Climate Change: Business Risk and Reward

Conference @ The Mac, Belfast - 7th March 2013

Conference Proceedings

www.climatenorthernireland.org.uk
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General Information

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Climate Northern Ireland with support from Business in the Community Northern Ireland (BITC NI), held their first Climate Week Conference on the 7th March 2013 at the Mac Belfast — Climate Change: Business Risk and Reward. Speakers from across the business and public sectors provided insight into the challenges of a changing climate, particularly highlighting the importance of a resilient and well-informed supply chain.

The speakers explored how global and local climate is changing, and how this will have significant consequences for businesses and ultimately the Northern Irish economy. Smaller businesses are particularly important to the Northern Ireland economy as well as their local communities and it is crucial to ensure that these are resilient in a changing world.

Recent extreme weather events in Northern Ireland, such as the ‘Big Freeze’ in December 2010 and the major October 2011 and June 2012 floods, have disrupted a wide range of businesses and their operations; impacting on staff, premises and disruption to suppliers, distributors and customers.

Climate Northern Ireland is a partnership which brings together members from a range of key sectors to share best practice and promote positive adaptation action to address the impacts of a changing climate within the region. We aim to help the local business sector understand the key impacts of climate change, identify the key opportunities and explore the benefits of integrating climate change adaptation into organisational strategy.

Climate change adaptation is best approached through a series of interlinked stages that build upon each other: identify the risks to business, recognise important stakeholders, and ascertain the actions required to incorporate risks in business planning to promote business continuity.

In addition to the conference resource booklet, Climate Northern Ireland has prepared information notes for Small and Medium sized Enterprises (SME) covering common issues arising for businesses facing climate-related risks, including questions to ask yourself and where to go for more information. The SME Info Sheets are available from: http://www.climatenorthernireland.org.uk/resources/

Northern Ireland is at a crucial stage in developing a regional Climate Change Adaptation Programme, in which the first Northern Ireland Climate Change Risk Assessment (CCRA) published in January 2012 will play a key part. The NI Adaptation Programme will identify priorities for action and appropriate adaptation measures within timescales that will be required to minimise risks to our economy, environment and society. By bringing representatives together from the business and public sectors, we hope that the Climate Northern Ireland business conference will facilitate the dialogue to develop the Adaptation Programme with a stakeholder input.
Agenda

Climate Change: Business Risk and Reward

08:30  Registration and Refreshments
09:00  Welcome – Sue Christie, Climate Northern Ireland
09:10  Climate Change in Northern Ireland – Alex Hill, Met Office
09:25  KEYNOTE: Risks and Rewards for Business—Paul Taylor, Camira Fabrics Ltd
09:55  Building for the Future – Liam McEvoy, Henry Brothers Ltd
10.15  BREAK

10:45  Need to address Climate Change—Alex Attwood, Minister of the Environment
11:00  Addressing Climate Change: Private and Public Sectors
11:00  Adaptation in Public Infrastructure - David Gavaghan, Titanic Quarter Ltd
11:10  Adapting Processes to Reduce our Carbon Footprint—Seamus McGovern, Greiner Packaging
11:20  Public Sector Adaption and Mitigation Policy for the Built Environment—Billy Black, DFP CPD
11:30  Clandeboye Estate: Climate Change Adaptation—John Witchell, Clandeboye Estate Yoghurt
11:40  PANEL SESSION: Q & A for all speakers

12:30  Closing Remarks
12:40  Lunch and networking in The Crush Bar
We’ve been worrying about climate change for nearly two decades now, but usually we think of trying to avoid it, or at least to minimising our impact on it; this is termed mitigation and involves reducing emissions of greenhouse gasses, mostly through our use of energy.

But we are now increasingly aware of the need to adapt to the changes in our climate and weather being caused by our continued emissions.

Recent research suggests that not only are current predictions of the impacts of greenhouse gasses on climate underestimated, but it is increasingly unlikely that we can avoid a 4 degree increase, which is certainly in the ‘very dangerous’ category. We need to recognise the impacts of changing climate, including increasingly severe and unpredictable weather events, and adapt our business and personal lives accordingly.

We need to adapt to physical impacts, but there are also economic and social impacts arising from local and global climate impacts. Security and cost of supplies, including energy and food, are of concern, as are the legal requirements for doing business: insurance, disrupted supply chains and possible damage to critical infrastructure such as energy, water and transport.

We are experiencing major disruption both globally (hurricane Sandy cost over $30 billion) and locally (burst pipes in the ‘freeze/thaw’ of 2010 cost £40 million in insurance in NI).

There are many risks, but being prepared costs less and provides many opportunities for new business development and decreasing business costs. An erratic climate does indeed introduce many business risks which you must plan for to avoid excessive costs, but there are also many opportunities for those who plan ahead. This conference is designed to help you do that by showing what other companies are doing now, and how it is saving them money and bringing them enhanced profits.
Alex explored the impacts of climate change across Northern Ireland through the context of the UK Climate Projections 2009 (UKCP09), looking at how the whole range of information can (with careful interpretation) be used to support adaptation actions across businesses. Alex promoted the key message of ‘adapt now, mitigate for the future’ and explained that through a comprehensive assessment of probabilities across a range of emission scenarios (as outlined in the UKCP09) we can establish important aspects about how we approach adaptation across different lead times.

The UKCP09 projections show that for the next 30 years we are locked into climate changes that reflect our historic emissions. Alex explained that we can begin to plan now on how we should adapt to these changes and use the UKCP09 projections as a robust planning tool. Beyond 2040 the UKCP09 projections start to tell us what levels of climate change might be avoided through mitigation. The projections for the 2080s provide a stark warning of how dangerous climate change could be, even for the UK, if the world continues to follow the medium emissions pathway or – even worse – follows a high emissions pathway. Immediate action to reduce greenhouse gases is vital, but we will also have to adapt to a changing climate in the UK and learn to cope with more extreme weather events including heat waves, droughts and floods.

Alex also spoke on the issues of climate change predictions, explaining how extremes are not well represented in UKCP09 – neither are the short term changes – over the next 10 to 20 years. It is hard to find a signal through the noise of natural climate variability. The scenarios are fixed so there is no input to the model covering changes to the scenarios due to economic or structural changes in the global system. In other words how well we mitigate – hence the AVOID programme which is an attempt to put some value on mitigation globally.

Weather forecasting is not precise; you have to understand where the strengths and weaknesses are in the data and climate change science is the same. The knowledge deficit between what we know now and what we need to know for the future is known as ‘The Gap.’ This gap in climate forecasting (as with weather forecasting) is improving over time, for example we can now eliminate arguments such as that solar output is causing the change; the earth has continued to warm as the sun has been cooling. Understanding of natural variability have also much improved in recent years and with the addition of the visible changes in Arctic Ice, people are becoming more aware and making the connection between our current situation and the future predictions in CP09.

Alex also spoke about how Northern Ireland is no longer rising. While the rate of rising was greater than that of sea levels for some time this is no longer the case, making the region even more vulnerable to future flooding. For this, amongst many other reasons, we must adapt now and mitigate for the future in an intelligent manner; understanding where our risks are and managing them.

Find Alex’s Presentation here
Camira cares passionately about sustainability and maintains that it is not just a morally sound endeavour but that it is actually a “good business model” to consider sustainability in all aspects of a business. The company has undergone large growth from turning over £26 million in 2006 to £55 million in only a few years. It currently houses the majority of its operations in Huddersfield, but with an additional site in Lithuania and multiple offices around the world. 55% of the material they make is for office seating and Paul claims that British quality still carries a resonance around the world.

Camira’s customers have a huge ask in regard to aspects of work such as carbon footprint, the quality of material and an understanding of the supply chain, which Paul maintains makes Camira work in a better and more sustainable fashion. While admitting New Zealand wool imports are a necessity because of the incomparable quality of the material, Camira have otherwise created huge innovations in how they work.

- Growing their own hemp in Leicestershire as opposed to sourcing it from the Netherlands (an unexpected benefit of their work with hemp is the discovery that woollen hemp is totally non-flammable.)
- Work with Starbucks which has ended their one-time use and waste of Jute sacks by recycling the material in the manufacture of chairs and tables.
- Recycling polyester from the huge number of waste cuttings at all stages of the supply chain.

Camira acknowledge the risks that they face, which include the fact that their premises are located beside waterways and also on steep hills, which sometimes impedes transport during weather events such as snow. Fundamentally, they recognise the complexity of their supply chain; from the number of inputs like energy, labour or crop yields, to the number of processes they conduct, the supply network needed to transport to 80 countries and the return of waste materials to the company from customers. Camira have past experience of facing weather-related problems, for example one work day was lost due to transport disruption during snowy conditions resulting in 320 customers not receiving their order. Some offices were also evacuated after heavy rainfall in June 2012 and during the snow in 2010 many employees were unable to get to work.

Camira have therefore designed a process flow of their operations, from the growing stages right through to transporting cuttings for recycling. This is making customers realise that they understand the risks to business and can do their best to adjust to situations that would leave the competition struggling. By understanding their supply and demand chain they can target exact elements of their business with plans for resilience, which this year has included planting more hemp to act as a store for years when the crop yield may be reduced during potentially bad summer weather.

Paul cannot say that Camira are 100% ready to face the impacts of climate change, but they understand the risks. Sustainability really increases their competitiveness, if customers know they understand adaptation resilience and risk assessment, they trust the company with their orders over another which does not. It is at the heart of what Camira do, but we need to talk about it much more and get businesses working together and not just individually.
The UK construction industry has only begun to look at sustainability and resilience, and has realised that more ‘sound’ buildings must be designed and constructed. Current impacts of severe weather events have recently forced the industry into taking action. Liam gave the example of a newly built Tesco (located on the Castlereagh Road, East Belfast) which his previous employer (Pattons) was contracted to build. During construction the site was subjected to the large flooding event of June 2012, for which Patton’s health safety and environmental procedures were not fully equipped to deal with. Resulting in damaged groundwork and destruction of materials that they thought had been stored safely and securely.

The downtime of a few days affected the programme adding significant cost to the overall delivery of the project.

Liam explored how materials that are currently specified and used to construct buildings are often unsuitable for purpose when taking into consideration future climatic changes (e.g. the use of lime mortar and increased precipitation rates). The current use of glass façades exaggerates the issue of overheating in buildings, stone is often affected by increased rates of CO₂, and increased rainfall rates will lead to defects and additional costs. The industry is only beginning to understand the potential for an increase in invasive species, e.g. Japanese Knotweed, upon which more practical action needs to be done in the face of a changing climate. On site operations are often affected by weather in many forms, from high winds shutting down cranes and roofing activities to supply chains being disrupted and the costs that this creates. The impacts of climate change may not always be a direct impact in Northern Ireland but rather a secondary global impact on supply chains, or even on travelling company employees. This highlights the importance and need of understanding of your entire supply system.

Liam highlighted that to increase resilience in the construction sector; we must be better prepared and learn from past experiences of weather impacts. We must instil a culture of education and awareness amongst employees and clients, and increase collaboration and integrated project delivery (IPD). The sector must strive to design and construct ‘smarter’ buildings, adopt retro-fitting and promote widespread use of Building Information Models (BIM) with integrated climate models to increase understanding of the direct impacts in the future and enable a cost value to be assessed.

Find Liam’s Presentation in ‘Resources’ on the Climate NI website, here
The pace of climate change is accelerating, as should our actions be regarding it. Ministers must embrace climate change and accelerate their response.

Northern Ireland can become ‘a world leader in carbon reduction’ as renewables are both Scotland and Northern Ireland’s biggest economic opportunity.

Energy costs in Northern Ireland are discussed on the boards of large business companies as ‘hot topics’, and such companies have the potential to become self-sufficient in energy.

In addition to energy supply, at another Northern Ireland event Quentin Wilson (previous Fifth Gear TV presenter) commented that Northern Ireland should be an “epicentre for e-cars” due to the size of the region. Environmental concerns can often be reconciled with the economic advantage.

The Patten Commission Report showed how we can reshape issues in this country and promote a regional change. At a point in the future we hope everyone within Northern Ireland will live no more than 10 miles from a charging point for an electric vehicle. However we are “not even in second gear” as regards adaptation, and we need to act more collectively, especially within government.
At the heart of the matter is the fact that this issue is self-inflicted. We must ask ourselves, how well are we adapting?

David Pudnam compared action on climate change with the abolition of slavery, as regards the end of using a cheap form of energy. As with slavery, in order to resolve climate change we need a change in our own hearts.

Titanic Quarter Ltd stands for sustainability and the understanding of what we can do to take action, it expresses the new opportunity ahead of us in Northern Ireland.

Transition – the whole planet is in transition, at present the Chinese Premier has recognised that climate change is no longer merely an environmental issue but also a social and economic one, as demonstrated by Hurricane Sandy in New York City.

Change – in the social contract can happen, the Eurozone is an example.

Quality – important but must be within reason so as not to hinder action (e.g. Boris’s Bike Scheme).

Resilience – must be improved, as seen during the flooding of the Westlink in 2008.

Legacy – we owe it to ourselves and others.

Daring – only then can we achieve.
Greiner packaging Ltd supply the UK food market with packaging, and had been experiencing increasing energy costs in a very competitive market. The company’s energy costs were due to peak at 7% of turnover in 2010 so they made a key decision to address it.

The company realised that the factory was in a good location; an elevated site with significantly high winds which could be used for cooling the production plant. They chose not to follow a standard approach and instead began Project Cool thanks in part to a Carbon Trust non-interest loan of £400,000.

Project Cool is a novel cooling and heat recovery process developed and implemented with the key objectives of providing a fully automated, highly energy-efficient closed-loop cooling water system with heat recovery technology that reduces both the cooling and heating load on-site. Heat which would otherwise be wasted is now supplied to the Greiner office block and finished goods warehouse via an under-floor heating system. In addition, after sharing the costs, Project SCool connected Greiner with the local integrated college and supplied them with the excess waste heat, resulting in a £25,000 annual reduction in the school’s energy bill.

This project is the first of its kind in the UK (and only the 10th globally) and has paid for itself in 3 years rather than the predicted 4 years due to the recent rise in energy prices.

Find Seamus’ Presentation in ‘Resources’ on the Climate NI website, here.
The Central Procurement Directorate (CPD) is responsible for public procurement policy, and for developing best practice and performance which centres on sustainable development and Whole Life Value. Sustainable development must be considered at the outset of any procurement process and then throughout the life of the project. The DFP follow a policy framework for construction procurement, under which the CIFNI (Construction Industry Forum for NI) environmental requirements are promoted. A new Government Construction Client's Sustainability Action Plan (GCC SAP) has been developed by the Sustainable Construction Task Group, and now features aspects of climate change mitigation and adaptation. The actions plan encourages CoPEs to take account of OGC Guidance ‘Adapting your procurement’ and ‘Design for Future Climate’ (Technology Strategy Board Document). The guidance acknowledges that the impacts of climate change will increasingly affect our built environment, infrastructure and the public services which we rely on. It is possible to adapt your procurement within existing frameworks and procurement rules, there is no legal reason not to and it makes sense to reduce long-term risk from climate change to a project. The guidance underlines that adaptation must be incorporated into wider corporate and sustainability objectives so that public procurement is sustainable.

We can deliver sustainable buildings, such as the NI Waterways or PRONI buildings, if we design and build intelligently, reusing materials for example. A number of sustainable construction examples can be seen here. We can also deliver sustainable energy and indeed a number of pilot projects have been created, the results of which show that of PV Cells, Biomass and Solar Thermal, Biomass produced the most stable load. However, with grants PV may be the most feasible in the near future.
Clandeboye may only be a small estate of 2000 acres “but we do things well.” After reducing the herd of dairy cattle to 100 the estate found that it added value and contributed to having less excess slurry on the estate. All energy inputs affect farming and because there are often global impacts, you have to think globally as well as locally. The estate found that despite how much milk is produced in Northern Ireland, there was not one yoghurt producer which led an imports market worth £44 million. This was an opportunity to become resilient and make some money. The estate can sell milk if the global price rises and if it goes down they sell yoghurt. Opportunities can be found in a changing climate, as in warmer weather (as is projected for Northern Ireland) yoghurt sales increase. In colder weather the estate produces firewood which they sell for profit. Resilience to weather impacts comes from being small and diverse, and also the in fact that the estate remains well-informed allowing more efficient plans to be implemented. The estate golf course was hit very hard during the big freeze event of December 2010, mainly because it is largely a pay-to-play course, and therefore highlighted the risk of significantly reduced income from membership should an extreme weather event occur. A carbon grant has enabled the estate to install woodchip boilers to heat the buildings, and they are also considering indoor tennis lawns and putting greens as forms of weather resilient activities in the business.
Panel Discussion

All Speakers
Panel Discussion

All Speakers

**The e-car needs critical mass for adoption in Northern Ireland, how can we achieve this?**

DFP Carbon Reduction Plan. Unsustainable sources of electricity for e-car (i.e. coal fired power stations), we must consider the social or trading cost of carbon.

It must be an individual initiative to drive an e-car. Titanic Quarter have adopted an e-car and launched a bike scheme – don’t wait for public sector!.

BITC NI recommend the use of e-cars after a 6 month trial period.

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**Attitudes towards climate change adaptation in large companies across the supply chain?**

For Camira their supply chains **must** understand risk and adaptation as they account for 60% of Camira work. Two Camira staff members spend three days/week working with raising awareness of sustainable issues across the supply chain.

Supply chains are aware of the impacts of extreme weather, however they need direction in understanding how they can plan for and deal with the impacts.

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**Mitigation and adaptation strategies are being carried out separately across sectors, can we bring this together for a more coordinated approach?**

Consideration of flood defence, carbon sequestration and land use planning. Modelling catchment management ideas responsibility across Departments.

**Titanic Quarter Ltd is happy to facilitate talks for business stakeholders affected by flooding** – possible collaboration with Climate NI, East Belfast Partnership and Connswater Community.

In Camira’s experience, local business got together to discuss their resilience issues after severe snow prevented transport lorries from entering or exiting the business premises. Together the local businesses funded a £3000 retrofit project, fitting ploughs to standard pick-up trucks to allow clearing of manufacturing sites during extreme snow events. An example like this is also in the interest of local councils!.

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**High level policy approach to energy takes no account of socio-economic impacts. The utility regulator proposes 25% cost increase, the energy bill will introduce a 4% cost increase, and NI has the highest fuel poverty (42%) in the UK. How can we prevent energy intensive industries from leaving to places where they are less restricted?**

Addressing energy issues is imminent. Cost/kwh is increasing steadily and has nothing to do with renewables, but less dependence on oil.

Environmental policies are negligible costs when oil is continuing to become more expensive. We must shift to renewables before we are left behind.
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Speaker Information

Sue Christie

Professor Sue Christie has been the Director of Northern Ireland Environment Link (NIEL), the networking and forum body for voluntary environmental organisations in Northern Ireland, since 1991. She is an ecologist, originally from the USA, with an MSc and PhD in Ecology and Behavioural Biology. Sue sits on various bodies in Northern Ireland, including CNCC, Waste Programme Board and the Planning Forum. Her main interests lie in ecology, waste management and climate change. She was the Coordinating Lead Author for the Northern Ireland section of the National Ecosystem Assessment.

Alex Hill

Alex is a native Glaswegian who, after Strathclyde University, joined the Met Office in the early 1970s. He has held a variety of posts working amongst others as a forecaster at RAF Leuchars, Glasgow Weather Centre, Senior Forecaster London Weather Centre, and Senior Forecaster for the ITV National Weather. Alex then became Head of London weather Centre where he lead a team of forecasters responsibly for severe weather and road forecasts in the southeast of England, rail forecasts for the UK as well as overall monitoring of UK National TV and radio output. After London Weather Centre he moved on to manage the Met Office defence network in the south of England and the Mediterranean. Alex moved back to Scotland in 2008 and is currently the Met Office Chief Advisor to Government for Scotland & Northern Ireland.

Paul Taylor

Paul has been a sustainability professional for the past 14 years, spending 13 of those as a Sustainability Specialist in the public sector in North East England. Paul graduated from Middlesex University in Environmental Management and Policy in 1996 majoring in Fluvial Geomorphology and river water quality. In recent years however, Paul has focused attention on climate change, both mitigation and adaptation, and in 2011 developed Redcar and Cleveland Borough Council’s first Adaptation Plan, which was recognised at the 2012 EU Strategic Risk Awards in the category of ‘Best Risk Management Approach in the Public Sector’. Now co-ordinating Camira’s innovative work on sustainability, which includes textiles manufactured from bast (plant) fibres and closed recycling on synthetics, he is particularly keen on how the private sector, especially SME’s, can become more resilient to severe weather events.

Liam McEvoy

Liam has over ten years experience working in the waste management and construction industries for both public and private sector companies and organisations throughout the UK and Ireland. Liam is now employed by Henry Group, working as their Group Environmental and Quality Manager. His role includes the management of their environmental and quality management system and working with the key stakeholders to develop and implement the company’s strategic sustainability strategy. Previous to this employment he worked as Environment & Quality Manager at Patton where he developed and implemented an award winning sustainability strategy for the business called DNA which aimed to continually challenge both the business and the industry to enable the change required to allow for a more sustainable growth throughout the construction sector. Prior to this, his experience includes working with Business in the Community and Bryson Recycling. He graduated with a BSc(Hons) Environmental Management from The University of Dundee.

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Alex Attwood MLA

Alex Attwood MLA took up his post as Minister of the Environment in May 2011. He was first elected as an MLA for West Belfast in 1998 and on three occasions since. He was Minister for Social Development in the last Northern Ireland Executive and a Belfast City Councillor 1985-2005. A native of Belfast, he graduated from Queen's University in 1987, and was Vice President and President of the Student Union (1981–1983). He worked as a solicitor before becoming a full-time politician. A member of Belfast City Council 1985–2005, he led the negotiations for the first Nationalist Mayor of the City. Involved in various all-party negotiations, including the Good Friday agreement he was the SDLP Policing Spokesman from 1997 to 2007, and was centrally involved in the implementation of policing change through the Patten Commission Report.

David Gavaghan

David started as Chief Executive of Titanic Quarter last year on leaving Quintain Estates and Development plc where he was the Executive Director responsible for the specialist fund management business. Prior to that, David was CEO of Strategic Investment Board Limited (SIB) advising Ministers in Northern Ireland (NI) on the infrastructure programme across the region. David took on the role of Chair of ARENA Network – the environmental arm of Business in the Community - in January 2013.

John Witchell

John was brought up on his family's farm in Gloucestershire. He graduated from Trinity Hall in 1976 having read Geography and Land Economy. He did a year's post graduate course in Advanced Farm Management at the Royal Agricultural College before moving to Northern Ireland in 1978 to join Blakiston Houston Estates, for whom he still works. He completed an MBA in Construction and Real Estate at the College of Estate Management in 2000 and was Chairman of the RICS in Northern Ireland in 2004. He is a past member of the Northern Ireland Biodiversity Group (NIBG) and currently sits on the Council for Conservation and the Countryside (CNCC). He has been an active supporter of Conservation Volunteers (TCV) since their inception and is currently their Chairman. He is managing agent of several estates, including Clandeboye Estate where he is currently leading projects designed to add value to its products and to promote links between food, farming and the environment.

Seamus McGovern

Seamus McGovern graduated from Queens University Belfast with a MEng Degree in Mechanical & Manufacturing Engineering. He is the site Engineering Manager at Greiner Packaging and has been with the company since 2008. Seamus is currently responsible for the full engineering function including capital projects, site facilities, tool room and machine maintenance. As engineering manager he also owns and leads the energy reduction plans on the manufacturing site in Dungannon.

Billy Black

Billy Black, MSc CEng MIMechE, is a Principal Engineer within the Department Finance and Personnel, Central Procurement Directorate (CPD). Since 2006 he has been working in CPD primarily on Construction Procurement Policy, and has previous experience in energy management. Billy also has professional experience in design within the construction, petro-chemical and aerospace industries.
‘Be afraid – it’s happening; deal with it!’
Alex Hill, Met Office

‘Sustainability is a growth strategy.’
Paul Taylor, Camira Fabrics

‘When it happens again... which it will.’
Liam McEvoy, Henry Brothers

‘Northern Ireland should be an epicentre to lead and exemplify change.’
Alex Attwood, Minister of the Environment

‘Be daring in all matters – it’s only by being daring that we achieve our visions.’
David Gavaghan, Titanic Quarter

‘It’s not complicated, it’s obvious; you just have to put it all together.’
Seamus McGovern, Greiner Packaging

‘You have to use Whole Life Costings.’
Billy Black, DFP CPD

‘We need to understand what weather does for us.’
John Witchell, Clandeboye Estate