

Native or non-native which one's best?

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Now in its 6th year, the annual Palmstead Soft Landscape Workshop took place on Wednesday 25 September at the Ashford International Hotel. The busy event sees over 300 designers, landscape architects and contractors from across the country travel down to Kent for a day-long workshop focusing on a current topic, always underpinned with "right plant right place". There were many opportunities for networking, and a selection of exhibitors to meet. This year speakers talked on the subject of native and non-native planting, discussing which is best.







Nick Coslett of Palmstead Nurseries introduced the workshop and explained the debate itself stems from the fact that assessors from BREEAM have been insisting on native only planting, with seemingly little interest in the impact on people, aesthetic importance, ecology and planting for wildlife. Eelco Hooftman at last year's Workshop referred to the BREEAM assessors as the 'ecological Taliban'. He believes being forced to use native planting restricts planting designs, and reduces the quality of the landscape. Responses to a Landscape Institute members' survey concurred with this view, with 42% of the Landscape Architects surveyed saying that BREEAM reduced Landscape quality, and only 25% saying it improved quality. Landscape Architects also felt BREEAM did help to maintain budgets as green BREEAM points were quite cheap (compared to building points) and this helped to protect budgets from excessive value engineering.

Nick continued by defining what is meant by, or what counts as native or non-native, and naturalised. There are a tiny proportion of plants which are threatening and invasive species, for example, Japanese Knotweed but the problem plants are mainly aquatic and are now being withdrawn from sale. However the majority of non-native species do positively



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add to biodiversity, and provide habitat and food for ecosystems. They may also be better adapted to cope with climate change than the indigenous native plants.

#### Native plant definitions:

**Indigenous / Native** A plant which originated or arrived here of its own accord without human intervention, e.g. as the ice age glaciers retreated and UK became an island.

**Naturalised Native** – an ancient introduced plant (before 1500AD) which has become self sustaining/established = naturalised in the UK (e.g. Sweet Chestnut & Field Poppy)

**Non-native** / **Alien** – Introduced generally by man from other areas. Established and self sufficient / sustaining here in our temperate climate - very few have become invasive

The number of native plants in the UK amounts to approx 1500 species, of which 50 are shrubs and trees. North America by contrast has approx 10,000 native species. A good source on the UK's native plants in specific areas is the **Native plant data base: www.nhm.ac.uk search for Postcode Plants** 

When & where to use Native Provenance plants				After Plant Link 2011 & JCLI CPSE 2002
Seed Source	Natural Regeneration	Similar Habitat nearby	Similar climatic region (UK)	Britain or Ireland & Near Europe
Special Sites SSSI & Ancient woodland	Best practise	Best practise	May be suitable	Not advised
Ecologically sensitive sites	Best practise	Best practise	Acceptable	Not advised
Farmed landscape	If feasible	Best practise	Acceptable	May be suitable
Urban / Suburban	Not advised	Acceptable	Acceptable	Acceptable
Parks & gardens	Not advised	Acceptable	Acceptable	Acceptable

### Definitions - Origin & Provenance explained:

**Origin** - Where the plant comes from geographically.

Indigenous - Having origin in a particular locality, district, county or country.

**Provenance** - The geographic location where seed was collected.

For example if we collected seed from a tree in an ancient Kent woodland and grew those trees/ plants on; their provenance would be Kent and origin Kent. However if the trees where seed was collected had been imported from France in past centuries, the seedlings would be Kent provenance and French origin. (Or origin unknown in many cases.)



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**Sarah McCarrick** from the Building Research Establishment (BRE) spoke first on 'Native plants and their importance to BREEAM and biodiversity', seeking to defend the BREEAM method, its assessors and their bias towards native planting. [BREEAM = Building Research

Establishment Environmental Assessment Method] Emphasis on native only planting is only a small part of the scheme, and BRE confirmed that non-native planting is accepted where there is a known benefit and attraction to local wildlife. BREEAM assessment is growing at a rapid rate, with interest rising as more and more people and developers begin to see the value of certification. Although assessment and certification is voluntary, many companies see it as necessary to receive BREEAM points, due to funding or planning requirements; more than 250,000 buildings are currently BREEAM certified. As well as highlighting common misconceptions, the criteria, and BRE's future plans, Sarah explained that BREEAM certification is flexible, with clients choosing credits that they see as most appropriate for their site. She also emphasised the battle BRE face in getting people involved early enough in a building scheme. At the beginning it is easier to maximise the benefits of the scheme, rather than finding credits at a late stage only to tick boxes. BRE are happy to offer advice on how BREEAM should be used, and have the Landscape Institute working alongside them.

Sarah received many questions from concerned delegates, who wonder if the emphasis on native is useful, or might even be detrimental.

Useful BRE & BREEAM related web links: www.breeam.co.uk & www.greenbooklive.com

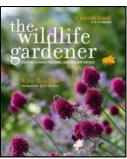
BRE have been consulting revision of BREEAM New Construction 2011. Delegates can find more information here: www.breeam.com/2014 Or contact BRE by email: breeam@bre.co.uk



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The second speaker, **Kate Bradbury**, an independent journalist and wildlife gardener, spoke on the often controversial topic of moths and plants for moths. Controversial as moths get overlooked, bees and butterflies get all the limelight. She accepted that moths have quite a bad reputation eating jumpers etc, but explained that of the 2500 thousand species of moth in the UK, only a handful are pests and most go unnoticed, in comparison, the UK has only 70 species of butterflies. They have a vital role in the ecosystem and for example their caterpillars are a principal source of food for young birds. She highlighted the importance of gardens as rich habitats for wildlife, and the place that insects such as moths have in the greater ecosystem. Kate explained the importance of European native plants to attract and feed moths. So inclusion of some native plants in gardens to support the egg to caterpillar stages of their life cycle is beneficial as are our native hedgerow shrubs in particular. See list below:

Useful Moth related web links: www.mothscount.org

**Good Moth food plants are:** Bird's foot trefoil; Clematis; Clover; Comfrey; Foxglove; Hawthorn; Hollyhock; Honeysuckle, *Lonicera*; Hop; Ivy; Mint (and relatives of); Primrose; Roses; Selfheal; Thyme

and Verbascums.

**Lists of Butterfly food plants:** www.ukbutterflies.co.uk/foodplants.php and the RHS's list www.rhs.org..uk/media/pdfs/advice/plants-for-butterlies

also: www.bigbutterflycount.org

And the Butterfly and Moth BAP (Biodiversity Action Plan): www.butterfly-conservation.org.uk

Kate's recently published book **The Wildlife Gardener** published by Kyle Books is well worth a look and full of practical advice and useful lists.



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The third speaker at the workshop was **Professor Nigel Dunnett** of Sheffield University who spoke on the topic of Beauty and Biodiversity. He called upon delegates to consider the language used to describe non-native plants, such as alien, invader, and destructive; if we spoke like this about people the reaction would be very different, so is it ok to use this language in reference to non-native plants? Sheffield University have a policy of a sustainable approach to urban ecological design. Having spent the last five years working on the Olympic Park the emphasis here was on being ecological and sustainable, and to maximise biodiversity.

Nigel Dunnett highlighted social sustainability and aesthetic benefits as the two most important factors to consider in planting design. He also placed huge emphasis on the fact that schemes must work for people, they have to look good for a long time and be easy to look after. He believes that a mixture of native and non-native plants work best, both to extend the season of interest, provide the best food sources for birds and other wildlife and for ecological enhancement and creativity. He promoted the use of natives which are well adapted to local soils and climates while non-natives may be less well fitted and therefore need greater maintenance, care and protection. He uses both in creating his sustainable naturalistic planting mixes.

He also discussed that be believes a project can be better and more ecological if BREEAM is ignored, as native only can be considered too dogmatic an approach. He gave an examples of this which highlighted the dogma some BREEAM assessors were using which was not in line with BRE policy that non-native planting is accepted where there is a known benefit and



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<u>attraction to local wildlife</u>. In this example the developer had abandoned seeking BREEAM assessment as the multiple re-designs had cost thousands and diluted the scheme.

Useful related web links: www.nigeldunnett.info

www.pictorialmeadows.co.uk www.thegreenroofcentre.co.uk

For Sheffield Biodiversity in urban Gardens www.bugs.group.shef.ac.uk and Jennifer Owen's book Wildlife of a garden - a thirty year study. RHS books

Also see the videos on You Tube made by the LI about the Olympic Park

http://www.youtube.com/watch?v=YsuU3APsA5c

which is just one of several videos made by the Landscape Institute on the Park.

and a post-Games report on the landscaping of the Olympic Park:

http://learninglegacy.independent.gov.uk/documents/pdfs/design-and-engineering-innovation/164-green-structure-dei.pdf

http://www.nao.org.uk/wp-content/uploads/2012/12/1213794.pdf

http://landscapeiskingston.wordpress.com/2013/04/29/olympics-landscape-legacy-landscape-engineering-the-london-olympic-park/

+ video http://www.youtube.com/watch?v=p9sEccTHlMk









Helen Bostock and Dr. Andy Salisbury from the RHS spoke about Plants for Bugs, and the research being carried out at RHS Garden Wisley. The research began in 2009 and seeks to investigate the role of native and non-native plants in supporting invertebrates. Some preliminary results have been collected, although the research is still ongoing and won't be fully reported until 2014. They explained that although we fall back on the presumption that British is best, for example gardens are often very biodiverse despite (or maybe even because) 70% of plants in an average UK garden are non-native. The Plants for Bugs research



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aims to find out if bugs care about the geographical origin of plants by monitoring the number and diversity of species of bugs on beds planted up with plants from either the UK, the Northern Hemisphere or the Southern Hemisphere. Although the research is not yet complete, preliminary results suggest all the plantings supported a good level of invertebrates and that natives were not always best.

RHS links: www.rhs.org.uk search for Plants for bugs

Also search the RHS list Perfect for Pollinators - a great list of plants beneficial to wildlife

Other useful sites: Wild about gardening, run jointly between the RHS & Wildlife Trust www.wildaboutgardens.org.uk Wildlife Gardening Gateway (in development but is coordinating a number of like minded groups and will be the the central website to visit for the Wildlife Gardening Forum) www.wlgf.org

Once Plants for Bugs final report is published we will forward links to delegates.

Palmstead closed the morning session by talking about how their nursery can be of use to businesses. Their 120 acre site produces one million plants each year from 2 litres to 200 litres, and their knowledgeable staff are a resource in their own right. Over 2000 species and varieties are grown. Additional plants and specimens are also sourced from assured specialist growers from across Europe. Palmstead shares the passion of its clients, and has many prestigious projects under its belt.







Tony Kirkham kicked off the afternoon session, after being unable to speak at the event last year due to a tragic accident at Kew Gardens. The Kew Gardens expert spoke about 'Establishing Trees for the Future', questioning the audience, when planting a tree, do you consider where it originates from? Tony Kirkham looked in particular at the habitat that trees



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originate from, in particular woods and forests. He discussed the social protection that trees offer each other in a wood or forest, as well as the root interaction that takes place. Taking trees out of this habitat can cause them to suffer and die. It is important to consider how a tree might grow naturally, and the importance of ecological matching, and the right tree for the right situation. Although it was mainly agreed that native plants are not necessarily better than non-native, choosing the right plant or tree for the right situation must definitely take precedence. Tony gave his recommendations on ten trees for future urban and street planting with climate change and pest / disease infections in mind:

- 1. Aesculus californica or Aesculus indica and Aesculus x dallimorei (a cross between A. Flava and hippocastanum with good flowers and all have full resistance to the leaf miner)
- 2. Fraxinus americana (flagship of autumn colour) and F. seiboldiana are resistant to Chalara and Fraxinus ornus (appears to be resistant but not known for certain yet)

  But all carry the susceptibility to Emerald Ash Borer, a threat in waiting in the USA.
- 3. Paulownia kawakamii (from Taiwan)
- 4. *Metasequoia glyptostroboides* (from China)
- 5. Ginko biloba (from China) though fossil records found in UK geology.
- 6. Quercus rysophylla (Mexico which is a good source of tree species)
- 7. Liriodendron tulipifera (from Eastern North America Tulip Tree) or Liriodendron chinense (from China the Mandarin Jacket Tree)
- 8. Fagus orientalis (from the Caucasus a good source of trees tolerant of climate change) almost indistinguishable from our native Beech which is threatened by climate change and is moving north.
- 9. *Pinus pinea* needs care as imported trees run the high risk of importing Pine Processionary Moth! Quarantine recommended.
- 10. Liquidambar styraciflua (from the Eastern North America)
  Tony also discussed planting and staking, and the correct ways to do both; there is currently no British Standard for tree planting. (An information sheet on best practice for tree planting and staking and Seismomorphogenesis is being prepared and will be available from the Palmstead web site shortly.)



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looked at the fact that our whole culture is built around exotic plants from around the world, and simply pushing out all non-natives would be both impossible, and stupid. We are so privileged to have a climate and landscape in Britain which can accommodate plants from around the world. It is part of our cultural heritage that we are a global operator. We need to have the right decision in the right place to allow the right plant in the right place.

He looked at the effect of plants and green space for health and wellbeing, which does not discern between native and non-native. He used the example that elderly people living in a landscape which changes with the seasons, with direct access to nature, keep their independence for much longer. Hospital patients are known to recover faster if they can see a tree or greenspace. Parks and green places are also known to give measurable reductions in stress within four minutes if people can; see, feel, smell and hear the landscape. This link to health may help in why plants matter and prioritise the protection and fostering of our green places. Important as half the worlds population live in towns and cities.

Professor Chris Baines closed the workshop with his seminar 'Striking a Balance'. Chris

In secluded unspoiled landscapes, non-native trees can be more challenging, but in cities this is not something that designers need to worry about. He accepted that some special and precious sites, such as British bluebell woods need to be protected from invasion and foreign species, but most landscapes do not need to be treated in this way. We need to be sophisticated and clever about our planting, native and non-native is not necessarily the best way to differentiate between plants, we should be planting what will benefit its surroundings and will flourish in the space.



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Chris's contact, tips and links: chris.baines@blueyonder.co.uk

Links to the wildlife trusts: www.wildlifetrusts.org

Visit the Dr. Jaqcues P. Thijssepark in Amsterdam where Dutch native plants have been laid out and a garden created <a href="www.thijssepark.nl/">www.thijssepark.nl/</a>

Use the Santamour 30:20:10 rule to build stronger, sustainable and more disease tolerant landscapes:

Plant no more than:

30% from the same family

20% from the same genus

10% from the same species (Santamour 1990)

It was clear from the day that most delegates see the bias towards native planting only as restrictive and unnecessary. Plants and trees should be planted with reference to their aesthetics and year round interest, their benefit to our wildlife, and their social sustainability and the enjoyment they provide. Focussing on native can restrict designers, limit creativity, and often puts the wrong plant in the wrong place where it will neither thrive, nor be fit for purpose.



Photos ©Palmstead & Speakers Thanks to Rose Hales for producing much of this document. The speaker presentations and audio podcasts are available via the Palmstead web site as is this report.

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