

**M25 junction 10/A3 Wisley interchange
TR010030
6.5 Environmental Statement:
Appendix 4.1 Major accidents and disasters
long list**

Regulation 5(2)(a)
Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

M25 junction 10/A3 Wisley interchange

The M25 junction 10/A3 Wisley interchange Development Consent Order 202[x]

6.5 ENVIRONMENTAL STATEMENT: APPENDIX 4.1 MAJOR ACCIDENTS AND DISASTERS LONG LIST

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Appendix 4.1 Major accidents and disasters long list

4.1 Major accidents and disasters long list

Table 4.1.1: Long list of Major Events

| Disaster type | Relevant to the Scheme | Source of disaster | Potential receptors | Consequence | Addressed in ES (Yes/No and where) | Covered outside of ES (Yes/No and where) | Embedded mitigation | Additional mitigation to reduce risk |
|------------------------------------|------------------------|--|---|--|---|--|---|--------------------------------------|
| Geological disasters | | | | | | | | |
| Avalanches and landslides | No | Due to the topography of the Scheme and the surrounding area, large scale landslide/avalanche disasters are considered an unlikely risk to the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Earthquakes | No | The site is not in a geologically active area and as such earthquakes are not considered to be a risk or serious possibility. | N/A | N/A | N/A | N/A | N/A | N/A |
| Volcanic eruptions | No | The site is not in a geologically active area and as such volcanic eruptions are not considered to be a risk or serious possibility. | N/A | N/A | N/A | N/A | N/A | N/A |
| Sinkholes | No | The geological units beneath the Scheme are not considered prone to dissolution and there is no identified historical underground mining therefore sinkholes are not considered a likely risk to the Scheme | N/A | N/A | N/A | N/A | N/A | N/A |
| Ground instability | Yes | Instable ground from geological units or Made Ground/Fill causing instability of the ground surrounding the Scheme. | Road users, infrastructure and property, surrounding environment. | Casualties, damage to infrastructure and property, disruption to services. | Yes - Geology and Soils chapter (Chapter 10). | No | Yes – within the Ground Investigation and Scheme design. The risk can be removed through design. There is a risk that the cost of construction will be increased with the increased design. | No |
| Hydrological disasters | | | | | | | | |
| Floods | Yes | Both the vulnerability of the Scheme to flooding, and its potential to exacerbate flooding, are covered in the Flood Risk Assessment and are also reported in EIA terms in the Road Drainage and the Water Environment chapter of the ES (Chapter 8). Both assessment address the risk to the Scheme and increased risk due to the Scheme. The Flood Risk Assessment has concluded that based on current flood risk understanding and the incorporation of flood risk mitigation/considerations the Scheme would be at an acceptable level of flood risk and would not increase flood risk elsewhere. | N/A | N/A | N/A | N/A | N/A | N/A |
| Tsunami/Storm surge | No | No applicable as Scheme not located in a coastal location. | N/A | N/A | N/A | N/A | N/A | N/A |
| Limnic eruptions | No | Bolder Mere, adjacent to the Scheme, does not exhibit the characteristics of a potential limnic eruption. i.e. a source of carbon dioxide within the lake; deep enough to have large amounts of dissolved carbon dioxide; and a stratified water column. | N/A | N/A | N/A | N/A | N/A | N/A |
| Major change to groundwater levels | Yes | Flooding due to an increase in the groundwater level. The baseline assessment of groundwater flooding has identified a low risk at existing ground level. The Scheme is above ground level and therefore would be at | N/A | N/A | N/A | N/A | N/A | N/A |

| Disaster type | Relevant to the Scheme | Source of disaster | Potential receptors | Consequence | Addressed in ES (Yes/No and where) | Covered outside of ES (Yes/No and where) | Embedded mitigation | Additional mitigation to reduce risk |
|---------------------------------|------------------------|---|---------------------|-------------|------------------------------------|--|---------------------|--------------------------------------|
| | | low risk. The new drainage network, specifically the drainage ditches and attenuation features are below ground level. Although the potential for water ingress into these features has been considered as part of the design, the overall impact/risk of groundwater flooding to the Scheme is considered low. | | | | | | |
| | | Groundwater levels depleted due to a lack of groundwater recharge. The risk of groundwater depletion to the Scheme is considered low and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Meteorological disasters | | | | | | | | |
| Blizzards | Yes | Blizzard conditions could cause road users to be trapped on the road, however the risk is no different from other roads/road users in the UK, and as such is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Cold waves | Yes | A rapid fall in temperature within a defined time period can cause a cold wave, affecting road users if they become trapped due to bad weather. The Scheme is not considered to be at any greater risk of a cold wave than other roads/road users and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Cyclonic storms | Yes | Cyclonic storms could cause high winds and heavy rain causing damage to infrastructure and property. However the risk is no different from other roads/road users in the UK, and as such is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Droughts | No | Droughts are only considered as a disaster due to water shortages for essential services and where there are indirect impacts on food production, loss of soils etc. The Scheme is not considered to be vulnerable to drought. | N/A | N/A | N/A | N/A | N/A | N/A |
| Thunderstorms | Yes | As the junction interchange is elevated, some consideration is given to the potential risk of lightning strikes, though the risk is not considered to be any greater than any other road bridges. | N/A | N/A | N/A | N/A | N/A | N/A |
| Hailstorms | Yes | The risk of hailstorms is no different from other roads/road users in the UK and as such is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Heat waves | Yes | Extreme heat for a prolonged period can cause tarmac to melt, a higher risk of fires to the surrounding vegetation and road users to dehydrate. The Scheme is not considered to be at any greater risk of a heat wave than other roads/road users and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Tornadoes | No | Although there are tornadoes in the UK, their destructive force tends to be much less than in other parts of the world and the Scheme is not particularly vulnerable to any potential effects. | N/A | N/A | N/A | N/A | N/A | N/A |
| Wildfires | Yes | There may be some potential for bush, scrub, grassland or heather fires, though the risk is no greater than the existing road and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |

| Disaster type | Relevant to the Scheme | Source of disaster | Potential receptors | Consequence | Addressed in ES (Yes/No and where) | Covered outside of ES (Yes/No and where) | Embedded mitigation | Additional mitigation to reduce risk |
|---------------------------------------|------------------------|--|---------------------|-------------|------------------------------------|--|---------------------|--------------------------------------|
| Poor air quality episodes | Yes | Although relevant, as vehicle emissions can contribute to poor air quality, it is not considered necessary to undertake any more assessment than is already being undertaken for the Air quality assessment of the EIA, in the Air quality chapter of the ES (Chapter 5). | N/A | N/A | N/A | N/A | N/A | N/A |
| High wind events | Yes | High wind events are usually linked to storm events that have been considered above. The risk of the Scheme to high wind events is no greater than other roads/road users and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Space disasters | | | | | | | | |
| Geomagnetic storms | Yes | Solar wind shock waves can interact with the earth's magnetic field causing disruption to electrical systems, communications and GPS. The Scheme is considered to be no more vulnerable than any other development and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Solar flare | Yes | Solar flares can interrupt radio and other electronic communications. The Scheme is considered to be no more vulnerable than any other development and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Astronomical object collision | Yes | An impact from an astronomical object can cause effects such as shock waves, heat radiation and craters. The Scheme is considered to be no more vulnerable than any other development and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Transport | | | | | | | | |
| Road accidents | Yes | A major traffic accident leading to the closure of the road for a prolonged period. The risk posed by spillage from hazardous loads as a result of a road traffic accident e.g. fuel tankers is considered in the Road Drainage and Water Environment chapter (Chapter 8). Mitigation included in the Scheme design ensures the risk is acceptable. Diverted traffic onto local roads following a road accident can cause a change in air quality emissions to the surrounding area. There is not considered to be any increased risk to the Scheme and road users than currently exists and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Rail accidents | No | No railways are located close to the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Aircraft disasters | No | Heathrow and Gatwick airports are not located within 2 km of the Scheme and there is not considered to be any increased risk to the Scheme and road users than currently exists and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Maritime disasters | No | The River Wey is the closest navigable river, crossing the M25 to the west of the Scheme. There is not considered to be any increased risk to the Scheme than currently exists and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Engineering Accidents/Failures | | | | | | | | |

| Disaster type | Relevant to the Scheme | Source of disaster | Potential receptors | Consequence | Addressed in ES (Yes/No and where) | Covered outside of ES (Yes/No and where) | Embedded mitigation | Additional mitigation to reduce risk |
|--|------------------------|--|---|---|------------------------------------|--|---------------------|--|
| Bridge failure | Yes | The bridge supports of the junction interchange and other overbridges form part of the Scheme design. There is not considered to be any increased risk to the Scheme as a result of these bridges than currently exists and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Flood defence failure/reservoir failure | Yes | The Flood Risk Assessment considers the risk from flooding from reservoir failure. A small section of the A3 (south of Bolder Mere Lake) is considered to be at risk of inundation from Bolder Mere. The flood risk from reservoirs is low. Consideration of these risks has been considered as part of the Scheme design. Following standard construction principles these risk remain low during the construction and operation phase of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Mast and tower collapse | Yes | Existing masts and towers could collapse on the road. There is not considered to be any increased risk to the Scheme than currently exists and is therefore not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Building failure or fire | No | No large buildings are located close by the Scheme to cause a risk greater than currently exists. | N/A | N/A | N/A | N/A | N/A | N/A |
| Utilities failure (gas, electricity, water, sewage, oil, communications) | Yes | Numerous utility routes cross the M25 and A3 could fail and cause damage to the Scheme. The required diversion of some utility routes due to the Scheme increases the risk of failure during diversion. | Road users, local residents, property, surrounding environment. | Potential for fire/explosion, pollution incident, injury. | No | No | No | All utilities companies have plans and arrangements in place to deal with supply disruptions and failures. |
| Industrial Accidents | | | | | | | | |
| Defence industry | No | No defence industries are located within 2 km of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Energy industry (fossil fuel) | No | No energy industries are located within 2 km of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Nuclear power | No | No nuclear power plants are located within 2 km of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Oils and gas refinery/storage | No | No oil and gas refinery/storage facilities are located within 2 km of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Food industry | No | No food industries are located within 2 km of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Chemical industry | No | No chemical industries are located within 2 km of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Manufacturing industry | No | No manufacturing industries are located within 2 km of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Mining industry | No | No mining industries are located within 2 km of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Terrorism/Crime/Civil unrest | | | | | | | | |

| Disaster type | Relevant to the Scheme | Source of disaster | Potential receptors | Consequence | Addressed in ES (Yes/No and where) | Covered outside of ES (Yes/No and where) | Embedded mitigation | Additional mitigation to reduce risk |
|---------------------------------------|------------------------|---|---------------------|---|------------------------------------|--|---|--------------------------------------|
| Bomb/vehicle attack on people | Yes | The Scheme is unlikely to be any more of a target for this attack than currently exists and is therefore not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Bomb/vehicle attack on infrastructure | Yes | The Scheme is unlikely to be any more of a target for this attack than currently exists and is therefore not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Mass shooting | No | Unlikely to occur in the vicinity of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Chemical/gas attack | Yes | Unlikely to be any more of a target for this attack than currently exists and is therefore not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |
| Rioting | No | Unlikely to occur due to no target locations/businesses in the vicinity of the Scheme. | N/A | N/A | N/A | N/A | N/A | N/A |
| Cyber attack | Yes | The increased number of roadside technology and increasing reliance on this technology could render the Scheme more vulnerable to a cyber attack. | Road users | Accidents due to information boards displaying incorrect information, fatalities. | No | No | The roadside technology is designed to Highways England security arrangements to mitigate the effects of cyber attacks. | No |
| War | | | | | | | | |
| Conventional | No | No more vulnerable than any other infrastructure. | N/A | N/A | N/A | N/A | N/A | N/A |
| Chemical | No | No more vulnerable than any other infrastructure. | N/A | N/A | N/A | N/A | N/A | N/A |
| Nuclear | No | No more vulnerable than any other infrastructure. | N/A | N/A | N/A | N/A | N/A | N/A |
| Disease | | | | | | | | |
| Human disease | No | No more vulnerable than any other infrastructure. | N/A | N/A | N/A | N/A | N/A | N/A |
| Animal disease | No | No more vulnerable than any other infrastructure. | N/A | N/A | N/A | N/A | N/A | N/A |
| Plant disease | No | No more vulnerable than any other infrastructure. | N/A | N/A | N/A | N/A | N/A | N/A |
| Animal infestation | No | An animal infestation event could impact the Scheme although this is no more likely to occur than currently exists and is not considered further. | N/A | N/A | N/A | N/A | N/A | N/A |

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