barrell
TREE CONSULTANCY

Urban greening: turning aspirations into action

Municipal Tree Officers Association Newsletter (Winter 2014/15)

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There is a compelling body of published and emerging research, supported by a burgeoning array of anecdotal evidence, that trees are the most cost-effective element of urban infrastructure for delivering multiple community benefits. All the more surprising then that we find national and local government commonly impotent at successfully protecting existing trees and incorporating new trees into new urban development. On a daily basis, we see valuable, and sometimes irreplaceable, trees lost in the name of progress, and the new trees promised by the 'here-today-gone-tomorrow' politicians often failing to live past the first few years of planting. Plenty of talk and very little action is the common reality; the quality and extent of our urban canopy cover is decreasing, so what are the prospects of reversing that damaging trend?

Jeremy Barrell was on the panel that produced BS 8545 *Trees from nursery to independence in the landscape* (www.bsigroup.com), and on the steering groups for the Trees & Design Action Group's ("TDAG") latest publications, *Trees in the Townscape: A guide for Decision Makers* and *Trees in Hard Landscapes: A Guide for Delivery* (download free from www.tdag.org.uk). He believes that, in combination, these three documents represent a turning point for all those professionals interested in greening the urban environment. For the first time, through the provenance and calibre of this new content, there is an opportunity for individuals to make a difference where successive political regimes have repeatedly failed. We know how to do this; the technical expertise to integrate trees into even the harshest urban conditions is tried and tested. What has been missing is an effective mechanism for turning that existing ability and the obvious aspiration into action on the ground. In the absence of any obvious political leadership and vision, it is up to individuals take the lead, with Tree Officers being very well placed to make change happen.

Strategic alignments

At the strategic level, it is always difficult for individuals to make a difference, which is where organisations and alignments of like-minded groups have an important role to play. Historically, the London Tree Officers' Association has been very successful at identifying local problems and coming up with effective solutions to assist its members in acting on the ground. Obvious examples include its *Risk Limitation Strategy* for dealing with pressure to lose trees for subsidence reasons, the *Oak Processionary Moth Guidance Note* and the *CAVAT* method of valuing amenity trees.

This has been a very effective assembly that has delivered local solutions, often of national interest. More recently, the Municipal Tree Officers' Association has moved the concept of an organised grouping of local authority tree professionals onto a national level, with a much wider geographic membership. In tandem with these alignments, the Arboricultural Association and TDAG have a much broader spread of professional affiliations, with a commonality of being very effective at voicing individual's concerns at a strategic level. Although different organisations, all have common objectives and closer collaborations are likely to offer substantial benefits to the joint memberships, which will empower individuals who want to make a difference.

Countering the demoralising impact of relentless negativity!

Taking a very broad perspective, there can be little doubt that the general public like trees and support the principle of optimising the stocking and health of our urban canopy. It would be a mistake to translate that goodwill into filling every gap with trees, but it does mean that there is likely to be widespread public support for making the best use of the space available. An obvious manifestation would be to get as many right trees into the right places as possible, but there is a psychological obstacle to realising this ideal that can dampen the enthusiasm of even the most dedicated individuals.

Day in, day out, Tree Officers bear the brunt of the public's frustration from trees that do cause problems; it can be relentless, which inevitably skews the perception of how the public value trees. Of course, the number of trees that create conflicts are minute compared to the vast majority of trees that cause no problems, but nonetheless, constantly dealing with complaints will sour even the most optimistic of characters. It is human nature to speak up when unhappy and keep quiet when all is fine, which highlights the negatives and suppresses the positives. For Tree Officers to be sucked into such a negative spiral is a barrier to action, and to occasionally step back and appreciate the wider reality can often assist in achieving a more balanced perspective. Ordinary people really do like trees, probably one of the best reasons never to give up doing your bit for the greater good.

Barriers and obstacles to urban greening

If it is right that there is an overall public appreciation of trees, albeit latent to some extent, then an obvious question is why are we not seeing more trees being planted, more trees surviving and urban canopy cover increasing? Here are few of the reasons:

- **Lack of space:** This frequently cited excuse for not planting new trees just does not stack up in a modern context. There is a wide range of tree sizes that allow the species to be tailored to the space available, both rooting and aerial. Fastigiate forms allow even the narrowest of gaps to be greened, with the vertical emphasis reducing the need for broad space compared to the more conventional spreading habit. Below ground, there are multiple products providing a means of converting even the most hostile environments to support tree growth, which in turn allows efficient use of the space above the ground. Trees can be fitted into parking areas

with very little reduction in parking numbers, and yet we regularly see local planning authorities still consenting vast commercial premises with no significant tree planting in parking areas. We have the technology and species choice to plant new sustainable trees almost anywhere, so there is no technical reason not to do so.

- **High cost of new trees:** Excessive cost is another reason for avoiding planting trees. Of course, that is a valid concern in the short-term because the bulk of the costs are in the initial supply, preparation, planting and maintenance to independence in the landscape. But as a tree grows, the value of the benefits it provides increase exponentially with size, so those early costs are soon paid back and a net gain position prevails for the bulk of the life of the tree. This matter is not clearly articulated at present and requires more research support to express it in a way that is easier for the decision-makers to understand. However, the clear position supported by the emerging research is that trees provide a vast net gain of benefits over their lifetime, more so than any other single element of urban infrastructure.

- **Trees cause damage:** Tree roots do have the potential to cause indirect subsidence damage on shrinkable clay soils and caution is obviously required in those situations. However, that is not the case for all other non-shrinkable soils, and no such precautions are required if clay is not present. And yet service providers still regularly demand unreasonable and unnecessary precautions on all soils. Additionally, trees can cause direct damage to services on all soils through displacement by root growth and blocking through root ingress into pipes. However, almost invariably, this type of damage is due to historically inadequate jointing and a failure to use modern products with a proven capacity to withstand these damage mechanisms. There are multiple ways of overcoming these problems, but progress will require the service providers to embrace a more holistic approach, accounting for the wider societal benefits of trees and not just their own narrow perspective. This lack of understanding and such an extreme aversion to any risk at all is simply unsustainable in the broader context of the national need to adapt to climate change, but more work is required to modernise this traditional and entrenched mindset.

Of course, change causes anxiety to even the most open-minded individuals and it is just human nature to fear the unknown. Sticking with what you know is simply easier and safer, but it is a real barrier to progress to be overcome if we are to effectively manage the challenges that climate change is bringing. It was never going to be easy, but help is at hand with the new BS and the two TDAG publications.

Trees in Hard Landscapes: A Guide for Delivery

Focusing in on the latest TDAG guide, *Trees in Hard Landscapes*, in addition to providing a review of where we are with urban greening, it also offers some unique insights into where we have the potential to go. Furthermore, the Foreword from Baroness Kramer, Minister for State for Transport, provides an endorsement from the highest level of government that trees matter and their integration into the public

realm is important. The document is presented in four sections; the collaborative process, designing with trees, technical design solutions and species selection criteria.

Collaboration is a very good place to start because it is an organisational characteristic that is missing from many projects and a core reason for failure to deliver efficient, economical and fully functional solutions. On a personal level, in our role as consultants in the planning system, we see a whole range of approaches, from the simply incompetent to the impressively well organised. Our experience is that one factor above all others stands out as being of fundamental importance to secure effective project delivery, i.e. the provision for all the professionals within the project team to communicate and work together right from the beginning. It sounds obvious, but as Figure 1 conceptualises, it is far from common, with the bulk of professionals preferring to work in isolation from other disciplines. This blinkered approach is cheap in the short term because there is less time input, but it invariably turns out expensive in the long term because unforeseen problems at the end of a project are much more difficult to put right.
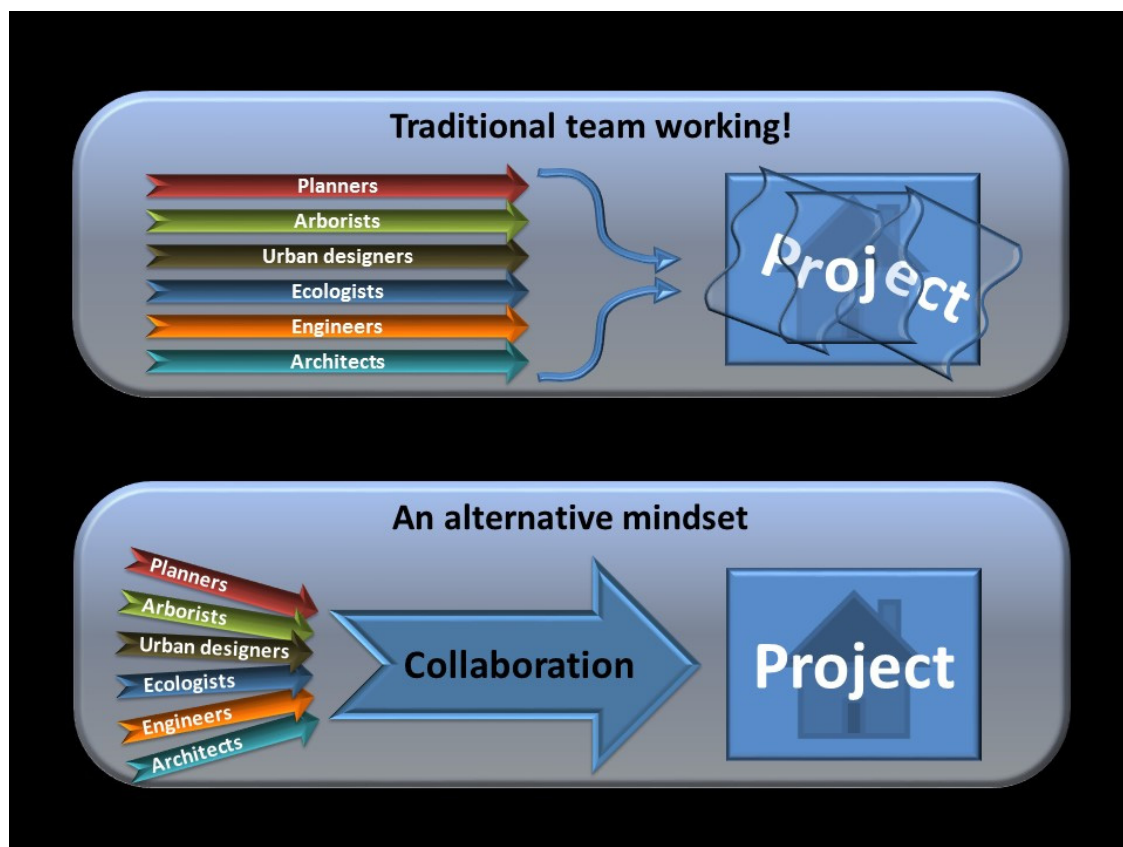

Figure 1: A common characteristic of traditional project management is poor communication between the disciplines, often seated in a culture of isolation rather than collaboration. A much more effective means of working is for the project team to meet at the start, talk all the issues through and deal with them efficiently early on, rather than having to firefight the unforeseen problems as the project progresses.

Our experience is that the smartest operators bring teams together early and talk a lot. Collaboration costs more up front, but it saves in the longer term, which is why that process, and the modern mindset it requires, deserves the prominent profile it has been given in *Trees in Hard Landscapes*.

Here are just a few of the other positive themes that run through the document:

- **Link funding to highway issues:** In the present climate of cost cutting and the focus on efficiency, funding for anything is a challenge. That is certainly so for tree planting aspirations, which often do not sit comfortably when pitched against priorities such as social care, waste collection and crime prevention. One of the great successes of this document is the identification of a subtle, but nonetheless, very strong link between more trees and improved highway management. It may not be obvious at first sight, but the background research has found multiple instances where increased tree planting associated with highway schemes has enhanced the delivery of the whole project. The detail of the case studies is worth reviewing for this aspect alone, because this funding stream has the potential to dramatically increase the density of new trees right where they are needed most, close to people and roads. Indeed, the active endorsement by the Minister of State for Transport and the high profile support of The Chartered Institution of Highways & Transportation reinforce the importance of this previously under-exploited funding opportunity.

- **The value of case studies:** One of the most effective responses to critics and sceptics who doubt the feasibility of tree planting projects is to offer case studies showing other instances where similar proposals have been successfully implemented. With 32 case studies (about two-thirds UK and one-third international), the document provides a wealth of practical illustrations of what can be done. Furthermore, a very useful Case Study Finder section assists the user in locating projects that may relate to their particular situation.

- **The importance of design champions:** A common feature of the most successful projects and initiatives is that they are driven by a single person with ambition and vision. At the grandest scale, these are often politicians looking to leave an ethical legacy, such as Mayor Bloomberg, who drove the New York City sustainability plan to make it an exemplar of progressive city management. More locally, that leading role can be adopted by a design champion, passionate about guiding a project to a successful conclusion. Seeking out and encouraging individuals to lead from the front has a proven record of success, and is repeatedly advocated throughout this document.

- **The need to think rather than rely on recipes:** For individuals lacking in experience or confidence, recipes for action are useful because they offer an alternative to thoughtful innovation based on practical knowledge. No such luck with this document, I'm afraid; there are no formulaic solutions for the robots, but there are plenty of ideas for those who are prepared to think. Managing urban infrastructure is a complex process that requires experience, expertise and

intelligence to master. There are rarely simple solutions that can be applied without due thought, and this document does not lend itself to such an approach.

Photo 1: Urban greening in Lyon linked into its sustainable transport policy; pleasant streets encourage people to walk and cycle wherever you are in the world.

Individual initiatives

In the absence of any lead from government in the form of a strategic national plan on the management of our tree population as a whole, both rural and urban, it will be down to individuals to articulate a vision and demonstrate by example how to make a difference. This is no easy task; it is so daunting that it almost seems naïve to suggest that such an approach could work. Indeed, it would seem impossible if it was not for the fact that it is already happening, and these are not isolated occurrences. Ordinary people are finding ways to do their small bit and those individual efforts are accumulating towards a big result. Each story is different, but binding them together is that they are just normal individuals who saw a way to make a difference, and then they did it. Whether through passion, skill, connections, hard work, ability, knowledge, determination or just plain luck, those individual successes offer inspiration certainly, but also clues to how the rest of us can contribute.

Just to pull out a few, at the recent AA Conference in London we heard how Keith Foster's (the Senior Programme Officer for Brisbane City Council) passion for trees is driving research into using Trichoderma as a means of combatting serious fungal pathogens, planting 16,000 trees a year across the city, installing street water harvesting for trees and funding research into wind loading. From France, Frédéric Ségur has successfully convinced Lyon's planners that trees should be an integral part of their sustainability planning, overseeing a massive infrastructure initiative with trees at its heart. From the TDAG case studies, Bjorn Embrem has pioneered tree-planting techniques in Stockholm that are now being replicated around the world. Closer to home, Rupert Bently-Walls (Tree Officer) has persistently lobbied for community support for creative tree planting to encourage cyclist and pedestrian engagement in Hackney. In Bristol, Russell Horsey (Tree Officer) worked tirelessly to foster community engagement with trees that has resulted in an impressive city greening programme. There are many others, all ordinary individuals finding ways of doing extraordinary things that made a difference.

Photo 2: The right tree for the right place; this fastigiate oak will provide substantial height without the spread and provide sustainable benefits into the long term.

Support from organisations and institutions

Hand in hand with these endeavours, organisations can assist by creating a favourable environment where more individual efforts can flourish. Case studies are obviously very important; we need a central repository accessible to all where anyone can record examples and experiences of practical achievements that may assist others in

doing the same. We all know that there is a net benefit over cost from planting trees, but we do not yet have a model to articulate this. The academics need to develop a cost/benefit model that is simple to use and understand to help practitioners make the point that the positives significantly outweigh the negatives. Anxiety and misunderstanding of the impact of tree roots on services is a barrier to tree planting; we need the academics to liaise with the service providers to nail down a protocol that properly balances the risk of harm with the need for sustainable planting. Most obviously, the time has come for Trees in Towns III; if ever there was a need for government to assist in the design of sustainable cities, it is now, and we do not have that support.

In closing, no matter how bleak the prospects seem and how difficult the task is, individuals should not give up because it does not have to remain the way it has been. Each of us can step up and make a difference if we choose to do so, and these documents provide the support to start making an impact for the better. All improvements, no matter how small, have the potential to accumulate into a much bigger result. There has never been a better time for small people to make a big difference.