**Inspection and Test Plan – Cut Floor/Topsoil Stripping**

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| **Project no.** | | CC-0374 | **Project name** | Pakenham Roads Upgrade | | **Date** |  | | **Approved by** |  |
| **ITP no.** | 1630-P200-SYM-QAC-ITP-0002 | | **Revision date** | 18/01/22 | **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** | **Commencement of Work** | | VR Clause 160.C1  General condition of Contract | | Works shall not commence on site before the following documents have been submitted:   1. Evidence of public liability and WorkSafe insurance conforming with the requirements of the General Conditions of Contract 2. Third party property damage insurance in accordance with Clause 160.G1 3. Health and Safety Management Plan 4. Construction Environmental Management Plan 5. Traffic Management Strategy and Traffic Management Plans for the initial works   **Has all of the above been completed and approved?**  **Yes □ No □ N/A □** | Once  (Pre-Start) | H | SE |  |  |  |  |
| **1.2** | **Safety**  Ensure that the following items have been actioned:  - SWMS if applicable  - Plant Pre-start Inspection  - Service locations identified  - Traffic Management Plans (if required)  - All staff inducted | | SMP | | SWMS/WMS submitted reviewed and accepted if required.    Plant inspections completed and entered.    TSA training completed. Pre-work briefings completed.    Service Diagrams available and services located.  **Has all of the above been completed and approved?**  **Yes □ No □ N/A □** | Once  (Pre-Start) | H | SE |  |  |  |  |
| **1.3** | Survey Set-out and TBM’s | | IFC Drawing | | Record existing and established TBMs.  Survey set out including frame, benchmark, and recovery points in place.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | Prior to start of Works | **H** | SE  SV |  |  |  |  |
| **2.0 Construction** | | | | | | | | | | | | |
| **2.1** | Topsoil Stripping | VR Clause 204.05 | | Topsoil is to be stripped to an appropriate depth removing surface topsoil in a way to leave the surface evenly graded and free draining.  Topsoil to be reused onsite is to be stockpiled in an agreed location. All stockpiles shall be maintained in a neat, well-shaped state capable of shedding water.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each Lot | R | SE |  |  |  |  |
| **2.2** | Site Excavation | VR Clause  204.06 | | Prior and during excavation work, the Superintendent will be notified to inspect all material encountered for material classification, subject to verification by laboratory testing.  The areas of rock subgrade shall be presented to the Superintendent for acceptance.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | H  I  S | SE |  | **H** |  | NATA Test Reports (as required):   * CBR and Swell * PI * Permeability   **Yes □ No □** |
| **2.2** | Groundwater /  Seepage (if applicable) | VR Clause  204.06 (h) | | **If groundwater or seepage is encountered, notify the Superintendent, and create a course of proposed action.**  **Submit any necessary approvals from relevant authorities for the treatment and disposal of this groundwater.**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | H  I  S | SE |  | **H** |  | Dewatering Permit No.:­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_  Written Approval from Authorities  **Yes □ No □** |
| **2.3** | Treatment of Unsuitable Materials (if applicable) | VR Clause  204.07 (d) | | **If unsuitable material is encountered, submit proposal for in-situ treatment or excavation and replacement with conforming material.**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | H | SE |  | **H** |  | Survey Report (Extent of Area)  **Yes □ No □** |
| **3.0 Treatment of Cut / Rock Subgrade** | | | | | | | | | | | | |
| **3.1** | Treatment of Rock Subgrade | VR Clause  204.06 (f) | | Where rock exists in a cut below subgrade level but **within the designed capping or selected material layer**:   * Excavate minimum 150 mm below subgrade level in all areas on which pavement is to be placed. * Remove loose material and soil from the rock floor. * Any resulting depressions lower than 150 mm below subgrade level shall be cleaned of loose material and backfilled with 20 mm Class 3, 3% cement treated crushed rock and compacted as specified.   **Present the above to Superintendent for inspection.**  **Contractor is to submit details of any necessary adjustments to the subsurface drainage design, including transverse subsurface drainage at all interfaces to the Superintendent for inspection and review.**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | H  W  S | SE |  | **H** |  | Evidence of VicRoads Registered Mix  **Yes □ No □**  NATA Test Report: Compaction and Moisture Content  **Yes □ No □** |
| **3.2** | Regulating Layer for Rock Subgrade | VR Clause  204.06 | | Following inspection of rock subgrade by Superintendent, place 150 mm regulating layer of Class 4, 20 mm Crushed to subgrade level in lieu of the specified capping or selected material.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | W  S | SE |  |  |  | NATA Test Report: Compaction and Moisture Content  **Yes □ No □** |
| **3.3** | Testing In-situ Material in Cuts | VR Clause  204.07  PS3020.05 (c) | | Undertake 1 **Lot test** initially to determine Assigned CBR and % swell for **in-situ material in cuts** **within 400 mm below capping layer.**  Where the assigned CBR and % swell conform to the requirements of Cl. 204.04, seek the Superintendents ’s approval for minimum frequency of testing.  Assigned CBR must be equal to or greater than 2.5% and must be no more than 10%.  Assigned percent swell must be less than 2.5%  Where Superintendent approves minimum testing frequency, proceed to conduct 1 **single** CBR and % swell test to confirm Assigned CBR and swell every 4 lots.  **Where unsuitable material is encountered on site, the contractor shall submit proposed treatment plan to the superintendent for evaluation.**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | W  S | SE |  | **H** |  | NATA Test Report: CBR and Swell  **Yes □ No □** |
| **3.4** | Treatment of Cut (if applicable) | VR Clause  204.06 (e)(ii)  204.10 (b)  204.12 | | The in-situ material shall be ripped to a minimum depth of 150 mm, loosened and broken down to a maximum particle size of 50 mm. Any rocks or boulders larger than 50 mm shall be removed and any resulting depression shall be backfilled with Type B material and such backfilling together with the loosened material shall be reworked and compacted as specified to the Cut Floor Level in preparation for test rolling.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | W  S | SE |  |  |  |  |
| **3.5** | Compaction and Moisture Requirements (material of nominal size < 40 mm) | VR Clause  204.13  (para 1)  204.13 (b)  204.15 | | Undertake 6 tests per lot (except for small lots).  **Ripped and re-compacted material below CFL:** minimum CDR99% (Scale A)  **Top 150 mm of areas where fill is to be constructed:** minimum CDR 97% (Scale A)  Material within 150 mm of subgrade shall be maintained such that its moisture content is not less than 70% of optimum moisture content prior to the placement of any pavement layer above.  The moisture ratio shall be determined using the material which passes the 37.5 mm sieve, where the material contains less than 20% oversize material. If the material contains more than 20% oversize material, the moisture ratio shall be determined using an alternative method in accordance with the appropriate test method or Code of Practice.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | W  S | SE |  |  |  | NATA Test Report: Compaction and Moisture Content  **Yes □ No □** |
| **3.6** | Compaction and Moisture Requirements (material of nominal size > 40 mm) | VR Clause  204.13  204.15 | | All fill material and material below the Cut Floor Level shall be compacted at minimum moisture ratio of 80%. Place and compact material in accordance with approved procedure.  Any unstable areas detected by test rolling shall be rectified. Where unstable areas exceed 20% of the area being test rolled, the whole of the area shall be ripped, re compacted as specified above, and re-presented for test rolling.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | W  S | SE |  |  |  |  |
| **3.7** | Surface Level Conformity – Fills and Prepared Surfaces | VR Clause  204.03 (a),(b),(c),(d),(e),(f),(g),(i),(j) & (K)204.15 | | Where capping and/or selected material is to be placed above the Cut Floor Level to subgrade level, the level at any point on the surface of the Cut Floor Level **immediately below capping and/or selected** **material shall not differ by more than 15 mm above or 30 mm below the specified level.**  Where capping and/or selected material is not required, the Cut Floor Level shall be prepared to the appropriate tolerance for the subgrade. **(See figure 1)**  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | I  S | SE |  |  |  | Survey Conformance Report  **Yes □ No □** |
| **3.8** | Test Rolling | VR Clause  204.12 | | Test Roll in accordance with Section 173.  **The Contractor shall provide for the Superintendent to be present during all test rolling.**  Surface shall withstand test rolling without visible deformation or springing.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | W  S | SE |  | **H** |  |  |
| **3.9** | Maintenance of Cut Floor Level | VR Clause  204.15 | | Visual inspection to confirm that surface is produce a smooth, hard, tightly bound surface, free from depressions capable of holding water.  Material within 150 mm of subgrade shall be maintained such that its moisture content is not less than 70% of optimum moisture content prior to the placement of any pavement layer.  **Has all of the above been completed?**  **Yes □ No □ N/A □** | | Each lot  &  Each possession | W  S | SE |  |  |  |  |
| **4.0 Work Lot Close Out** | | | | | | | | | | | | |
| **4.1** | Test Reports | VIC Roads Specifications | | All Test reports received and Reviewed.  **Yes □ No □ N/A □** | | Each lot | R | SE |  |  |  | NATA Endorsed Test Reports  **Yes □ No □** |
| **4.2** | Product Non-Conformance | CQMP | | All Product Non-Conformance(s) recorded and closed (if applicable)  **Yes □ No □ N/A □** | | Each lot | R | SE |  |  |  | NCR No\_\_\_\_\_\_\_\_\_\_  NCR reports  **Yes □ No □** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Works complete (signer SE)** | |  | | | **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.

**Figure 1.**

