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SUMMER 2016

Access key to unlocking sustainable housing

A development of 193 residential units has been given the green light in Ifield, near Crawley. The Barratt Homes proposals were supported by an access strategy developed by Motion's team of transport planning and design experts.

The site is located 2km northwest of Crawley town centre on land to the south of Lady Margaret Road. It was previously occupied by the former Ifield Community College and benefits from good access to transport networks and a range of local facilities. *Continued on page 3*

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E's the way to go

© Courtesy of Formula E

The increasingly popular sport of Formula E motor racing returned to London in July, when the city hosted the final two events of this year's FIA Formula E Championships. 'E' stands for 'electric', as only electric-powered cars can be driven in the race. Unlike Formula 1, Formula E tracks tend to be city street circuits, allowing fans to get close to the action.

Motion Director Jerry Muscroft was part of the team that worked on the London circuit. He describes the challenges of designing for Formula E. *"There are a number of factors we take into account when determining whether a site is suitable as a circuit or not. The proposed route needs to be approximately 2 - 3 km in length - shorter than a traditional Formula 1 circuit. Roads must be at least 10 metres wide. The circuit must have high quality road surfaces and the right camber for Formula E cars."*

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Uphill Challenge

Linden Homes has appointed Motion to provide the detailed layout, highways and drainage design for a 38 unit residential development on the site of a former school in Westerham, Kent. Alex Jordan, Technical Development Manager, Linden Homes says, *"Motion supported the pre-planning team. The company is now helping us develop the brownfield site which has lain vacant for over 25 years."*

The development's nine metre level drop across the site posed a significant design challenge that the Motion team had to overcome. Senior Engineer Shaun Cregeen comments, *"The gradient of the site meant that permeable paving was not a sustainable drainage measure available to us."* He continues, *"The design included the installation of large volumes of cellular storage to act as soakaways, and the provision of retaining structures to divide the plots and maximise useable garden space."*

© Images courtesy of OSP Architecture

Chris Saunders

All mapped out

Can you tell us a little about how you came to be at Motion, Chris?

CS *I came from Reading Borough Council, where I was the Transport Development Control Manager. I worked on major residential and commercial projects, including the highway infrastructure for the redevelopment of Reading railway station and the multi-million pound projects associated with regenerating the surrounding area. I was also involved with a number of strategic projects which were located within neighbouring authorities.*

So what attracted you to the private sector?

CS *Working for a private consultancy means you get to be part of projects across a wider geographical area, and further your knowledge and understanding about the whole development process. Motion is a forward-thinking and ambitious consultancy; it has a really good reputation, so it was an easy decision.*

Do you have a particular area of interest?

CS *I have a real passion for road systems. I chair the Development Management Group of the Institute of Highway Engineers, organising and running a professional certificate in Development Management at Aston University.*

And what about outside work?

CS *My biggest hobby is map collecting – I have over 750 Ordnance Survey maps, and a range of other collectable maps – which all sit safely on the top shelf, away from my children!*

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Access

key to unlocking sustainable housing

Free flow of traffic

Barratt Homes will be making improvements to the Ifield Drive and Ifield Avenue junction in order to address existing capacity issues. Vehicular access to the development will be provided via a new priority controlled junction from Lady Margaret Road. Off-site highway works were also proposed to improve the free flow of traffic along Lady Margaret Road. The works include localised widening and providing dedicated on-street bays designed to formalise existing parking.

Outline planning consent was granted at appeal in 2008, for a mixed use scheme comprising of 170 residential units, a medical centre, a 70 bed care home and an outreach facility. Motion's Phil Bell explains, *"In this regard, the principle of residential development on the site, as well as an acceptable level of traffic, had already been established."* He demonstrated to the local authority that the proposals would not have a severe impact upon the local highway networks. Phil continues, *"The current scheme is likely to generate fewer movements during the peak periods than the previous proposals."*

The access strategy associated with outline consent, proposed the conversion of Lady Margaret Road to a one-way system in a clockwise direction between the junctions with Ifield Drive. The junctions were to be converted to mini-roundabouts. A 20 miles per hour speed limit was to be introduced on Ifield Drive.

According to Phil Bell, *"The new development will be served via an access at the entrance to the former college. However, unlike the previous proposals, the new access will accommodate two-way traffic."*

Overcoming congestion

On-street parking currently takes place along Lady Margaret Road, which restricts the carriageway to one-way. This often leads to localised congestion at peak times. To overcome these issues, the Motion proposals included the widening of Lady Margaret Road and the removal of the redundant no entry restrictions. To ensure vehicle speeds along Lady Margaret Road are controlled, traffic calming features were incorporated into the design.

A travel plan is being developed for the site and future residents will be encouraged to consider alternative transport modes.

"The new development will be served via an access at the entrance to the former college. However, unlike the previous proposals, the new access will accommodate two-way traffic." **Phil Bell**

PLANNING SECURED for Guildford town centre development

Consent has recently been granted for 14 two bedroom apartments on Farnham Road, Guildford. Surrey-based Levanter Developments were delighted that Motion was able to negotiate the withdrawal of a draft planning condition which proposed the introduction of a pedestrian traffic island on a nearby junction, close to the town's railway station.

Jack Sutcliffe comments, *"We have worked with Motion's transport planners on three major schemes in Guildford within the last two years and in each case we have been very grateful to have them as part of our planning team. We really appreciate the quality advice and support, and Motion's willingness to meet at short notice when something is time critical."*

The 0.3 acre site sits on the junction of Farnham Road and Denzil Road, adjacent to the grade II listed Farnham Road Hospital.

Motion's Phil Bell successfully demonstrated that the proposed condition did not meet the tests of paragraphs 203 to 206 of the National Planning Policy Framework. He maintained that there were no significant road safety issues which justified the crossing on Madrid Road. Phil explains, *"The road is straight with good visibility and no on-street parking."*

© Image courtesy of Steve Clifton, SCD Architects Ltd

SLOWING the flow

A holistic approach to flood protection

Current planning regulations require the attenuation of flows from new development, irrespective of the location of the site within the catchment. Motion Director Richard Bettridge argues for three improvements to flood risk management strategies in relation to new schemes.

Sites near the seaside have needed measures to attenuate surface runoff, when it may be better to release excess flows to sea quickly, clearing the way for upstream flows. Sites at the head of a catchment are allowed to discharge attenuated flows under extreme conditions, exacerbating flooding downstream.

Provision for extreme events

Schemes which operate on a sliding scale should be considered. Methods to hold the runoff at the head of the catchment could be employed. Attenuation could be used mid-catchment, with free discharge at the bottom of the catchment.

The level of flood protection is often designed to operate under particular rainfall or flood events. More needs to be done to revise the criteria to take account of successive extreme events. Although in theory these events are rare, in practice more are being experienced. The recent floods in the north of England and Somerset appear to arise from a number of successive serious rainfall events. These expose the inadequacy of flood defence measures, which may have been designed on the traditional basis.

A complex solution

Finally, the requirements of water supply need to be matched to those of flood protection by the same means: *impounding and storing excess water in upstream areas*. At first glance, the answer to both challenges is identical.

The solution is not a simple one. In order to address all the issues, a more holistic approach may be required. The following three measures could help channel the course of flood protection strategies for the better:

- Relate sustainable drainage solutions to the behaviour of the catchment
- Consider the impact of successive extreme events
- Link the needs of water supply and flood storage

This article is based on a letter published in Environment Magazine, March 2016

Cabot Park, Avonmouth

© Courtesy of Formula E

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E's the way to go

Jerry continues, *"It's not just the technical considerations that we examine. The host country and city are often using the event to showcase the location. We consider whether there are particular vistas or landmarks that the host wants to highlight to television audiences. The designs will also include the positioning of safety barriers, pits, the press stand, hospitality suite and the grandstands, to ensure that they are optimally located."*

Motion has conducted feasibility studies for a number of potential Formula E circuits in Malta and South Africa.

Holding back the tide

Work has begun on the infrastructure for a mixed use development on the site of a former caravan park in Walton-on-the-Naze, Essex. The scheme includes 250 residential units, a care home and a supermarket.

Motion designed a new access road and associated highways infrastructure and produced a drainage and flood risk statement. The company has also been appointed as the contract administrator for all on-site infrastructure works.

Unusually, the site contains a Grade II listed Martello tower. Martello towers, small coastal forts, were built in the nineteenth century to defend against sea invasion. Part of the site lies within Flood Zone 3a, which carries a one in 100 year risk of river flooding or a one in 200 year risk of marine flooding. It is protected by sea defences.

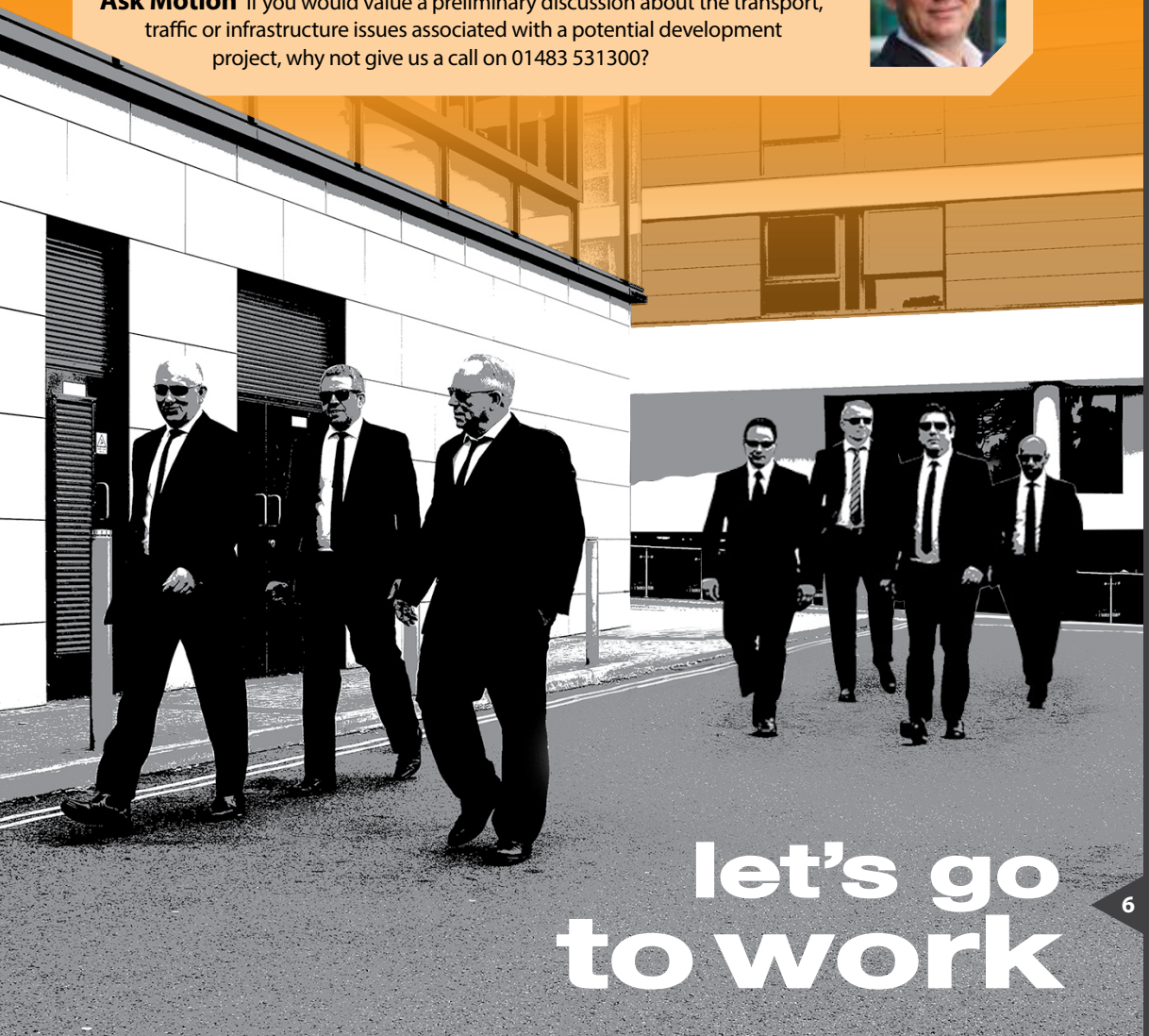
Motion Associate Julian Smith says, *"We recommended earthworks to raise properties above flooding levels. We also had to plan for the possibility of a failure in the sea defences, which would flood part of the main access road. Motion proposed an alternative emergency access route to the north of the site in case of a breach."*

Forward Motion

Following sustained growth, Motion has relocated to larger premises in Guildford and opened an office in Reading. Managing Director Phil Bell comments, *"Our new premises will enable us to strengthen and extend the comprehensive range of services we offer. These now include flood risk and drainage advice, infrastructure development and design, as well as transport and travel planning."* The Reading team will be led by Director, Jerry Muscroft.

See right-hand panel for contact details for all our offices.

Ask Motion If you would value a preliminary discussion about the transport, traffic or infrastructure issues associated with a potential development project, why not give us a call on 01483 531300?



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