

Maintenance of the Highway Network

Long term and short term
expectations

The size of the Challenge

- Total Carriageway Asset length 780km
- Total Carriageway Asset Value £888million
- Total spend per annum on Carriageway resurfacing only £500k which equates to less than 0.1% of value
- Comparison to other authorities NPTBC £886K, VOG £800K, RCT £2.5M

Legislation

- Highways Act 1980 – Section 41 states the highway authority are under a duty to maintain a highway that is maintainable at public expense
- An action (most typically claims) can arise out of an authorities failure to maintain
- Highways Act 1980 – section 130 states it is the duty of the highway authority to protect the rights of the public to use the highway.

Legislation (contd.)

Recent court of appeal decisions

- Wilkinson V City of York Council (2011) -- a lack of resources cannot be taken into consideration in defending claims under section 41
- Crawley v. Barnsley MBC (2016) --- Defects once reported must be assessed within 24hours

Intervention Criteria

BRIDGEND COUNTY BOROUGH COUNCIL

Rating System of Defects

CATEGORISATION/DEFINITION OF HIGHWAY "SAFETY" DEFECTS.

CARRIAGEWAY CATEGORY		INSPECTION FREQUENCY	EMERGENCY SAFETY INTERVENTION LEVELS (24HR REPAIR) ---- PRIORITY 1			NON-EMERGENCY SAFETY INTERVENTION LEVELS (28 DAY REPAIR) ----PRIORITY 2		
		Frequency in brackets is Code of Practise recommendation	POTHOLES	SUBSIDENCE OR RAISED AREAS (With a minimum actionable value of 75mm)	PROTRUDING IRON WORK	POTHOLES	SUBSIDENCE OR RAISED AREAS (With a minimum actionable value of 50mm)	PROTRUDING IRON WORK
2	STRATEGIC ROUTE	3 MONTHS (1 MONTH)	40mm	10%	25mm -	**See note 1**	10%	**See note 1**
3a	MAIN DISTRIBUTOR	3 MONTHS (1 MONTH)	50mm	10%	25mm -	40mm	10%	**See note 1**
3b	SECONDARY DISTRIBUTOR	3 MONTHS (1 MONTH)	50mm	10%	25mm -	40mm	10%	**See note 1**
4a	LINK ROAD	6 MONTHS (3 MONTHS)	75mm	20%	50mm -	40mm	10%	35mm
4b	LOCAL ACCESS	12 MONTHS (12 MONTHS)	100mm	20%	75mm -	40mm	10%	35mm
FOOTWAY CATEGORY			TRIPS (VERTICAL DIFFERENCES IN LEVEL)			TRIPS (VERTICAL DIFFERENCES IN LEVEL)		
1a	PRESTIGE AREA	1 MONTH (1 MONTH)	20mm	15%	20mm	**See note 1**	15%	**See note 1**
1	PRIMARY WALKING ROUTE	1 MONTH (1 MONTH)	20mm	15%	20mm	**See note 1**	15%	**See note 1**
2	SECONDARY WALKING ROUTE	3 MONTHS (3 MONTHS)	40mm	15%	40mm	20mm	15%	20mm
3	LINK FOOTWAY	6 MONTHS (6 MONTHS)	50mm	30%	50mm	20mm	15%	20mm
4	LOCAL ACCESS FOOTWAY	12 MONTHS (12 MONTHS)	50mm	30%	50mm	20mm	15%	20mm

Intervention Criteria

- SCRIM (Skidding resistance) investigatory criteria are based on the DMRB National Document which provides intervention levels based on road layouts.
- For example, Speed Limits, No. of junctions, Road geometry (gradient and bend radii), presence of Schools, Traffic lights, Approaches to Roundabouts
- Higher levels of skidding resistance is required where these features, or combinations thereof are present.
- SCRIM is only undertaken on A,B and some C Roads due to size of the recording machine

Intervention Criteria

- Other factors that need to be maintained on the network include drainage/ditches to prevent build up of water on Carriageway which could lead to aquaplaning
- Similarly the road profile needs to address dips to avoid similar standing water issues
- Monitoring of utility works and other third parties
- Maintenance of structures.

Public Expectations

- 2013 Public Survey – Highways Service Area high priority equal 2nd to Social care, behind education
- 45% of survey dissatisfied with Highway condition
- Over 60% of complaints about Highway Services are in relation to defects
- Complaints are rising from Businesses about the state of the network and the affect it has on investment

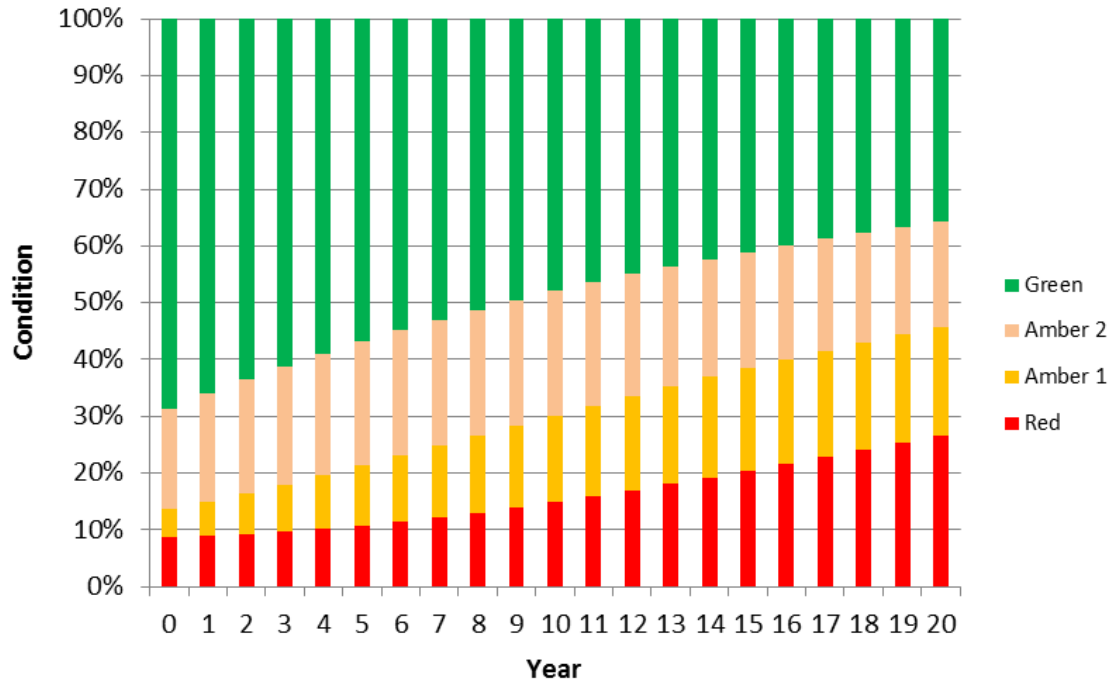
Costs of repair

- Pothole filling approximately £100/m² (likely to require further repairs within 2 years)
- Resurfacing £20/m² (15 years + no maintenance)
- An example is at the A473 Waterton R/A, Based on broad assessment spending £100k now avoids costs of additional 25% - £125k over 25 year period. Further at year 25 the only option would be full reconstruction at an additional £185k

Cost continued

- Typical claims can vary from £200 for tyre repairs, up to £30,000 for Personal injury repairs
- The above info is more aligned to simple pothole issues. However the skidding resistance is also a critical aspect of Carriageway Maintenance. Incidents as a consequence of failure in this regard could lead to life changing injuries and/or death. Corporate Manslaughter would certainly be a consideration.

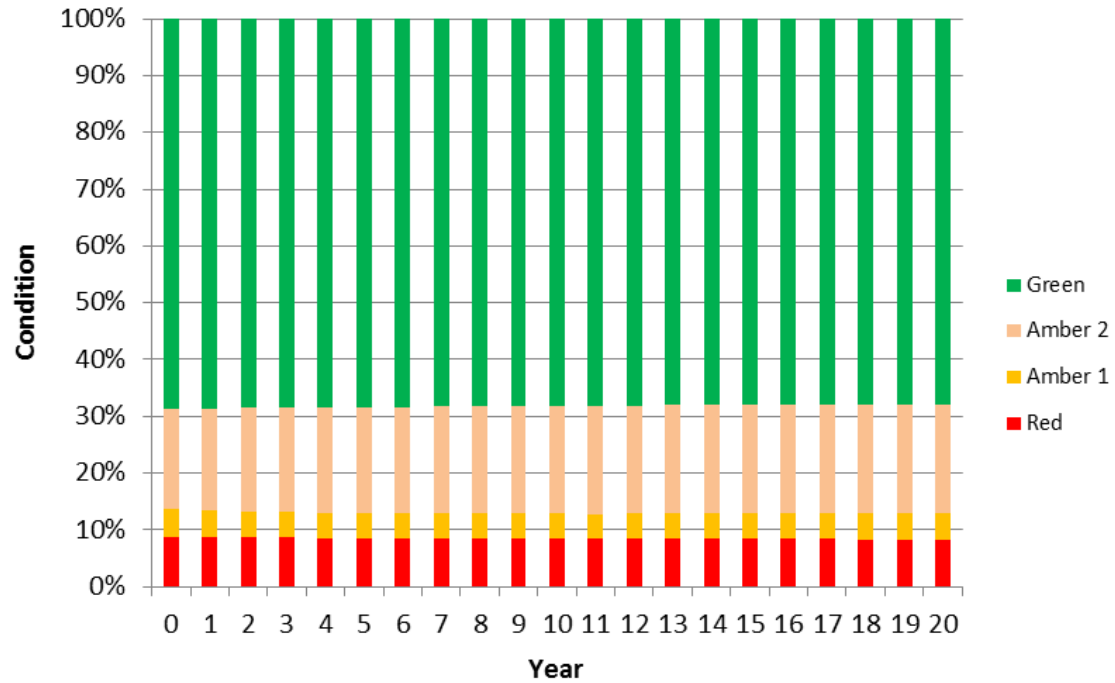
Option C1-maintain current budget Condition Profile - All Roads



Road Condition analysis

The Graphs produced in the business case identify the condition of the overall network based on differing spend scenarios. These graphs are based on asset evaluation tools used throughout the UK to predict the change in condition of the network.

Option C2 - maintain current condition Condition Profile - All Roads



Road Condition

£2,000,000 annual investment



Investment

- The LGBI process funded by Welsh Government saw an investment of over £2m per annum for 3 years.
- This produced a reduction in claims by over 50% by end of return period.
- Road condition indicator was maintained below all Wales average as identified in the original business case

Conclusions

- Constant patching and pothole filling of the network is not sustainable.
- These repairs will require further attention within a number of years.
- The cost of third party claims will rise, and a lack of resources is not a defence.
- A failing network will detract from investors to the area.
- Public perception is already high that BCBC do not spend enough on repairing roads. This will get worse
- Prevention/early intervention avoids increased costs in the future, and ultimately a point will be reached where the patching cannot go on. All national documents suggest increases in preventative maintenance will insure the network is protected.
- Difficult decisions on the closing of roads will also have to be made.
- BCBC currently under invests compared to neighbouring Authorities