

**DIRECTORATE OF CITY  
& ENVIRONMENTAL  
SERVICES**

**REQUEST FOR  
DECISION**

**Decision making level:  
Director**

**Officer in  
Consultation**

**Date: 22 July 2014**

**Title: Speed Cushion Specifications**

**Decision Requested**

To agree a specification for future speed cushions installed in York, and the way forward for existing cushions falling outside this.

**Reason**

To achieve greater speed cushion consistency, with a good balance between speed reduction and ride quality.

**Background Information**

Since the mid 1990s speed cushions in York have generally been constructed in tarmac to the following dimensions:-

- **width** 1.6m
- **length** 3.5m
- **height** 65mm
- **up/down slopes** 1in8
- **side slopes** 1in4

This followed extensive consultation and testing of alternative designs to explore the profile that achieved the best balance between slowing down most drivers whilst proving a good degree of comfort for passengers of key vehicles types such as buses, ambulances, and fire engines.

Construction of cushions in tarmac had certain practical and cost advantages. However, they have proved difficult to build to a consistent profile, and there have been maintenance problems in some locations (with the side ramps being particularly susceptible to deterioration leading to regular repairs).

In order to address these on-going problems, in 2011 the Highway Maintenance Section sought and obtained Executive Member for Neighbourhoods and Housing approval to use re-cycled rubber cushions.

Since then around 65 rubber cushions have been installed, which have slightly different dimensions to the tarmac ones, as summarised below:-

- **width** 1.65m ( 50mm wider)
- **length** 2.0m ( 1.5m shorter)
- **height** 65mm ( the same)
- **up/down slopes** 1in10 ( a bit less steep)
- **side slopes** 1in4 ( the same)

There have been complaints made about them being much more severe and uncomfortable drive over. Although the actual number of complaints has been small, they have been very strongly made.

The Highways Maintenance Section has respond to these complaints with the argument that these rubber cushions meet the national regulations and are proving very effective at reducing speed.

The speed cushions trials carried out in the 1990s showed that small increases in width could sharply increase discomfort levels for lot of vehicles. Also, the trials showed that the length of the cushion can be important for certain vehicles, such as low slung sports models. Short cushions can fit between the front and back wheels of a vehicle exposing the underside to the full height of the measure, hence increasing the risk of grounding.

To overcome these problems, and achieve greater consistency, it is recommended that a dimensional specification is agreed which all speed cushions in York should meet, regardless of their construction method. This needs to meet current national regulations/guidance and be based on the key dimensions that came out of the trials conducted in the 1990s. It would also be helpful if this some flexibility where possible to give manufactures of pre-formed cushions a good chance of meeting our requirements. The proposed specification is:-

- **width** 1.6m exactly (because this is considered critical, and offers the best balance between speed reduction and passenger comfort)
- **length** 3.0m minimum to 3.7m maximum (the minimum will reduce the risk of grounding, and the a maximum is specified in national guidance)
- **height** 65mm exactly (because this is considered the best balance between speed reduction and passenger comfort and reduces the risk of grounding)
- **up/down slopes** 1in8 to 1in12 (because this is considered a good balance between speed reduction and passenger comfort, but provides some flexibility to manufacturers)
- **side slopes** 1in4 to 1in6 (because this is considered a good balance between speed reduction and passenger comfort, but provides some flexibility to manufacturers)

## Consultation Process

The extensive public consultation and testing carried out in the 1990s is still considered relevant, and hence no new consultation has been carried out on this technical matter.

## Statutory Powers

The Council has powers to install speed cushions under the Highways (Road Humps) Regulations 1996.

## Ward Members and Political Party Views

No political views have been sought on this matter of technical detail.

## Financial Programme Implications

It would cost nothing to adopt the proposed technical specification, but there would be a significant cost of replacing any cushions that currently fall outside it. Around 65 such cushions are known about, and the estimated cost of replacement is £65,000. Rather than replace them all at this point, it is proposed to only replace them over time at the point where significant maintenance is required at a particular site.

## Options

There are two key decisions to be made, with options as set out below:

1)

- To adopt the proposed standard specification for speed cushions.
- To adopt a different specification.

2)

- To immediately replace all the exiting cushions that fall outside the adopted specification.
- To replace these cushions over time as their condition warrants this under normal maintenance.

## Level of Risk

1-3 Acceptable	3	16-20 Action Plan	
4-8 Regular Monitoring		21-25 Registered as a corporate risk	
9-15 Constant Monitoring			

## Internal Consultation

Highway Services

**Implementation  
Status**

Work completed	N/A
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**Recommendations**

That the proposed dimensional specification for speed cushions in York be adopted.

That existing speed cushions falling outside this specification be replaced over time as their condition warrants this under normal maintenance.

**Contact  
Details**

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**Report  
Approved**



**Date** 11/7/2014

**Wards Affected:**

**All**

**For further information please contact the author of the report**