



Manningham Road Benchmarking Report

January 2016

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with Manningham City Council

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1. OBJECTIVE

To determine the overall performance, from a “community” perspective, of six (6) councils in terms of road infrastructure maintenance and to compare that performance with the performance of Manningham based on a visual “driver” perspective, *“to view the streetscape (road and nature strip) as would a member of the community driving along that road”*.

The two key outcomes sought are to:

Compare Manningham’s performance with previous years and to ascertain the level of consistency or change in performance from year to year; and

Compare Manningham’s performance against five (5) other similar Victorian (metropolitan) councils to ascertain the relativity between their respective performances.

2. MAINTENANCE ITEMS SURVEYED

The Road infrastructure survey included:

- Road pavement - potholes;
- Signs;
- Line marking;
- Side entry pits;
- Garden bed maintenance (within road reserves); and
- Overall tidiness (street cleaning, extent of litter and overall appearance).

3. COUNCILS SURVEYED

The six councils surveyed were the cities of Manningham, Whitehorse, Monash, Knox, Maroondah and Banyule.

4. METHODOLOGY

4.1 Road Infrastructure

The Road infrastructure was assessed by a “windscreen survey” undertaken by two persons in the one vehicle. The key components of the road infrastructure survey of each council involved:

- Travelling along thirty (30) kilometres of road under the care and management of the Council in each municipality (this information was obtained from each Council’s Road Management Plan to ensure all are local roads and provide greater consistency between Council’s surveyed);
- Random selection of a wide variety of roads including residential, commercial/ industrial, collector and local roads within each municipality;
- Recording the number of “incidents” and assessment of line marking, garden bed maintenance and overall tidiness against specified Assessment Criteria outlined in Section 5;

- The inclusion of the infrastructure elements of intersecting road in the vicinity of the intersection that are clearly visible from the road being assessed; and
- Assessments carried out by persons experienced in infrastructure maintenance and management and independent of the Manningham maintenance operations.

As recommended in the previous report, only those roads as designated within each Council's Road Register were surveyed. This ensured that all roads selected are maintained by each council and eliminate any potential inconsistencies for maintenance responsibilities between councils surveyed.


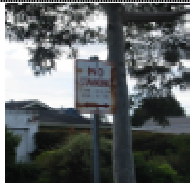
5. ASSESSMENT CRITERIA




The two methods of assessing performance were by:

- Recording the number of "incidents" in each road infrastructure category; and
- Visually assessing and recording performance against agreed assessment criteria for the following elements:
 - Line marking;
 - Landscape (garden bed); and
 - Overall tidiness.

5.1 Incident Recording

The criteria used within each municipality for assessing the comparative performance of the road infrastructure for incidents, is set out in the following table:



Performance Categories	Performance Criteria
SIGNS	
Leaning Poles	Poles with leans of approximately 3 degrees (> 50mm lean over length of 2000mm) or more from the vertical.
Twisted/broken or bent signs	<p>Twisted signs included signs facing wrong way on pole and/or the sign itself twisted.</p> <p>Broken signs include those broken and part of the sign remains or sign has been removed from its position and lying on the ground/pavement.</p> <p>Bent signs included obvious deformation of the sign even if still legible.</p> 
Missing Signs	A pole without a sign or a bracket fixed to a pole but no sign.
Graffiti on sign	A sign defaced by stickers, writing, spray paint etc
Faded/Dirty sign	A sign difficult to read due to faded lettering/symbol and/or build-up of dirt, rust etc. 




Performance Categories	Performance Criteria	
SIDE ENTRY PITS		
Blocked Inlet	Inlet pit throat blocked by more than 50% of opening.	
Broken lintel	Lintel structure broken/damaged/deformation	
PAVEMENT - POTHOLES		
Greater than 300mm diameter	Pothole in road surface greater than 300mm in diameter and greater than 25mm deep.	
Less than 300mm diameter	Pothole in road surface less than 300mm in diameter and greater than 25mm deep.	



Note: Bus Stop signs and poles are excluded from the survey, as the maintenance responsibility between municipalities for these items is not consistent.

5.2 Visual Rating Assessments

For the assessment of Line marking, landscape elements and the overall tidiness, a score rating system of 5 (best) to 1 (worst) was used. The following tables identify the assessment criteria and the corresponding rating for that element.

GENERAL TIDINESS (Overall street cleanliness & litter rating):		
5. Excellent	No Litter and overall street very neat and tidy	
4. Very Good	Little (not unsightly)	
3. Good	Scattered amounts of unsightly litter	
2. Fair	Significant amounts of unsightly litter	
1. Poor	Excessive amounts of unsightly litter	

GARDEN BEDS (rating):		
5. Excellent	Healthy plants, dense cover and no weeds and /or litter	
4. Very Good	Healthy plants with some weed growth and /or litter	
3. Good	Plants with some distress and/or some weed growth and /or litter	
2. Fair	Plants with significant distress and/or weed growth and /or litter	
1. Poor	Plants with excessive distress and/or weed growth and /or litter	

LINE MARKING (Extent of fading/broken)		
5. Excellent	Highly visible with continuous line marking with no breaks.	
4. Very Good	Clearly visible with continuous line marking with no breaks.	
3. Good	Visible with little or no breaks due to paint loss/cracked, repair works to road surface	
2. Fair	Some line marking areas with poor visibility in daylight and/or some breaks due to paint loss/cracked, repair works to road surface	
1. Poor	Either very difficult to see in daylight and requires painting or non-existent and/or with significant number of breaks due to paint loss/cracked, repair works to road surface	

6. LIMITATIONS OF THE SURVEY

The following lists the limitations of the survey and the results presented in this report:

- The evaluation of the Road Infrastructure was from a “windscreen” survey;
- The performance criteria (standards of each Council) may not match the individual council’s required performance/standard;
- Survey undertaken over two consecutive day period and weather conditions may vary;
- Survey does not assess or make comment on the adequacy of the infrastructure; and
- The number of incidents or ratings recorded for each category is a score for that sample and may not reflect as a percentage the total infrastructure in that category.

7. SURVEY RESULTS

The surveys were undertaken during 19th and 20th January 2015 with fine weather conditions consistent over the two days except for some light rain early on the 20th.

The results have been divided into three sections as follows:

- Section 7.1 – Summary Table Incident & Rating Assessments January 2015;
- Section 7.2 – Total Incidents Overall – up to and including January 2016; and
- Section 7.3 – Specific Road Infrastructure Category Results - January 2016.

To assist in making comparisons with all previous year assessments, an overall **Industry Mean** has been calculated and provided on each of the Charts utilising data from the past five (5) survey years (Dec 2011 to January 2016). In Section 7, an Annual Mean for January 2016 results has also been included to assist in determining relevant performance for that year.

7.1 Summary Table Incident & Rating Assessments January 2016

The following table summarises the various incidents recorded within the survey of each of the municipalities. It identifies the various key elements of signs, garden beds, side entry pits, line marking, potholes and overall general tidiness results with their sub-elements where relevant.

Municipality	Length Surveyed km	SIGNS (No)				GARDEN BEDS (Rating) Litter/weeds/plants	SIDE ENTRY PITS		LINE MARKING (Rating) Faded/Broken Lines	POTHoles (No)			TOTAL ALL INCIDENTS (Exclude Line Marking)			TOTAL KM		Ave GENERAL TIDINESS/km Condition
		Poles Broken/Twisted Sign	Missing Sign	Graffiti on Sign	Faded/Dirty Sign		TOTAL SIGNS	Blocked Inlet >50%		Broken Lintel	TOTAL SIDE ENTRY PITS	>300mm	<300mm	S	TOTAL ALL INCIDENTS	Urban Roads Local	Urban Roads Council	
Banyule	30.0	199	4	79	21	303	46	11	57	3.1	2	18	20	380	30.0	0.0	3.6	
Knox	30.0	114	0	28	25	167	33	5	38	3.5	1	7	8	213	30.0	0.0	3.8	
Maroondah	30.1	172	1	56	35	264	40	8	48	3.4	0	11	11	323	30.1	0.0	3.7	
Manningham	30.1	92	0	7	0	99	14	4	18	3.5	0	9	9	126	30.1	0.0	3.8	
Monash	30.0	213	3	26	43	285	25	5	30	3.3	1	6	7	322	30.0	0.0	3.9	
Whitehorse	29.9	278	0	46	43	367	12	11	23	3.4	0	28	28	418	29.9	0.0	3.8	

Table 1: Summary Table Incident & Rating Assessments January 2016

For those areas where ratings are used, e.g. Garden Beds, Line marking and General Tidiness, the higher the rating, the higher (better) the performance.

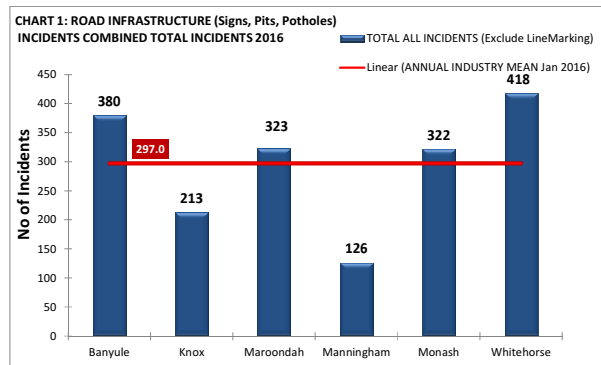
In the other areas, the lower the number of recorded incidents, the higher (better) the performance.

7.2 Total Incidents Overall - January 2016

In terms of the total number of incidents at each municipality identified during the survey (excluding ratings for line marking, garden beds and overall tidiness of the **road infrastructure** inspected), the following charts identify the various assessments for each municipality recorded during the survey period. These incidents include Signs (bent/twisted, missing, graffiti and faded), Pits (blocked and broken) and Potholes (small & large).

The lower the number of recorded incidents indicates better performance overall within each category assessed.

Chart 1 shows that Manningham had the lowest number of road infrastructure incidents recorded, closely followed by Knox and then Monash and Maroondah. Manningham and Knox are all well below the Industry Mean. In 2015 Manningham was also the lowest. Whitehorse recorded the most incidents, which was a large increase from 2015. Both Banyule and Whitehorse are well above the Industry Mean. These have significantly higher number of recorded incidents, which would be clearly visible to the local community and road users within these municipalities.



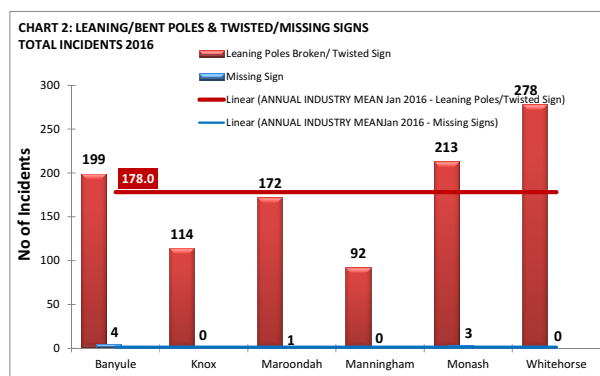
7.3 Specific Road Infrastructure Category Results

The Table in Section 7.1 shows the comparative performances of various road infrastructure based on the number of incidents or ratings in each category.

The following summarises the various assessments within each specific category for each municipality in alphabetical order.

7.3.1 Total Sign Incidents (leaning poles, bent/twisted, missing signs)

Based on these results, **Chart 2** indicates that Manningham had the lowest number



of recorded sign incidents followed closely by Knox and then Maroondah, all three below the industry Mean. Banyule, Monash and Whitehorse are all above the Industry Mean.

Manningham recorded equal lowest with Knox in 2015.

As in previous surveys missing signs were very rare.

Whitehorse recorded a significantly high number of sign incidents.

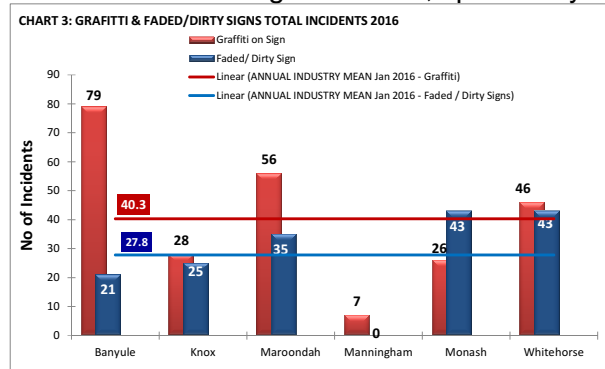
From a driver and pedestrian aspect, signs are very evident and based on the results above the Whitehorse community would see significantly more incidents within their community. In addition the community perception would be of differing maintenance values (Level of Service) between the six councils.

7.3.2 Total Sign Incidents continued - (Graffiti and Faded/Dirty Signs)

A further analysis and breakdown of the total number of sign incidents, specifically reviewing the number of **graffiti** and **faded** signs incidences recorded as indicated in **Chart 3**.

In terms of **graffiti**, which is directly impacted upon by the level of community activity, Manningham had the lowest number recorded with Banyule registering the highest incidences of graffiti. Maroondah and Whitehorse also had relatively high numbers of graffiti incidences and were above the Industry Mean.

In terms of **faded/dirty** signs, Manningham recorded zero (0) incidents, while Monash and Whitehorse had equally significantly higher incidents of dirty/faded signs. Faded/dirty signs are an activity not generally influenced by the community, such as occurs with graffiti. The number of incidents recorded generally indicates the level of focus (maintenance) placed on this issue by those councils.



7.3.3 Garden Beds (weeds/litter and plant healthiness)

These results are based on the visual assessment undertaken of garden beds within road reserves surveyed (generally centre medians, centre of roundabouts or at intersections), It should be noted that **“the lower the rating, the poorer the condition of the garden beds”**.

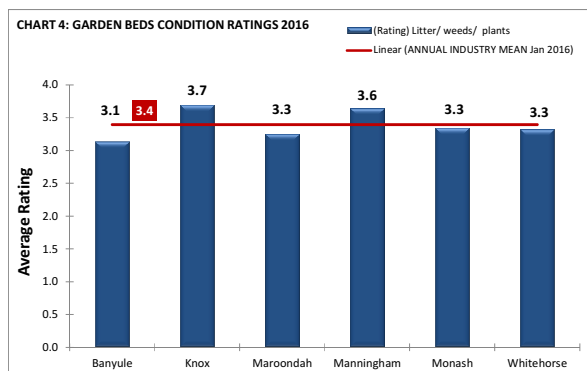


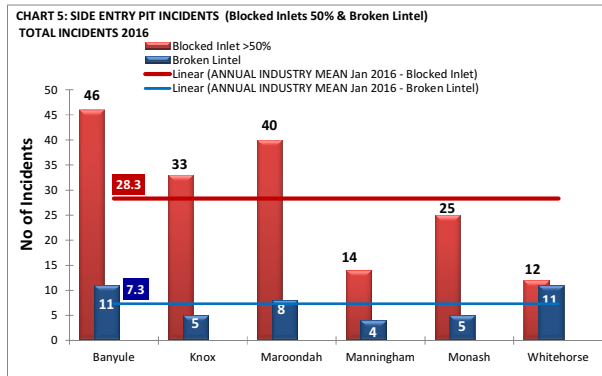
Chart 4 indicates that the garden beds within road reserves for Knox and Manningham were rated the best with the remaining four councils rating below the Industry Mean.

However, overall a lower standard was observed with the Industry Mean dropping to a lower level than in 2015. This may have been due in part to the long spell of dry weather leading into and over the summer period.

The garden beds assessed during the inspections indicate Banyule had the lowest rating garden beds and were generally in poorer condition with more distressed plants and higher evidence of weeds.

7.3.4 Pits (Blocked Inlets > 50% & Damaged Lintels)

As indicated in **Chart 5**, Whitehorse followed closely by Manningham had the least number of recorded **blocked pits**.



Overall the total number of blocked pit incidences has continued to decrease from the peak recorded in 2013 of a total 381 incidences, to 208 in 2015 and 170 this 2016 audit.

In terms of **broken lintels/damaged pits** Manningham, Knox and Monash had limited numbers indicating high focus on this area. Banyule and Whitehorse

had higher numbers of incidences and along with Maroondah were above the Annual Industry Mean. The total number of broken pits recorded this survey maintained a downward trend recording less than 2015 indicating an increased focus on this issue.

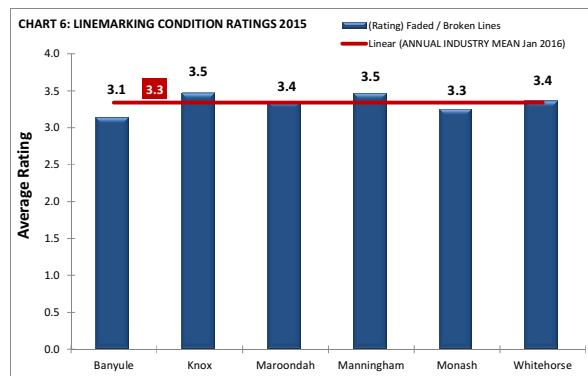
The decrease in the number of **blocked pits** within Manningham has steadied at a lower level since the 2013 survey of 54 incidences, but is still higher than Dec 2011 of 4 incidences and an increase of one (1) higher than 2015.

The 2011 results were considered at that time due to the positive impact of Council's asset renewal/maintenance programs increased the sizing of pit openings, and although the 2016 score is one higher than 2015, it indicates the program may be achieving the desired result. It however should be noted that weather conditions can have a significant impact on blocked pits.

7.3.5 Line Marking

Chart 6 (note the lower the rating the poorer condition) highlights that Banyule recorded the lowest rating and was below the Industry Mean. Knox and Manningham had the highest ratings.

Even though the linemarking is in good condition, with Whitehorse the only council to improve on the 2015 results, a lower Annual Industry Mean for 2016 resulted. This indicates that overall linemarking



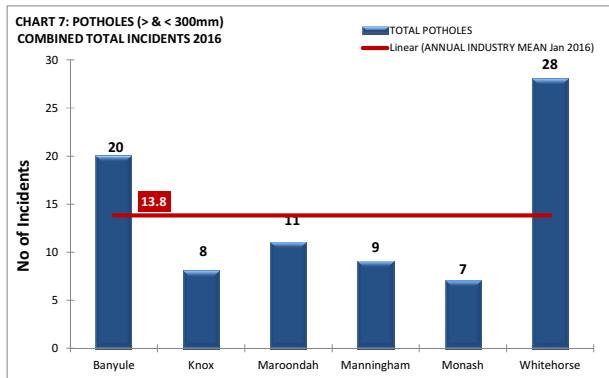
maintenance has declined in the other councils, including Manningham, since 2015. The rating system records all roads inspected that have line marking and assesses the overall condition of that linemarking per road inspected. The small difference in average condition between the highest and lowest council (except for Banyule) indicates that the condition of the line marking remains reasonably consistent, although this year more faded lines were noticeable and this would be readily observed by the community both during the day and night.

The line marking in Banyule remained lower than all other Council's.

It was noted that in many instances the linemarking was borderline between a good or lesser result as it was beginning to fade and at the point where it will need attention to maintain a good score.

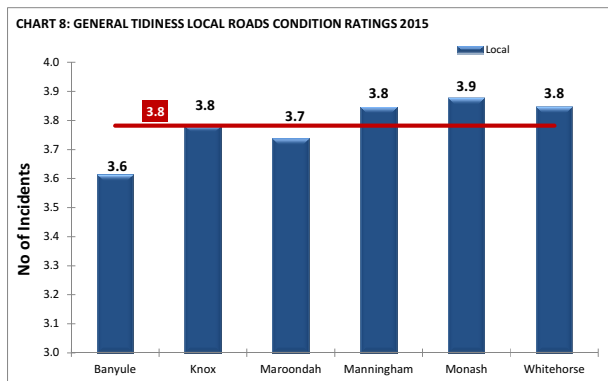
7.3.6 Potholes (>&< 300 mm diameter &> 25mm deep)

There were a significant number of potholes identified in Banyule and Whitehorse, as evidenced in **Chart 7**. Although these are significantly higher than the other Councils surveyed, Banyule was the only council to achieve a decrease since 2015. All other councils, including Manningham, had higher numbers of incidences except for Monash which was unchanged. Overall there has been an increase in the total number of incidences with a 62 in 2015 compared to 2016 with a total of 83 incidences.



Monash had the least potholes with 7 closely followed by Knox, 8 potholes then Manningham, 9 potholes. Although the total number of potholes is low, the overall increase in the number of potholes since 2015 is concerning and reflective of the need for a higher maintenance/renewal focus in all municipalities.

7.3.7 Overall General Tidiness



The cleanliness within the overall road network (local and collector roads) predominantly focusses on the cleanliness of the kerb and channel and the extent of debris/litter within the road reserve (*note the highest score of 5 indicates no litter, the lower the rating the poorer the overall tidiness*)

Factors such as the extent of leafy trees, slope of channel and recent rainfall has a direct impact on the results within this aspect.

In terms of tidiness, **Chart 8** highlights that Monash was the best followed closely by Manningham, Knox and Whitehorse equally second best, all rating at or above the Industry Mean.

In some areas, particularly Banyule, the amount of general litter and leaf litter was very evident.

8. SUMMARY INFRASTRUCTURE ITEM ASSESSMENTS DECEMBER 2011 TO JANUARY 2016

Benchmarking assessments (surveys) have been undertaken within the six (6) municipalities, generally on an annual basis since April 1999. Whereas some aspects of the surveys have been improved (e.g. condition rating of line marking and the introduction of garden bed assessment), the overall survey methodology remains consistent and provides an excellent base to compare performances over a long period.

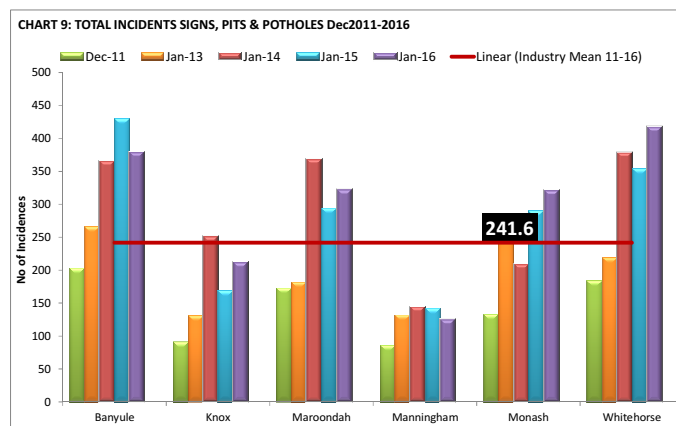
Whilst information from 1999 is available, it was considered more beneficial to review the past five (5) year surveys to provide more meaningful comparisons. The Charts and Industry Mean compare the past five (5) surveys (December 2011 - January 2016) to better highlight recent trends.

8.1 Total Incidents – Signs, Pits and Potholes

From a community perspective, signs, pits and potholes are the most obvious for comment and recognition of their councils focus on road infrastructure maintenance.

Chart 9 summarises the total number of recorded incidents during the recent January 2016 survey and aligns these with the results of the previous four (4) surveys for each municipality.

As evidenced in the above Chart, there are significant variations in recorded



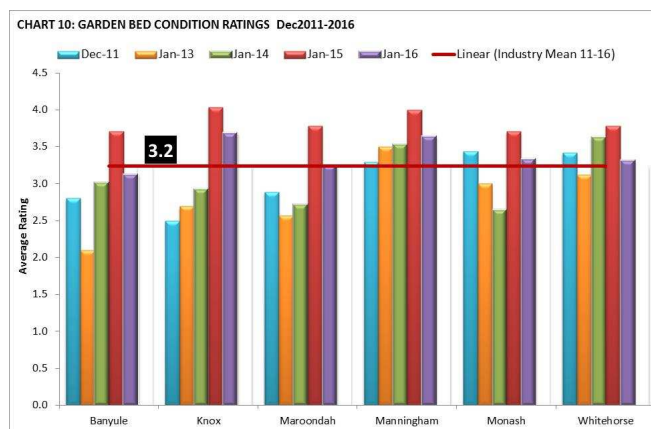
incidents over the five-year period. Over the four years prior to this survey there was a general steady increase in the overall number of incidences recorded plateauing in 2015. This year has seen a further increase in the overall number with the Industry Mean being 193.4 in 2013, 224.9 in 2014, 224.2 in 2015 and 241.6 in the 2016 survey.

It was noted that the number of incidents was greater for Knox, Maroondah, Monash and Whitehorse compared to 2015 and a decrease for Banyule and Manningham. Manningham attained a 13% decrease from 142 to 126 incidences over the last two survey periods.

Manningham continues to exhibit significantly less incidents than all other councils indicating a higher focus on maintenance/renewal of these very visible, key infrastructure items.

8.2 Garden Beds

A review of the garden bed ratings (litter/ weeds/plant conditions/ mulch etc), as per **Chart 10**, indicates that all six (6) councils declined from the 2015 survey. Banyule and Maroondah showed the greatest decline since 2015, falling below the Industry Mean.



Maroondah, Monash and Whitehorse remain above the Industry Mean by 0.1 point, with Knox and Manningham rating well above the Industry Mean. The overall decline in garden bed ratings indicates an upgrading in the quality of bed maintenance is required for all councils. The Industry Mean has steadily increased from 3.0 (2014) to 3.2 (2015 & 2016) but has not yet reached the 3.3 (2000) when

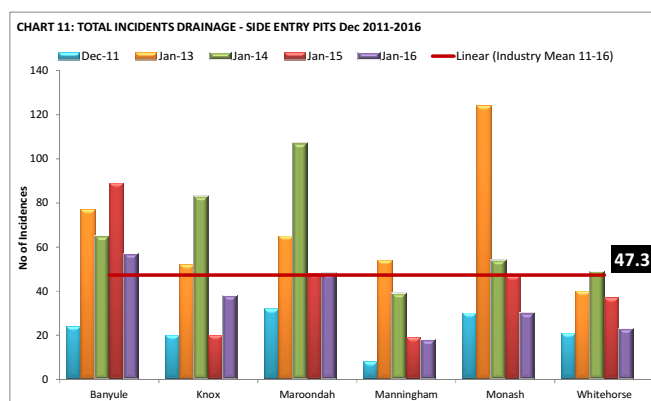
garden bed assessments were introduced.

The warmer weather has clearly had an impact and observations of distressed plants, litter and weeds in the field also indicate better focus and increased level of service towards garden bed maintenance/presentation is required.

As observed over past surveys damage to garden beds caused by vehicles and further an increase in use of hard standing areas is still evident.

8.3 Drainage – Side Entry Pit Incidents

In terms of road drainage side entry pits incidents, **Chart 11** highlights that between the five (5) surveys there appears to be a general reversal of the past trend of increases since 2014 in the number of incidents with all councils except Knox, experiencing a decrease in incidents since the last survey.



Banyule experienced the largest decrease with Manningham the smallest decrease, although coming off the lowest 2015 figure, and Maroondah remaining the same since the last survey. The trend, except for Knox and Maroondah (remaining the same), is heading towards the low number of incidences of December 2011.

Knox's increased score resulted from more debris in the entry to

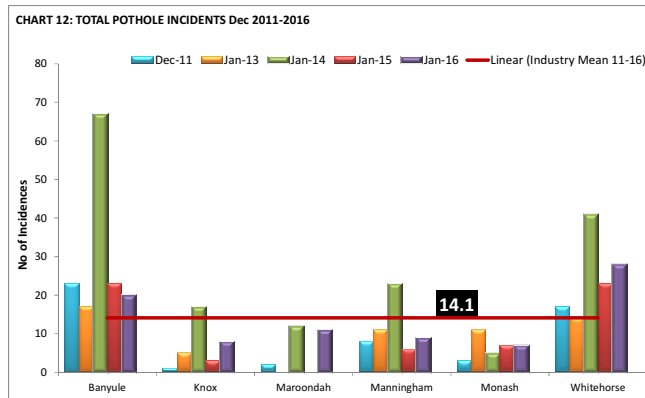
the pits whereas Banyule and Whitehorse had the equal highest number of broken lintels.

Manningham and Whitehorse have the cleanest pit entrances whilst Manningham, Knox and Monash have lower numbers of broken lintels indicating Manningham has the best overall maintenance service.

Manningham continues to be a consistent, high performer, in this area.

8.4 Potholes

Overall, the number of potholes evident within the five (5) councils road systems assessed (30kms each) was significantly higher than in January 2015 with a total 62 (2015) and 83 (2016), **Chart 12**.



Banyule was the only Council to exhibit a decrease with Monash remaining the same in incidents. All other councils, including Manningham, experienced a slight increase in the number of pothole incidents compared to last year.

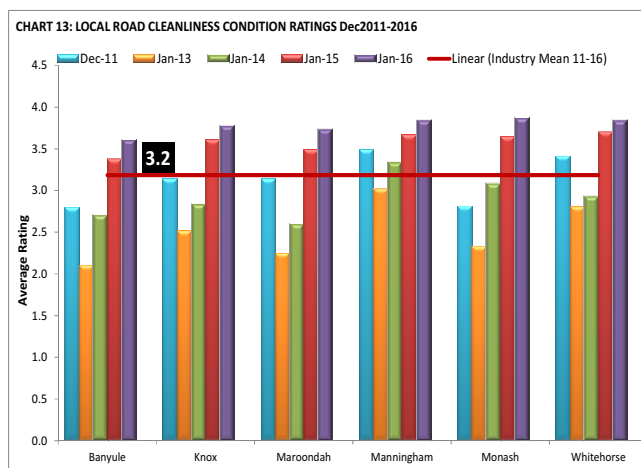
The Industry Mean of 14.1 is higher than the 13.6 of 2015 with four of the six councils below the Industry Mean. Although Banyule and Whitehorse are above the

Industry Mean, Banyule continues to show improvement compared with the 2014 and 2015 surveys.

Maroondah, a standout in 2015 with no incidents, this year had 11 incidents. Monash remains the most consistent performer. The overall increase in potholes, despite the mild weather, indicates that fewer funds are most likely being directed to renewal and maintenance in this area.

Whilst in the 2014 survey the number of potholes in the majority of councils had increased and concern was expressed that it may indicate a significant shift with changes in inspection programs and appropriate resource allocations to maintain low levels of potholes, it would appear that trend which was in reverse, may now have plateaued. The Road Management Act and the requirement to inspect and repair have certainly kept up the focus on road maintenance in previous years, but the 2016 results generally show this has slipped a little.

8.5 Local Road Cleanliness



The local road cleanliness assessment is based on the higher the score the cleaner the road eg rating of 5 indicates excellent condition with no visible litter.

Chart13 indicates that all councils continued the trend of higher ratings with the 2016 ratings being higher than 2015, which in turn were higher than 2014 and 2013. This is an excellent result.

All councils remain above the Industry Mean which was first achieved in 2015. The Industry Mean has also increased from 3.0 (2015) to 3.2 (2016).

Manningham continues to be rated above the Industry Mean indicating consistent performance over many years.

In 2013 it was thought the poorer results appeared to be an aberration rather than a trend. The 2014, 2015 and 2016 results have continued the improvement trend confirming that the 2013 results were most likely an aberration.

8.6 Line Marking

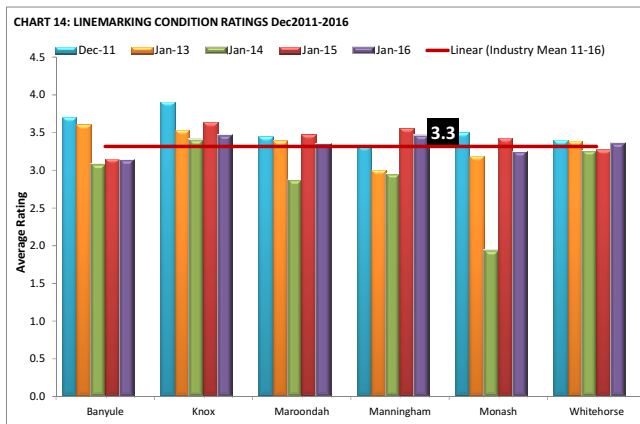


Chart 14 highlights that line marking ratings which improved in 2015, declined in 2016 except for Whitehorse which showed an improvement. With the exception of Banyule all other councils still remained at or above the Industry Mean. The 2016 industry Mean however remains the same as 2014 and 2015 at 3.3.

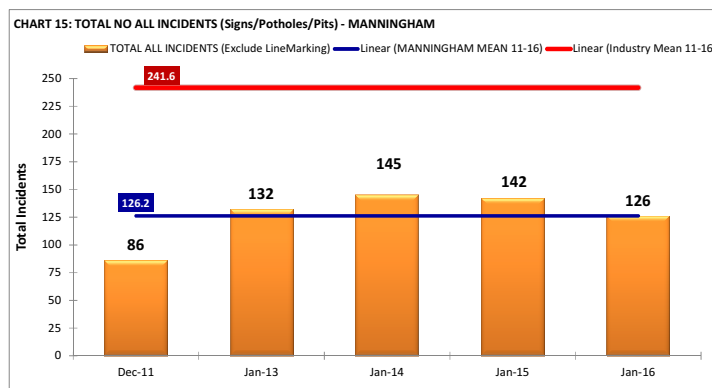
Whitehorse's performance remains the most consistent and this year they lifted their rating above the Industry Mean.

Knox and Manningham are the better performers in 2016 with both 0.2 above the Industry Mean.

9. MANNINGHAM ASSESSMENT TRENDS DECEMBER 2011 – JANUARY 2016

To give a better understanding of Manningham's performance over the past five (5) surveys Dec 2011, Jan 2013, Jan 2014, Jan 2015 and Jan 2016, the following information is provided. To assist in this assessment the Industry Mean in addition to Manningham's Mean has also been compared to the various assessments to better understand where Manningham results are compared to the other five (5) councils.

9.1 Total Incidences – Signs, Pits and Potholes



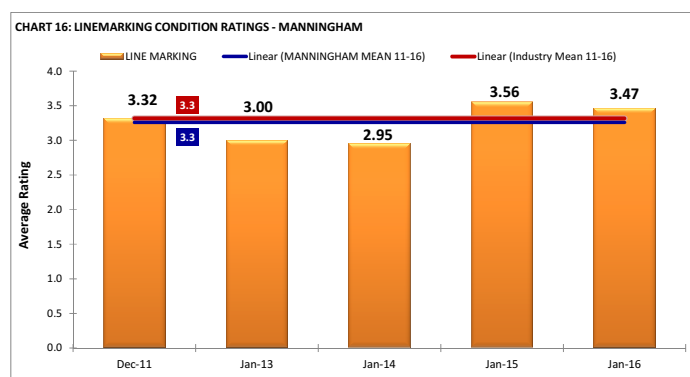
Over the past five (5) years, the total number of incidents within Manningham steadily increased peaking at 2014, with a decreasing trend in 2015 and again in 2016. All scores have remained well below the overall Industry Mean.

As evidenced in **Chart 15**, the Manningham Mean

continues to be significantly lower than the Industry Mean in the number of total incidents recorded each year.

Whilst the overall results for Manningham, compared to other councils is good, it is also pleasing that the earlier trend of a significant rise in incidents has now reversed over the last two years with total incidents now less than recorded in 2013.

9.2 Line marking



Line marking performance, **Chart 16**, indicates an improvement in the downward trend observed in 2014, and for the last two years better than the Dec 2011 results which were previously reported to appear as an "aberration". Even though there is a drop in performance from 2015 to 2016, the Manningham

Mean which in 2015 remained below the Industry Mean with a score of 3.1 compared with 3.3 is now equal at 3.3.

However, the level of service in line marking needs to be closely monitored to ensure that the downward movement in 2016 is halted.

Similar to 2015 it was observed that there were a number of instances of varied performance as some sections of a road appeared good but within the same road some sections were fading.

Evidence in the field indicates substantial variations in performance between roads inspected, although compared to previous years no roads scored were considered

poor to fair. For example line marking in Blackburn Road, Carbine Street and Leslie Street were considered excellent to very good with scores of 4.5, with 47% of road sections considered very good scoring (4) and 40% of road sections rated very good to good scoring (3.5 & 3), while 0% were considered poor or fair, a score of (2.5, 2, 1.5 & 1).

This variation has also occurred in previous surveys.

Overall, the performance compared to previous surveys revealed more constant good line marking. However there is room for improvement by ensuring the lines are repainted at frequencies that intervene before they fade and become unserviceable. As recommended in previous Benchmarking reports, it is again recommended that due to the importance of line marking there is room for further improvement in the line marking and a thorough examination of the line marking standards, schedules and resources to occur. It is also recommended that the review of line marking to determine the frequency of relining (based on road hierarchy) and subsequent cost and that the required level of service be considered by Council as part of the budget process.



Faded Line Marking - Grant Olsen Avenue

9.3 Drainage Pits

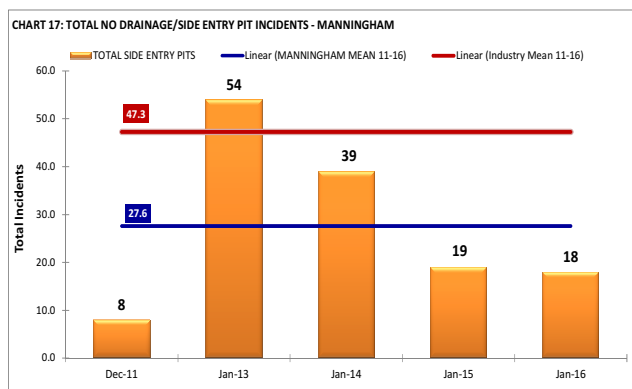


Chart 17 indicates a positive trend with a continuous decline in the number of drainage pit incidents from the peak in Jan 2013 to the 2016 results.

It is noted that the pit incidents reduction trend from 2013 to 2016 coincides with the continuous improvement in street cleanliness ratings over the same period, as per Section 9.5.

The Manningham results have improved in the past three surveys

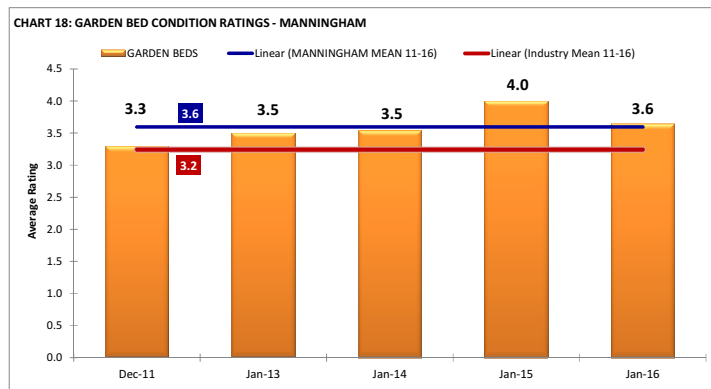
with the Manningham Five (5) year Mean remaining well below the higher number of incidents for the Industry Mean.

It is important that inspection processes and the approach to cleaning pit openings continues which has rendered the improvements, continues.



Blocked Pit – Derreck Avenue -

9.4 Garden Beds



The results from January 2016, as per **Chart 18**, indicate a lack of consistent performance over past five surveys with the garden bed rating trending upwards to 2015 and a decline in 2016. However the Manningham Mean has increased from 2015 (3.3) to 2016 (3.6) remaining higher than the Industry Mean (3.2).

Although there has been a decline in the 2016 garden bed rating, it has not fallen below the Manningham Mean.

There was overall evidence in the field of a less consistent performance between garden beds inspected.

Of fourteen (14) garden beds inspected eight (8) achieved a high rating between excellent to very ($4^{1/2}$ & 4), four (4) rating as very good to good (3.5 & 3), indicating improved maintenance, but with room for further improvement with Grant Olsen Avenue (score 1.5) and Sheahans Road (score 2.5), the lowest scores.



Excellent Garden Bed – Santa Rosa Blvd - Manningham



Poor Garden Bed – Grant Olsen Ave - Manningham

9.5 Road Tidiness/Cleanliness

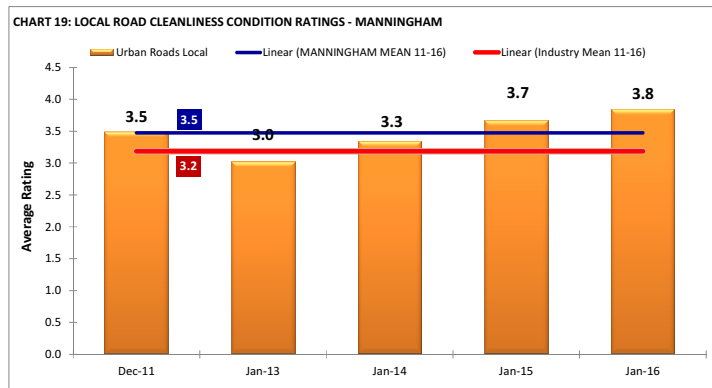


Chart 19 highlights the overall cleanliness ratings for local roads respectively over the past five (5) surveys. In this survey no arterials were inspected and all roads inspected were listed within each council's road register as local roads. This provided for greater consistency between Council's surveyed.

Results from this survey indicate a trend of continued improvement in the overall cleanliness each year from Jan 2013, with the 2016 rating being the highest of the last five surveys. This is considered a very good trend and sets the challenge to continue the upward move.

The Manningham Five (5) Year Mean remains better than the Industry Mean for that period.

9.6 Signs

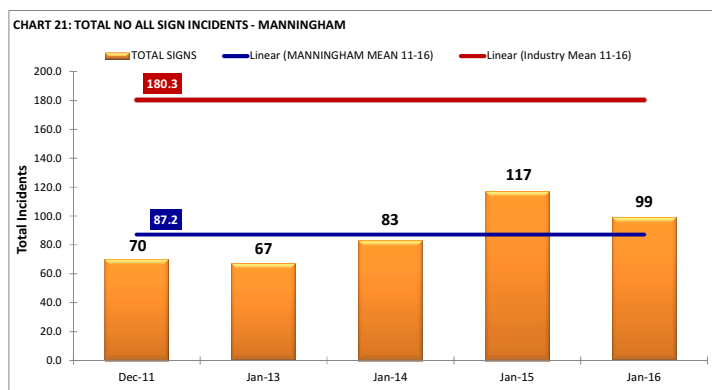


Chart 21 highlights that the total number of sign incidents identified at each survey were remaining relatively consistent over the first three (3) surveys, with a higher peak in 2015, reducing again in 2016. The 2016 survey recorded a significant number of sign incidents which are above the Manningham 5 Year Mean. The number of

bent/broken/twisted signs and leaning/bent poles was the major contributor to this high number.

The Manningham mean continues to be significantly lower than the average Annual Industry Mean indicating higher focus and performance in sign maintenance compared to other councils.

However there is room for improvement by ensuring the signs are inspected and intervention maintenance undertaken so they are more serviceable and presentable.

10. CONCLUSION

Since 1999, sixteen (16) road infrastructure surveys have been undertaken utilising the concept of assessing “through community eyes” as to how the council present their infrastructure from a “road user” (driver) perspective.

The assessment of road infrastructure items such as potholes, signs, line marking, storm water side entry pits, garden beds within road reserves and general road/street tidiness was based on the following methods of assessment:

- The number of incidents recorded; and
- Infrastructure condition ratings based on specified criteria.

This process reflects the condition of the visible infrastructure as expected to be observed by the many users of these roadways (residents and visitors) either as motorists, cyclists or pedestrians and reflects on the “delivered level of service” for each category

Arguably the inspection process is how a “member of the public” would view the level of performance of the council having regard to these visible elements and allow them to reflect on the “level of service” the council engages in presenting their road infrastructure to the community.

The two (2) key objectives of the benchmarking project were to compare Manningham performance to similar councils and to ascertain its own relative performance over a period of time.

10.1 Summary Comparison with Five Other Councils

The following is a synopsis in regards to comparing Manningham and the other five (5) councils in the survey.

Signs: Continues to have the lowest number of sign instances and graffiti on sign incidents. However, there was a significant upward trend in the number of sign incidents recorded in 2015, decreasing in the 2016 survey. Very good performance.

Garden Beds: A decline in performance compared with the 2015 survey. Rated second to Knox (equal high performer with Knox in 2015), with generally greater consistency between garden beds, although still room for improvement to redress the overall decline. Overall, good performance.

Side Entry Pits: Decrease in incidences from 2015 and remains the lowest incidences compared to other councils in survey. The results are considered very good.

Line Marking: Achieved an equal highest rating with Knox, which is the same ranking as the previous survey in 2015. Although a slight decrease in condition rating from the previous year, this result is considered good performance.

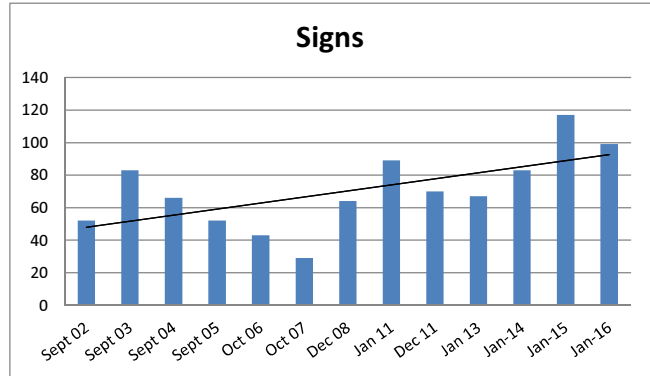
Potholes: Generally “middle of the pack” with an increase in the number of incidences recorded in 2016 compared with 2015. Significantly lower than two (2) other councils, just below one (1) council and a little than two (2) councils surveyed. Very good performance.

General Tidiness: Performs very well in local road cleanliness with consistently highest average rating, with a further slight increase in rating from 2015. In this 2016 survey Manningham rated equal second highest, compared to the highest in 2015. Overall, performance very good.

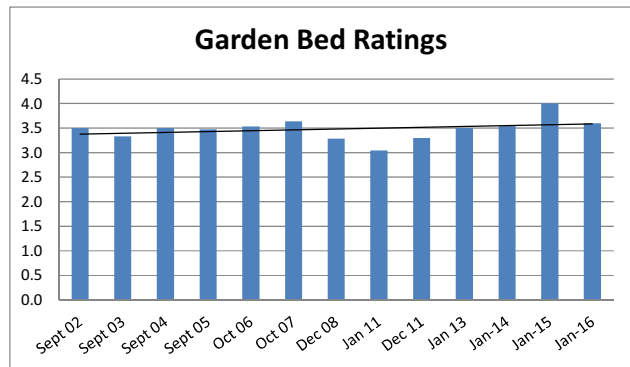
10.2 Summary Performance Over a Period of Time.

In terms of comparing Manningham's performance over time the following provides a synopsis of that performance and trends of these thirteen (13) surveys.

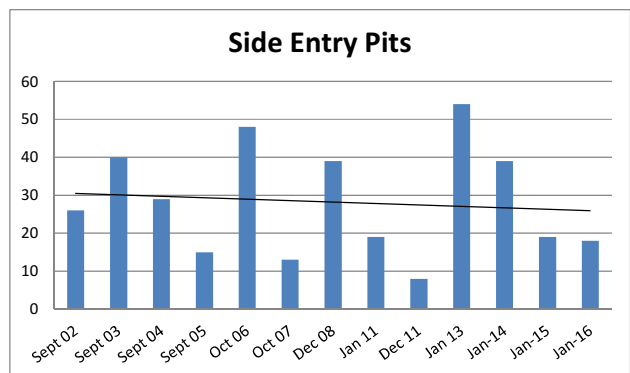
Signs: Trend for an increase in incidents over previous three surveys with a decline in incidents in 2016. Overall trend is still upwards in incidents since 07, whereas 03 to 07 saw steady improvement.



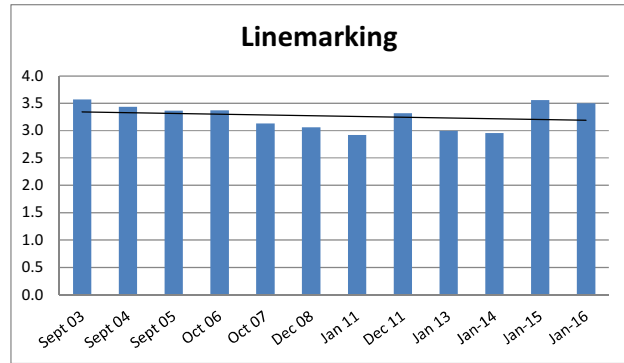
Garden Beds: Jan 16 results generally on par with previous few years except for improvement rating spike in 2015. Over thirteen, surveys a slight increase in performance.



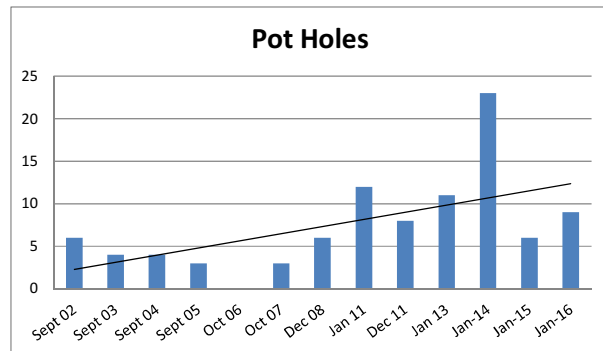
Side Entry Pits: A large decrease in incidents since 2013 and 2014 surveys. Overall downward trend continued with 2016 having a further decrease in the number of pit incidents, although a very slight change.



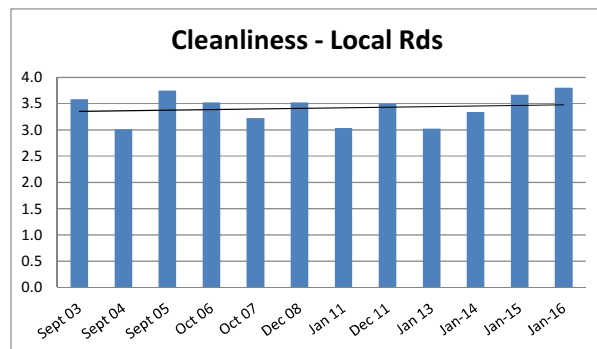
Line marking: The 2016 results were very good, although slightly down on 2015. Indicate consistency with maintaining higher rating, but some improvement required. The overall trend is still downwards.



Potholes: Overall number of potholes continues to be low, with a slight increase in 2016 on the large decrease on potholes survey in 2015 compared with 2014 survey. However the trend over the thirteen (13) surveys still indicates an increasing trend in the number of potholes. This is mainly due to the large upward spike in 2014.



General Tidiness: Local Roads generally consistent performance rating with further improvement in 2016. There is still a marginal downward trend in performance, even with the improved performance rating in 2015 and 2016.



Overall, the January 2016 survey indicates Manningham continues to perform reasonably well when compared to the other councils although some challenging trends are emerging especially in relation to sign incidents, need to maintain linemarking and garden beds.

In terms of signs, with 2016 recording the second highest number of of twisted/ bent signs and leaning poles (with the highest recorded in 2015) it is recommended that maintenance standards and practices be reviewed and improved.

In terms of line marking, although there has only been a slight decrease in standard compared with the 2015 survey, as with previous surveys there remains the issue of some inconsistency in service delivery, particularly the need to keep the quality of the line marking at acceptable visibility standards.

10.3 Key Recommendations

The “Road Benchmark Survey Infrastructure Performance” survey, involving the cities of Manningham, Whitehorse, Monash, Knox, Maroondah and Banyule continues to provide Council with a practical means of measuring its performance against similar councils. It also enables trends to be identified and effective process improvements implemented to improve the consistency in performance.

The following are the key recommendations:

- 1. The drop of performance in signs be examined and the inspection and intervention maintenance standards and practices be reviewed;**
- 2. The drop in performance in garden beds be examined and the maintenance standards and practices be reviewed to obtain better consistency; and**
- 3. A review of line marking be undertaken to address the inconsistency in service delivery, particularly the need to keep the quality of the line marking at acceptable visibility standards.**