**Inspection and test plan – Spray Seal**

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| **Project no.** | CC0375 | **Project name** | Hunter Power Project | | | | | | |
| **Symal ITP no.** | CC0375-ITP-028 | **Revision no.** | 1 | **Revision date** | | 22/03/2024 | **Plant and equipment used** | |  |
| **UGL ITP no.** | 3200-0663-HPP-QA-ITP-129 | | | | | | **SHL ITP no.** | HPP-UGL-QUA-GN-GEN-ITP-0069 | |
| **Symal Lot No.** |  | | | | | | | | |
| **Location (chainages, detailed description or marked up plan)** | | | | |  | | | | |

Attach Dockets, Certificates and QA Documents to ITP

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| Contact Details | | Summary of Requirements | | | Principle Codes / Standards | | Records | |
| **Customer: Hunter Power Project**  **Construction Manager: Mitchell Hogg**  **Project Engineer:**  **Quality Representative: Earl Andrade**  Subcontractors    Surveillance / Inspection Key  **HOLD POINT (H):** Nominated point beyond which work shall not proceed without verified acceptance by nominee.  **WITNESS POINT (W):** Points at which the nominee shall be notified and invited to witness an activity, but further work may proceed without the presence of the nominee.  **SURVEILLANCE (S): Continuing** evaluation of the status of methods, analysis of records and monitoring of activities on a random basis to ensure quality requirements will be met.  **VISUAL (V): 100**% Visual Inspection of work / item to ensure compliance with code / specification.  **DIMENSIONAL (D): Measurement** of critical dimensions to ensure work / item is within tolerance. | | **Process Qualifications**  **Traceability:**  Material:  Alloy Verification  Heat Treatment:  Pressure Testing  Consumable:  NDT:  Welder ID:  WPS:  Electrical:  Instruments  **Heat Treatment:**  **Dimensional Control:**  **Testing (NDT):**  **Acceptance Specification:**  **Pressure Testing:**  **Elect. / Instrumentation:**  Notes: | | | TfNSW R106 - Sprayed Bituminous Surfacing  TfNSW R107 - Polymer Modified Binder For Pavements  **Client Specifications**  HPP-AEC-CIV-GN-GEN-SPT-0161\_0 QUALITY (CONSTRUCTION)  **Engineering Procedures / WI** | | **(MDR Insert as marked 3 )**   * Inspect Release Certs. * Deviations/Concessions * Material Certificates * Conformance Certificate * Welding Records * Welder Qual. Register * NDT Reports * Report on Repairs * Heat Treatment Records * Dimensional Records * Non-Conformance Rpts * Pressure Test Records * Drawings & Data Sheets * Misc Verification Records * Electrical Test Sheets | |
| Prepared by: | Earl Andrade | | Date : 22/03/24 | Approved By: | | Date : 22/03/24 | |  |

|  | |  |  |  |  | **Verification of acceptance by** | | | | | | **Remarks / record (eg. test frequency, reports, certificates, checklist etc)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  |  |  | **Symal** | | **HPP Con** | | **HPP QA** | |
| **Item no.** | | **Activity** | **Ref docs** | **Acceptance criteria** | **Acceptance** | **Key** | **Sign date** | **Key** | **Sign date** | **Key** | **Sign date** |  |
| **1.0 Preliminaries** | | | | | | | | | | | | |
| **1.1** | | Documentation | Issued drawings / Site copy drawings | Check that you have the latest site and engineering drawings BEFORE starting each task/set of tasks. | Yes  No  N/A | S |  | S |  | S |  |  |
| **1.2** | | Lot Traceability | Spec. 0161 Quality [Cl 7.3] | Prepare a lot map for traceability of the work area | Yes  No  N/A | S |  | S |  | S |  | Lot map |
| **1.3** | | Material | TfNSW 3151, 3252,3253, 3258,  3259, ,3268, 3269 | Correct class & type been supplied and free of contaminations. | Yes  No  N/A | S |  | S |  | S |  | Material Test Report |
| **1.4** | | Underlying Lot Conformance | Underlying Lot ITP | Underlying services and/or assets have been installed prior to commencing works over and/or above.  Refer underlying lot ITP(s) | Yes  No  N/A | S |  | S |  | S |  |  |
| **1.5** | | Set out | Drawings | Setout to the location and levels on the drawings. This shall be presented for inspection by the superintendent. | Yes  No  N/A | S |  | S |  | S |  |  |
| **1.6** | | Nominated Application Rates | TfNSW R106.3  & R107.3, 5.4 | 1. Selection of Spray Seal Types and Binder Types -   TfNSW R106 Annexure R106/L & R107 Annexure R107/L specifies Seal and Binder Types   1. Submission of Nominated Application Rates for each Segment.   (Hold Points) | \_\_\_\_ litres/m2  ☐ Yes ☐ No ☐ N/A | H |  | H |  | H |  |  |
| **1.7** | | Bitumen Sprayer Certification | TfNSW 106 6.1& 6.2 & TfNSW R107.6.1 & 6.2 | Current Sprayer Certificate | ☐ Yes ☐ No ☐ N/A | R |  | R |  | R |  | Certificate  (within 12 Months of Test) |
| **2.0 Application of Spray Seal** | | | | | | | | | | | | |
| **2.1** | | Pavement Temperature & Weather Conditions | TfNSW R106 5.3 & TfNSW107.5.3 | Prior to Commencing and throughout Operations. Spraying shall be undertaken only if the pavement > 10oC for at least 1 hour and > 20oC for at least 1 hour for PMB | ­­­­ \_\_\_\_0C (air)  \_\_\_\_0C (pavement) | S |  | S |  | S |  | Monitor -Thermometer |
| **2.2** | | Preparation of Pavement Surface | TfNSW R106  & TfNSW R107 | Surface visual inspection by Superintendent as per job specific requirements prior to operations.  Ensure protection of existing services & fixtures Prior to Commencing Sprayed Bituminous Surfacing  Sweep surface with rotary broom 300mm beyond edge of seal | ☐ Yes ☐ No ☐ N/A | S |  | S |  | S |  |  |
| **2.3** | | Preparation of Binder - Incorporation of Cutter, Flux, Adhesion Agent | TfNSW R106 6.7 & TfNSW R107.6.7 | Prior to each spraying surface, check Bitumen to cutter and circulate for 700 L/min for 20 minutes. For PMB circulate at 700l/min for 15 minutes. | ☐ Yes ☐ No ☐ N/A | S |  | S |  | S |  |  |
| **2.4** | | Binder Temperatures (for Spraying) | TfNSW R106.6.6 |  | ☐ Yes ☐ No ☐ N/A | S |  | S |  | S |  | Monitor -Thermometer |
| **2.5** | | Binder application and aggregate | TfNSW R106 7.0 & TfNSW R107.7.0 | Period between application Seal over Prime/Primeseal  Apply - Seal > 48 hours after Prime  Seal > 12 months after Primerseal  Application Rate of Binder  Binder + / - 5% of Target Application Rate  Spread Rate of Aggregate  Target Spread Rate | ☐ Yes ☐ No ☐ N/A | S |  | S |  | S |  |  |
| **2.6** | | Rolling of Sprayed Sealing |  | Initial Rolling shall be carried out by 2 or more multi tyred rollers (mass min 1 tonne per wheel, tyre pressures 550kPa) until agg embedded, backrolling at 1 hr per 1,500m2 for > 500  V.L.D. and 1 hr per 1,000m2 for < 500 V.L.D. (for 1 multi tyred roller) | ☐ Yes ☐ No ☐ N/A | S |  | S |  | S |  |  |
| **2.7** | | Sweeping of Sprayed Seal (if required) | TfNSW T277 | All Loose Stone to be removed, as a minimum the final sweep shall be with a suction broom as long as the suction broom does not damage the fresh seal.  Measurement of loose aggregate for 10 & 14mm seals after sweeping operation.  Urban areas = 20 particles/m2: Medium - High areas = 30 particles/m2: Low traffic areas = 40 particles/m2 | ☐ Yes ☐ No ☐ N/A | S |  | S |  | S |  |  |
| **3.0 Conformance check** | | | | | | | | | | | | |
| **3.1** | | Acceptance and closure of non-conforming items | Spec. 0161 Quality [Cl 3.8] | NCRs to be opened for non-conforming items and closed prior to closing construction lot. **HOLD POINT** | ☐ Yes ☐ No ☐ N/A | **H** |  | **H** |  | **H** |  |  |
|  |  | **Comments**: | | | | | | | | | | |
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| **Acceptance of works:** | | | | |  | |
| Symal Infrastructure representative name |  |  | Symal Infrastructure representative signature |  | Date |  |
| HPP Construction representative name |  |  | HPP Construction representative signature |  | Date |  |
| HPP Quality representative name |  |  | HPP Quality representative signature |  | Date |  |

**Inspection Checklist Report**

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| **Project no.** | CC0375 | **Project name** | Hunter Power Project | | **Date** |  |
| **Symal ITP no.** | CC0375-ITP-28 | | | | | |
| **UGL ITP no.** | 3200-0663-HPP-QA-ITP-129 | | **SHL ITP no.** | | HPP-UGL-QUA-GN-GEN-ITP-0069 | |
| **Symal Lot no.** |  | | | | **Symal Sub Lot no.** |  |
| **Location (chainages, detailed description or marked up plan)** | | | |  | | |

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|  | | **Verify of acceptance by** | | | | | | **Remarks / records** |
|  | | **Symal** | | **HPP Con** | | **HPP QA** | |
| **ID No.** | **Activity to be verified** | **ITP Step No.** | **Items conforms?** | | | **NCR / Test Report No.** | | **Key** | | **Sign Date** | **Key** | **Sign Date** | **Key** | **Sign Date** |  |
| Yes | No | NA |
| **Preliminaries** | | | | | | | | | | | | | | | |
| 1. | Documentation | 1.1 |  |  |  |  | | S | |  | S |  | S |  |  |
| 2. | Lot Traceability | 1.2 |  |  |  |  | | S | |  | S |  | S |  | Lot map |
| 3. | Material | 1.3 |  |  |  |  | | S | |  | S |  | S |  | Material Test Report |
| 4. | Underlying Lot Conformance | 1.4 |  |  |  |  | | S | |  | S |  | S |  |  |
| 5. | Set out | 1.5 |  |  |  |  | | S | |  | S |  | S |  |  |
| 6. | Nominated Application Rates  (Hold Points) | 1.6 |  |  |  |  | | H | |  | H |  | H |  |  |
| 7. | Bitumen Sprayer Certification | 1.7 |  |  |  |  | | R | |  | R |  | R |  | Certificate  (within 12 Months of Test) |
| **Application of Spray Seal** | | | | | | | | | | | | | | | |
| 8. | Pavement Temperature & Weather Conditions | 2.1 |  |  |  |  | | S | |  | S |  | S |  | Thermometer |
| 9. | Preparation of Pavement Surface | 2.2 |  |  |  |  | | S | |  | S |  | S |  |  |
| 10. | Preparation of Binder - Incorporation of Cutter, Flux, Adhesion Agent | 2.3 |  |  |  |  | | S | |  | S |  | S |  |  |
| 11. | Binder Temperatures (for Spraying) | 2.4 |  |  |  |  | | S | |  | S |  | S |  | Thermometer |
| 12. | Binder application and aggregate | 2.5 |  |  |  |  | | S | |  | S |  | S |  |  |
| 13. | Rolling of Sprayed Sealing | 2.6 |  |  |  |  | | S | |  | S |  | S |  |  |
| 14. | Sweeping of Sprayed Seal (if required) | 2.7 |  |  |  |  | | S | |  | S |  | S |  |  |
| **Conformance Check** | | | | | | | | | | | | | | | |
| 15. | Acceptance and closure of non-conforming items  **HOLD POINT** | 3.2 |  |  |  |  | | **H** | |  | **H** |  | **H** |  |  |

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| I certify that this Lot conforms to the requirements of the design and specifications; that all associated NCRs have been closed out: and all survey, conformance testing and inspections have been undertaken in accordance with the specified requirements. | | | | |
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| **Symal Representative** |  | **Signature** |  | **Date** |
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| **HPP Construction Representative** |  | **Signature** |  | **Date** |
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|  |  |  |  |  |
| **HPP Quality Representative** |  | **Signature** |  | **Date** |
| **Comments:** | | | | |
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