Soil Volumes

- Due to the poor quality and quantity of soil in typical city streets, The City requires additional soil volumes be installed with all street trees in paved areas, with structural cells or structural soils below paving.
- Location, extent, depth and alignment of structural cells to approved by the City's representative prior to commencement of works.
- Consultants and contractors must advise the City of designed and installed soil volumes for each tree, indicating species and install size, for approval by the City's Representative.
- Target soil volumes are: (Refer to Street Tree List for size classification for each species)
  - 10m3 for small tree species (3-8m height)
  - 20m3 for medium tree species (8-15m height)
  - 30m3 for large tree species (15m+ height)
- These target soil volumes shall be installed wherever physically possible
- If not physically possible due to site constraints, the consultant or contractor shall demonstrate they have maximised the potential soil volume for each tree. Drawings, service investigations and site photos must be provided.
- Structural cells should be prioritised over structural soils due to better spatial efficiency.
- Structural soils are typically 1/3 soil, 2/3 ballast. Therefore the soil volume provided in the same space is less and must be calculated accordingly.
- Structural cells are typically 10% plastic/structure and 90% void/soil. Soil volume calculations must take this into account.
- Structural cells and soils can and should be installed around existing utilities. Future-proofing conduits should be installed where appropriate to avoid the need to remove the cells in future infrastructure upgrades by utility providers.
- Additional soil volumes can be provided by a hybrid solution of structural cells and soils. This is encouraged where it helps to maximise soil volumes in constrained locations.
- Connected pits or trenches of structural cells or soils should be installed where possible.
- Several hold points requiring on-site inspection and approval by City Representative are listed below and must be observed.
- Structural cells must be installed by an installer certified by the supplier. Certification is available via a short, free online training course. All supplier processes are to be followed and proof of warranty provided to the City.
- Location, extent, depth and alignment of installed structural cells and soils to be provided to the City in geolocated CAD format.
- Photographic evidence of full excavation extent and estimated soil volume to be submitted to the City.