

# WASTE FILL IMPORTATION GUIDELINE

A D E L A I D E   A I R P O R T   L I M I T E D



## PURPOSE

This guideline provides information on the maximum allowable concentrations of chemical substances which may be present in any fill material imported on to the airport site.

## SCOPE

This guideline applies to both Adelaide and Parafield Airport sites as defined in the respective Master Plans.

## REFERENCES

AAL/PAL Building Approval Application Package

South Australian Environment Protection Authority (SAEPA) Standard for the production and use of Waste Derived Fill

[http://www.epa.sa.gov.au/xstd\\_files/Waste/Guideline/standard\\_wdf.pdf](http://www.epa.sa.gov.au/xstd_files/Waste/Guideline/standard_wdf.pdf)

AAL/PAL Construction Environmental Management Plan Template

Guidelines for Environmental Site Assessments at Adelaide and Parafield Airports

[http://www.aal.com.au/lib/pdf/09\\_Enviro\\_Site\\_AssesmentsV2.pdf](http://www.aal.com.au/lib/pdf/09_Enviro_Site_AssesmentsV2.pdf)

## DEFINITIONS

Homogeneous – uniform in structure or composition throughout, of similar nature or kind

Heterogeneous – consisting of elements that are not of the same kind or nature

Fill material – any soil, rubble and/or bulk materials imported from off-site sources to be utilised on site for levelling an area for construction, usually sub soil material which contains little organic matter

Quarry rubble/sand – non organic, graded material purchased from a licensed quarry/mine

## PROCEDURE

AAL require a waste fill assessment report to be submitted as a part of the Building Application process which certifies that any fill material being brought onto the site is compliant with the following Environmental criteria.

### Prework

When it has been established that fill must be imported onto the site for construction purposes, the applicant must include a statement in their submission that soil will be imported onto the site.

A sampling and analysis plan must be generated in order to classify the material being brought onto the airport site.

All fill material being brought onto the airport site must be certified as compliant with the Waste Fill Criteria as assessed using the SA EPA Standard for the production and use of Waste Derived Fill.

Fill material obtained from a licensed quarry or sand mine is defined as quarry rubble and need not be separately sampled, however certification from the quarry that the material is chemically compliant with Waste Fill criteria is required.

[www.aal.com.au](http://www.aal.com.au)

## PROCESS

Sampling, analysis and reporting must be undertaken by a competent person/organisation with adequate environmental experience and training. There are a number of specialist consultancy companies who offer services for undertaking such works that meet the general requirements of the SA EPA. Careful consideration should be taken when choosing a consultant for each particular job; further guidance may be found in the Guidelines for Environmental Site Assessments at Adelaide and Parafield Airports.

All imported fill material must be sampled at a base rate of 1 sample per 25m<sup>3</sup> with a minimum of 3 samples from a parent stockpile less than 50m<sup>3</sup>.

For larger amounts of fill material a minimum of 10 samples and/or 1 sample per 250m<sup>3</sup> must be undertaken.

For these base rates to be utilised the source of the fill material must be homogeneous, additional sampling may be required if there is indication of variable soils from the source site.

The following table show the minimum number of samples required depending on the volume of material to be imported.

| SOIL VOLUME (M <sup>3</sup> ) | NO OF SAMPLES |
|-------------------------------|---------------|
| <50                           | 3             |
| 75                            | 4             |
| 100                           | 5             |
| 125                           | 7             |
| 150                           | 8             |
| 175                           | 9             |
| 200 - 2500                    | 10            |
| > 3000                        | 1:250         |

All fill material must be free from debris greater than 100mm diameter such as concrete, bitumen, green waste (weeds, branches & clippings).

Imported fill material must be geotechnically suitable for the purpose and contain limited amounts of organic material.



## ANALYTICAL CRITERIA

All sample analytes must have values less than the SA EPA Waste Fill Criteria.

The imported fill criteria which must be complied with is as follows.

| ANALYTE                 | WASTE FILL CRITERIA (MG/KG) |
|-------------------------|-----------------------------|
| Arsenic                 | 20                          |
| Cadmium                 | 3                           |
| Chromium (III)          | 400                         |
| Copper                  | 60                          |
| Lead                    | 300                         |
| Nickel                  | 60                          |
| Zinc                    | 200                         |
| Mercury                 | 1                           |
| Heptachlor              | 2                           |
| Aldrin                  | 2                           |
| Dieldrin                |                             |
| (cis & trans) Chlordane | 2                           |
| 4.4' - DDT              | 2                           |
| Benzene                 | 1                           |
| Toluene                 | 1.4                         |
| Ethylbenzene            | 3.1                         |
| Total Xylene            | 14                          |
| Phenol                  | 0.5                         |
| Benzo (a) pyrene        | 1                           |
| Total PAH               | 5                           |
| TPH (C6 - C9)           | 65                          |
| TPH (C10- C14)          | 1, 000                      |
| TPH (C15- C28)          | 1, 000                      |
| TPH (C29- C36)          | 1, 000                      |

## REPORTING

AAL must receive a report (two hard copies and one electronic) prior to the material being brought on site detailing the following;

- Location and source of fill material
- Expected amount to be imported
- General description of the fill
- Analytical results
- Classification against the criteria
- Conclusion certifying that fill is environmentally and geotechnically suitable for the purpose.

The report is to be provided to the  
Environment Manager  
Adelaide Airport Limited  
1 James Schofield Drive