Joint pledge to continue vital building safety work during pandemic

- Housing Secretary, Mayors and local leaders pledge to ensure vital building safety improvements continue during pandemic
- This will ensure the safety of those living in high-rise buildings with unsafe cladding or insufficient fire safety measures is prioritised
- Construction industry guidance published to reduce risk of spread of Covid-19 on site

Essential safety work to replace unsafe cladding on high-rise buildings will continue during the Covid-19 emergency, following a commitment from local leaders to Housing Secretary Robert Jenrick MP.

The Mayors of Greater Manchester, Sheffield City Region, London, Liverpool City Region and the West Midlands have pledged their commitment to ensuring vital safety work can continue, where necessary social distancing rules are being followed. This action is to reassure those living in high-rise buildings with unsafe cladding that work to make their homes safe will be prioritised.

Earlier this year the government announced a new £1 billion fund to pay for the removal and replacement of unsafe cladding for high rise buildings.

The Pledge sets out a commitment to improving the safety of residential blocks whilst also ensuring those working on site are given clear information and support to guarantee their own safety as well as limiting the spread of Covid-19.

A number of sites across the country have been leading the way, adapting their procedures in ways that include:

- having decontamination areas on site, enabling workers to hose down overalls before safe disposal
- providing additional toilet and washing facilities, reducing the number of workers gathering together
- splitting up work teams with a view to minimising the risk of infection

Housing Secretary Robert Jenrick MP said:

> The government is bringing about the biggest change in building safety in a generation. The new building safety regime will put residents' safety at its heart and follows the announcement of the

> unprecedented £1 billion fund for removing unsafe cladding from high-rise buildings in the Budget.
>
> However, I have been deeply concerned that vital building safety work has significantly slowed down as a result of the pandemic. I have been clear that work must resume to ensure the safety of residents living in buildings with unsafe cladding or with insufficient fire safety measures, and it is entirely possible for this work to be done safely within health guidelines.
>
> I brought together Mayors and local leaders to find a solution. The agreement that I have reached with them will ensure those working on these vital repair projects can continue to do so safely.

Cllr Peter John, Chair of London Councils, said:

> We cannot allow the unprecedented challenge that we have all faced with Covid-19 as an excuse to forget the challenge of making our buildings fire-safe across London and the UK.
>
> Councils in London want to see our residents safe in their homes, so remediation work must continue urgently and building-owners and contractors must treat this work as an absolute priority.

The government has provided sector specific guidance on how to apply social distancing in the workplace in England. This was also reviewed by Public Health England and the Health and Safety Executive and includes updated guidance for construction workers making clear that 'work on-site can continue if done in accordance with the social distancing guidelines wherever possible'.

Where work continues on-site, detailed guidance is available from the Construction Leadership Council on further reducing the risk, including measures for maintaining high standards of hygiene.

In order to support this vital work, the Ministry of Housing has appointed a firm of construction consultants, Faithful & Gould, to advise those planning and doing ACM cladding remediation work, including identifying and increasing awareness of safe practice under current Covid-19 restrictions.

The National Fire Chiefs Council has also published revised guidance on waking watch interim measures, in the context of Covid-19, that reflects higher rates of occupancy and vulnerability due to people staying home for an extended period of time.

This pledge has been agreed by The Rt Hon Robert Jenrick MP (Secretary of State for Housing, Communities and Local Government) and the following local leaders:

- Andy Burnham (Mayor of Greater Manchester)

- Dan Jarvis (Mayor of the Sheffield City Region)
- Peter John (Chair of London Councils)
- Sadiq Khan (Mayor of London)
- Steve Rotheram (Mayor of the Liverpool City Region)
- Andy Street (Mayor of the West Midlands)

Civil Procedure Rule Committee: Annual open meeting 15 May 2020

- Only go outside for food, health reasons or work (but only if you cannot work from home)
- If you go out, stay 2 metres (6ft) away from other people at all times
- Wash your hands as soon as you get home

Do not meet others, even friends or family.

You can spread the virus even if you don't have symptoms.

Councils given greater financial relief against cash flow pressures

New measures to help ease immediate financial pressures faced by councils in England due to the coronavirus outbreak have been announced by the government today (16 April 2020).

Councils will be allowed to defer £2.6 billion in business rates payments to central government, and £850 million in social care grants will be paid up front this month in a move aimed at helping to ease immediate pressures on local authority cash flows.

Councils are doing crucial work to help vulnerable people and the wider communities get through this crisis. This includes delivering essential supplies to the vulnerable, paying out financial relief to local businesses and get rough sleepers into accommodation. The government wants to ensure that they have the support they need at this unprecedented time.

Local Government Secretary Rt Hon Robert Jenrick MP said:

> Whether it be caring for the elderly, providing outpatient

> services, councils are providing vital support to the most vulnerable people in our society throughout this pandemic.
>
> I am determined councils get the support they need which is why I am taking action to ease some of the immediate financial pressures they face in responding to coronavirus, helping to protect the NHS and save lives.

These new measures mean councils will be able to defer £2.6 billion of payments they are due to make to central government over the next 3 months as part of the business rates retention scheme.

Additionally, the government will bring forward care grant payments to councils worth £850 million for both children and adults. These will now all be paid this month, rather than monthly in April, May and June, and will help provide immediate support for core frontline social care services.

Regulator approves first Ventilator Challenge device

Penlon's Prima ES02 model is now authorised by the Medicines and Healthcare products Regulatory Agency (MHRA) for use in hospitals. It follows extensive final testing of these devices in hospitals to ensure that they are safe and effective.

Penlon has worked with the VentilatorChallengeUK consortium, which includes a number of groups including High Value Manufacturing Catapult, Ford, a number of UK based F1 teams and Siemens.

The Penlon device is a newly-adapted ventilator design, adapted from previous models, that meets the rapidly manufactured ventilator system specification. It is a fully intubated mechanical ventilator designed to provide support to critically ill patients with a range of functions including volume and pressure controlled ventilation.

Following the device's approval, the Government has confirmed an order for 15,000 Penlon devices. Hundreds of units are expected to be built over the next week, with production being further scaled up in the coming weeks.

The first dispatch of 40 Ventilator Challenge Penlon devices will be sent to MOD Donnington today and will be delivered to the NHS front line very shortly.

The news follows the arrival of an existing ventilator model by paraPAC to the NHS front line across all four nations last weekend. 80 paraPAC devices

were produced last week, with production being ramped up into the hundreds over the next few weeks. As an existing device, the paraPAC already had MHRA approval.

Chancellor of the Duchy of Lancaster Michael Gove said:

> The approval of Penlon's device underlines the significant progress being made in the Ventilator Challenge.
>
> I pay tribute to the incredible ingenuity and commitment of our manufacturing industry, coming together as part of the national effort to protect the NHS and save lives.

Last month the Prime Minister called on some of the biggest names in British manufacturing to help step up ventilator supplies, in order to save lives during this coronavirus pandemic. Following this, the government has partnered a number of the UK's leading technology and engineering firms with smaller manufacturers to rapidly build existing, modified or newly designed ventilators at speed.

Currently, over 10,000 mechanical ventilators are available to NHS patients, which is set to increase further through these new devices as well as through additional orders from overseas.

Special feature: Data science at GAD

Our increasingly digitalised modern world produces more data in a wider variety of formats than ever before. Data science techniques allow us to process, analyse, gain insights and communicate results from this increasing volume of data. As part of our growth as a learning organisation, this is also a key area in which we are investing to further increase our expertise.

This article provides an overview of data science and discusses how GAD's actuaries are increasingly utilising its techniques to enhance the quality and efficiency of our work. In particular, we explore the use of machine learning.

Overview of data science

Data science includes algorithms, mathematics, statistics, analytics, data mining and programming. The graphic below highlights some key data science themes and the value they can add to real world problems.

Making sense of ‘big data’

The work of GAD’s public sector clientele often exposes us to datasets much larger than those used by equivalent private sector actuarial firms. For example, GAD’s work on actuarial valuations of the (unfunded) public service pension schemes requires the analysis of data for around 15 million individuals.

The volume and complexity of the data held for this exercise, and other GAD projects, continues to increase. Through increased adoption of data science techniques GAD is able to:

- process, query, analyse and report on larger datasets more efficiently
- improve and streamline current processes through automation
- adopt more sophisticated forms of analysis and modelling, through techniques such as machine learning (discussed in more detail below)
- innovate our client advice by using interactive models, dashboards and visualisations to report on data and other analysis results

The benefits of this are twofold: to increase the efficiency of the work we undertake and to allow our actuaries to provide more meaningful advice to facilitate better-informed client decisions. Increased availability of data can also introduce new problems to which GAD’s analysis can add value. Examples include analysis of health data, disaster risk financing and analysing risks associated with climate change.

Machine learning

At GAD, machine learning techniques can play a key role in enhancing our understanding of, and advise in relation to, areas of future uncertainty. Our case study provides one such example, by discussing how machine learning techniques supported GAD’s work on the sale of student loans by UK Government Investments.

Machine learning uses statistics, operational research, mathematics and computer science to build logic for algorithms (a sequence of well-defined rules/instructions) to produce predictions. These algorithms can aid understanding of, and provide insights in relation to, a wide variety of problems. Ways machine learning techniques can add value include the following:

- Enhancing existing processes: GAD’s work regularly uses statistical ‘supervised learning’ techniques such as linear regression and decision tree analysis. Examples include predicting future earnings for UK graduates and identifying factors driving mortality rates from pension scheme member data.

- Identifying new patterns in existing data: by identifying new patterns algorithms can learn to group data items with similar characteristics through ‘unsupervised learning’. GAD recently used this technique to

segment data on the financial performance of 2,000 UK defined-benefit pension schemes into groups with similar characteristics. This enabled us to effectively tailor our data analysis and reporting to our clients' needs.

- Independent decision making: some new or very complex problems require the use of 'reinforcement learning'. This is where algorithms learn to react with, and to make decisions in, an environment through a trial and error approach. While this is still a developing area, its complex applications are helping to drive a host of new technological innovations, such as the development of automated cars.

Future focus

Going forwards the volume of data available is only set to increase, with so called 'big data' here to stay. Data science is a rapidly evolving discipline and GAD remains committed to staying at the forefront of these new developments and building our expertise accordingly.

Our actuaries will continue to apply the latest data science techniques in new and innovative ways, producing meaningful advice to assist our clients with the challenges of the future.