**Tunnels Context**

Network Rail’s (NR’s) funding requirements are issued to the Office for Rail and Road (ORR) every 5 years. They are required to provide assurance of best practice Asset Management. The ORR assesses the values requested and the management processes outlined in the Asset Management Policy in order to determine the actual value to be issued.

There are 627 Network Rail Tunnels UK Wide. Most tunnels were built individually during the 19th century to differing specifications and using a range of techniques and materials. Some common elements are shown in Figure 1.

Tunnels were previously included in an Asset Management Policy covering 72,256 structural assets. As a result the policy was perceived not to fully represent the unique nature of tunnels and the range of issues encountered in their management.

Due to some of the management challenges a specific Tunnels Asset Management Policy was proposed for Control Period 6 (CP6) (April 2019 – March 2024) to raise the profile of these difficulties.

**Issues**

**Money**
To secure funds an evidence based approach to cost-efficient renewal and maintenance strategies must be demonstrated.

Detailing the important contribution of NR’s tunnels to the railway network and the unique risks associated is required to ensure effective planning and funding requests.

**Age**
Due to the age of these assets most are beyond their design life and asset condition is not at a steady state. However tunnel performance is required to continue in perpetuity due to replacement currently being uneconomical.

**Time**
Demand for capacity across the network is increasing, leaving less time for track possessions to allow work to be completed.

**Sustainability**
To ensure the lowest whole life cost (WLC), all repair work completed must be sustainable in order to reduce the requirement for repeat repair works.

**Hidden Shafts**
Shafts used in the construction of tunnels were sometimes infilled and covered on completion and therefore pose a particular management challenge. Hidden shafts present a risk of the ground above collapsing, or the shaft failing resulting in debris penetrating the tunnel bore.

**Conclusion**

The creation of a new Tunnel specific Asset Management Policy is the first step to achieving the vision of a higher performing, safe and sustainable Tunnel portfolio providing benefit across the network. The vision statements for future tunnel performance are shown in Figure 5.