

EQIA Submission – ID Number

Section A

EQIA Title

Chestfield Tunnel Ventilation Replacement

Responsible Officer

Brian McKay - GT TRA

Approved by (Note: approval of this EqIA must be completed within the EqIA App)

Helen Rowe - GT TRA

Type of Activity

Service Change

No

Service Redesign

No

Project/Programme

Project/Programme

Commissioning/Procurement

No

Strategy/Policy

No

Details of other Service Activity

No

Accountability and Responsibility

Directorate

Growth Environment and Transport

Responsible Service

Highway Structures and Tunnels

Responsible Head of Service

Helen Rowe - GT TRA

Responsible Director

Andrew Loosemore - GT TRA

Aims and Objectives

Aims and objectives

The scheme replaces the ventilation system in Chestfield Tunnel, a twin-bore tunnel carrying the A299, a Strategic Route on Kent's Resilient Highway Network. The existing jet fan system is beyond its service life; there have been multiple reports that have found it cannot control smoke from fires as per its original design due to its age and lack of available spares. The purpose of the scheme is to restore and improve ventilation performance over the next financial year 2026-2027

The selected option (Option 2A) replaces the 32 existing jet fans with the same number of same-size fans fitted with angled louvre deflectors, with Fan 2 in each bank relocated to provide clearance to the lighting rig. This option was endorsed by the Tunnel Design and Safety Consultation Group (TDSCG). It was preferred because it improves smoke control while keeping construction complexity, duration and disruption low relative to the alternatives considered.

The objectives of the scheme are to restore ventilation performance and improve smoke control capability; improve system reliability and reduce the frequency of unplanned maintenance; resolve the maintenance access constraint affecting the lighting installation; and deliver the works with the least practicable disruption to road users, local communities and those maintaining the asset.

Context

This EQIA has been prepared to satisfy the Public Sector Equality Duty under section 149 of the Equality Act 2010, and to inform both the option selection and the delivery approach. Non-motorised users (pedestrians, cyclists and horse-riders) are not permitted within Chestfield Tunnel, so the scheme has no direct effect on those groups within the tunnel itself. The principal equality considerations arise during construction, when traffic management, contraflow operation and, on occasion, full closure require traffic to be diverted onto the local road network, which may affect residents, businesses and vulnerable road users along the diversion routes.

The selected option is delivered predominantly through night-time single-bore closures over approximately 40 nights, with the adjacent bore operating under contraflow. This is materially less disruptive than the larger-fan or portal-based alternatives, which would have required continuous 24/7 closures over an extended period or full closure of the A299. The choice of option therefore reduces the extent and duration of diversion-related impacts on all affected populations.

Post construction, it is considered that options 2a manages risks to all populations SFAIRP. Levels of safety risk for all populations are expected to see a slight positive change (improvement in system reliability and reduced unplanned maintenance activities) ensuring they are no worse than levels experienced prior to the construction activities. Option 2a provides the most balanced solution. It delivers an improvement in ventilation performance while maintaining relatively low construction complexity and associated risks.

Outcome of the analysis

The analysis found no evidence that the scheme would result in a significant or disproportionate adverse impact on people sharing a protected characteristic. The improvements to smoke control and system reliability benefit all tunnel users equally and represent a positive safety outcome. Construction-phase impacts are temporary and are managed through established traffic management practice, signed diversion routes and, where appropriate, additional temporary measures to protect vulnerable users on local roads. No change to the scheme is required on equality grounds. It is recommended that the mitigation measures identified in the safety risk assessment, including consideration of temporary provision for vulnerable users on diversion routes, are carried forward into delivery.

Section B – Evidence

Do you have data related to the protected groups of the people impacted by this activity?

Yes

It is possible to get the data in a timely and cost effective way?

Yes

Is there national evidence/data that you can use?

No

Have you consulted with stakeholders?

Yes

Who have you involved, consulted and engaged with?

Tunnel Design and Safety Consultation Group (TDSCG)

- Kent County Council (KCC) - CDM Client
- Ringway HTMC- CDM Principle Contractor
- William Sale Partnership(WSP)- CDM Principle Designer
- Kent Fire and Rescue Service (KFRS)
- Kent Police
- SECamb
- Canterbury City Council

Has there been a previous Equality Analysis (EQIA) in the last 3 years?
No
Do you have evidence that can help you understand the potential impact of your activity?
Yes
Section C – Impact
Who may be impacted by the activity?
Service Users/clients
No
Staff
Staff/Volunteers
Residents/Communities/Citizens
Residents/communities/citizens
Are there any positive impacts for all or any of the protected groups as a result of the activity that you are doing?
Yes
Details of Positive Impacts
Improved safety for all tunnel users: better smoke control in a fire gives more tenable conditions for evacuation. This benefits every user equally, regardless of any protected characteristic. More reliable ventilation system: the new equipment is expected to fail less often than the current end-of-life system. Fewer unplanned closures and diversions: because the replacement system is more reliable, there will be less need for unplanned closures caused by fan faults. This means fewer occasions when traffic is diverted onto local roads, reducing the impact on local road users and vulnerable users along the diversion routes over the life of the asset. Better maintenance access: relocating Fan 2 by 400mm in each bank clears access to the lighting drivers and adjacent fans, shortening routine maintenance and reducing the number and length of future planned closures and diversions. Reduced risk to maintenance workers: easier access means less time working at height and in constrained positions, and fan removal is no longer needed to reach the lighting system. Low construction disruption: delivered mainly through night-time single-bore closures with contraflow, avoiding the extended 24/7 and full-road closures that other options would have required, minimising diversion impacts on local communities. Maintained network resilience: keeps the A299, a Strategic Route, open and safe for the next 20 to 25 years, supporting community access to services, employment and emergency response. Support for emergency response: improved smoke control and retained CCTV monitoring assist Kent Fire and Rescue Service and other responders. No new hazards introduced: unlike the portal-deflector option, the hybrid adds no visual flicker, falling-ice risk or full-road closure.
Negative impacts and Mitigating Actions
19.Negative Impacts and Mitigating actions for Age
Are there negative impacts for age?
No
Details of negative impacts for Age

Not Applicable
Mitigating Actions for Age
Not Applicable
Responsible Officer for Mitigating Actions – Age
Not Applicable
20. Negative impacts and Mitigating actions for Disability
Are there negative impacts for Disability?
No
Details of Negative Impacts for Disability
Not Applicable
Mitigating actions for Disability
Not Applicable
Responsible Officer for Disability
Not Applicable
21. Negative Impacts and Mitigating actions for Sex
Are there negative impacts for Sex
No
Details of negative impacts for Sex
Not Applicable
Mitigating actions for Sex
Not Applicable
Responsible Officer for Sex
Not Applicable
22. Negative Impacts and Mitigating actions for Gender identity/transgender
Are there negative impacts for Gender identity/transgender
No
Negative impacts for Gender identity/transgender
Not Applicable
Mitigating actions for Gender identity/transgender
Not Applicable
Responsible Officer for mitigating actions for Gender identity/transgender
Not Applicable
23. Negative impacts and Mitigating actions for Race
Are there negative impacts for Race
No
Negative impacts for Race
Not Applicable
Mitigating actions for Race
Not Applicable
Responsible Officer for mitigating actions for Race
Not Applicable
24. Negative impacts and Mitigating actions for Religion and belief
Are there negative impacts for Religion and belief
No
Negative impacts for Religion and belief
Not Applicable
Mitigating actions for Religion and belief
Not Applicable
Responsible Officer for mitigating actions for Religion and Belief
Not Applicable

25. Negative impacts and Mitigating actions for Sexual Orientation
Are there negative impacts for Sexual Orientation
No
Negative impacts for Sexual Orientation
Not Applicable
Mitigating actions for Sexual Orientation
Not Applicable
Responsible Officer for mitigating actions for Sexual Orientation
Not Applicable
26. Negative impacts and Mitigating actions for Pregnancy and Maternity
Are there negative impacts for Pregnancy and Maternity
No
Negative impacts for Pregnancy and Maternity
Not Applicable
Mitigating actions for Pregnancy and Maternity
Not Applicable
Responsible Officer for mitigating actions for Pregnancy and Maternity
Not Applicable
27. Negative impacts and Mitigating actions for Marriage and Civil Partnerships
Are there negative impacts for Marriage and Civil Partnerships
No
Negative impacts for Marriage and Civil Partnerships
Not Applicable
Mitigating actions for Marriage and Civil Partnerships
Not Applicable
Responsible Officer for Marriage and Civil Partnerships
Not Applicable
28. Negative impacts and Mitigating actions for Carer's responsibilities
Are there negative impacts for Carer's responsibilities
No
Negative impacts for Carer's responsibilities
Not Applicable
Mitigating actions for Carer's responsibilities
Not Applicable
Responsible Officer for Carer's responsibilities
Not Applicable