**Inspection and Test Plan – Landscape Works**

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| **Project no.** | | **CC0374** | **Project name** | Pakenham Road Upgrade | | **Date** |  | | **Approved by** | Damian Hagebols |
| **ITP no.** | 1630-P200-SYM-QAC-ITP-0059 | | **Revision date** | **1/02/2024** | **Plant and equipment used** | | |  | | |
| **Lot no.** |  | | **Location (chainages, detailed description or marked up plan)** | | | | |  | | |

Attach Dockets, Certificates and QA Documents to ITP

|  |  |  |  |  | **Verification of acceptance by** | | | | | **Remarks/record (eg. Test frequency reports, certificates, checklist etc)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | **Symal** | | | **Superintendent** | |
| **Item no.** | **Activity** | **Ref docs** | **Acceptance criteria** | **Freq** | **Key** | **Resp** | **Initial/ date** | **Key** | **Sign/ date** |
| **1.0 Pre-start activities** | | | | | | | | | | |
| **1.1** | Check Survey Set-out and TCM’s | 720.06 | Record existing TCM’s on TCM offset sheet.  Survey set out including frame, benchmark, and recovery points in place.  The Contractor shall set out the location and shape of planting areas in accordance with the Landscape Drawings.  **Has all of the above been completed?**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Prior to start of works | **H** | SE/PE |  |  |  |  |
| **1.2** | Submission and Records | 720.03  720.044  720.045 | The following items shall be provided before commencement of the relevant landscape work (if requested):  **Inspections:**   * plant stock for all plant species   **Samples**   * mulch * imported topsoil   **Records**   * evidence of origin of indigenous provenance plant material * analysis certificates for grass seed * details of suppliers * soil tests on topsoil * copies of fertiliser labels   **Have any/all of the above material records been acquired/completed and signed off?**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Prior to start of works | R | SE/PE |  | **R** |  |  |
| **2.0 Site Preparation** | | | | | | | | | | |
| **2.1** | Setting Out of Landscape Softworks | 720.06 | Set out the location and shape of planting areas in accordance with IFC Landscape Drawings.  Plant density requirements and planting offsets comply as shown in the plant schedules.  Individual plants shall be in accordance with VicRoads Road Design Guidelines, including clear zone and sight distance requirements.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Prior to start of works  Each lot | S | SE/PE |  |  |  |  |
| **3.2** | Site Preparation | 720.07 | Soil preparation shall be as described in Table 720.071 (Refer to page 8 Fig #1). | Prior to start of works  Each lot | S | SE/PE |  |  |  |  |
| **2.3** | Soil Additives including Gypsum, lime.  (If applicable) | 720.07(a)  AS 4419 5.11 | Soil additives, including any material used to modify the chemical properties of the soil, prior the physical ripping and cultivation and in accordance with results and recommendations from site topsoil analysis tests.  Apply sufficient gypsum to ensure soils are not dispersive, incorporating gypsum during ripping to a minimum depth of 300 mm.  Adjust soil pH if soil including subsoil, to a depth of 300 mm is not in the range of 5-8.  Where salinity requirements for existing (unmoved) site subsoil or topsoil do not meet the acceptable range in AS 4419 5.6, shall notify the Superintendent.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | I | SE/PE |  |  |  | Site Topsoil Analysis Tests (If applicable)  **Yes □ No □** |
| **2.4** | Ripping | 720.07 (b)  720.071 | Each ripped planting area, individual tree planting and grassing area prior to mulching, planting, or grassing are is to be made available.  Rock and rubbish brought to the surface shall be removed and disposed.  Ripping shall be postponed when the soil is at or wetter than field capacity.  **Do not proceed until the Superintendent acknowledges requirements for ripping have been met. In areas where ripping is not practicable, submit alternative methods to achieve an equivalent result to the Superintendent for review.**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | H  I | SE/PE |  | **H** |  |  |
| **2.5** | Topsoil Application | 720.07 (c) | Topsoil shall be spread on planting areas and grassed areas. Topsoil is not compacted.  Weedy site topsoil shall not be spread to other locations on the site. Weedy topsoil shall be handled in accordance with weed management procedures.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **2.6** | Cultivation | 720.07 (d) | Cultivation shall be undertaken to break soil down to the tilth with 80% of the volume composed of clods less than 50 mm in diameter.  Rotary hoes and other powered cultivators that might create a hard pan beneath the depth of cultivation shall not be used for cultivations.  Cultivations shall not occur within the extent of existing vegetation areas marked for protection or the dripline of existing woody plants. Hand cultivation shall be used within root zones of trees to be retained.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **2.7** | Topsoil Finished Surface Levels | 720.07 (e) | The finished level of grassed areas shall be:   * not higher than 125 mm below weep holes or damp-proof courses in adjacent walls * level with the bottom of fence plinths * level with adjacent pavements, kerbs, pits, and other structures.   The finished level of garden bed mulch and/or topsoil shall be tapered so that the finished mulch and/or topsoil levels meet flush with the adjacent surfaces.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | H  I | SE/PE |  |  |  |  |
| **2.8** | Topsoil Finished Surface Levels | 720.07 (e) | After cultivation and trimming, topsoil for stability on slopes may be lightly compressed. Vibrating plate is not used. Dry bulk density does not exceed the following:   |  |  | | --- | --- | | **Soil Texture**  **(AS 4419)** | **Max. Dry Bulk Density of Topsoils** | | Clay Soils | 1.3g/cm3 (1.4g/cm3 on slopes steeper than 3:1) | | Loams | 1.5 g/cm3 | | Sandy Soils | 1.7g/cm3 | | Each Lot | S | SE/PE |  |  |  |  |
| **2.9** | Acceptance of Topsoil Placement | 720.07 (e) | **Each ripped, topsoiled and cultivated planting area, individual tree planting and grassing area shall be made available for review by the Superintended prior to mulching, planting or grassing.**  **In areas where topsoiling or cultivation is not practicable, the Contractor shall submit alternative methods to achieve an equivalent result to the Superintendent for review.**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | H  I | SE/PE |  | **H** |  |  |
| **2.10** | Removal of Unwanted Matter | 720.07 (f)  Table 720.073 | All unwanted mater shall be removed from landscape areas.  **Mown Grass Areas**:   * Any weeds, plastic, metal, glass, or material toxic to plants. * Surface stone, rock, building rubble greater than 25 mm in diameter * Clay lumps, sticks and exposed tree roots greater than 50 mm diameter   **Planting Areas:**   * Any weeds, plastic, metal, glass, or material toxic to plants * Any visible surface stone, rock building rubble greater than 75 mm in diameter * Clay lumps, sticks, and expose tree roots greater than 100 mm diameter.   **Has all of the above been completed?**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **2.11** | Existing Planting Areas | 720.07 (g) | Obtain all necessary permits and obtain approval from the Superintendent prior to the pruning or removal of local native vegetation.  **Has all of the above been completed?**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | H  I | SE/PE |  | **H** |  |  |
| **3.0 Mulching** | | | | | | | | | | |
| **3.1** | Wood Mulch (Shredded or Chipped) | 720.08 (a) | Install wood mulch to all Planting Areas unless otherwise specified. Mulch shall extend at least 1 m beyond plant centres at the outer edges of all Planting Areas.  Install 2 m diameter mulch rings around all Individual Tree Plantings.  Mulch Depth in all situations shall be a minimum 75 mm and maximum 125 mm. | Each lot | S | SE/PE |  |  |  |  |
| **3.2** | Weed Control Mat and Erosion Control Mat | 720.08 (b) | Install weed control mat for planting areas steeper than 2:1 and in planting areas prone to flooding or within 2 m of waterways, swales, wetlands, and sedimentation ponds or elsewhere as specified.  Weed control and erosion mat shall be laid and anchored in accordance with the manufacturer’s instruction.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **4.0 Planting** | | | | | | | | | | |
| **4.1** | Planting | 720.09 (a) | Carry out planting to ensure healthy, vigorous growth of plants.  Holes in heavy soils or on batters shall be prepared and to ensure adequate drainage.  Holes shall not be left smooth sided in basalt or plastic soils. Drill or auger hole diggers only be used where soil has been cultivated.  Planting holes shall be backfilled with friable topsoil free of debris, rocks, and clods greater than 50mm in diameter.  In the event the specified plant is unlikely to be suited to the as constructed growing conditions, the Superintendent shall be notified.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **4.2** | Fertilising | 720.09 (b) | Fertilise advance trees and where specified and/or identified by the soil analysis, other planting areas with fertiliser in accordance with the manufacturer’s recommendations.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **4.3** | Initial Watering | 720.09 (c) | Saturate each plant within 8 hours after planting. Cells and tubes shall be irrigated with a minimum 3L of water per plant.  Under no circumstance shall any plant be planted into a dry planting hole (soil moisture at wilting prior or drier). If the soil is dry, the planting hole shall be saturated with water prior to planting.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **5.0 Grassing** | | | | | | | | | | |
| **5.1** | Seeded Grassing | 720.10 (a) | All areas indicated to be grassed on the IFC drawings.  Seeding mix: 25% perennial rye, 35% annual rye, 15% cocksfoot, and 25% clover at 200kg/ha.  All areas disturbed will not be a planting area or managed as remnant indigenous vegetation.  Grass seed shall be sown at minimum 100 kg/HA (if drilled) or 200 kg/Ha (if broadcast), distributed evenly to achieve an even and dense grass cover.  Germination rate shall be minimum 80% cover within 8 weeks and 95% cover within 3 months of sowing.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **5.2** | Hydromulch & Seed Layer | IFC  Landscaping and Urban Design | Hydromulch Treatment:  - min. 100mm cross-ripped subgrade  - min. 75mm ameliorated site top soil, over  - hydro-mulch & seed layer, over  Note: for hydromulch planting within swales refer to detail 01 / DRG 3001  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | I | SE/PE |  |  |  |  |
| **5.3** | Fertilising | 720.10 (b) | Fertiliser shall be placed evenly over the prepared surface in accordance with the manufacturer’s recommendations. | Each lot | S | SE/PE |  |  |  |  |
| **5.4** | First Mow | 720.10 (c) | First cut when at least 50% of the grassing area to be cut has grown to a minimum 75 mm and maximum 150 mm height. Mow to a minimum height of 75 mm. Less than 1/3 the height of the grass shall be removed in the first cut.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE |  |  |  |  |
| **6.0 Completion** | | | | | | | | | | |
| **6.1** | As Built Survey | VR Clause 720 | Finished level of grassed areas shall be no higher than 125 mm below weep-holes or damp-proof courses in adjacent walls and level with bottoms of fence plinths, kerbs, pavements and pits. Mulch shall extend at least 1m beyond plant centres at the outer edges of all Planting Areas with 2m diameter mulch rings around all Individual Tree Plantings.  Mulch Depth in all situations shall be a minimum 75 mm and maximum 125 mm.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Each lot | S | SE/PE  SV |  |  |  | Survey conformance report**.**  **Yes □ No □** |
| **7.0 Work Lot Closeout** | | | | | | | | | | |
| **7.1** | Test Reports | VIC Roads Specifications | All Test reports received and Reviewed.  **Yes □ No □** | Each lot | R | SE/PE |  |  |  | NATA Endorsed Test Reports  **Yes □ No □** |
| **7.2** | Product Non-Conformance | CQMP | All Product Non-Conformance(s) recorded and closed (if applicable)  **Yes □ No □** | Each lot | R | SE/PE |  |  |  | NCR No:\_\_\_\_\_\_\_\_\_\_  NCR reports  **Yes □ No □** |
| **7.3** | Quality Representative to check the above criteria and records to confirm | CQMP  Lot Records | All above criteria met, and records identified attached.  **Yes □ No □** | Each lot | R | SE/PE |  |  |  | Completed Checklist (if applicable) and reports and other compliance records attached. |

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| **Works complete (signer SS)** | |  | | | **Date works complete** | |  | | | |
| **Lot conforms (signer PE)** |  | | **Date lot closed** |  | | **NCR/s no. raised** | |  | **Date NCR closed for this lot** |  |

**Responsibility (Resp.) Key**: **PM**-Project Manager, **PE**-Project Engineer, **SE**- Site Engineer, **CS**-Civil Superintendent, **SS**-Site Supervisor, **SV**-Surveyor, **CR**-Client Representative

**Inspection Key: W –** Witness, **H –** Hold Point, **S –** Surveillance, **R –** Review Point, **I –** Inspection Point.

**Fig 1.**

