Appendix 1.1: Satellite photo showing study sites.

Appendix 1.2: Summary table of site attributes for each beach or beach section sampled.

Appendix 1.3: Photographs of study sites.

Appendix 1.4: Daily wind speed (km.h⁻¹; blue series), rainfall (mm; red series) and maximum air temperature (°C; purple series) observations for Port Noarlunga, July 2005 – March 2008.

Appendix 3.1: Sieving versus laser-diffraction techniques for assessing grainsize distributions of beach sands (unpublished manuscript)

Appendix 3.2: Frequencies of cores with cobbles versus cores without cobbles between beaches open v closed to vehicles and results of contingency table tests for each sampling occasion.

Appendix 3.3: Frequency of cores with cobbles versus cores without cobbles by vehicle access type for Aldinga Bay beach sections (i.e. within-beach comparisons) and results of contingency tables tests for each sampling occasion.

Appendix 3.4: Frequency of cores with cobbles versus cores without cobbles by vehicle access type for Moana Bay beach sections (i.e. within-beach comparisons), and results of contingency tables tests for each sampling occasion.

Appendix 4.1: Measuring the realised sediment displacement by vehicles on a beach subject to intense vehicle usage over a period of several months: notes on field methods on a failed experiment with some findings

Appendix 5.1: Frequency of cores containing fauna by core cover and vehicle access type and results of contingency tables tests for each sampling occasion.

Appendix 5.2: Frequency of cores with fauna absent (i.e. a 'null' core) versus fauna present by vehicle access type and results of contingency tables tests for each sampling occasion or season.

Appendix 5.3: Frequency of cores containing fauna by vehicle access type for Aldinga Bay beach sections and results of contingency tables tests for each sampling occasion, year or season.

Appendix 5.4: Frequency of cores containing fauna by vehicle access type for Moana Bay beach sections for years 2 and 3 only, and results of contingency tables tests for each sampling occasion.

Appendix 5.5: Average similarities and abundances (4th root transformed) of up to the top 3 species (in order of higher to lower contribution) selected by SIMPER analysis as contributing (%C) the most to average similarity among samples (for all cover types) for beaches open or closed to vehicles, for each seasonal sampling occasion and overall year of the study.

Appendix 5.6: Average similarities and average abundances (4th root transformed) of up to the tree species selected by SIMPER analysis as contributing (%C) the most to average similarity (in order of higher to lower contribution) among samples (for all cover types) for Aldinga Bay beach sections, for each seasonal sampling occasion and overall year.

Appendix 5.7: Average similarities and average abundances (4th root transformed) of the tree species selected by SIMPER analysis as contributing (%C) the most to average similarity (in order of higher to lower contribution) among samples (for all cover types) for Moana Bay beach sections, for each seasonal sampling occasion and overall year.

Appendix 6.1: Taxonomy of nematode worms collected from study beaches, to Order, but only Genus names for some species (Platt & Warwick 1983; 1988; Warwick *et al.* 1998). Feeding guilds, based on buccal cavity structure (Jensen 1987) are also given.

Appendix 6.2: Summary tables for results of ANOVA tests on measured sediment variables (all square-root transformed to meet the assumptions for ANOVA; MGS [µm]: mean grain size; percent moisture: moisture (%); BD [g/mL]: bulk density; PR [kg/cm²]: penetration resistance and PC [mL/cm²/s]: percolation rate) and meiofaunal abundance and species richness (SR; both square-root transformed to meet the assumptions for ANOVA) for a) nested 3-factor ANOVA between-beaches, and for 2-factor ANOVA within-beaches (n = 45 samples) at b) Aldinga; and c) Moana Bays. Significance values are indicated with asterisks (p values: * < 0.05; ** < 0.01; blank = NS).