the “prevention principle” is that the first party to a contract cannot insist upon strict performance of the contract by the second party if the first party has occasioned the second party's default or non-performance under the contract.[1]

How does the Prevention Principle relate to delay?

If a proprietor or its agents causes a delay and the contractor is prevented from completing its work on time because of the delay, then the prevention principle operates to make time “at large”. This means that the new completion date for the contract is a reasonable time.

However, where the contract expressly contains a provision for the extension of time, and the contractor does not avail itself of its right to claim for an extension of time by giving proper notice, the prevention principle does not apply[2] to make time “at large”. In that case unless the contractor validly exercises the extension of time provisions under the contract it will be liable for liquidated damages for a delay even though it may be the actual fault of the other party to whom liquidated damages are payable.

Pay no more!

The prevention principle applies to prevent a proprietor from recovering liquidated damages for delay if the proprietor or its agents are the cause of the delay[3], unless the contractor has agreed to the existing completion date being maintained with full knowledge of the proprietor's act or omission; or the contract contains an express

provision for the extension of time which the contractor fails to activate in accordance with the terms of the contract[4].

How does this apply in real life?

The prevention principle was considered by the Western Australian Court of Appeal in *Spier Earthworks Pty Ltd (“Spier”) v. Landtec Projects Corporation Pty Ltd (“Landtec”)*(No2) [2012] WASCA 53. *Spier* argued that *Landtec* had prevented it from reaching practical completion by making design changes, requesting additional works and failing to supply sufficient or suitable material etc. *Landtec*'s position was *Spier* was not entitled to an extension of time due to its failure to give notice in accordance with the contract. *Spier* responded by stating that *Landtec* was estopped from relying on the notice requirement and from claiming liquidated damages by reason of the additional work requested and the failure of the Superintendent to respond to their written requests for extension of time.

The main issues were whether:

1. the failure to give notice of delay in accordance with Clause 35.5 was sufficient to prevent the Contractor from relying on the prevention principle[5]; and
2. having issued a notice of delay and an extension of time not being granted, was clause 35.5 in itself sufficient to prevent *Spier* (the contractor) from relying on the prevention principle.

Clause 35.5 relevantly reads:

“When it becomes evident to the Contractor that anything, including an act or omission of the Principal, the Superintendent or the Principal's employees, consultants, other contractors or agents, may delay the work under the Contract, the Contractor shall promptly notify the Superintendent in writing with details of the possible delay and the cause...”

A delay by the Principal or the failure of the Superintendent to grant a reasonable extension of time or to grant an extension of time within 28 days shall not cause the Date for Practical Completion to be set at large...(Clause 35.5 AS 2124 – 1986 shortened to the relevant parts only)[6].

In relation to issue (1), *McLure P* (*Newnes JA* concurring) at paragraph [53] – [57] reviewed the authorities and concluded that the West Australian

Court of Appeal was obliged to follow the stance taken by the New South Wales Court of Appeal[7] in *Peninsula Balmain* unless it was convinced that it was clearly wrong. The NSW's Court's position is that the prevention principle would not apply where the contractor had failed to satisfy a condition enlivening its contractual right for an extension of time (i.e. it failed to give proper timely notice). His Honour *McLure P* ultimately found it unnecessary to determine the question but it logically follows that the same principles applied by the New South Wales Court of Appeal apply. It follows therefore, that where a contractor having the right to claim an extension of time fails to do so, it cannot claim that the act/s of prevention by the Principal which would have entitled the Contractor to an extension of time resulted in the Contractor's inability to complete by contractually specified date for completion.[8]

In relation to issue (2), *McLure P* held that the purpose of clause 35.5 does not “exclude the prevention principle itself insofar as it applies to a Principal's breach of the building contract. In the absence of an extension of time [being granted] under cl 35.5, the contractor would be entitled to damages against the Principal for its breach of contract including any damages (liquidated or otherwise) it suffered as a result of Principal-caused delays in practical completion...[9]” He concluded by stating that “... the relevant purpose of cl 35.5 was to prevent the prevention principle having the effect of setting time at large”.[10] In other words, the contract construction period survives. This is consistent with the view held by *Murphy JA*[11]

In summary, it was held that unless one complies with the contract in relation to the extension of time trigger mechanism, the contractor cannot rely on “Prevention Principle”. Second, the contract can validly limit the operation of the prevention principle from setting time “at large”.

The Superintendent's discretion

Some contracts will provide the Superintendent with an independent discretion to grant an extension of time. One such contract was considered by the Supreme Court of Victoria in *620 Collins Street Pty Ltd (“620”) v Abigroup Contractors Pty Ltd (“Abigroup”)* [2006] VSC 491.

The appeal concerned the Arbitrator's decision to affirm the Superintendent's exercise of power under Clause 35.5 to grant an extension of time notwithstanding the fact that *Abigroup* had failed to comply with the notice provisions in respect of the extension of time.

Clause 35.5 relevantly reads:

“...Notwithstanding that the Contractor is not entitled to or has not claimed an extension of time, the Superintendent may at any time and from time to time before the issue of the Final Certificate by notice in writing to the Contractor extend the time for Practical Completion for any reason.”

It was argued by 620 that the Arbitrator erred in

following Peninsula Balmain or in the alternative erred in exercising the reserve discretion vested in him by clause 35.5 if he was correct in following Peninsula Balmain[12].

In Peninsula Balmain, the New South Wales Court of Appeal confirmed that it was open to the Superintendent to grant an extension of time even if the Contractor had not followed the mandatory extension of time procedures[13]. The reserve power under Clause 35.5 was a discretionary power to grant an extension of time where it is just and equitable to do so. In the exercise of this independent discretion to extend time, the Superintendent is obliged to act honestly and fairly.

Osborn J in the Supreme Court of Melbourne affirmed that Peninsula Balmain was the correct approach to adopt in Victoria. Further, it was reasonably open to the Arbitrator to find, as a matter of fact, that the requested extensions of time were capable of being dealt with by the Superintendent under Clause 35.5.

In summary, this case supports the proposition that the Superintendent may grant an extension of time unilaterally notwithstanding the fact that the Contractors have not complied with the mandatory notice provisions in the contract nor claimed an extension of time if the contract expressly provides him with a reserve power to do so.

The take home message

The prevention principle may seem like a good ticket out of paying liquidated damages for

delay. But there are strict conditions that must be complied with in order for the principle to operate.

First, the delay and the consequent liquidated damages must be attributable to the actions of the owner or their agents;

Second, the contractor must not have agreed to the old deadline being maintained even after being aware of the Owner's delay causing acts or omissions;

Third, if there is an express provision in the contract for the extension of time but the contractor chooses not to avail himself of it, he cannot rely on the prevention principle to get out of paying liquidated damages for delay; and

If the prevention principle does not apply, recourse may be had to the Superintendent's reserve discretion to give an extension of time under the contract.

[1] Spier Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd (No2) [2012] WASCA 53 at para [47].

[2] Turner Corporation (Receiver & Manager Appointed) v Austotel Pty Ltd (1997) 13 BCL 378; Peninsula Balmain Pty Ltd v Abigroup Corporation Pty Ltd [2002] NSWCA 11; 620 Collins Street Pty Ltd v Abigroup Contractors Pty Ltd (No 2) [2006] VSC 491.

[3] Built Environment Pty Ltd v Tali Engineering Pty Ltd v Ors [2013] SASC 84 at [152]

[4] Harlburys Laws of Australia Vol 65, "Building and Construction Law", at [65-1020]. Also see

the judgment of Justice Blue in Built Environment Pty Ltd v Tali Engineering Pty Ltd v Ors [2013] SASC 84 at [152] for a useful restatement of the principles)

[5] Spier Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd (No2) [2012] WASCA 53 at para [50].

[6] Spier Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd (No2) [2012] WASCA 53 at para [119].

[7] Peninsula Balmain Pty Ltd v. Abigroup Contractors Pty Ltd [2002] NSWCA 211

[8] Turner Corporation Limited v Austotel Pty Limited [1994] 13 BCL 378 at [384]-[385].

[9] Spier Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd (No2) [2012] WASCA 53 at para [61].

[10] Spier Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd (No2) [2012] WASCA 53 at para [62].

[11] Spier Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd (No2) [2012] WASCA 53 at para [164].

[12] 620 Collins Street Pty Ltd ("620") v Abigroup Contractors Pty Ltd ("Abigroup") [2006] VSC 491 at para [19].

[13] 620 Collins Street Pty Ltd ("620") v Abigroup Contractors Pty Ltd ("Abigroup") [2006] VSC 491 at para [21].]

AIB Regional Round-Up

By Trevor Nye, FAIB, AIB NSW and Hunter Committees

AIB membership and events are on the rise in regional Australia these days – no more so than in the beautiful wine-growing Hunter Valley of New South Wales! Membership, stimulated by some one hundred Newcastle University student members, is very active with a full agenda of events each year. In 2014 these included –

- March, AIB members supported the Orientation Week at the university, highlighting their industry experience to new students, followed by a 'BBQ with the Boss';
- April, site visit to the JHG \$100m Student Accommodation Project;
- May, two Workshops on the theme of Mental Health First Aid, one for students and one for professionals, equally as relevant to new-starters in the industry as to the long-term participants. Sponsored by University of Newcastle, Hansen Yuncken, GHD and RLB;

- August, evening seminar on BIM/Field technology and the innovative research and development work currently underway on the systems of the future;

- October, another 'BBQ with the Boss' for the students and, lastly, the much vaunted –

- December, 'President's Christmas Shout' which is traditionally held on the Newcastle Harbour waterfront.

The calendar year 2015 looks to be equally as participative with more Workshops, Seminars and the 'mandatory' BBQs with the Boss scheduled. There is never a dull moment for the Hunter Committee which has energetic organisers from academics of Newcastle University to Consultants GHD and RLB to Contractors such as Hansen Yuncken. Drop in and see us some time!

One Door Slammed And Another Opens. What Does Contract Repudiation Mean For Builders?

By Justin Cotton, Partner and head of practitioner advocacy, Lovegrove Smith & Cotton

March 2014

Like it or not, and no matter how well you build, there will be a small minority of owner customers for whom no level of quality management will necessarily avoid a contract dispute. Of course, not all owners will be striving to “take the builder for a ride”, and having worked in dispute resolution for many years one gets to see that there is plenty of good and bad on both sides of the contract divide.

This article will examine what happens when the parties’ relationship appears to break down irretrievably, so much so that the owner retakes possession of their land, changes the locks or in some other way communicates to the builder that the contract is at an end. When such action is taken, it is almost a ‘like it or lump it’ situation, and the builder is usually left pondering how to recoup monies owed or ‘what do I do next?’

There are many ways this can come about. Suffice to say there is a wrong way and a right way to end a contract and the correct method will be those situations where the other party is in substantial default under the contract in some way, and an initial notice of default (ideally, prepared by a lawyer) is served under the contract.

That preliminary notice sets out the contract breach or breaches and requires the other party to rectify their default within the set time allowed by the contract. It will also advise that if the default is not remedied within that time then the non-defaulting party reserves the right to serve a second notice (being a notice of termination). Only with delivery of the notice of termination is the contract regarded as being at an end.

So generally speaking if the ‘bad news’ owner on the opposing side of your dispute decides to simply re-take possession of the works without following the above procedure, this could well amount to a wrongful termination or ‘repudiation’ of the contract. The test of what is a repudiation, is whether the action or conduct amounts to “evinced an intention to no longer be bound by the contract”. This could be by way of re-taking possession, changing the locks, or even by words. For example, advising the builder to leave the site, never to return.

Even if the correct two notice procedure under the contract is used, that in itself only means that due process was followed. A termination could still be found to be unlawful in the long run if the notices were served by a party who is themselves in breach (for example, for not paying a valid progress claim), or if the grounds for the default notice are found to

be unmeritorious.

Further to that, if the way the notices are prepared is somehow defective or lacking in form, that has in the past led to VCAT striking down the notices and instead finding that this amounts to a repudiation by the party serving the notices. When you think about it, this is not a mere technicality, because if a contract notice is misleading about what is wrong under the contract or what the consequences will be if the warning is not heeded, this can lead to misapprehension about future contract actions. And hence the importance of having these notices prepared by a lawyer or at least checked by one before they are served.

If you are a builder with an errant owner, there are notices under the contract that can assist. The most common contractual breach by an owner is failure to pay a progress claim on time, usually but not always the final progress claim. In these circumstances a notice of suspension should be considered, as this will help avoid the problem getting worse by doing more work that you may not get paid for, and granting you an automatic extension of time while the owner’s breach continues. Suspension notices become less effective the closer you are to completion.

There is also the two step procedure of a notice of default (sometimes referred to as a “notice of intention to terminate”) that sets out the breach and demands rectification within a set time and followed by a notice of termination if required. It is not compulsory to serve the second notice just because the first has been served, but it gives the builder (or indeed the owner in the reverse scenario) the option to do so if the default is not remedied, and is a good way to apply pressure on the other party first and foremost.

Once the second notice (termination) is sent, more often than not the parties will end up in Court or in VCAT if significant monies are owed on either side. If the builder serves the termination notice, or if the owner has otherwise repudiated the contract, the builder will be entitled to claim damages under the contract against the owner.

I once acted for a builder of horse stables where the owner had re-taken possession following the service of notices. While the builder was loathe to allow the owner to re-take possession, they really had no choice but to do so. The old adage goes: “A man’s home is his castle”. Likewise it is the owner who has proprietorship of the land and they can ultimately re-take possession if they so wish. The upshot for the builder though is that if there is a

repudiation or wrongful termination of a contract, then the builder is placed in a strong position legally.

The damages claimed by the builder can be on a “quantum meruit”. This means that rather than just claiming what is owed under the stage or progress claims set out in the contract schedule, the builder is entitled to count up all costs incurred with tradesmen and suppliers for which they have not been paid by the owner, and add a margin for profit. This will sometimes be higher than what is in the contract schedule or what was actually billed in the invoice to the owner.

I cannot emphasise enough how important it is for builders to retain good paperwork and to ensure that all relevant invoices and receipts are included in a court or VCAT claim and given to your legal representative. That means invoices and receipts from subcontractors and suppliers, it is not enough just to rely on the invoices served on the owner and a summary spreadsheet.

The costs and the margins will need to be able to be broken down, whether we are referring to original contract works or variations. Too often we find that it is like “pulling teeth” when asking that all relevant invoices and receipts are provided for VCAT disputes, but the importance of these documents is not to be under-estimated.

In addition, when calculating damages the builder can also include the lost profit margin on the works yet to be completed under the Contract. For example, if the owner wrongfully terminates at the end of Lock Up stage and the builder has not done works on Fixing and Completion stages, the builder can claim for the loss of profit on the remaining contract price after Lock Up.

On the other side of the coin, if the builder repudiates the contract or is validly terminated from it, then the owner can claim damages on a different basis. If the owner engages a second contractor to finish the works, it is likely to cost more than the balance left in the contract price due to the second contractor charging for the risk of taking over someone else’s project. That cost over-run can be charged back to the first builder as damages. Seldom will a builder agree to hand this over, so once again this will become a court or VCAT saga.

This is a brief summary of what it means when a contract is ended before completion, some common ways this can manifest, and what a builder can or should do when faced with this dilemma. It need not be the end of the world by any means, but you should seek legal advice to know your rights.

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New Ask An Architect Website

Designed to demystify the process and make architecture something everybody can easily access, <http://askanarchitect.com.au> is a new online portal for home owners, builders and renovators.

Launched recently by the Australian Institute of Architects, <http://askanarchitect.com.au> is all about helping and guiding people through buying, building, renovating or maintaining their home, as well as helping consumers build trust and confidence to engage and work with an architect.

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AIB NEW MEMBERS

Section 1

On behalf of the existing membership, the Chapter Committees and the National Council I extend a very warm welcome to all these new additions to the AIB family.

AIB NEW MEMBERS

Given	Surname	Member Group	State/Country
Marco	Bonadio	Member	VIC
Adrian	Burt	Member	WA
Chi Kong	Chan	Member	Hong Kong
Man Hon	Chan	Member	Hong Kong
Po Wing	Chung	Member	Hong Kong
Brian	Connor	Member	WA
Jason	Dean	Member	VIC
Wayne	Dixon	Fellow	WA
David	Dodds	Member	WA
Kristy	Dyson	Associate Level 1	WA
Brodie	Fraser	Graduate	ACT
Richard	Frisina	Member	VIC
Mary	Hardie	Member	NSW
Allan	Harriman	Member	NSW
Kin Ian	Ho	Member	Macau
David	Humphry	Member	WA
Lukas	Junker	Member	NSW
Chi Shing	Lau	Member	Hong Kong
Kong Ngai	Lee	Member	Hong Kong
Ka Leung	Lee	Member	Hong Kong
Siu Wah	Li	Member	Hong Kong

Man King	Lui	Member	Hong Kong
Wai Yiu	Luk	Member	Hong Kong
Hing Sum	Mak	Member	
Dennis	Moschoyiannis	Associate Level 1	VIC
David	Mountseer	Member	QLD
Gavin	Murphy	Member	ACT
James	Mursell	Member	VIC
Chi Wai	Ngai	Member	China
Bruce	Paku	Member	QLD
Neile	Rosenlund	Fellow	QLD
Yiu Kuen	Siu	Member	Hong Kong
Andrew	Stapleton	Member	VIC
Cheuk Wah	Sun	Member	Hong Kong
Chris	Taylor	Member	QLD
Robin	Pagan	Fellow	QLD
(Raymond) Mitch	Torpy	Member	WA
Vernol	Ulluwishewa	Member	NSW
Ivan	Venter	Member	QLD
Hing Kau	Yeung	Member	Hong Kong
Ka Chi	Yeung	Member	Hong Kong
Stephen	Young	Member	WA
Stevan	Zhivanovich	Member	NSW



MERRY CHRISTMAS

AIB would like to wish all members and stakeholders a very safe and enjoyable festive season.

The AIB office will be closed from 5pm Friday 19 December 2014 until 9am Monday 5 January 2015.

NEW AIB Merchandise

Membership of the Australian Institute of Building (AIB) provides recognition and distinction amongst professionals within the building and construction industry. To assist members demonstrate their support for the building profession through their AIB membership the Institute is pleased to make available a range of merchandise.

AIB Safety Hard Hat \$24.95*
One size fits all

AIB High Visibility Vest \$15.95*
Sizes available – small, medium, large and extra large

AIB Scheduling Calendar \$5.95*

*All prices include GST and postage within Australia.
Orders from outside Australia incur a AUD \$7.50 surcharge.

To purchase any items of merchandise,
contact the AIB National Office on +61 2 6247 7433 or
email administration@aib.org.au



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Merchandise & Book Sales	sales@aib.org.au
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National Sponsorship	sponsorship@aib.org.au
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AIB National Council

Norman Faifer FAIB	National President
Paul Heather FAIB	National Senior Vice President
Ronald Webber FAIB	National Vice President
Graham Teede FAIB	National Vice President
Robert Whittaker AM FAIB	Immediate Past National President
Robin Fardoulis LFAIB	Overseas Chapter Nominee
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Darren Jones FAIB	Tasmania Chapter Nominee
David Burnell FAIB	Victoria Chapter Nominee
Frank Dilizia FAIB	West Australian Chapter Nominee
Ian Cumming CSC FAIB	Australian Capital Territory Chapter Nominee
King Wong FAIB	Hong Kong Chapter Nominee

No more 28 day render cure delays before painting

Fresh or “green” cement render and concrete is HIGHLY ALKALINE, traditionally requiring time to stabilise before painting, resulting in costly project delays and extended scaffolding costs.

In the real world, project schedules compress and painting sooner often results in coating failures or unsightly alkali staining (white salts or “efflorescence”).

AcraTex® GREEN RENDER SEALER eliminates the “28 Day” wait cycle - meaning project dollar savings and enhanced durability.



Eliminate unsightly efflorescence



Scaffolding costs reduced

Safe, Durable & Assured

- Water Based
- AcraTex® GREEN RENDER SEALER chemically reacts with free cement alkali to bind and block its migration
- Paint after only 2 days* render drying - instead of waiting 28 days
- Superior adhesion to masonry

Safe to paint over render In 2 days* - No more delays

Dulux Approved System for Cement Render

Cement render is highly alkaline and rigid due to the inherent nature of the cement binder. Coating systems for cement render must block alkali (salts) leaching and expand and contract to accommodate render shrinkage cracks. Low build (conventional) paint coatings are NOT recommended for cement render.

System Component	Dulux Recommended System	Feature Benefits
Primer Sealer	AcraTex Green Render Sealer Suitable for application over 2 day old cement render	- Blocks Cement Efflorescence - Reduces Project Delays - Optimises System Performance
Crack Bridging Topcoat	AcraTex AcraSkin Available across the full Dulux exterior colour range	High Build - Crack Bridging Protection Nap Roller - Paint Like Appearance Superior Application - Low Roller Spatter

Note: GRS is “Safe to paint after only 2 days” based on adequate drying of the substrate to a stable moisture content.

For further information about Dulux AcraTex Green Render Sealer please go to our website www.acratex.com.au

Fast track your project completion...

and reduce your scaffolding costs

SAFE TO PAINT
OVER RENDER IN
2 DAYS*
No more delays



AcraTex® Green Render Sealer™

The Anti-Efflorescence Primer-Sealer for fresh cement render eliminates project delays and unsightly efflorescence.



Fast Track - coat Render after only 2 days*



Lower Scaffolding Costs - drop scaffold faster



Restricts Efflorescence



Superior Adhesion



Water Based - low VOC

Dulux recommended system for cement render with AcraSkin crackbridging topcoat.

* Safe to paint over 2 days based on substrate adequately drying to a stable moisture content.




For further information go to: acratex.com.au
Dulux Customer Service: 13 23 77

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**No more 28 day
project delays**

**New
Green Render Sealer™**
- saves time
- improves finish





Feature
packed
for
complete
control



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Construction Management Software

- + Project Budget
- + Procurement
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