Table 22 Surface properties (Albedo)

	DATA OPTION 1: Landsat ETM	**DATA OPTION 2: MODIS**
Spatial Dimensions		
Area to cover	185km x 185km per scene	2500 knm swathj width per scene
Mapping unit	15m panchromatic 30m multi-spectral	250 m (bands 1-2) 500 m (bands 3-7)
Positional accuracy	Dependent on Geo-referencing process	1000 m (bands 8-36) Dependent on geo-referencing process
Temporal Dimensions		
When	Approx 9.45am	Approx 10.30am (Terra) and 1.30pm (Aqua)
How often	Every 16 days	Daily
Variable to map	Albedo	Albedo
Environmental Restrictions	Cloud cover Terrain	Cloud cover Terrain
Processing technique **(Output)**	Derivation of albedo from spectral reflectance / reflectance curves. Image or raster surface of albedo Note: The ability to map specific targets will depend on their form and extent.	Derivation of albedo from spectral reflectance / reflectance curves. Image or raster surface of albedo Note: The ability to map specific targets will depend on their form and extent
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 classification module (e.g. ARCGIS Image Analyst)
Resource – Personnel	Trained in image classification Experience with Landsat data Knowledge of area to be mapped	Trained in image classification Experience with MODIS data Knowledge of area to be mapped
References: Note these are some example references	Duguay and Ledrew (1992)	Liang et al. (2002)

Duguay, C. and Ledrew, E. (1992). "Estimating surface reflectance and albedo from Landsat-5 Thematic Mapper over rugged terrain." Photogrammetric Engineering and Remote Sensing, 58, 551-558.

Liang, S., Fang, H., Chen, M., Shuey, C. J., Walthall, C., Daughtry, C., Morisette, J., Schaaf, C. and Strahler, A. (2002). "Validating MODIS land surface reflectance and albedo products: methods and preliminary results." Remote Sensing of Environment, 83(1-2), 149-162.