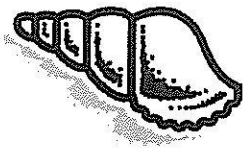
Annexure 5

Performance Standards

Safer Local Roads
Contract No.1218



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Annexure 5 - Performance Standards

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A5-1. Performance Standard 1 - Accelerated Works Program

A5-1.1 Context

This Performance Standard defines the level of service required of the Contractor in relation to Accelerated Works Projects and the Accelerated Works Program.

The intent of the Accelerated Works Program is to upgrade the road sections identified in the Accelerated Works Program to the agreed scope and standards set out in the Contract within the Accelerated Works Period. Once upgraded, the Assets improved by the Accelerated Works Projects must be maintained in accordance with the Contract.

A5-1.2 Standard

The following Performance Standard applies to each Accelerated Works Project:

.1 Design compliant with clause A3-25.6 (Design standards) (subject to clause A3-1.2.5).

.2 Construction compliant with the Accelerated Works Program, the Contract and the Approved AW Design.

.3 The progress of each and all Accelerated Works Projects is consistent with the Accelerated Works Program.

.4 Compliance with obligations arising during the Defects Liability Period.

A5-1.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review during the Accelerated Works Period and thereafter until the Completion of all Accelerated Works Projects and the expiry of all Defects Liability Periods associated with Accelerated Works Projects. The Contractor's performance of this Performance Standard may also be measured at any time during that period in accordance with clause 68 (Application of Service Points).

A5-2. Performance Standard 2 - Routine Maintenance Services

A5-2.1 Context

This Performance Standard defines the level of service required of the Contractor in the performance of the Routine Maintenance Services.

A5-2.2 Standard

The Performance Standard for Routine Maintenance Services is:

.1 Defects are Rectified within their applicable Response Times and in accordance with the Activity Specifications.

.2 Compliance with clause A4-3 (Routine Maintenance Services)

A5-2.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review and may be measured at any other time in accordance with clause 68 (Application of Service Points).

Personal Information

A5-3. Performance Standard 3 - Safety

A5-3.1 Context

This Performance Standard defines the level of service required of the Contractor in the performance of the Services as regards safety.

A5-3.2 Standard

The Performance Standard for safety in the performance of Services is:

.1 All Services are carried out in accordance with all applicable OH & S Laws and codes of practice.

.2 Attention to the identification and management of safety risks and hazards before and during the performance of the Services and upon the occurrence of any incident or near miss.

.3 Compliance with clause A3-27 (Safety).

.4 Compliance with clause A3-28 (Traffic management).

.5 Compliance with clause 32 (Protecting people).

.6 No action is taken under the Contract with respect to a Safety Breach.

A5-3.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review and may be measured at any other time in accordance with clause 68 (Application of Service Points).

A5-4. Performance Standard 4 - Contract management

A5-4.1 Context

This Performance Standard defines the level of service required of the Contractor in the performance of the Services as regards the management of the Contract.

A5-4.2 Standard

The Performance Standard for contract management is:

.1 Compliance with clause A3-11 (Integrated Management Plan).

.2 Compliance with the Integrated Management Plan.

.3 Compliance with clause A3-12 (Management of the Contract).

.4 Issues arising in the management of the Contract are identified early and promptly referred to the Service Management Team.

.5 Compliance with the Contractor's obligations under clause 9 (Service Management Team).

A5-4.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review and may be measured at any other time in accordance with clause 68 (Application of Service Points)..

A5-5. Performance Standard 5 - Interface with Shire & customers

A5-5.1 Context

The Performance Standard defines the level of service required of the Contractor in the performance of the Services as regards its interface with the Shire and customers.

A5-5.2 Standard

The Performance Standard for interface with the Shire and customers is:

.1 Compliance with the service standards set out in the following table:

Activity	Performance Standard
Telephone Customers	90% of calls are answered within 20 seconds and 100% are answered within 120 seconds. The number of calls made by the caller held longer than 10 seconds does not exceed 3%. Calls are answered by the Contractor's staff in person between the hours of 7.00 am until 6.00 pm Monday to Friday (excluding public holidays).
Correspond-ence	Correspondence (including any Merit System service request) is acknowledged by card or letter or email (as appropriate) within 5 Business Days of receipt by the Shire (or, if the Shire delays more than 1 Business Day before passing it to the Contractor, within 5 Business Days of receipt by the Contractor). Advice of action is provided to customer within 10 further Business Days (by letter or phone). Notes of actions / advice to be recorded on service request within 2 Business Days. If the case is to take more than 10 Business Days to close the customer is advised of likely timeframe for a response.
Walk Ins	Walk-ins are treated promptly and efficiently at the Contractor's depot and follow up action occurs using the same procedures and timelines as for correspondence set out above. All contacts are entered into the Merit System.
On-site meetings	Where necessary or upon specific request from a customer, the Contractor takes reasonable steps to meet with the customer on-site within 5 Business Days of lodgement of a complaint or request with the Shire (or, if the Shire delays more than 1 Business Day before passing it to the Contractor, within 5 Business Days of receipt by the Contractor).

.2 Compliance with clause A3-18 (Customer service and community liaison)

A5-5.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review and may be measured at any other time in accordance with clause 68 (Application of Service Points).

A5-6. Performance Standard 6 - Inspections

A5-6.1 Context

This Performance Standard defines the level of service required of the Contractor in the performance of the Services as regards inspections and associated obligations such as the identification and recording of Defects, the identification and recording of Assets and the implementation of responses to Defects.

A5-6.2 Standard

The Performance Standard for inspections and associated obligations is:

.1 Compliance with the inspection frequencies required under the Road Management Plan.

.2 Compliance with clause A3-13 (Inspections).

.3 Compliance with clause A3-14 (Initiation of work).

.4 Compliance with clause A3-15 (Records of action taken).

.5 Compliance with clause A3-16 (Provision of AMIS and other data).

.6 Compliance with clause A3-17 (Asset Inventory).

.7 Compliance with clause A3-38 (Asset and data management requirements)

.8 Compliance with the program development obligations set out in Annexure 4 (Activity Specifications).

.9 Identification of Defects in an effective and timely manner consistent with the Contract and programming and implementation of required Rectification so as to ensure compliance with Response Times.

A5-6.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review and may be measured at any other time in accordance with clause 68 (Application of Service Points).

A5-7. Performance Standard 7 - Sustainability

A5-7.1 Context

This Performance Standard defines the level of service required of the Contractor in the performance of the Services as regards sustainability.

A5-7.2 Standard

The Performance Standard for sustainability is:

.1 By the end of the Accelerated Works Period, the following sustainability targets have been achieved and are maintained for the balance of the Contract Term:

- Greater than 80% of all pavement materials removed during the Annual Reseal Program are recycled or re-used within the Network provided that this is consistent with achieving the Required PCI, having regard to the technology and methods reasonably available at that time
- Reduction of greenhouse gases generated in the performance of the Services by 10% per annum due to work method chosen
- Recorded Environmental incidents caused by the Contractor in the performance of the Services or as a consequence of its failure to perform the Services as and when required are less than two (2) per annum.

.2 The Contractor's Agents include local residents and businesses.

.3 An approved program for a trainee to be employed by the Contractor in any one or more disciplines associated with this Contract has been implemented and is continuing.

.4 Compliance with clause A3-29 (Protection of Environment and heritage).

.5 Compliance with clause A3-30 (Sustainability).

A5-7.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review and may be measured at any other time in accordance with clause 68 (Application of Service Points).

A5-8. Performance Standard 8 - Emergency Management

A5-8.1 Context

This Performance Standard defines the level of service required of the Contractor in the performance of the Services as regards Emergency Management.

A5-8.2 Standard

The Performance Standard for Emergency Management is:

.1 Compliance with clause A3-20 (Emergency Management); and

.2 Compliance with clause A3-21 (MERO Services).

A5-8.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review and may be measured at any other time in accordance with clause 68 (Application of Service Points).

Personal Information

A5-9. Performance Standard 9 - Pavement Condition

A5-9.1 Context

This Performance Standard defines the level of service required of the Contractor in the performance of the Core Services as regards PCI Assessable Pavements in each PCI Road Category.

A5-9.2 Standard

The Performance Standard for PCI Assessable Pavements is:

.1 All surveys and data reporting for calculation of Measured PCI are undertaken by the dates specified in the Contract.

.2 The Required PCI for each PCI Road Category is maintained throughout the Contract Term.

The Required PCI for each PCI Road Category is as set out in the table below:

Road Asset	Total Length (km)	Total Area (m^2)	Required PCI*
CATEGORY A (Length Weighted)	203	1,479,150	82
CATEGORY B (Length Weighted)	141	1,028,041	77
CATEGORY C1 (Length Weighted)	248	1,593,882	74
CATEGORY C2 (Length Weighted)	651	3,757,955	89
CATEGORY D (Area Weighted)	24	212,166	89

* As calculated in accordance with Annexure 6A (Condition Monitoring) as at Contract Year 0 (1/7/2005 – 30/6/2006).

A5-9.3 Measurement

The Contractor's achievement of this Performance Standard will be measured each Pavement Performance Review Year at the Annual Review.

To determine the Contractor's performance against the Required PCI in each Pavement Performance Review Year ("PPR Year N"), the process for each PCI Road Category is to compare the Measured PCI against the Required PCI.

A5-9.4 Review of Performance Standard

The parties acknowledge and agree that:

.1 the Shire's requirements for assessment and measurement of the performance of the PCI Assessable Pavements, and the Contractor's ability to achieve the Required PCI for each PCI Road Category, may be affected over time by various factors including:

(a) Asset Inventory Changes;

(b) changes in Shire boundaries;

(c) changes in the anticipated level and volume of capital expenditure by the Shire whether by way of Shire Works or otherwise;

(d) work undertaken or not undertaken by others on the Assets;

(d) changes in policy and road funding priorities (including changes in Road Hierarchy); and

(e) the performance of works in progress at the time the data for measurement is required to be collected;

.2 in order to accommodate changes of the kind referred to in clause A5-9.4.1, the parties wish to further develop the Required PCI so that it is able to be adjusted each Pavement Performance Review Year to take account of change;

.3 the process for calculation of the adjustable Required PCI will be determined by the Service Management Team based on the joint recommendation of the parties' Asset Management Specialists and a deed of variation will be entered into to give effect to the change;

.4 the parties will use their best endeavours to ensure that the process and deed of variation referred to in .3 above are implemented prior to 1 July 2008; and

.5 until such time as the process and deed of variation referred to in .3 above are implemented, the Required PCI as established at the Commencement Date will continue to apply and to be binding on the parties, on and subject to the terms of the Contract.

A5-9.5 Outline of adjustable Required PCI

Unless otherwise agreed by the Service Management Team based on the joint recommendation of the parties' respective Asset Management Specialists, the provisions of the deed of variation for adjustable Required PCI referred to in clause A5-9.4 (Review of Performance Standard) will include:

.1 deletion of Annexure 6A (Condition Monitoring: Fixed PCI) and Annexure 6B (Condition Monitoring: Adjustable PCI Working Draft) and replacement with a new Annexure 6 (Condition Monitoring) incorporating PCI adjustment provisions (and associated provisions) developed from Annexure 6A and Annexure 6B (Condition Monitoring: Adjustable PCI Working Draft);

.2 deletion of this clause and clause A5-9.4;

.3 replacement of all references to Annexure 6A with references to Annexure 6;

.4 deletion of all references to Annexure 6B;

.5 new or amended definitions in Annexure 1 (Definitions) as needed to support the revised Annexure 6 (Condition Monitoring) which may include the following (with clause and schedule references amended as appropriate):

Agreed Rates of Deterioration means the rates set out in schedule A6-18 (Agreed Rates of Deterioration), as those rates may be adjusted from time to time by the Service Management Team based on a joint recommendation by the parties' respective Asset Management Specialists.

PCI Assessable Pavements means the traffic lanes of a Road Asset that is sealed with a surfacing other than concrete or segmented paving.

Required PCI means, for each PCI Road Category:

(a) in the first PPR Year, the PCI specified in Performance Standard 9 (Pavement Condition) for that PCI Road Category; and

(b) in any subsequent PPR Year (PPR Year N), the Required PCI for that PCI Road Category and that PPR Year determined, as applicable, in accordance with clause A6-7.1 (Determining Required PCI for A, B and C1) or clause A6-8.1 (Determining Required PCI for C2 and D) during PPR Year N-1.

Road Schedule has the meaning given in clause A6.4 (Road Schedule); and

.6 an amendment to this Performance Standard to reflect the fact that the Required PCI will be adjusted each Pavement Performance Year after the variation is effected.

A5-9.6 Status quo

Until the effective date of the deed of variation referred to in this clause:

.1 Annexure 6A (Condition Monitoring: Fixed PCI) is binding on the parties and Annexure 6B (Condition Monitoring: Adjustable PCI working draft) has no contractual effect (other than as a guideline for the development of the replacement Annexure 6 (Condition Monitoring)); and

.2 References to Annexure 6 (Condition Monitoring) are references to Annexure 6A (Condition Monitoring: Fixed PCI).

A5-10. Performance Standard 10 - Ordered Work

A5-10.1 Context

This Performance Standard defines the level of service required of the Contractor in the performance of Ordered Work.

A5-10.2 Standard

The Performance Standard for performance of Ordered Work is satisfactory Completion of that Ordered Work in accordance with the requirements of the Work Order Documents.

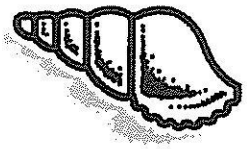
A5-10.3 Measurement

The Contractor's achievement of this Performance Standard will be measured at each Annual Review and may be measured at any other time in accordance with clause 68 (Application of Service Points).

Annexure 6A

Condition monitoring: Fixed PCI

Safer Local Roads
Contract No. 1218



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Annexure 6A – Condition monitoring: Fixed PCI

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Annexure 6A –Condition monitoring

Fixed PCI

A6-1. Introduction

This Annexure sets out the Contractor's obligations in relation to the monitoring and measurement of the Condition of the PCI Assessable Pavements.

During each Pavement Performance Review Year, the Contractor must assess the Condition of the PCI Assessable Pavements and determine whether they have achieved the Required PCI.:

This Annexure sets out how this is to be done and the methodology to be applied.

A6-2. PCI Road Categories & coverage

A6-2.1 Special PCI Road Categories, based on the Road Hierarchy from the Road Management Plan (listed in Schedule A6-1 (Road Hierarchy) have been adopted for the purposes of the Contract to distinguish between those Roads on which automated testing can be undertaken and those whose Condition can only be assessed visually.

The PCI Road Categories are indicated in Schedule A6-2 (PCI Road Categories).

A6-2.2 "Sealed" roads indicate roads predominantly sealed using bituminous surfacing products (including spray (chip) seal, slurry seal and microsurfacing and asphalt). Roads predominantly surfaced by non-bituminous products i.e. concrete, segmental paving etc. are not included in PCI performance review assessments and are not subject to this Annexure.

A6-3. Condition Assessments

A6-3.1 In each Pavement Performance Review Year, the Contractor must engage an accredited and Shire approved subcontractor(s) ("Condition Assessor") to undertake Condition assessments (both automated and visual) of the PCI Assessable Pavements in accordance with the requirements as specified in this Annexure.

A6-3.2 The Contractor must use the same Condition Assessor for each Pavement Performance Review, unless the Service Management Team approves the use of an alternative (such approval not to be unreasonably withheld).

A6-3.3 All data provided to the Contractor by the Condition Assessor must be provided to the Shire within 7 days of being received by the Contractor.

A6-3.4 Schedule A6-4 (Conditions to be assessed for PCI) indicates the pavement conditions required to be assessed for the purposes of this Annexure.

A6-4. Road Schedule

A6-4.1 For the purposes of undertaking its assessment, the Condition Assessor must be given the Road Schedule for each PCI Road Category showing the roads for which data is to be collected and details of the prescribed and counter directions, where appropriate.

A6-4.2 The Road Schedules for each PCI Road Category are schedules A6-20 (Road Schedule for PCI Categories A, B and C1) and schedule A6-21 (Road Schedule for PCI Road Categories C2 and D).

A6-5. Automated Pavement Condition Assessment

A6-5.1 **Use of automated pavement condition assessment**

The Contractor must use automated pavement condition testing on PCI Assessable Pavements falling within the PCI Road Categories A, B and C1.

A6-5.2 **Condition Assessment**

In undertaking automated assessments, the Condition Assessor must assess the following Conditions in accordance with the PCI Automated Data Collection and Reporting Specification:

Roughness - a condition parameter that characterises deviations from the intended longitudinal profile of a road surface, with characteristic dimensions that affect vehicle dynamics (and hence road user costs), ride quality and dynamic pavement loading. A measure of surface irregularities with wavelengths between 0.5m and 50m in the longitudinal profile of one or two wheel tracks in a traffic lane, reported in dimensionless units as either International Roughness Index (IRI, m/km) or as NAASRA Roughness Meter counts (NRM, counts/km) for the lane.

Rutting - a condition parameter to characterise the transverse profile of a pavement. Longitudinal deformation in a wheelpath, with a length/width ratio greater than 4:1. May occur in one or both wheelpaths of a lane.

Texture Depth - an indication of the volume through which water may escape from the interface between a tyre and the road surface.

A6-5.3 **Specification for Automated Data Collection**

The Contractor must develop a detailed specification for automated pavement condition data collection (PCI Automated Data Collection and Reporting Specification) and must ensure that the Condition Assessor is contractually bound to comply with it.

As a minimum, the PCI Automated Data Collection and Reporting Specification must include the following requirements:

(a) Collection of Condition Data (Automated) by automated means for the selection of roads as provided in a 'Road Schedule'.

(b) Assessment methods and Conditions to be assessed, consistent with schedule A6-4 (Conditions to be assessed for PCI).

(c) Use of the ARRB TR Test Method, utilising a multi laser profilometer (MLP). (Minimum 13 laser units and two accelerometers). The profilometer must conform as a "Class 1 Profile Measuring Device".

(d) The survey is to be conducted as described below:

(1) The Condition Assessor must survey the selected roads in both the prescribed and counter directions for Category A and B roads and in the prescribed direction only for Category C1 roads. (The prescribed direction is to be identified on the Road Schedule).

(2) Where more than two lanes exist, only the left or slow lane will be surveyed.

(3) The Condition Assessor will ensure that the driver of the data collection vehicle is able to accurately locate start and end chainages and is able to accurately report the data in 100 metre intervals and in lengths less than 100 metres at the end of runs.

(e) For PCI Road Categories A and B, the survey data will be quality assured, checked for accuracy and reported in accordance with the timeframes specified in schedule A6-6 (Condition Data Collection and Reporting Dates) and the formats specified in schedules A6-7 (Roughness Reporting Format PCI Road Categories A and B), A6-8 (Rutting Reporting

Format PCI Road Categories A and B) and A6-9 (Surface Texture Reporting Format PCI Road Categories A and B). Copies of the data must be supplied to both the Contractor and the Shire.

(f) For PCI Road Category C1, the survey data will be quality assured, checked for accuracy and reported in accordance with the timeframes specified in Schedules A6-6 (Condition Data Collection and Reporting Dates) and the formats specified in schedules A6-10 (Roughness Reporting Format PCI Road Category C1), A6-11 (Rutting Reporting Format PCI Road Category C1) and A6-12 (Surface Texture Reporting Format PCI Road Category C1). Copies of the data must be supplied to both the Contractor and the Shire.

(g) Extraneous items such as speed humps, roundabouts, slow points, railway tracks are to be denoted with a comment and removed from final data calculations.

(h) The Condition Assessor must provide the following information as a minimum:

(1) a statement of methodology that includes:

- Equipment used
- Survey method, including in-process checks
- Method of analysing roughness, rutting and texture
- Filtering algorithms used
- Any other processing or reporting features

(2) an indicative works program to indicate the expected time frames for survey and reporting requirements that includes:

- Proposed weekly survey program of roads
- Hold points
- Data processing time frames
- Data acceptance period.

(i) All works are to be carried out in accordance with all relevant OH & S arrangements. As testing is undertaken as a 'mobile' site, the Condition Assessor must comply with the appropriate Australian Standards for the collection of Multi-Laser

Profilometer data. Testing vehicles will be fitted with appropriate warning signs and lighting.

A6-6. Visual Pavement Condition Assessment Requirements

A6-6.1 Use of Visual Pavement Condition Data

The Contractor must collect the Condition Data (Visual) by visual assessment in accordance with this clause A6-6 on all PCI Road Categories to the extent set out in Schedule A6-4 (Conditions to be assessed for PCI).

A6-6.2 PCI Condition definitions

Conditions to be assessed visually in accordance with the PCI Visual Data Collection and Reporting Specification are as follows:

Crocodile Cracking - interconnected or interlaced cracks forming a series of small polygons resembling a crocodile hide. Usually associated with wheelpaths and may have a noticeable longitudinal grain. Cell sizes are generally less than 150mm across but may extend up to 300mm.

Flushing - immersion, partially or completely, of the aggregate into the bituminous binder causing low texture depth and inadequate tyre-to-stone contact.

Stripping - removal of the coarse aggregate of a seal leaving the binder exposed to tyre contact. It can happen as the loss of individual stones, or as the complete loss of stone in a localised area.

Pavement Defects – localised rutting, shoving, depressions and failures, as defined below:

Localised rutting – as defined for Condition Data (Automated), but confined to a localised area.

Localised shoving - bulging of the road surface generally parallel to the direction of traffic and/or horizontal displacement of surfacing materials, mainly in the direction of traffic where braking or acceleration movements occur. Transverse shoving may arise with turning movements.

Localised depressions - localised areas within a pavement with elevations lower than the surrounding area. May not be confined to wheelpaths and could extend across several wheelpaths.

Localised failures – localised loss of shape and geometry of the road structure; localised loss of structural integrity of the pavement or subgrade deformation or localised breakdown of

one or more of the pavement components, of such magnitude as to make the pavement incapable of sustaining the loads imposed on its surface but only to the extent requiring dig-outs and patching and not to the extent requiring pavement rehabilitation unless the need for pavement rehabilitation is due to a default by the Contractor in the performance of the Services.

A6-6.3 **Specification for Visual Data Collection**

The Contractor must develop a detailed specification for the collection of Condition Data (Visual) (PCI Visual Data Collection and Reporting Specification) and must ensure that the Condition Assessor is contractually bound to comply with it.

As a minimum, the PCI Visual Data Collection and Reporting Specification must include the following requirements:

(1) Collection of Condition Data (Visual) by visual means as indicated in clause A6-6.4 (Condition Data (Visual) for the selection of roads as provided in a Road Schedule.

(2) All data shall be collected by foot in 25m sub-segments in urban areas and by foot or vehicle (travelling at speeds no faster than 20kph) in 100m sub-segments in rural areas.

(3) All data is to be reported in electronic format and collected in 25m and 100m intervals, referenced to pre-defined Mornington Peninsula Shire road segment identifiers as provided in the Road Schedule. Each data set for each 25m/100m sub-segment is to be reported in both database records and the locations identified spatially (GPS coordinate) as specified in the defined reporting formats (refer schedule A6-13 (Reporting Format for Condition Data (Visual)).

(4) Data collected must in all cases represent the condition taking into account the entire seal width of the pavement.

(5) The survey data must adhere to documented quality control and both field and office auditing processes, and be quality assured and reported in accordance with the defined reporting formats.

(6) All quality control and field and data audit processes must be documented and reported to the Contractor at handover of data.

(7) All visual assessments must be undertaken during daylight hours, and must not be undertaken whilst the road pavement is wet.

(8) Visual assessment data is to be supplied to both the Contractor and the Shire in either Microsoft Excel Spreadsheet or Microsoft Access Database files in adherence with the timeframes specified in schedule A6-6 (Condition Data Collection and Reporting Dates) and the formats specified in schedule A6-13 (Reporting Format for Condition Data (Visual)).

(9) Spatially referenced visual assessment data points at each 25m/100m (or part thereof at end of defined road segments) must be forwarded to the Contractor and the Shire in MapInfo table or alternative shape file formats in accordance with GDA94 projection.

(10) A generic clause addressing adherence to necessary safety plans/processes referencing all appropriate standards.

A6-6.4 **Collection and reporting of Condition Data (Visual)**

The following Condition Data (Visual) must be collected and reported in accordance with the following requirements:
Crocodile Cracking must be identified in accordance with the *'Austroads Guide to the Visual Assessment of Pavement Condition 1987'* and reported as an extent (estimated number of square metres) of the sub-segment surface affected by each of two categories of severity (<3mm wide & >3mm wide). The area affected and predominant severity must be assessed and recorded each 25m or 100m sub-segment as the area of all cracking (regardless of type) plus a 250mm radial zone of influence, with the crocodile component within that area, estimated and recorded as a decimal ratio. The decimal ratio will later enable the distribution of crocodile vs. lineal cracking from the total area of all cracking recorded.

Pavement defects consist of all distresses associated with pavement structure problems and are typically displayed as areas of distortion (predominantly greater than 25mm) from the surrounding pavement surface level and typically are those listed in schedule A6-5 (Austroads Distress). They must be recorded for each 25m or 100m sub-segment as an extent (estimated number of square metres) of the sub-segment surface affected by the defects.

Stripping is to be collected as a single severity and the extent of area of the segment surface significantly affected is to be reported. It must be identified in accordance with the *'Austroads Guide to the Visual Assessment of Pavement Condition 1987'*. Stripping is normally associated with spray seal surfaces. It must be recorded for each 25m or 100m sub-segment as an extent (estimated number of square metres) of the sub-

segment surface affected by the defect. (Assessment of this defect can be highly subjective as the severity of surface stone loss changes considerably across the segment and the extent of significant loss will appear quite different in varying ambient lighting conditions) such as overcast, sunny, afternoon or morning lighting.

Flushing (also termed **bleeding**) must be identified in accordance with the *'Austroads Guide to the Visual Assessment of Pavement Condition 1987'*. Flushing must be recorded for each 25m or 100m sub-segment as an extent (estimated number of square metres) of the sub-segment surface affected by the flushing. (Assessment of this flushing can be highly subjective as the extremities usually fade in to view without a defined boundary. Interpretation of the boundary location is greatly effected by ambient lighting conditions and therefore highly variable results may be achieved).

A6-7. Calculation methodology for PCI Road Categories A, B & C1

A6-7.1 Application to determine Measured PCI for A, B and C1

The parties acknowledge and agree that:

(a) the Required PCI for PCI Road Categories A, B and C1 has been calculated by applying the methodology set out in this clause A6-7.

(b) the Measured PCI for PCI Road Categories A, B and C1 for each PPR Year will be calculated by:

(1) firstly, taking the data collected under clauses A6-5 (Automated Pavement Condition Assessment) and A6-6 (Visual Pavement Condition Assessment Requirements) for that PPR Year;

(2) secondly, applying the methodology set out in this clause A6-7 to the above data.

A6-7.2 PCI Calculation Methodology Road Categories A, B & C1

The processes, data required and calculation methodologies for PCI Road Categories A, B and C1 are summarised in schedule 6-14 Figure 1 (PCI Calculation Process Flow Chart for Road Categories A, B and C1).

A6-7.3 Data required for PCI calculation

The following data is required in order to calculate the PCI for PCI Road Categories A, B or C1:

(a) Condition Data (Automated) - Roughness (NAASRA), Rutting (Rut depth mm) and Texture Depth (SMTD)
- 100m interval

(b) Condition Data (Visual) – Crocodile Cracking and Flushing (% Area)
- 25m interval

(c) Road sections data – Block ID, PCI Road Category, surface type, trafficable area and surface age
- 100m interval

A6-7.4 **PCI calculation process**

The process for calculation of the PCI for PCI Road Categories A, B and C1 is as follows:

(a) Transformation – Data Transfer

(1) Transfer Condition Data (Automated) into the predefined road network's 100m sections
- the data transfer methodology is based on length weighted average approach

(2) Transfer Condition Data (Visual) into the predefined road network's 100m sections
- the data transfer methodology is based on summation approach

(b) Condition data calculation for each 100m road section

(1) Roughness:

Average Roughness

$$= \frac{\text{NAASRA Left + NAASRA Right}}{2}$$

(2) Rutting:

Maximum Rut Depth

= Max Rut Depth (IWP Left, OWP Left, IWP Right, OWP Right

(3) Texture Depth

Minimum Texture Depth

= Min Text Depth (IWP Left, OWP Left, IWP Right, OWP Right

(3) Cracking

% Cracked Area

(4) Flushing
% Flushed Area

(c) Condition Index Conversions

The condition index conversions are set out in schedule A6-15 (Condition Index Conversions).

(d) Apply % contributions (Category A and B) to each of the index

- Condition data = 65%
  - Roughness = 30%
  - Rutting = 15%
  - Texture & Flushing = 30%
  - Cracking = 25%
- Surface age = 35%

(e) Apply % contributions (Category C1) to each of the indices

- Condition data = 75%
  - Roughness = 25%
  - Rutting = 15%
  - Texture & Flushing = 30%
  - Cracking = 30%
- Surface age = 25%

Surface Age at Contract Year 0 = 2005 minus the year of wearing course application, Surface Age at Contract Year 3 = 2008 minus the year of wearing course application, etc.

(f) Sum up all individual weighted PCI to calculate the FINAL PCI for each 100m section.

(g) Length weighted average of all 100m section FINAL PCIs to calculate the overall PCI for the PCI Road Category.

A6-8. Calculation methodology for PCI Road Categories C2 & D

A6-8.1 Application to determine Measured PCI for C2 and D

The parties acknowledge and agree that:

(a) the Required PCI for PCI Road Categories C2 and D has been calculated by applying the methodology set out in this clause A6-8;

(b) the Measured PCI for PCI Road Categories C2 and D for each PPR Year will be calculated by:

(1) firstly, taking the data collected under clause A6-6 (Visual Pavement Condition Assessment Requirements) for that PPR Year;

(2) secondly, applying the methodology set out in this clause A6-8 to the above data.

A6-8.2 **Overview**

The processes, data required and calculation methodologies for PCI Road Categories C2 and D are summarised in schedule A6-14 Figure 2 (PCI Calculation Process Flow Chart for Road Categories C2 and D).

A6-8.3 **Data required for PCI calculation**

The following data is required to calculate the PCI for PCI Road Categories C2 and D:

(a) Condition Data (Visual) – Pavement Defects, Crocodile Cracking, Stripping and Flushing (% Area)

- 25m interval

(b) Road sections data – Block ID, PCI Road Category, surface type, trafficable area and surface age

- 100m interval

A6-8.4 **PCI calculation process**

The process for calculation of the PCI for PCI Road Categories C2 and D is follows:

(a) Transformation – data transfer

- Transfer Condition Data (Visual) into the predefined road network's 100m sections
  - The data transfer methodology is based on summation approach

(b) Condition data calculation for each 100m road section

- Cracking
  % Cracked Area
- Flushing
  % Flushed Area
- Pavement Defects
  % Pavement Defective Area
- Stripping
  % Stripped Area

(c) Condition Index conversion

- Cracking
  100 - % Cracked Area
- Flushing
  100 - % Flushed Area
- Pavement Defects
  100 - % Pavement Defective Area
- Stripping
  100 - % Stripped Area
- Surface Age
  Refer schedule A6-15, Tables 4 and 5 for Condition Index Conversions for Surface Age.

(d) Apply % contributions (Category C2) to each of the index

- Condition data = 75%
  - Cracking = 25%
  - Pavement Defects = 25%
  - Flushing = 25%
  - Stripping = 25%
- Surface age = 25%

(e) Apply % contributions (Category D) to each of the index

- Condition data = 80%
  - Cracking = 25%
  - Pavement Defects = 25%
  - Flushing = 25%
  - Stripping = 25%
- Surface age = 20%

Surface Age at Contract Year 0 = 2005 minus the year of wearing course application, Surface Age at Contract Year 3 = 2008 minus the year of wearing course application, etc. schedule

(f) Sum up all individual weighted PCI to calculate the FINAL PCI for each of 100m section

(g) Length weighted average of all 100m section FINAL PCI to calculate the overall PCI for the PCI Road Category.

A6-9. Calculation methodology – Asset Inventory Change All PCI Road Categories

Not used.

A6-10. Determination of PCI Points

Not used.

A6-11. Condition Assessment Reporting

A6-11.1 Sealed Road Network Condition Assessment Reporting

The Contractor must provide a fully documented Condition assessment report to the Shire indicating achieved pavement performance and updated and forecast performance levels, adhering to the reporting frequencies set out in schedule A6-6 (Condition Data Collection and Reporting Dates) and reporting formats as specified in schedule A6-19. (Reporting Formats for Sealed Road Network Condition Assessment).

Schedule A6-19 (Reporting Formats for Sealed Road Network Condition Assessment) provides general examples of data requirements and formats to be followed when producing network condition reports for the Shire. The data to be provided need not be limited to that listed, and may include other graphs, lists, and projected outcomes based upon varying funding scenarios, or as requested by the Service Management Team.

A6-11.2 Specific PCI Road Category reporting

The Contractor must report in detail to the Shire in relation to any Measured PCI for a PCI Road Category calculated from updated condition data in a Pavement Performance Review Year that indicates a reduction in value from the then Required PCI.

The report must indicate reasons for the PCI reduction, and must be submitted to the Service Management Team at the same time as the draft Cure Plan under clause 69 (Cure of PCI Default Events).

Schedule A6-1 - Road Hierarchy

Table 1. Mornington Peninsula Shire Road Hierarchy in Rural Areas

Road Class	Class Type	Service Function Description	Brief Description RURAL AREAS
4A	Rural Arterial	Provides primarily for the main connection from town centres and local areas to the wider State main road network	Two way, two-lane, mainly sealed
4B	Rural Collector	Provides for collecting and distributing traffic and acting as a feeder service to local arterial roads	Two-way, two-lane sealed or unsealed road
4C	Rural Access	Provides predominantly for direct access to properties, recreational areas and industries in urban and rural zones	Two-way, mainly two lane sealed or unsealed road
4D	Rural Limited Access	Provides primarily for limited access and in rural areas using four wheel-drive vehicles	Two-way, unformed single lane track with limited geometry and possible access restrictions imposed

Table 2. Mornington Peninsula Shire Road Hierarchy in Urban Areas

Road Class	Class Type	Service Function Description	Brief Description URBAN AREAS
8A	Urban Arterial	Provides primarily for the main connection from, urban centres and local areas to the wider State main arterial road network	Generally a four lane, or two lane two-way sealed road with parking provisions on both sides.
8B	Urban Collector	Provides for collecting and distributing traffic and acting as a feeder service to local arterial roads	Mainly a two lane, two-way sealed road with commonly parking on one side
8C	Urban Access	Provides predominantly for direct access to properties, recreational areas and industries in urban zones	A two lane, two-way sealed road, or unsealed road
8D	Urban Limited Access	Provides primarily for limited access to rear of properties or within recreational parks	General one lane, two way road at the rear of properties or informal tracks within recreational parks

Schedule A6-2 - PCI Road Categories

PCI ROAD CATEGORY	DEFINITION
A	Sealed Arterial Roads
B	Sealed Collector Roads
C1	Sealed Local Access Roads able to have Automated Condition Assessment
C2	Sealed Local Access Roads not able to have Automated Condition Assessment
D	Sealed Limited Access Roads and Car Parks

Schedule A6-3 - Pavement Performance Review Years

CONTRACT YEAR	CONTRACT YEAR 0 (Benchmark)	CONTRACT YEAR 3 (PPR Year 1)	CONTRACT YEAR 6 (PPR Year 2)	CONTRACT YEAR 9 (PPR Year 3)	CONTRACT YEAR 12 (PPR Year 4)	CONTRACT YEAR 14 (PPR Year 5)
ALSO KNOWN AS	YEAR 2005	YEAR 2008	YEAR 2011	YEAR 2014	YEAR 2017	YEAR 2019
DATES	1/7/2005 – 30/6/2006	1/7/2008 – 30/6/2009	1/7/2011 – 30/6/2012	1/7/2014 – 30/6/2015	1/7/2017 – 30/6/2018	1/7/2019 – 30/6/2020

Schedule A6-4 - Conditions to be assessed for PCI

PCI ROAD CATEGORY	DEFINITION	ASSESSMENT METHOD	CONDITIONS TO BE ASSESSED
A	Arterial	Automated Field Survey Condition Data – collected in both directions	Roughness Rutting Texture Depth
		Visual Field Survey Condition Data	Flushing* Crocodile Cracking
		Database records	Surface Age
B	Collector	Automated Field Survey Condition Data – collected in both directions	Roughness Rutting Texture Depth
		Visual Field Survey Condition Data	Flushing* Crocodile Cracking
		Database records	Surface Age
C1	Access (able to have Automated Assessment)	Automated Field Survey Condition Data – collected in prescribed direction only	Roughness Rutting Texture Depth
		Visual Field Survey Condition Data	Flushing* Crocodile Cracking
		Database records	Surface Age
C2	Access (not able to have Automated Assessment)	Visual Field Survey Condition Data	Stripping Flushing* Crocodile Cracking Pavement Defects
		Database records	Surface Age
D	Limited Access & Car Parks	Visual Field Survey Condition Data	Stripping Flushing* Crocodile Cracking Pavement Defects
		Database records	Surface Age

* Also termed bleeding

Schedule A6-5 – Austroads Distress

DEFECT CATEGORY	AUSTROADS DISTRESS
Crocodile Cracking	Crocodile cracking.
Lineal Cracking	Transverse, Diagonal, Longitudinal and Meandering Cracking.
Pavement Defects	Localised rutting, shoving, depressions and failures.
Edge Defects	Edge break, edge drop.
Stripping	Stripping.
Flushing	Flushing, Bleeding.
Ravelling	Ravelling.
Surface Defects	Potholes, delamination, surface disintegration.

Schedule A6-6 - Condition Data Collection & Reporting Dates

Survey Type	Contract Year	Dates of Data Collection	Date of Report to Shire
Automated (PCI Road Categories A, B, C1) and visual (All PCI Road Categories)	Year 3	1/10/2008 – 31/1/2009	No later than 31/5/2009
Automated (PCI Road Categories A, B, C1) and visual (All PCI Road Categories)	Year 6	1/10/2011 – 31/1/2012	No later than 31/5/2012
Automated (PCI Road Categories A, B, C1) and visual (All PCI Road Categories)	Year 9	1/10/2014 – 31/1/2015	No later than 31/5/2015
Automated (PCI Road Categories A, B, C1) and visual (All PCI Road Categories)	Year 12	1/10/2017 – 31/1/2018	No later than 31/5/2018
Automated (PCI Road Categories A, B, C1) and visual (All PCI Road Categories)	Year 14	1/10/2019 – 31/1/2020	No later than 31/5/2020

The above network condition reporting time frames are subject to updated pavement performance review year condition data being supplied within the designated data collection periods as specified in schedule A6-6 (Condition Data Collection and Reporting Dates). Should condition data not be supplied and forwarded to the Contractor within required network condition reporting time frames, an extension of time to supply network condition reports to the Shire may be agreed subject to the approval of the Service Management Team.

Schedule A6-7 - Roughness Reporting Format PCI Road Categories A and B

(Reported at 100m Intervals)

Field Description			Column Name	Units	Example	
Road Name			ROAD_NAME		Elizabeth Street	
Road No			ROAD_NO		122900	
Segment No			START_SEG_NO		1	(if segmentation has been defined)
Chainage - Start			START_CHNG	Km	0.00	
Chainage - End			END_CHNG	Km	0.10	
Carriageway Type			CWAY_CODE		A	(if carriageway has been defined)
Lane Group Code			LANE_GROUP_CODE		U	(Undivided or Divided)
Direction of Travel			TRAVEL_DIRECTION_CODE	CD	PD or (CD)	(Road Schedule to identify prescribed direction)
Roughness	NAASRA Lane	PD	NAS_LANE_PD	NRM	76	
		CD	NAS_LANE_CD	NRM	70	
		Ave	NAS_LANE_AVE	NRM	73	
Roughness	NAASRA Avg	PD	NAS_AVE_PD	NRM	66	
		CD	NAS_AVE_CD	NRM	61	
		Ave	NAS_AVE_AVE	NRM	64	
Roughness	IRI Lane	PD	IRI_LANE_PD	IRI	2.53	
		CD	IRI_LANE_CD	IRI	2.68	
		Ave	IRI_LANE_AVE	IRI	2.61	
Roughness	IRI Avg	PD	IRI_AVE_PD	IRI	2.53	
		CD	IRI_AVE_CD	IRI	2.03	
		Ave	IRI_AVE_AVE	IRI	2.28	
Date - Survey			DATE_COLLECTED		03/01/2005	
Comments			ROU_COMMENT		0.082 - Hump	

Data to be supplied in comma delimited .txt file with the column names on the first line.

Schedule A6-8 - Rutting Reporting Format PCI Road Categories A and B

(Reported at 100m Intervals)

Field Description				Column Name	Units	Example	
Road Name				ROAD_NAME		Elizabeth Street	
Road No				ROAD_NO		122900	
Segment No				START_SEG_NO		1	(if segmentation has been defined)
Chainage - Start				START_CHNG	km	0.00	
Chainage - End				END_CHNG	km	0.10	
Carriageway Type				CWAY_CODE		A	(if carriageway has been defined)
Lane Group Code				LANE_GROUP_CODE	U	U or D	(Undivided or Divided)
Direction of Travel				TRAVEL_DIRECTION CODE	CD	PD or CD	(Road Schedule to identify prescribed direction)
Rutting	OWP	<10mm	PD	OWP_LT_10	%	94	
		10-20mm	PD	OWP_10_TO_20	%	5	
		>20mm	PD	OWP_GT_20	%	1	
		Avg Depth	PD	OWP_PAVE	mm	5	
	IWP	<10mm	PD	IWP_LT_10	%	100	
		10-20mm	PD	IWP_10_TO_20	%	0	
		>20mm	PD	IWP_GT_20	%	0	
		Avg Depth	PD	IWP_PAVE	mm	2	
Rutting	OWP	<10mm	CD	OWP_LT_10	%	94	
		10-20mm	CD	OWP_10_TO_20	%	5	
		>20mm	CD	OWP_GT_20	%	1	
		Avg Depth	CD	OWP_PAVE	mm	5	
	IWP	<10mm	CD	IWP_LT_10	%	100	
		10-20mm	CD	IWP_10_TO_20	%	0	
		>20mm	CD	IWP_GT_20	%	0	
		Avg Depth	CD	IWP_PAVE	mm	2	
Date - Survey				DATE_COLLECTED		03/01/2005	
Comments				RUT_COMMENT		0.325 - Bridge	

Data to be supplied in comma delimited .txt file with the column names on the first line.

Schedule A6-9 - Surface Texture Reporting Format PCI Road Categories A and B

(Reported at 100m Intervals)

Field Description				Column Name	Units	Example	
Road Name				ROAD_NAME		Elizabeth Street	
Road No				ROAD_NO		122900	
Segment No				START_SEG_NO		1	(if segmentation has been defined)
Chainage - Start				START_CHNG	km	0.00	
Chainage - End				END_CHNG	km	0.10	
Carriageway Type				CWAY_CODE		A	(if carriageway has been defined)
Lane Group Code				LANE_GROUP_CODE	U	U or D	(Undivided or Divided)
Direction of Travel				TRAVEL_DIRECTION_CODE	CD	PD or CD	(Road Schedule to identify prescribed direction)
	Flushing	PD	OWP	FLUSH_OWP	%	81	
		PD	IWP	FLUSH_IWP	%	76	
	Sand Circle Diameter	PD	OWP	SCD_OWP	mm	322	
		PD	IWP	SCD_IWP	mm	314	
	Texture Depth	PD	OWP	SMTD_OWP		0.32	
		PD	IWP	SMTD_IWP		0.32	
	Flushing	CD	OWP	FLUSH_OWP	%	81	
		CD	IWP	FLUSH_IWP	%	76	
	Sand Circle Diameter	CD	OWP	SCD_OWP	mm	322	
		CD	IWP	SCD_IWP	mm	314	
	Texture Depth	CD	OWP	SMTD_OWP		0.32	
		CD	IWP	SMTD_IWP		0.32	
Date - Survey				DATE_COLLECTED		03/01/2005	
Comments				TEXT_COMMENT		0.325 - Bridge	

Data to be supplied in comma delimited .txt file with the column names on the first line.

Schedule A6-10 - Roughness Reporting Format PCI Road Category C1

(Reported at 100m Intervals)

Field Description			Column Name	Units	Example	
Road Name			ROAD_NAME		Elizabeth Street	
Road No			ROAD_NO		122900	
Segment No			START_SEG_NO		1	(if segmentation has been defined)
Chainage - Start			START_CHNG	km	0.00	
Chainage - End			END_CHNG	km	0.10	
Carriageway Type			CWAY_CODE		A	(If carriageway has been defined)
Lane Group Code			LANE_GROUP_CODE	U	U or D	(Undivided or Divided)
Direction of Travel			TRAVEL_DIRECTION_CODE	PD	PD	(Road Schedule to identify prescribed direction)
Roughness	NAASRA Lane	PD	NAS_LANE_PD	NRM	76	
	NAASRA Avg	PD	NAS_AVE_PD	NRM	66	
	IRI Lane	PD	IRI_LANE_PD	IRI	2.53	
	IRI Avg	PD	IRI_AVE_PD	IRI	2.53	
Date - Survey			DATE_COLLECTED		03/01/2005	
Comments			ROU_COMMENT		0.082 - Hump	

Data to be supplied in comma delimited .txt file with the column names on the first line.

Schedule A6-11 - Rutting Reporting Format PCI Road Category C1

(Reported at 100m Intervals)

Field Description				Column Name	Units	Example	
Road Name				ROAD_NAME		Elizabeth Street	
Road No				ROAD_NO		122900	
Segment No				START_SEG_NO		1	(If segmentation has been defined)
Chainage - Start				START_CHNG	km	0.00	
Chainage - End				END_CHNG	km	0.10	
Carriageway Type				CWAY_CODE		A	(if carriageway has been defined)
Lane Group Code				LANE_GROUP_CODE	U	U or D	(Undivided or Divided)
Direction of Travel				TRAVEL_DIRECTION_CODE	PD	PD	(Road Schedule to identify prescribed direction)
Rutting	OWP	<10mm	PD	OWP_LT_10	%	94	
		10-20mm	PD	OWP_10_TO_20	%	5	
		>20mm	PD	OWP_GT_20	%	1	
		Avg Depth	PD	OWP_PAVE	mm	5	
	IWP	<10mm	PD	IWP_LT_10	%	100	
		10-20mm	PD	IWP_10_TO_20	%	0	
		>20mm	PD	IWP_GT_20	%	0	
		Avg Depth	PD	IWP_PAVE	mm	2	
Date - Survey				DATE_COLLECTED		03/01/2005	
Comments				RUT_COMMENT		0.325 – Bridge	

Data to be supplied in comma delimited .txt file with the column names on the first line.

Schedule A6-12 - Surface Texture Reporting Format PCI Road Category C1

(Reported at 100m Intervals)

Field Description				Column Name	Units	Example	
Road Name				ROAD_NAME		Elizabeth Street	
Road No				ROAD_NO		122900	
Segment No				START_SEG_NO		1	(if segmentation has been defined)
Chainage - Start				START_CHNG	km	0.00	
Chainage - End				END_CHNG	km	0.10	
Carriageway Type				CWAY_CODE		A	(if carriageway has been defined)
Lane Group Code				LANE_GROUP_CODE	U	U or D	(Undivided or Divided)
Direction of Travel				TRAVEL_DIRECTION_CODE	PD	PD	(Road Schedule to identify prescribed direction)
	Flushing	PD	OWP	FLUSH_OWP	%	81	
		PD	IWP	FLUSH_IWP	%	76	
	Sand Circle Diameter	PD	OWP	SCD_OWP	mm	322	
		PD	IWP	SCD_IWP	mm	314	
	Texture Depth	PD	OWP	SMTD_OWP		0.32	
		PD	IWP	SMTD_IWP		0.32	
Date - Survey				DATE_COLLECTED		03/01/2005	
Comments				TEXT_COMMENT		0.325 - Bridge	

Data to be supplied in comma delimited .txt file with the column names on the first line.

Schedule A6-13 - Reporting Format for Condition Data (Visual)

Reported at 25m/100m Intervals (or part thereof at end of defined road)

GIS ID	Location ID	PMS Segment	Start Chain -age	End Chain -age	Crack Ext	Crack Sev	Croc Ratio	Pave Defect Ext	Surface Defect Ext	Edge Defect Ext	Stripping Ext	Flushing Ext	Ravelling Ext	Comments	Inspect Date	Northing	Easting
1	10000	301429001	0	25	0	0	99	3	0	0	0	0	0		16/08/2005	5758296.25904	324848.53312
2	10001	301429001	25	50	0	0	99	25	10	0	0	0	0		16/08/2005	5758276.49299	324846.43865
3	10002	301429001	50	75	1	1	1	4	12	5	1	0	0		16/08/2005	5758254.51739	324843.86592
4	10003	301429001	75	96	1	1	1	0	6	3	0	0	0		16/08/2005	5758224.85332	324839.75121
5	10004	301178002	200	225	3	2	0.5	6	4	1	1	1	0		25/08/2005	5758126.44271	325209.03447
6	10005	301178002	225	250	1	1	0.6	0	0	0	0	1	0		25/08/2005	5758112.10548	325330.86728

Schedule A6-14 - PCI Calculation Process Flow Charts

Figure 1. **PCI Calculation Process Flow Chart for Road Categories A, B and C1**
(clause A6-7)

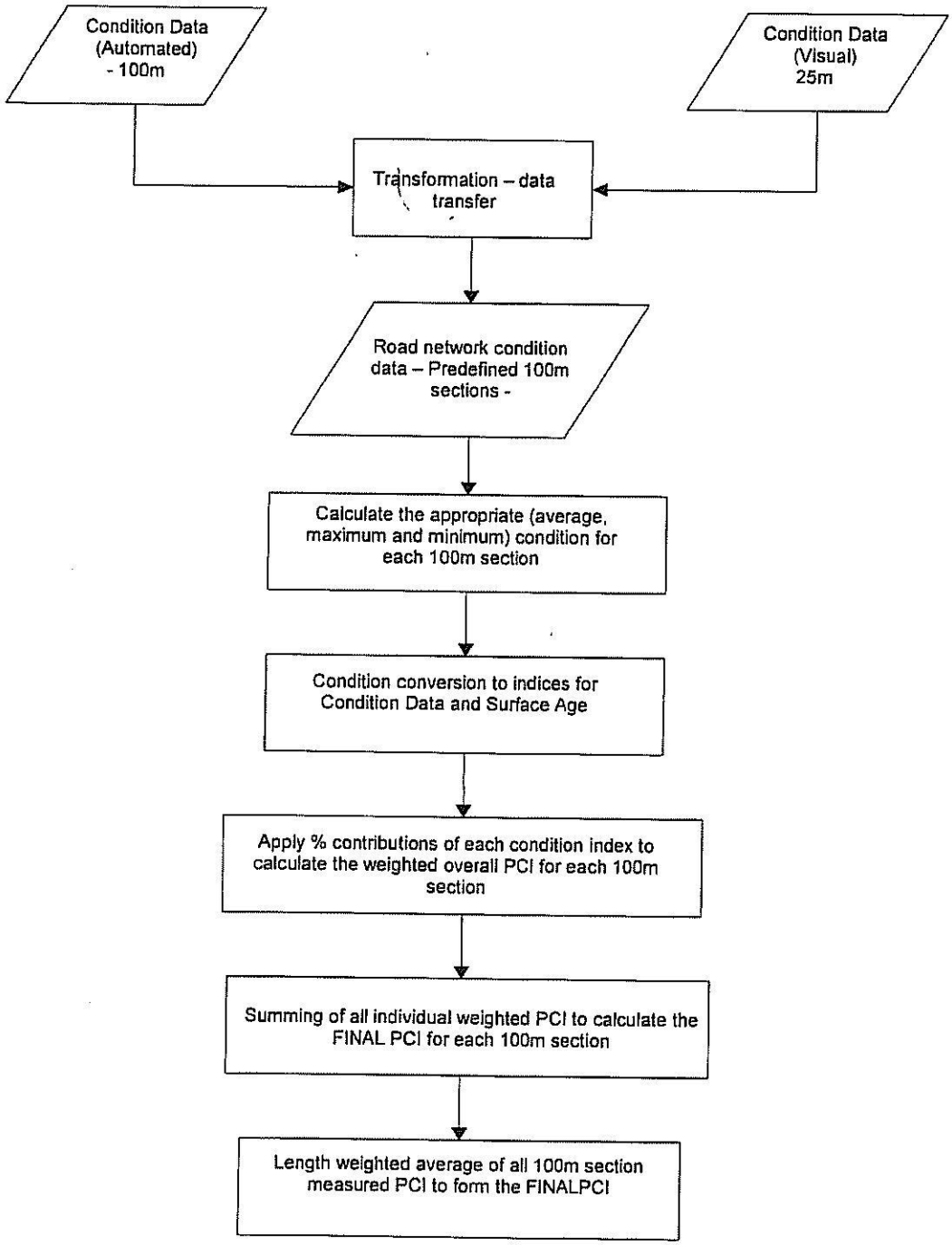
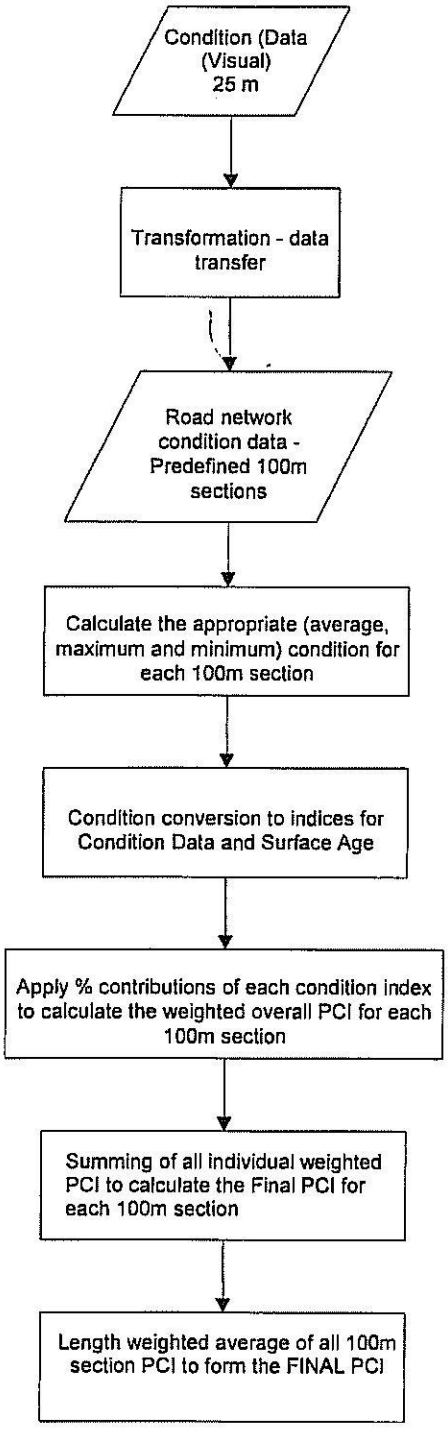


Figure 2. PCI Calculation Process Flow Chart for Road Categories C2 & D

(Clause A6-8)



Schedule A6-15 - Condition Index Conversions

Table 1. **Condition Index Conversion – Roughness**

Average Roughness (x)	*Roughness Index (y)*
<70	100
>=70 and <90	99 – 75
>=90 and <120	74 – 50
>=120 and <150	49 – 25
>=150 and <200	24 – 1
>=200	0

$y = -95.65\ln(x) + 506.15$

$R2 = 0.9988$

Table 2. **Condition Index Conversion – Rutting**

Maximum Rut Depth	*Rutting Index*
<10	100
>=10 and <20	99 – 75
>=20 and <30	74 – 50
>=30 and <40	49 – 25
>=40 and <50	24 – 1
>=50	0

$y = -2.5x + 125$

$R2 = 1$

Table 3. Condition Index Conversion – Surface Texture

Minimum Texture Depth	*Surface Texture Index*
>=1	100
>=0.8 and <1	99 – 50
>=0.6 and <0.8	49 – 1
<0.6	0

y = 250x – 150

R2 = 1

Cracking

100 - % Cracked Area

Flushing

100 - % Flushed Area

Table 4. Condition Index Conversion – Surface Age– Chip (Spray) Seal or Slurry Seal

Surface Age	*Surface Age Index*
0 and <5	100 – 85.7
>=5 and <10	85.7 – 71.4
>=10 and <15	71.4 – 57.1
>=15 and <20	57.1 – 42.9
>=20 and <25	42.9 – 28.6
>=25 and <30	28.6 – 14.3
>=30 and <35	14.3 - 0

y = 100 – ((x / 35) *100)

Personal Information

Table 5. Condition Index Conversion – Surface Age – Asphaltic Concrete

Surface Age	*Surface Age Index*
0 and <5	100 – 90
>=5 and <10	90 – 80
>=10 and <15	80 – 70
>=15 and <20	70 – 60
>=20 and <25	60 – 50
>=25 and <30	50 – 40
>=30 and <35	40 – 30
>=35 and <40	30 – 20
>=40 and <45	20 – 10
>=45 and <50	10 – 0

$y = 100 - ((x / 50) * 100)$

Schedule A6-16 - PCI Adjustment for Asset Inventory Changes

Not used.

Schedule A6-17 - Condition Resets

Not used.

Schedule A6-18 - Agreed Rates of Deterioration

Not used.

Schedule A6-19 - Reporting Formats for Sealed Road Network Condition Assessment

Table 1. Example of Network PCI Summary

Pavement Condition Index 2005-6 (Contract Year 0)			
	Total Length (km)		Avg PCI
Network PCI (Categories A, B, C1, C2)	1,243		83
	Total Length (km)	Total Area (m2)	Avg PCI
Category A (Length Weighted)	203	1,479,150	82
Category B (Length Weighted)	141	1,028,041	77
Category C1 (Length Weighted)	248	1,593,882	74
Category C2 (Length Weighted)	651	3,757,955	89
Category D (Area Weighted)	24	212,166	89

Table 2. Example of Road Category Data Distribution on Category A Network

Category A 2005-6

Total Area (M^2)	Total Length (km)
1,479,150	203

Roughness

Min	Max	SumOfArea	SumOfLength	%Length
-1	0	2134.53	263	0.1
10	20	6.4	1	0.0
20	30	35880.42	5469	2.7
30	40	180750.77	26411	13.0
40	50	236506.56	33873	16.7
50	60	245375.02	33514	16.5
60	70	184436.45	24782	12.2
70	80	176185.8	23111	11.4
80	90	112306.83	15032	7.4
90	100	92460.78	12387	6.1
100	110	60745.67	8392	4.1
110	120	43961.44	5702	2.8
120	130	29176.26	4259	2.1

Schedule A6-19 Reporting Formats for Sealed Road Network Condition Assessments

Roughness

Min	Max	SumOfArea	SumOfLength	%Length
130	140	27975.79	3681	1.8
140	150	13021.64	2154	1.1
150	500	38225.18	4376	2.2

Rutting

Min	Max	SumOfArea	SumOfLength	%Length
-1	0	1489	146	0.1
0	5	705599	90741	44.6
5	10	541950	75532	37.1
10	15	139050	21408	10.5
15	20	62320	10662	5.2
20	25	17972	3049	1.5
25	30	8436	1434	0.7
30	35	2334	435	0.2

Texture

Min	Max	SumOfArea	SumOfLength	%Length
-1	0	3288	362	0.2
0	0.4	38122	4588	2.3
0.4	0.6	237417	29920	14.7
0.6	0.8	200401	25861	12.7
0.8	5	999923	142676	70.1

Cracking

Min	Max	SumOfArea	SumOfLength	%Area
0	0	1226802.8	174737	82.9
0	3	206727.69	22911	14.0
3	5	20102.28	2556	1.4
5	10	19730.04	2458	1.3
10	15	3963.61	536	0.3
15	20	1110	110	0.1
20	25	713.1	99	0.0

Flushing

Min	Max	SumOfArea	SumOfLength	%Area
0	0	409655.78	59757	27.7
0	3	220890.9	32135	14.9
3	5	85102.7	12376	5.8
5	10	158669.58	21276	10.7
10	15	79131.74	11089	5.3
15	20	76899.93	9815	5.2
20	25	59161.9	8023	4.0
25	30	38207.04	4839	2.6
30	35	43032.88	5106	2.9
35	40	22848.25	2756	1.5
40	45	33782.07	4393	2.3
45	50	28881.99	3401	2.0
50	55	20853.39	2615	1.4
55	60	25855.35	3111	1.7

Flushing

Min	Max	SumOfArea	SumOfLength	%Area
60	65	21170.62	2704	1.4
65	70	25608.19	3299	1.7
70	75	23960.99	2752	1.6
75	80	18311.08	2372	1.2
80	85	20260.64	2552	1.4
85	90	22629.1	2983	1.5
90	95	23413	3094	1.6
95	100	20822.42	2959	1.4

Table 3. Example of Road Category Data Distribution on a Category C2 Network

Category C2 2005-6

Total Area (M^2)	Total Length (km)
3,720,389	650

Cracking

Min	Max	SumOfArea	SumOfLength	%Area
0	0	3135102.5	561818	84.3
0	3	393434.6	58653	10.6
3	5	66525.97	10280	1.8
5	10	62577.29	9897	1.7
10	15	25154.89	3712	0.7
15	20	10731.85	1653	0.3
20	25	7236.36	1167	0.2
25	30	6379	1001	0.2
30	35	2941.02	522	0.1
35	40	2078.22	297	0.1
40	45	2473.44	444	0.1
45	50	612.75	104	0.0
50	55	1009	200	0.0
55	60	550	100	0.0
60	65	233.4	30	0.0
65	70	1100	200	0.0
70	75	746.12	128	0.0
75	80	696.34	127	0.0
85	90	225.5	41	0.0
90	95	298.92	47	0.0
95	101	281.64	48	0.0

Schedule A6-19 Reporting Formats for Sealed Road Network Condition Assessments

Flushing

Min	Max	SumOfArea	SumOfLength	%Area
0	0	3507993.3	611286	94.3
0	3	157837.58	28952	4.2
3	5	16581.06	3085	0.4
5	10	14674.82	2931	0.4
10	15	9518.23	1585	0.3
15	20	4991.1	903	0.1
20	25	1995.41	413	0.1
25	30	1764.2	392	0.0
30	35	83.55	15	0.0
35	40	650	100	0.0
40	45	1336	300	0.0
45	50	1041.4	198	0.0
50	55	546.45	84	0.0
55	60	1375.75	225	0.0

Pavement Defect

Min	Max	SumOfArea	SumOfLength	%Area
0	0	3189348.4	567750	85.7
0	3	505662.74	78071	13.6
3	5	10465.01	1828	0.3
5	10	8819.32	1461	0.2
10	15	2552.67	467	0.1
15	20	628.23	107	0.0
20	25	410	100	0.0
25	30	2502.5	685	0.1

Stripping

Min	Max	SumOfArea	SumOfLength	%Area
0	0	2988752.4	519801	80.3
0	3	595037	105010	16.0
3	5	57518.71	10259	1.5
5	10	42351.51	8293	1.1
10	15	16792.56	3293	0.5
15	20	6776.17	1312	0.2
20	25	4736.47	990	0.1
25	30	1497.76	361	0.0
30	35	1168	210	0.0
35	40	634	126	0.0
40	45	650	100	0.0
45	50	680.4	108	0.0
50	55	650	100	0.0
55	60	788.4	138	0.0
60	65	1300	200	0.0
65	70	292.5	45	0.0
75	80	328.6	62	0.0
80	85	434.32	61	0.0

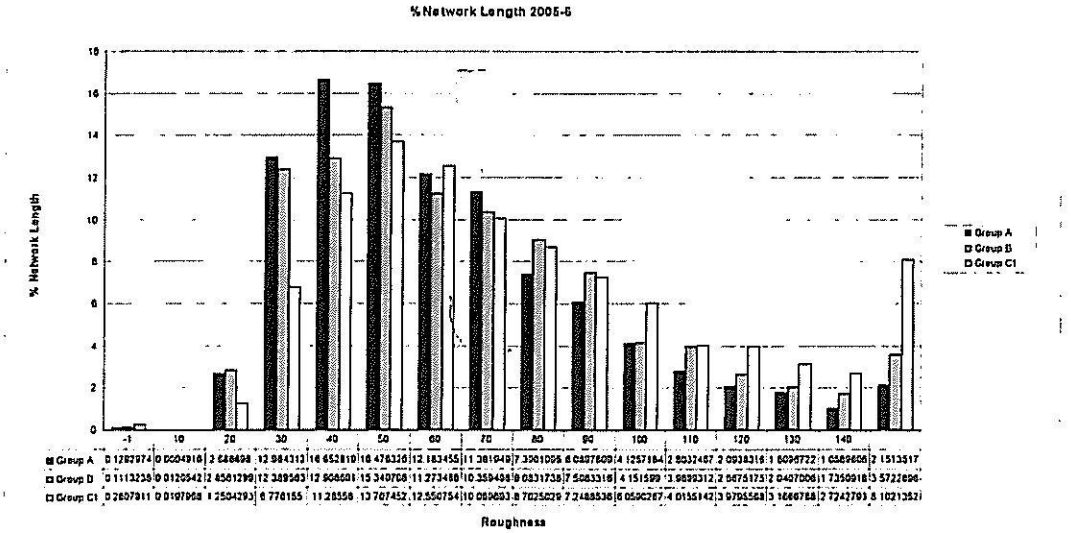
Schedule A6-19 Reporting Formats for Sealed Road Network Condition Assessments

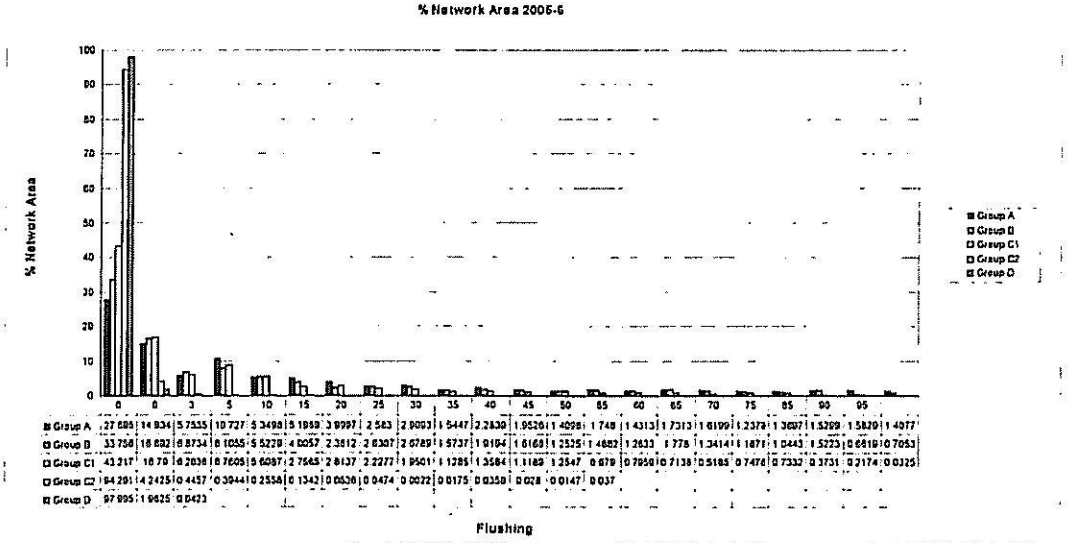
Table 4. Example of Individual Road Segment Condition Data

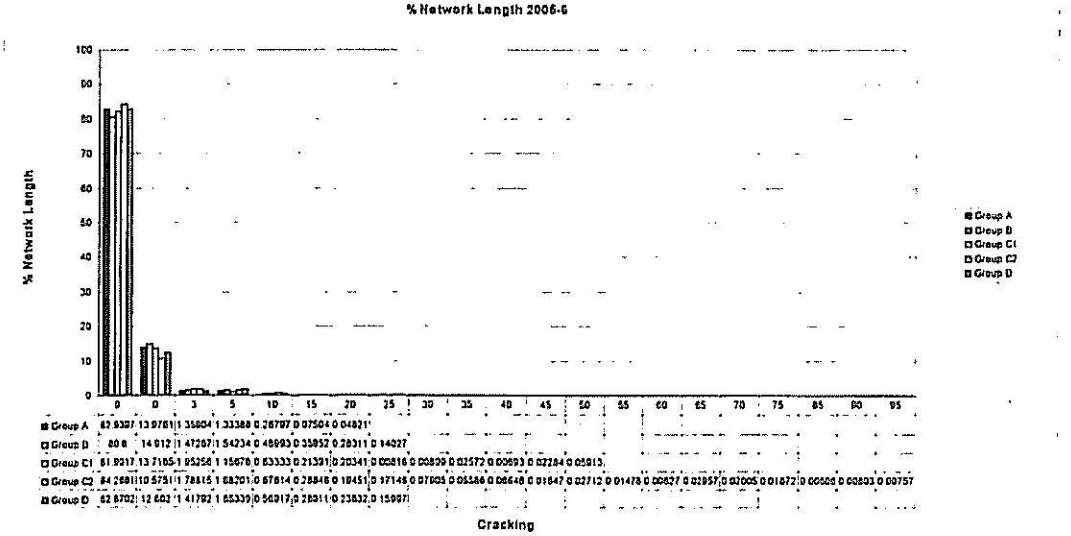
PCI Road Category A (2005-6)

RoadNo	BlkNo	Length	Area	Rough	Rutt	Texture	Flush	% Cracking	SurfYear	SurfType	SurfAge	PCI
104386	1	1192	8653.9	52.09	5.40	0.86	29.26	0.10	2000	CS	5	86.30
106016	1	565	3616.0	94.76	6.15	1.24	8.50	1.11	2003	CS	2	91.43
106016	2	502	3212.8	29.16	4.29	1.79	0.00	0.00	1993	CS	12	88.00
106016	3	383	2803.6	37.97	7.44	1.24	21.39	0.00	1993	CS	12	83.74
106016	4	530	3662.3	40.91	5.75	1.02	14.34	0.82	1995	CS	10	86.01
106016	5	413	2560.6	71.86	10.34	0.87	12.93	1.91	1995	CS	10	83.40
106016	6	463	2870.6	48.87	7.53	1.10	5.38	0.00	1995	CS	10	88.66
106016	7	468	2957.8	75.76	6.25	0.91	14.77	0.00	1995	CS	10	83.53
106016	8	343	2027.1	102.90	6.59	1.39	8.00	0.20	1994	CS	11	80.93
106016	9	445	2492.0	55.63	12.37	1.54	0.90	0.00	1994	CS	11	87.80
106016	10	315	1764.0	41.36	9.81	1.91	0.95	0.00	1994	CS	11	88.67
106016	11	503	2942.6	43.22	8.36	1.88	2.58	0.00	1994	CS	11	88.23
106016	12	429	2471.0	91.33	6.64	0.84	21.42	0.00	1992	CS	13	75.81
106016	13	372	2046.0	78.95	10.59	1.08	11.09	0.00	1992	CS	13	81.25
106016	14	528	3131.0	106.24	10.08	0.93	18.56	0.64	1992	CS	13	73.82
106038	1	355	2811.6	56.98	5.49	0.95	11.27	0.00	1996	CS	9	87.61
106038	2	370	2749.1	55.08	8.52	1.21	0.46	0.00	1996	CS	9	90.96
106038	3	547	3577.4	52.57	6.06	0.79	36.75	0.00	1992	CS	13	77.98
106038	4	318	2003.4	52.50	8.52	1.00	6.77	0.00	1992	CS	13	84.09
106038	5	523	3294.9	60.37	11.10	1.12	2.72	0.00	1992	CS	13	85.97
106038	6	401	3372.4	68.48	7.08	0.75	40.40	1.47	1992	CS	13	77.47
106038	7	134	1541.0	70.33	3.47	0.38	62.76	0.27	2000	CS	5	76.59
106038	8	139	1462.3	76.00	1.47	0.36	81.60	0.05	2000	CS	5	74.41

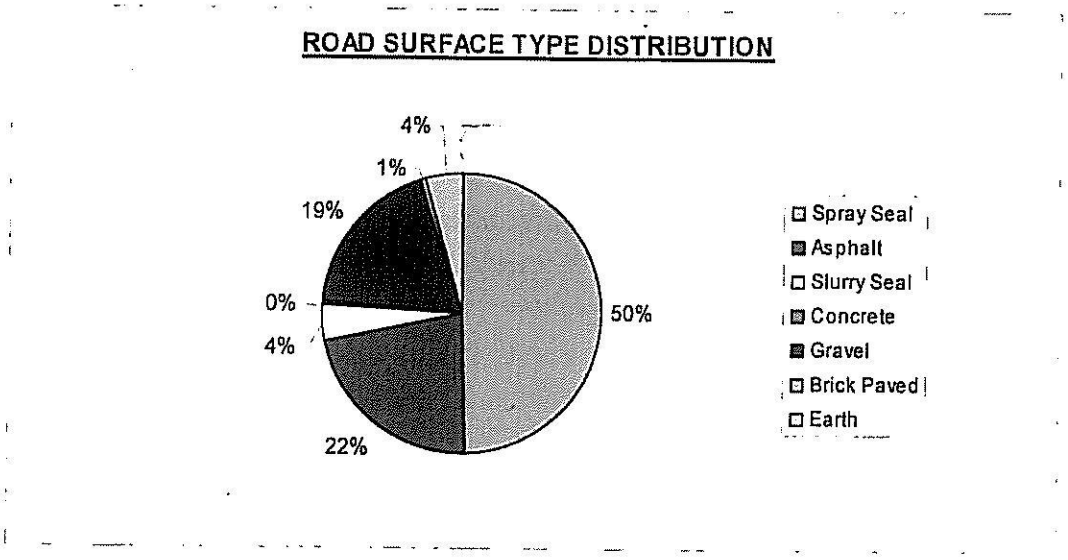
Graphs 1, 2 and 3. Examples of Road Category Data Distribution



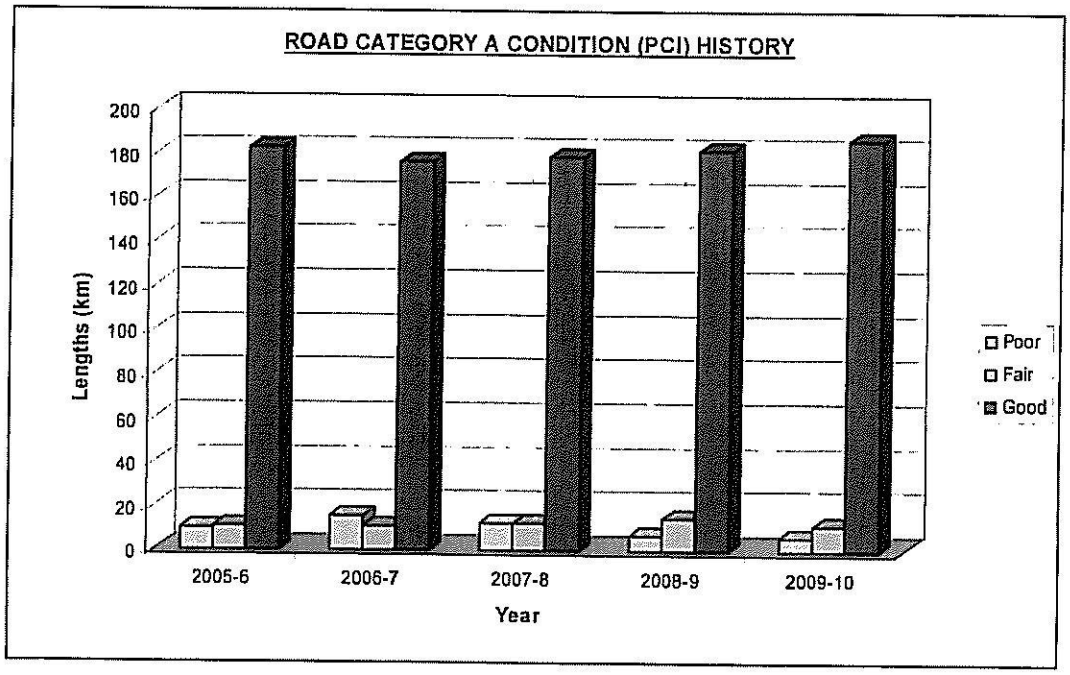




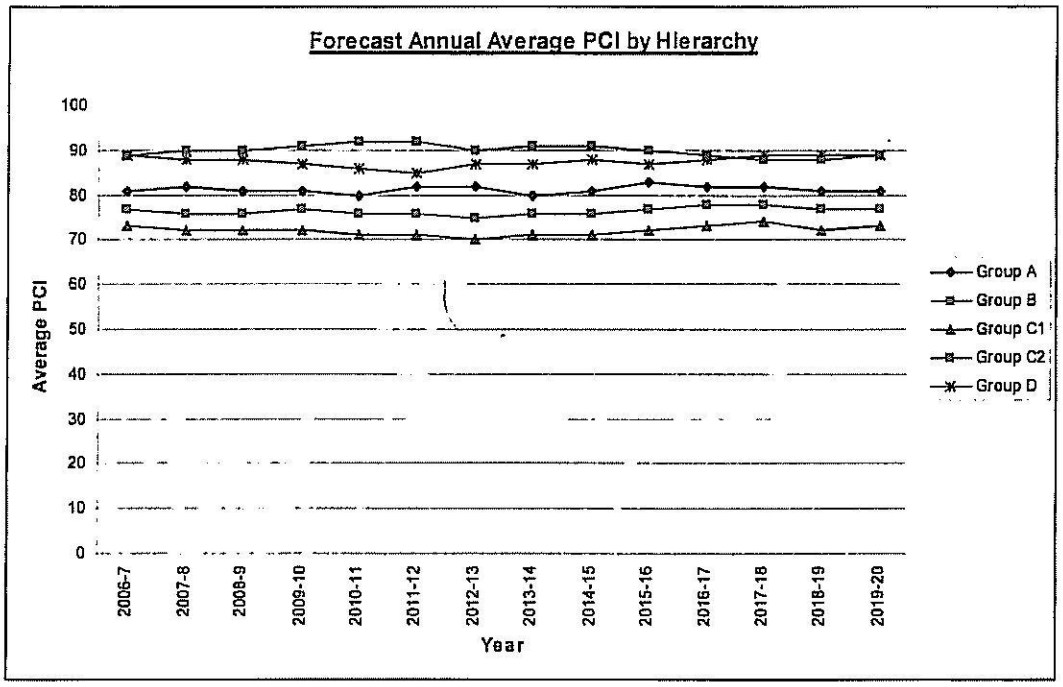
Graph 4. Example of Current Network Data



Graph 5. Example of Category Data History



Graph 6. Example of Forecast Category Average PCI



Schedule A6-20 - Road Schedule for PCI Categories A, B & C1

Unless otherwise determined by the Service Management Team, the Road Schedule for PCI Road Categories A, B and C1 is the same as the one used to determine the Required PCI for those PCI Road Categories.

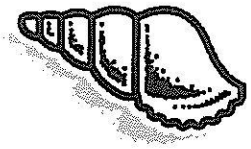
Schedule A6-21 - Road Schedule PCI Road Categories C2 & D

Unless otherwise determined by the Service Management Team, the Road Schedule for PCI Road Categories C2 and D is the same as the one used to determine the Required PCI for those PCI Road Categories.

Annexure 6B

Condition Monitoring
Adjustable PCI working draft

Safer Local Roads
Contract No. 1218



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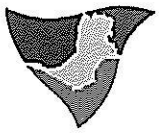

Annexure 6B – Condition monitoring

Adjustable PCI working draft

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Annexure 6B –Condition monitoring: Adjustable PCI working draft

This document contains suggested provisions for incorporation into the replacement Annexure 6 (Condition Monitoring) which is being developed by the parties in accordance with clause A5-9.4 (Review of Performance Standard).

Use of these provisions is not mandatory, but a guideline only.

A6-1. Introduction

This Annexure sets out the Contractor's obligations in relation to the monitoring and measurement of the Condition of the PCI Assessable Pavements.

During each Pavement Performance Review Year, the Contractor must:

.1 undertake pavement performance condition assessments, and

.2 determine the Required PCI to apply for the following Pavement Performance Review Year.

This Annexure sets out how this is to be done and the methodology to be applied.

A6-2. PCI Road Categories & coverage

As per Annexure 6A

A6-3. Condition assessments

As per Annexure 6A

A6-4. Road Schedules

A6-4.1 For the purposes of undertaking its assessment, the Condition Assessor must be given a schedule for each PCI Road Category showing the roads for which data is to be collected and details of the prescribed and counter directions, where appropriate ("Road Schedule").

A6-4.2 The Road Schedule for each subsequent PPR Year (PPR Year N + 1) must be developed jointly by the parties' Asset Management Specialists and approved by the Service Management Team as part of the Annual Review in each PPR Year (PPR Year N). The Road Schedule for PPR Year N + 1 must set out only those lengths of road that were used in the calculation of the Required PCI for PPR Year N +

1, so as to provide a data equivalence for the measurement of the PCI in PPR Year N +1.

A6-4.3 The Road Schedules for PPR Year 1 (as determined at Contract Year 0) are schedules A6-20 (Road Schedule for PCI Categories A, B and C1) and schedule A6-21 (Road Schedule for PCI Road Categories C2 and D).

A6-4.4 If, in any PPR Year, the parties wish to collect data relating to lengths of road additional to those set out in the Road Schedule for that PPR Year, the additional road lengths must be set out in a Supplementary Road Schedule agreed by the Service Management Team (on the joint recommendation of the parties' Asset Management Specialists) and provided to the Condition Assessor. Data collected under a Supplementary Road Schedule is not relevant and must not be taken into account for the purpose of determining the Measured PCI.

A6-5. Automated Pavement Condition Assessment

As per Annexure 6A

A6-6. Visual Pavement Condition Assessment Requirements

As per Annexure 6A

A6-7. Calculation methodology for PCI Road Categories A, B & C1

A6-7.1 Application to determine Required PCI

This clause A6-7.1 is to provide an overview of how the Required PCI is determined each Pavement Performance Review Year. Technical content to be agreed.

The parties acknowledge and agree that:

(a) the Required PCI for PCI Road Categories A, B and C1 for PPR Year 1 (as set out in Performance Standard 9 (Pavement Condition)) has been calculated by applying the methodology set out in this clause A6-7;

(b) the Required PCI for PCI Road Categories A, B and C1 for each subsequent PPR Year ("PPR Year N +1") will be calculated by:

(1) firstly, taking the data collected under clauses A6-5 (Automated Pavement Condition Assessment) and A6.6 (Visual Pavement Condition Assessment Requirements), not including any data collected under a Supplementary Road Schedule;

(2) secondly, applying the methodology set out in this clause A6-7 to the above data to determine the Measured PCI;

(3) thirdly, adjusting the Measured PCI for PPR Year N for Asset Inventory Changes in accordance with clause A6-9 (Calculation methodology – Asset Inventory Change All PCI Road Categories) to determine the Asset Adjusted Interim PCI; and

(4) finally, adjusting the Asset Adjusted Interim PCI to take account of applicable PCI Points in accordance with clause A6-10.3 (Operation of PCI Points).

A6-7.2 **PCI Calculation Methodology Road Categories A, B & C1**

The processes, data required and calculation methodologies for PCI Road Categories A, B and C1 are summarised in schedule 6-14 Figure 1 (PCI Calculation Process Flow Chart for Road Categories A, B and C1).

A6-7.3 **Data required for PCI calculation**

The following data is required in order to calculate the PCI for PCI Road Categories A, B or C1:

(a) Condition Data (Automated) - Roughness (NAASRA), Rutting (Rut depth mm) and Texture Depth (SMTD)
- 100m interval

(b) Condition Data (Visual) – Crocodile Cracking and Flushing (% Area)
- 25m interval

(c) Road sections data – Block ID, PCI Road Category, surface type, trafficable area and surface age
- 100m interval

A6-7.4 **PCI calculation process**

The process for calculation of the PCI for PCI Road Categories A, B and C1 is as follows:

(a) Transformation – Data Transfer

(1) Transfer Condition Data (Automated) into the predefined road network's 100m sections
- the data transfer methodology is based on length weighted average approach

(2) Transfer Condition Data (Visual) into the predefined road network's 100m sections

- the data transfer methodology is based on summation approach

(b) Condition data calculation for each 100m road section

(1) Roughness:

Average Roughness

$$\frac{(\text{NAASRA Left} + \text{NAASRA Right})}{2} \text{ Right}$$

(2) Rutting:

Maximum Rut Depth

= Max Rut Depth (IWP Left, OWP Left, IWP Right, OWP Right [PC])

(3) Texture Depth

Minimum Texture Depth

= Min Text Depth (IWP Left, OWP Left, IWP Right, OWP Right [PC])

(3) Cracking

% Cracked Area

(4) Flushing

% Flushed Area

(c) Condition Index Conversions

The condition index conversions are set out in schedule A6-15 (Condition Index Conversions).

(d) Apply % contributions (Category A and B) to each of the index

- Condition data = 65%
  - Roughness = 30%
  - Rutting = 15%
  - Texture & Flushing = 30%
  - Cracking = 25%
- Surface age = 35%

(e) Apply % contributions (Category C1) to each of the indices

- Condition data = 75%
  - Roughness = 25%
  - Rutting = 15%
  - Texture & Flushing = 30%
  - Cracking = 30%
- Surface age = 25%

Surface Age at Contract Year 0 = 2005 minus the year of wearing course application, Surface Age at Contract Year 3 = 2008 minus the year of wearing course application, etc.

(f) Sum up all individual weighted PCI to calculate the FINAL PCI for each 100m section.

(g) Length weighted average of all 100m section FINAL PCIs to calculate the overall PCI for the PCI Road Category.

A6-8. Calculation methodology for PCI Road Categories C2 & D

A6-8.1 Application to determine Required PCI

This clause A6-8.1 is to provide an overview of how the Required PCI is determined each Pavement Performance Review Year. Technical content to be agreed.

The parties acknowledge and agree that:

(a) the Required PCI for PCI Road Categories C2 and D for PPR Year 1 (as set out in Performance Standard 9 (Pavement Condition)) has been calculated by applying the methodology set out in this clause A6-8;

(b) the Required PCI for PCI Road Categories C2 and D for each subsequent PPR Year ("PPR Year N +1") will be calculated by:

(1) firstly, taking the data collected under clause A6-6 (Visual Pavement Condition Assessment Requirements) not including any data collected under a Supplementary Road Schedule;

(2) secondly, applying the methodology set out in this clause A6-8 to the above data to determine the Measured PCI;

(3) thirdly, adjusting the Measured PCI for PPR Year N for Asset Inventory Changes in accordance

with clause A6-9 (Calculation methodology – Asset Inventory Change All PCI Road Categories) to determine the Asset Adjusted Interim PCI; and

(1) finally, adjusting the Asset Adjusted Interim PCI to take account of applicable PCI Points in accordance with clause A6-10.3 (Operation of PCI Points).

A6-8.2 **Overview**

The processes, data required and calculation methodologies for PCI Road Categories C2 and D, are summarised in schedule A6-14 Figure 2 (PCI Calculation Process Flow Chart for Road Categories C2 and D).

A6-8.3 **Data required for PCI calculation**

The following data is required to calculate the PCI for PCI Road Categories C2 and D:

(a) Condition Data (Visual) – Pavement Defects, Crocodile Cracking, Stripping and Flushing (% Area)

- 25m interval

(b) Road sections data – Block ID, PCI Road Category, surface type, trafficable area and surface age

- 100m interval

A6-8.4 **PCI calculation process**

The process for calculation of the PCI for PCI Road Categories C2 and D is follows:

(a) Transformation – data transfer

- Transfer Condition Data (Automated) (if any) into the predefined road network's 100m sections
  - o The data transfer methodology is based on length weighted average approach
- Transfer Condition Data (Visual) into the predefined road network's 100m sections
  - o The data transfer methodology is based on summation approach

(b) Condition data calculation for each 100m road section

- Cracking
  % Cracked Area
- Flushing
  % Flushed Area

- Pavement Defects
  % Pavement Defective Area
- Stripping
  % Stripped Area

(c) Condition Index conversion

- Cracking
  100 - % Cracked Area
- Flushing
  100 - % Flushed Area
- Pavement Defects
  100 - % Pavement Defective Area
- Stripping
  100 - % Stripped Area
- Surface Age
  Refer schedule A6-15, Tables 4 and 5 for Condition Index Conversions for Surface Age.

(d) Apply % contributions (Category C2) to each of the index

- Condition data = 75%
  - Cracking = 25%
  - Pavement Defects = 25%
  - Flushing = 25%
  - Stripping = 25%
- Surface age = 25%

(e) Apply % contributions (Category D) to each of the index

- Condition data = 80%
  - Cracking = 25%
  - Pavement Defects = 25%
  - Flushing = 25%
  - Stripping = 25%
- Surface age = 20%

Surface Age at Contract Year 0 = 2005 minus the year of wearing course application, Surface Age at Contract Year 3 = 2008 minus the year of wearing course application, etc. schedule

(f) Sum up all individual weighted PCI to calculate the FINAL PCI for each of 100m section

(g) Length weighted average of all 100m section FINAL PCI to calculate the overall PCI for the PCI Road Category.

A6-9. Calculation methodology – Asset Inventory Change All PCI Road Categories

A6-9.1 Overview

The processes and calculation methodologies for ALL PCI Road Categories are summarised in schedule A6-16 (PCI Adjustment for Asset Inventory Changes).

A6-9.2 Asset Inventory Change Calculation Process

To take account of Asset Inventory Changes that have occurred since PPR Year N-1, the Contractor must adjust the Measured PCI for each PCI Road Category as follows:

(a) GS1 - Works in progress

- Apply GS1 by using the Condition Resets (as defined below) for all works in progress on PCI Assessable Pavements in that PCI Road Category and recalculate the PCI taking into consideration the applicable length:
- The calculation of the FINAL PCI is based on PPR Year condition data by applying the agreed "condition reset" to sections where works are in progress. The applicable condition resets are set out in schedule A6-17 (Condition Resets). Reset values may be adjusted during the term of the Contract. This may occur where justified by analysis of updated condition data, and subject to approval by the Service Management Team.

(b) GS2 – Change of PCI Road Category

- The adjustment of PCI to take account of changes in PCI Road Category is made by applying the PPR Year condition data to the additional or deducted road network length within the PCI Road Category.
- Only perform calculation for the additional road length → positive **(GS2 – L)** and ignore the road length reduction scenario.

(c) GS3 – Brand New Subdivisions

- The adjustment of PCI is made by applying the PPR Year condition data to the additional road network length within the road category.
- Calculate the additional road length → positive **(GS3 - L)**.

(d) GS4 – Pre-Existing Roads Not Surveyed in previous PPR Year, Handover From Others, Left Out

- The adjustment of PCI is made by applying the PPR Year condition data to the additional road network length not being surveyed previously.
- Calculate the additional road length → positive **(GS4 - L)**.

(e) GS5 – Capital Works of Renewal / Accelerated Works

- The adjustment of PCI is made by applying the PPR Year condition data to the additional road network length resulted from capital works projects and predefined and agreed accelerated works.
- Calculate the additional road length → positive **(GS5 - L)**.

(f) GS6 – Shrinkage Due To Hand Back / Works by Others

- The adjustment of PCI is made by applying the PPR Year condition data to the reduction of road network length.

(g) Calculate the overall PCI taking into consideration all factors (GS1, GS2, GS3, GS4, GS5 AND GS6) → **Asset Adjusted Interim *PCI- PPR Year N***.

A6-9.3 **Development of Road Schedule for PPR Year N +1**

The additional road length information and adjustments for Asset Inventory Change made in accordance with this clause must be recorded in a new Road Schedule submitted to the Service Management Team at the same time as the Sealed Road Network Condition Assessment Report referred to in clause A6.11 (Condition Assessment Reporting) is submitted to the Shire.

A6-10. Determination of PCI Points

Clause required to explain what PCI Points are and how they are used in calculating the Final PCI. Also, if PCI Points are relevant to determining whether the Required PCI has been complied, explain how they operate in that context. Technical content to be agreed

A6-10.1 **Sources of PCI Points**

PCI Points originate the application of agreed deterioration rates to new road lengths (see clause A6-10.3).

A6-10.2 **PCI Points for deterioration of additional road lengths**

For new road lengths introduced since PPR Year N-1, the Contractor is awarded PCI Point Credits calculated as follows:

(a) Identify and calculate the total length of road network applicable for the calculated PCI → ***L***.

(b) Calculate the overall total additional road length for GS2, GS3, GS4 and GS5 for the applicable PCI Road Category

GS-L = (GS2-L) + (GS3-L) + (GS4-L) + (GS5-L)

(c) Calculate PCI Point Credits for deterioration purposes as follows:

$$\text{PCI Point Credits} = \frac{[(\text{PCI R/D}) \times 3] \times \text{GS-L}}{\text{L}}$$

where PCI/RD is the Agreed Rate of Deterioration applicable to the PCI Road Category.

A6-10.3 **Operation of PCI Points**

PCI Points operate as follows:

(a) PCI Point Credits are deducted from the Asset Adjusted Interim PCI for PPR Year N to produce the Required PCI for PPR Year N + 1

(b) PCI Point Debits are added to the Asset Adjusted Interim PCI for PPR Year N to produce the Required PCI for PPR Year N + 1.

A6-11. Condition Assessment Reporting

As per Annexure 6A.

Schedules

Schedule A6-1 - Road Hierarchy

As per Annexure 6A

Schedule A6-2 - PCI Road Categories

As per Annexure 6A

Schedule A6-3 - Pavement Performance Review Years

As per Annexure 6A

Schedule A6-4 - Conditions to be assessed

As per Annexure 6A

Schedule A6-5 – Austroads Distress

As per Annexure 6A

Schedule A6-6 - Condition Data Collection & Reporting Dates

As per Annexure 6A

Schedule A6-7 - Roughness Reporting Format PCI Road Categories A and B

As per Annexure 6A

Schedule A6-8 - Rutting Reporting Format PCI Road Categories A and B

As per Annexure 6A

Schedule A6-9 - Surface Texture Reporting Format PCI Road Categories A and B

As per Annexure 6A

Schedule A6-10 - Roughness Reporting Format PCI Road Category C1

As per Annexure 6A

Schedule A6-11 - Rutting Reporting Format PCI Road Category C1

As per Annexure 6A

Schedule A6-12 - Surface Texture Reporting Format PCI Road Category C1

As per Annexure 6A

Schedule A6-13 - Reporting Format for Condition Data (Visual)

As per Annexure 6A

Schedule A6-14 - PCI Calculation Process Flow Charts

As per Annexure 6A

Schedule A6-15 - Condition Index Conversions

Table 1. Condition Index Conversion – Roughness

Average Roughness (x)	*Roughness Index (y)*
<70	100
>=70 and <90	99 – 75
>=90 and <120	74 – 50
>=120 and <150	49 – 25
>=150 and <200	24 – 1
>=200	0

$y = -95.65\ln(x) + 506.15$

$R2 = 0.9988$

Table 2. Condition Index Conversion – Rutting

Maximum Rut Depth	*Rutting Index*
<10	100
>=10 and <20	99 – 75
>=20 and <30	74 – 50
>=30 and <40	49 – 25
>=40 and <50	24 – 1
>=50	0

$y = -2.5x + 125$

$R2 = 1$

Table 3. Condition Index Conversion – Surface Texture

Minimum Texture Depth	*Surface Texture Index*
>=1	100
>=0.8 and <1	99 – 50
>=0.6 and <0.8	49 – 1
<0.6	0

y = 250x – 150

R2 = 1

Cracking

100 - % Cracked Area

Flushing

100 - % Flushed Area

Table 4. Condition Index Conversion – Surface Age– Chip (Spray) Seal or Slurry Seal

Surface Age	*Surface Age Index*
0 and <5	100 – 85.7
>=5 and <10	85.7 – 71.4
>=10 and <15	71.4 – 57.1
>=15 and <20	57.1 – 42.9
>=20 and <25	42.9 – 28.6
>=25 and <30	28.6 – 14.3
>=30 and <35	14.3 - 0

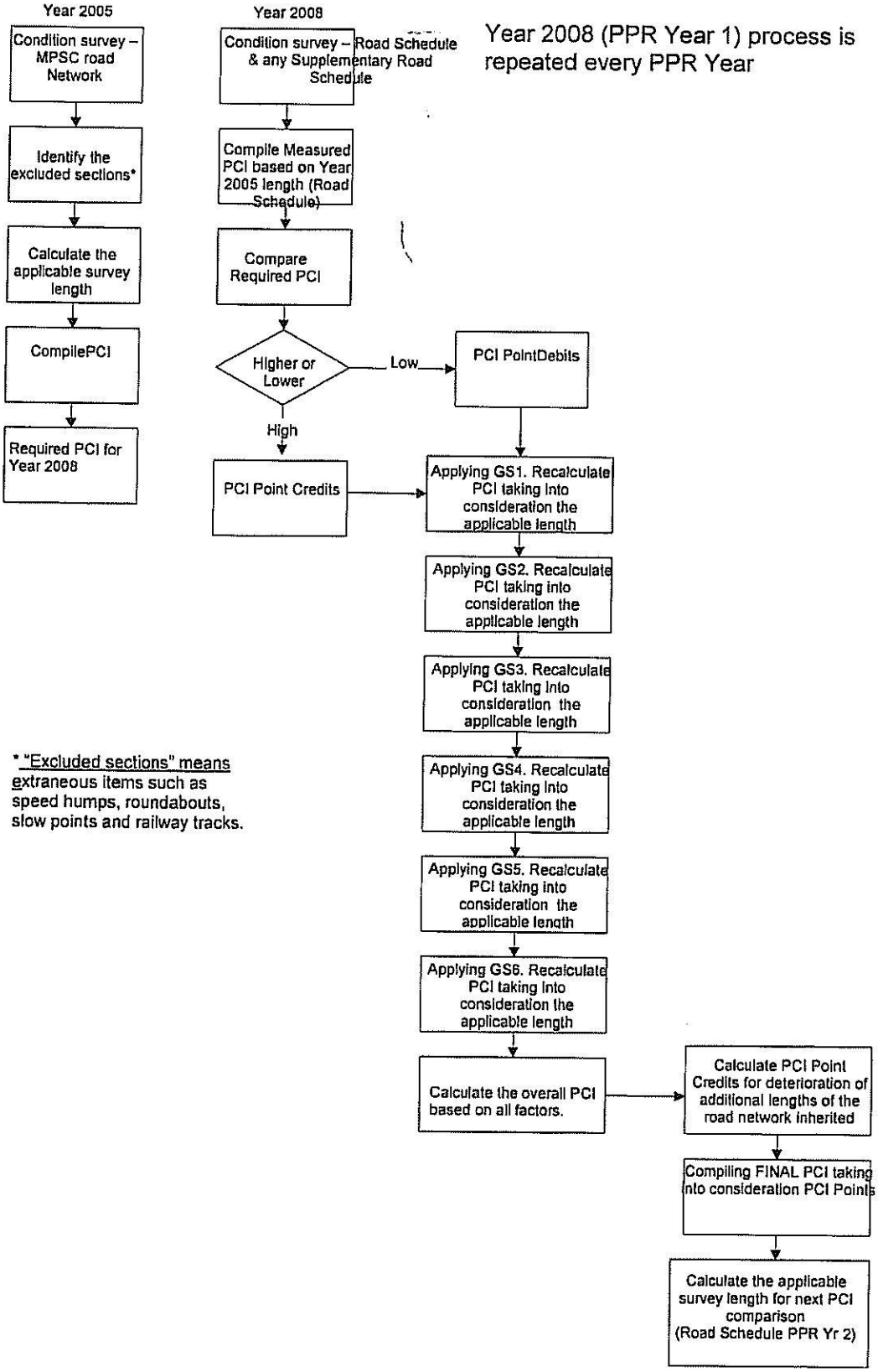
y = 100 – ((x / 35) *100)

Table 5. Condition Index Conversion – Surface Age – Asphaltic Concrete

Surface Age	*Surface Age Index*
0 and <5	100 – 90
>=5 and <10	90 – 80
>=10 and <15	80 – 70
>=15 and <20	70 – 60
>=20 and <25	60 – 50
>=25 and <30	50 – 40
>=30 and <35	40 – 30
>=35 and <40	30 – 20
>=40 and <45	20 – 10
>=45 and <50	10 – 0

$y = 100 - ((x / 50) * 100)$

Schedule A6-16 - PCI Adjustment for Asset Inventory Changes



Schedule A6-17 - Condition Resets

Table 1. Road Categories A, B & C1 (Chip / Spray Seal)

Condition	*Condition Reset (at Year 0)*
Roughness	N/A
Rutting	N/A
Surface Texture	2
Flushing	0
Cracking	0

Table 2. Road Categories C2 & D (Chip / Spray Seal)

Condition	*Condition Reset (at Year 0)*
Pavement Defects	0
Flushing	0
Stripping	0
Cracking	0

Table 3. Road Categories A, B & C1 (Slurry Seal)

Condition	*Condition Reset (at Year 0)*
Roughness	If(Ruff<65,nCND_Ruff,max(nCND_Ruff-20,65))
Rutting	2
Surface Texture	1.5
Flushing	0
Cracking	0

Table 4. Categories C2 & D (Slurry Seal)

Condition	*Condition Reset (at Year 0)*
Pavement Defects	0
Flushing	0
Stripping	0
Cracking	0

Table 5. Road Categories A, B & C1 (Thin AC Overlay)

Condition	*Condition Reset (at Year 0)*
Roughness	if(nCND_Ruff<65,nCND_Ruff,max (nCND_Ruff-30,65))
Rutting	1
Surface Texture	1
Flushing	0
Cracking	0

Table 6. Condition Resets – Road Categories C2 & D (Thin AC Overlay)

Condition	*Condition Reset (at Year 0)*
Pavement Defects	0
Flushing	0
Stripping	0
Cracking	0

Table 7. Road Categories A, B & C1 (Rehabilitation)

Condition	*Condition Reset (at Year 0)*
Roughness	60
Rutting	2
Surface Texture	2
Flushing	0
Cracking	0

Table 8. Road Categories C2 & D (Rehabilitation)

Condition	*Condition Reset (at Year 0)*
Pavement Defects	0
Flushing	0
Stripping	0
Cracking	0

Schedule A6-18 - Agreed Rates of Deterioration

Road Category	*PCI rate of deterioration /annum (at Contract Year 0) PCI R/D*
A	1.6

B	1.5
C1	1.3
C2	1.3
D	1.0

Schedule A6-19 - Reporting Formats for Sealed Road Network Condition Assessment

As per Annexure 6A

Schedule A6-20 - Road Schedule for PCI Categories A, B & C1

See Annexure 6A

Schedule A6-21 - Road Schedule PCI Road Categories C2 & D

As per Annexure 6A

Annexure 7

Accelerated Works Program

Safer Local Roads
Contract No.1218

MORNINGTON
PENINSULA
Shire

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Annexure 7 – Accelerated Works Program

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A7-1 Accelerated Works Program

Job No.	Asset	Asset Type	Year 1 (06/07)	Year 2 (07/08)	Year 3 (08/09)	Year 4 (09/10)	Third Party Funded Project	Description of Works
1	Derril Road, Moorooduc (550m of Derril / Tuerong / Graydens inter)	Road	✓				N	Foam stabilised pavement, 7m sealed road with 1.5m shoulders, guide posts, drainage & signage
2	Waterfall Gully Road, Rosebud (300m of road 2km east of Goolgowie St)	Road	✓				N	Foamed stabilised pavement, 5m sealed road with 0.5m shoulders, guide posts, drainage & signage
3	Melbourne Road, Rye (seal shoulders both sides Canterbury Jetty - Dundas St)	Shoulder	✓				N	Construct heavy duty sealed shoulders 1.5m with edge lines
4	O'Neills Road, Tyabb (seal shoulders both sides Frankston/ Flinders road to Dandenong/Hastings Road)	Shoulder	✓				N	Construct light duty sealed shoulders with edge lines
5	Main Creek Road, Main Ridge (seal shoulders Arthurs Seat – Shands Rds)	Shoulder	✓				N	Construct light duty sealed shoulders with edge lines in conjunction with the reseal program
6	Dundas Street, Rye (stage 1) (seal shoulders Browns-Sandy Rds)	Shoulder	✓				N	Construct light duty sealed shoulders, with passing lane/ bus bay opposite shopping centre car park
7	Dundas Street, Rye (designed)	Car Park	✓				Y	Construct car parking area
8	Eramosa Road, Somerville (designed)	Car Park	✓				Y	Construct car parking area
9	Browns Road, Main Ridge (stage 1) (seal shoulders Purves – Jetty Rds)	Shoulder		✓			N	Construct light duty sealed shoulders with edge lines
10	Browns Road, Rye (stage 2) (seal shoulders Truemans - Dundas St)	Shoulder		✓			N	Construct light duty sealed shoulders with edge lines
11	Bentons Road, Mt Martha (seal shoulders Century - Moorooduc Hwy)	Shoulder		✓			N	Construct asphalt kerbing both sides

Accelerated Works Program Overview

Job No.	Asset	Asset Type	Year 1 (06/07)	Year 2 (07/08)	Year 3 (08/09)	Year 4 (09/10)	Third Party Funded Project	Description of Works
12	Boes Road, Hastings (1600m between Graydens – Hodgins Rds)	Road		✓			N	Foamed stabilised pavement, 7m sealed road with 1.5m shoulders, guide posts, drainage (floodway) & signage
13	Hendersons Road, Bittern (750m between Kingfauns Estate - Myers Rd)	Road		✓			Y (part)	Shared between Developer / Shire / SCS Final construction details to be agreed upon.
14	Waterfall Gully Road, Rosebud (1100m from Goolgowie - top of hill)	Road		✓			Y	FCR overlay pavement, 5m sealed road with 0.5m shoulders (possible alternative asphalt kerbing), drainage, guide posts, entranceways & signage
15	Hopetoun Avenue, Mt Martha (stage 1) (600m between Dominion – Essex)	Road		✓			Y	FCR overlay pavement, 6m sealed road with asphalt kerbing, drainage & signage.
16	Hopetoun Avenue, Mt Martha (stage 2) (550m between Essex - Norfolk)	Road			✓		Y	FCR overlay pavement, 6m sealed road with asphalt kerbing, drainage & signage.
17	Hopetoun Avenue, Mt Martha (stage 3) (750m between Norfolk - Point Nepean Hwy)	Road			✓		Y	FCR overlay pavement, 6m sealed road with asphalt kerbing, drainage & signage.
18	Shands Road, Main Ridge (stage 1) (700m between Mornington/Flinders – Tucks Rd)	Road			✓		N	Foam stabilised pavement, 6m sealed road with asphalt kerbing, s/water outlets from kerb & signage (Includes enhancement to bridge)
19	Shands Road, Main Ridge (stage 2) (1400m between Tucks - Shoreham Rds)	Road			✓		N	Foam stabilised pavement, 6m sealed road with 1m shoulders, minor culverts, guide posts & signage.
20	Browns Road, Boneo (stage 3) (seal shoulders Jetty - Truemans Rds)	Shoulder			✓		N	Construct light duty sealed shoulders with edge lines
21	Dundas Street, Rye (stage 2) (seal shoulders Melbourne - Browns Rds)	Shoulder			✓		N	Construct light duty sealed shoulders with edge lines
22	Tyabb - Tooradin Road, Tyabb (stage 1) (seal shoulders Western Port Hwy -	Shoulder			✓		N	Construct light duty sealed shoulders with edge lines

Job No.	Asset	Asset Type	Year 1 (06/07)	Year 2 (07/08)	Year 3 (08/09)	Year 4 (09/10)	Third Party Funded Project	Description of Works
	Bungower Road)							
23	Tyabb - Tooradin Road, Somerville (stage 2) (seal shoulders Bungower - Boundary Rd East)	Shoulder				✓	N	Construct light duty sealed shoulders with edge lines
24	Lower Somerville Road, Somerville (1650m between Bungower - Eramosa East)	Road				✓	N	Foam stabilised pavement, 6m sealed road with 1m shoulders, minor culverts, guide posts & signage.
25	Graydens Road, Moorooduc (1200m from east end dam – Loders Rd)	Road				✓	N	Foam stabilised pavement, 6m sealed road with 1m shoulders, minor culverts, guide posts & signage
26	Truemans Road, Tootgarook (stage 1) (seal shoulders Wilkinson - Browns Rd North)	Shoulder				✓	N	Construct light duty sealed shoulders with edge lines
27	Truemans Road, Rye (stage 2) (seal shoulders Browns Rd North - Sandy Rds)	Shoulder				✓	N	Construct light duty sealed shoulders with edge lines
	Total capital expenditure		**$1,708,703**	**$1,962,730**	**$1,922,353**	**$920,591**		

1. All amounts set out in this Annexure are Indexed. The Applicable Index is the index that applies to Accelerated Works Projects.
2. Notwithstanding any discrepancy between the capital expenditure listed in this Annexure and the Component Price for Accelerated Works Projects for any Contract Year, the MSC is fixed and not subject to adjustment other than as expressly stated in the Contract. Neither party has a right to make a claim for adjustment on the grounds of such a discrepancy.
3. In this Annexure 7 "developer" means a property developer; "FCR" means Fine Crushed Rock; "PC" means Prime Cost Item; "SCS" means Special Charge Scheme.

A7-2 Schedule of Prices (Breakdown of Accelerated Works Program by Accelerated Works Projects)

Councillor Item No.	Asset	-	Asset Type	Design/Construction Details	Year 1	Year 2	Year 3	Year 4
1	Derril Road, Moorooduc	(550m of Derril/Tuerong/Graydens intersection)	Road	Xsection 4A - sealed 7m/1.5m shoulders, foam stabilised pavement, intersection drainage, g/posts, warning signs included	$196,011	$0	$0	$0
2	Waterfall Gully Road, Rosebud - STAGE 1	(300m of road 2km from Goolgowie St)	Road	SAFETY ISSUE - Construction of 300m of road (approx 2km from Goolgowie St.) adj to steep right angle corner to Kings Falls, controlled pruning of vegetation only. Xsection 4C - sealed 5m/0.5m shoulders, foam stabilised pavement, drainage ,g/posts, warning signs Investigate whether asphalt kerb an alternative	$105,382	$0	$0	$0
3	Melbourne Road, Rye	(seal shoulders)	Shoulder	Construct Heavy Duty Shoulders 1.5m wide between Dundas St and Canterbury Jetty Rd.	$437,337	$0	$0	$0
4	O'Neills Road, Tyabb		Shoulder	Shoulder widening from Frankston/Flinders Rd - Dandenong/Hastings Rd, no ex centre or edge lines Between 0 - 1.7km can achieve 1m on north side and 0.5m on south side, remainder of length generally 0.75m - 1m. Edge lines Investigate whether shoulder depth adequate, commercial driveways sealing (asphalt)	$44,859	$0	$0	$0
5	Main Creek Road, Main Ridge	(seal shoulders Arthurs Seat Rd-Shands)	Shoulder	Shoulder widening between Arthurs Seat Rd - Shands Rd, no ex. Centre or edge lines Between 0 -0.85km can achieve 1m on east side and 0.5m on west side, between 0.85 - 1.4m can extend to 1m on Between 0 .85km - 1.4km can extend west side to 1.0mBetween 1.4km - 1.7km can only achieve 0.5m on east side Between 1.7km - 1.8km can only achieve 0.5m both sides Between 1.8km - 4.12km (Shands Rd) can achieve between 0.5m - 1m both sides Allowance for tree pruning Edge lines	$78,894	$0	$0	$0
6	Dundas Street, Rye - STAGE 1	(seal shoulders Browns-Sandy)	Shoulder	Shoulder widening between Browns Road - Sandy Road Can achieve 1m widening both sides Edge lines Investigate cost of sealing intersections	$71,660	$0	$0	$0
7	Dundas Street, Rye	(designed)	Car Park	Carparking Area - (SCS) DESIGNED	$405,722	$0	$0	$0

Accelerated Works Program
Breakdown by Accelerated Works Projects

Councillor Item No.	Asset	-	Asset Type	Design/Construction Details	Year 1	Year 2	Year 3	Year 4
8	Eramosa Road, Somerville	(designed)	Car Park	Carparking Area - (SCS) DESIGNED				
9	Browns Road, Rye - STAGE 2	(seal shoulders Dundas-Truman)	Shoulder	**West of Dundas St, local access only - no work required** Shoulder widening between Dundas St - Truemans Rd, can achieve 1m sealed shoulders all way, Replace edge lines				
10	Browns Road, Main Ridge - STAGE 1	(seal shoulders Purves-Jetty)	Shoulder	Shoulder widening between Purves Road - Jetty Road Boneo, no centre or edge lines Can achieve 0.75m - 1m entire length both sides centre and edge lines				
11	Bentons Road, Mt Martha	(seal shoulder industrial estate-Baxter/Tooradin)	Shoulder	Asphalt Kerb both sides - Century to Moorooduc Hwy				
12	Boes Road, Hastings	(1600m between Graydens-Hodgins)	Road	Construction of app. 1600m of road between Graydens Road - Hodgins Road Xsection 4A - sealed 7m/1.5m shoulders, foam stabilised pavement, minor culverts, g/posts, warning signs Floodway may be required, check catchment (PC item of $30K currently in pricing)				
13	Hendersons Road, Bittern	(750m between Kingfauns Estate-Myers)	Road	Construction of app. 750m of road between Kingfauns Estate - Myers Rd, to join exist sealed section Subdivision adjacent and sub-divider required to construct approx 500 metres. Existing sealed section 6m and asphalt kerb with 1 way Xfall - new to match. Investigate effect of design on drainage requirements				
14	Waterfall Gully Road, Rosebud - STAGE 2	(1100m from Goolgowie-top of hill)	Road	Construction of 1100m of road from Goolgowie St to top of hill past "suburban houses" Xsection 4C - sealed 5m/0.5m shoulders, 200mm FCR overlay Replace e/way culverts (app. 20No.), cross road culverts every 200m, spalls in table drain, g/posts, warning signs Remove 5 small trees/shrubs only to minimise delays. Investigate whether asphalt kerb an alternative, sealing of driveways				
15	Hopetoun Avenue, Mt Martha (stage 1)	(600m between Dominion-Essex)	Road	Construction of app. 600m of road between Dominion Rd - Essex St, Mt Martha. Xsection 4B sealed 6m on 200mm FCR overlay with asphalt kerbs, drainage full length, pits both sides every 80m. Investigate additional cost of asphalt sealing				
16	Hopetoun Avenue, Mt Martha (stage 2)	(550m between Essex-Norfolk)	Road	Construction of app. 550m of road between Essex St - Norfolk St., Mt Martha Xsection 4B sealed 6m on 200mm FCR overlay with asphalt kerbs, drainage full length, pits both sides every				

Irrelevant & Sensitive

Councillor Item No.	Asset	-	Asset Type	Design/Construction Details	Year 1	Year 2	Year 3	Year 4
				80m. Investigate additional cost of asphalt sealing and drainage.				
17	Hopetoun Avenue, Mt Martha (stage 3)	(750m between Norfolk-Point Nepean rd)	Road	Construction of app. 750m of road between Norfolk Street - Point Nepean Road Xsection 4B - sealed 6m on 200mm FCR overlay with asphalt kerbs, drainage full length, pits both sides every 80m. Investigate additional cost of asphalt sealing and drainage.				
18	Shands Road, Main Ridge - STAGE 1	(700m between Mornington/Flinders-Tucks)	Road	Construction of app. 700m of road between Mornington/Flinders Rd - Tucks Rd Xsection 4B - sealed 6m w asphalt kerb but xsection varying to suit local conditions, foam stabilised pavement, S/W outlets from kerb, g/posts, warning signs Structural check required on bridge - level 2 report by Bruce Mitchell completed.				
19	Shands Road, Main Ridge - STAGE 2	(1300m between Tucks-Shoreham)	Road	Construction of app. 1400m of road between Tucks Rd - Shoreham Rd. Xsection 4B - sealed 6m/1m shoulders, foam stabilised pavement, minor culverts, g/posts, warning signs.				
20	Browns Road, Boneo - STAGE 3	(seal shoulders Truemans-Jetty)	Shoulder	**Sections of shoulder widening between Truemans Road - Jetty Road. Between 0km - 1km (Truemans Rd) heading east ex shoulders sealed to Eagle Ridge Sub. - no work required).** Between 1km - 2.7km (Boneo Rd) can achieve 1m widening both sides; ex edge line may need to be reinstated. Between 2.7km - 3.55km (Old cape Schanck Rd) ex asphalt kerb on north side, can achieve 1m shoulder widening on south side only. Between 3.55km - 3.75km install asphalt kerb on to maintain consistency with existing. Between 3.75km - 5.75km ex asphalt kerb, edge lines - **no work required.** Edge lines as required. Investigate material depth at intersection and cost of asphalt kerb for traffic control				
21	Dundas Street, Rye	(seal shoulders Melbourne-Browns)	Shoulder	Shoulder widening between Melbourne Rd - Browns Road, ex edge lines Can achieve 1m widening both sides Edge lines as required Investigate cost of asphalt kerb				
22	Tyabb-Tooradin Road, Tyabb	(seal shoulders Dand'ng/Hastings-Bungower)	Shoulder	Shoulder widening between Dandenong/Hastings Rd - Bungower Road, ex centre line only Can achieve 0.75m - 1m widening both sides edge line Investigate the cost of additional major patching				

Councillor Item No.	Asset		Asset Type	Design/Construction Details	Year 1	Year 2	Year 3	Year 4
23	Tyabb-Tooradin Road, Somerville	(seal shoulders Bungower-Boundary Rd East)	Shoulder	Shoulder widening between Bungower Road - Boundary Road East, ex. Centre line only Can achieve between 0.5m - 0.75m both sides Edge lines Investigate the cost of additional major patching	$0	$0	$0	$64,289
24	Lower Somerville Road, Somerville	(1650m between Bungower-Eramosa East)	Road	Construction of app. 1650m of road between Bungower - Eramosa East Xsection 4B - sealed 6m/1m shoulders, foam stabilised pavement, culverts, g/posts, warning signs Investigate cost of sealing intersections	$0	$0	$0	$378,323
25	Graydens Road, Moorooduc	(1200m from east end dam-Loders)	Road	Construction of app.1200m of road between Derrils Rd (east end of dam wall) - Loders Rd Xsection 4B - sealed 6m/1m shoulders, foam stabilised pavement, culverts, g/posts, warning signs	$0	$0	$0	$244,487
26	Truman's Rd - STAGE 1	(seal shoulders Wilkinson-Browns Rd North)	Shoulder	Shoulder widening between Point Nepean Road (Wilkinson St) - Browns Road North Between 0.3km - 1.5km can achieve 0.5m - 0.75m both sides Between 1.5km - 3.4kmcan achieve 1m both sides edge lines	$0	$0	$0	$107,034
27	Truman's Road, Rye - STAGE 2	(seal shoulders Browns Rd North-Sandy)	Shoulder	Shoulder widening between Browns Rd North - Sandy Road (2.2km) - 5km can achieve m widening both sides Edge lines	$0	$0	$0	$126,459
		Total capital expenditure during the Accelerated Works Period			**$1,708,703**	**$1,962,730**	**$1,922,353**	**$920,591**

This Schedule of Prices (Breakdown of Accelerated Works Program by Accelerated Works Projects) is included in the Contract for the purposes only of:

(a) understanding the scope of each Accelerated Works Project in the absence of any detailed design documentation;

(b) determining the value of an individual Accelerated Works Project to enable substitution of one Accelerated Works Project with another of equivalent value under the provisions of the Contract relating to Third Party Funded Works; and

(c) valuing any Variation to an Accelerated Works Project.

The stated value of an Accelerated Works Project does not include the cost of Design & Investigation Services, except in the case of AWP Job 14.

Annexure 8

Ordered Work Conditions

Safer Local Roads
Contract No.1218

MORNINGTON
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Annexure 8 – Ordered Work Conditions

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Annexure 8 – Ordered Work Conditions

A8-1 Status of this Annexure

The conditions set out in this Annexure (together with all applicable terms of the Safer Local Roads Contract) are incorporated in and apply to every Work Order issued in accordance with the Safer Local Roads Contract. In the event of any inconsistency between these conditions and the terms of the Safer Local Roads Contract, these conditions prevail.

A8-2 Definitions

Unless the context requires otherwise:

.1 terms defined in the Safer Local Roads Contract have the same meanings when used in these conditions or in any Work Order Document; and

.2 the following defined terms apply in these conditions:

Date for Completion means, with respect to any Ordered Work, the Date or Dates for Completion identified in the Work Order Documents, as extended from time to time in accordance with clause A8-12 (Extensions of time).

Project Works means Ordered Work involving the performance of a single capital works project at a single location (usually for the creation of a New Asset or for the reconstruction of an existing Asset).

Safer Local Roads Contract means the contract between the Shire and the Contractor so titled and dated 30 June 2006.

Site means the site or sites to be handed over by the Shire to the Contractor for the performance of the Ordered Work.

Work Order Period means, with respect to any Ordered Work, the period identified in the Work Order Documents as the Work Order Period, as extended from time to time in accordance with clause A8-12 (Extensions of time).

A8-3 Mutual obligations

The mutual obligations of the parties under each Work Order are as follows:

.1 the Contractor is to carry out and Complete the Ordered Work in accordance with the Work Order Documents,

.2 the Shire is to provide access to the site of the Ordered Work and not to do anything to prevent or hinder the Contractor in the proper performance of the Ordered Work,

.3 both parties are to give the highest priority to safety, and

.4 both parties are to work together to ensure that, as regards matters within their respective control, all Ordered Work is carried out and Completed within the price agreed and set out in the Work Order.

A8-4 Representation

A8-4.1 Each party must appoint a competent person to represent it in relation to the Ordered Work. The initial representatives of the parties and their contact details should be notified in the Work Order Documents but if they are not, each party must promptly provide notice to the other party of the name and contact details of its nominated representative.

A8-4.2 Any change to the identity or contact details of a representative must be notified promptly to the Superintendent (in the case of a change to the Contractor's representative) and to the Contract Manager (in the case of a change to the Shire's representative).

A8-4.3 The Shire's representative appointed under this clause may exercise any powers conferred on the Superintendent by these conditions or the Safer Local Roads Contract with respect to the Ordered Work.

A8-5 Commencement & progress

A8-5.1 The Contractor is to commence the Ordered Work within the period or on the date, if any, specified in the Work Order, unless otherwise agreed.

A8-5.2 The Contractor is to:

.1 carry out the Ordered Work in a timely and expeditious manner, and

.2 where the Work Order specifies a Date or Dates for Completion, Complete the Ordered Work by those dates, and

.3 where the Work Order specifies a Work Order Period, Complete the whole of the Ordered Work within the Work Order Period.

A8-5.3 Both parties are responsible for early notification of events or circumstances likely to delay the progress of the Ordered Work.

A8-6 Care of Project Works

A8-6.1 The Contractor is solely responsible for loss or damage to any Project Works (and all plant, materials, equipment and things necessary for carrying out the Project Works, including things provided by the Shire for the purposes of the Project Works)

from the time of commencement of the Project Works to the Date of Completion.

A8-6.2 After the Date of Completion of any Project Works, the Contractor remains responsible for loss or damage connected with the Project Works but only to the extent arising out of performing variations, making good defects, and removing materials from the Site.

A8-6.3 The Contractor's liability under clauses A8-6.1 and A8-6.2 is reduced to the extent that that an Excepted Risk contributes to the loss or damage.

A8-7 Managing Ordered Work

A8-7.1 Subject to the terms of the Work Order, the Contractor must establish and maintain all systems, plans and procedures required to manage, meet and control all obligations imposed on it by Law with respect to the Ordered Work.

A8-7.2 The Contractor must manage the quality and performance of its obligations under or in relation to the Work Order. This includes doing all testing and other things necessary to demonstrate conformance with its systems, plans and procedures.

A8-7.3 The Contractor must retain records produced in carrying out the Ordered Work and in complying with its systems and make them available to the Shire in accordance with the terms of the Work Order Documents.

A8-7.4 The Superintendent may do any one or more of the following in relation to any Ordered Work:

.1 Conduct audits, surveillance and testing to verify that the Contractor's management systems and plans are effective.

.2 Test materials or other components or parts of the Ordered Work (even if the Contractor is also doing the same tests).

.3 Direct the Contractor not to cover up any work or make it inaccessible without prior approval.

.4 Nominate any point in a work process as a Witness Point or Hold Point.

.5 As part of an audit, direct the Contractor to open up or pull down any completed work and to reinstate it later.

A8-7.5 The Shire must reimburse the Contractor for all costs the Contractor reasonably incurs in pulling down or opening up and then reinstating any completed work for the purposes of an audit unless:

.1 the audit shows that the audited work was not carried out in compliance with the Work Order Documents, or

.2 the work was covered up in breach of a Hold Point or Witness Point or a direction given under clause A8-7.4.3 or another provision of the Work Order Documents.

A8-7.6 Management systems & plans are a tool to demonstrate compliance with the Work Order Documents and as applicable the requirements of good practice and Law. They do not in any way limit a party's obligations under or in relation to the Work Order.

A8-8 Directions

The Contractor must comply with directions of the Superintendent in carrying out its obligations under and in relation to the Work Order.

A8-9 Variations

A8-9.1 The Superintendent may direct the Contractor to carry out a variation with respect to any Ordered Work. A variation directed under this clause may involve the performance of additional work or an increase, decrease, change to the quality or manner of performance or an omission of any part of the Ordered Work.

A8-9.2 The Contractor must comply with a variation direction issued under this clause A8-9 (Variations).

A8-9.3 All variations to Ordered Work will be valued in accordance with the provisions of the Safer Local Roads Contract applicable to Variations directed by the Superintendent.

A8-10 Latent conditions

A8-10.1 If the Contractor encounters on the site of any Ordered Work or its surroundings a physical condition (other than a climatic condition or a condition arising from climatic conditions) including an artificial obstruction ('Latent Condition'), which:

.1 differs materially from the conditions it could reasonably have anticipated at the time of pricing the Ordered Work having regard to the Contractor's knowledge of the Network at the time, the information provided to it for the purpose of pricing and any information ascertainable by the making of reasonably available enquiries; and

.2 affects its ability to carry out, or its costs of carrying out, the Ordered Work,

the Contractor may request a Variation to overcome the effects of the Latent Condition.

A8-10.2 Wherever possible, the Contractor is to notify the Superintendent immediately after encountering the Latent Condition and ideally before the Latent Condition is disturbed.

A8-10.3 The nature and amount of a Variation under this clause are to be determined by agreement between the parties' representatives and failing agreement, by the Superintendent.

A8-11 Not used

A8-12 Extensions of time

A8-12.1 The Contractor is entitled to claim an extension of time to any Date or Dates for Completion or to any Work Order Period if:

.1 the Contractor is delayed in meeting the Date for Completion or is unable to Complete the Ordered Work within the Work Order Period because of an Excusing Event,

.2 the delay starts before the Date for Completion or before the expiry of the Work Order Period (as the case may be),

.3 notice of the delay (or delaying event) has been given to the Shire's Representative in a timely manner after the event and its likely effects are known,

.4 the Contractor has taken reasonably available steps to minimise the duration and effects of the delay,

.5 the Contractor has made a written submission to the Shire's Representative setting out details of the delay, its causes and the amount of extra time claimed, and

.6 the Superintendent considers that an extension of time is justified.

A8-12.2 The approval and duration of any extension of time must be notified to the Contractor by the Superintendent.

A8-12.3 Extensions of time for Ordered Work may extend a Date for Completion or a Work Order Period beyond the end of the Contract Term.

A8-12.4 The Superintendent may also grant an extension of time at any time and for any reason.

A8-12.5 The parties acknowledge that timely identification of disruptive or delaying events is beneficial to both parties and consistent with the SLR Objectives. Both parties agree to keep the Service Management Team informed of things that may delay or disrupt the progress of any of the Services.

A8-13 Costs of delays

A8-13.1 Subject to this clause A8-13 (Costs of delays), the Contractor may claim compensation for the direct cost impacts of any delay to Ordered Work caused solely by a direction or a breach of contract or negligent or wrongful act or omission on the part of the Shire or an Agent of the Shire. The Contractor must endeavour to keep any such cost impacts to a minimum.

A8-13.2 The Contractor is not entitled to claim or receive any compensation under clause A8-13.1 if and to the extent that the delay arose out of or as a result of a direction or any other action considered by the Shire or the Shire's Agent to be necessary or desirable due to an act, omission, default or unauthorised conduct by the Contractor or any of its Agents.

A8-13.3 To be eligible to claim compensation under clause A8-13.1, the Contractor must:

.1 be entitled to claim and be granted an extension of time under clause A8-12 (Extensions of time), and

.2 submit full details of its costs claim to the Superintendent within 5 Business Days of the date of notification of the extension of time under clause A8-12 (Extensions of time), and

.3 be able to demonstrate to the reasonable satisfaction of the Superintendent that the costs claimed were incurred as a direct and sole result of the direction or breach of contract or other action by the Shire or an Agent of the Shire and were not due in any respect to a failure by the Contractor to comply with the Contract or to manage its affairs so as to minimise the impact of any delay.

A8-13.4 Clause A8-13.1 is the Contractor's sole and entire entitlement to compensation for the cost impacts of any delay to Ordered Work.

A8-14 Completion obligations

A8-14.1 On Completion of the Ordered Work, the Contractor must provide to the Superintendent:

.1 "as constructed" drawings and bills of quantities in respect of New Assets created as part of the Ordered Work (Project Works only) (to be provided in digital format);

.2 all materials, documentation and things produced as part of the Ordered Work and not required to be retained by the Contractor for the performance of the Services; and

.3 all items and things provided by the Shire to the Contractor for the purposes of carrying out the Ordered Work (other than items and things used up in the process of carrying out the Ordered Work or required to be retained by the Contractor for the performance of the Services).

A8-14.2 On Completion, the Shire's representative must issue a certificate of Completion in, or substantially in the form set out in schedule A8-1 (Form of Completion Certificate).

Schedule A8-1 – Form of Completion Certificate

Form of completion certificate

[Shire letterhead]

[Date]

[Contractor name]

SAFER LOCAL ROADS CONTRACT - ORDER No. XXXXXX
WORK ORDER FOR [WORK DESCRIPTION]

I hereby certify that the above Ordered Work is Complete.

The following details are confirmed:

1 The Date of Completion was [xxx].

2 The final cost of the Ordered Work (including variations) was [xxx].

3 The Defects Liability Period is [xxx] commencing on the Date of Completion.

Yours sincerely,
[for the Superintendent]

Annexure 9

Asset & Network description

Safer Local Roads
Contract No.1218

MORNINGTON
PENINSULA
Shire

COMMITTED TO A
SUSTAINABLE
PENINSULA

Annexure 9 – Asset & Network description

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Annexure 9 – Asset & Network description

A9-1 This Annexure

This annexure comprises this document and the contents of the CD-Rom identified as "Annexure 9 CD-ROM" and initialled for identification by the parties.

A9-2 Contents of CD-Rom

The contents of the CD-Rom are the documents titled:

A9-2.1 Assets Summary 2006-09-11

A9-2.2 Grading Program – roads summary

This document is also schedule A4-1 (Scope of unsealed roads grading program).

A9-2.3 Network sections 2006-09-11

Personal Information