**Inspection and test plan – stormwater drainage**

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| **Project no.** | | CC-0388 | **Project name** | Shoalhaven Area Remediation of Multiple Slips | | | | | **Date** |  | | **Approved by** |  |
| **ITP no.** | SYM-0388-ITP-008 | | **Revision no.** | B | **Revision date** | 18/05/23 | **Plant and equipment used** | | | | Excavator, Positrack | | | |
| **Site 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)** | | | |
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|  | |  |  |  |  | **Symal Infrastructure** | | **Shoalhaven City Council** | |
| **Item no.** | | **Activity** | **Ref docs** | **Acceptance criteria** | **Acceptance** | **Key** | **Sign date** | **Key** | **Sign date** |
| **1.0 Preliminaries** | | | | | | | | | | | | | |
| **1.1** | | Set out | Construction Drawings  TfNSW R11 | Is the position of the culverts in accordance with the drawings?  Confirm location with the superintendent. | Yes  No  N/A | H |  |  |  |  | | | |
| **1.2** | | Submission of Conformance Documentation | Construction Drawings  TfNSW R11 | Full set of certified product drawings submitted prior to installation | Yes  No  N/A | H |  | H |  |  | | | |
| **1.3** | | Drainage structure confirmation | Construction Drawings | Has the correct class & type of drainage structure been supplied and free of defects? | Yes  No  N/A | H |  | H |  |  | | | |
| **2.0 Excavation and bedding** | | | | | | | | | | | | | |
| **2.1** | | Excavation | TfNSW R11 | The minimum width of vertically sided trenches shall be the outside diameter plus 30mm or 600mm total, whichever is greater? | Yes  No  N/A | S |  |  |  |  | | | |
| **2.2** | | Minimum Grade Requirements | TfNSW R11 | Where 0.5% gradient not achievable with sections of open drain, notification to be issued to client | Yes  No  N/A | H |  |  |  |  | | | |
| **2.3** | | Material | IFC Drawings | Material for stormwater drainage to comply with requirements of the IFC Drawings | Yes  No  N/A | S |  | W |  |  | | | |
| **2.4** | | Bedding material | TfNSW R11 | Is the Bedding material placed the full width of the trench and not less than:   * 100mm where D<1500mm * 200mm where D>1500mm   Where D is the nominal pipe diameter or culvert height. | Yes  No  N/A | S |  | W |  |  | | | |
| **3.0 Culvert Installation** | | | | | | | | | | | | | |
| **3.1a** | | Culvert under paving | TfNSW R11 | Has trench been backfilled to design subgrade level with select backfill material? | Yes  No  N/A | S |  |  |  |  | | | |
| **3.1b** | | Culvert not under paving | TfNSW R11 | Has trench been backfilled to 0.3m above the top of the culvert with select backfill material? | Yes  No  N/A | S |  |  |  |  | | | |
| **3.2** | | Jointing | TfNSW R11 | Has jointing been installed to specifications?  Have holes provided for lifting and handling purposes been plugged? | Yes  No  N/A | S |  | W |  |  | | | |
| **3.3** | | Compaction | TfNSW R11 | Backfill under pavements shall be compacted to a dry density ratio if not less than 95% modified compactive effort. General Fill shall be compacted to a dry density ratio of not less than 98% using standard compactive effort. | Yes  No  N/A | H |  | W |  |  | | | |
| **4.0 Drop Inlet Installation** | | | | | | | | | | | | | |
| **4.1** | | Drop Inlet Position | IFC Drawing | The drop inlet structure is installed at the correct location, depth, and size per IFC Drawings | Yes  No  N/A | S |  |  |  |  | | | |
| **4.2** | | Connection | IFC Drawing | The drop inlet structure is properly aligned and connected to the storm drain system. | Yes  No  N/A | S |  |  |  |  | | | |
| **4.3** | | Drop Inlet Gate | IFC Drawing | Drop inlet grate is installed securely and flush with the surrounding pavement surface | Yes  No  N/A | S |  |  |  |  | | | |
| **4.4** | | Compaction | IFC Drawing | Backfill material is properly compacted in layers per the IFC Drawing / manufacturer specifications. Verify the grading is level and slopes away from the drop inlet structure to ensure proper drainage. | Yes  No  N/A | S |  |  |  |  | | | |
| **5.0 Rip Rap** | | | | | | | | | | | | | |
| **5.1** | | Rip rap | IFC Drawing | The rip rap is installed at the correct location and orientation per the project specifications. | Yes  No  N/A | S |  | W |  |  | | | |
| **5.2** | | Geotextile | IFC Drawing | The geotextile is installed as per the spec. | Yes  No  N/A | S |  | W |  |  | | | |
| **6.3** | | Shotcrete | IFC Drawing | The shotcrete is applied as per the spec. | Yes  No  N/A | S |  |  |  |  | | | |
| **6.0 Conformance check** | | | | | | | | | | | | | |
| **6.1** | | Survey pick up | TfNSW R11 | Has an As-constructed survey must be completed by a licenced or competent surveyor of the stormwater drainage system? | Yes  No  N/A | H |  |  |  | Surveyor |  | |  |
| Date picked up |  | |
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|  | **Comments**: | | | | | | | | | | | |  |
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| **Site acceptance:** | | | | |
| Symal Infrastructure representative name |  |  | Shoalhaven City Council representative name |  |
| Symal Infrastructure representative signature |  |  | Shoalhaven City Council representative signature |  |

**Inspection key: W –** Witness Point, **H –** Hold Point, **S -** Surveillance