

**APPLICATION FOR APPROVAL
 AIR QUALITY/DUST MANAGEMENT PLAN**

PROJECT DETAILS

Description of Project

.....

Total Land Area (m2)Maximum Exposed Area (m2).....

Start, Finish Dates (earthworks)

Start, Finish Dates (construction)

SITE LOCATION DETAILS

Street Address

Suburb

OWNER DETAILS

Name

Address

Contact Number/s

CONTRACTOR DETAILS

Contractor Name

Contractor Address

Office Telephone Number Email Address

SITE SUPERVISOR DETAILS

Name

Business Hours Contact Number/s A/H Contact Number/s

SITE CHARACTERISTICS

Soil Type

Score from Assessment Chart

APPLICATION FEES

PAYMENT IN PERSON
 At City of Armadale Office. Open
 8:15am to 4:45pm Monday-Friday

PAYMENT BY MAIL
 Send completed form together with
 cheque or money order to postal
 address indicated at top of form.

PLEASE COMPLETE THIS SECTION IF PAYING BY CREDIT CARD

Name as shown on card :

Card Holder Address :

.....Signature.....

Expiry Date
 ___ / ___ Bankcard MasterCard Visa Card

Amount Card Number
 \$ _____

	Wind Fencing	
5	Install wind fencing of suitable length, height and porosity where it is needed, to reduce prevailing wind speed and therefore the impact of dust on surrounding areas. Effectiveness is greatest where fencing is perpendicular to the prevailing wind direction with a porosity of about 50%
	Storage of Materials On Site	
7	Loose materials left on site must be stored in a manner that prevents loose materials from wind effects and other prevailing weather elements.
	Stop Work	
8	Stop work immediately whenever high dust causing activities are likely to cause a dust nuisance to nearby properties
	Make Good Damage Caused by Escape of Dust	
9	Make good any damage to neighboring properties resulting from release of dust from the development site

I.....have due authorisation and delegation to sign this Air Quality/Dust Management Plan on behalf of the Company listed above and take responsibility for ensuring compliance with our commitment specified herein, the City’s Local Laws and any other relevant legislation.

Signed Dated

Land development sites and impacts on air quality

A guideline for the prevention of dust and smoke pollution from land development sites in Western Australia

http://portal.environment.wa.gov.au/pls/portal/docs/PAGE/DOE_ADMIN/GUIDELINE_REPOSITORY/2644_LAND_DEVELOPMENT_SITES.PDF

Department of Environmental Protection
Perth, Western Australia
November 1996

3. Air quality management programmes

3.1 Requirement for air quality management programmes

One of the main problems identified with the previous dust control guidelines was that they were not applied uniformly, that is, they were applied to some subdivisions and not to others. This weakness has been recognised, and it has been suggested by industry that a solution to this problem is for local governments to require an adequate air quality management programme to be submitted for approval with the engineering drawings for the subdivision. Responsibility for dust management is then the developer's, who can delegate that responsibility to the relevant engineers and contractors. This is one method that local governments can employ to ensure that dust management is always considered in the planning of a subdivision.

3.2 Air quality management programme

As a guide, the air quality management programme should include the following items:

(a) Site classification.

A "CLASSIFICATION ASSESSMENT CHART" for the site should be completed. This chart, together with some explanatory notes, is attached as Appendix 1 to the guidelines.

The chart and chart notes recognise that the major factors influencing the dust risk potential of a specific site are the time of the year when the works are to be conducted, the nature of the site, the extent of the proposed works and the proximity of the site to any other land uses.

Should an adjoining land development site have works occurring simultaneously or overlapping with the works on the subject site, then the site classification/s shall be assessed taking fully into account the adjacent site as an existing land use.

The "SCORE" obtained on the assessment chart, together with any special site conditions as described in the explanatory notes (Appendix 1, Sheet 3), shall then be used to determine the appropriate dust potential classification/s of the site.

It is envisaged that some sites may be divided into more than one site classification. Provisions and contingency arrangements applied to each part of the site are those relevant to the particular site classification.

The "SITE ASSESSMENT DETAILS" form refers to the starting and completion dates, and the duration of the development works. The air quality management programme may need to be revised/updated should the "Contract Dates" as shown on the form vary

significantly.

- (b) Site inspection, involving relevant engineer for the developer and Local Government Engineer and/or Environmental Health Officer to ascertain:
 - soil type and sensitivity;
 - exposure of site;
 - proximity and sensitivity of land uses;
 - extent of required wind fencing;
 - existing vegetation and timing of removal; and
 - other influencing factors, for example duration of development, effect of prevailing winds, etc.
- (c) Sequence of site disturbance, including maximum size of exposed areas and details on the method used for the removal and replacement of topsoil, with respect to prevailing winds.
- (d) Haul road location.
- (e) Contractor's site location — proximity of houses.
- (f) Schematic sketch of site, incorporating above items, where applicable.
- (g) Notification of nearby residents by letter drop and information board on site (to include after hours number of engineer for the developer and/or contractor).
- (h) Course of action to be taken in the event of a dust problem.
- (i) Appropriate items in specifications to be included with engineering drawings, and approved by the local government.
- (j) Details on interim mulching, or other stabilisation activity.
- (k) Method of treatment of cleared vegetation (see Section 2.5).

3.3 Contractual arrangements

It is anticipated that the ACEA and UDIA will draft model clauses for use in contracts for subdivision works. As a guide, the contract clauses should include:

- reference to these Guidelines;
- a clear description of the demarcation of responsibility for costs included in the lump sum allowance and those covered by provisional quantity/sum items;
- a statement that the ultimate contractual responsibility for dust and smoke control remains with the contractor, being the occupier of the land, or the developer in relation to the adequacy of the contractual requirements to allow/compel the contractor to exercise his responsibility;
- wind fencing — detail of construction and maintenance, including removal of sand build-up;
- provisions and contingency items required by the dust control guidelines;
- a requirement for the cessation of work during adverse wind conditions;
- provisional quantities/sums detailed and listed in schedule;
- advisory notices;
- a course of action should problems arise; and
- classification of the site in relation to its status as contaminated land.

These model clauses will be appended to this document as soon as they are produced.

4. Procedures for the assessment and management of dust lift-off

Site classifications — Threshold scores

Based on the total score obtained from the “SITE CLASSIFICATION ASSESSMENT CHART” and notwithstanding any allowance for special site conditions during the dry period, (refer to Note 4, Appendix 1) the following Site Classification will apply:

Site Classification 1 — under 199;

Site Classification 2 — 200 to 399;

Site Classification 3 — 400 to 799, and

Site Classification 4 — over 800.

- Note:**
- Unique sites may need special assessment.
 - It is essential that any contracts for construction work on site include the relevant contingency arrangements appropriate for the site classification.

4.1 Classification 1 (score under 199, considered negligible risk)

Provisions:

- None required.

Contingency arrangements:

- None required.

4.2 Classification 2 (score between 200 and 399, considered low risk)

Provisions:

- The developer shall supply a contingency plan to the local government, which shall detail the activities to be undertaken should dust impacts occur.

Contingency arrangements:

- Include an allowance for water-cart operation, wind fencing and surface stabilisation during the construction period for the purposes of dust suppression.
- All areas of disturbed land should be stabilised to ensure that the disturbed area exposed at any time is kept to a practical minimum.

4.3 Classification 3 (score between 400 and 799, considered medium risk)

Provisions:

- Appropriate wind fencing of a length specified in the air quality management programme needs to be stored on site or available within one hour of being required by the engineer for the developer/local government/DEP.
- All areas of disturbed land should be stabilised to ensure that the disturbed area exposed at any time is kept to a practical minimum to prevent exceedence of the maximum acceptable dust level (see Section 6.).

- The engineer for the developer shall maintain close control of works with dust creating potential (for example, allowable length of open trenching).
- After all siteworks are completed, and before the contractor has vacated the site, the developer should ensure that the entire site is stable. The developer then retains responsibility for site stability until change of ownership/control takes place. After the change of ownership/control has taken place, the new owner or controlling party will inherit responsibility for site stabilisation.

Contingency arrangements:

- Suitable water-carts in good working condition and of not less than 10,000 litres capacity per 7.5 hectares of disturbed site, or other suitable alternatives, shall be available to commence watering on the site within 18 hours of being required to do so by the engineer for the developer/local government/DEP.
- Surface stabilisation equipment shall be available to commence operation on site within 48 hours of being required to do so by the engineer for the developer/local government/DEP and with sufficient capacity to cover the disturbed site area within a further 48 hours.
- Wind fencing shall be erected within 18 hours of the contractor being required to do so by the engineer for the developer/local government/DEP. Dust generating works on the site shall cease in the interim.
- If dust-related complaints are generated due to activities on the site, the developer may be required by the local government or an authorised DEP officer to distribute advisory notices to adjoining land occupiers within 48 hours. The notices shall include the name of the developer, engineer for the developer, contractor/s and the contract period. The notices shall also contain contact telephone numbers and procedures as detailed in Appendix 2.
- If dust-related complaints are generated due to material which has been excavated for trenching, the developer shall ensure this material is stabilised within 48 hours of being requested to do so by the engineer for the developer, local government or an authorised DEP officer.
- Include an allowance for water-cart operation, wind fencing and surface stabilisation during the construction period for the purposes of dust and wind-borne material suppression.
- Include an allowance for surface stabilisation for the purposes of dust and wind-borne material suppression to be maintained after the construction period and until change of ownership/control takes place.

4.4 Classification 4 (score over 800, considered high risk)

Provisions:

- Advisory notices shall be issued to adjoining land occupiers, the local government and the DEP at least 48 hours before site works commence. The notices shall include the name of the developer, engineer for the developer, contractor/s and the contract period. The notices shall also contain contact telephone numbers and procedures as detailed in Appendix 2.
- Fencing to the extent and in locations agreed to by the developer and local government shall be erected before any part of the site surface is disturbed.

Note: This provision does not necessarily mean that the total site boundary is to be fenced. The fence is to be installed to an extent which will protect adjacent land uses and in most cases should be erected on the edge of the area which will be disturbed rather than on the site boundary.

- An amount of wind fencing of a length specified in the air quality management programme needs to be stored on site or available within one hour of being required by the engineer for the developer/local government/DEP.
- The nominated wind fencing is to remain in position until the disturbed surface is stable.
- Surface stabilisation is to be applied to the disturbed area of each section of the site upon completion of the works in that section.

- The engineer for the developer shall maintain strict control of works with dust-creating potential. Material which has been excavated for trenching shall be stabilised if the trench is to be left exposed for longer than 72 hours.
- After all siteworks are completed, and before the contractor has vacated the site, the developer should ensure that the entire site is stable. The developer then retains responsibility for site stability until change of ownership/control takes place. After the change of ownership/control has taken place, the new owner or controlling party will inherit responsibility for site stabilisation.

Contingency arrangements:

- Suitable water-carts in good working condition and of not less than 10,000 litres capacity per 5 hectares of disturbed site, or an appropriate alternative, shall be available to commence immediate watering on the site.
- Surface stabilisation equipment shall be available to commence operation on site within 48 hours of being required to do so by the engineer for the developer/local government/DEP and with sufficient capacity to cover the disturbed site area within a further 48 hours.
- Additional wind fencing shall be erected within 18 hours of the contractor being required to do so by the engineer for the developer/local government/DEP. Dust generating works on the site shall cease in the interim.
- Include an allowance for water-cart operation, wind fencing and surface stabilisation during the construction period for the purposes of dust and wind-borne material suppression.
- Include an allowance for surface stabilisation for the purposes of dust and wind-borne material suppression to be maintained after the construction period and until change of ownership/control takes place.

5. Contractor's responsibility

The "Site Classification" rating for a particular site should be considered as an aid to deciding the appropriate measures which should be taken to contain dust and wind-borne material generated by a land development site to maximum acceptable limits.

Notwithstanding the allocated "Site Classification" given to a site, if, during the actual construction work, the suggested dust suppression measures are found to be insufficient, the responsibility for carrying out the necessary measures to achieve an appropriate level of dust suppression rests with the contractor. The DEP or relevant local government, however, reserves the right to take enforcement action for any unsatisfactory dust control against the engineer for the developer, the developer and/or the contractor.

6. Maximum acceptable dust level at site boundary

The existing DEP limit for the maximum allowed level of dust concentration in the atmosphere is 1000 micrograms per cubic metre of air, measured over 15 minutes. The level of dust being generated by a site should be determined by subtracting the upwind dust concentration from the downwind dust concentration. Both concentrations should be determined at the boundary of the development site.

NOTE: for the redevelopment of contaminated sites, more stringent standards and dust management protocols will be required, to be determined on a risk assessment basis.

A recommended rule-of-thumb for estimating dust levels is that visible dust crossing the property boundary indicates that the potential for adverse dust impacts exists and control measures should be implemented. The DEP has the technical capability to measure the concentration of dust in the air. Developers, engineers for the developers and contractors should not wait for dust measurements to be made before applying appropriate dust control measures in this instance, but should take immediate action to abate the dust lift-off.