Portsmouth CITY COUNCIL

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NOTICE OF MEETING

CABINET MEMBER FOR TRAFFIC & TRANSPORTATION

THURSDAY, 15 DECEMBER 2016 AT 5.00 PM

THE EXECUTIVE MEETING ROOM - THIRD FLOOR, THE GUILDHALL

Telephone enquiries to Joanne Wildsmith, Democratic Services Tel: 9283 4057
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If any member of the public wishing to attend the meeting has access requirements, please notify the contact named above.

CABINET MEMBER FOR TRAFFIC & TRANSPORTATION
Councillor Jim Fleming (Conservative)

Group Spokespersons

Councillor Lynne Stagg, Liberal Democrat
Councillor Stuart Potter, UK Independence Party
Councillor Yahiya Chowdhury, Labour

(NB This Agenda should be retained for future reference with the minutes of this meeting.)

Please note that the agenda, minutes and non-exempt reports are available to view online on the Portsmouth City Council website: www.portsmouth.gov.uk

Deputations by members of the public may be made on any item where a decision is going to be taken. The request should be made in writing to the contact officer (above) by 12 noon of the working day before the meeting, and must include the purpose of the deputation (for example, for or against the recommendations). Email requests are accepted.

A G E N D A

1 Apologies

2 Declarations of Members' Interests

3 Tertiary Highways Network Investment Policy and Programme 2017 - 2019 (Pages 3 - 32)

The report by the Assistant Director of Contracts, Procurement and Commercial is for the Cabinet Member for Traffic & Transportation to consider and approve the recommended Asset Management Strategy for Investment in the Council's Tertiary Network. Also to note the three year investment

programme as a result of the selection policy.

RECOMMENDED:
(1) That the Strategy, Vision and Methodology for Tertiary Highways Network Scheme selection and treatment is approved.

(2) That the proposed three year Tertiary Network Investment Programme is noted.

Portsmouth CITY COUNCIL

Agenda item:

Decision maker:	Cabinet Member for Traffic & Transportation - 15 December 2016
Subject:	Tertiary Highways Network Investment Policy and Programme 2017 - 2019.
Report by:	Assistant Director of Contracts, Procurement and Commercial
Wards affected:	All
Key decision (over £250k):	No

1. Purpose of the report

To consider and approve the recommended Asset Management Strategy for Investment in the Council's Tertiary Network. To note the three year investment programme as a result of the selection Policy.

2. Recommendations

2.1 That the Strategy, Vision and Methodology for Tertiary Highways Network Scheme selection and treatment is approved.

2.2 That the proposed three year Tertiary Network Investment Programme is noted.

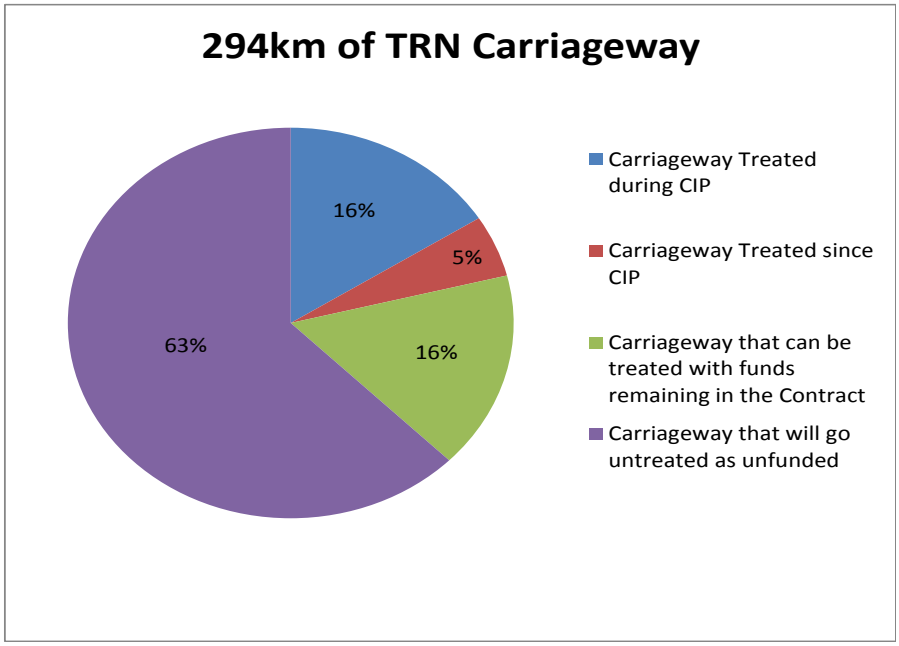
3. Background

3.1 The City Council entered in to a 25 year Highways Maintenance PFI Contract with the Service Company (Ensign Highways Ltd) in 2004. The purpose of this Contract was to provide investment in the Highways Network so that the overall condition of the Network was brought up to a specific condition. The Service Company is then required to maintain this standard throughout the life of the Contract for both the Primary and Secondary Network. This would be paid for by the Service Payment to the Service Company.

3.2 The Tertiary Network is treated slightly differently, however the Service Company are obliged to deposit £200,000 (indexed) into a specific joint bank account on an annual basis between years 6 and 20 of the Contract. The Contract specifies that this money can only be spent on providing Lifecycle Replacement to the Tertiary Network and that this money can only be used to commission the LCR work through the Service Company.

3.3 During the Core Investment Period (CIP) the Service Company invested £13m in the road upgrading 47km of Tertiary Network carriageway. Since CIP the Council have commissioned £1m from the Tertiary Network Fund covering 15km of carriageway. There is currently £1.1m in the Joint Tertiary Network Bank account and a further £2.1m to be received by 2024. Based on previous cost of works it is estimated with the remaining funds available, the Council would be able to treat a further 48km. This means during the term of the Contract 37% of the entire Tertiary Network would have been treated, this is demonstrated in figure 1 below.

Figure 1: % of TRN Carriageway treated/to be treated against entire TRN



3.4 To date the decision on which Road Sections Lengths to treat and the treatment applied has been driven by Ensign who have suggested a programme, however consideration of public and Member concerns and not using recognised engineering techniques had been the Council's methodology for either scheme selection or the treatment to be applied. This has led to roads that require treatment because they are in a poorer condition being left untreated or inappropriate treatments being applied.

3.5 Given the finite amount of money available to treat the Tertiary Network the Council needs to set out it's criteria for scheme selection and treatment, hence why the Policy document in appendix A has been developed.

3.6 When formulating this scheme selection and treatment policy the Council has had to consider the Council's corporate priorities, Local and Regional Local Transport Plans and it's own Asset Management Strategy. The policy sets out how this has been incorporated into the plan.

4. Reasons for the Recommendations.

Scheme Selection and Treatment Strategy

4.1 Council officers working with Ensign have devised a strategy for treating the Tertiary Network with a view to maximising the value for money of the financial resources it has available. This focuses on the following objectives:

4.1.1 To use a selection methodology that allows the Council to accurately assess the condition of the Tertiary Network which in turn allows the Council to treat those roads that are in the poorest condition.

4.1.2 To ensure that a robust selection process is used so that those Road Section Lengths that support the Council's wider strategic goals are treated as a priority.

4.1.3 To adopt an investment plan to ensure the appropriate validation and technically sound treatments are applied to the Tertiary Network.

4.1.4 To ensure that Best Value is achieved through procuring the Tertiary Network works in the most beneficial terms to the Council so that the finite amount of money available can treat the maximum amount of roads within the confines of the Highways Maintenance Contract.

4.1.5 To maximise the Services provided by the Service Company under the Highways Maintenance Contract to ensure that the Council only procures works that are not already covered by the Service Payment.

4.1.6 To devise a forward looking Tertiary Network Plan by creating a three year indicative programme of works, allowing the Council to where able merge these works with others on the Network and gain efficiencies.

4.2 The scheme treatment selection process was previously not set out and it is felt that some treatments may have been applied to address aesthetic rather than structural issues; such as applying aesthetic surface treatments to roads with a concrete base, as such this utilised funds that could have been used to treat roads that had real structural defects. This new policy sets out the methodology for treatments of the specific road construction types and will only spend money on structural treatments.

3 Year TRN Programme

4.3 The Council previously commissioned Tertiary Network works on a piece meal basis the intention is to now provide a 3 year programme to the contractor, this enables the Council to improve it's management of the overall network and tie in with other road works and also take advantage of economies of scale by merging works with the Highways Maintenance contractor. It will also minimise disruption and aid proactive communication with the resident.

4.4 This will deliver a better value for money for the works carried out and crucially more availability on the Project Network.

4.5 The indicative three year programme and costs estimates are included at Appendix C.

6. Equality impact assessment (EIA)

6.1 An Equality Impact Assessment is not required for this report, as it will not disproportionately impact on protected characteristics under the Equality Act 2010, being about the methodology of selection and treatment of roads.

7. Legal Comments

7.1 The proposed works are in accordance with the Contractual provisions provided for within the Highways Maintenance Contract. The Council have an obligation to use the Tertiary Network Fund within a specified timeframe. In light of the above there are no legal implications arising from this report subject to a report on any possible risks to the City Solicitor and S.151 officer.

8. Finance Comments

8.1 Works carried out on the Tertiary Network detailed in this report will be met from the Contractual arrangements included within the Highways Maintenance Contract. If the Council chose to carry out Network enhancements that were greater than that provided within the Contract an alternative source of funding would need to be identified.

8.2 The funds available will not be enough to treat the entire network between now and 2029, however there is no evidence to suggest that this is required or that the Council has a funding shortfall at this moment in time.

8.3 The Council does however need to be mindful of the resources that it has available and therefore the treatments that are applied to the TRN need to be based on providing Value for money with the limited funds available.

8.4 Any funds that remain in the Tertiary Network Bank account in year 20 (2024), prior to handback will accrue to the Council, the contract does however state that the Council needs to use "Best Endeavours" to spend at least £500,000 (indexed) in a three year rolling period.

8.5 The indicative programme that is referred to in this report is likely to cost in the region of £613,000 over the next three years, this will be funded from the Tertiary Network fund as detailed in the report.

……
Signed by Assistant Director of Contracts, Procurement and Commercial

Appendices:
Appendix A -Tertiary Network - Vison, Strategy and Methodology
Appendix B - Tertiary Network - 3 Year Programme

Background list of documents: Section 100D of the Local Government Act 1972

The following documents disclose facts or matters, which have been relied upon to a material extent by the author in preparing this report:

Title of document	Location

The recommendation(s) set out above were approved/ approved as amended/ deferred/

rejected by …… on ……

……
Signed by Cabinet Member for Traffic & Transportation

Portsmouth CITY COUNCIL

Highways PFI
Tertiary Road Network

Vision, Strategy & Methodology

www.portsmouth.gov.uk

Document Title: **PCC Highways PFI Tertiary Road Network - Vision, Strategy & Methodology**

Author: **Alex Lopez, Technical Officer**

Version Control

Version	Author	Role	Date
1.0	Alex Lopez	Technical Officer	12th August 2016
1.1	Alex Lopez	Technical Officer	25th October 2016

Document Control

Version	Reviewer	Role	Date
1.0	Eleni Oulasoglou	Technical Manager	12th August 2016
1.1	Eleni Oulasoglou	Technical Manager	28th October 2016

Approval Control

Version	Reviewer	Role	Date
1.0	Brad Yates	Performance Manager	12th August 2016
1.1	Wayne Layton	Commercial Manager	2nd November 2016

Distribution Control

Version	Name	Role	Date
1.1	Greg Povey	Assistant Director	3rd November 2016

Table of Contents

List of Figures

List of Tables

1. Introduction

1.1 The purpose of this document is to set out a robust methodology for maintaining the Portsmouth PFI Tertiary Road Network. It takes into account the Council's existing Vision, Asset Management Strategies, Policies and Plans.

1.2 The tertiary road network or unclassified local network is defined as local roads intended for local traffic. The vast majority (60%) of roads in the UK fall within this category.

1.3 The document sets out the decision process for selecting roads for treatment, and how best to treat those roads to ensure that they are repaired on a whole life cost basis making maximum use of the financial resources available.

2. Background

2.1 Portsmouth City Council ("PCC" or "the Council") entered into a private finance initiative highways management contract (the Contract) with Ensign Highways Ltd ("the Service Provider") on the 30 July 2004. The Contract, which was the first of its kind for highway maintenance in the UK, extends over a period of 25 years and PCC setup a Highways PFI team to manage the Contract.

2.2. The Highways Maintenance Contract obliges the Service Company to carry out maintenance and Life Cycle replacement for Carriageways on the Primary and Secondary Network; however it only includes maintenance for the Tertiary Network.

2.3 The Tertiary Network (TRN) in Portsmouth constitutes approximately 294 km, 64% of the adopted Portsmouth Road Network, and it is divided in 1798 Road Section Lengths. Although there is residential housing in the PRN and SRN networks, the vast majority of the Portsmouth residents live in a TRN road.

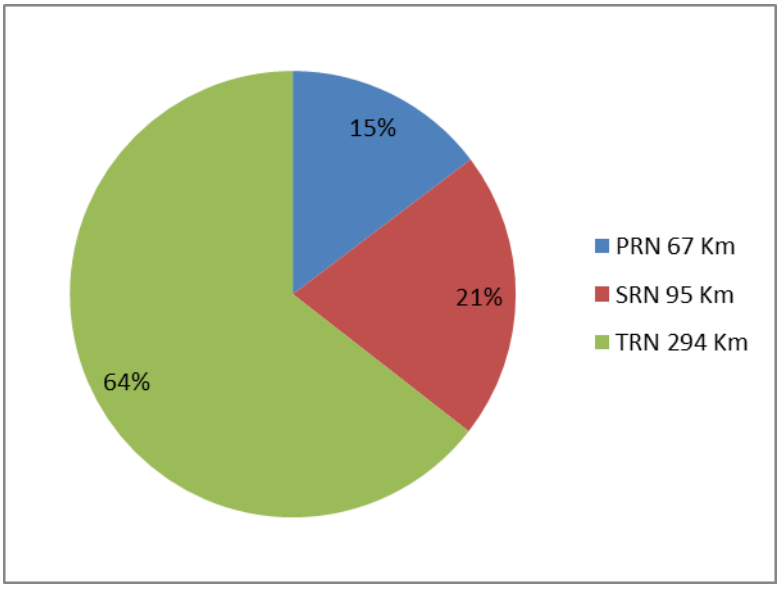


Figure 1: Percentages of each network hierarchy by km

2.4 The contract required the Service Provider to upgrade the network, including the TRN network in an initial 5 years Core Investment Period (CIP) as specified below.

2.5 To date the TRN condition was assessed through the annual Coarse Visual Survey (CVI).CVI is intended to be a coarse, rapid survey, usually carried out from a slow-moving vehicle, that allows a large part of a highways authority's road network to be assessed each year.

2.6 At the end of CIP, 100% of the TRN was surveyed and the Core Investment Period (CIP) was certified based on the TRN NCI at 6.64 which was above the minimum threshold of 3.02 (as defined below). In order to achieve this certification, a total of 47km of the TRN were treated in the initial 5 years CIP.

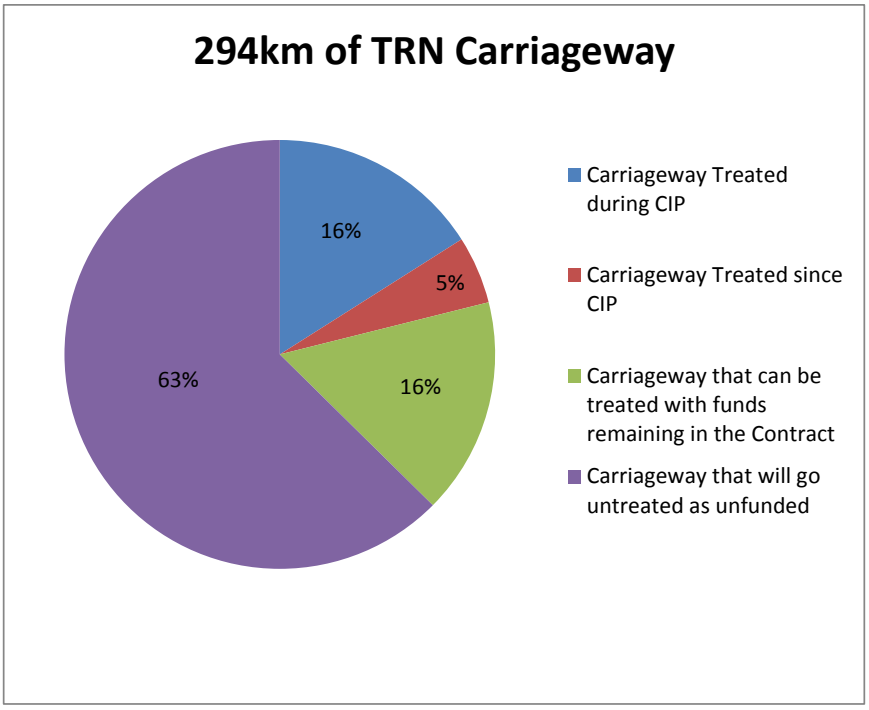


Figure 2 - Projected maximum carriageway treatment over the Contract duration

2.7 After CIP, the only Contractual requirements placed on the Service Company for the TRN are:

- *At the end of the CIP, and for the remainder of the Contract Period, no Road Section Length shall exhibit, greater than 30% (by area) of Patching*
- *Footways in Tertiary Network shall be maintained to the required FCI threshold in accordance with Part 1 Schedule 4, paras 22 to 27;*

2.8 The Contract also specifies that the Service Company has to deposit £200,000 (indexed) from year 6 to 20 into the TRN fund and to use the fund to pay for works on Tertiary Network following the 7th contract year (Clause 10.22). The fund is very limited, and it is only a 10% of Southampton budget of £2m for example. It is worth noting that the TRN fund is only for renewal as maintenance is included in the PFI contract.

2.9 From this the City Council has to work with the Service Company to use best endeavours to maintain the TRN to the highest possible standard within the budget provided.

2.10 From the TRN fund account, the Council are Contractually obligated to:

(a) only use the TRN Fund to pay for works to be performed by Service Co. on the carriageway of the Tertiary Network;

(b) subject to (c) below, use best endeavours to specify and pay for (from the TRN) such works to a value of £500,000 Indexed in any three year period following the seventh Contract Year until the fund is spent, and

(c) in so doing, have reasonable regard to representations from Service Co. about the works which should be paid for from the Tertiary Network Fund, which representations may include suggestions for works which will assist in the discharge of Service Co.'s obligation under Clause 10.22.7.

2.11 The main contractual requirement for TRN CIP upgrade is set out in Schedule 4 Part 1 of the Contract as follows:

- *The Tertiary Network shall be maintained at or above a Network NCI of 3.02 as defined in Schedule 4 Pt 2 [Service Performance Measurement Methodology] (i.e. at or above the existing network level) by the end, or before the end, of the Core Investment Period such that no Road Section Length within the Tertiary Network shall be in failed condition (i.e. a section NCI of 1.6 or less).*

2.12 This means that for maintenance purposes, defects like pot holes that reach an intervention point set out in the Contract, the Service Company has the responsibility to fix, however they are not required to resurface the entire road.

2.13 The TRN condition is assessed through the annual Coarse Visual Survey (CVI). At the end of CIP, 100% of the TRN was surveyed and the Core Investment Period (CIP) was certified based on the TRN NCI at 6.64 which was above the minimum threshold of 3.02 (as defined above). In order to achieve this certification, a total of 47km of the TRN were treated in the initial 5 years of CIP. (See Appendix 1, Roads treated during CIP)

2.14 After CIP, the contract only requirements for the TRN are:

- *At the end of the CIP, and for the remainder of the Contract Period, no Road Section Length shall exhibit, greater than 30% (by area) of Patching*

- *Footways in Tertiary Network shall be maintained to the required FCI threshold in accordance with Part 1 Schedule 4, paras 22 to 27;*

2.15 Following the CIP, the TRN is assessed through the CVI on a 4 year basis (25% of the network is assessed per year). Additionally, Ensign carries out an externally contracted visual survey of all assets, including carriageway, which form the basis of the SIC score. The survey assesses the carriageway every 20m and assigns a value from 1 (as new) to 4 (no safety defects but might need renewing). Further information can be found in table 3 below.

2.16 The Contract also specifies that the Service Company has to deposit £200,000 (indexed) from year 6 to 20 into the TRN fund and to use the fund to pay for works on Tertiary Network following the 7th contract year (Clause 10.22).

2.17 Service Co. will deposit £200 000 (Indexed) on the 1st October of the sixth Contract Near, and each Contract Year thereafter up to and including the twentieth Contract Year, in an interest bearing designated account in the name of Portsmouth City Council (PCC).

2.18 Since the fund was created, PCC has refurbished approximately 15km of the TRN utilising £1m of the fund, on a variety of schemes and technical proposals. This equates to an average of 6 roads per year. (around 3Km a year)

2.19 The table below summarises the TRN NCI, the CIP investment and investment following the CIP:

Year/Period	CIP	2011	2012	2013	2014	2015
NCI	6.64		5.94	5.34*	4.04	5.28
£ investment	£13.35 m	£159,836	£350,850	£200,671	£0	£291,654

Table 1 . Investment during and after CIP

2.20 There is currently £1.1m in the Tertiary Network fund bank account and an additional £2.1m still left in the Contract. Which, given the expenditure to date means that approximately a further 48km of road can still be treated. (around 5km per year average)

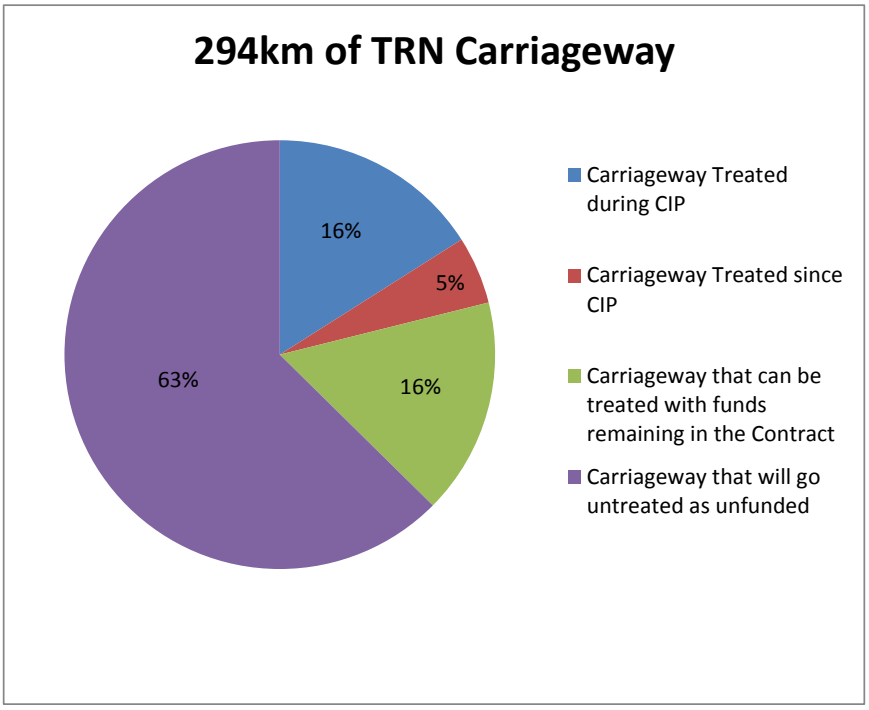


Figure 3 - Projected maximum carriageway treatment over the Contract duration

2.12 The graph above demonstrates that by the end of the Contract the Council will only be able to treat 37% of the overall TRN. Therefore, it is essential that the Council has a robust methodology not only for selecting the Roads that require treatment but also to ensure that the treatment applied provides a value for money. This ensures that the areas treated are critical road structures and not due to aesthetics issues.

In summary, during the 25 years of the contract only around 37% of the TRN will be treated.

3. Vision

3.1 To develop a strategy that allows the Council to provide a structurally sound, safe, resilient and reliable TRN network that is maintained regularly to protect its users and that contributes to local economic growth and aids to develop strong road links that also attracts housing developments.

3.2 The TRN also needs to support the stated Council overall Vision statements, support regional LTP programmes and the overall Council Highways Asset Management Plan, ensuring it delivers:

- A network that provides high quality, affordable and accessible services for all.
- A network that contributes to Portsmouth City Council corporate vision statement to become “The premier waterfront city with an unrivalled maritime heritage – a great place to live, work & visit.”

4. Strategy

1. To ensure that a robust selection process is used so that those Roads that support the Councils' wider strategic goals are treated as a priority.

2. To use a methodology that allows the Council to accurately assess the condition of the TRN which in turn allows the Council to treat those roads that are in the poorest condition ensuring strategic locations such as schools, hospital, nursing homes, etc are factored in within the decision process.

3. To adopt a consistant investment plan to ensure the appropriate validation and technically sound treatments are applied to the Tertiary Network.

4. To ensure that Best Value is achieved through procuring the Tertairy works in the most beneficial terms to the Council so that the finite amount of money available can treat the maximum amount of Roads within the confines of the Highways Maintenance Contract.

5. To maximise the Services provided by the Service Company under the Highways Maintenance Contract to ensure that the Council only procures works that are not already covered by the Service Payment.

6. To devise a forward looking Tertiary Network Plan by creating a three year indicative programme of works, allowing the Council to where able merge these works with others on the Network.

5. Methodology

5.1 The methodology used so far for the selection of these schemes did not seem to have a clear strategy and a proven industry approach to ensure the funds were spent wisely targeting the poorest condition road section length and obtaining best value for the PCC.

5.2 During this review of the methodology, it was discovered that the main drivers used by PCC to date for the selection of schemes were not appropriately defined and inconsistently applied. Furthermore, the data used had been unreliable. The use of this strategy meant that some areas of the network were not attended or treated as a priority creating concerns from the residents which in turn became residents' complaints. This prompted a rethink of the process and a new methodology has been developed jointly by PCC and Ensign's technical groups.

5.3 The proposed new methodology is based on Industry Best Practice and follows guidance documents produced by the UK Roads Liaison Group and the Highways Maintenance Efficiency Program (HMEP).

5.4 It ensures a systematic analysis of the data available which is summarised in the diagram below:

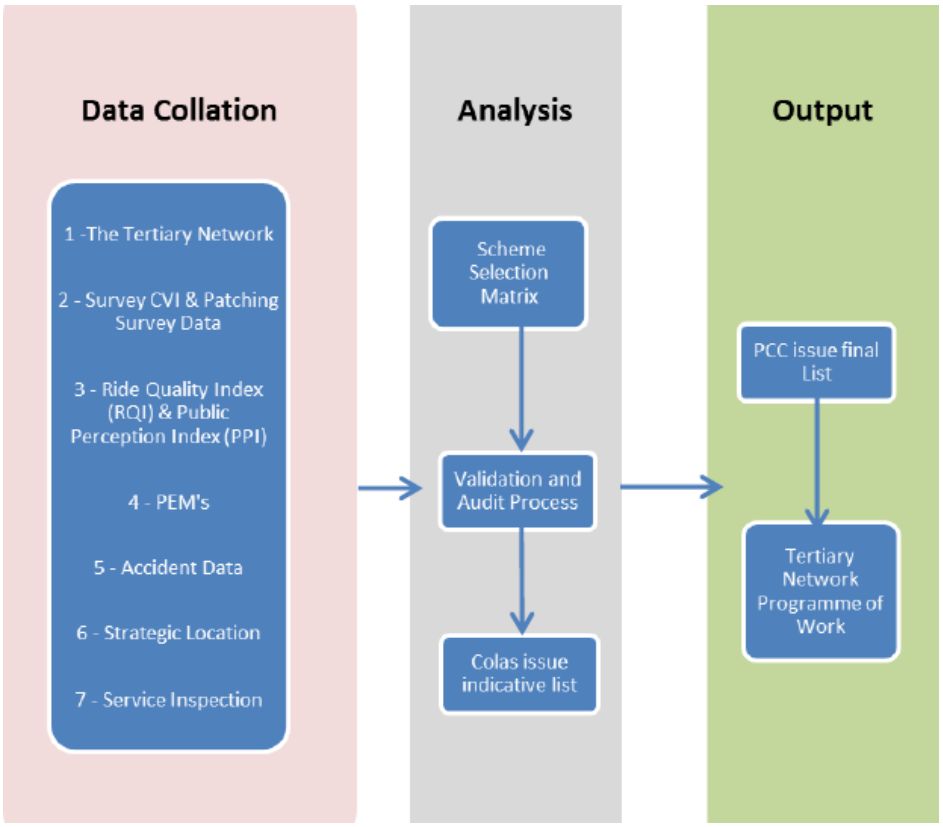


Figure 4 - Process diagram

5.5 The process is summarised in three disctinct stages, the first is the collection of relevant technical data that allows the Council to fully understand the condition of the Highways Network. This uses a mixture of Industry standard technical surveys, local knowledge and collected data.

5.1 Data Collation

5.1.1 The data used for the proposed new methodology comes from various sources;

a) Surface Condition Index (SCI) obtained as part of the Network Condition Index (NCI) process. This score is based on a Coarse Visual Inspection (CVI) carried out on 25% of the network every year;
b) Service Inspections Condition (SIC), based on a 100% TRN walked survey and undertaken by John Reed Surveyors;
c) Reactive Maintenance Data; analyses defect locations and category of defects (by asset and treatment)
d) Public Enquiries Management System (PEM's): Public concerns on the carriageway condition;
e) Accident records: Skid related accidents derived from Police records;
f) Strategic Routes and Amenities: Identifying the location of schools, hospital, emergency services and residential homes on tertiary network and giving priority;
g) Safety Inspections condition, comments and recommendations;
h) Road sections of concern to PCC,

5.1.2 These data sources have been designed to conform with good industry practice and also take into account public feedback, local knowledge of a non-engineering manner, such as location and the number of issues that have been reported in these locations.

5.2 Analysis

The second stage is analysing this data. In order to do this we need to introduce trigger points for intervention which are detailed below:

5.2.1 **Analysis** of the data collected.

The triggers are based on 4 main data:

1. Surface Condition Index – SCI; collected as part of NCI surveys. Based on Coarse Visual Inspection

SCI data

Condition	Years Remaining	SCI
Excellent	>10	10
Good	>8 - <=10	8
Reasonable	>6 - <=8	6.6
Fair	>5 - <=6	4.8
Poor	>2 - <=5	3.6
Critical	>0 - <=2	2.4
Failed	0	1.6

Table 2 - SCI Condition distribution

Based on this parameter, a 5% distribution was obtained based on the actual condition which meant that every RSL under the value of 1.93 was added to the list of sites for site investigation. The figure below shows how this is calculated:

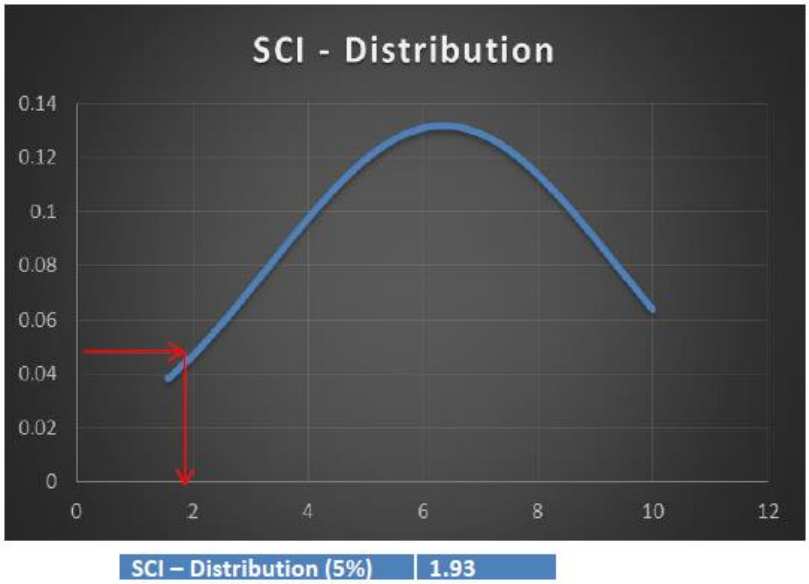


Figure 5 - SCI distribution curve

2. Service Inspection Condition (SIC) : Visual Survey data is collected as part of the Ensign/Colas Asset Maintenance Strategy.

SIC data – is a length weighted average of the 20m subsection

Condition	SIC
New or As New	1
Good	2
Condition showing signs of aging	3
No safety defects but may need renewing	4

Table 3 - SIC Condition distribution

As per the SCI above, a 5% distribution was obtained based on the actual condition which meant that every RSL over the value of 3.25 was added to the list of sites for site investigation. The figure below shows how this is calculated:

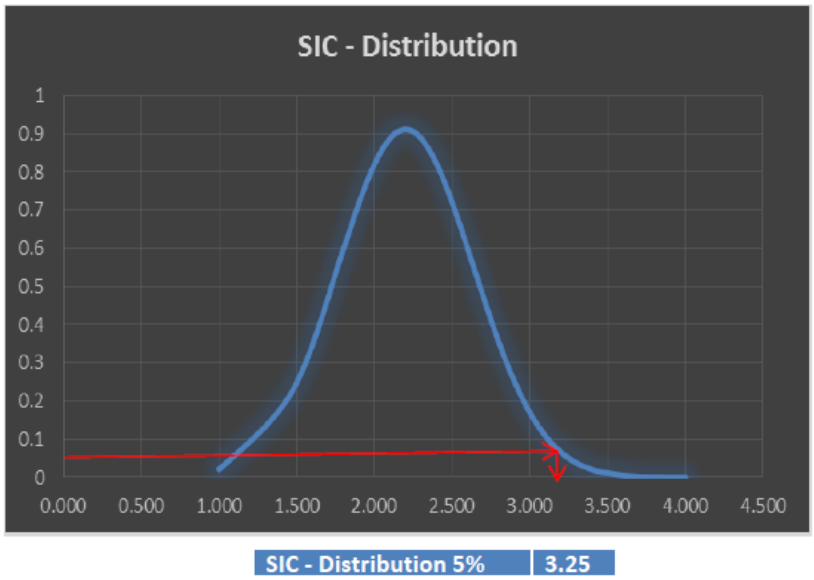


Figure 6 - SIC distribution curve

3. Reactive maintenance data; based on the number of defects recorded in any particular Road Section Length
4. Safety Inspectors recommendations.

5.2.2 Following this 4 triggers of data analysis, the generated list is then prioritised based on the following data:

1. Public Enquiries Management System (PEM's): Public concerns on the carriageway condition;
2. Accident records: Skid related accidents derived from Police records;
3. Strategic locations (SL): (Schools, hospital, emergency services and residential homes) Priority 1 assigned to sections on SL and Priority 2 assigned to sections not on SL;
4. Road sections of concerned to PCC.

5.2.3 Utilising a statistical approach based on the four main triggers above and for each of the parameters a list is generated, where a 5% distribution has been added to create a first indicative list.

5.2.4 The list of sections generated by this distribution is then categorised by Strategic Location.

5.2.5 Site validation by in depth visual inspections is then carried out by Ensign/Colas and PCC.

5.2.6 A provisional list of sites to treat from the validation survey is then generated. This list is then assessed by PCC engineers.

This year the list generated 306 sites. A breakdown per ward is presented below:

Page 20

Wards	High priority	Medium priority	Low priority	Grand Total
Charles Dickens	3	18	19	40
Paulsgrove		5	32	37
St Jude	1	19	9	29
Cosham	1	12	12	25
St Thomas	2	12	9	23
Milton	1	10	10	21
Hilsea		9	12	21
Drayton & Farlington		4	17	21
Eastney & Craneswater	2	5	13	20
Baffins	1	6	12	19
Fratton	3	4	7	14
Copnor	4	2	7	13
Central Southsea	4	4	4	12
Nelson	1	6	4	11
Grand Total	23	116	167	306

Table 4 - Tertiary Road Network 201 -Wards Summary and Priority Ratings

5.2.7 Finally a Joint Ensign and PCC Workshop to finalise potential schemes is held.

5.3 Output Stage

5.3.1 The Last Stage is the Output stage, this is where PCC confirms final scheme selection for the TRN network.

5.3.2 The 3 year Works Programme is developed. This includes a 12 month detailed schedule and a further 2 year indicative programme. The selection process can be found in Appendix 4.

6. Treatment Selection Methodology

In order to define the treatment selection methodology we have to firstly classify the roads based on their existing road structure, these are as follows:

I. Fully flexible Road, where the road base and the surface course are composed by flexible materials (commonly known as tarmac).

II. Flexible Composite Roads, where the road base is pavement quality concrete and the overlying surface course is between 30mm/50mm of tarmac.

III. Concrete roads, where the road base and the surface is concrete. (with time, some of this roads have been treated with a very thin micro asphalt surface 0-15mm to protect them from the ingress of water).

Based on the road structure, the main treatment types are:

Type	Treatment Type	Description	Purpose
A	**Crack Sealing/ Overbanding**	Sealing the cracks from the ingress of water with a bituminous emulsion	To protect from the ingress of water and freeze and thaw effects
B	**Surface Dressing**	Covering the carriageway with stone chips embedded in bitumen.	To seal the surface, improve skidding resistance and restore visual/ride quality mainly in Rural areas.
C	**MicroAsphalt**	Covering the carriageway with a veneer of cold laid surfacing material.	To seal the surface, improve skidding resistance and restore visual/ride quality mainly in Urban areas.
D	**Resurfacing (Inlay)**	Removal of surface course and replacing the carriageway with a minimum thickness of 30mm of dense hot laid surfacing material.	To replace a failed surface which is not suitable for Micro suirfacing or Surface dressing. Resurfacing restores ride quality, skidding resistance and can reduce noise.
E	**Resurfacing (Overlay)**	Covering the carriageway with a minimum thickness of 30mm of dense hot laid surfacing material.	To replace a failed surface which is not suitable for Micro suirfacing or Surface dressing. Resurfacing restores ride quality, skidding resistance and can reduce noise.
F	**Strenghthening**	Removal of surface course and base/binder course to a minimum of 70mm depth and replacing the materials with a new road structure.	To replace a failed road structure

Table 5 - Treatment Matrix

7. Treatment Selection Methodology

7.1 The process for selecting the appropriate treatment for each selected TRN scheme will be based on the two main factors:

- Road structure
- Structural condition

As summarised on the table 4 below, the first step would be to determine the road structure.

7.2 Once the road structure has been determined, we would then analyse the data available and the site validation notes to ascertain whether the road is structurally sound or not. Based on the this, the treatment options would be selected from Table 5 above.

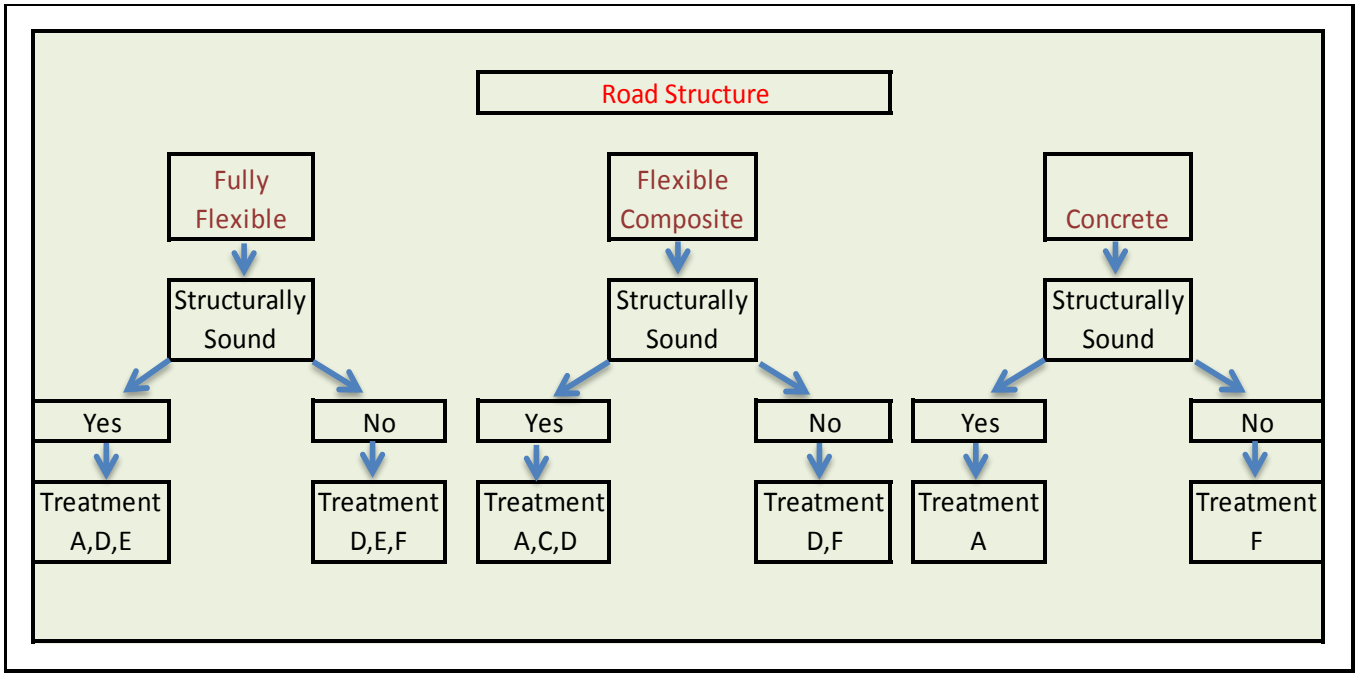


Table 6 - Treatment Selection Matrix

7.3 Due to the limited funding available and the misconstrued perception that concrete roads need treatment when the surface cover deteriorates, it is our intention to only treat concrete roads when their structure is deteriorated and failing and not due to aesthetically unpleasing issues.

7.4 Concrete Roads constitutes 2% of the tertiary network as detailed below

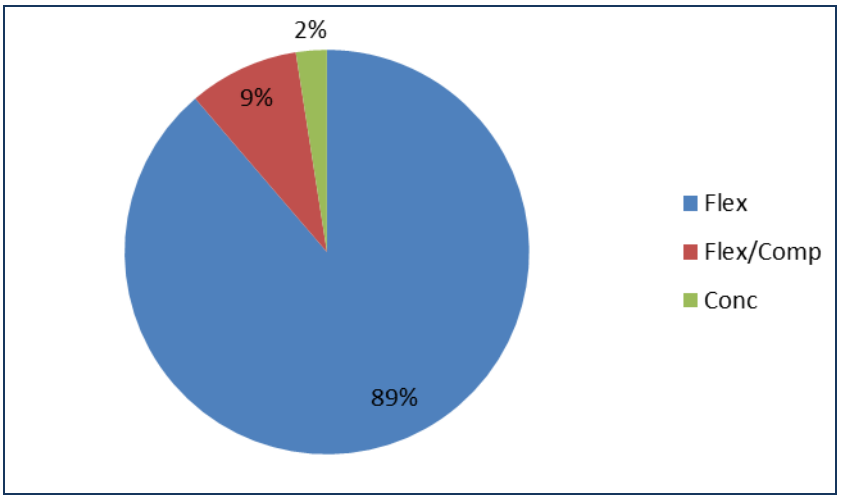


Figure 7: Percentages distribution of Tertiary Network based on Surface Type

7.5 The definition of a carriageway pothole under the Highways PFI contract and when it becomes a safety concern is a depth of defect of 40mm. Concrete roads have a Surface cover of normally 6-10mm and therefore a pothhole occurring does not constitute a safety concern.

7.6 The concrete roads will be regularly serviced using overbanding methods to ensure the surface continues to be waterproofed and prevent the deterioration caused by freeze and thaw.

8. Appendices

Appendix 1: Tertiary Network Schemes Selection Process, Tertiary Road Network Report, Contract Year 12, Ensign/Colas, 21 July 2016.

Appendix 2: Tertiary Road Network Report, Contract Year 12, Ensign/Colas, 21 July 2016. Process of Scheme Selection (Tertiary Road Network), Ensign/Colas, July 2016.

Appendix 3: Tertiary Road Network Fund Report, Contract Year 12, Ensign/Colas, 21 July 2016.

Appendix 4: Tertiary Road Network , Programme of Works following Selection Process,Contract Year 13 , PCC, August 2016

References

Hampshire County Council - Guidance Document on Surfacing Options for Highways, 2010.

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Appendix 4 - Programme of works following the selection Methodology

1. Proposed Programme of Works

Following development of the validation list a site validation is carried out by PCC engineers considering additional factors such as :

1) Defects /maintenance issues that should be address within the contract
2) Other softer engineering factors such as touristic/historic places, shopping areas

Having considering all the above the proposed list for this financial year is presented below:

Road Name	Priority	PCC Comments	Proposed Treatment	Road Type
Lynton Road	H-H	Very uneven road with large patches. Structurally poor.	D	Flexible
Nelson road	H-H	Areas of unevenness and large patches/reinstatements. Large amount of traffic. Review the cushion condition.	D	Flexible
Marion Road	M-H	Large amount of patching/c/w repairs, unevenness, reflective cracking and material loss.	D	Flexible
Richmond Place	M-M	Significant amount of patching/c/w repairs, unevenness, reflective cracking and material loss. High used area due to deliveries for Palmerston precinct access road for Waitrose and Palmerston road.	D	Flexible
Waltham Street	H=M	Large patches, poor condition overall	D	Flexible
Auckland Road East	H-M	Very poor condition, material oxidisation, fretting	D	Flexible
Alver Road	H-H	poor Condition	D	Flexible
East Street	M-M	Poor Condition/Touristic Place	D	Flexible
Cavell Drive	H-H	patching poor condition	D	Flexible

Table 1: Tertiary Road Network 2016 - Proposed maintenance list for Contract year 13

The proposed list is supported by the initial validation as it is detailed below:

RSE_DESCR	PS Cat	Wards	Surface Type	SCI	Accidents in last 5 years (11 - 15)	Service Inspection Cond (SIC) 10/2015	SIC - No. Subsection Rating 4	Patching Ratio 2012	Patching Ratio 2013	Patching Ratio 2014	Patching Ratio 2015	Patching Ratio Final	PEM 2015 - Count	Defect Count	Strategic Location	SCI - Distribution	SIC - Distribution	Defects Count - Distribution	Code
ALVER ROAD	PS1 (C)	Fratton	Bituminous	5.05	0	2.81	1	0.00				0.00	37	4			1		HH
CAVELL DRIVE	PS1 (C)	Cosham	Bituminous	1.80	0	2.56	0			1.07		1.07	10	1	HOSPITAL / BUS	1			HH
LYNTON GROVE	PS1 (C)	Baffins	Bituminous	1.89	0	2.99	0				1.96	1.96	49	9		1		1	HH
NELSON ROAD	PS1 (C)	Charles Dickens	Bituminous	5.39	0	2.26	0	0.00				0.00	11	6	SCHOOL			1	HM
WALTHAM STREET	PS1 (C)	St Thomas	Bituminous	3.45	0	3.03	1		0.14			0.14	12	5	SCHOOL		1	1	HM
MARION ROAD	PS1 (C)	Eastney & Craneswater	Bituminous	3.82	0	3.00	0		0.00			0.00	29	24				1	HL
AUCKLAND ROAD E	PS1 (C)	St Jude	Bituminous	3.61	0	3.05	1		0.05			0.05	85	3			1		HL
RICHMOND PLACE	PS1 (C)	St Jude	Bituminous	4.43	0	4.00	7		0.49			0.49	38	1			1		MH
EAST STREET	PS1 (C)	St Thomas	Setts	1.69	0	3.14	1		0.09			0.09	17	1	NAVAL / BUS	1	1		MM

Table 2 : Tertiary Road Network- Proposed list for Contract year 13 based on 4 main triggers and soft engineering parameters

2. Proposed Programme for Contract Year 14

Road Name	Priority	PCC Comments	Proposed Treatment	Road Type
ST ALBAN`S ROAD	H-M	Patching is required at present.	D	Flexible
HAVANT STREET	H-M	loss of material patching	D	Flexible
SHAKESPEARE ROAD	H-M	loss of material patching	D	Flexible
LOWER BROOKFIELD ROAD	H-H	Cul de sac	D	Flexible
TOWER ROAD	H-M	loss of material patching	D	Flexible
MERTON ROAD	M-M	fretting loss of material	D	Flexible
GLENTHORNE ROAD	H-M	loss of material patching	D	Flexible
ST ANN`S ROAD	H-L	fretting loss of material	D	Flexible
HENLEY ROAD	H-L	loss of material patching	D	Flexible
CHILDE SQUARE	H-L	fretting loss of material	D	Flexible

Table 3: Tertiary Road Network 2016 - Proposed maintenance list for Contract year 14

RSE_DESCR	PS Cat	Wards	Surface Type	SCI 2012	SCI 2013	SCI 2014	SCI 2015	SCI	Accidents in last 5 year	Service Inspection Cond (SIC)	SIC - No. Subsection	Patching Ratio 2012	Patching Ratio 2013	Patching Ratio 201	Patching Ratio 2015	Patching Ratio Final	PEM 2015 -Count	Defect Coun	Strategic Location	SCI - Distribution	SIC - Distribution	Defects Count - Distribution	Inspector List	Scheme Selection	Code
HAVANT STREET	PS1 (C)	Charles Dickens	Bituminous	4.80				4.80	0	4.00	1	0.00				0.00	1	1	NAVAL		1			1	HM
ST ALBAN`S ROAD	PS1 (C)	Central Southsea	Bituminous		3.60			3.60	0	3.27	1		1.38			1.38	7	2			1			1	HM
TOWER ROAD	PS1 (C)	Central Southsea	Bituminous		4.45			4.45	0	3.00	0		0.00			0.00	8	5				1		1	HM
CHILDE SQUARE	PS1 (C)	Nelson	Bituminous				3.16	3.16	0	3.00	0				1.54	1.54	50	12				1		1	HL
HENLEY ROAD	PS1 (C)	Central Southsea	Bituminous		3.82			3.82	0	3.08	1		0.08			0.08	55	6			1	1		1	HL
SHAKESPEARE ROAD	PS1 (C)	Fratton	Bituminous	4.80				4.80	0	2.78	0	0.00				0.00	76	2	SCHOOL				1	1	HL
ST ANN`S ROAD	PS1 (C)	Central Southsea	Bituminous		2.86			2.86	0	3.00	0		0.18			0.18	18	9				1		1	HL
BROOKFIELD ROAD	PS1 (C)	Fratton	Bituminous	5.10				5.10	0	2.19	0	0.00				0.00	27	5				1		1	MH
MERTON ROAD	PS1 (C)	St Jude	Bituminous		9.22			9.22	1	2.00	0		0.04			0.04	40	7	SCHOOL			1		1	MM

Table 4: Tertiary Road Network 2016 - Proposed maintenance list for Contract year 14

3. Proposed Programme for Contract Year 15

Road Name	Priority	PCC Comments	Proposed Treatment	Road Type
CRANESWATER AVENUE	M-M	crazing and patches loss of material	D	Flexible
NETLEY ROAD	M-M	crazing and patches loss of material at the end	D	Flexible
CONAN ROAD	L-M	settlement loss of material	D	Flexible
STAFFORD ROAD	M-M	loss of material patching	D	Flexible
WESTBOURNE ROAD	H-L	loss of material patching	D	Flexible
WIMPOLE STREET	M-L	loss of material patching	D	Flexible
WILSON GROVE	M-L		D	Flexible
WELLINGTON STREET	M-L	Completion of the development discussion for next year. Contribution required	D	Flexible

Table 5: Tertiary Road Network 2016 - Proposed maintenance list for Contract year 15

RSE_DESCR	PS Cat	Wards	Surface Type	SCI 2012	SCI 2013	SCI 2014	SCI 2015	SCI	Accidents in last 5 years (11 - 15)	Service Inspection Cond (SIC	SIC - No. Subsection Rating	Patching Ratio 2012	Patching Ratio 2013	Patching Ratio 2014	Patching Ratio 2015	Patching Ratio Final	PEM 2015 - Count	Defect Count	Strategic Location	SCI - Distribution	SIC - Distribution	Defects Count - Distribution	Inspector List	Scheme Selection	Code
WESTBOURNE ROAD	PS1 (C)	Copnor	Bituminous				5.55	5.55	0	3.00	0				3.30	3.30	41	14				1		1	HL
NETLEY ROAD	PS1 (C)	St Jude	Bituminous		4.93			4.93	0	3.09	1		0.35			0.35	45	1			1			1	MH
STAFFORD ROAD	PS1 (C)	St Jude	Bituminous		3.60			3.60	0	3.14	1		0.12			0.12	50	2	SCHOOL		1			1	MH
CONAN ROAD	PS1 (C)	Hilsea	Bituminous				5.06	5.06	0	2.48	0				0.81	0.81	11	5	SCHOOL / RES_ HOMI			1		1	MM
WIMPOLE STREET	PS1 (C)	Charles Dickens	Bituminous	2.94				2.94	0	2.00	0	0.00				0.00	8	5				1		1	MM
CRANESWATER AVENUE	PS1 (C)	Eastney & Craneswa	Bituminous		6.80			6.80	0	2.76	1		0.06			0.06	54	8			1	1		1	MM
WELLINGTON STREET	PS1 (C)	St Thomas	Bituminous		3.43			3.43	0	3.14	1		0.22			0.22	23	3			1			1	MM
WILSON GROVE	PS1 (C)	St Jude	Bituminous		3.46			3.46	0	3.07	1		0.29			0.29	42	12			1	1		1	MM

Table 6: Tertiary Road Network 2016 - Proposed maintenance list for Contract year 15