

**Table 7 Harmful Algal Blooms e.g. *Lyngbya majuscula* (Biomass)**

	<b>DATA OPTION 1: Quickbird 2</b>	<b>DATA OPTION 2: Airborne hyper-spectral data</b>
<b><i>Spatial Dimensions</i></b>		
<b>Area to cover</b>	12 km x 12 km per scene	Up to 1000 km <sup>2</sup>
<b>Mapping unit</b>	068m panchromatic 4.0 m multi-spectral	0.5m – 5m
<b>Positional accuracy</b>	Dependent on georeferencing process	Dependent on Geo-referencing process
<b><i>Temporal Dimensions</i></b>		
<b>When</b>	Approx 10.45 am	User defined
<b>How often</b>	Minimum every 4 days	User defined (can be < 1 day)
<b>Variable to map</b>	Benthic (biomass)	Benthic (biomass)
<b>Environmental / Sensor Restrictions</b>	For sub-tidal vegetation to depth limited by water clarity. Inter-tidal and supra-tidal vegetation can have water on top.  Not possible for turbid water  Clouds, strong winds and breaking waves.  % cover of <i>Lyngbya</i> should be higher than 40 %	For sub-tidal vegetation to depth limited by water clarity. Inter-tidal and supra-tidal vegetation can have water on top.  Not possible for turbid water  Clouds, strong winds and breaking waves.  % cover of <i>Lyngbya</i> should be higher than 40 %
<b>Processing technique (Output)</b>	Regression Analysis	Regression Analysis
<b>Resources – Hardware and Software</b>	PC Image processing software GIS with image classification module (e.g. ARCGIS Image Analyst)	PC Image processing software with Hyper-spectral analysis capabilities, including sub-pixel mapping techniques.

<b>Resource – Personnel</b>	Trained in image classification Experience with high spatial resolution data Knowledge of area to be mapped	Trained in hyper-spectral data processing. Knowledge of area to be mapped
<b>References:</b> Note these are some example references	No peer reviewed reference	No peer reviewed reference