APPENDIX 1

Table A1.1. List of Ecosystem Functions and their descriptions as incorporated into the SEQ Ecosystem Services Framework

Function Categories	Ecosystem Function	Description - ecosystem processes and components (Ecological Complexity)
Regulating Functions Maintenance of essential ecological processes and life support systems.	**(1) Gas regulation**	Relates to the influence of natural and managed systems in relation to biogeochemical processes including greenhouse gases, photo-chemical smog and volatile organic compounds (VOCs).
	(2) Climate regulation	Influence of land cover and biological mediated processes that regulate atmospheric processes and weather patterns which in turn create the microclimate in which different plants and animals (incl. humans) live and function.
	(3) Disturbance regulation	The capacity of the soil, regolith and vegetation to buffer the effects of wind, water and waves through water and energy storage capacity and surface resistance. The soil profile stores water and reduces runoff. Vegetation enhances infiltration and provides surface resistance. Degraded soils and landscapes have a reduced capacity. Soil properties (e.g. depth, surface texture) and vegetation structure are important.
	(4) Water regulation	The influence of land cover, topography, soils, hydrological conditions in the spatial and temporal distribution of water through atmosphere, soils, aquifers, rivers, lakes and wetlands
	(5) Soil retention	Minimising soil loss through having adequate vegetation cover, root biomass and soil biota.
	(6) Nutrient regulation	The role of ecosystems in the transport, storage and recycling of nutrients.
	(7) Waste treatment and assimilation	The extent to which ecosystems are able to transport, store and recycle certain excesses of organic and inorganic wastes through distribution, assimilation, transport and chemical recomposition.
	(8) Pollination	Pollination is critical to the reproduction of most wild plants and the production of food for consumption by animals and humans. Pollination is the interaction between plants and (1) biotic vectors e.g. insects, birds and mammals and (2) abiotic vectors e.g. wind and water in the movement of male gametes for plant production. Pollination and seed dispersal are linked.
	(9) Biological control	The interactions within biotic communities that act as restraining forces to control population of potential pests and disease vectors. This function consists of natural and biological control mechanisms.
	(10) Barrier effect of vegetation	Vegetation impedes the movement of airborne substances such as dust and aerosols (including agricultural chemicals and industrial and transport emissions), enhances air mixing and mitigates noise.
Supporting Functions Providing habitat (suitable living space) for wild plant and animal species at local and regional scales.	**(11) Supporting habitats**	Preservation of natural and semi natural ecosystems as suitable living space for wild biotic communities and individual species. Natural ecosystems are a storehouse of genetic information generated through evolutionary process. This function also includes the provision of suitable breeding, reproduction, nursery and refugia and corridors (connectivity) for species that are harvested or otherwise valued.
	(12) Soil Formation	Soil formation is the facilitation of soil formation processes. Soil formation processes include the chemical weathering of rocks and the transportation and accumulation of inorganic and organic matter.
Provisioning Functions Provision of natural resources.	**(13) Food**	Biomass that sustains living organisms. Material that can be converted to provide energy and nutrition. Mostly initially derived from photosynthesis.
	(14) Raw materials	Biomass that is used for any purpose other than food (excluding mining resources).
	(15) Water supply	The role of ecosystems in providing water through sediment trapping, infiltration, dissolution, precipitation and diffusion.
	(16) Genetic resources	Self maintaining diversity of organisms developed over evolutionary time (capable of continuing to change). Measurable at species, molecular and sub molecular levels. These processes are increasingly paralleled by human intervention.
	(17) Provision of shade and shelter	Relates to vegetation that ameliorates extremes in weather and climate at a local landscape scale. Shade or shelter is important for plants, animals and structures.
	(18) Pharmacological resources	Natural materials that are or can be used by organisms to maintain, restore or improve health. (Natural patterns can be copied by humans for synthetic products).
Cultural Functions Providing life fulfilment opportunities and cognitive development through exposure to life processes and natural systems.	**(19) Landscape opportunity**	The inspiration and motivation, traditional owner and other cultural, historical and aesthetic values; health enhancement; sense of place; amenity; recreational, scientific and educational opportunity, provided by the extent and variety of natural features and landscapes.