

Chapter B10

Air Quality



Summary of key findings:

Air quality impacts were assessed for the construction and operational phases of Melbourne Airport's Third Runway (M3R). This chapter also identifies the specific measures available to avoid, manage, mitigate and/or monitor air quality impacts where required.

Modelling demonstrated that during construction predicted peak concentrations of PM_{2.5} and TSP (excluding background levels) were below their respective criteria at residences to the north and south of the airport boundary; and predicted peak concentrations of PM₁₀ (excluding background) were above criteria at residences north of the airport.

The initial risk level for the M3R construction for PM₁₀ 24-hr concentrations and TSP was assessed as high but downgraded to medium after taking into account additional mitigation measures. Potential impacts due to dust emissions from construction activities will be mitigated to satisfactory levels by applying dust suppression techniques. Project standards for deposited dust (TSP/nuisance dust), PM₁₀ and PM_{2.5} are therefore expected to be met outside the airport.

The primary contributors to air emissions from airport operations were aircraft movements (landing and take-offs, LTOs), auxiliary power units (APUs) and road vehicle movements.

Comparisons of model results for the No Build and Build scenarios indicated that overall Build leads to slightly worse air quality impacts. This is to be expected, given aircraft movements and road traffic movements will increase under the Build scenarios. The worst-case scenario was Build 2046 in which aircraft operations increased by 91 per cent and road traffic increased by an average of 95 per cent compared to 2019 (the base scenario).

Assessed risk levels for the operational case Build 2046 ranged between negligible and medium for all pollutants.