TRANSPORT FOR NSW (TfNSW)

QA SPECIFICATION 3071

SELECTED MATERIAL FOR FORMATION LAYERS

REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1		New specification	GM, RNIC	16.01.04
Ed 1/Rev 1	"Notice"	RTA PO Box and Fax numbers updated.	GM, IC	31.07.09
	Spec Ref No	Revision No added; previous version deemed Revision 0.		
	Foreword	Foreword, incorporating copyright clause, added.		
	Global	Minor editing to clarify intent.		
	3	Definitions of "you" and "your" added.		
Ed 1/Rev 2	3	Part of definition for "Selected Material" relating to seal for heavy duty pavement deleted.	GM, IC	11.01.12
	5	Sub-headings to 5.1, 5.2 and 5.3 added. Previous clause 6 becomes clause 5.3. Subsequent clauses renumbered.		
	Table 1	Maximum PI value increased to 15.		
		CBR requirement for top 150 mm layer clarified.		
		UCS: curing regime changed to 28 day normal curing.		
		Footnote (iii) amended to clarify that for top 150 mm layer, if 15<CBR<30, then material may be stabilised by addition of binder.		
	Annex M	Referenced documents updated.		
Ed 1/Rev 3	5.1	Note added that pretreatment required if specified in Annex A4.	GM, IC	20.01.13
	Table 1	Footnotes to table amended: - MDCS defined. - accelerated curing must not be used for UCS.		

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1/Rev 3 (cont'd)	8	Height of stockpiles limited to 4 metres.		
Ed 1/Rev 4	Table 1	UCS requirement displayed differently to clarify requirement. Footnotes amended: - "4 days soaking" added to preparation requirement for CBR samples. - UCS requirement applicable to modified material only. - accelerated curing of UCS test samples not be used for determining mix design binder content, but may be used for Lot conformity assessment.	GM, IC	04.04.13
	5.1, 3rd para	Sub-clause reworded.		
Ed 2/Rev 0		Spec title changed.	GM, CB	11.04.16
	Global	Clauses rearranged and reworded to improve clarity.		
	Guide Notes	Guide notes added.		
	3.1	"You" and "yours", "modified material" and "steel furnace slag" added to Definitions.		
	3.2	List of acronyms added.		
	5.1	Heading title changed.		
		Statement added that Supplier may propose alternative materials.		
		Table 1 (comprising only Selected Material Type B) moved here from previous Annex A3. Selected Material Type A deleted from Table.		
		Table 2 (previously Table 1) retitled, and content reorganised. CBR values changed to characteristic values, to harmonise with spec R44.		
	5.2	Heading added to form new clause, with new sub-clauses 5.2.1 and 5.2.2.		
	5.2.1	Referenced CBR values changed to characteristic values.		
	5.2.2	"Allowable time" corrected to that between time of incorporation of binder and completion of placing and compaction, rather than "delivery of modified material" previously.		
		Statement added that Supplier may propose use of a different binder with different working time, for modified materials.		

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 2/Rev 0 (cont'd)	5.3	Heading title changed.		
		Previous clause 5.3 to provide evidence that source and methods are adequate for supply of material deleted (superfluous since this should have been carried out prior to placing of order).		
	5.3.1	Use of recycled material containing coal tar prohibited.		
	5.3.2	New sub-clause permitting use of reclaimed asphalt pavement material.		
	5.3.3	New sub-clause prohibiting use of steel furnace slag aggregates.		
	5.4	New clause on chemical and other properties of water.		
	5.5	Previously clause 6.1.		
	5.5.1	Details of nominated Selected Material to be submitted, moved here from previous Annex D.		
		"3 months old" previously relating to age of certification changed to age of test results.		
	5.5.2	Previously clause 6.2.		
	6	Previously clause 9. Heading title changed. New headings added to form clauses 6.1 to 6.3. Individual clauses rearranged.		
	6.1	Sampling requirements for certified stockpiles specified.		
	7	New clause combining previous clauses 7 and 8.		
		New Hold Point on delivery of material from a new certified stockpile added.		
	7.1	Previously clause 7. New headings added to form new sub-clauses 7.1.1 to 7.1.3.		
	7.1.2	Moisture content specified (previously nominated in Annex A3.		
	7.1.3	Previously clause 10.		
	7.2	Previously clause 8. Headings added to form new sub-clauses 7.2.1 to 7.2.4.		
	7.2.1	Note added that this clause on stockpile locations applies only to direct supply of material to the Principal.		
	8	Previously clause 11. Individual clauses rearranged and reworded.		

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 2/Rev 0 (cont'd)	8.1.1	Previously clause 11.2. Heading title changed. Sampling of material from site stockpiles clarified to apply only to material not supplied from certified stockpiles. Time of sampling for modified material changed from "within one day of adding binder" to "within the allowable time stated in Annex A3".		
	8.1.2	Previously clause 11.3, incorporating part of previous clause 11.4		
	8.2	Previously clause 11.4. Heading title changed. New headings added to form new sub-clauses 8.2.1 to 8.2.4.		
	8.2.2	Requirements when production process is under control tabulated under Table 4.		
	9	Previously clause 12.		
	9.3	Disposition of nonconforming material clarified.		
	Annex A1	Delivery details previously under Annex A1, A2 and A5 consolidated under this Annex. Comment note added that this Annex applies only for direct supply of material to the Principal.		
	Annex A2	Various test methods combined under one item in table.		
	Annex A3	Annex heading title changed. Comment note added to refer to front Guide Notes for guidance on allowable times.		
	Annex C	Schedule of Hold Points added. Schedule of Identified Records updated.		
	Annex L	Table L.1 reorganised.		
	Annex M	Referenced Documents updated.		
Ed 2/Rev 1	3.1	Definitions of "you" and "your" clarified.	MCQ	
	9.2	Testing requirements with respect to spec Q clarified.		
Ed 2/Rev 2	Global	References to "Roads and Maritime Services" or "RMS" changed to "Transport for NSW" or "TfNSW" respectively.	DCS	22.06.20

GUIDE NOTES
(Not Part of Contract Document)

SPECIFICATION 3071

Specification 3071 sets out the requirements for Selected Material obtained from sources outside the Site for use in formation layers in earthworks. The Selected Material may also be used for rehabilitation and widening road projects.

USE OF 3071

Specification 3071 may be used in a contract for supply of Selected Material directly to the Principal, or as part of a suite of specifications in a roadworks contract.

Where used in latter, Specification 3051 is used in conjunction with the following Specifications:

(i) R44 - Earthworks

(ii) R50 - Stabilisation of Earthworks

WORKING TIME FOR MODIFIED MATERIAL

Where testing has not been carried out to determine the working time of modified material from the time of mixing with the binder to the time of completion of placing and compaction, the following default values may be used when completing Annexure 3071/A3:

Binder Type-	Time
Type GP and GB cement	2 hours
Slag/lime blend	4 hours
Hydrated lime	24 hours

Transport for NSW

QA SPECIFICATION 3071

SELECTED MATERIAL FOR FORMATION LAYERS

IC-QA-3071

VERSION FOR:
DATE:

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CLAUSE **PAGE**

FOREWORD

TFNSW COPYRIGHT AND USE OF THIS DOCUMENT

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REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW 3071 Edition 2 Revision 1.

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

PROJECT SPECIFIC CHANGES

Any project specific changes are indicated in the following manner:

(a) Text which is additional to the base document and which is included in the Specification is shown in bold italics e.g. ***Additional Text***.

(b) Text which has been deleted from the base document and which is not included in the Specification is shown struck out e.g. ~~Deleted Text~~.

TfNSW QA SPECIFICATION 3071

SELECTED MATERIAL FOR FORMATION LAYERS

1 SCOPE

This Specification sets out the requirements for the supply of Selected Material for formation layers from sources outside the Site.

The Selected Material can be naturally occurring, recycled or manufactured.

2 STRUCTURE OF THE SPECIFICATION

This Specification includes a series of annexures that detail additional requirements.

2.1 PROJECT SPECIFIC REQUIREMENTS

Project specific details of work are shown in Annexure 3071/A.

2.2 SCHEDULES OF HOLD POINTS AND IDENTIFIED RECORDS

The schedules in Annexure 3071/C list the **HOLD POINTS** that must be observed. Refer to Specification TfNSW Q for the definition of **HOLD POINTS**.

The records listed in Annexure 3071/C are **Identified Records** for the purposes of TfNSW Q Annexure Q/E.

2.3 FREQUENCY OF TESTING

The minimum frequency of testing is shown in Annexure 3071/L.

2.4 REFERENCED DOCUMENTS

Unless specified otherwise, the applicable issue of a referenced document, other than a TfNSW Specification, must be the issue current at the date one week before the closing date for tenders, or where no issue is current at that date, the most recent issue.

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 2350). For convenience, the full titles are given in Annexure 3071/M.

3 DEFINITIONS AND ACRONYMS

3.1 DEFINITIONS

The terms "you" and "your" mean respectively "the Contractor" and "the Contractor's", or "the Supplier" and "the Supplier's", as appropriate.

The term "the Supplier" means the supplier of the material covered by the scope of this Specification.

The following definitions apply to this Specification:

Modified material: Unbound material which have been mixed with a small proportion of binder.

Selected Material Zone: The top part of the Upper Zone of Formation (usually 300 mm thick) in which material of a specified higher quality is required.

Selected Material: Material of a specified quality used in the Selected Material Zone.

Steel furnace slag A waste by-product in the production of steel using the Basic Oxygen Steel (BOS) or Electric Arc Furnace (EAF) processes. Steel furnace slag does not include any bag house dust or air pollution control residues.

3.2 ACRONYMS

MDCS Maximum Dry Compressive Strength

SMZ Selected Material Zone

UCS Unconfined compressive strength

4 SUPPLIER'S QUALITY MANAGEMENT SYSTEM

The Supplier must establish and maintain a Quality Management System complying with AS/NZS ISO 9001 as a means of ensuring that the material conforms to this Specification.

Provide evidence verifying compliance with this Clause.

5 MATERIAL REQUIREMENTS

5.1 PARTICLE SIZE DISTRIBUTION AND OTHER PROPERTIES

Selected Material must comply with the requirements of Tables 3071.1 and 3071.2. You may propose alternative materials, including those with a different particle size distribution or CBR, for approval by the Principal.

Pretreatment of the test samples must be carried out where specified in Annexure 3071/A2.

Table 3071.1 - Particle Size Distribution

AS Sieve	% Passing (by mass) (1)
53 mm	100
37.5 mm	95 – 100
19.0 mm	50 – 85
6.7 mm	40 – 80
2.36 mm	35 – 70

Note:

(1) Determined using Test Method TfNSW T106, after pretreatment specified in Annexure 3071/A2.

Table 3071.2 – Other Properties

Property	Test Method	Requirement (1)
$CBR_{4\ day}$ (2), characteristic value (%)	TfNSW T117	
SMZ, upper 150 mm thick layer		33 (3, 4) min
SMZ, lower layer		19 min
Plasticity Index (PI)	TfNSW T108 and T109	15 max
MDCS (MPa)	TfNSW T114	2 min (if PI < 3)
UCS (5) (MPa)	TfNSW T131 (6)	1.5 max

Legend:

SMZ: Selected Material Zone min: minimum max: maximum

MDCS: Maximum Dry Compressive Strength UCS: Unconfined compressive strength

Notes:

(1) After any pretreatment specified in Annexure 3071/A2.

(2) For the fraction passing 19.0 mm AS sieve. Compact test samples to 100% of maximum dry density and soak for 4 days.

(3) See Clause 5.2.

(4) Where the material is modified by use of binder, the UCS requirement must also be met.

(5) Applicable only to modified Selected Material.

(6) Accelerated curing of samples to Test Method TfNSW T131 must not be used when determining the mix design binder content to meet the required UCS criteria but may be used for Lot conformity assessment.

5.2 MODIFIED SELECTED MATERIAL

5.2.1 General

Where the characteristic value of CBR for the material is greater than 19% but less than 33%, the material may be modified by use of binder to meet the CBR requirements for the top 150 mm layer of the Selected Material Zone, using a stationary mixing plant with moisture control.

The binder used must comply with the requirements of Specification TfNSW 3211.

5.2.2 Allowable Time

The maximum allowable time between the incorporation of binder and completion of placing and compaction of the modified Selected Material is specified in Annexure 3071/A3.

You may propose for the Principal's approval the use of a different binder with a different allowable working time, which has been determined in accordance with Test Method TfNSW T147 for maximum dry density.

5.3 SLAG AND RECYCLED MATERIALS

5.3.1 Recycled Materials

Where recycled materials are proposed for use as Selected Material, the amount of foreign material must not exceed the limit specified in Table 3071.3.

Table 3071.3 – Allowable Limits of Foreign Material in Recycled Material Proposed for Use as Selected Material

Type	Description	Allowable Limit (1) (% by mass)
1	Metal, glass (2) and ceramics	5 max
2	Plaster, clay lumps and other friable material	1 max
3	Rubber, plastic, paper, cloth paint, wood and other vegetable matter	0.2 max

Notes:

(1) Determined using Test Method TfNSW T276.

(2) Glass must comply with Specification TfNSW 3154.

Do not use recycled material containing coal tar.

5.3.2 Reclaimed Asphalt Pavement Material

Reclaimed asphalt pavement material complying with Specification TfNSW 3153 may be used when mixed with Selected Material, up to a maximum limit of 25% by mass.

5.3.3 Steel Furnace Slag

Do not use steel furnace slag aggregates.

5.4 WATER

Water used in the Selected Material must be free from deleterious amounts of materials such as oils, acids, alkalis, organic matter and any other matter which could affect the chemical reaction.

Water that is not taken from a town water supply system must comply with the requirements in Table 3071.4.

Table 3071.4 – Properties of Non-Town Water

Property	Test Method	Upper Limit
Chloride ion (mg/L)	T1004	600
Sulfate ion (mg/L)	T1014	400
Undissolved solids (% by mass)	AS 3550.4	1

Where recycled water is proposed for use, the water must meet the above requirements and those in Specification TfNSW G36 with the maximum concentration of 1,000 thermo-tolerant coliforms per 100 ml when tested in accordance with Test Method TfNSW T1015.

5.5 NOMINATED SELECTED MATERIAL

5.5.1 Submission of Nominated Selected Material Details

Prior to commencement of supply, submit to the Principal the following details of the nominated Selected Material:

(a) For **each nominated material**:

(i) Description (material type).

(ii) Average particle size distribution of the material, known as the "nominated particle size distribution".

(iii) Maximum Dry Density (t/m^3), determined in accordance with Test Method TfNSW T111.

(iv) Source(s) of constituent materials.

(v) Blend proportions for blended materials.

(vi) Method of producing the nominated material.

(b) For **modified Selected Material**, details of the type and percentage of binder(s), and the process to ensure that, during production, the binder(s) is mixed uniformly and to the proportion specified.

(c) For **recycled material**, test results for a sample of the nominated recycled material to verify that the foreign material content are within the limits stated in Table 3071.3.

Include a signed certification stating that the nominated Selected Material meets the requirements of this Specification, together with a copy of the supplier's checklist verifying conformity of each of the relevant properties specified in Clause 5.1, and associated NATA endorsed test results which are no older than 3 months old.

5.5.2 Variation to Nominated Selected Material

If a change to the source of supply, blend proportions, method of production or the proportion or type of binder is proposed, submit details of the new nominated Selected Material in accordance with Clause 5.5.1.

6 CERTIFIED STOCKPILES AT SOURCE

6.1 SUPPLY FROM CERTIFIED STOCKPILES

The Supplier may supply the Selected Material from certified stockpiles which have been previously tested and shown to conform to the requirements of this Specification.

Stockpiling methods, identification and sampling must be in accordance with Clauses 7.2.2, 7.2.4 and 8.1.2 respectively.

Once a particular stockpile has been certified as conforming to the requirements of this Specification, do not add further material to that stockpile unless the additional material has been tested and verified as conforming to this Specification. Provide to the Principal the test certificates verifying the conformity of all such additional material.

6.2 RELEASE FROM CERTIFIED STOCKPILES

Prior to the release of material from a certified stockpile, provide the Principal with a signed statement certifying that the material from the identified stockpile conforms to the requirements of this Specification, including NATA endorsed test results and clearly indicating the quantity of material represented by the results.

Each delivery docket must identify the certified stockpile from which the material is being supplied.

Material supplied from certified stockpiles will generally require no further testing unless it is to be modified.

6.3 CHANGED PROPERTIES

However, if subsequent inspection and/or testing of the material at the stockpile or at the point of delivery indicates that the properties of the material have changed since certification, for example, by segregation, contamination or weathering, the Principal may stop further deliveries, and require further sampling and testing of the stockpile.

The conformity or otherwise of the material will then be assessed on the basis of these results.

7 DELIVERY OF MATERIAL

HOLD POINT

Process Held:	Delivery of Selected Material to the Site from a certified stockpile.
Submission Details:	At least five working days prior delivery of material from a new certified stockpile, provide notification of intended delivery and submit the details specified in Clause 6.2.
Release of Hold Point:	The Principal will consider the submitted details and may request further information, prior to authorising the release of the Hold Point.

7.1 TRANSPORT

7.1.1 Transport Vehicles

Transport the Selected Material in vehicles which are so constructed that loss of material does not occur. The delivery vehicles used must be suitable for the ground conditions at the Site.

7.1.2 Moisture Content

Keep the material suitably moist to prevent segregation or loss of fines during transit. At the time of delivery, the material must have a moisture content (uniformly distributed) of within 60% to 90% of the optimum moisture content, as determined by Test Method TfNSW T111.

7.1.3 Segregated or Contaminated Material

Material delivered to the Site which is segregated or contaminated (except for foreign materials in recycled materials within the limits stated in Clause 5.3.1) is considered to be nonconforming, and must be dealt with in accordance with Clause 9.3.

7.2 SITE STOCKPILES

7.2.1 Stockpile Locations

Clause 7.2.1 applies only where this specification is used in a contract for supply of Selected Material directly to the Principal.

At the place of delivery, place the Selected Material in stockpiles at locations designated by the Principal.

The party responsible for preparation of the stockpile sites is specified in Annexure 3071/A1.

7.2.2 Placing Material in Stockpiles

Place stockpiles on clear, even, well-drained, firm ground or over a constructed floor.

Keep each stockpile well separated from the others to prevent cross-contamination and segregation, and maintain the moisture content of the material in the stockpile within the limits stated in Clause 7.1.2.

Place the material in the stockpiles in horizontal layers, with each new layer fully within the perimeter of the underlying layer. Do not push the stockpile into a cone shape.

Each stockpile must not exceed 4 m in height.

7.2.3 Lots

For the purpose of delineating Lots, place the material in each stockpile in such manner that either:

(a) each stockpile represents only one Lot or,

(b) the stockpile of the one material type is built up incrementally in such a way that each new Lot of material added is tested and found to be conforming before any further new Lots of material is added.

Each Lot is limited to a maximum size of 4000 tonnes.

7.2.4 Stockpile Identification

Clearly and uniquely identify stockpiles by signposting. Indicate the amount and type of material on the signposting.

8 SAMPLING AND TESTING

8.1 GENERAL

8.1.1 Times of Sampling

Where the material is not supplied from a certified stockpile, sample the delivered material from site stockpiles within three days of completing the stockpile.

For modified material, sample within the allowable time stated in Annexure 3071/A3 to verify conformity with Table 3071.2 for MDCS and UCS.

8.1.2 Sampling Method

Carry out sampling in accordance with AS 1141.3, and state the sampling method used on the relevant NATA endorsed test certificate.

Provide a statement accompanying any test certificate that the samples tested are representative of the material to be supplied under the Contract.

8.2 FREQUENCY OF SAMPLING AND TESTING

8.2.1 General

The requirements of this clause will apply regardless of whether sampling is carried out at the source or at the point of delivery.

The frequency of sampling and testing for a Lot must not be less than the frequency specified in Annexure 3071/L.

8.2.2 Production Process Under Control

You may adopt the reduced frequency of testing specified in Annexure 3071/L provided that you can demonstrate to the Principal that the production process is under control.

The production process is considered to be under control when the requirements shown in Table 3071.5 are achieved.

Table 3071.5 – Production Process Under Control

Characteristic	Test Method	Requirements
CBR	TfNSW T117	Conforming test results from 6 consecutive Lots
Plasticity Index	TfNSW T108 and T109	
MDCS	TfNSW T114	
Foreign material content	TfNSW T276	

Provide to the Principal the relevant test results, and an estimation of the quantity of material produced over the duration of the tests.

8.2.3 Sampling and Testing After Reduction in Frequency

When a reduced frequency of sampling and testing has been adopted, the samples to be tested must be from the Lot using representative portions of the sub-Lot samples taken, and the results must be representative of the whole Lot. The test certificate must indicate which samples were combined to form the test sample.

Provided that the Lots tested are consecutive and of the same type, the Lots sampled need not form part of the supply under the Contract, for the reduced frequency of sampling and testing to be adopted.

8.2.4 Nonconformity After Reduction in Frequency

When a reduced frequency of sampling and testing has been adopted and a sample fails a specified test requirement, reinstate the full minimum frequency specified in Annexure 3071/L for that test until it can be re-established that the process is once again under control.

The production process will be considered to be once again under control when the test results for 3 consecutive Lots are conforming.

9 CONFORMITY

9.1 GENERAL

Where the material is not supplied from certified stockpiles, provide the Principal with a summary of conformity results for each Lot within 48 hours of completion of testing of samples taken from site stockpiles. Include work sheets where requested by the Principal.

Document all tests carried out, including any tests whose results were not used for any reason, and provide copies of the reports to the Principal. Obtain the concurrence of the Principal for omission of any test data.

9.2 TESTING CRITERIA

Test the material in accordance with the requirements of this Specification and calculate the characteristic value in accordance with TfNSW Q Annexure Q/L3.2.

9.3 NONCONFORMITY

Notify the Principal of any cases of nonconforming material and of the action taken to deal with the nonconformity. Do not incorporate nonconforming material in the Works.

Where this specification is used in a contract for supply of Selected Material directly to the Principal, replace any nonconforming material with new conforming material.

ANNEXURE 3071/A – PROJECT SPECIFIC REQUIREMENTS

Refer to Clause 2.1.

A1 DELIVERY DETAILS

NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure 3071/A)

Complete this section only where this specification is used in a contract for supply of Selected Material directly to the Principal. If this is not the case, delete this section in its entirety and replace the heading title with "Not Used".

In Table 3071/A1.1 below, delete whichever option is not applicable and fill in the required details. For item A1.2, attach a map showing the location for delivery if appropriate.

Table 3071/A1.1

Item	Description	Requirement
A1.1	Date for delivery	……
A1.2	Location (1) for delivery	……
A1.3	Stockpile sites at point of delivery prepared by	Principal / Supplier
A1.4	Maximum daily delivery rate	….. tonnes/day

Note:

(1) Refer to attached map if provided.

A2 PRETREATMENT

NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure 3071/A)

Complete Table 3071/A1.2 below by deleting whichever option is not applicable.

Table 3071/A1.2

Item	TfNSW Test Method	Pretreatment Required	
		to T102	to T103
A2.1	T106, T108, T109, T114, T117, T131	Yes (1)	Yes / No

Note:

(1) Pretreatment to T102 is always required.

A3 MAXIMUM ALLOWABLE TIME FOR MODIFIED MATERIAL

NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure 3071/A)

Complete Table 3071/A1.3 below by filling in the required details. Refer to the front Guide Notes for guidance on the maximum allowable times to use for various types of binders.

Table 3071/A1.3

Item	Description	Requirement
A3.1	Binder type	……..
A3.2	Maximum allowable time between incorporation of binder and completion of placing and compaction	…… hours

ANNEXURE 3071/B – (NOT USED)

ANNEXURE 3071/C – SCHEDULES OF HOLD POINTS AND IDENTIFIED RECORDS

Refer to Clause 2.2.

C1 SCHEDULE OF HOLD POINTS

Clause	Description
7	Delivery of Selected Material to the Site

C2 SCHEDULE OF IDENTIFIED RECORDS

The records listed below are Identified Records for the purposes of TfNSW Q Annexure Q/E.

Clause	Description of Identified Record
5.5.1	Nominated Selected Material details
6.2	Certification, including test results, of conformity of material released from certified stockpiles
8.2.2	Conforming test results from 6 consecutive Lots for adoption of a reduced frequency of testing
9.1	Conformity results for material not supplied from certified stockpiles

ANNEXURES 3071/D TO 3071/K – (NOT USED)

ANNEXURE 3071/L – TESTING REQUIREMENTS

Table 3071/L.1 - Minimum Frequency of Testing

Total Mass of Lot Represented (tonnes)		1 – 500	501 – 1000	1001 – 2000	2001 – 4000
Number of sub-Lot Samples per Lot		2	3	4	5
Characteristic Tested	**Test Method**	**Minimum Number of Samples to be Tested**			
Coarse Particle Distribution	TfNSW T106	2	3	4	5
CBR	TfNSW T117	2 (1)	3 (2)	4 (2)	5 (2)
Liquid Limit (LL)	TfNSW T108	2 (1)	3 (2)	4 (2)	5 (2)
Plastic Limit (PL)	TfNSW T109	2 (1)	3 (2)	4 (2)	5 (2)
MDCS (if PI < 3)	TfNSW T114	1 (0) [(i)]	1 (0) [(i)]	2 (0) [(i)]	3 (0) [(i)]
UCS [(ii)] (modified Selected Material only)	TfNSW T131	2	3	4	5
Foreign material content [(iii)]	TfNSW T276	1 (0)	1 (0)	2 (1)	3 (1)

Notes:

The numbers shown within brackets represents the reduced rates of testing allowable under Clause 8.2.2.

(i) Where the reduced rate of sampling is shown as (0), then regardless of Lot size, the minimum frequency of testing will be one per 4,000 tonnes.

(ii) Required only for modified Selected Material.

(iii) Applicable only to Selected Material manufactured from recycled material.

ANNEXURE 3071/M – REFERENCED DOCUMENTS

Refer to Clause 2.4.

TfNSW Specification

TfNSW Q	Quality Management System
TfNSW G36	Environmental Protection
TfNSW 3153	Reclaimed Asphalt Pavement Material
TfNSW 3154	Granulated Glass Aggregate
TfNSW 3211	Cements, Binders and Fillers

TfNSW Test Methods

TfNSW T102	Pretreatment of Road Construction Materials by Compaction
TfNSW T103	Pretreatment of Road Construction Materials by Artificial Weathering
TfNSW T106	Coarse Particle Size Distribution of Road Construction Materials (by Dry Sieving)
TfNSW T108	Liquid Limit of Road Materials
TfNSW T109	Plastic Limit and Plasticity Index of Road Construction Materials
TfNSW T111	Dry Density/Moisture Relationship of Road Construction Materials
TfNSW T114	Maximum Dry Compressive Strength of Road Construction Materials
TfNSW T117	California Bearing Ratio of Remoulded Specimens of Road Construction Materials
TfNSW T131	Unconfined Compressive Strength of Road Construction Materials (blended in the Laboratory with Cementitious Binders)
TfNSW T147	Working Time for Road Construction Materials (blended in the Laboratory with Slow Setting Binders)
TfNSW T276	Foreign Materials Content of Recycled Crushed Concrete
TfNSW T1004	Quantitative Determination of Chloride Ion in Water
TfNSW T1014	Quantitative Determination of Sulfate Ion in Water
TfNSW T1015	Microbiology of Water used in Roadworks (Thermotolerant Coliforms)

Australian Standards

AS 1141.3	Methods for sampling and testing aggregates – Sampling of aggregates and rock
AS/NZS ISO 9001	Quality management systems - Requirements