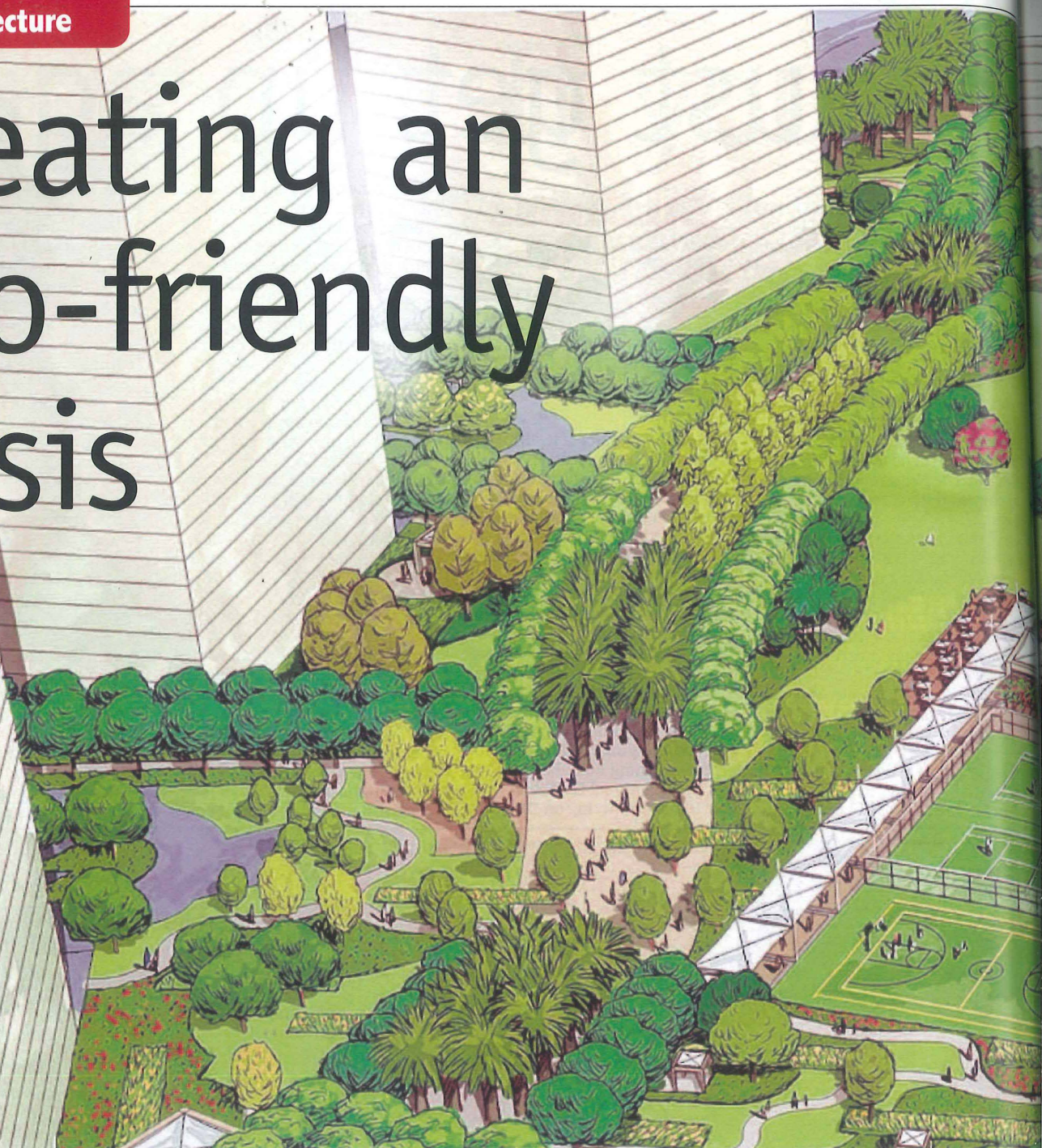


Creating an eco-friendly oasis



ADAM KULA meets boundary-pushing Petersfield architects Terra Firma

What do you imagine when you think of 'the city of the future'? Space-suited residents with robot butlers? Air-conditioned streets? Fields of solar panels as far as the eye can see?

Well, you would be half-right – if plans for a new eco-city in the Arabian desert are to be believed.

Masdar City is a groundbreaking, self-sustaining eco-metropolis of 6,000 sq km, and is being tendered for by a small Petersfield-based architecture firm.

Terra Firma, a 19-year-old, 20-

strong landscape architecture company headquartered in Cedar Court, has previously designed blueprints to transform Chichester's canals, spruce up Hayling's seaside and put together contingency plans for the future of Pompey's Fratton Park stadium.

But since last year it has taken its ambitions to another level, by submitting plans for two new cities in Abu Dhabi – the much-vaunted Masdar, and its 'twin', the 100,000-population Al Falah.

The firm has been breaking into the Middle East market over

the years and opened an office in the UAE in 2006, but these two projects, located next to each other on Abu Dhabi's outskirts, are the biggest it has ever gone for.

It is waiting to hear the outcome of its bid for the city of Masdar, but it is ploughing ahead with the 12,600sq km Al Falah scheme, for which it won the contract in April, 2008.

It is the largest scheme the firm has undertaken and is now well under way, with the firm working to a broad masterplan and fine-tuning the details such as the types of

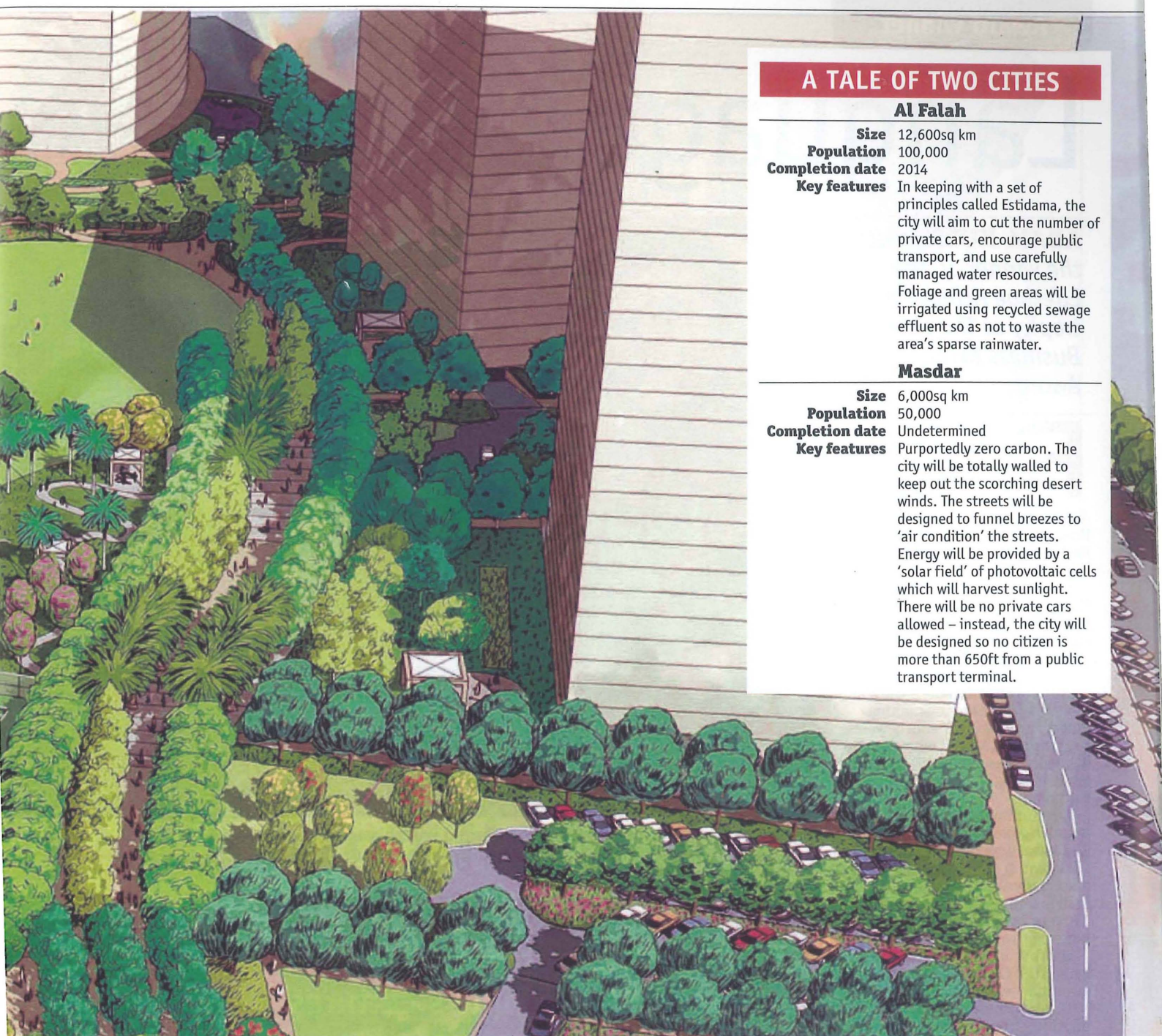
greenery, parks, the irrigation system, and pedestrian areas.

Although not aiming for the zero-carbon Masdar standard, it is still streets ahead in its environmental impact, explained managing director Lionel Fanshawe.

'I can't think of anywhere you've got a new town settlement where you've got cycle routes and the whole public transport system mapped out so much. Our task is to make sure this is all shaded and useful, and that the cycle lanes aren't interrupted by traffic.'



**Terra Firma MD
Lionel Fanshawe**



A TALE OF TWO CITIES

Al Falah

Size	12,600sq km
Population	100,000
Completion date	2014
Key features	In keeping with a set of principles called Estdama, the city will aim to cut the number of private cars, encourage public transport, and use carefully managed water resources. Foliage and green areas will be irrigated using recycled sewage effluent so as not to waste the area's sparse rainwater.

Masdar

Size	6,000sq km
Population	50,000
Completion date	Undetermined
Key features	Purportedly zero carbon. The city will be totally walled to keep out the scorching desert winds. The streets will be designed to funnel breezes to 'air condition' the streets. Energy will be provided by a 'solar field' of photovoltaic cells which will harvest sunlight. There will be no private cars allowed – instead, the city will be designed so no citizen is more than 650ft from a public transport terminal.

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The fact no vehicles will be moving through means it's a pedestrian-first environment

Another problem is vegetation, and how to water it. 'If we wanted to plant a palm tree in the desert, even if you throw water at it, it isn't going to do very well because the soil is so saline.'

To get around this, the team aims to use 'sweet sand', usually trucked in from the deep desert, to help provide a good growing environment.

But rather than bus tonnes of sweet sand overland, the team discovered natural deposits of it on site, much of it buried, and aims to use that mixed with a natural compost like sugar-beet residue to form the fertile soil, and to irrigate it with recycled effluent from the city to save using precious rainwater.

But green though this is, the landscaping and architecture

proposed for Masdar takes things a stage further.

'The fact no vehicles will be moving through means it is a pedestrian-first environment, which is quite unusual for that part of the world.'

'If you walk through the sort of souks and covered marketplaces in Egypt, they have a long history of having these kind of shaded areas you can stroll through.'

'But the rest of the streets have really become car-orientated, and this is trying to strike back at that.'

'In a sense it's kind of reinventing the wheel. Our parents and grandparents were used to recycling and not wasting things, and it's only really this generation which has become so wasteful.'

Among the company's other achievements is a butterfly house in St Albans called Butterfly World, which will be home to around 10,000 tropical butterflies in a 328ft-wide dome, and which has just been scheduled to open to the public on June 5.

The company is also in the process of building a de facto new suburb of Cairo, as well as putting forward plans for schemes in Iran and India.

'The Middle East is a fairly obvious market in our field,' Mr Fanshawe said. 'It's always been there since the 1960s and 1970s. They've had their ups and their downs which, I think, are more pronounced than ours, and the Gulf wars have slowed things down, but it's become – dare I say it – a real Mecca.'