

Table 1: Phases and Potential Impact Producing Factors of Offshore Wind Development

PRE-CONSTRUCTION PHASE Baseline surveys, site design, assessment of wind potential, component selection	CONSTRUCTION PHASE Foundation pile driving, installation of submarine array cables, install of transition pieces onto foundations, offshore substation, onshore connection to grid and onshore substation construction.	OPERATIONS AND MAINTENANCE PHASE Operational (power producing) phase of the development including monitoring and maintenance	DECOMMISSIONING PHASE Fluids drained and stored, nacelle and blades removed (cut). Piles cut ~ 2m below seabed and removed and transportation to shore via vessels. When possible and where applicable inter-array and export cables are removed (some remain in place).
Temporary Exclusion Zones • Seismic and Sonar surveys	Temporary Exclusion Zones • Commercial shipping, transportation, recreational use, tourism, fishing • Military exercises, unexploded ordinance	Permanent (during OSW life span) Exclusion Zones • Commercial shipping, transportation, recreational use, tourism, fishing • Military exercises radar and communications interactions • Aviation interactions	The same IPF's and associated Valued Components noted in the Construction phase apply for Decommissioning phase.
Increased Vessel and Equipment Activity • Increased sound and vibration • Increased vessel traffic and collision potential • Use of helicopters and vessels for surveying • GHG Emissions • Human health	Increased Vessel and Equipment Activity • Military exercises, unexploded ordinance • Underwater soundscapes/radar interaction • Increased sound and vibration • Increased lighting • Increased vessel collision potential • Use of helicopters and vessels during construction	Increased Vessel and Equipment Activity • Intermittent during monitoring/maintenance of turbines	
Accidents/Unplanned Releases • Potential for accidents and spills/releases due to increased vessel presence • Worker health and safety	Accidents/Unplanned Releases • Potential for accidents and spills/releases due to increased vessel presence and equipment use • Worker health and safety	Accidents/Unplanned Releases • Potential for accidents and spills/releases due to increased vessel presence and turbine installations	

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		• Worker health and safety	
	Noise, Dust (air quality), Vibration, Lighting, Electromagnetic Fields (EMF) from cable arrays • Human health • Visual impact during construction (coastal)	Electromagnetic Fields (EMF) • Human health at onshore substation locations/grid connection	
	Construction of cables, pipelines, anchoring and mooring and turbine foundations (including trenching, dredging, rock cutting, pile driving, drilling) • New port development • Workforce/skills development requirements • GHG Emissions • Human health • Interaction with structures, sites or things of historical, archaeological, paleontological, or architectural significance • Interaction with Protected and Special Areas • Visual aesthetics and acoustic environment including tourism)	Operating Turbines, Cable Arrays and Electrical Grid Connection • Visual impact from shore (day and night [lighting]) • Noise of turbine (when in proximity) • Reducing GHG emissions and climate change goals • Economic growth/power export market	

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		Naturally Occurring Conditions • Sea ice interaction • Seismic activity • Geohazards • Weather and extreme weather (climate change effects) • Substrate destabilization, scour and transportation	

Note: Impact Producing Factors associated with the following valued components have been addressed under separate Advice Requests and ongoing engagement:

- Fish and fish habitat (including commercial fisheries, marine mammals and sea turtles); and,
- First Nations