Institution of MECHANICAL ENGINEERS
Improving the world through engineering

North Western Region, West Cumbria Area
nearyou.imeche.org/near-you/UK/North-Western/West-Cumbria-Area

Spring/Summer | 2016

FEATURES

UPCOMING EVENTS 2016

NEWSLETTER

INSTITUTION OF MECHANICAL ENGINEERS WEST CUMBRIA EDITION

CHAIRMAN'S COMMENT

Welcome to our Spring/Summer 2016 Newsletter. May I wish you all a belated Happy New Year. Here you will find our programme of events for the next few months, as well as reviews of the recent Engineering Activities we have undertaken.

The weather in Cumbria has played havoc through November and December and this, as most of you will be aware, has taken its toll on our Autumn events programme; a number of talks and visits unfortunately had to be cancelled due to weather-related issues. We have tried wherever possible to replace the cancelled events, and hope that you have found these interesting. You will find on the following page reviews of the events that we have successfully hosted.

You will also see the reviews of the educational outreach-related events that IMechE West Cumbria has supported during Autumn, either through the planning and delivery of the events by our Area Committee and Young Members Panel, or through direct financial help for events from our Sponsors Education Fund, generated from our 2015 Annual Dinner, for which we are very grateful. Thank you to all of our Sponsors.

Turning to the 2016 Annual Dinner, we are delighted to announce that this year's event will take place again at Lakes College West Cumbria on 23th June. In keeping with the high-profile international sporting events that are taking place this year, we are delighted to have George McNeil, the former world professional sprint champion, as our main after dinner speaker.

The past year has enabled us to welcome a number of new committee members and the return of some former members bringing new ideas to take us forward. The Young Members committee has also seen increased numbers which bodes well for the future.

As this is my final newsletter as Chairman, I would like to thank all the people who have given their support over the last 3 years, and in particular our Honorary Secretary, Simon Farrell, for all his hard work in keeping things on track. I have enjoyed the challenges that chairmanship brings, and have met a lot of new friends, seen and heard a lot of interesting, innovative and exciting things - from fast cars to hip replacements, from beer making to high-tech camera imaging systems whilst doing it.

Finally I would like to wish Simon Mandale, my Vice Chairman, all the best in his future role as Chairman of the IMechE West Cumbria Area Committee.

Best Wishes,

David McArthur BEng AMIMechE
Chairman – IMechE (West Cumbria)
david.mcarthur@sellafieldsites.com

SUPPORTING YOUR IMECHE
KEY SPONSORS 2016

IMPROVING THE WORLD THROUGH ENGINEERING

IMechE West Cumbria: nearyou.imeche.org/near-you/UK/North-Western/West-Cumbria-Area
IMechE WC Young Members: nearyou.imeche.org/near-you/UK/North-Western/West-Cumbria-Young-Member-Panel
IMechE UK: www.imeche.org
Sign up to receive IMechE West Cumbria email updates. Forward your email to: **WCumbSec@imechenetwork.org**
Follow us on Twitter: @IMechE_WCumbria **Institution of Mechanical Engineers (IMechE)**

EXPLORING OUR ENGINEERING EXCELLENCE

Innovia Films Tour

The Wigton-based Innovia Films hosted a group of around 20 people with varied backgrounds on Thursday 14th January. The evening consisted of an illuminating presentation, including a brief résumé of Innovia Films, followed by a walking tour of part of the site.


Control room at Innovia

Innovia Films is a leading global manufacturer of two 'families' of speciality products supplied into the packaging, labels, tobacco overwrap and securities markets - Biaxially-Oriented Polypropylene (BOPP) and Cellulose-based films. Their films are sold to converters, brand-owners and end-users across the globe. They become part of the packaging, labelling or overwrap solution for some of the world's best known brands across a wide variety of everyday consumer goods. These include chocolates, perfume, cheese, tea, shampoo, cigarettes, beer and biscuits.

Innovia has production sites in the UK, USA, Belgium and Australia and operates a network of sales offices, agents and distributors throughout the world. Worldwide, Innovia employs 1,350 people and their focus is on delivering high quality speciality products, maintaining strong customer relationships, Research & Development and unsurpassed service.

With a turnover in excess of €400m, the total annual film production capacity currently stands at more than 120,000 tonnes. The Wigton site is the largest within the group, employing nearly two thirds of the total global labour force. Both biaxially-oriented polypropylene (BOPP) and cellulose films are manufactured on the Wigton site, the only location within the group to do so. The production of cellulose on the site dates back to 1933.

The factory in Wigton, is still affectionately known in and around Wigton as 'Sidac' (a previous appellation of the company) or simply 'the factory'. The Wigton site is also the global headquarters of the Innovia company. In addition to this, the firm's Research and Development centre is based at its Wigton site. This was opened in 2002 by then Prime Minister, Tony Blair.

George Telford, Works Engineer for BOPP, spoke about Innovia's history, operations and future, followed by a walking tour around parts of the site.

The Innovia Group has recently constructed a new plant to supply the Royal Mint with Clarity™C base film which forms the foundation of Guardian® polymer banknote substrate produced by Innovia Security. Clarity™C is a high performance, biaxially-oriented polypropylene film, ideally suited to banknote production that has unique characteristics imparted by Innovia's specialised manufacturing process. The Guardian® polymer substrate is already well established, being used by over 20 other countries, including Canada: the new opacification plant is expected to be fully operational in early 2016 and will ultimately produce the polymer substrate required for the new Winston Churchill £5 note, which will be launched in 2016. The Jane Austen £10 note will follow around a year later. This investment will also create 70 to 80 additional jobs.

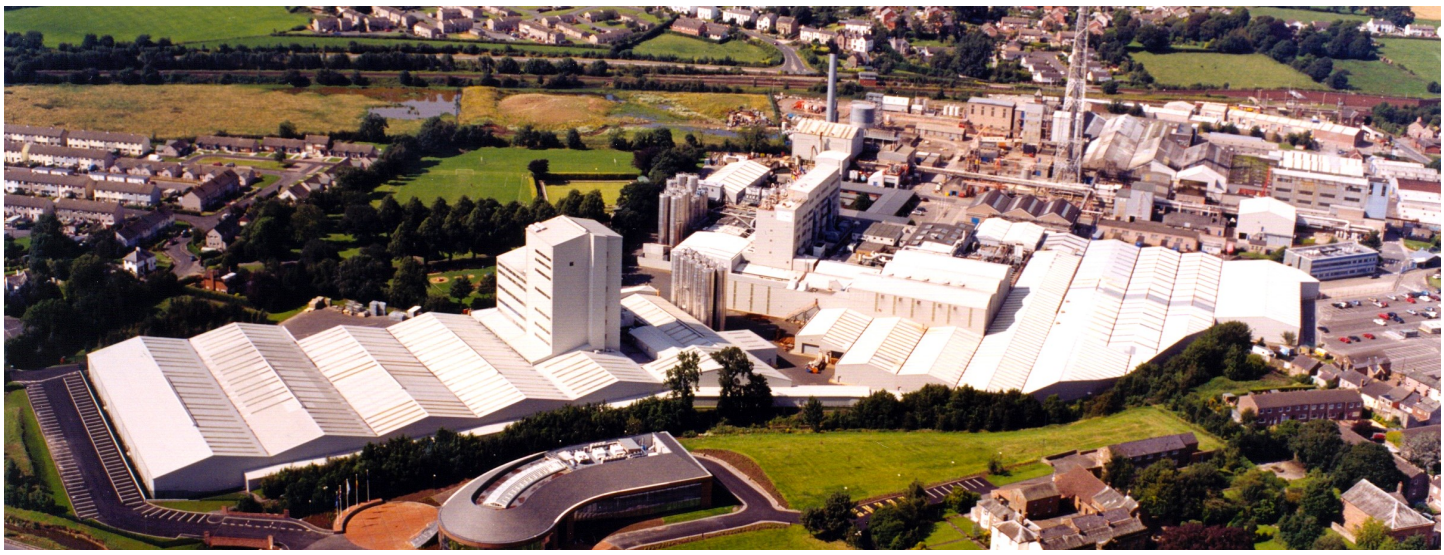
Unfortunately, we were not permitted to see inside the security film area but, at the time of our visit, the first order run was being made and we got to see samples of the security film with their patented features printed on it.

On our tour we saw the production of 'normal' BOPP film this film is produced by using a unique 'bubble' process. Polypropylene film can also be produced using the stenter method, however there are distinct differences in the processes and the finished product. The main characteristics of BOPP Film are that it has a high tensile strength that facilitates high-speed conversion, as well as good puncture and flex-crack resistance over a wide range of temperatures. It is not affected by moisture and so is a good barrier to water vapour and is resistant to oils and greases; also it does not shrink with environmental changes.

Questions were frequent throughout the presentation and tour, and George and his colleagues were always on hand with the correct answer or piece of information. I am sure that the group would have been more than happy to stay and see much more.

The evening concluded with a fantastic drinks reception and light buffet in the recently refurbished Wigton Hall. Many thanks to George and his team for hosting the visit.

Caroline Hamilton, IMechE West Cumbria



THE WEST CUMBRIA WATER SUPPLY PROJECT

Victorian Engineering Innovation

On Tuesday 6th October 2015, the Institution of Mechanical Engineers hosted a presentation on the West Cumbria Water Supply Project. Guests were greeted by United Utilities Programme Manager, Carl Sanders, who gave a presentation on the West Cumbria water supply project.

United Utilities will be using 19th Century techniques to carry out the project

The Water Supply Project will see a new to 100km water pipeline linking Thirlmere to West Cumbria. This project will bring a new water source for local people which is needed as a consequence of the Environmental Agency's decision to end the agreement to the use of Ennerdale—which has been West Cumbria's local source for the last 120 years.

To understand this proposed alternative, it is necessary to take a step back into 19th Century Britain.

Building on Engineering Legacy

Back in the Victorian era, Manchester was a rapidly-growing city in the grip of the industrial revolution. The city had an expanding population and a growing thirst for water. To quench this thirst, in the 1880s, Victorian engineers embarked on one of the biggest feats of engineering of its time: the Thirlmere aqueduct.

The ninety-six mile aqueduct, which starts its journey at Thirlmere reservoir near Keswick, took eight years to construct involving 3,000 men. The supply of water, solely by gravity, from the Lake District to Manchester began on 13th October 1894. These days, it ends in Lostock and is 83 miles long.

When the first water gushed from the specially-constructed ceremonial fountain in Manchester's Albert Square, there was jubilation. Onlookers stood with cups to get their first sip. To this day, the aqueduct provides 2million homes with fresh drinking water.

Due to the challenging terrain and low local population at the time, West Cumbria was not connected. This means that currently over 80,000 people, in towns like Egremont, Cockermouth and Whitehaven, have relied solely on local sources like Ennerdale water.

Carl stated that United Utilities still take their hats off to the Victorians, and that the legacy that they have left is something that the company is proud to look after. So, to ensure that a new water supply system is resilient long into the future, United Utilities are continuing where the Victorians left.

Why do we need change?

The prime reason for the pipeline project is to ensure sustainable water for West Cumbria. "But it's *always* raining!" Well, yes - that's right! But it may come as a surprise to hear we all need to save and secure water supplies in the region.

Ennerdale is a very "flashy" catchment area and the lake surface is often close to falling below the weir crest, which, in the worst case, would mean having to tanker in water from Carlisle. It gets very close to this every year.

Ennerdale, its lake and the River Ehen, play host to protected species. It's a very special place and United Utilities want to make sure they do their bit to keep it this way. If the company does not reduce the amount of water taken from these naturally occurring water sources, continued extraction risks doing long-term damage to the wildlife that relies on them.

With this in mind, United Utilities will need to stop using Ennerdale as a source of water by 2025, when the Environment Agency will withdraw the abstraction licence for Ennerdale.

United Utilities plans to link West Cumbria to the rest of the regional water network via a major new pipeline from Thirlmere to West Cumbria, a new water treatment works, pumping stations and underground service reservoirs. By carefully tapping into the spare capacity at Thirlmere reservoir and with careful planning, there should be minimal long-term environmental impact.

This will mean there will always be enough water on tap for the West Cumbrian households and businesses, whilst giving nature a helping hand.

The Construction

The majority of the water pipes will be constructed utilising "open-cut" methods. This is very similar to the Victorian technique, simply excavating a trench in the ground, placing a pipe in the trench and then backfilling the trench with a suitable material. The scheme will include both gravity-fed pipes and pressure pipes, generally laid between 1m and 4m below existing ground level. Pipe laying is predominately within agricultural land suiting this method of construction.

A site boundary will be established and the topsoil stripped and stored appropriately at the site boundary. An excavator will then dig the trench on the agreed line and to the appropriate depth. Along the pipeline's route United Utilities will encounter different ground conditions; they are anticipating all types of ground from sand to rock, and to encounter ground water. An appropriate method of ground support will be designed and installed to support the trench during pipe installation, which may vary from creating a gentle slope to installing sheet piles. Pipes will be installed and generally surrounded pipe bedding, although they will re-use excavated material where appropriate. The existing sub-soil, topsoil and land drains will then be reinstated over the area and the land returned to its previous use.

A "no dig" solution will be used when traversing under the Rivers such as the Derwent, Keekle, Ellen and Greta. Options that are currently being considered include utilising a tunnel boring machine, pipe-jacking and directional drilling.

Proposed route of the new pipeline

Simon Mandale,
Vice Chairman, IMechE West Cumbria

> **LIKE THE THIRLMERE AQUEDUCT, WE PLAN TO MAKE THE MOST OF GRAVITY, ENSURING WE KEEP THE EFFECT ON THE ENVIRONMENT AS LOW AS POSSIBLE**

Publicly Driven Planning

PHASE 1

Following consultation during the summer of 2013, United Utilities identified Thirlmere as the preferred alternative source of water for West Cumbria.

United Utilities proposed to invest in the construction of a pipeline to transport water from Thirlmere to West Cumbria. There were three options all requiring a new water treatment works, with pumping stations and underground service reservoirs.

Public scrutiny of the proposal was as carried out on 16th and 17th of September 2014 which outlined the Water Resources Management Plan (dWRMP).

- Thirlmere option accepted as the right long-term solution. Revised dWRMP updated to reflect work done since November 2013, particularly in relation to the 2022 project in-use date
- The revised dWRMP amended to include a contingency plan for the event that the Thirlmere option becomes undeliverable.
- The plan will be updated in terms of the interim abstraction reduction measures that are already underway; the four boreholes at South Egremont, the work at Summergrove Water Treatment Works, and the tankering that has already been adopted in the Drought Plan.

PHASE 2

- Of the three proposed options, the public preferred Bothel Moor because it had a gravity option; United Utilities narrowed this down and came up with a new preferred option with a route that utilises gravity for the majority of the pipeline.
- Pubic wanted a sustainable system; the new preferred option has a treatment works proposed in the Bridekirk area due to it being located at the optimal elevation for a gravity solution, with a proposed pumping station and service reservoir.
- Public wanted minimal disruption; the pipeline is now mostly in agricultural land, minimising the disruption to traffic and we are exploring opportunities to build off site.

PHASE 3

United Utilities finished their third round of consultation and incorporated all of the feedback from spring and summer 2014 public discussions into three final proposals, making sure customers and communities views were considered:

- Option A: Proposed new water treatment works in the Thirlmere area.
- Option B: Proposed new water treatment works in the Cockermouth area.
- Option C: Proposed new water treatment works in the Bothel Moor area.

THE PREFERRED OPTION:

- A new large water pipe (aqueduct) between Thirlmere and Bridekirk.
- A proposed new water treatment works in the Bridekirk area, north of Cockermouth with proposed pumping station
- New smaller water pipes distributing water from the new water treatment works (Bridekirk to Quarry Hill; Bridekirk to Stainburn; Bridekirk to Cornhow; Bridekirk to Summergrove). Some sections may be slip lined which is using the existing pipes as sleeves.
- New service reservoirs at Moota Hill and High Leys.

£300million Investment and in use by 2022

IMechE West Cumbria Vice Chairman Simon Mandale thanks Carl for his presentation.

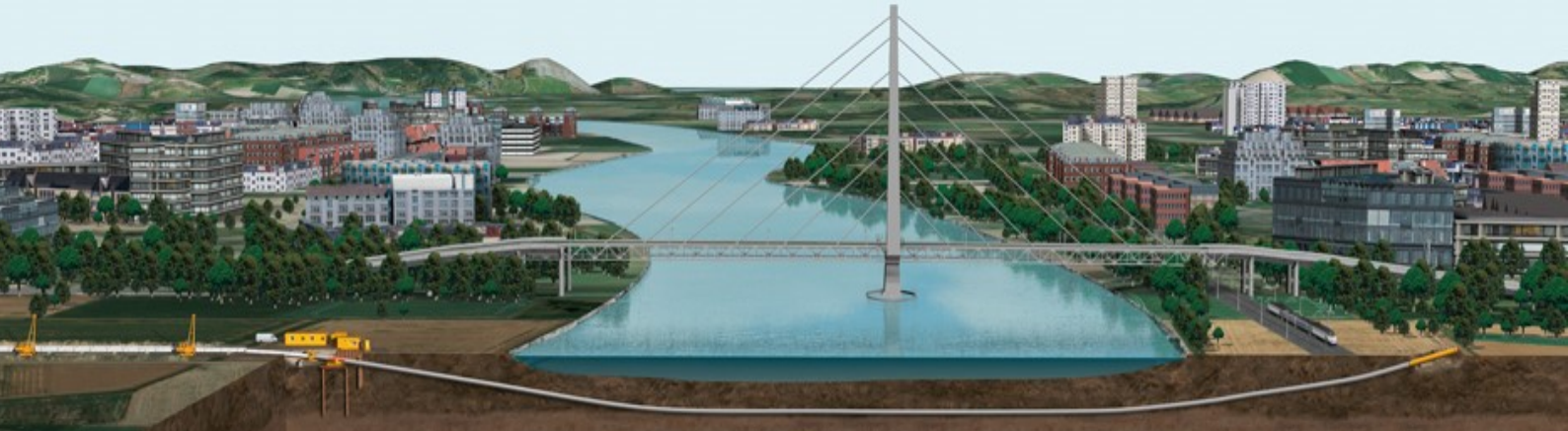
ENVIRONMENT, ARCHAEOLOGIC, WILDLIFE AND ECOLOGY SURVEYS

379 ARCHAEOLOGICAL REMAINS & HISTORIC BUILDINGS IDENTIFIED

20 HISTORIC LANDSCAPE TYPES

WALKOVER SURVEYS, DESK-BASED ASSESSMENTS, WOODLAND REPORTS, WILDLIFE SAFEGUARDING

WORKING CLOSELY WITH COMMUNITIES AND PARTNER ORGANISATIONS TAPPING INTO LOCAL SUPPLY CHAIN, DEVELOPING TRAINING RIGHT HERE IN CUMBRIA



Launch pit with Pipe Thruster

Traversing under rivers requires a launch and reception shaft/pit at either side or a structure to be crossed and a tunnel between the two. The machine will excavate the ground and this will be transported to the launch shaft/pit for removal, then a liner will be installed to support the ground. Once the reception shaft is reached, the water pipe will be installed within the tunnel and connected to the upstream and downstream "open cut" water pipes.

Reception pit for AVN Machine

EXPANDING LOCAL KNOWLEDGE

James Walker - Dynamic Global Manufacturing

IMechE West Cumbria held a visit to the Cockermouth facilities of James Walker & Co Ltd on 16th February. A talk on the facilities was given by Ray Clifford, Technical Director of Walker's EMEA Sales Region and Mark Brook, Operations Director at the Cockermouth site. This was followed by a fascinating tour of plant.

Since the 1880s, the firm of James Walker has played a vital role in providing sealing solutions. Starting with the famous 'Lion Brand' packing cords used for many decades in the stuffing boxes on steam engines, pumps and valve stems, the company expanded into

the market for sealing gaskets and jointing materials. In the 1920s, production was moved from London Docklands to Woking, Surrey, from where the company grew, expanding in the inter-war years to cover Europe, Australasia and the USA. After the war, the company

pioneered the use of PTFE, polyamides, thermoplastics and other fluoropolymers in the manufacture of high integrity seals for rotary and linear action mechanisms operating in the harshest environments, which now include offshore oil and gas, wind, defence, pharma, petrochemicals, nuclear, marine and a host of other demanding applications.

The company began production in Cockermouth in 1969, and during the 1970s developed new ranges of asbestos-free packing and jointing materials. In 2004, the remainder of the Woking production and technology facilities were relocated to Cockermouth, which is now the centre of excellence for elastomeric materials. The wide variety of items manufactured means that there are some 250,000 items on the product list; the average production run is often less than 20 parts, which are supplied to some 30,000 customers worldwide. These can be manufactured from up to 400 different compounds, and the level of specialist service is such that the target lead-time from order to supply is 8 – 10 days. The company prides itself on its ability to give detailed advice at the design stage on materials selection and seal design, and on its ability to provide full traceability and quality control to a wide variety of different customer specifications. It even offers a specialist on-site seal installation service for certain applications. Laboratory equipment is available at the Cockermouth site to ensure consistent quality control with minimum variability so as to be able to guarantee product lives for critical applications. Some of this equipment has also been used to detect instances where sub-standard sealing components had been substituted for genuine Walker's products.

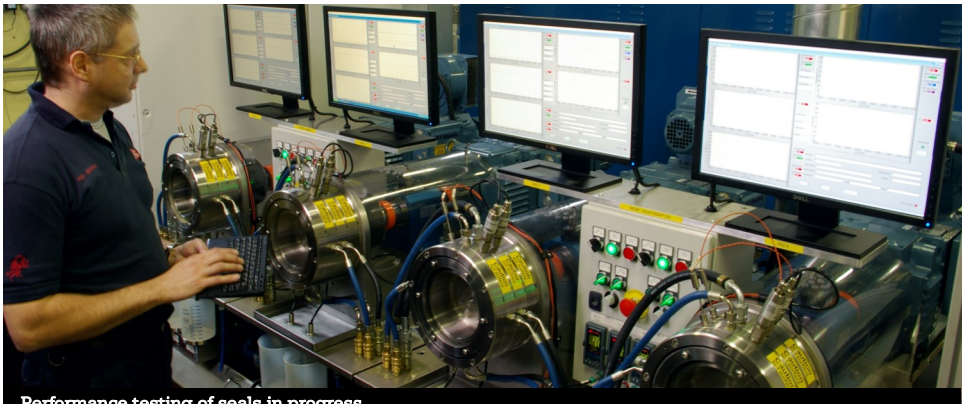
Some 500 people are employed on the Cockermouth site, and work goes on round the clock over a five-day week. During the tour, the party was able to see the raw materials from which the finished materials are blended, and the mixing equipment used to ensure that materials are absolutely homogeneous prior to them being formed into sealing products. These can be cut from flat sheet, extruded sections which can be jointed to make circular seals having diameters of up 7 or 8m, as well as smaller seals which are moulded directly to the finished diameter, as well as sealing diaphragms for control valves, etc.

The talk also described how the company had managed to recover as quickly as possible from the Cockermouth floods in early December 2015. Water levels rose rapidly on Saturday 5 December, and a controlled shutdown was instituted. IT and other communications systems were moved to backup locations with help from other businesses in the area, so that the company was able to continue to take calls from its customers. Through implementation of controlled shutdown procedures, emergency business continuity plans, deployment of flood defences that offered some protection, and the fantastic support of employees and suppliers, the company was able to begin despatches of products by mid-Monday 7 December, heat and power were restored a day later, and the first of the high-priority production areas had been cleaned up by Wednesday 9 December.

A number of further changes and improvements have been instituted during the refurbishment work to increase the resilience of the plant in the event that the River Derwent breeches its banks in future.

Jim Furness, IMechE West Cumbria

IMechE West Cumbria Committee Member Jim Furness presents a pit tankie locomotive to Walker's EMEA Sales Director, Ray Clifford.



Performance testing of seals in progress

DEVELOPING YOUNG ENGINEERS

Charity Cheque Presentations

We are delighted to announce that the Charity Raffle from the 2015 IMechE West Cumbria Annual Dinner raised £1200, which has been donated to our three charities for 2015 .

Cockermouth Mountain Rescue

The team mainly operates in the Buttermere, Ennerdale, Lorton and Loweswater valley areas. It also covers the area out from Cockermouth to the NW Cumbrian coast. They are a registered charity relying on voluntary donations to raise the £36,000 it costs to run the team each year, plus extra for additional equipment and vehicles. The 40 team members are all unpaid volunteers who give up their time to attend practices and about 50 incidents a year.

Great North Air Ambulance

The Great North Air Ambulance Service (GNAAS) operates three helicopters, 365 days a year, across the North-East, North Yorkshire and Cumbria. GNAAS crews respond to around 1,000 call-outs each year and on board its aircraft are specialist trauma doctors and paramedics, who bring accident and emergency expertise to the scene. Whether it's in a city centre or a remote mountain, GNAAS medics respond wherever they are needed in the shortest space of time. The helicopters are never more than a 15-minute flight from the nearest hospital. In 2014/15 the running cost of the charity was £4.627million. The vast majority of this money is received from individual and corporate donations and donations from wills.

Hospice at Home West Cumbria

The charity has the mission of delivering high quality palliative and end-of-life care in West Cumbria, by providing services traditionally found in a Hospice setting to people in their own homes and local communities. This enables adults whose illness is progressive and unlikely to be cured to be cared for at home and to die at home if that is their choice. It includes providing symptom relief and advice, working collaboratively and in partnership with all local providers of palliative and end-of-life care both within and outside the NHS. Their work can also often include offering support and care to those who are bereaved.

Simon Farrell, IMechE West Cumbria

Donations: Last year's IMechE West Cumbria Annual Dinner raised £1200 from the evening's charity raffle. Benefiting organisations this year were (from left) Hospice at Home West Cumbria, Great North Air Ambulance and Cockermouth Mountain Rescue.

Engineering Your Future 2015

Around 50 Sixth Form students came together at the UCLan Westlakes Campus on 20 November 2015 for the Engineering Your Future 2015 event. The day was organised by the IMechE West Cumbria Area Committee and STEM Cumbria.

The students took part in a number of hands-on activities throughout the day to demonstrate various engineering disciplines. These were delivered by STEM Ambassadors representing the IMechE, IChemE and the NI with a number of Nuclear Graduates on hand to guide the students between workshops.

While taking a break over lunch, the students had the opportunity to talk to representatives from several local employers about future opportunities at a Careers Marketplace.

The feedback received from the students and teachers was very positive with a large number indicating a preference for STEM careers. We would like to pass on their thanks to the Ambassadors who gave up their up their time to make the day so enjoyable

Mark Holmes, IMechE West Cumbria

BE PART OF THE JIGSAW

IF YOU WOULD LIKE TO BE INVOLVED IN THE FINAL JIGSAW WORKSHOP, YOU CAN EMAIL US DIRECTLY

WCumbYMSec@imechenetwork.org

Cumbria Joint Institution Group
JIG
Student Aspiration Workshops

The West Cumbria Joint Institution Group, a collaboration of local Professional bodies including the IMechE, have been piloting a series of workshops for students of all ages over the past 6 months. The aim of the initiative is to provide the students with an introduction to professional careers and stage of development.

The programme has been designed to be repeated every year, with students able to attend all parts or just those they will find most useful at their current development stage.

The first workshop, 'Where Do I Fit In?', was held in September 2015, gave students information on the current opportunities available and included an exhibition of local employers and professional bodies, as well as a series of lectures on the likely future state of employment in the area and the skills that will be required to meet this new demand.

The second workshop, 'Getting Selected', took place in January this year and was focussed on the common application processes for jobs, volunteer roles, universities and other educational programmes. Through a series of interactive sessions, finding opportunities, making an application, assessment centres and phone and personal interviews were all explained with good and bad techniques explored.

The third and final workshop is called 'Personal Development' and will be taking place on **Thursday 21st April.** This session will explore the concept of 'competence' in a professional context and what this means for personal development and career planning. This session will be entirely interactive with students ending the session with the tools they need to identify gaps and development goals.

More information about the events, including student registration can be found at: AxisWestCumbria.org.uk

SESSION ONE
WHERE DO I FIT IN?
Careers Exhibition

SESSION TWO
GETTING SELECTED
Interview Techniques

SESSION THREE
PERSONAL DEVELOPMENT
Demonstrating & Gaining Competency

IMECHE WEST CUMBRIA
UPCOMING EVENTS 2016

To book your place on any of the events below please visit;
http://nearyou.imeche.org/near-you/UK/North-Western/West-Cumbria-Area/events

Don't forget if you have registered your email with us you will be the first to know when future events are available for bookings. For more information, contact the event organiser.

VISIT: TATA Steel Projects

LIMITED NUMBERS

10 March 2016, 19:00 (registration 18:45)

Tata Steel Projects is a multi-disciplinary solutions business with extensive engineering capabilities, a substantial portfolio of projects and a leading capability in delivering innovative solutions. With offices in York, Birmingham, Manchester and Reading and manufacturing facilities in Workington, they are responsible for designing, manufacturing and constructing major infrastructure projects in the UK.

Location: TSP, Curwen Road, Derwent Howe, Workington, CA14 3YX
Organiser: Simon Farrell (simonf81@yahoo.co.uk)

TALK: Your Industry & Future - Learning Lessons from the Railway

13 April 2016, 18:30 (registration 18:00)

A thought provoking presentation by Rob Davison, a Senior Lecturer at the University of Newcastle on the highs and lows of developments within the rail industry, seeking to ask why we make changes and whether these are always for the right reasons.

Location: Lakes College West Cumbria, Lillyhall, Workington, CA14 4JN
Organiser: Caroline Hamilton (caroline.hamilton@iggesund.com)

TALK: Irish Sea Rim Project

10 May 2016, 19:30 (registration 19:00)

Nigel Catterson returns with Prof. Phillip Leigh, from the University of Chester to talk about the project to develop economic growth around the Irish Sea through innovative collaboration engagements between government, business, communities and the higher education sector (www.irishsearim.org)

Location: Lakes College West Cumbria, Lillyhall, Workington, CA14 4JN
Organiser: David Williamson (djw7@sellafieldsites.com)

The IMechE West Cumbria Annual Dinner 2016

LIMITED NUMBERS

23 June 2016, 19:30 (drinks reception 18:30)

We are delighted to be once again holding the 12th IMechE West Cumbria Annual Dinner at Lakes College West Cumbria, where our key guest speaker for the evening will be George McNeil, former professional footballer and former world professional sprint champion.

Location: Lakes College West Cumbria, Lillyhall, Workington, CA14 4JN
To book, contact David McArthur on david.mcarthur@sellafieldsites.com or 07811274818

VISIT: Iggesund Wood Yard & Biomass CHP

30 June 2016, 13:00 (registration 12:30)

A chance to visit Iggesund Paperboard's Wood Yard, to see how they handle and process wood stock into the different feed stocks (Fuel and Fibre), and to see how their new biomass combined heat and power plant is key to the future success of the business.

Location: Iggesund Paperboard Ltd, Siddick Road, Workington, CA14 1JX
Organiser: Caroline Hamilton (caroline.hamilton@iggesund.com)

North West Projects
Advanced Engineering Design

TATA

JACOBS

James Walker

DOOSAN

ARUP

IMPROVING THE WORLD THROUGH ENGINEERING

Remember, you don't need to be a member of the Institution to take advantage of our events.
Book your place online: **nearyou.imeche.org/near-you/UK/North-Western/West-Cumbria-Area/events**

Each event will become active for bookings nearer its date.
Visit the events page of out website for more information.

Be the first to hear about news, upcoming events and bookings. Simply forward your email to: **WCumbSec@imechenetwork.org**