

Subject: tree advice
Date: 21 February 2013 16:44:46

Dear Ms Tollitt,

I am forwarding an email I received from an professional colleague who has been very involved in water management throughout his career. Check out SWA Group on <http://www.swagroup.com/projects/> He was responsible for reworking the drainage and water flooding areas in Houston. <http://www.swagroup.com/project/brays-bayou.html>

Amanda

Sent: 20 February 2013 13:14
Subject: RE: help needed from amanda

Amanda,

How delightful to hear from you and to hear that you've been sucked into the cauldron of the NGO world!

Just a few brief thoughts about creating some kind of coherent basement policy:

1. I agree with any policy being performance driven, with some limits.
2. It is correct that many (but not all) trees can survive in 24" of soil, most particularly smaller trees.
3. An important criteria is what we call "soil mass": there needs to be a minimum total volume of soil for trees to prosper. (otherwise you can end up with little 24" deep 'buckets' or tree 'wells' which will result in very short lived trees). Soil mass should be at least 1.5 times the area of the natural mature dripline of the species selected.
4. A basement development policy might favor soil interconnectivity between adjacent parcels, so that you don't end up with lots of totally isolated pockets.
5. Some consideration should be given to the 'community' of trees in a block or neighborhood. This is sometimes referred to as the ecological 'guild', wherein multiple species grow in a community of trees, smaller plants, and soil bacteria and beneficial fungi to create a living system that benefits each of the members of the living community. So you might think about what that would be for the urban London landscape.
6. The issue of stormwater management is huge, and the soil mass can play an important role in moderating the peak flows after a rainfall event. The rainwater can soak into the

soil and be released over a period of time. Maybe the basement policy should encourage or require the implementation of green roofs on the above ground structure to further mitigate the increase in rainfall peak flows that inevitably occur with redevelopment and improvements in infrastructure.

7. Background reading ideas:

- a. James Urban has written a number of authoritative books about city trees and soils. Should be available in libraries, Amazon or just Google.
- b. You are probably familiar with the term Low Impact Development (LID); you can Google it and find gobs of information about options to mitigate the effects of development on stormwater flows. A good starting point in the US is the Low Impact Development Center: <http://www.lowimpactdevelopment.org/>
- c. You can Google “soil food web” for descriptions of the soil/plant/microbe community that I referred to above or click on http://en.wikipedia.org/wiki/Soil_food_web for a broad overview.

I hope this is helpful!

Please give my regards to Martin! And Evelyn says “Hello!”

Kevin