

# TRANSPORT FOR NSW (TfNSW)

## QA SPECIFICATION R103

### HIGH PRESSURE WATERBLASTING OF BITUMINOUS SEALS

#### NOTICE

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#### REVISION REGISTER

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Ed 1/Rev 2	“Notice” Guide Notes Foreword Global 1.3 Guide Notes, 5.3, 5.4 2.1 3 Annex A, E, F	RTA PO Box and Fax numbers updated References to “Single Invitation Contracts” replaced by “Road Maintenance Council Contracts”. Contact person for comments updated. Foreword, incorporating copyright clause, added Minor editing to improve clarity. “Superintendent” replaced by “Principal”. “(non)conformance” replaced by “(non)conformity”. Definition of “you” and “your” added EPA waste classifications updated. Legislation title updated Subclauses combined and reworded to improve clarity Tables reformatted	GM, IC	24.06.09
Ed 1/Rev 3	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)

## **USING SPECIFICATION R103**

TfNSW R103 has been developed specifically for the treatment of sprayed bituminous seals. It is particularly suitable for use under Road Maintenance Council Contracts (RMCC) for maintenance of State Roads. It does not cover cleaning of asphalt surfaces.

TfNSW R103 is a QA specification and the use of QA specifications requires the implementation of a quality system by the Contractor that meets the quality system requirements specified in TfNSW Q. To comply with the intention of government policy as well as Specification TfNSW Q, high pressure waterblasting using TfNSW R103 requires adequate surveillance and audit by the Principal.

## **EDITION 1**

This is the first issue version of the specification. Further improvement and upgrading based on field experience is expected. Comments and suggestions should be forwarded to the **Senior Pavement Technologist (Surfacings)** Ph: **02 8837 0970**.

## **TECHNICAL REFERENCE NOTES**

The following notes are intended to provide guidance on the application of this Specification. They do not form part of the Contract.

### **Surface Treatment(s)**

High pressure waterblasting can be used to improve the surface texture of sprayed bituminous seals by removing the excess binder and residues such as petrol, oil, grease, or rubber tyre particles. It can also be used to clean open graded asphalt surfaces; however, this type of treatment is outside the scope of this Specification.

The application of “binder hardener and aggregate”, hot rolled aggregate and hand spread grit are other treatments used to improve surface texture of bleeding seals. Bleeding seals treated by any of these processes are more difficult to retexture using the high pressure waterblasting process as the smaller aggregate/grit provides a barrier to the removal of the excess binder from the surface. Where high pressure waterblasting is likely to be used, the application of these treatments should be limited to that required to achieve a safe surface condition.

Trials of high pressure waterblasting have also included treatment of surfaces that contain polymer modified binders. For these binders there is a tendency for clumps of binder to be left on the road surface and these will generally need to be removed by hand.

Treatment of line marked areas should be avoided wherever possible.

### **Safety**

Safety requirements include the following:

- (i) A suitable control procedure based on an appropriate risk assessment for emergency shutdown in the event of a system failure (e.g. electrical, hydraulic, mechanical and/or engine failure) that has been approved by the Principal.
- (ii) The vehicle has been accredited by a TfNSW Fleet Inspector. This accreditation must not be more than six (6) months old.

The Principal should highlight this requirement in the tender documents.

The forward vision should be managed by an appropriate vehicle movement plan and additional staff (i.e. a spotter at the front of the vehicle) if required.

### **Waste Streams – Classification and Disposal**

Waste material generated during the waterblasting process consists of liquid waste (water containing suspended bitumen particles, heavy metals, oils, total petroleum hydrocarbons, grit and dirt) and solid waste (concentrated mixture of bitumen, heavy metals, oils, total petroleum hydrocarbons, grit and dirt).

These wastes have been classified as “liquid waste” and “general solid waste (non-putrescible)” respectively, in accordance with the Department of Environment Climate Change and Water NSW (2008) Waste Classification Guidelines, and have to be disposed of at a licensed waste facility.

### **Visual Assessment**

A visual assessment of the road surface should be made continuously during the high pressure waterblasting treatment and the work should cease immediately if any surface damage occurs. The required texture must be in the general range of “matt” to “hungry”.

Photographs and definitions of surface texture conditions, extracted from the TfNSW Sprayed Sealing Guide are shown on pages (v) and (vi) of these Guide Notes.

### **Nonconformity**

When a nonconformity has been raised and where the application of additional passes by the waterblasting machine could potentially meet the appropriate texture depth requirement in Table R103.1 of this Specification, the Contractor should not be permitted to commence a new Lot until conformity of the prior Lot has been achieved.

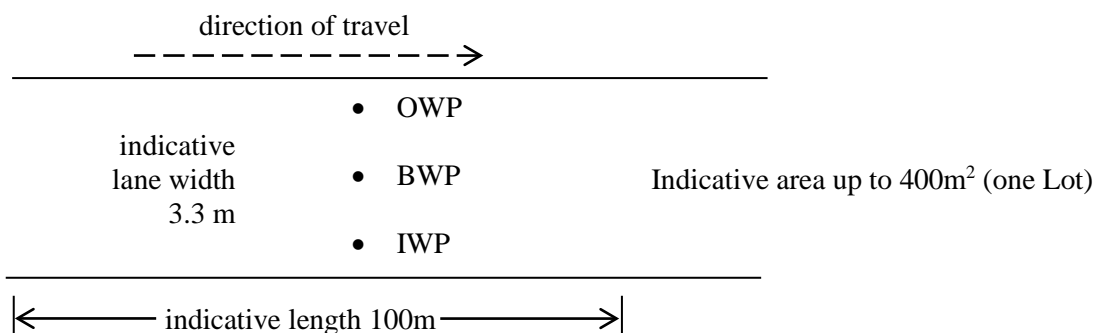
This Specification reflects the current machine availability which is unable to realistically cope with varying treatment widths and therefore existing areas with texture depths outside of the treatment limits (Table 1) before starting work or textures may become nonconforming because of the treatment process in the non-target areas. These outcomes should be considered by the Principal at the Hold Point process.

### **Work Orders**

For the purpose of obtaining an in house comparison with alternative treatments, the Project Manager should include a Pay Item for Traffic Control when issuing a Work Order for this treatment.

### **Table R103.2**

In Table R103.2, the implied testing grid is as follows:



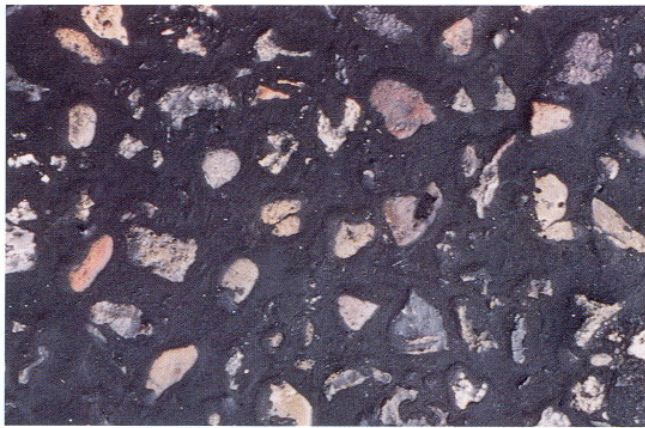
## PHOTOGRAPHS AND DEFINITIONS OF TEXTURE



**Bleeding seal**

**Photograph 4.1**

*Bleeding* - a surface condition in which an excess of free binder completely covers the aggregate. There is no surface texture.



**Flushed seal**

**Photograph 4.2**

*Flushed* - a surface condition in which the binder is near the uppermost surfaces of the aggregate particles. The uppermost surface of the aggregate is still visible, but there is minimal surface texture.



**Smooth seal**

**Photograph 4.3**

*Smooth* - a surface condition in which the aggregate is worn and the texture depth is minimal.





**Matt seal**  
(Note - polishing  
on tips of aggregate)

**Photograph 4.4**

*Matt (seal)* - a surface condition in which the aggregate is proud of the surface and the binder is approximately two thirds of the way up the sides of the aggregate particles.



**Hungry seal**

**Photograph 4.5**

*Hungry surface (seal)* - a surface condition in which the aggregate is proud of the surface and the binder is approximately half way up the sides of the aggregate particles.



**Very Hungry**

**Photograph 4.6**

*Very hungry surface (seal)* - a surface condition in which the aggregate is proud of the surface and the binder is approximately one third of the way up the sides of the aggregate particles.





# HIGH PRESSURE WATERBLASTING OF BITUMINOUS SEALS

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VERSION FOR: DATE:
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## FOREWORD

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### REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW R103 Edition 1 Revision 2.

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 R103

### HIGH PRESSURE WATERBLASTING OF BITUMINOUS SEALS

## 1 GENERAL

### 1.1 SCOPE

This Specification sets out the requirements for improving the surface texture of bituminous seals by High Pressure Waterblasting.

The work to be executed under this Specification include the following activities:

- (a) high pressure waterblasting of spray seals;
- (b) supply of water for the process;
- (c) disposal of liquid and solid waste;
- (d) testing to verify conformity; and
- (e) quality planning and record keeping.

### 1.2 STRUCTURE OF THE SPECIFICATION

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

#### 1.2.1 Project Specific Requirements

Project specific details of work are shown in Annexure R103/A.

#### 1.2.2 Measurement and Payment and Resolution of Nonconformities

The method of measurement and payment is detailed in Annexure R103/B.

Acceptance of materials and work will be in accordance with Annexure R103/B.

#### 1.2.3 Schedules of HOLD POINTS and Identified Records

The schedules in Annexure R103/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 R103/C are **Identified Records** for the purposes of TfNSW Q Annexure Q/E.

#### 1.2.4 Planning Documents

The PROJECT QUALITY PLAN must include each of the documents and requirements listed in Annexure R103/D and must be implemented.

## **HOLD POINT**

Process Held:	High pressure waterblasting of bituminous seals.
Submission Details:	At least 5 working days prior to commencement of work, submit the PROJECT QUALITY PLAN documentation.
Release of Hold Point:	The Principal will consider the submitted documents prior to authorising the release of the Hold Point.

### **1.2.5 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. TfNSW R106). For convenience, the full titles are given in Annexure R103/M.

## **1.3 DEFINITIONS**

The terms “you” and “your” mean “the Contractor” and “the Contractor’s” respectively.

The following definitions apply to this Specification.

- (a) **OWP:** The travel lane outer wheel path in the direction of road travel.
- (b) **IWP:** The travel lane inner wheel path in the direction of travel.
- (c) **BWP:** The centre of the travel lane (between OWP and IWP) as tracked by vehicles.
- (d) **Sector:** An individually identified section of pavement requiring high pressure waterblasting as defined by an individual line in Annexure R103/A
- (d) **Control Stations:** The vehicle has a maximum of two control stations, i.e. one is the driver’s position and the second is located at either the side or rear of the vehicle. Both control stations must have full control of the vehicle braking system/s.
- (e) **Immobilised:** Vehicle transmission disengaged and brakes applied.

## **2 PLANT AND EQUIPMENT & TRAFFIC MANAGEMENT**

### **2.1 HIGH PRESSURE WATERBLASTING MACHINE**

The plant used to carry out the high pressure waterblasting must be a TfNSW Fleet Services Accredited vehicle and consist of a self contained system which uses high pressure water jets to dislodge/remove the excess bituminous binder from the road surface.

The system must be vehicle mounted with sufficient capacity and power to carry both the waterblasting equipment and a full load of waste material. The equipment must incorporate a suction system, sufficient in capacity, to recover and uplift all of the dislodged particles of binder and sprayed

water and have a storage facility (i.e. tank) to house the waste materials until disposal at a licensed waste facility.

The waterblasting machine must have at least one adequately trained operator, certified by the machine supplier, at all times when the machine is in use. The operator must have direct access to emergency shutdown controls at all times. The operator must be in control of the steering at all times. In the event of the operator changing control stations, immobilise the vehicles for that period.

The waterblasting jets must be able to be adjusted for pressure to achieve the required degree of binder removal without damage to the seal.

The fully loaded mass of the waterblasting machine must, at all times, whether at travel or waterblasting, comply with the requirements of the Road Transport (Mass, Loading and Access) Regulation 2005.

## **2.2 STORAGE OF PLANT**

You are responsible for the storage of all plant, equipment and materials. Do not store plant, equipment or materials within the road reserve, unless otherwise approved by the Principal.

## **2.3 TRAFFIC MANAGEMENT**

Provide traffic management in accordance with Specification TfNSW G10.

# **3 TRIAL PAVEMENT**

Provide a completed list of sectors using the form provided in Annexure R103/A.

The Principal will nominate in Annexure R103/A the sector for which a trial section of pavement is to be undertaken.

Select a representative area of at least 100 m<sup>2</sup> from within the nominated sector to be treated as the trial section of pavement. The selected section must be continuous and representative of the entire sector being treated.

### **HOLD POINT**

Process Held:	Each nominated trial section of pavement.
Submission Details:	Notification of the location, date and time of the commencement of the trial section of pavement at least three (3) working days prior to commencement of the trial section of pavement.
Release of Hold Point	The Principal will inspect the trial section and authorise the release of the Hold Point after the Contractor confirms the trial is ready to proceed.

The treated trial section of pavement must conform to the performance requirements specified in Clause 4.

In the event of nonconformity of the trial section of pavement, the Principal may require the treatment of a further trial section of pavement before releasing the Hold Point.

For nonconformities in the trial section of pavement, the Principal may require your disposition to include modifications to the equipment or methods.

If it is evident during or after treatment of the trial section of pavement that the sprayed seal/pavement is being damaged, you must cease treatment immediately and implement corrective action.

The Principal has the right to order a new trial section of pavement at any stage of the work under the Contract when changes are made by you in equipment, control settings, plant or rate of work.

### **HOLD POINT**

Process Held:	Work subject to each nominated trial section of pavement
Submission Details:	Test results and visual inspection record confirming conformity
Release of Hold Point:	The Principal will consider the submitted documents, and may inspect the trial section of pavement prior to authorising the release of the Hold Point.

## **4 PERFORMANCE REQUIREMENTS**

### **4.1 DEFINITION OF LOTS**

A Lot is defined as a uniform, treated area not exceeding 400 m<sup>2</sup>.

### **4.2 VISUAL INSPECTION REQUIREMENTS**

#### **4.2.1 Texture by Visual Assessment**

You and the Principal must agree on the existing aggregate size on a per sector basis before commencement of the work.

Undertake constant visual inspection of the road surface at all times whilst the waterblasting process is being undertaken.

Visual assessment must be made continuously. The required texture must be in the general range of “matt” to “hungry” (refer to the TfNSW Spray Sealing Guide). The actual texture depth must be confirmed by measurement in accordance with Clause 4.3.

#### **4.2.2 Uniformity by Visual Assessment**

The treated surface must be uniform in texture both transverse to and longitudinally along the road surface.

#### **4.2.3 Defects by Visual Assessment**

The waterblasting work must not damage the road surface in the process, including:

- (a) excessive removal of the binder;
- (b) stripping of the sealing aggregate;
- (c) removal of the seal and underlying pavement layers;



- (d) scouring damage to underlying pavement layers or other base materials; and
- (e) longitudinal lines, at machine overlaps and the overlap of treatment runs, with a texture depth in excess of that specified in Table R103.1 for the respective aggregate size.

Any of these defects will constitute a nonconformity which must be dealt with in accordance with Annexure R103/B.

#### **4.2.4 Removal of Solids and Liquids from Road Surface**

Remove any excess binder, free water or other waste by hand or other approved method without damaging the seal.

### **4.3 TEXTURE DEPTH TESTING REQUIREMENTS**

In addition to the continuous visual assessment of the process, arrange for texture depth testing in accordance with TfNSW T240.

Carry out texture depth testing both before and after treatment. Record test results and details of the locations of testing sites on the Record of Texture Depth Test Results sheet attached in Annexure R103/F. Carry out the post-treatment testing as near as practicable to the pre-treatment testing.

After treatment, the measured texture depth must be within the limits given in Table R103.1.

**Table R103.1 – Texture Depth**

<b>Existing Seal Nominal Surface Aggregate Size (mm)</b>	<b>Texture Depth (mm)</b>
5	1.0 to 1.4
7	1.0 to 1.7
10	1.2 to 1.9
14	1.4 to 2.4
20	1.6 to 2.9

The requirements for the frequency and location of the texture depth testing are given in Table R103.2.

**Table R103.2 – Texture Testing Requirements**

<b>Type of Work</b>	<b>No. Tests Required</b>	<b>Location of Test*</b>
Trial	3 per 100 m <sup>2</sup> (before and after)	OWP & IWP & BWP
General Work	1 per Lot or part thereof (before and after)	OWP & IWP & BWP

\* One test is one OWP, one IWP and one BWP transversely at the selected location. Definitions of OWP, IWP and BWP given in Clause 1.3.

#### **4.4 TREATMENT OF NONCONFORMITY LOTS**

Submission of your Nonconformity Report and supporting documents to rectify the nonconforming Lot constitutes a Hold Point. Refer to Annexure R103/B2.

##### **HOLD POINT**

Process Held:	Further surface texturing work, after nonconformity is identified
Submission Details:	Submit Nonconformity Report and proposed corrective action
Release of Hold Point:	The Principal will consider the submitted documents prior to authorising the release of the Hold Point.

### **5 WASTE MANAGEMENT**

#### **5.1 ENVIRONMENTAL PROTECTION**

Ensure that no waste material, whether liquid and solid, generated during the waterblasting operation is deposited on the road surface or adjoining land. Take full ownership and responsibility of all waste materials, consistent with the duties and definitions of an “owner” of waste under the Protection of the Environment Operations Act 1997.

#### **5.2 SOLID WASTE**

The solid waste generated as a result of the high pressure waterblasting process, has been classified as “general solid waste (non-putrescible)”. Dispose of the material directly to a licensed waste facility unless it can be demonstrated to the Principal that the solid waste is to be stored, used or disposed in compliance with all relevant guidelines and legislation.

#### **5.3 LIQUID WASTE**

The liquid waste generated as a result of the high pressure waterblasting process, has been classified as “liquid waste”. Dispose of this material directly to a licensed waste facility unless it can be demonstrated to the Principal that the liquid waste is to be stored, used or disposed in compliance with all relevant legislation and guidelines. Any disposal to sewer must not occur without relevant approvals from the relevant authority.

#### **5.4 NOMINATED DISPOSAL FACILITIES**

Maintain and supply to the Principal when requested proof of disposal at the identified facility.

Proof of disposal records must include receipts from the identified disposal facility that identify the date, quantity and nature of the disposed material plus details of the owner/operator of the disposal site including name, address and a contact phone number.

## **6 END PRODUCT CRITERIA**

If a Lot fails to achieve full conformity to this Specification, such failure constitutes a nonconformity under the Contract.

If the nonconformity is not acceptable in accordance with Annexure R103/B2, the nonconforming material must be replaced or the nonconforming section of sprayed bituminous seal must be either replaced or corrected.

Any nonconformity must generate a Hold Point and may require a further trial at the Principal's discretion.

The Field Entry Sheets attached in Annexure R103/E must be jointly signed off by you and the Principal at the completion of each sector.

**ANNEXURE R103/A – PROJECT SPECIFIC REQUIREMENTS**

Further details or scope sheets may be provided by the Principal.

(Form shown below has been completed as an example.)

<i>Proposed Treatment</i>												
<i>Sector ID</i>	<i>Trial Section Required?</i>	<i>Road</i>	<i>Segment</i>	<i>Carriageway</i>	<i>Lane: Slow / Middle / Fast / Other</i>	<i>Start Chainage (m)</i>	<i>End Chainage (m)</i>	<i>Length (m)</i>	<i>Extent: Full Lane / Wheel Paths / Other</i>	<i>Width (m)</i>	<i>Area (m<sup>2</sup>)</i>	<i>Existing Surface: Aggregate, Binder &amp; Comments</i>
1	Y	SH27	800	A	Slow	00	400	400	Full	3.5	1400	14mm Rubber
2	N	SH27	810	A	Slow	00	560	560	Full	3.5	1960	14mm Rubber
3	N	SH27	810	A	Fast	100	200	100	OWP	1.0	100	14mm Rubber
4	N	SH27	820	A	Mid	120	130	10	Full	3.5	35	14mm Rubber
5	Y	SH10	1235	B	Mid	120	140	20	OWP	1.0	20	14mm Rubber
6	N	SH10	1236	C	Slow	00	280	280	Both WP	2.0	560	14mm Rubber
7	Y	SH10	1236	C	Slow	2800	3400	600	Both WP	2.0	1200	14mm Rubber
8												
9												
10												
<b>Total Area (m<sup>2</sup>)</b>												

## **ANNEXURE R103/B – MEASUREMENT AND PAYMENT AND RESOLUTION OF NONCONFORMITIES**

### **B1 MEASUREMENT AND PAYMENT**

Payment will be made for all costs associated with completing the work detailed in this Specification in accordance with the following Pay Item.

Where no specific pay items are provided for a particular item of work, the costs associated with that item of work are deemed to be included in the rates and prices generally for the Work Under the Contract.

Unless specified otherwise, a lump sum price for any of these items will not be accepted.

You must provide a unit rate for all works under Pay Item R103P1 for each sector as listed in Annexure R103/A.

No account must be made for areas outside the area directed in Annexure R103/A or approved by the Principal for treatment.

#### **Pay Item R103P1 High Pressure Waterblasting**

This Pay Item includes all of the following activities for the package of works defined in Annexure R103/A:

- (a) provision of all plant, labour and materials required for the process;
- (b) carrying out trials;
- (c) provision of water for the process;
- (d) removal and disposal of liquid and solid waste;
- (e) undertaking, recording and reporting all testing to demonstrate conformity;
- (f) all costs associated with reworking, retreating and/or repairing nonconforming work; and
- (g) Contractor's site supervision and management costs.

The unit of measurement is the square metre.

The quantity must be determined by measuring the length and width of the treated area as defined in Annexure R103/A. Such area would also include any additional area directed for treatment by the Principal or representative thereof.

The measured areas are to be recorded using the Field Entry Sheet as provided in Annexure R103/E.

### **B2 RESOLUTION OF NONCONFORMITIES**

#### **B2.1 Reworking Of Nonconforming Lots**

You may rework Lots that do not conform to the requirements of this Specification. The costs of reworking, including all associated activities such as traffic control, additional testing and waste disposal must be borne by you.

**B2.2 Replacement and Rectification of Sprayed Bituminous Surfacing**

Repair defects, as defined in Clause 4.2.3, at your cost.

Replace bituminous surfacing removed from the works with a sprayed bituminous seal conforming to the requirements of the Specification TfNSW R106 or TfNSW R107 as appropriate. Use a method of rectification which avoids damage to and does not affect the performance of the underlying structures, utilities, utility covers and similar structures.

**B2.3 Acceptance of Nonconformities**

Nonconformities may be accepted by the Principal subject to deductions, as specified hereunder, to the schedule rate applied to the area failing to comply with the requirements for texture depth. In the case of the texture depth being outside the limits specified in Table R103.1, the deductions shown below will apply.

- Texture depth of 0.2 mm - deduction 10% of schedule rate
- Texture depth of 0.3 mm - deduction 20% of schedule rate
- Texture depth > 0.3 mm - deduction 50% of schedule rate.



## **ANNEXURE R103/C – SCHEDULES OF HOLD POINTS AND IDENTIFIED RECORDS**

Refer to Clause 1.2.3.

### **C1 SCHEDULE OF HOLD POINTS**

<b>Clause</b>	<b>Description</b>
1.2.4	Acceptance of PROJECT QUALITY PLAN
3	Commencement of treatment of trial section of pavement in the presence of the Principal
3	Visual conformity and Texture depth results for treatment of trial section of pavement
4.4	Submission of NCR and proposed Corrective Action

### **C2 SCHEDULE OF IDENTIFIED RECORDS**

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

<b>Clause</b>	<b>Description of Identified Record</b>
4.3	Before and after treatment texture depth test results recorded on the Record of Texture Depth Test Results Sheet (Annexure R103/F)
5.4	Proof of disposal records including receipts from the identified disposal facility that identify the date, quantity and nature of the disposed material
6	The Field Entry Sheets (Annexure R103/E) signed by both the Contractor and the Principal

## **ANNEXURE R103/D – PLANNING DOCUMENTS**

Refer to Clause 1.2.4.

The following documents are a summary of documents that must be included in the PROJECT QUALITY PLAN. The requirements of this Specification and others included in the Contract must be reviewed to determine additional documentation requirements.

The PROJECT QUALITY PLAN must include each of the key quality planning action points listed below:

- (a) details of all equipment and plant to be used;
- (b) description of the process method to be used to achieve a quality outcome;
- (c) names of your key staff and their site duties and contact details;
- (d) details of the proposed waste disposal method and process for both liquid and solid waste including details of licensed disposal sites;
- (e) Inspection and Test Plan (ITP) that addresses the requirements of this Specification; and
- (f) provide risk assessment and applicable Safe Working Method Statement (SWMS).

ANNEXURE R103/E – FIELD ENTRY SHEET

Measured Final Treated Quantities													
Sector ID	Road	Segment	Carriageway	Lane: Slow / Middle / Fast / Other	Start Chainage (m)	End Chainage (m)	Length (m)	Extent: Full Lane / Wheel Paths / Other	Width (m)	Area (m <sup>2</sup> )	Agreed Aggregate Size and Binder Type (if known)	Visually Conforms - Clause 4.2.2 (Yes / No)	Tested Texture Depth Within Limits - Clause 4.2.3 (Yes/No)
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													

Contractor's Representative (Name): \_\_\_\_\_

Principal's Representative (Name): \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**ANNEXURE R103/F – RECORD OF TEXTURE DEPTH TEST RESULTS**

Texture Depth Test Results													
Sector ID	Sector ID	Work Type: Trial or General	Road	Segment	Carriageway	Lane: Slow / Middle / Fast / Other	Chainage	Length (m)	Location: OWP/IWP /BWP	Width (m)	Pre-Treatment Texture (mm)	Post-Treatment Texture (mm)	Comments
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													

## **ANNEXURES R103/G TO R103/L – (NOT USED)**

## **ANNEXURE R103/M – REFERENCED DOCUMENTS**

Refer to Clause 1.2.5.

### **TfNSW Specifications**

TfNSW G10	Traffic Management
TfNSW Q	Quality Management System
TfNSW R106	Sprayed Bituminous Surfacing (with Cutback Bitumen)
TfNSW R107	Sprayed Bituminous Surfacing (with Polymer Modified Binder)

### **TfNSW Test Methods**

TfNSW T240	Texture Depth of Coarse Textured Road Surfaces
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