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| **PROJECT:** |

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| **CLIENT NAME:** | **CONSTRUCTION PROGRESS:** |
| **CONTRACT NO:** | **SPECIFICATION:** |

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| **Item No:**  **Task / Activity Description:** | | **Inspection/Test Sequence** | | | | **Responsible Personnel** | **Inspection (I), Hold (H), Witness (W), Review (R)** | **Hold Point Release/Review**  **Comments** | |
| **Frequency** | **Acceptance Criteria** | **Inspection/Test Method** | **Conformance Record** | **EVO** | **Client** |
| 1. **General Preliminaries** | | | | | | | | | |
| **1.1** | Job Inspection/Scope of works review | Prior to each separable parts of the works | Site Hazards and job specific requirements |  | Project Scope/SWMS & Risk Assessment | Supervisor, Crew Foreman  Engineer |  |  |  |
| **1.2** | Equipment and vehicles pre-start checks | Daily | As appropriate for items of plant and equipment | Visual and documentation. Test and Tag. Service History | Equipment/Heavy Vehicle Maintenance checklist | Plant Operators |  |  |  |
| **1.3** | Toolbox meetings | Prior to commencement of works on site | Ensure all Site hazards are identified | Physical attendance | Attendance Record/Sign in Record | Client |  |  |  |

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| 1. **Concrete Spalling Remediation** | | | | | | | | | |
| **2.1** | Site Establishment [(Erection of scaffolding or EWP deployment) If required] | After site has been deemed safe and accessible | Access to repair is safe | Visual Inspection |  | ECM supervisor, workers | **(R) Review Point**  Confirmation of correct temporary solution is established |  |  |
| **2.2** | Hammer test intended repair area to identify any further hollow sections or delamination | After site is established to grant safe access to repairs | Sound concrete is achieved in the perimeter | Physical Application | TfNSW specification M774 - Concrete Bridge Repairs | ECM Supervisor, workers | **(W) Witness Point**  Confirmation all loose/hollow areas are marked, and sound concrete is reached |  |  |
| **2.2** | Square up and break away loose concrete perimeter | After Identification of concrete spalling / Cracks as per scope of works | Area of spalling to be squared with a concrete grinder and min depth achieved shall be 10 - 25mm based on product specification | Physical Application | TfNSW specification M774 - Concrete Bridge Repairs | ECM Supervisor, workers |  |  |  |
| **2.3** | Treat any corrosion to reinforcement bars (If Applicable)  (If rebars are identified, concrete must be broken further back approx. 20mm to allow new concrete to bond with reo) | After breaking away loose concrete and debris | Corrosion is cleaned with wire brush and treated with Nitoprime Zinchrich | Physical Application | TfNSW specification M774 - Concrete Bridge Repairs | ECM Supervisor  workers | **(H) HOLD POINT**  Confirmation of depth and width is within allowance of product specification, if not notify the principal contractor immediately |  |  |
| **2.4** | Install Formwork to repair area (If required) | After area is prepared as per specs |  | Physical Application | TfNSW specification M774 - Concrete Bridge Repairs | ECM Supervisor  Workers |  |  |  |
| **2.5** | Saturate Concrete with clean water required by supplier | After Formwork Installation | Saturate according to product supplier | Physical Application | TfNSW specification M774 - Concrete Bridge Repairs | ECM Supervisor  workers | **(W) Witness Point** |  |  |
| **2.6** | Saturate bonding coat (Primer)(If applicable) is to be brushed into damp substrate to receive repair mortar | After removal of excess water | Coat should be done according to product suppliers’ recommendation. Entire substrate should be adequately applied | Physical Application | TfNSW specification M774 - Concrete Bridge Repairs | ECM Supervisor  workers | **(W) Witness Point** |  |  |
| **2.7** | Mix and install repair shrinkage compensated mortar into prepared substrate | After bonding coat is applied | Installation should be done as per the product suppliers’ requirements. | Physical Application | TfNSW specification M774 - Concrete Bridge Repairs | ECM Supervisor  Workers | **(W) Witness Point** |  |  |
| **2.8** | Repair Mortar allowed to cure and treated with an appropriate concrete cure (If Applicable) | After repair mortar is placed | Apply according to AS 3799. Product specifications | Physical Application | TfNSW specification M774 - Concrete Bridge Repairs | ECM Supervisor  workers | **(W) Witness Point** |  |  |

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| 1. **Concrete Cracking Remediation** | | | | | | | | | |
| **3.1** | Mark out cracked to be routed and sealed. | Prior to starting any work | Identification of visual crack on concrete surface | Visual Inspection | TfNSW specification TS 00080:1.0- Repair of Concrete Works | ECM Supervisor, workers | **(W) Witness Point** |  |  |
| **3.2** | Chase crack with a V-Blade grinder to a depth of 15mm | After defect has been identified | Crack has been eliminated and solid concrete has been reached | Visual Inspection | TfNSW specification TS 00080:1.0- Repair of Concrete Works | ECM supervisor, workers |  |  |  |
| **3.3** | Assess the cause of the crack, crack dimensions, and whether the crack is active or inactive | After Crack has been chased with a V – Blade | Determine if the crack is only surface crack, shrinkage crack, or settlement crack | Visual Inspection | TfNSW specification TS 00080:1.0- Repair of Concrete Works. | Ward Civil  Engineers | **(H) Hold Point** |  |  |
| **Opt 1** | If the concrete adjacent to the crack has deteriorated, the concrete must be treated as a cementitious patch repair of concrete | After Crack has been chased with a V – Blade | Concrete spalling is present | Visual Inspection | TfNSW specification TS 00080:1.0- Repair of Concrete Works. Clause 7.4 | ECM Supervisor, workers |  |  |  |
| **Opt 2** | Routing and sealing: Enlarging the crack along its exposed face and filling with a suitable joint sealant. | After Crack has been chased with a V – Blade | Crack is only on the surface and no visible crack is present further past the groove | Visual and physical inspection | TfNSW specification TS 00080:1.0- Repair of Concrete Works. Clause 7.5 | ECM Supervisor, workers |  |  |  |
| **Opt 3:** | Gravity feed: Filling and sealing of horizontally positioned cracks using low viscosity resins by pouring and spreading onto surface or placing into purposely formed reservoirs. | After Crack has been chased with a V – Blade | Crack is present past the groove introduced. A low viscosity crack injection shall be used to flood the surface groove | Visual and physical application | TfNSW specification TS 00080:1.0- Repair of Concrete Works. Clause 7.5 | ECM Supervisor, workers |  |  |  |
| **Opt 4** | Coating over cracks: Application of coatings with a crack-bridging capability or impregnation ability (such as silanes) for cracks of width of 0.2 mm or less. The method must be used only for cracks that are compatible with the functional requirements of the structure but are not associated with earth-retaining or water-retaining concrete components. | After Crack has been chased with a V – Blade | Crack is only on the surface and no visible crack is present further past the groove | Visual and physical inspection | TfNSW specification TS 00080:1.0- Repair of Concrete Works. Clause 7.5 | ECM Supervisor, workers |  |  |  |

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|  | **Completion Sign Off** | ABN: 81 140 124 858  51 Heathcote Road  Moorebank NSW 2170  Ph 1300 880 476 |
| **PROJECT:** |
| **Evolution Civil Maintenance**  **Final Inspection:** I confirm that the above works have been installed in accordance with the specification requirements. Any minor alterations to the standards are stated on the attached Daily Diary or Non-Conformance Report (NCR).      Print Name:Signature: Date: | | |