Table A9.1: Environmental Impact Consequence Definitions (MBS 2019)

Insignificant	Minor	Moderate	Major	Severe
Key Environmental Factors				
Terrestrial Flora and Vegetation				
Localised and short term decrease in health, abundance and structure of vegetation communities that are well represented in the region.	Localised and medium term decrease in health, abundance and structure of vegetation communities that are well represented in the region.	Localised and long term decrease in health, abundance and structure of vegetation communities that are well represented in the region.	Widespread and medium term decrease in health, abundance and structure of vegetation communities that are not well represented in the region.	Permanent loss of vegetation communities that are not well represented in the region.
No direct loss of conservation significant flora in Development Envelope although increased stress incurred through indirect or induced processes.	Minor, localised loss of conservation significant flora either through direct, indirect or induced processes.	Regional loss of conservation significant flora with no impacts on species survival.	Project places significant pressure on continued survival of conservation significant species.	Project results in extinction of conservation significant species on a regional scale.
Manageable, localised weed infestation that does not result in competition with native species and is easily controlled.	Manageable, localised weed infestation that results in minor competition with native species.	Localised weed infestation that results in competition with native species requiring considerable management/control measures.	Regional weed infestation that results in competition with native species requiring extensive management/control measures.	Uncontrollable regional weed infestation that results in competition with native species
Subterranean Fauna				
Short term loss to the representation, diversity, viability and ecological function of subterranean fauna species, populations or assemblages in the Development Envelope.	Medium term loss to the representation, diversity, viability and ecological function of subterranean species, populations or fauna assemblages in the local area.	Long term loss to the representation, diversity, viability and ecological function of subterranean fauna species, populations or assemblages in the local area.	Short or medium term loss to the representation, diversity, viability and ecological function of subterranean species, populations or fauna assemblages in the regional area.	Permanent loss to the representation, diversity, viability and ecological function of subterranean species, populations or fauna assemblages in the regional area.
Terrestrial Environmental Quality				
Negligible impact to soil quality in isolated area.	Contained, low impact to soil quality of project area with no subsequent impact on any environmental values.	Uncontained impact to soil quality, able to be rectified in short term.	Extensive hazardous impact to soil quality that will require long-term remedial works.	Uncontained hazardous impact to soil quality with long term residual effects.

Insignificant	Minor	Moderate	Major	Severe
Minimal land contamination within Development Envelope, easily treatable in short term and does not result in adverse impacts on associated environmental values.	Minimal land contamination which is localised and treatable in medium term. Does not result in adverse impacts on associated environmental values.	Localised, low level land contamination resulting in adverse impacts on associated environmental values in the short to medium term.	Low level land contamination on a regional scale resulting in adverse impacts on associated environmental values requiring medium to long term management.	Mid-level land contamination on a regional scale resulting in permanent damage with severe environmental and socioeconomic disruption.
Project activities cause negligible erosion in isolated area.	Project activities lead to limited erosion within development envelope which does not impact on any environmental values and can be rectified in short term.	Project activities lead to substantial erosion which can be rectified in short term.	Project activities lead to substantial erosion which will require long-term remedial works to ensure closure criteria are met.	Project activities lead to substantial erosion resulting in long term residual effects
Inland Waters Environmental Quality				
Minimal change to surface water or groundwater quality within one subcatchment that does not change its ability to be used by beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna.	Short term, minimal, decline in surface water or groundwater quality that affects beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna.	Medium term, low level decline in surface water or groundwater quality that affects beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects may cross a catchment boundary, or involve multiple sub-catchment.	Medium term high level decline in surface water or groundwater quality that prevents beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects involve multiple sub-catchments.	Long term, mid-level decline in surface water or groundwater quality that prevents beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects broad and across multiple sub-catchments.
Formation of a pit lake that does not impact on environmental values associated with existing surface and groundwaters.	Formation of a pit lake which results in short term, minimal, localised decline in surface water or groundwater quality that affects beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna.	Formation of a pit lake that results in medium term, low level decline in surface water or groundwater quality that affects beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects may cross a catchment boundary, or involve multiple sub-catchments.	Formation of a pit lake that results in high level decline in surface water or groundwater quality that prevents medium to long term use by livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects involve multiple sub-catchments.	Formation of a pit lake that results in a mid-level decline in surface water or groundwater quality on a regional scale that prevents beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects broad and across multiple sub-catchments.
Other Environmental Factors				
Terrestrial Fauna				

Insignificant	Minor	Moderate	Major	Severe
Localised and short term loss of habitat (including that of conservation significant species) that is well represented in the region, overall habitat area remains intact with minimal fragmentation.	Localised and medium term loss of habitat (including that of conservation significant species) that is well represented in the region, some short term habitat fragmentation.	Localised and permanent or widespread and long term loss of habitat (including that of conservation significant species) that is not well represented in the region, medium term habitat fragmentation.	Permanent and widespread loss of habitat (including that of conservation significant species) that is not well represented in the region, permanent habitat fragmentation.	Permanent loss and fragmentation of habitat (including that of conservation significant species) that is not well represented in the region.
Some displacement of conservation significant fauna that has no lasting effects on population viability or abundance.	Some displacement of conservation significant fauna that has short term effects on population viability or abundance.	Displacement of conservation significant fauna that has medium term effects on population viability or abundance.	Displacement of conservation significant fauna that puts populations at risk of local extinction.	Displacement of conservation significant fauna that leads to extinction of species on a regional scale.
No measurable impacts to behaviour of fauna in local area.	Short term impact to behaviour of fauna in local area.	Medium term impact to behaviour of fauna in local area.	Long term and widespread impact to behaviour of fauna.	Permanent change to behaviour of fauna in the regional area.
Localised and short-term decrease in fauna abundance (including conservation significant fauna) occurring in the Development Envelope.	Localised and long-term or widespread, and short-term decrease in fauna abundance (including conservation significant fauna) within the Development Envelope.	Localised and irreversible or widespread and long-term decrease in fauna abundance (including conservation significant fauna) that extends beyond the Development Envelope.	Significant, widespread, and persistent decrease in fauna abundance (including conservation significant fauna).	Permanent loss of a significant portion of fauna population (including conservation significant fauna).
Minor increase in pest species numbers, but does not result in impacts to the population viability or abundance of native species.	Minor increase in pest species numbers, resulting in localised impacts to the population viability or abundance of native species.	Major increase in pest species numbers, resulting in widespread impacts to the population viability or abundance of native species.	Pest species introduced and populations expand into the regional area resulting in long term exclusion of native species.	Pest species introduced and populations expand into the regional area resulting in permanent exclusion of native species.
Social Surroundings				
No loss or disturbance of physical or cultural heritage within local area.	Loss or disturbance of non-significant physical or cultural heritage within local area in agreement with traditional owners and compliant with relevant legislation.	Loss or disturbance of significant physical or cultural heritage in agreement with traditional owners and compliant with relevant legislation.	Loss or disturbance of significant physical or cultural heritage that requires significant compensation compliant with relevant legislation.	Loss or disturbance of significant physical or cultural heritage not in agreement with traditional owners that requires significant compensation and is not compliant with relevant legislation.
No impacts to Aboriginal cultural associations (eg bush tucker).	Localised and medium term impacts to Aboriginal cultural associations.	Localised and longer term impacts to Aboriginal cultural associations.	Widespread and medium term impacts to Aboriginal cultural associations.	Widespread permanent loss of Aboriginal cultural associations.

Insignificant	Minor	Moderate	Major	Severe
Minimal, short term and infrequent loss of amenity within the project area.	Minimal and short term, but frequent, loss of amenity within the local area.	Medium term and frequent low level decreases in amenity within a local area.	Medium term, low level decline in amenity within a regional area.	Long term, mid-level decline in amenity over a regional area
Infrequent, minimal (but perceptible) increases in noise above baseline conditions within Development Envelope that do not affect the well-being of receptors.	Infrequent, minimal (but perceptible) increases in noise above baseline conditions in the local area that occasionally disrupts the well-being of receptors.	Occasional, minimal increases in noise above baseline conditions in the regional area that disrupts the well-being of receptors.	Frequent, low level increases in noise above baseline conditions in the regional area that significantly disrupts the wellbeing of receptors.	A continuous, mid-level increase in noise above baseline conditions in the regional area that significantly impacts the wellbeing of receptors.
Hydrological Processes				
Short term, minimal changes to surface water volumes that do not affect beneficial uses, including livestock and fauna. Effects are localised within one sub-catchment.	Medium term, minimal changes to surface water volumes that do not affect beneficial uses, including livestock and fauna.	Short term, low level changes to surface water volumes that affect beneficial uses, including livestock and fauna. Effects may cross a catchment boundary, or involve multiple sub-catchments.	Medium term low level changes to surface water volumes that affect beneficial uses, including livestock and fauna. Effects involve multiple sub-catchments.	Long term, mid to high level changes to surface water resources that affect livelihoods and/or survival of communities. Effects broad and across multiple catchments.
Short term, minimal changes to groundwater levels/availability in the project area that do not affect beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects are localised within one sub-catchment.	Medium term, minimal changes to groundwater levels/availability that do not affect beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna.	Short term, low level changes to groundwater levels/availability that affect beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects may cross a catchment boundary, or involve multiple sub-catchments.	Medium term, low level changes to groundwater levels/availability that affect beneficial uses including livestock, fauna, groundwater dependent ecosystems and subterranean fauna. Effects involve multiple sub-catchments.	Long term, mid to high level changes to groundwater levels/availability that affect beneficial uses, including livestock, fauna, groundwater dependent ecosystems and subterranean fauna in the long term. Effects broad and across multiple catchments.
Air Quality				
Total Suspended Particles (TSP) and dust deposition guideline levels are not exceeded for sensitive receptors offsite.	TSP and dust deposition guideline levels may be exceeded for sensitive receptors offsite, but this rarely happens.	TSP and dust deposition guideline levels are exceeded occasionally for sensitive receptors offsite.	TSP and dust deposition guideline levels are exceeded frequently for sensitive receptors offsite.	TSP and dust deposition guideline levels are exceeded almost constantly for sensitive receptors offsite.
Annual greenhouse gas emissions (measured as CO_2 equivalent) less than 1% of net emissions for Western Australia.	Annual greenhouse gas emissions (measured as CO_2 equivalent) in the range 1 to 5% of net emissions for Western Australia.	Annual greenhouse gas emissions (measured as CO_2 equivalent) in the range 5 to 10% of net emissions for Western Australia.	Annual greenhouse gas emissions (measured as CO_2 equivalent) in the range 10 to 20% of net emissions for Western Australia.	Annual greenhouse gas emissions (measured as CO_2 equivalent) greater than 20% of net emissions for Western Australia.