



- Hard Landscape**
- (PT3a) Paving Type 1a: Entrance Plaza
 - Material: Permeable Clay Brick
 - Product: Argenta Terrazze
 - Size: L217 x W52 x D10mm
 - Pattern: Offset Stretcher
 - Supplier: Yande Moorlet or equal and approved
 - (PT3) Paving Type 2: Pedestrian routes
 - Material: Granite
 - Product: Bianco Cristal
 - Finish: Flamed
 - Size: L190 x W150 x D10mm
 - Pattern: Stretcher Bond
 - Supplier: Hardscape or equal and approved
 - (PT3b) Paving Type 3a: Shared Surface at Courtyards
 - Material: Granite
 - Product: Hydro Lineo 0
 - Finish: Standard Grids
 - Size: L300 x W100 x D10mm
 - Pattern: Single Herringbone
 - Supplier: Hardscape or equal and approved
 - (PT3b) Paving Type 3b: Shared Surface at Courtyards
 - Material: Grass concrete paver
 - Product: Hydro Lineo 40
 - Finish: Standard Grids
 - Size: L300 x W100 x D10mm
 - Pattern: Stretcher Bond
 - Supplier: Hardscape or equal and approved
 - (PT4) Paving Type 4: Seating & cycle nooks
 - Material: Granite
 - Product: Bianco Cristal
 - Finish: Flamed
 - Size: L190 x W150 x D10mm
 - Pattern: Stretcher Bond
 - Supplier: Hardscape or equal and approved
 - (PT5) Paving Type 10: Asphalt
 - Existing: To match existing

- Soft Landscape Trees (See 22050-SP-602)**
- TREE PLANTING GENERALLY**
- All trees to be selected at source nursery by HarrisonStevens
 - Accurately set out and obtain approval from HarrisonStevens for tree locations and associated drainage prior to commencement. Excavate tree pit to shown dimensions as indicated on the GA drawings, min 2x2x1m. Thoroughly break up sides and base of excavation to remove compaction / smearing caused by the excavation operations, and ensure free draining soil structure is achieved.
 - Excavate drain track offset to one side and set base of track to min. 1 in 150 falls. 110mm Ø pvc flexible perforated pipe with 150mm surround of 40/20mm clean drainage gravel. Full extent of drainage layer and associated tracks to be wrapped in filter membrane with minimum 300mm overlap. Trenches connected to existing combined sewer via air trap as may be required, or 2 cubic meters soak away if space and ground conditions allow.
 - If required, refer to GA drawings for locations.
 - Install tree root barrier as required to protect adjacent hardworks surfaces and/or services.
 - Clean and inset sand base to provide free draining, non-compactable base on which to sit the root ball of the tree. Depth of sand to suit height of root ball (to ensure top of root ball is at ground level). Not to be less than 200mm.
 - Backfill pit with clean, weed free, free draining approved imported topsoil min 900mm consolidated depth placed in 300mm layers and lightly consolidated. Backfill pre-mixed to incorporate 45kg slow release balanced granular fertiliser, 200g peat free compost. Ensuring at all times that free draining backfill connects full depth with sand base and drainage layer. Topsoil and all additives to be handled in suitable weather conditions and to be protected once placed. Trenches to be surcharged to shed water.
 - Site underground guys secured with proprietary soil anchors. Anchors evenly spaced around rootball and prevented from biting into the rootball by pressure spreading matting / frame. Anchors to be driven vertically to specified depth or solid, unmade ground by means of mechanical driver or ram if necessary.
 - Specification of all component elements of the guying system to manufacturers recommendation and to suit varying wind loading from tree size/form.
 - Install a proprietary system consisting perforated pvc watering & aeration system set 1/3 of the depth of the rootball. Capped pipe to be located accurately, consistently across multiple installations, and finished flush with ground level.
- TREE PLANTING IN HARD LANDSCAPE**
- In grass 1500mm Ø, 75mm depth of ornamental grade bark mulch 20-30mm
- TREE PLANTING IN SOFT LANDSCAPE**
- Where trees in hard paving are adjacent, excavate fully connected trench the width specified, but the full length to encompass all adjacent trees in one excavation.
 - Install: On: proprietary systems consisting perforated pvc watering & aeration system Primary set 1/3 of the depth of the rootball with square aluminium grill to pipe located within the tree grille paving. Secondary wide area irrigation ring to be set 1250mm from the centre of the rootball with 2 nr square aluminium caps to be accurately set opposite sides of the tree, within surrounding hard landscape.
 - Directly on top of the filter membrane, to drainage layer in general notes above, construct an inter-locking grid of proprietary load-bearing 30x20x250mm cell modules to minimum volume of 12m³. The extent of the full tree pit excavation is to be filled to a depth of 540mm to receive proprietary root deflector.
 - 1200mm clear opening HDPE ribbed tree root deflector located and secured to the load-bearing cell base. Set square to the line of proposed paving to accept hunched tree grille supports, and hold back surrounding sub-base construction.

- Shrubs (See 22050-SP-602)**
- Accurately set out and obtain approval for bed locations prior to commencement. Excavate full shrub beds to shown dimensions as indicated on the GA drawings, and 450mm deep.
 - Thoroughly break up sides and base of excavation to remove compaction / smearing caused by the excavation operations, and ensure free draining soil structure is achieved. Stone and debris pick all excavated material and set aside for re-use, removing any matter exceeding 25mm Ø on any axis.
 - Backfill pit with clean, weed free, free draining approved imported topsoil, 450mm consolidated depth placed in 2 layers and lightly consolidated. Plant plants incorporating 35g/m² slow release balanced granular fertiliser, 500g/m² peat free compost.
 - Rake off to finished levels and shape to minimum 1 in 30 falls.
 - 75mm depth of ornamental grade bark mulch 20-30mm finished by crowning to shed water.
- Existing Trees**
- (TT1) Tree Type 1: Street Tree
 - Sorbus aucuparia
 - SM 20-25cm, AirPot Containerised
 - (TT2a & b) Tree Type 2: Courtyard - North Stair Tree
 - Prunus sylvestris
 - Courtyard (a) - EHS 14-16cm, AirPot Containerised
 - North Stair (b) - EHS 14-16cm, AirPot Containerised
 - (TT3a & b) Tree Type 3: Courtyard - North Stair Tree
 - Cornus betula
 - Courtyard (a) - SM 20-25cm, AirPot Containerised
 - North Stair (b) - EHS 14-16cm, AirPot Containerised
 - (TT4) Tree Type 4: Courtyard
 - Fagus sylvatica
 - SM 20-25cm, AirPot Containerised
 - (TT5) Tree Type 5: South Stair Tree
 - Betula pendula
 - EHS 14-16cm, AirPot Containerised
 - (TT6) Tree Type 6: South Stair Tree
 - Crataegus monogyna
 - EHS 14-16cm, AirPot Containerised
 - (TT7) Tree Type 7: South Stair Tree
 - Prunus sylvestris
 - EHS 14-16cm, AirPot Containerised
- Extent of Tree Pit**
- in Shared Surface or Hard Landscape
 - min. 15 m² per tree
 - Load bearing Cells: directly on top of the filter membrane construct an inter-locking grid of proprietary load bearing 30x20x250mm cell modules. The extent of the full tree pit excavation is to be filled to a depth of 540mm to receive proprietary root deflector.
 - Supplied by Green Blue Urban (greenblueurban.com)

- Grass**
- Surfaces filled, shaped and regulated using imported soil to ensure regular grades and minimum 1:30 falls. Trimmed surfaces cross-rippled 150mm deep at 150mm centres removing stones and debris exceeding 50mm.
 - Supply / spread 150mm depth imported approved topsoil, adjust pH to 6.0 spread and cultivated with horticultural sand. Spread 50mm depth clean horticultural sand and cultivate 100mm depth. Rake off to finished levels to tie with adjacent edges, 25mm above, and stone debris pick all excavated material and set aside for re-use, removing any matter exceeding 25mm Ø on any axis.
 - Turf to be grown in accordance with the TGA guidelines for drought tolerant, low maintenance turf.
 - Submit proposal for pre-approval, prior to order.
 - Supply to be on 1x2 meter rolls (Dimensions 60x2100 or thereby) with no more supplied to site than can be laid in one day. Rolls must weigh less than 20 kg. The height of the sward when harvested should not exceed 35 mm.
 - Turves to be laid 30 mm proud of adjacent surface finishes. Turfed area rolled evenly over the last 300mm to finish 15mm above adjacent finished levels.
 - The thickness of uncompressed thatch should not exceed 10 mm.
 - To demonstrate strength, it should be possible to lift 1 sq. metre turves clear of the ground by their shortest side 19 out of 20 times.
 - Autumn and winter: Within 24 hours of delivery.
 - Spring and summer: Within 18 hours of delivery.
 - Laid with staggered joints, butted up. Whole turfs, trimmed to a true line.
 - Lightly and evenly firm as laying proceeds to ensure full contact with substrate.
 - Brush well in to completely fill all joints. 35% Fertiliser topsoil, 35% Compost as clause 428, 30% Sand
- Wildflower Seeding (See 22050-SP-602)**
- (WT1) Wildflower Mix Type 1

- Shrubs (See 22050-SP-602)**
- (ST1) Shrub Mix Type 1:
 - Herbaceous and ornamental shrub planting
 - South-facing landscape
 - (ST2) Shrub Mix Type 2:
 - Herbaceous and ornamental shrub planting
 - North-facing landscape
 - (ST3) Shrub Mix Type 3:
 - Rangarden planting
 - (CT1) Climbing Plants Type 1:
 - To screen wall in front of retaining wall on Level 1

- NOTES:**
- This drawing is to be read in conjunction with all other drawings and specifications.
 - Do not scale off this drawing. Written dimensions to be taken only.
 - Any discrepancies found between this drawing and other drawings, specifications or other associated documents must be referred to the Landscape Architect prior to work commencing.
 - This drawing must not be copied in whole or in part without prior written consent of HarrisonStevens Limited
 - Survey information is based upon the Topographical Survey and OS data where referenced.

3.00 Issue for Planning	mb	20.02.24
Issue/Revision	By	Date

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Client: Scottish Opera
Project: Scottish Opera New Rotterdam Wharf
Drawing Title: Landscape Materials Drawing Sheet 1

Date: 20.02.24 Status: STAGE 3
Drawn: MB Checked: MH Scale: 1:250@A1

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