



OCTOBER NEWSLETTER

Issue 11

Amey trials pothole repair material made from old tyres



A new rubber-modified road surfacing material made from old tyres could soon be used to patch up Sheffield's roads and pavements.

Trials by Amey with local manufacturer Roadmender Asphalt have shown the mastic asphalt-based material is hard-wearing and could speed up road repairs significantly.

The materials can be used to repair a wide variety of surface defects in roads and pavements including potholes, cracking and the surrounds of manholes and gullies. Because of the rubber content, it's very sticky but flowable when heated up.

Once poured into a pothole or crack, it effectively spreads beyond the edges sticking to the surface making it watertight, flowing into cracks and cavities.

Earlier this year, Amey Streets Ahead, Sheffield City Council's highway maintenance contractor, undertook a trial on one road in Sheffield awaiting repair.

Inside this issue:

- Due Dilligence in Property **2**
- CDB Carry out Technical Reports **2**
- AC Technology Does More Than Cool **3**
- Work from Home if you **3**
- Better use of Solar **4**
- CDB Expert witness **5**
- CDB LTD 10 year Report **5**

Dave Lawrence, Amey principal operations manager said: "We chose a very challenging road with a significant amount of surface cracking to test out this product. "We have checked the road regularly since and found that it has done very well. The product's durability, and the speed with which it can be applied will enable us to make noticeably improved repairs to roads and pavements across Sheffield in the future. There is no doubt that the product is unique but it's also kinder to the environment too with nine 'end of life' HGV tyres to every tonne of material laid. Road repairs can be very invasive and taking up the existing surface using heavy machinery often means lengthy road closures. However, this new mastic asphalt material is not only sustainable, it can also reduce our carbon footprint by as much as 96% – based on one tyre per one tonne offsetting carbon footprint by 8%. We will continue to monitor the performance of this material on the test site throughout the winter, which will be more challenging, and if all goes

well, we hope to use it on specific roads and



Due Diligence in Property

Who should undertake due diligence?

Seller

This involves identifying material issues which may influence a buyer's or lender's decision to invest or offer finance and collating documents and other information which a buyer, lender and/or their advisors are likely to require. Undertaking this at an early stage (even before marketing a property) will:

- assist in identifying specific facts or matters (for example certain effects in title) which the seller may be legally required to disclose;
- help the seller plan how and when to raise these with the buyer and put the seller in a better position to deal with questions raised during negotiations;
- enable the seller to decide what representations and warranties can be given and what qualifications to these are appropriate or necessary; and
- generally ensure that the transaction proceeds quickly and efficiently and reduce the risk of a material unexpected problem arising during the later stages.

Buyer

Any buyer of real estate should undertake due diligence to:

- test the assumptions made about the proposed investment;
- analyse the risks associated with the proposed purchase;
- ascertain whether all necessary information has been provided and, in light of any issues raised during the course of the due diligence process, what further enquiries or due diligence is required;
- verify the accuracy of information provided (on the basis of which the decision to buy/invest is made); and determine any outstanding issues which may prevent the acquisition from proceeding, e.g. consents or permits required from statutory bodies or (for leasehold properties) landlords for the buyer to purchase, develop or charge.

[We carry out full pre-purchase Technical Due Diligence/ Condition Survey Reports.](#)

The Technical Reports cover all Electrical/HVAC/Plumbing installed within the property and they are NDT (non destructive testing/inspecting) to visual/visible and accessible locations and carried out under Covid safety conditions.

Reporting on all existing, visible and accessible equipment details - incoming mains services, sizes, Water, Gas -Electrical requirements, including all necessary comments to existing services and add full recommendations.

Our fee includes all necessary travelling time, the taking of all photographs to include within the report as considered necessary and making comments on same together with your review/approval of report and thereafter to issue the final Report

£455.00 exclusive of V.A.T. (within a radius of 50 miles of Manchester, and within a radius of 50 miles of Carlisle outwith these areas please contact us for a quotation)

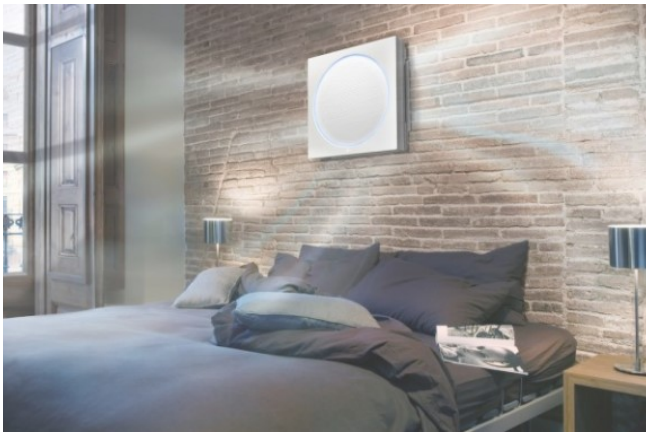
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AC TECHNOLOGY DOES MORE THAN COOL

Air conditioning provides cooling, but the latest technology means it can do so much more, meaning there is more opportunity for installers to solve indoor air problems for homeowners. Jody Lees, LG's Head of Air Conditioning and Energy Solutions, explains.

Air conditioning in homes is not perceived as an immediately prolific market in the UK, living as we do in a climate that requires cooler air more rarely. However, LG is experiencing a steady increase in demand for domestic air conditioning products here, and not always simply driven by the desire for cooler air – although the number of warm,

sticky nights in the year when air conditioning would be a wonderful addition to our homes is on the rise. Despite not being a mass market in the highly temperate UK, the sales of fans through the sheds seems to back the theory that almost without realising it, we are as a nation looking to cool down far more.

Much of the demand for air conditioning in UK homes is for higher end new build properties, but equally there is demand from people who are not necessarily looking just or even primarily for cooler air – but for better air quality. This includes a removal of the moisture out of the air, reducing the humidity levels associated with warm spells in the UK, for filtered air removing the allergens from the air that cause havoc for hay fever and asthma sufferers, for people living in urban areas where opening windows to cool down lets in noise pollution and provides a security issue, and of course the fact that most air conditioning units can also provide quick response heating as well. <https://www.phamnews.co.uk/ac-technology-does-more-than-cool/>

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Coronavirus: Work from home 'if you can',

In July, the prime minister said people should "start to go back to work now if you can" and last month the government launched a campaign to encourage workers back to offices. The new message is now Work from home if you can.

The government says it is changing tack on its guidance for England because the risk has changed - and that is why it wants pubs to shut early too.

There's been passionate discussion among ministers about how far to go with these measures - some wanting the prime minister to go further, faster - others urging restraint.

The government's chief scientific adviser, Sir Patrick Vallance, has warned there could be 50,000 new coronavirus cases a day by mid-October without further action - which, he said, could lead to more than 200 deaths per day by mid-November.

There seems to be a disconnect between the two groups. Why?

BETTER USE OF SOLAR

When the technology of solar thermal and photovoltaics come together in a single unit, they combine to make better use of the solar spectrum and deliver both hot water and electricity. Eric Hawkins of Thermatrixity explains the concept.

The picture at the side of this page shows a development of around 100 houses, which have two to three PV panels fitted to offset the carbon emissions from the gas boilers in the properties. I suggest that what needs to happen next is to increase the number of PV panels on the roof, but as photovoltaic thermal (PVT) collectors.

What is PVT?

PVT systems are designed to convert solar radiation into both thermal and electrical energy. PVT collectors combine photovoltaic solar cells – which convert sunlight into electricity – with a solar thermal collector, which transfers the otherwise unused waste heat from the PV module to a heat transfer fluid.

The combination of these two technologies in one panel represents a more efficient solution than an individual PV or a thermal panel.

A house using a PVT system could have a 100 or 150 litre horizontal thermal store installed in the loft as the hot water pre-heat cylinder. The warmed water it produces would be circulated into the vented thermal store and back to the PVT panels to keep the PV panels cool between the spring and autumn months.



The best working temperature for PV panels is below 26°C, on the basis that PV cells show reduced efficiency as the temperature rises. However, in reality – depending on where the PV panels are installed – PV panels can reach over 90°C in Australia and up to 70°C in the UK.

Case in point

Consider a new home using a 250 to 300 litre hot water thermal store, heated by 3 x 3kW immersion heaters. PV cells would offset some of the carbon emissions during the spring/summer months, while the thermal heated water delivered by the pre-heat thermal store would reduce HW heating costs and carbon emissions.

During winter months after the first ground frost the mains water to a property can be as cold as 5°C. Under these circumstances, boilers have to work with these cold water temperatures, adding costs and increased carbon emissions. Compare this to a HW system fed with pre-heated cold water from 10°C to 30°C, thanks to the use of PVT technology.

Full immersion

The assembly of the open vented thermal store in copper or stainless steel provides the store of water to be heated by 3 x 3kW immersion heaters.

Inside the thermal store are 2 x 22mm stainless steel corrugated 316L coils. The two heat exchangers are joined together on the outside by an in-line flow meter, which allows the flow of mains water to be set to what best meets

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CDB Consulting Engineers celebrate being in business now for over 10 years moving from strength to strength, with a team of engineers, the main parties who have been working within the building services industry each for over 30 years.

We all have a wide ranging experience across all types of building design which includes offices, retail, residential, schools, hospitals and all types of industrial buildings

We are working hard towards being in close partnership with our clients, design and contract team, offering advice from conceptual consultation through to full system design to ensure high-performance.

Having a wide experience, our personal and professional approach we offer to assist Architects, Developers, Main-Contractors, Local Council's and Health Authorities etc.

CDB Consulting will deliver a complete range of mechanical electrical & public health services from industrial engineering to HVAC, hot and cold water services, Steam and High temperature engineering, network distribution, power and lighting control.

Other services include fire protection, security systems, voice and data communications technologies, as well as consultations and services that focuses on energy efficiency.

CDB Consultants aim to provide optimal solutions that meet the requirements of the building and the client, recognizing the importance of energy efficiency and cost management

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We survey your dispute, take photographs, make comment against these photo's and include all these comments along with our technical information and advice in a part 35 Expert Report.

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