

**JUA19/009/TS/BM: TOPOGRAPHICAL & HYDROGRAPHICAL SURVEYS FOR  
SEWERAGE TREATMENT POND LAMBAK KIRI, SIMPANG 603-35-33 STKRJ LAMBAK KIRI**

**1.0 Location**

The areas to be surveyed as indicated in attached location maps. The areas are:  
**Kolam Rawatan Lambak Kiri.**

The survey covers on either side of simpang road to the site and whole site within the existing perimeter fence. Entry to the areas is limited to PWD Sewerage Section personnel and appointed-contractor only and wearing of appropriate personnel equipment is required. The site is developed area and easily accessible.

**2.0 Scope of Works**

The scope of works for the survey is as follows:-

- i) Carry out topographical survey for the areas indicated in the map, clearly identifying and locating all existing features, natural and man-made, boundaries of land ownership, buildings, water pipes and service routes, lamp columns, waterways in particular location of existing manholes, chambers, weirs of the existing ponds along their cover levels and inverts wherever possible;
- ii) Carry out hydrographical survey to identify levels of water, silt/sludge and whole or partly submerged structures of the ponds;
- iii) Survey a corridor of 10m on either side of existing roads;
- iv) Contours shall be at 1m intervals. Variations in the contour intervals at steep slopes etc are to be determined on site and emphasised on drawings;
- v) All spot heights shall be carried out in a grid pattern of 10m unless variations in slopes and gradients require a closer spacing;
- vi) The Brunei State Datum shall be reference datum for all the spot heights and contours;
- vii) The survey shall be plotted on the Borneo Rectified Skew Orthomorphic Projection and the grid shall be based on the Borneo Rectified Orthomorphic Grid (Metric);
- viii) Survey plans to be produced at 1:500 scales;
- ix) Key plan 1: 2500 scale.
- v) Two (2) sets of A1 and A3 size of survey plans to be submitted together with one (1) set of digital copy, clearly labelled, compatible with AutoCAD 2010 or higher.