

Thank you for your e-mail of 29 March 2015 to our chief executive, Mark Carne, and our managing director of Infrastructure Projects, Francis Paonessa, in respect of the electrification of the Great Western Railway through Goring and South Stoke. In line with our communications policy, Mark and Francis have asked me to respond to you in my capacity of community relations manager for the Western route.

Your comments are wholly understandable and I do sympathise with your concerns. We have a number of factors to take into account with a complex programme such as the electrification of the Great Western Railway; one of these is the impact on neighbours and the environment. We also seek the lowest whole life cost, for a safe, maintainable and reliable solution.

The last mainline electrification in the UK was on the East Coast main line from Kings Cross to Scotland, a couple of decades ago. This used headspans, which do reduce visual intrusion to some extent and have a lower capital cost; however the reliability is not to the level that we now seek in order to run a punctual timetable. We are seeking to install an overhead line system that is considerably more reliable than the older systems, has improved system safety, and is easier and safer to construct and maintain. One problem with headspans is that trains running at high speeds can sometimes pull down the overhead lines, and with a headspan arrangement this can affect all four tracks. The aim of the new design is to minimise this risk, and contain any failures to one track only. Furthermore, maintenance is less safe with headspans because of the greater need for working at heights, and the closer proximity to live 25kV equipment. Construction of headspans is also more difficult on a busy railway because of the amount of time required with all four tracks closed to traffic. We will, however, use headspans where the train speed is sufficiently low, for example at terminus stations.

The older electrification on this route between London Paddington station and the junction for Heathrow airport uses headspans, and while we would like to replace these to increase reliability, this is not cost effective at this time.

Where possible we are using twin track cantilevers to support the overhead line; these are arms that are attached to the masts and carry the overhead lines for two tracks (but such that failure on one track is unlikely to affect the other). A significant advantage with these is that our design allows for rapid installation on the masts which reduces construction cost and construction time, and therefore disruption to services. However, owing to the long reach required on some sections of track to cover two tracks, and the need to avoid buried lineside cables, we have to install portals in some places which stretch across all four tracks. The visual intrusion difference is not great, however, as the gap in the middle between the two track cantilevers is not a large proportion.

Furthermore, it is worth noting that structures carrying wire headspans would need to be taller than the structures that we are installing through South Stoke and Goring, and they also have different loading characteristics which would require much deeper piles than those that have been installed.

With respect to the removal of vegetation, we need to remove all vegetation within 3.6 metres of the masts on each side of the track, or up to our boundary fence, whichever we meet first. This essential work is required for the safe operation of the overhead line electrification system. We will, of course, continue to maintain these areas to avoid vegetation encroachment. While we have to remove all woody vegetation, we plan to sow native wild flower seeds on our land to enhance the local habitat.

While your concerns regarding the appearance of OLE system are understandable, the equipment installed is made of galvanised steel which has a robust lifespan and therefore does not need repainting. The colour of galvanised steel is more likely to blend in with the skyline than a green or dark colour.

You are entirely correct that our environmental impact assessment identifies the large, adverse impact on the local environment through South Stoke and Goring and it is for this reason that we are giving consideration to replanting on community grounds for the purpose of mitigating against the appearance of OLE, and we will shortly be contacting the local authority to identify any local schemes in this regard.

Please be assured that we understand your concerns, shared by many of your neighbours, and that an action group has been set up. We will in due course be arranging to meet with the action group to discuss concerns and to explore any further possibilities for screening in view of the AONB status.

I hope you can appreciate that electrification plays an important role in reducing carbon emissions as well as improving air quality. Electric vehicles emit, on average, 20%-30% fewer CO2 emissions than diesel and it is expected that by 2020, 54% of the railway will be electrified with electric trains accounting for 75% of all rail traffic. In addition to these benefits, that electrification will bring to both the network and to the country, I hope you can appreciate that electrification will create faster, quieter and more reliable train services.

I hope this information is of assistance and helps set out our position in respect of your concerns.

Best and warm regards,

Richard Turner
Community Relations Manager - Western Communications, Network Rail