

6.13 Health and safety

This section has been prepared to identify and assess the potential construction, operation and cumulative health and safety impacts of the amended project, including an assessment of the proposed changes against the impacts documented in the EIS. This section should be read in conjunction with the assessment undertaken for the project described in the EIS, which is discussed in Section 8.3 of the EIS.

6.13.1 Assessment methodology

The assessment focused on changes to potential health and safety impacts associated with the amended project, when compared to the project as described in the EIS.

The assessment involved a review of the potential health and safety impacts identified in Section 8.3 of the EIS against the design changes and proposed construction updates described in **Chapter 3** and **Chapter 4** to identify changes to health and safety impacts associated with the amended project.

The study area described in Section 8.3.2 of the EIS has not been changed as a result of the amended project.

6.13.2 Existing environment

The existing health and safety environment is described in Section 8.3.3 of the EIS and is still applicable to this assessment.

6.13.3 Assessment of potential impacts

6.13.3.1 Construction impacts

The EIS identified a number of potential impacts on the local population's health and safety that may occur during the construction of the project. These impacts include:

- Workplace hazards
- Environmental hazards
- Impacts on public health and ability to carry out physical activity and/or complete journeys using active modes of travel
- Road and pedestrian safety
- Bushfire risks
- Dangerous goods handling risks.

Potential impacts associated with the amended project are discussed in the following sections.

Workplace hazards

Given that the proposed construction updates described in **Chapter 4** would not substantially alter the nature of construction sites as described in the EIS, the construction workplace risk of the amended project would be moderate as was identified in the EIS, and potential workplace hazards would remain consistent those described in the EIS.

Environmental hazards

Health risks associated with the construction of the amended project may be present due to exposure to the following environmental hazards:

- Air quality impacts
 - As described in **Section 6.12**, there would be no material change in construction dust risk ratings from the amended project from what was determined for the project as described in the EIS
 - As a result, there would continue to be a low to moderate risk of dust impacts during construction, and potential air quality environmental hazards would remain consistent with those described in the EIS
- Noise and vibration impacts
 - High construction noise impacts would be likely at the nearest receivers to the project when noise intensive equipment such as rock-breakers or concrete saws are in use
 - As described in **Section 6.7**, noise impacts of the amended project are generally consistent with those of the project as described in the EIS, however, the amended project would result in additional impacts to receivers located near work being undertaken on Elizabeth Drive, south of the motorway-to-motorway interchange at the M7 Motorway. This is not anticipated to constitute a substantial environmental hazard
 - As described in **Section 6.7**, there would be a minor increase in the number of structures located within the recommended minimum working distance for vibration, which is not anticipated to constitute a substantial environmental hazard
- Lighting, electrocution or fire hazards
 - Given that the construction updates described in **Chapter 4** do not substantially alter the construction lighting and electricity, or any other potential fire hazards from that described in the EIS, potential lighting, electrocution and fire hazards remain consistent with those described in the EIS
- Exposure to hazardous materials
 - **Section 6.11** identifies three additional AElS for the amended project where asbestos may be present. However, intrusive asbestos investigations would be carried out along the construction footprint to assess asbestos risks before construction
 - As a result, asbestos exposure to workers or nearby residents remain consistent with those described in the EIS and asbestos exposure to workers or nearby residents is not anticipated
- Gas contamination
 - There is a moderate risk of gas contamination from excavation activities in the vicinity of landfills as identified in the EIS. This remains consistent for the amended project
 - As described in **Section 6.11**, gas contamination risk as a result of the amended project would be comparable to the impacts documented in the EIS
 - Elevated gas concentrations are likely to be relatively localised and would be further investigated before construction of the project

- Contaminated land exposure
 - **Section 6.11** presents a qualitative risk assessment to assess the potential risk of these construction activities to human health and environments
 - Further detailed investigation of areas of environmental interest would be carried out to determine if there are concentrations of polycyclic aromatic hydrocarbons or the presence of asbestos that could be harmful to human health.

Physical activity

The construction footprint of the amended footprint would continue to encroach into the Western Sydney Parklands and is near Kemps Creek Nature Reserve. During construction, access into the Parklands and Kemps Creek Nature Reserve would continue to be maintained in consultation with the Western Sydney Parklands Trust and National Parks and Wildlife Service. The community would therefore have continuous access to the physical activity and recreation opportunities offered by both parks, consistent with the access provided in the project as described in the EIS.

Construction of the amended project would also impact on a number of walking and cycling paths, including the Wylde Mountain Bike Trail. The amended project would result in the permanent loss of facilities and sections of trails within the operational footprint of the amended project. This is consistent with the project as described in the EIS and the amended project would continue to require the redesign and relocation of these facilities prior to construction starting. Construction of the amended project would result in increased noise and dust, causing temporary disruptions. In addition, the car park of the Wylde Mountain Bike Trail would be used as an additional construction ancillary facility as described in **Section 4.1**. These disruptions are anticipated to be minor and temporary in nature, however, and would be similar to the disruptions resulting from the project as described in the EIS.

Other walking and cycling paths, including the Cecil Hills walking track, the Jacquetta Close pedestrian pathway and the M7 Motorway shared path, would also experience temporary disruptions. These disruptions, however, are anticipated to be minor and temporary in nature, and would be consistent with the expected disruptions resulting from the project as described in the EIS.

In summary, access would be maintained for walking and cycling paths during construction of the amended project, which may include temporary diversions. As a result, the amended project would continue to provide the same opportunities for the local population to carry out physical exercise.

Access to social infrastructure

The amended construction footprint would be adjacent to the Kemps Creek Sporting and Bowling Club, with an additional construction ancillary facility located to the east of the club. In addition, utility amendments and enabling works for the amended project may take place in the vicinity of the club. Access to the club, including pedestrian access, vehicular access, parking arrangements and signage would be maintained in consultation with affected business owners. As a result, operation of and access to the club would continue to be maintained during construction of the amended project and would be consistent with the project as described in the EIS.

Access to other social infrastructure in the local area is not anticipated to significantly disrupt access to other local infrastructure and would be consistent with the EIS. As a result, the amended project would continue to provide the same opportunities for the local population to access social infrastructure.

Road and pedestrian safety

The construction of the amended project would result in an average of 229 truck movements per day. This is an increase of about 15 truck movements per day from the project as described in the EIS. This is not considered to be a substantial increase, and it is considered that the construction traffic management plan implemented for the amended project would adequately manage traffic, pedestrian and cycling safety.

As a result, road safety impacts would be low and temporary in nature and would remain consistent with those described in the EIS.

Bushfire risks

The amended project would be partially located within and near bushfire prone land. However, the increased clearing of vegetation for the amended project (**Section 6.1**) would create a fire break between residential areas of Mount Vernon, Kemps Creek, Cecil Park, Cecil Hills and Abbotsbury, reducing the risk of a bushfire. The proposed construction updates described in **Chapter 4** would not result in additional construction activities involving flammable materials and ignition sources.

As a result, bushfire risks would be similar to those described in the EIS.

Handling and use of dangerous goods

The proposed construction updates described in **Chapter 4** would not result in changes to hazardous substances that would be transported to the site and used within the construction footprint during construction of the amended project. In addition, dangerous goods would continue to be handled in accordance with relevant legislation and codes.

As a result, the hazards and risks associated with handling and use of dangerous goods are considered to be low and would be consistent with those described in the EIS.

Distribution of health risks and benefits

The health and safety risks associated with construction of the amended project would be concentrated within and close to the amended project construction footprint. Given this, health risk impacts on workers and the community in the wider study area would be minimal.

As a result, the distribution of health risks and benefits of the construction of the amended project would remain consistent with those described in the EIS.

Public safety

The proposed construction updates described in **Chapter 4** would not result in changes to risks of electrocution, gas, fire or other hazards that may impact public safety as a result of the amended project. Consultation with utility service providers would continue to be undertaken as described in **Chapter 5**.

As the amended project is not located near any mine subsidence developments or mine subsidence districts, subsidence risks have not been further considered.

As a result, the public safety risks of the construction of the amended project would remain consistent with those described in the EIS.

6.13.3.2 *Operational impacts*

The following potential impacts on the local population's health and safety were identified to occur during the operation of the project as described in the EIS:

- Workplace hazards
- Exposure to environmental hazards
- Physical activity
- Access to social infrastructure
- Road safety
- Pedestrian safety
- Emergency facilities
- Bushfire risks
- Handling and use of dangerous goods
- Distribution of health risks and benefits
- Public safety
- Bird strikes.

Changes to the above potential impacts as a result of the amended project are discussed below.

Workplace hazards

Workplace hazards that could occur during the operation of the project are related to road maintenance activities. Given that the proposed design changes described in **Chapter 4** do not substantially alter the nature of road maintenance activities, the workplace hazard risks of the operation of the amended project would remain consistent with those described in the EIS. With the effective implementation of relevant guidelines and procedures, the impacts on operational workplace hazards would therefore be low.

Environmental hazards

Health risks associated with the operation of the amended project may be present due to exposure to the following environmental hazards:

- Noise
 - As described in **Section 6.7**, the amended project would result in an increase in the total buildings requiring consideration of additional noise mitigation from road traffic noise when compared to the EIS, mainly due to an increase to the operational footprint to account for works on Elizabeth Drive and realigned Wallgrove Road.
 - Noise levels associated with road traffic noise in the amended project would generally be consistent with noise levels predicted in the EIS during the day, however levels would decrease by up to 4 dB at night when compared to those presented in the EIS, mainly due to the updated traffic modelling used to assess the amended project.
 - Maximum noise levels of the amended project would generally be consistent with the EIS, however levels at dwellings adjacent to the realigned Wallgrove Road in NCA04 would be up to 7 dB higher than the EIS due to the design of the amended project moving closer to dwellings.
 - These impacts are not anticipated to constitute an environmental hazard.

- Air quality
 - Air quality environmental hazards were considered in Section 8.2 of the EIS
 - As described in **Section 6.12**, there would be no substantial change in local air quality outcomes for the amended project from what was determined for the project as described in the EIS. Potential air quality environmental hazards would remain largely consistent with those described in the EIS.
- Contamination and asbestos hazards
 - As described in **Section 6.11**, contamination and asbestos impacts are consistent with those of the project as described in the EIS. As a result, once operational the contamination hazards of the project would be minor in nature and are not anticipated to constitute an environmental hazard.

Physical activity

The project as described in the EIS would result in the permanent loss of land in the Western Sydney Parklands and the redesign of the Wylde Mountain Bike Trail, with associated change in recreation opportunities. It would also impact other walking and cycling paths which would be realigned as determined during detailed design. This is consistent with the amended project.

The amended project would continue to provide a shared user path. Changes to the shared user path are proposed as described in the EIS (see **Section 3.3.2**). These are not anticipated to result in any changes to how the shared user path would be used for physical activity, however.

As a result, the amended project would continue to provide the same opportunities for the local population to carry out physical exercise.

Access to social infrastructure

The proposed design changes described in **Chapter 4** would not substantially change the alignment of the amended project compared to the project as described in the EIS. While the amended project would result in the permanent loss of land in the Western Sydney Parklands, this is consistent with the project as described in the EIS and wider access to the Parklands would continue to be improved for pedestrians and cyclists.

As a result, the amended project would continue to provide the same opportunities for the local population to access social infrastructure as the project described in the EIS.

Road safety

The proposed design changes described in **Chapter 4** would not change the amended project's provision of an alternative route to the Western Sydney International Airport that would be more direct than Elizabeth Drive and the local road network.

As described in **Section 3.1.2**, combining two M7 Motorway off-ramps into a single exit point from the motorway before diverging for access to M12 Motorway or Elizabeth Drive would improve operational performance and driver safety. This is due to the reduction in locations where vehicles would be merging left and decelerating to exit the motorway. A single exit point would also reduce driver confusion. Similarly, for the ramps exiting the M12 Motorway, the combination into a signal exit point from the motorway before diverging would improve safety and performance.

As a result, the safety of motorists, pedestrians and cyclists would be improved from that described in the EIS and would have a beneficial impact.

Pedestrian safety

The shared user path would continue to be grade-separated at all road crossings along the M12 Motorway and while the crossing at The Northern Road would continue to be at grade. The amended shared user path as described in **Section 3.3.2** would still underpass the airport access road.

As a result, the amended project would continue to provide safer access for pedestrians and cyclists than the existing road network.

Emergency facilities

The proposed design changes described in **Chapter 4** would not substantially change emergency facilities from those of the project as described in the EIS. Emergency crossovers and heavy vehicle stopping bays would continue to be provided at required intervals and would be appropriately located where road geometry allows for suitable visibility and sufficient space for vehicles. Emergency telephone bays would continue to be provided at each integrated speed limit and lane use sign location. Each bay would be designed to allow a car to park clear of the motorway shoulder and safely access the emergency telephone.

As a result, the amended project would continue to provide the required emergency facilities.

Bushfire risks

The proposed design changes described in **Chapter 4** would not change the project's invulnerability to bushfire. The new road surfaces built for the amended project would continue to create a buffer between vegetated areas, particularly in the Western Sydney Parklands.

As a result, the bushfire risks of the operation of the amended project would remain consistent with those described in the EIS. The amended project is not expected to be a significant bushfire hazard during operation.

Handling and use of dangerous goods.

The nature of the proposed design changes described in **Chapter 4** would not change the risk of a vehicle collision associated with the operation of the amended project.

As a result, hazards and risks associated with handling and use of dangerous goods during operation are considered to be low and would remain consistent with those described in the EIS.

Distribution of health risks and benefits

The nature of the proposed design changes described in **Chapter 4** would not change the health risks and benefits of the amended project.

As a result, the operation of the amended project would continue to have a generally positive benefit to health and safety – both for the immediate community and the wider western Sydney.

Public health

The amended project would continue to be located within a Public Safety Area (PSA) as described in Section 5.5.5 of the EIS. Potential interaction between the amended project design and the PSA would be the subject of ongoing consultation during detailed design to ensure that the relevant guidelines from the National Airports Safeguarding Framework are considered appropriately, minimising risks to public safety.

As a result, impacts to public health during operation of the amended project would be consistent with those associated with the project as described in the EIS.

Bird strikes

The proposed design changes described in **Chapter 4** do not include any additional permanent water quality basins located within 13 kilometres of Western Sydney International Airport. The type and design of permanent water quality basins for the amended project would be further investigated during detailed design to confirm their suitability and develop appropriate mitigation measures.

As a result, no additional risk of bird strike is anticipated for the amended project compared to the project described in the EIS.

6.13.4 Opportunities for health improvement

Once operational, the amended project would continue to provide access and connectivity, and additional opportunities for people to increase levels of physical exercise. The amended project would also continue to reduce existing bushfire health risks by creating an effective bushfire buffer.

As a result, the beneficial health and safety impacts of the amended project would be consistent with the project as described in the EIS. These are discussed in Section 8.3.5 of the EIS.

6.13.5 Environmental management measures

The health and safety impacts associated with the amended project are generally consistent with the impacts described in the EIS. The environmental management measures identified in Section 8.3.6 of the EIS are therefore considered appropriate to manage the health and safety impacts associated with the amended project. No additional or amended environmental management measures are required for the amended project.