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Side by side
Harmonising residential
and industrial uses



Capital investment
Protecting species,
homes and businesses



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Achieving construction and
operational efficiency



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ISSUE 23

Foreword by Phil Bell

Placing sustainability at the core of property development projects



This special edition of *Insight* is dedicated to what is probably the most important issue of our lifetime - the climate emergency.

We passionately believe that the business community should play its part in helping to limit human-induced greenhouse gas emissions. That is why Motion is responding proactively. By continuing to adapt our services and advice for existing clients and engage in new markets for our traditional skills and capabilities, we are helping property developers and landowners tackle the effects of climate change on the built environment, and turn the challenge of sustainability into opportunities for all.

We are also busy reviewing our internal policies to reinforce sustainability's place at the heart of Motion's strategy. In this, I am supported by an enthusiastic team of talented individuals; Motion's climate change group drives our own carbon-reduction plans to ensure we are helping to make the world a better place for future generations.

From ultra-urban warehousing to meet the demands of a modern city, to solar farm installations helping the UK transition to a cleaner, greener energy supply – *Insight* covers all our latest news on this vast and complex topic.

If you would value a preliminary discussion about the environmental challenges of your property development scheme, give us a call on 01483 531300.

Winning partnership for climate action

Anesco Limited is on a mission to accelerate the transition to a sustainable, low-carbon future. To date, the company has designed and constructed 111 solar farms and 33 large-scale energy storage facilities, generating over 774MW of clean energy.

The company enjoys a 100 per cent record in steering applications through the planning system to build solar farms and battery storage facilities around the UK. In part, this is due to the high level of detail and rigorous application at every stage of the process. Partnerships with experienced and trusted advisors are critical to ensure the company is best placed to maximise each opportunity. Navigating the political and technical complexities requires an intimate knowledge of the local and national policy context, and a deep understanding of the ecology, flood-risk and transport issues.

Low Farm in Skegness, Lincolnshire, is an example of the transport planning and construction management support that has contributed to the company's planning application success rate.

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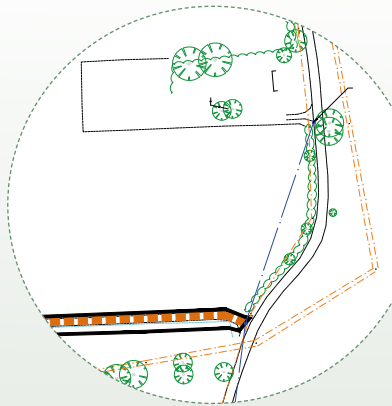
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Demonstrating suitability and sustainability

According to Motion Director, John Russell, "While the planning environment may be more favourable for renewable projects, the highways and transportation arguments in support of solar farms need to be increasingly robust to address opposition."

The crux of the argument often centres on the movement of vehicles to and from site during the construction phase, and capacity of the local road network to accommodate the resulting additional heavy vehicle traffic. Transport Planner, Andrew Nock, explains, "Both temporary access for larger vehicles and the site's permanent access arrangements can present obstacles that need to be addressed as early as possible."

Laura Murphy, Senior Project Developer at Anesco, agrees. "Often the challenge from a transport perspective centres on the detail concerning visibility splays, on-site turning, CrashMap data and construction vehicle routes. The Motion team supports us with provision of expert knowledge and timely advice, with access to an impressive network of local authority contacts."



Low Farm project at a glance:

- ▶ **50MW solar farm**
- ▶ **60-hectare site**
- ▶ **13,500 new homes powered by clean energy**
- ▶ **12,000 tonnes of carbon emissions saved annually**
- ▶ **Supports local authority's carbon reduction plan**
- ▶ **Biodiversity net gains of more than 130%**

Motion contribution:

- ▶ **Preparation of transport statement**
- ▶ **Access advice**
- ▶ **Swept path analysis**
- ▶ **Assessment of junction visibility**
- ▶ **Analysis of traffic impact and mitigation - during and after construction phase**

Outcome:

- ▶ **New, non-carbon energy generating facilities at a location safely accessed by construction and operational vehicles with de minimus temporary traffic impact**
- ▶ **Construction of Low Farm in Skegness will be completed at the end of 2023**

Andrew Nock

Driving sustainable business

The *Insight* team caught up with Motion Transport Planner and member of the company's Climate Change Group, Andrew Nock, to discuss his new role in reducing the business' carbon footprint and why sustainability is a win-win-win strategy.

Is climate change really happening?

AN Climate change is not something we can put to one side - there has been a palpable difference even within the space of a few years. It is something we need to tackle now to improve the planet for future generations.

How does Motion's experience help with the climate emergency challenge?

AN Motion's track record in transport, travel and infrastructure advice and design means the company is well placed to adapt to broader environmental challenges, in both the advice it offers clients and how it reduces its own carbon emissions.

What changes has the company experienced?

AN Over the years our advice has evolved and nowadays a big focus is on electric vehicle charging provision in carparks and new residential, industrial and commercial developments. We are also advising property developers and landowners about water neutrality and sustainable drainage strategies.

Our transport planning and construction traffic management services for solar farm installers and battery storage operators highlight how carbon reduction runs through everything we do. We've also partnered with energy innovators to help deliver energy, mobility and community hubs for new residential developments.

Tell us more about Motion's Climate Change Group

AN The committee comprises people who bring diverse experience and skills covering the full range of transport planning and infrastructure design capabilities.

Our aim is to use a range of metrics to measure and record our carbon footprint. We will plant one tree for each client project instruction. We also plan to offset emissions by supporting carbon avoidance projects. We will be continuing to investigate ways to limit greenhouse gases, such as reducing reliance on car use for business travel. Each employee will also have the chance to volunteer for a couple of days every year to help their local community!





Sewer adoption: The private vs public debate

Are sustainable drainage systems (SuDS) becoming harder to adopt for new residential developments? What are the challenges of site-wide SuDS strategies? Technical Director, Jason Morgans, has worked in the field of highways, transportation engineering and drainage for more than 25 years. In the following article he reflects on changes in both design approaches and policy guidance and asks whether there is a disconnect between the conditions of the various authorities involved in adoption decisions.

When I began designing infrastructure for residential development sites, it was almost a given that roads would be designed to adoptable standards, with the intention that they would be adopted by the highway authority under a Section 278 or 38 agreement.

The same would apply for drainage systems. Here, the preference would be for adoption by the sewer authority under a Section 104 agreement. The rationale? It was desirable for the maintenance of this infrastructure to be undertaken by a public body. The alternative was leaving residents with the maintenance liability of a private road, which was considered inappropriate at the time.

More recently, the default position is that many developers plan from the outset for the internal road network and drainage infrastructure to remain private. Some highway authorities' guidance states that residential access roads serving more than ten dwellings will be offered for adoption. The authorities are therefore actively encouraging road adoption. Despite this, there appears to be reluctance in the industry to take up this offer. This also seems to be the case for foul and surface-water drainage.

Adoption benefits

There could be many advantages of adopting residential roads and drainage systems. The maintenance is undertaken by a public body. The standards of maintenance are secured by agreed targets and legislation, with accountability to the general public. Resources and infrastructure are put in place in the local area to deliver the required maintenance. Responsibility of the funding of maintenance in perpetuity is passed from the developer or residents to the adopting authority.

However, the evolution of road and drainage design and planning policy has impacted on the ability of developers to deliver an offering that meets adoptable standards. Consequently, the benefits are often not being seen in developments built with infrastructure that is offered for adoption.

This is particularly true for SuDS. Highway and sewer authorities have generally always taken a conservative approach to acceptance of adoptable infrastructure. In the past, drainage systems were designed to

meet adoptable standards. But further back, we did not have to meet the requirements of a site-specific flood risk assessment or drainage strategy, or the one-in-100-year-plus climate change return period, or provide strategies for the treatment of surface-water runoff.

These requirements are a positive and a necessary evolution. To deliver them the design of SuDS infrastructure is needed, such as permeable paving, ponds, basins and swales to drain internal roads. But since these requirements were introduced, highway and drainage authority adoption conditions have not kept pace. This is illustrated by the huge variation in published criteria across different authorities in England.

Disconnect

Similarly, highway authorities will not permit water to drain from private areas, roofs and hard standing into the highway drainage system. This can result in the need to develop two separate systems, which is not always easily achieved within the parameters of a SuDS design.

There exists a disconnect between what is stipulated by the local planning authority, the lead local flood authority and the highway authority. Private adoption of infrastructure is one way to get round the significant hurdles imposed at planning stage.

Sewer authorities have published guidance that can pave the way to adoption of swales, bio-retention systems, ponds, wetlands and basins. Sewer authorities will not, however, adopt storage crates or permeable paving. This becomes a barrier in SuDS adoption. Here, planning policy and SuDS guidance encourages a site-wide strategy using a variety of methods, some of which will not be adopted by the Sewer Authority under their current guidance.

In conclusion, navigating the varied conditions stipulated by the relevant authorities across England requires skill, imagination and creativity in an environment where policy guidance, adoption conditions and design approaches must evolve together.

For a preliminary conversation about the flood-risk and drainage challenges of your scheme, email jmorgans@motion.co.uk



Endangered eels protected by latest infrastructure upgrade

In order to fulfil its long-term flood-risk management responsibilities while protecting and enhancing local biodiversity, the Lower Severn Internal Drainage Board's (LSIDB) programme of improvements to its ageing infrastructure installations continues. The land drainage pumping stations at Saul and Elmore Back have been upgraded so that they no longer form a barrier to eel migration. Modifications to the sites, which are adjacent to the River Severn, include fish-friendly pumps and eel passes.

Motion was engaged by the Board to manage the design and contract procurement of works to enable pumps, pipework and outfalls to be replaced at the pumping stations. Work finished at Elmore Back in the summer after installation of the final pieces of equipment. The upgrade included new pumps, an automated screen rake and conveyor, eel pass and control system.

According to James Thomas, Civil Engineer at the LSIDB, *"We delivered an effective piece of infrastructure which protects an endangered species and achieves compliance with the Eels (England and Wales) Regulations 2009. Our investment programme continues to make the system more resilient and enhances the Board's ability to protect farms, businesses and communities in the region."*

Motion Associate Director, Julian Smith, comments, *"Overcoming the challenges of this programme of improvements has demonstrated Motion's strengths in the areas of land drainage, design engineering and the management of capital infrastructure projects."*



Sustainable warehouses to meet demands of modern city

Planning permission has been granted for 'green' warehouse developments at two sites in central London. Located in Brixton Hill and Greenwich, the schemes are some of the first to be implemented by Bloom and will transform under-utilised real estate into ultra-urban warehouses to enable businesses to thrive and become more sustainable.

The units will target high-level environmental ratings to meet Bloom's core sustainability objective to reduce greenhouse gas emissions through construction and operational efficiency. Motion supported the industrial investor and developer with transport and travel advice, including access, parking and servicing arrangements, as well as measures to encourage sustainable travel.

Council concerns allayed

Chris Leonard, Development Director at Bloom Developments, comments, *"Motion certainly faced a challenge due to the location of the sites, the proximity to residential areas and the types of flexible use class required."* Chris adds, *"The team did well to model, analyse and interpret complicated vehicle movement numbers, managing to allay council concerns, sufficient to grant consent."*

To meet additional requirements stipulated by planning and highway officers, the team supplied supplementary 'dark kitchen' trip analysis for the Brixton site. Motion Technical Director, Phil de Jongh, explains, *"The need to accommodate bicycle and scooter demand associated with a potential dark kitchen operation was assessed, and the increased development demands were deemed to have minimal impact on the local junction operation."*

Councillor concerns about traffic generation for the Greenwich site were also addressed by Motion. Phil adds, *"Measures were explored to promote electric vehicle use for the movement of outbound goods and local aggregate wharfs to reduce road trips for the delivery of goods and construction materials to the site."*

The sites will be equipped to service the latest in sustainable delivery vehicles with enhanced power supply and electric charging facilities to enable e-cargo bikes and electric vans.

Pioneering scheme combines residential and industrial uses

A resolution to grant planning permission has been received for the demolition of an existing Jewson hardware store for a mixed-use, 25-storey residential tower at Ilderton Wharf, Southwark. The new development comprises three towers of nine, 23 and 25 storeys and will deliver 170 apartments, including 61 affordable homes and a replacement builders' merchant on the ground floor.

Motion supported Twenty Twenty Ilderton Wharf Limited and SGBD Property Holdings with transport planning, sustainable and active travel, access, delivery and servicing advice, and construction traffic management. With the exception of two on-site disabled parking spaces, the residential element of the development will be car free with residents encouraged to walk, cycle or use public transport when possible.

Complexities of use handled

David Hill, Director at 2020 Capital, comments, "Ilderton Wharf is a pioneering scheme demonstrating how residential and industrial uses can coexist, which is very rarely achieved in London. Motion successfully handled the complexities of retaining the use for the builders' merchant site and providing for 170 residential units above." David adds, "Due to the development being located on the boundary of Southwark and Lewisham, the team worked effectively with both local authorities and the involvement of the GLA. They also dealt with the commercial and residential access requirements."

Green amenities

The mixed tenure homes will have access to a wealth of open space, from oversized balconies providing 'outdoor rooms' and winter gardens, to south-facing communal gardens offering play and amenity space for children and teenagers onsite. The scheme will provide new improved public realm at ground level including the addition of sensitive lighting, bird and bat boxes and insect hotels.

Motion Technical Director, Chris Saunders, says, "A travel plan has been developed to provide a long-term strategy for encouraging residents, employees and visitors to choose more sustainable modes of travel." Chris adds, "Improvements to bus services, provision of New Bermondsey overground station and the potential extension of the Bakerloo Line along the Old Kent Road will significantly improve accessibility to the site."

Motion's coming home

As interest in football reached fever pitch when the World Cup kicked off in Qatar, closer to home Motion was proud to have played a part in helping Saltdean United's planning application across the line.

The proposal included plans for a state-of-the-art 3G pitch, a new spectator stand and clubhouse, and improved car and cycle parking. The Motion team has also enjoyed working with other football clubs across the south, including Oxford United, Sandhurst Town and Sevenoaks FC. What a result!



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Balanced and ecological SuDs approach

A combination of transport planning and sustainable drainage expertise from Motion helped secure approval for Silverleaf Group, who plans to build up to 35 dwellings in East Sussex. The development will provide much-needed housing, including some affordable homes on land at Coopers Green, Uckfield.

One of the main obstacles was finding an outfall for surface water. Justin Owens, Group Managing Director at Silverleaf Group, comments, "Surface drainage was a challenge due to the constraints of the site, but the Motion team adopted a multi-faceted approach to get all the relevant decision makers onboard and to agree a plan that everyone found acceptable."

Pragmatic advice

Motion Director, Neil Jaques, explains, "The site had no obvious outfall. Infiltration was not possible, therefore soakaways were not viable and there were no watercourses immediately adjacent to the site that were in our control." Neil adds, "After

exploring all the options, we proposed a connection to the highway drainage network." Justin Owens continues, "We've worked with Motion for a number of years, and we value the pragmatic advice and problem-solving attitude they bring to complex schemes like this."

Motion's sustainable drainage strategy also included permeable paving in the car parking areas and private access roads, and an attenuation pond.

Neil comments, "It is a wet pond, so this provides additional ecological benefits. It can also help with filtering out solids and silt, as the sediment is collected in the bottom of the pond, preventing it from discharging downstream."



Rob wished he had read the memo entitled 'Office Plant' more carefully

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Ask Motion – If you would value a preliminary discussion about the traffic, travel, infrastructure, drainage or flood-risk issues associated with your development project, why not give us a call on 01483 531300?

Directors

Phil Bell M: 07795 424949
E: pbell@motion.co.uk

Richard Bettridge M: 07860 254766
E: rbettridge@motion.co.uk

Laura Fitzgerald M: 07484 897712
E: lfitzgerald@motion.co.uk

Neil Jaques M: 07557 304223
E: njaques@motion.co.uk

Mike MacCoughlan M: 07741 573576
E: mmaccoughlan@motion.co.uk

Robert Monie M: 07876 688387
E: rmonie@motion.co.uk

John Russell M: 07769 334279
E: jrussell@motion.co.uk

Andrew Whittingham M: 07766 522911
E: awhittingham@motion.co.uk

Regional Director

David Lewis M: 07748 845028
E: dlewis@motion.co.uk

Technical Directors

Phil de Jongh M: 07539 108844
E: pdejongh@motion.co.uk

David McMurtary M: 07494 433626
E: dmcsmurtary@motion.co.uk

Jason Morgans M: 07384 542646
E: jmorgans@motion.co.uk

Chris Saunders M: 07789 873994
E: csaunders@motion.co.uk

Associate Director

Julian Smith M: 07585 771354
E: jsmith@motion.co.uk

Associates

Phil Allen M: 07985 775567
E: pallen@motion.co.uk

Richard Allman M: 07971 956643
E: rallman@motion.co.uk

Shaun Cregeen M: 07981 989210
E: scregeen@motion.co.uk

Richard Storey T: 01483 531300
E: rstorey@motion.co.uk

84 North Street, Guildford, Surrey GU1 4AU
T: 01483 531300

Golden Cross House, 8 Duncannon Street
London WC2N 4JF
T: 020 8065 5208

Quadrant House, Broad Street Mall, Reading
Berkshire RG1 7QE
T: 0118 467 4498

www.motion.co.uk

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