



Rethinking safety through

INCLUSION

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WELLBEING

# ENVIRONMENT

## PRIMARY STANDARD

28/01/2025

# AIR QUALITY AND DUST MANAGEMENT

## PURPOSE AND SCOPE

The purpose of this Primary Standard is to eliminate or minimise environmental impacts as a result of discharge to air including dust generation.

### 1.0 CRITICAL CONTROLS AND CONTROLS CRITERIA

Air quality and dust management issues from construction activities must be identified and assessed prior to the work commencing. Associated controls must be documented and implemented.

**Table 1** provides the mandatory Critical Controls and associated Controls Criteria which when implemented will reduce the risk of severe environmental impacts. The Critical Controls and associated Controls Criteria are considered operational controls and are to be included in project-specific management plans and procedures. The Controls Criteria support the successful implementation of the Critical Controls.

Table 1 Critical Controls and Controls Criteria

CRITICAL CONTROLS	CONTROLS CRITERIA
PREWORKS ASSESSMENT IS CONDUCTED TO DETERMINE AIR QUALITY RISKS AND CONTROLS	Background air quality assessment is completed, and data is captured in the project documentation.
CONSTRUCTION METHODOLOGY CONSIDERS AIR QUALITY AND DUST GENERATION	Upper wind speed threshold is known and documented in the Air Quality Management Plan or Construction Environmental Management Plan (CEMP).
	Sensitive areas and receivers are identified and protections are captured in the project documentation.
	Site establishment dust emission controls are identified and captured in project documentation (e.g. laydown areas, stockpiles, and access/haul roads).
AIR QUALITY MONITORING AND SURVEILLANCE PROGRAMME IS IN PLACE	Air quality monitoring programme schedule is defined and recorded in the CEMP or sub-document.
	Wind speed and direction monitoring is conducted on the project.
	Monitoring equipment is fit for purpose for project requirements.
	Results are recorded and regularly reviewed by the environmental team or a suitably qualified person.
	Results are reported to the client and regulator as required.
	Odour monitoring programme has been designed and established for high-risk works.
	Trigger action response plans are developed and known for when there is a high-wind event.



CRITICAL CONTROLS	CONTROLS CRITERIA
DUST GENERATION FROM HEAVY PLANT AND EQUIPMENT AND VEHICLES IS CONTROLLED	Construction work area design/plans outline approved areas of operation. (i.e. work areas must remain within the approved access areas and worksites).
	Project documentation states loads are covered to reduce dust.
	Speed limits on tracks and access roads are established and contained in project documentation (e.g. Project Risk Assessment (PRA), Traffic Management Plan).
	Project documentation contains controls (e.g. wheel washes and cattle grids) to eliminate material being tracked off-site (e.g. exit points from site are controlled to eliminate material being tracked off-site).
COMMUNITY COMPLAINTS ARE RECORDED RESPONDED TO (FOLLOWED UP)	Air quality monitoring equipment, surveillance or resources are available and calibrated for use in testing/monitoring in response to a complaint.
	Testing/monitoring is conducted by a suitable qualified person.
	Testing/monitoring results are recorded and regularly reviewed.
	Community complaints are recorded and responded to in approved timeframes.
CONTROL GENERATION, RELEASE AND DISTRIBUTION OF HAZARDOUS DUST (SYSTEM)	Methods for reducing dust generation and distribution including worker exposure across the worksite are included in the PRA and Work Method Statements; use hierarchy of control substitution, isolation, engineering controls.
	Reducing dust generation and distribution across the worksite has been considered during design (e.g. Safety in Design Risk Assessment).
	Training of the risks associated with respiratory protective equipment has been developed and included in the Training Needs Analysis.
CONTROL GENERATION, RELEASE AND DISTRIBUTION OF HAZARDOUS DUST (FIELD)	Wet cutting, grinding systems or systems with engineering controls such as local exhaust ventilation (LEV) are fitted to the equipment to reduce airborne hazardous dust.
	Methods or enclosures to separate workers from dust sources are in place and effective (e.g. enclose workshops from prevailing winds).
DUST GENERATED AS A RESULT OF PROJECT ACTIVITIES IS MANAGED	Dust controls are in place to prevent dust leaving project boundary (water carts, screens, stockpile management, reduced ground disturbance, misters, air scrubbers).
	Loads are covered to reduce dust.
	High dust generation activities (e.g. soil screening, crushing and grinding, cut and fill) are reduced or being managed during high wind events.
	Finished areas are progressively landscaped and rehabilitated as soon as possible.
	Stabilised exit points are maintained and functional (wash through, cattle grids) and public roads free from tracked material.
	Finished areas are stabilised or suitable controls in place to minimise dust.
AIR QUALITY MONITORING AND SURVEILLANCE PROGRAMME IS OPERATIONAL	Monitoring equipment is established, well maintained and operational.



## 2.0 MONITORING AND MEASUREMENT

While the project scope and associated conditions of approval provide conditions and parameters to include in an air quality monitoring system, all projects should have a monitoring programme that:

- Records information to track performance
- Monitors operational controls
- Assesses the level of conformance with objectives and targets.

Minimum objectives and targets to be measured include:

- No valid dust complaints from construction works
- No dust impacting on off-site activities or surrounding residences
- No release of contaminants (such as odour or smoke) into the air
- Compliance with construction contract conditions.

Exceedances should be reviewed against project requirements and **SR Event Management, Reporting and Investigation**.

## 3.0 DUST EMISSIONS

All operations are to have mitigation measures in place to suppress dust from site activities. This will include:

- Having water tankers or similar suitable measure where necessary for dust suppression
- Spraying formations (e.g. road, rail) and exposed work areas to suppress dust where there is a risk of off-site emissions. Application rates to be determined based on wind conditions and the intensity of construction operations. To reduce potable water consumption, use recycled water for dust suppression where practicable
- Providing stabilised access points in the form of shaker grids or rumble strips or wheel washes at site egress points
- Minimising traffic volumes and traffic speeds on exposed areas
- Covering haul vehicles loads and ensuring tail gates are closed when operating on public roads
- Removing mud from haul vehicles prior to entering public roads
- Removing spilt mud/sediment by construction equipment or vehicles on public roads
- Reprogramming dust generating work during periods of high wind. Where dust cannot be controlled, cease dust generating activities until control measures can be implemented
- Undertaking site rehabilitation as soon as practical
- Stabilising disturbed areas as soon as practical to prevent or minimise wind-blown dust
- Using soil binders for longer turn areas that remain unstable
- Using soil binding agents for areas to be exposed for long periods of time. The environmental impact of using soil binding agents must be assessed prior to use (e.g. if using adjacent waterways, near sensitive ecological communities).

## 4.0 PLANS, FORMS AND TEMPLATES

For relevant plans, forms and templates see the Laing O'Rourke HSEMS at [www.lorhsems.com](http://www.lorhsems.com).