

The appearance of potholes dramatically increases during winter conditions, affecting any paved area – from a domestic driveway right the way through to a local authority or Highways Agency road. Duncan Haywood, an expert in repair and maintenance at Tarmac Building Products, explores the common causes of potholes and how they can be avoided



Potholes typically occur in areas with poor drainage facilities, especially during winter, which is the most common season for potholes due to regular rainfall and sub-zero temperatures.

When water penetrates the road construction, the resulting expansion during the freezing process can cause it to break up. Whilst frozen water on the surface may not impact on the structural rigidity of the road, if water has penetrated then it can weaken the structure beneath. When traffic drives over the weakened structure potholes form.

It is important not to underestimate the damage a pothole can cause to both property and individuals, regardless of its location. If a pothole is hit at speed it can severely damage a vehicle, with suspension and the flat-spotting of alloy wheels a particular problem, but can also cause a vehicle to swerve, endangering other road users and pedestrians, as well as the vehicle's driver.

Repairing potholes

Despite their regular occurrence, potholes can be quickly and easily repaired. Addressing the original drainage problem is obviously one of the most effective long-term solutions; Whilst potholes are a common occurrence – especially in winter – they should not be ignored. They have the potential to cause serious damage to personal property as well as to individuals

however with regard to the pothole itself, I would always advocate a permanent repair.

A permanent repair involves cutting the pothole square into a regular shape, as the vertical cuts provide a much more structurally sound repair which is far more likely to stand the test of time.

There are two main methods of then repairing the shaped pothole: a hot asphalt repair product which offers the installer a quick setting time and reliable end result, or a PCSM (permanent coldlay surfacing material) product.

The main advantage of a PCSM product is that it can be supplied in tubs or bags, meaning it negates the logistics involved in sourcing, delivering and laying hot asphalt. With no short-term shelf life (compared to hot asphalt which is only workable for a few hours after it's been produced) PCSMs can be stored to accommodate emergency repairs and easily distributed through standard warehousing and vehicles. What's more, PCSM products offer a more economical and sustainable

pothole solution as minimum order quantities are lower and material wastage is reduced when compared to hot asphalt solutions.

Permanent is preferable

In some circumstances a quick-fix temporary repair, which would involve simply filling the pothole in its original shape with a repair product, is sufficient. However, I would only advise this in the short-term until a permanent repair can be made, especially as a PCSM repair is only slightly more time-consuming than a temporary one.

In short, whilst potholes are a common occurrence – especially in winter – they should not be ignored. They have the potential to cause serious damage to personal property as well as to individuals; however they can easily be repaired. Temporary patch repairs offer short-term relief from the problem but I would highly advise conducting a full cut and repair installation using either a hot asphalt or PCSM product to ensure a robust and reliable repair is achieved.