Checklist – CAC048M: Assessment of Stabilised Pavement Mix Design Submission (Hold Point 3) (For versions of MRTS08 and MRTS10 dated earlier than November 2022)

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| Contractor |  | Date |  | Review No. |  |
| Contract No. |  | Project No. |  | Project Name |  |
| Mix Design |  | Specification MRTS |  |

| Reference | Requirements | Addressed | Comments/Observations |
| --- | --- | --- | --- |
| Unbound Materials |
| MRTS08 and MRTS10Cl 6.1 | Has a permissible type of unbound material been nominated to be stabilised as follows:

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| --- | --- | --- |
| Material | MRTS05 Subtype | Recycled materials permitted |
| Category 1 | 2.1 | Limited applications (refer MRTS08 Cl 6.1.2) |
| Category 2 | 2.1, 2.2 | Limited applications (refer MRTS08 Cl 6.1.2) |
| LBB | 2.1 | Limited applications (refer MRTS10 Cl 6.1.2) |
| LBSB | 2.1, 2.2, 2.3 | Yes |
| LBIL | 2.1, 2.2, 2.3 | Yes |

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| MRTS08 and MRTS10Cl 6.1 | Have adequate test results and Quarry Registration Certificate been submitted to demonstrate that the unbound material used in the mix design UCS testing complies with the requirements of MRTS05, including:* course properties
* fine properties
* particle size distribution(s) (grading(s))
* California bearing ratio (CBR) (for Type 2.3 material only)
* pH (for material containing recycled concrete)
* Unconfined compressive strength (UCS) (for material containing recycled concrete)
* foreign material (for material containing recycled materials).
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| Stabilising Agent and Chemical Admixture |
| MRTS08 and MRTS10Cl 6.2 | Has the constituents incorporated into the stabilising agent been nominated as one or more of the follows:

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| Stabilising Agent constituents  | Specification or Standard |
| Cement | Type GP or Type GB that complies with AS 3972 |
| Fly Ash | Special Grade or Grade 1 complying with AS/NZS 3582.1 |
| Slag | Ground granulated blast furnace slag (GGBFS) complying with AS 3582.2 |
| Hydrated Lime | Hydrated lime complying with MRTS23 |

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| MRTS08 and MRTS10Cl 7.4 | Have the following details of stabilising agent been provided:* the type of stabilising agent, with written certification from the stabilising agent supplier, supported by test results
* the proportions of each constituent to be used in the stabilising agent
* the ATIC registration number (where available)
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| MRTS08 and MRTS10Cl 6.3 | Is a chemical admixture (for example, set retarder) proposed for use in the mixture? |  |  |
| MRTS08 and MRTS10Cl 7.4 | Has the details of the chemical admixture including nominated dosage rate been provided? |  |  |
| MRTS08 and MRTS10Cl 7.3 | Has the same chemical admixture and dosage rate been used in mix design UCS and working time testing? |  |  |
| Mix Design |
| MRTS08 and MRTS10Cl 7.4 | Are all test results used in the mix design less than 12 months old? |  |  |
| MRTS08 and MRTS10Cl 7.3 | Are all tests (including unbound material tests, UCS tests, and working time test) undertaken on specimens taken from the same unbound material lot? |  |  |
| MRTS08 and MRTS10Cl 7.3 | Are all tests for mix design purposes undertaken on laboratory prepared specimens? |  |  |
| MRTS08 and MRTS10Cl 7.1 and Cl 7.3 | Are there at least three unconfined compressive strength (UCS) test results to cover the UCS range shown below without extrapolating results and with at least one result falling between the Minimum and Maximum limits?

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| Material | UCS Time | UCS (min) | UCS (max) |
| Category 1 | 28 days | 3.0 MPa | 6.0 MPa |
| Category 2 | 28 days | 2.0 MPa | 4.0 MPa |
| LBB | 28 days | 1.0 MPa | 2.0 MPa |
| LBSB | 28 days | 1.0 MPa | 2.0 MPa |
| LBIL | 7 days | 1.0 MPa | 2.0 MPa |

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| MRTS08 and MRTS10Cl 7.4 | Has UCS testing been carried out at both seven and 28 days (excluding LBIL)? |  |  |
| MRTS08 and MRTS10Cl 7.2 | Has an acceptable mixing plant variability (MPV) been nominated as follows and rounded up to the nearest 0.1%?

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| Are 30 or more consecutive historic production results available? | yes | no |
| If yes, determine the nominated MPV using the Standard Deviation method | MPV ≥ z.σ |  |
| If no, adopt an interim MPV |  | MPV ≥ 0.5% |

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| MRTS08 and MRTS10Cl 7.4 | If historic test results have been used to determine the MPV, have the test reports been provided, summarised into a table and statistically analysed? |  |  |
| MRTS08 and MRTS10 Cl 7.3.1 | Has the Contractor used the nominated MPV and the UCS test results to determine the Acceptable Range for the Target Content of Stabilising Agent in accordance with the requirements:1. the upper limit of the acceptable range is the stabilising agent content at maximum UCS minus the MPV
2. the lower limit of the acceptable range is the stabilising agent content at minimum UCS plus the MPV.

Where the upper limit is less than the lower limit, the mix design is not suitable. |  |  |
| MRTS08 and MRTS10Cl 7.3.2 | Has the Contractor nominated a specific Target Content of Stabilising Agent within the acceptable range? |  |  |
| MRTS08 and MRTS10Cl 7.4 | Has the Contractor calculated and reported the UCS value at the nominated Target Content of Stabilising Agent? |  |  |
| MRTS08 and MRTS10Cl 7.4 | Except for LBIL, has the Contractor determined the relationship between seven and 28 day UCS results for production conformance at the minimum and maximum UCS limits specified? |  |  |
| MRTS08 Cl 7.1 | For Category 1 materials do the test results show:* a UCS gain of at least 1 MPa from seven to 28 days (at the nominated target content of stabilising agent)?
* a working time of at least 6 hours?
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| MRTS08 and MRTS10Cl 8.2.3 | Has the Contractor completed working time testing, provided test results, and nominated an allowable working time that is the lesser of:* 4 hours
* the working time determined by TMR test method Q136A?
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| MRTS08 and MRTS10Cl 8.2.3 | If the Contractor has requested an allowable working time of greater than 4 hours, has sufficient justification been provided to accept this proposal? |  |  |

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| \*KeyC = ConformanceNFV = Not Fully VerifiedN/A = Not ApplicableIP = ImprovementNC = Nonconformance |
| Audited by: |  |  |  |
| Name |  | Signature |  | Date |  |