

Table 30 Riparian - Longitudinal continuity

| | DATA OPTION 1: Quickbird 2 | DATA OPTION 2: Airborne Laser Scanning |
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| <i>Spatial Dimensions</i> | | |
| Area to cover | 12km x 12km per scene | Can be up to 1000km ² or more |
| Mapping unit | 068m panchromatic 4.0m multi-spectral | 0.5m to 10m |
| Positional accuracy | Dependent on geo-referencing process | Within 5m or less dependent on GPS base station used |
| <i>Temporal Dimensions</i> | | |
| When | Approx 10.45am | User controlled |
| How often | Minimum every 4 days | User controlled |
| Variable to map | Vegetation projective cover and canopy gaps | Vegetation projective cover and canopy gaps |
| Environmental Restrictions | Cloud cover | Cloud cover |
| Processing technique (Output) | Empirical model for vegetation projective cover and image classification of projective cover and canopy gaps or feature detection using segmentation and classification. Determine longitudinal continuity based on % of cover and gaps. (Vegetation type map and target features) Note: The ability to map specific targets will depend on their growth form and extent. | Ground and canopy return extraction, interpolation and ground and canopy mapping. Classification of projective cover and canopy gaps. Determine longitudinal continuity based on % of cover and gaps. Raster or image surface |
| Resources – Hardware and Software | PC Image processing software GIS with image classification module (e.g. ARCGIS Image Analyst) | PC Image processing software GIS with image analysis capabilities. |
| Resource – Personnel | Trained in image modelling and segmentation Experience with high spatial resolution data Knowledge of area to be mapped | Trained and with experience in ALS mapping. Knowledge of area to be mapped |
| References: Note these are some example references | | Johansen et al. (2010) |

Johansen, K., Arroyo, L. A., Armston, J., Phinn, S. and Witte, C. (2010). "Mapping riparian condition indicators in a sub-tropical savanna environment from discrete return LiDAR data using object-based image analysis." Ecological Indicators, 10(4), 796-807.