

Development phase	ONSHORE WIND ENERGY			
	Potential type of DIRECT impact		Potential type of INDIRECT impact	
	Negative	Positive	Negative	Positive
CONCEPT	<ul style="list-style-type: none"> - Pre-emptive clearance of natural habitats in preparation for project development 	<ul style="list-style-type: none"> - Opportunity to implement advanced offset or enhancement actions 	<ul style="list-style-type: none"> - In-migration in expectation of project development 	<ul style="list-style-type: none"> - Opportunity to promote integrated landscape planning
PLANNING	<ul style="list-style-type: none"> - Excavations for investigations can later impact groundwater systems 		<ul style="list-style-type: none"> - In-migration in expectation of project development 	
CONSTRUCTION	<ul style="list-style-type: none"> - Loss or degradation of natural habitats - Disturbance of or injury to wildlife from construction traffic, noise, activities or night lighting - Pollution by dust, construction materials or vehicle emissions - Introduction of alien invasive species - Destruction of archaeology or other cultural features - Erosion or loss of the cultural significance of heritage places 	<ul style="list-style-type: none"> - Opportunity to repair or improve existing infrastructure 	<ul style="list-style-type: none"> - Supply chain and manufacturing impacts - Increased local resource use, wildlife disturbance or pollution from temporary construction workforce - Induced access via new or upgraded roads - Displacement of agricultural or other activities - Reduced access to cultural activity areas 	<ul style="list-style-type: none"> - Opportunity to improve landscape-level resource or waste management - Opportunity for increased local employment
OPERATION	<ul style="list-style-type: none"> - Erosion or loss of the cultural significance of heritage places - Loss of identity and the connection 	<ul style="list-style-type: none"> - Onsite biodiversity enhancement 	<ul style="list-style-type: none"> - Induced access via new or upgraded roads 	<ul style="list-style-type: none"> - Access to carbon-emission-free electricity

	(including cultural and social uses) between people and heritage sites (e.g., loss in the quality of interactions, which are also social drivers) - Bird and bat fatalities from collisions with turbine blades (risk is species-specific) - Disruption of bird migration and fatalities from attraction to lights on infrastructure - Behavioural displacement (species-specific) leading to effective loss of habitat and changes in ecological communities - Barriers to wildlife movement - Shadow flicker, infrasound, noise pollution and light pollution from night lighting - Obstructed views and visual intrusions	- Onsite biodiversity enhancement - Protection of onsite natural habitats or species	- Displacement of agricultural or other activities - Reduced access to cultural activity areas	
REPOWERING	- Collision fatalities for birds and bats due to taller turbines	- Restoration of cleared areas around removed turbines	- As for the construction phase	- Increased production of low-carbon energy
DECOMMISSIONING	- Ecological/environmental disturbance during infrastructure removal	- Restoration of natural habitats	- As for the construction phase	- Opportunity to promote integrated landscape planning
RECOVERY				

(Please note that these lists are intended only to provide examples and are by no means exhaustive. For the question of assessing visual impacts, see [‘Note 4’](#))