

SITE INVESTIGATION WORKS & MITIGATING MEASURES TO PROTECT THE CENTRAL CATCHMENT NATURE RESERVE

Site investigation (SI) works are being carried out to determine the underground soil conditions and engineering feasibility of the two possible alignments being considered for the Cross Island Line (CRL). As part of the SI works within the Central Catchment Nature Reserve (CCNR), the appointed specialist will be constructing boreholes on existing trails / clearings to extract soil samples.

LTA will take all efforts to protect the nature reserve. Mitigating measures as outlined in Phase 1 Environmental Impact Assessment (EIA) report include but are not limited to the following:

- (a) Reduce the number of boreholes required for the SI works, from 72 boreholes to 16 boreholes.
- (b) Boreholes will be located on existing trails and clearings within the CCNR.
- (c) Engineers will use non-intrusive geophysical survey methods to supplement the data obtained from the boreholes.
- (d) Impose strict accessibility criteria to guide off-trail movements. The surveyor team will be supervised by NParks officers at all times.
- (e) Vehicular access will be limited to existing trails.
- (f) Avoiding ecologically sensitive areas such as streams, and swampy areas. For example, a 30m buffer zone is applied to these areas and no boreholes will be allowed.
- (g) All site investigation activities will be restricted to daylight hours, so as not to affect nocturnal animals.

FURTHER MITIGATING MEASURES TO BE IMPLEMENTED

LTA will be implementing the following additional set of mitigating measures after further consultation with NParks and the nature groups:

- (a) **NParks officers to map out specific access routes** that surveyors can use for the non-intrusive geophysical surveys. These routes will be restricted to existing unmarked trails in the forest.
- (b) Schedule the geophysical surveys to include **at least one to two rest days in between the surveys**, over the period of borehole operations within the same sector, to allow respite for sensitive and less mobile fauna.
- (c) **Involve nature groups as observers** for the SI works to reinforce compliance with the mitigating measures.
- (d) **Engage a certified arborist** to propose and assess methods to avoid damage to trees due to borehole operations.

- (e) Modify the drilling rig further by **installing a silencer** at the end of the drill engine exhaust to reduce noise.
- (f) Require the appointed SI specialist to **conduct trial runs of and rehearse the borehole operations and geophysical surveys off-site** prior to actual works in the CCNR. This provides the opportunity to further enhance operations to minimise impact on the environment, while allowing the SI workers to familiarise themselves with the stringent requirements of working within the CCNR.
- (g) Allow a **longer period of time before resuming SI works after heavy rain** to reduce soil erosion into streams and to protect the integrity of the top soil structure. **NParks officers to give consent** before resumption of work.
- (h) Work with PUB to access boreholes located on Terentang Trail through Bukit Kalang Service Reservoir compound. This will **reduce vehicular movement** along Terentang Trail which is narrow and undulating.
- (i) **NParks officers to issue immediate stop-work orders**, should there be any breach of or deviation from the agreed mitigating measures, or when pollution is detected.
- (j) Dispense with the use of Mackintosh Probes which means **there will be no works in streams**.