

Design For Maintenance

Wednesday 28 September 2011

Ashford International Hotel, Ashford, Kent

Professor James Hitchmough; pioneer, scientist, alchemist and meadow-man



Part traveller, part alchemist; it's not too bold a statement to say that Professor James Hitchmough has helped change the face of soft landscaping in the UK. And when his biggest project is unveiled at the Olympic Site in Stratford, in a little over a year's time, this pioneering alchemist will find his name repeated around the globe.

His ground-breaking work at Sheffield explores how ecology, as a science, can be applied to designed and managed herbaceous vegetation in urban and parkland environments in order to; maximise sustainability support native wildlife and bring colour and meaning to human beings. In short – he researches and makes beautiful meadows. He doesn't do this from the bubble of Sheffield University, he applies his work in the real world and in conjunction with his colleague Nigel Dunnett, James has designed all of the 8.5 ha of sown native vegetation types (meadows, swales and woodland understories) at the 2012 Olympic Park. No mean feat. Professor Hitchmough will be addressing the annual Palmstead Workshop on 28 September this year and will talk about 'Design for Maintenance'.

Q&A

How would you describe yourself and your current projects?

I'm a curious hybrid – a scientist and a designer. I'm working on the Olympic Park. Sarah Price and I co-designed the planting in two of the gardens; Nigel Dunnett and Sarah designed the other two.

How important is the topic "Design for Maintenance"?

I don't think you can sensibly design things unless you have a clear idea of how it's going to be managed in the future. A lot of my work is about trying to join those two things together – the conception of what you're going to make, and what resources are needed to maintain it. I like to work with very low levels of resourcing – a lot of the stuff I make is manageable to 5 or 6 hours per 100 square metres per annum, which is very low when you compare it to typical maintenance management for conventional herbaceous planting which can be anything from 10 – 50 hours per hundred per annum. Most of the vegetation I work with is grown from seed; seeding represents lower cost per square metre.

The costs of meadows seem attractively low – do you think we are going to see our public parks turned to meadow?

One of the first things we're going to have to do if we're going to have a more sustainable world is look at the areas of 'mown grass' we have in the UK, and look at treating them in a different way. Typically in Britain we have a lot of mown grass – Local Authorities are addicted to mowing grass, it's part of what they do. One of the reasons why the large parks aren't covered in meadows is down to 'attitude'; most green space managers are sceptical of everything other than that they know very well, and they know mown grass very well; they're still looking at things from an inherited Victorian view; from the tail end of Victoriana, or what I would call the fag end of the very innovative 19th century. This inherited value isn't lateral or creative.



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How do you begin to change these values then?

I don't want to replace someone else's orthodoxy with my own, so we've done a lot of research into what the public think about the things we make and what they like, and also we've done a lot of work with green space managers and what they think. Quite often the green space managers are more conservative than the public. Technical things can't break the log jam, for me as a research scientist who crunches numbers, it's about getting people interested. My work in terms of how to do things cheaply, easily and on a big scale has to be backed up with "what do people think about this space and what it looks like?". I like to go to bed thinking I'm doing something positive.

Is prairie style meadow planting just a trend or a fashion and is this down to your work?

To a degree we've played a part in the "wave" that's building towards more meadows – if you talk about something enough people think there's something in it. Local Authorities who let the roundabouts go to meadow and gardens who have incorporated meadows are responding partly to fashion, but mainly it's to do with a change of "values". Increasingly there's a sense that nature is good and if it looks natural then it must be positive and wholesome. This combined with the lower price tag has made it easier to do.

On a practical level what's involved in your "scientific research" and how does this impact upon "Design for Maintenance"?

At Sheffield, we work in experimental plots to fine tune things. I travel to look at stuff in its habitat. If I'm going to make a meadow out of seeds from South Africa I need to see the species in its habitat – once you see the species in its habitat it's much easier to see what the maintenance and planting challenges will be; it's hugely valuable for putting together management programmes. Three weeks before the Palmstead workshop in September, I'll be in the mountains of South Africa looking at stuff – I spend as much time as I can and try to use the resources to see and understand vegetation in its natural habitat.



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Design for Maintenance – what is the secret to creating a long lasting meadow?

The construction of these things is relatively straightforward, but my role is to try to work out how to design to make maintenance as simple and resourceable in the long term as possible. Horticultural practice sometimes values complexity for its own sake; to me things that are simple or sometimes even crude are beautiful. There's no point in setting this up as inordinately complicated. My work is about trying to find a way to design with seeding to give you control – in most conventional seed mixes there's no control; you don't know what to expect, you don't know what the results will be and when it doesn't work you don't know why. So I've developed establishment protocols and seed mixes that deliver – actually deliver, in the same way when you design with conventional plants. If you have a vision of what you want and go out and make it, you can have the same control you have with plants. In the longer term mix design is key, as this is how the relatively abundance of species in vegetation is initially controlled. We can make really successful mixes because of the years of research we have invested in understanding how large numbers of sown species behave in sown vegetation. Jelitto seeds now sell one of my prairie mixes, which is similar to the mix at Wisley, and you can buy that off the peg and it will produce. It's very straightforward providing you follow the key establishment and management protocols.

I was with two of my students this morning who were making up nine sowing blocks (1 by 1 metre blocks) for a study on meadows found in Korea. They covered weed free ground with a 75mm layer of sand to suppress weed seed emergence from the soil seed bank below, and then they will sow into the ground tomorrow. They then will need to irrigate the sand to keep the surface moist for six weeks and that's it. The seeds germinate; you pull out the few weeds and leave everything else. By the end of the year we will have a largely weed free meadow of the sown species. The students previously had no experience of doing any of these things, but they too can make it work.

What level of maintenance is involved with these designs?

There has to be some management regime with all types of meadow like vegetation. If it's winter dormant North American Prairie vegetation for example, you leave it to February and then cut it down with a brush cutter in early March, then you remove the cut material and you flash burn over it - this kills the annual weeds and it

defoliates any perennial weeds, slowing them down a bit. Any really problematic weeds can be physically removed or spot treated at this time. Most of the management is squeezed into a couple of weeks in March, when you in effect reset the clock for another year. Within two to three weeks the desired species begin to sprout back again. We have a prairie sowing in Sheffield Botanic Gardens that we planted in 2004; it's 8 years old now and is more or less weed free and only gets this type of management once a year.

What's the secret to the "mix" you use?

I like to think that these meadows can last forever given appropriate management – they won't stay fixed, however, some things become more dominant, some less, but as the alchemist I'm trying to work out which ones will be forever and what will the dynamics of the interaction be for the next 10 years. My work is all about the distillation and understanding of the species interaction in the seed mix.

You've been trialling the meadows on site in the Olympic Park – is the excitement building and the mix right now?

Yes it's true we have been trialling. We've got to try and push back the flowering to the games window and the way we're going to do that is defoliating them "x" number of weeks before the games so they re-grow their flower buds again – typically this takes about 8-10 weeks to happen. We cut the first lot of plots 5 weeks ago, and we're cutting the next set of plots next week.

What are the benefits of being able to trial something in the space it will be unveiled?

The trialling was really more to fine tune – I have to make the call for when we cut the whole of the Olympic Park – probably 8 weeks before the games. Manipulating through irrigation we hope to get the best flowering through the games.

Were people sceptical about your original ideas for the Olympic Park?

The contractors were initially quite sceptical and now I think they're actually quite "wow - it looks like that!" -



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it's been a change in attitude and I think some of the contractors will be interested in meadow projects in the future.

What is the soil like at the Park – there have been reports of it being cleared of Japanese knotweed?

All the meadows are sown into imported sand and organic debris. Japanese knotweed from the past is just a memory in terms of the realities of the present.

What kind of maintenance will be required once the games are over and the site becomes the public's parkland?

The main thing is the cutting. They may get away with one cut per annum, which should typically be sometime between late July and early September.

What can we expect to see at the Olympic Park? Is there something new?

I think the main thing that's going to impact is the scale. If we can get the meadows to flower on time, the whole of north landscape will be meadow of some sort or other, so people will be deposited into 80,000 sq metres of this stuff – it will be very dramatic and colourful – a magical experience really. In the south park the gardens will be very exciting too by virtue of their scale and the unusual things that people haven't seen before.

What is your favourite space?

That's an impossible question to answer. There are places I like more than others – I really like being in wild places, up some sort of mountain – that's what pushes the buttons most for me. In terms of public spaces; should one have an answer to this? Where do I really like – when you're closely involved in all these things it's almost a bit shallow to say I like "this place". If pushed I'll say I really like the landscape of Warrington New Town as an example of a 20th century ecological landscape new town, but I also really like Beth Chatto's dry garden.



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Palmstead Nurseries continue their successful series of Soft Landscape Workshops aimed at professional landscapers, designers, specifiers and managers, with 'Design For Maintenance' on Wednesday 28 September 2011 at the Ashford International Hotel, Ashford, Kent.

Now in their 4th year the workshops provide a great opportunity for the industry to come together and share their thoughts on the year and to hear the leaders in their field talk about the future of design and maintenance.

Chaired by Andy Sturgeon, the speakers for 2011 include: -

James Alexander-Sinclair, Gill Chamberlain and Professor James Hitchmough.

