

Surface materials around trees in hard landscapes

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Transport for London | London Tree Officers Association
@LTOA33

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Background

- Lots of options.
- Lack of justification.
- Not much unbiased guidance.



Conflict

- Roots v pavement.
- Alleged reason for removal.



Surface materials working party

- Howard Booth (Transport for London);
- Ernst Erasmus (LB Southwark);
- Simon Ffoulkes (LB Bromley);
- Michael Gargan (Street Tree Care);
- Pat Langley (LB Wandsworth);
- John Parker (Transport for London);
- Michael Sankus (Medway Council);
- Chris Suthers (Street Tree Care).



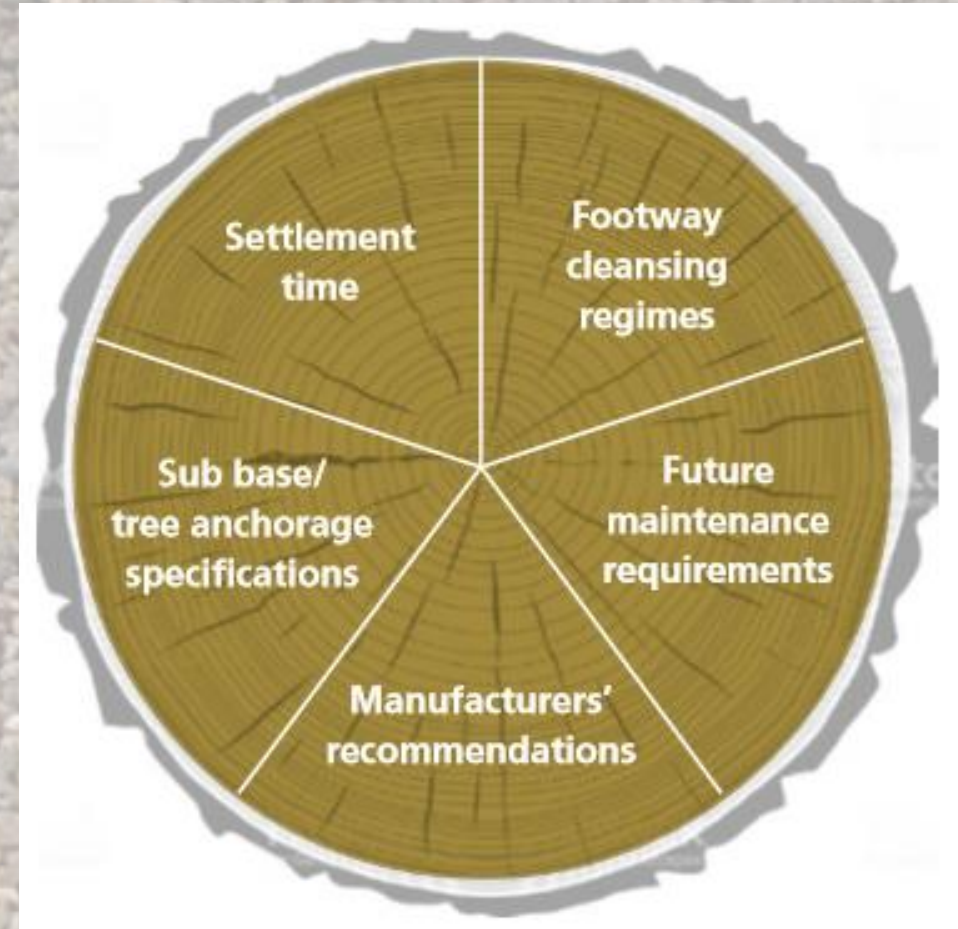
The document

- Aid to decision making.
- For all involved in specifications.
- Guidance, not solution.



Principles for selection, installation and maintenance

- Lots to consider.
- Different requirements for established and new trees.



Permeability v robustness



Materials covered

- Eight materials covered.
- Combinations.
- Other options available.



Gravel – resin-bound



Gravel – self-binding



Grilles



Mulch – inorganic



Mulch – organic



Rubber crumb



Soil



Asphalt

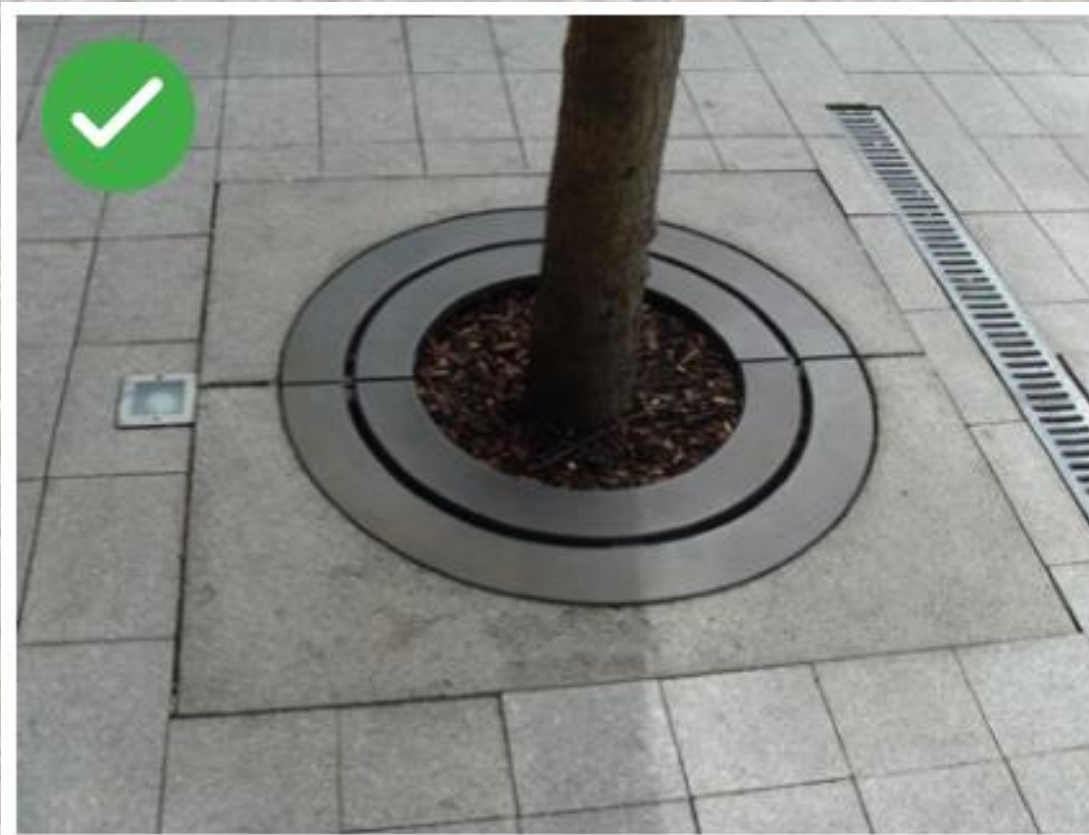
Gravel: resin-bound



Gravel: self-binding



Grilles



Mulch: inorganic



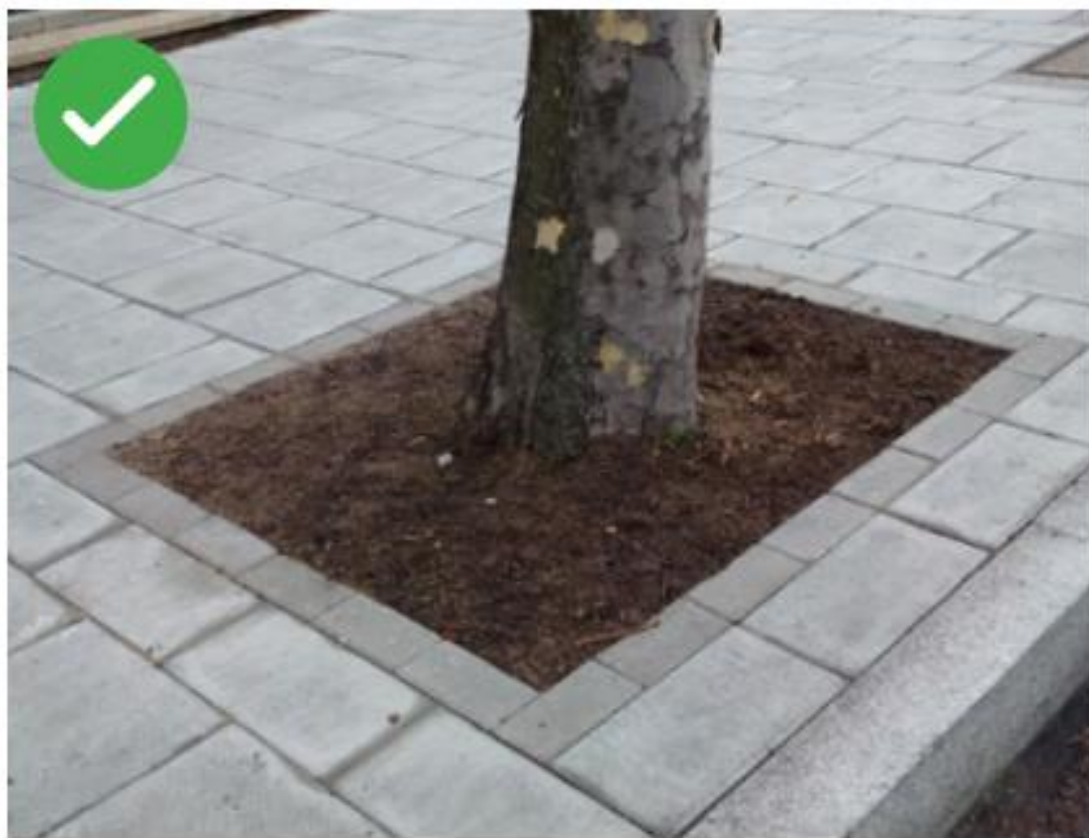
Mulch: organic



Rubber crumb



Topsoil



Asphalt



Suitability rating guides

- Tree criteria.
- Site criteria.
- Installation/maintenance criteria.
- Anecdotal evidence and experience.

TREE CRITERIA

Permeability for air and water to reach the rooting medium if correctly maintained	MEDIUM
Flexibility of material	HIGH
Risk of damaging young tree health if incorrectly installed	HIGH
Risk of damaging established tree health if incorrectly installed	LOW
Risk of damaging young/established tree health if unmaintained	LOW
Potential to improve soil fertility	LOW
Suitability for installation up to the base of a young tree	MEDIUM

SITE CRITERIA

Tolerance to regular pedestrian traffic	MEDIUM
Resistance to street sweeping machines/animal excavation	LOW
Effectiveness at suppressing weed growth	MEDIUM
Availability of different colours/styles	LOW

INSTALLATION AND MAINTENANCE CRITERIA

Suitability for installation immediately after tree planting	MEDIUM
Likelihood of requiring a sub base prior to installation	LOW
Level of experience/competence required to correctly install and maintain	MEDIUM
Expected lifespan of material	MEDIUM
Whole life cost of material, including purchase, installation, maintenance and disposal	MEDIUM

High/Medium/Low ratings

SITE CRITERIA

Tolerance to regular pedestrian traffic	HIGH
Resistance to street sweeping machines/animal excavation	HIGH
Effectiveness at suppressing weed growth	LOW
Availability of different colours/styles	HIGH

Selection criteria matrix

		Gravel – Resin-bound	Gravel – Self-binding	Grilles	Mulch – Inorganic	Mulch – Organic	Rubber crumb	Soil	Asphalt
TREE CRITERIA	Permeability for air and water to reach the rooting medium if correctly maintained	HIGH	MEDIUM	HIGH	HIGH	HIGH	HIGH	HIGH	LOW
	Flexibility of material	MEDIUM	HIGH	LOW	HIGH	HIGH	HIGH	HIGH	MEDIUM
	Risk of damaging young tree health if incorrectly installed	HIGH	HIGH	MEDIUM	LOW	LOW	MEDIUM	LOW	HIGH
	Risk of damaging established tree health if incorrectly installed	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MEDIUM
	Risk of damaging young/established tree health if unmaintained	MEDIUM	LOW	HIGH	LOW	LOW	MEDIUM	LOW	MEDIUM
	Potential to improve soil fertility	LOW	LOW	LOW	LOW	HIGH	LOW	MEDIUM	LOW
	Suitability for installation up to the base of a young tree	LOW	MEDIUM	LOW	HIGH	HIGH	MEDIUM	HIGH	LOW
SITE CRITERIA	Tolerance to regular pedestrian traffic	HIGH	MEDIUM	HIGH	LOW	LOW	HIGH	LOW	HIGH
	Resistance to street sweeping machines/animal excavation	HIGH	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH
	Effectiveness at suppressing weed growth	MEDIUM	MEDIUM	LOW	HIGH	MEDIUM	MEDIUM	LOW	HIGH
	Availability of different colours/styles	HIGH	LOW	HIGH	HIGH	LOW	HIGH	LOW	MEDIUM
INSTALLATION AND MAINTENANCE CRITERIA	Suitability for installation immediately after tree planting	MEDIUM	MEDIUM	HIGH	HIGH	HIGH	LOW	HIGH	LOW
	Likelihood of requiring a sub base prior to installation	HIGH	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH
	Level of experience/competence required to correctly install and maintain	HIGH	MEDIUM	HIGH	LOW	LOW	HIGH	LOW	MEDIUM
	Expected lifespan of material	MEDIUM	MEDIUM	HIGH	LOW	LOW	MEDIUM	LOW	HIGH
	Whole life cost of material, including purchase, installation, maintenance and disposal	HIGH	MEDIUM	MEDIUM	LOW	LOW	HIGH	LOW	LOW

Conclusions

- No one material is suitable in every situation.
- Ask a tree officer!
- Right tree, right place..

..and right material.



Thank you!

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The image shows the top portion of the London Tree Officers Association (LTOA) website. The header is green and features the LTOA logo on the left, which includes silhouettes of trees and a city skyline. To the right of the logo is the text "London Tree Officers Association". Further right is a search bar with the placeholder text "Search...". In the top right corner of the header is a "Login" button with a right-pointing arrow icon.

Below the header is a dark grey navigation bar with the following menu items: "Home" (highlighted in green), "About" (with a dropdown arrow), "Membership" (with a dropdown arrow), "Resources" (circled in red), "News", "Contacts" (with a dropdown arrow), "Sponsors" (with a dropdown arrow), and "Jobs". A Twitter icon is located on the far right of the navigation bar.

The main content area features a large background image of a tree with green leaves in the foreground and a clock tower (Big Ben) in the background. A dark grey text box is overlaid on the left side of the image, containing the following text:

Become a Sponsor
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In the bottom right corner of the main content area, there is a small green circle containing the number "2".