

SAMPLE CONTRACT SPECIFICATIONS FOR MOSQUITO AND RODENT SURVEILLANCE AND CONTROL AT CONSTRUCTION SITES

Technical Specifications

1 GENERAL

The Contract Specifications shall be read in conjunction with the Conditions of Contract and all other documents included in this Contract. The Contractor shall be bound by all Contract Documents referred to in the Tender and shall be deemed to have made himself acquainted with all such documents before tendering for the Contract, as no claim of lack of knowledge in this aspect will be entertained.

2 DEFINITIONS

For the purpose of this Contract,

“Mosquito” in the Contract means the adult mosquito, including its egg, larva and pupa capable of carrying or causing any disease to human beings.

"Rodent" refers to but not limited to the common rat and mouse species and their young found in Singapore such as sewer rat, roof rat and house mouse.

“Permanently destroy” refers to treatment, removal and eradication of mosquito and rodent.

“Superintending Officer” (or the initial S.O.) means construction site management or authorised representative and also such person or persons as may be deputed by him in writing to act on his behalf for the purpose of this Contract.

3 SCOPE OF SERVICE

The contract is for the provision of mosquito and rodent surveillance and control services prior to and throughout the entire construction duration/project/contract for the following:

- To detect and permanently destroy the mosquito breeding and harbouring sites
- To provide rodent control services to eradicate rodents and harbouring sites
- To provide advice on interim or permanent measures for the destruction of potential breeding and harbouring sites of mosquitoes and rodents

This contract service shall include all areas within the construction site, and not limited to the following:

- a) Construction area
- b) Apron of buildings
- c) Building structure (includes all levels of built-up areas)
- d) Storage Yard/Machinery parking area
- e) Carpark
- f) Bin centre
- g) Vehicle wash bay
- h) Office
- i) Workers' Quarters/Canteen

The contractor shall provide all manpower, materials, equipment and everything else necessary to carry out the services in accordance with the Contract Specifications and the Conditions of Contract.

4 MOSQUITO CONTROL SERVICES

4.1 Service Requirement

The contractor shall conduct baseline survey at different phases of construction to identify the state of the breeding and environment irregularities/lapses that contributed to the breeding. All mosquito breeding found during the inspection shall be destroyed and removed. All potential breeding habitats should be treated with insecticide if habitat cannot be removed. All breeding detected and potential breeding habitats observed should be reported to the construction site management so that appropriate interim or permanent measures can be taken to eliminate these potential breeding grounds.

Fogging is to be carried out only when there is adult mosquito nuisance or a disease outbreak.

4.2 Work and Service Standards

The Contractor shall ensure that his staff are in standard uniform and equipped with proper, working and usable tools, including but not limited to:

- a) dippers;
- b) sample bottles;
- c) torches;
- d) pipettes;
- e) devices for lifting up drain covers and inspection chamber covers;

for the detection and destruction of mosquito.

Where fogging is to be carried out, the Contractor shall cover all overflow outlet pipes leading to water tanks of all buildings within the fogging area, to prevent contamination of water. The covers shall be removed after fogging is completed.

The Contractor shall carry out the frequency of surveillance to all areas within the construction as mentioned in **Annex A1** as a minimum guide, but contractor may

increase its frequency or conduct surveillance to other areas when deemed necessary or as instructed by S.O.

In the event of an emergency situation/disease outbreak, intensified surveillances are to be carried out as instructed by S.O. The Contractor shall be paid in accordance to the rates in the Schedule of Rates shown in **Annex B**.

4.3 Work Report

The Contractor shall furnish a full baseline report for all potential breeding habitats and environmental irregularities detected in the format as shown in **Annex C1 (Sample Baseline Report)** to the S.O. by the second week after the commencement of the contract or each construction stage.

The Contractor shall furnish a service report for all mosquito control services performed at the end of each service in the format as shown in **Annex D1 (Sample Service Report)** to the S.O. It shall also recommend specific solutions to prevent mosquito breeding such as building design details, structural modifications, repairs, housekeeping programmes, user habits and any other factors that have direct bearing on mosquito breeding. Photos of each breeding or structural defect and the respective treatment taken from different perspectives/angles are required to be included in the reports. The S.O. reserves the right to withhold any payment to the Contractor if he does not receive any service report from the Contractor or if the report is late or the Contractor does not comply with the specified work scope.

5 RODENT CONTROL SERVICES

5.1 Service Requirement

The Contractor shall be responsible to:

- a) Carry out a baseline survey to identify the state of rodent infestation, signs of rodent infestation e.g. droppings, rub marks, gnaw marks, live rodents etc. and environmental irregularities/lapses that contributed to the infestation. The following should be carried out:
 - I. Inspect all areas within the construction site e.g. bin centre, workers' quarters, storage yard, building structure, etc.
 - II. Identify rodent burrows/nests in the immediate surroundings e.g. landscape areas, grass verge/gardens/parks
 - III. Gather information on signs of rodent activity from stakeholders
 - IV. Identify irregularities detected in housekeeping, storage and waste disposal that are contributing to rodent infestation and make recommendations for rectification/follow-up action by S.O.
 - V. Identify potential rodent entry/exit points and make recommendations for rectification/follow-up actions by S.O.
 - VI. Highlight signs of rodent infestation (e.g. rub marks, rodent droppings, burrows, etc.)

- VII. Use of special equipment e.g. night vision infrared camera and borescope to verify status of rodent infestation, if necessary
 - VIII. Carry out any other forms of rodent surveillance, where necessary or as instructed by S.O.
- b) Carry out treatment to destroy rodents in all stages of their life-cycle:
- I. Carry out indoor treatment by using trapping devices e.g. glue and cage traps at strategic locations where rodent activities have been detected.
 - II. Carry out outdoor treatment by deploying tamper-resistant bait stations (with rodenticide baits, provided safety is not compromised) at high risk location(s)
 - III. Remove carcasses of dead rodents, disinfect and deodorise area accordingly
 - IV. Seal all inactive rodent burrows in the outdoors one (1) month after completion of treatment
 - V. Carry out night inspections and treatment as and when necessary
- c) In the event of heavy rodent infestation (e.g. repeated rat sightings in a specific area as defined by S.O.), the contractor shall carry out intensified containment measures.
- d) Investigate and carry out rodent treatment after receiving feedbacks and/or notifications on rodents by the public or S.O. Activations for such services should be attended to no later than _____ (*service buyer to determine the response time*) after receiving the feedback and/or notifications. A thorough investigation is also to be carried out to determine the cause(s) of infestation. Such activities are to be reported to the S.O. upon completion as well as reported in the service report.

5.2 Work and Service Standards

The contractor shall ensure that his staff are equipped with proper tools, pesticides and any other materials/equipment that is necessary for all services specified in the Contract.

All pesticides, regardless of packaging, shall be placed either in locations not accessible to children, pets, wildlife and domestic animals, or in tamper-resistant bait stations.

If bait stations are used, the Contractor shall ensure:

- a) All bait stations are placed out of the general view, and in locations where they will not be interfered or be disturbed during routine operations
- b) The lids of all bait stations are securely locked or fastened and only authorised personnel will be able to open them
- c) All bait stations are securely attached or anchored to floor, ground, wall or other immovable surface, so that they cannot be easily removed
- d) Baits are secured in the feeding chamber of the stations and not placed at the exit hole of the stations or along the rat runway

- e) All bait stations are properly labelled with the Contractor's business name and telephone number with the words "Rodent Bait Station, Do Not Remove" printed on it

The Contractor shall submit a proposal for rodent control programme for the area within the construction site and should include the following:

- a) Define the location and extent of the service areas defined in **Annex A2** and to include other areas, if any, based on the layout plan provided by S.O.
- b) Service Report (including photographs of affected areas) on pest situation (no. of rodent, species caught etc.) and advice on housekeeping and rat-proofing measures
- c) Night surveillance and control recommended
- d) Option for 'Intensive Treatment' depending on rodent situation
- e) Sketch plans showing all rodent monitoring stations, including traps and outdoor tamper resistant baiting stations, etc., if applicable

The Contractor shall carry out the frequency of surveillance to all areas within the construction site as mentioned in **Annex A2** as a minimum guide, but contractor may increase its frequency or conduct surveillance to other areas when deemed necessary or as instructed by S.O.

In the event of heavy rodent infestation, intensified rodent treatment and containment measures are to be carried out as instructed by S.O. The Contractor shall be paid in accordance to the rates in the Schedule of Rates shown in **Annex B**.

5.3 Work Report

The Contractor shall furnish a full baseline report for all rodent burrows, activity and environmental irregularities detected in the format as shown in **Annex C2 (Sample Baseline Report)** to the S.O. by the second week after the commencement of the contract or at the beginning of each construction stage.

The Contractor shall furnish a service report for all rodent control services performed at the end of each service in the format as shown in **Annex D2-1 (Sample Service Report)** to the S.O. It shall also recommend specific solutions to prevent rodent infestation such as building design details, structural modifications, repairs, housekeeping programmes, user habits and any other factors that have direct bearing on rodent infestation. Photos of each rodent burrow or structural defect and the respective treatment to eradicate rodents taken from different perspectives/ angles are required to be included in the reports. At the end of each month, the Contractor shall furnish a monthly service report in the format as shown in **Annex D2-2 (Sample Monthly Service Report)**. The report shall consolidate the findings and the outcomes of the action taken for the month. The S.O. reserves the right to withhold any payment to the Contractor

6 EMPLOYMENT OF QUALIFIED AND LICENSED PERSONNEL

The Contractor shall ensure that no unlicensed vector control technicians or uncertified vector control workers are to be employed by him or any sub-contractor, in the execution of any part of the works. The Contractor shall note that the employment of any unlicensed/uncertified vector control technicians/workers to carry out vector control work is a breach of the Control of Vectors and Pesticides Act, Chapter 59 (CVPA).

The Contractor shall engage supervisors and technicians to ensure the efficient execution of the works to the satisfaction of the S.O. They shall also carry out all instructions/ directions issued by the S.O. and such instructions/ directions shall be deemed to be instructions/directions given to the Contractor.

The Contractor shall submit a list of names and NRIC/FIN of all the technicians and workers to be deployed by him under the Contract according to the format in **Annex E (Vector Control Technicians/Workers Employed by Contractor)** before the commencement of the contract and shall ensure that only such licensed technicians or certified workers are to be deployed for all Works carried out under the Contract. The Contractor shall provide an updated manpower list to the S.O. as and when there are changes in deployment arrangements or when the S.O. requires.

7 PESTICIDES & SAFETY DATA SHEETS

Upon taking over the service site(s), the Contractor shall select and decide on the appropriate type of pesticides to be used for all treatment/maintenance. The Contractor shall provide updated Safety Data Sheets (SDS) for all pesticides proposed to be used during vector control services at the construction sites, for inspection by the authority or S.O. upon demand. Should there be a change of pesticides used during the contract period, the Contractor shall submit new updated SDS and inform S.O. on the new selection.

The contractor shall also take the initiative to update the S.O. with new and updated SDS should the existing SDS become invalid.

The pesticides used shall comply with the regulations under Section 7 of the Control of Vectors and Pesticides Act (Chapter 59), and applied according to the label instructions.

8 SAFETY PRECAUTIONS

The Contractor shall provide all personnel working at the service areas designated under the Contract, distinctive and proper attire and appropriate footwear etc., and ensure that they are worn. Any additional personal protective equipment required for the safe performance of work must be determined and provided by the Contractor in accordance with recommendations on the SDS for each pesticide.

The Contractor shall be responsible to take every safety precaution to eliminate dangers to his vector control technicians/ workers, the general public and property of others or any other guidelines specified by the Ministry of Manpower. The Contractor must not compromise on the safety measures taken on site and shall ensure that there shall be no incidents of safety issues or breaches.

Mosquito Control Service Schedule

Phase I: Site Work

Area	Specific Areas	Work	Frequency
Construction Area	Ground puddles	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Bottom of barriers	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Trenches	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Sump pits/ Silt traps	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Drains/ temporary channels	Search and destroy stagnant water and/or mosquito breeding	At least weekly
	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
Storage Yard	Building materials	Search and destroy stagnant water and/or mosquito breeding	At least weekly
	Water storage containers/ drums	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Ensure water storage containers/drums are covered.	At least weekly
	Lids of paint cans	Search and destroy stagnant water and/or mosquito breeding	At least weekly
Bin Centre	Demolished debris	Search and destroy stagnant water and/or mosquito breeding	At least fortnightly
		Remove and dispose of any discarded receptacles properly into a bin.	At least fortnightly
	Bulky waste containers/ bins/ skip tanks	Search and destroy stagnant water and/or mosquito breeding	At least fortnightly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least fortnightly
Machinery Parking Area	Equipment/ machinery parts	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to parts that may collect water (which cannot be removed) and re-apply after heavy rain	At least weekly
Vehicle Wash Bays	Perimeter drains/ scupper drains	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to parts that may collect water (which cannot be removed) and re-apply after heavy rain	At least weekly
Office		Search and destroy stagnant water and/or mosquito breeding	At least weekly

	Roof of freight containers/ ground below containers	Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	At least weekly
	Air con drip tray	Search and destroy stagnant water and/or mosquito breeding	At least weekly
Workers' Quarters	Roof of containers/ ground below containers	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	
	Air con drip tray	Search and destroy stagnant water and/or mosquito breeding	At least weekly
	Ground puddles	Search and destroy stagnant water and/or mosquito breeding	At least weekly
	Toilet cisterns	Search and destroy stagnant water and/or mosquito breeding	At least weekly
	Gully/ Floor Traps	Search and destroy stagnant water and/or mosquito breeding	At least weekly

Phase II: Foundations / Sub-structure

Area	Specific Areas	Work	Frequency
Construction Area	Ground puddles	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Bottom of barriers	Search and destroy stagnant water and/or mosquito breeding	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Trenches	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Sump pits/ Silt traps	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Drains/ temporary channels	Search and destroy stagnant water and/or mosquito	At least weekly
	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin.	At least weekly
Concrete Test Cube Tanks	Apply BTI briquettes	At least monthly	
Storage Yard	Building materials	Search and destroy stagnant water and/or mosquito	At least weekly
	Water storage containers/ drums	Search and destroy stagnant water and/or mosquito	At least weekly
		Ensure water storage containers/drums are covered.	At least weekly
Lids of paint cans	Search and destroy stagnant water and/or mosquito	At least weekly	
Bin Centre	Demolished debris	Search and destroy stagnant water and/or mosquito	At least fortnightly

		Remove and dispose of any discarded receptacles	At least fortnightly
	Bulky waste containers/ bins/ skip tanks	Search and destroy stagnant water and/or mosquito	At least fortnightly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
Machinery Parking Area	Equipment/ machinery parts	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to parts that may collect water (which cannot be removed) and re-apply after heavy rain	At least weekly
Vehicle Wash Bays	Perimeter drains/ scupper drains	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to parts that may collect water (which cannot be removed) and re-apply after heavy rain	At least weekly
Office	Roof of freight containers/ ground below containers	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	At least weekly
	Air con drip tray	Search and destroy stagnant water and/or mosquito	At least weekly
Workers' Quarters	Roof of containers/ ground below containers	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	At least weekly
	Air con drip tray	Search and destroy stagnant water and/or mosquito	At least weekly
	Ground puddles	Search and destroy stagnant water and/or mosquito	At least weekly
	Toilet cisterns	Search and destroy stagnant water and/or mosquito	At least weekly
	Gully/ Floor Traps	Search and destroy stagnant water and/or mosquito	At least weekly

Phase III: Superstructure

Area	Specific Areas	Work	Frequency
Apron of Building Structure	Ground puddles	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Bottom of barriers	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Trenches	Search and destroy stagnant water and/or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Sump pits/ Silt traps	Search and destroy stagnant water and/or mosquito	At least weekly

		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Drains/ temporary channels	Search and destroy stagnant water and/ or mosquito	At least weekly
	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
	Concrete Test Cube Tanks	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply BTI briquettes	At least monthly
Building Structure (includes all levels of built-up areas)	Lift pits	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and reapply after heavy rain	At least weekly
	Partially completed planter boxes	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and reapply after heavy rain	At least weekly
	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
	Ground depression/ ponding	Search and destroy stagnant water and/ or mosquito	At least weekly
Apply anti-mosquito oil to stagnant water (which cannot be removed) and reapply		At least weekly	
Storage Yard	Building materials	Search and destroy stagnant water and/ or mosquito	At least weekly
	Water storage containers/ drums	Search and destroy stagnant water and/ or mosquito	At least weekly
		Ensure water storage containers/drums are covered.	At least weekly
	Lids of paint cans	Search and destroy stagnant water and/ or mosquito	At least weekly
Bin Centre	Demolished debris	Search and destroy stagnant water and/ or mosquito	At least fortnightly
		Remove and dispose of any discarded receptacles	At least fortnightly
	Bulky waste containers/ bins/ skip tanks	Search and destroy stagnant water and/ or mosquito	At least fortnightly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least fortnightly
Machinery Parking Area	Equipment/ machinery parts	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to parts that may collect water and re-apply after heavy rain	At least weekly
Vehicle Wash Bays	Perimeter drains/ scupper drains	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to parts that may collect water and re-apply after heavy rain	At least weekly
Office	Roof of freight containers/ ground below containers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	At least weekly

	Air con drip tray	Search and destroy stagnant water and/ or mosquito	At least weekly
Workers' Quarters	Roof of containers/ ground below containers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	At least weekly
	Air con drip tray	Search and destroy stagnant water and/ or mosquito	At least weekly
	Ground puddles	Search and destroy stagnant water and/ or mosquito	At least weekly
	Toilet cisterns	Search and destroy stagnant water and/ or mosquito	At least weekly
	Gully/ Floor Traps	Search and destroy stagnant water and/ or mosquito	At least weekly

Phase IV: Façade

Area	Specific Areas	Work	Frequency
Apron of Building Structure	Ground puddles	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Bottom of barriers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Sump pits/ Silt traps	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
	Building Structure (includes all levels of built-up)	Lift pits	Search and destroy stagnant water and/ or mosquito
Apply anti-mosquito oil to stagnant water (which cannot be removed) and reapply after heavy rain			At least weekly
Partially completed planter boxes		Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and reapply after heavy rain	At least weekly
Discarded receptacles		Remove and dispose of any discarded receptacles properly into a bin	At least weekly
Storage Yard		Building materials	Search and destroy stagnant water and/ or mosquito
	Water storage containers/ drums	Search and destroy stagnant water and/ or mosquito	At least weekly
		Ensure water storage containers/drums are covered.	At least weekly
	Lids of paint cans	Search and destroy stagnant water and/ or mosquito	At least weekly
Bin Centre	Bulk waste containers/ bins/ skip tanks	Search and destroy stagnant water and/ or mosquito	At least fortnightly

		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least fortnightly
Machinery Parking Area	Equipment/ machinery parts	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to parts that may collect water and re-apply after heavy rain	At least weekly
Vehicle Wash Bays	Perimeter drains/ scupper drains	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to parts that may collect water and re-apply after heavy rain	At least weekly
Office	Roof of freight containers/ ground below containers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	At least weekly
	Air con drip tray	Search and destroy stagnant water and/ or mosquito	At least weekly
Workers' Quarters	Roof of containers/ ground below containers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	At least weekly
	Air con drip tray	Search and destroy stagnant water and/ or mosquito	At least weekly
	Ground puddles	Search and destroy stagnant water and/ or mosquito	At least weekly
	Toilet cisterns	Search and destroy stagnant water and/ or mosquito	At least weekly
	Gully/ Floor Traps	Search and destroy stagnant water and/ or mosquito	At least weekly

Phase V: Interior Construction

Area	Specific Areas	Work	Frequency
Apron of Building Structure	Ground puddles	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Bottom of barriers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Sump pits/ Silt traps	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
Building Structure (includes all levels of built-up areas)	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly

Bin Centre	Bulky waste containers/ bins/ skip tanks	Search and destroy stagnant water and/ or mosquito	At least fortnightly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least fortnightly
Office	Roof of freight containers/ ground below containers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to ground below containers and re-apply after heavy rain	At least weekly
	Air con drip tray	Search and destroy stagnant water and/ or mosquito	At least weekly

Phase VI: Commissioning

Area	Specific Areas	Work	Frequency
Apron of Building Structure	Bottom of barriers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly
	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
	Key holes or gaps on the covers of subterranean pits and chambers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply slow-release larvicide	At least fortnightly
	Open and closed perimeter drains	Search and destroy stagnant water and/ or mosquito	At least weekly
Building Structure (includes all levels of built-up areas)	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
Car Park	Hollows in aeration slabs/ car park drains	Search and destroy stagnant water and/ or mosquito	At least fortnightly
Bin Centre	Perimeter drains/ scupper drains	Search and destroy stagnant water and/ or mosquito	At least fortnightly
	Gully traps	Search and destroy stagnant water and/ or mosquito	At least fortnightly
	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least fortnightly
	Roof gutters/ roof tops	Search and destroy stagnant water and/ or mosquito	At least fortnightly

Phase VII: Grading, Improvements and Landscaping

Area	Specific Areas	Work	Frequency
Apron of Building Structure	Bottom of barriers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply anti-mosquito oil to stagnant water (which cannot be removed) and re-apply after heavy rain	At least weekly

	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
	Key holes or gaps on the covers of subterranean pits and chambers	Search and destroy stagnant water and/ or mosquito	At least weekly
		Apply slow-release larvicide	At least fortnightly
	Open and closed perimeter drains	Search and destroy stagnant water and/ or mosquito	At least weekly
Building Structure (includes all levels of built-up areas)	Discarded receptacles	Remove and dispose of any discarded receptacles properly into a bin	At least weekly
Landscaped Areas	Tree holes and bifurcations between branches and thick leave axils	Search and destroy stagnant water and/ or mosquito	At least fortnightly
	Ground puddles	Search and destroy stagnant water and/ or mosquito	At least fortnightly
	Bushes/ flower beds	Search and destroy stagnant water and/ or mosquito	At least fortnightly
Car Park	Hollows in aeration slabs/ car park drains	Search and destroy stagnant water and/ or mosquito	At least weekly
Bin Centre	Perimeter drains/ scupper drains	Search and destroy stagnant water and/ or mosquito	At least fortnightly
	Gully traps	Search and destroy stagnant water and/ or mosquito	At least fortnightly
	Discarded receptacles	Remove and dispose of any discarded receptacles	At least fortnightly
	Roof gutters/ roof tops	Search and destroy stagnant water and/ or mosquito	At least fortnightly

Rodent Control Service Schedule

Phase I: Site Work

Area	Specific Areas	Work	Frequency Carry out treatment immediately if active infestation is detected. To follow-up weekly until infestation is eliminated
Construction Area	Open Area	Check for active burrows	At least monthly
		Check for rodent activity	
		Check for fresh rodent droppings	
	Sump pits/ Silt traps	Check for rodent activity	
		Check for fresh rodent droppings	
	Drains/ temporary channels	Check for rodent activity	
Check for fresh rodent droppings			
Storage Yard	Building materials	Check for rodent activity	
		Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Roofs/ False Ceiling	Check for rodent nest	
		Check for rodent activity	
		Check for fresh rodent droppings	
		Check for gaps/ cracks for rodent entry point	
	Meter/ Switch box	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Walls/ door gaps/ beam/ floors	Check for grease marks or rub marks	
Check for gnaw marks			
Check for fresh rodent droppings			
Bin Centre	Demolished debris	Check for rodent activity	
		Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Bulky waste containers/ bins	Check for rodent activity	
		Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
Machinery Parking Area	Equipment/ machinery parts	Check for grease marks or rub marks	
		Check for gnaw marks	

		Check for fresh rodent droppings	
Office	Landscape areas/ flower beds/ planted areas	Check for active burrows	At least monthly
		Check for runways	
		Check for rodent nest	
	Roofs/ false ceilings	Check for rodent activity	
		Check for fresh rodent droppings	
		Check for gaps/ cracks for rodent entry point	
		Check for grease marks or rub marks	
	Walls/ door gaps/ beam/ floors	Check for gnaw marks	
		Check for fresh rodent droppings	
		Check for grease marks or rub marks	
	Meter/ Switch box	Check for gnaw marks	
		Check for fresh rodent droppings	
Check for grease marks or rub marks			
Pipes and other fixtures	Check for gnaw marks		
	Check for fresh rodent droppings		
	Check for fresh rodent droppings		
Workers' Quarters – Service/ dining areas (including outdoor area)	Landscape areas/ flower beds/ planted areas	Check for active burrows	
		Check for runways	
		Check for rodent nest	
	Roofs/ false ceilings	Check for rodent activity	
		Check for fresh rodent droppings	
		Check for gaps/ cracks for rodent entry point	
		Check for grease marks or rub marks	
	Walls/ door gaps/ beam/ floors	Check for gnaw marks	
		Check for fresh rodent droppings	
		Check for grease marks or rub marks	
	Meter/ Switch box	Check for gnaw marks	
		Check for fresh rodent droppings	
Check for fresh rodent droppings			
Workers' Quarters – Kitchen/ Food preparation & Storage Area	Roofs/ false ceilings/ runways	Check for gaps/ cracks for rodent entry point	
		Check for rodent nest	
		Check for fresh rodent droppings	
	Pipes and other fixtures	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Walls/ door gaps/ beam/ floors	Check for grease marks or rub marks	
		Check for gnaw marks	

		Check for fresh rodent droppings	
	Meter/ Switch box	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	

Phase II: Foundations / Sub-structure

Area	Specific Areas	Work	Frequency Carry out treatment immediately if active infestation is detected. To follow-up weekly until infestation is eliminated
Construction Area	Open Area	Check for active burrows	At least monthly
		Check for rodent activity	
		Check for fresh rodent droppings	
	Sump pits/ Silt traps	Check for rodent activity	
		Check for fresh rodent droppings	
	Drains/ temporary channels	Check for rodent activity	
Check for fresh rodent droppings			
Storage Yard	Building materials	Check for rodent activity	
		Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Roofs/ False Ceiling	Check for rodent nest	
		Check for rodent activity	
		Check for fresh rodent droppings	
		Check for gaps/ cracks for rodent entry point	
	Meter/ Switch box	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Walls/ door gaps/ beam/ floors	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Bin Centre	Demolished debris	Check for rodent activity
Check for grease marks or rub marks			
Check for gnaw marks			
Check for fresh rodent droppings			
Bulky waste containers/ bins		Check for rodent activity	
		Check for grease marks or rub marks	
		Check for gnaw marks	

		Check for fresh rodent droppings	
Machinery Parking Area	Equipment/ machinery parts	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
Office	Landscape areas/ flower beds/ planted areas	Check for active burrows	
		Check for runways	
	Roofs/ false ceilings	Check for rodent nest	
		Check for rodent activity	
		Check for fresh rodent droppings	
	Walls/ door gaps/ beam/ floors	Check for gaps/ cracks for rodent entry point	
		Check for grease marks or rub marks	
		Check for gnaw marks	
	Meter/ Switch box	Check for fresh rodent droppings	
		Check for grease marks or rub marks	
		Check for gnaw marks	
	Pipes and other fixtures	Check for fresh rodent droppings	
		Check for grease marks or rub marks	
		Check for gnaw marks	
	Workers' Quarters – Service/ dining areas (including outdoor area)	Landscape areas/ flower beds/ planted areas	Check for fresh rodent droppings
Check for active burrows			
Roofs/ false ceilings		Check for runways	
		Check for rodent nest	
		Check for rodent activity	
Walls/ door gaps/ beam/ floors		Check for fresh rodent droppings	
		Check for gaps/ cracks for rodent entry point	
		Check for grease marks or rub marks	
Meter/ Switch box		Check for gnaw marks	
		Check for fresh rodent droppings	
		Check for grease marks or rub marks	
Workers' Quarters – Kitchen/ Food preparation & Storage Area		Roofs/ false ceilings/ runways	Check for fresh rodent droppings
	Check for rodent nest		
	Check for gaps/ cracks for rodent entry point		
	Pipes and other fixtures	Check for fresh rodent droppings	
		Check for grease marks or rub marks	
		Check for gnaw marks	
			At least monthly

	Walls/ door gaps/ beam/ floors	Check for fresh rodent droppings	
		Check for grease marks or rub marks	
		Check for gnaw marks	
	Meter/ Switch box	Check for fresh rodent droppings	
		Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	

Phase III: Superstructure

Area	Specific Areas	Work	Frequency Carry out treatment immediately if active infestation is detected. To follow-up weekly until infestation is eliminated
Apron of Building Structure	Open Area	Check for active burrows	At least monthly
		Check for rodent activity	
		Check for fresh rodent droppings	
	Sump pits/ Silt traps	Check for rodent activity	
		Check for fresh rodent droppings	
	Drains/ temporary channels	Check for rodent activity	
		Check for fresh rodent droppings	
	Walls/ gaps/ beams/ floors	Check for grease marks or rub marks	
		Check for gnaw marks	
Check for fresh rodent droppings			
Building Structure (includes all levels of built-up areas)	Walls/ gaps/ beams/ floors	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Roofs/ false ceiling	Check for rodent nest	
		Check for rodent activity	
		Check for fresh rodent droppings	
Storage Yard	Building materials	Check for rodent nest	
		Check for rodent activity	
		Check for fresh rodent droppings	
	Roofs/ False Ceiling	Check for rodent nest	
		Check for rodent activity	
		Check for fresh rodent droppings	

	Meter/ Switch box	Check for gaps/ cracks for rodent entry point	At least monthly
		Check for grease marks or rub marks	
		Check for gnaw marks	
	Walls/ door gaps/ beam/ floors	Check for fresh rodent droppings	
		Check for grease marks or rub marks	
		Check for gnaw marks	
Bin Centre	Demolished debris	Check for fresh rodent droppings	
		Check for rodent activity	
		Check for grease marks or rub marks	
	Bulky waste containers/ bins	Check for gnaw marks	
		Check for fresh rodent droppings	
		Check for rodent activity	
Machinery Parking Area	Equipment/ machinery parts	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
Office	Landscape areas/ flower beds/ planted areas	Check for active burrows	
		Check for runways	
	Roofs/ false ceilings	Check for rodent nest	
		Check for rodent activity	
		Check for fresh rodent droppings	
		Check for gaps/ cracks for rodent entry point	
	Walls/ door gaps/ beam/ floors	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Meter/ Switch box	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Pipes and other fixtures	Check for grease marks or rub marks	
		Check for gnaw marks	
Check for fresh rodent droppings			
Workers' Quarters – Service/ dining areas (including	Landscape areas/ flower beds/ planted areas	Check for active burrows	
		Check for runways	
	Roofs/ false ceilings	Check for rodent nest	
		Check for rodent activity	

outdoor area)		Check for fresh rodent droppings	
		Check for gaps/ cracks for rodent entry point	
	Walls/ door gaps/ beam/ floors	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Meter/ Switch box	Check for grease marks or rub marks	
Check for gnaw marks			
Check for fresh rodent droppings			
Workers' Quarters – Kitchen/ Food preparation & Storage Area	Roofs/ false ceilings/ runways	Check for gaps/ cracks for rodent entry point	
		Check for rodent nest	
		Check for fresh rodent droppings	
	Pipes and other fixtures	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Walls/ door gaps/ beam/ floors	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
	Meter/ Switch box	Check for grease marks or rub marks	
		Check for gnaw marks	
		Check for fresh rodent droppings	
			At least monthly

Schedule of Rates

The rates to provide any ad-hoc works as a variation to the Contract for mosquito/ rodent control works:

1. The description given for each item listed below shall, unless otherwise stated, be held to include the use of tools/ equipment, transportation, materials/ pesticides and labour, etc. required for the proper execution of works.
2. The under mentioned rates also take into account works that may have to be carried out after normal office working hours or during Sunday and Public Holidays.
3. The unit “Per Job” shall, unless otherwise stated, mean all works to be carried out within a spherical radius of **xx metres (service buyer to determine)** in communal areas of the construction site. The unit ‘Visit’ shall, unless otherwise stated, mean “Per Visit”.

S/N	Description	Unit	Rate
1	Example for reference only: <i>Inspection and detection of mosquito’s breeding and harbouring sites. To apply insecticide to areas where stagnant water cannot be removed.</i>	Per Visit	
2	Example for reference only: <i>a. Fogging; or b. Residual spraying in workers’ quarters</i>	Per Job	
3	Example for reference only: <i>Inspection and extermination of rodents by setting up baiting stations/ traps, followed up by checking and replenishing of baits. To remove dead rodents and to disinfect and deodorise the affected areas. (to be carried out at night)</i>	Per Visit	
4	Example for reference only: <i>Inspecting, locating and identifying possible exit and entry points of rodents. To seal up any crevices, gaps or burrows after treatment.</i>	Per Job	
5	<i>Additional manpower required commencing between timings</i> <ul style="list-style-type: none"> • Vector Control Technician • Vector Control Worker 	Per Person/ Hour	
6	<i>Additional equipment to be used</i> <ul style="list-style-type: none"> • Thermal fogger • Motorised mist blower • Compression sprayer etc. 	Per Item	
7	<i>Additional pesticides to be used</i>	Per Job	

Format for Work Reports for Mosquito Control Services

Sample Baseline Survey Report

There should be a pre-construction site assessment report to identify potential challenges and assist in formulating effective vector control programme.

Findings: *(for reference only)*

S/N	Stage of Work	Location/Blocks [#]	Mosquito breeding/ Potential breeding grounds	Recommendation
1	<i>Preliminary</i>	<i>Existing abandoned manhole</i>	<i>Collect rain water</i>	<i>To demolish and backfill [Insert Photo]</i>
2	<i>General</i>	<i>Worksite ground level</i>	<i>Area too large for PCO to cover within two hours</i>	<i>Propose zonings and 2 or 3 visits per week. [Insert Photo]</i>
		<i>Bus-stop outside the worksite</i>	<i>Receptacles littered by public</i>	<i>To conduct regular housekeeping along perimeter fence (especially at the bus-stop).</i>

S/N	Stage of Work	Location/Blocks	Mosquito breeding/ Potential breeding grounds	Recommendation
3	<i>Substructure</i>	<i>Open cut excavation with CBP & strutting</i>	<i>Stagnant water on strutting & wailers</i>	<i>Provide openings in struts/wailers to prevent water collection. Design shoring system without struts.</i>
		<i>Basements Ejector pit / lift pits / IC(s)</i>	<i>Stagnant water, dark area.</i>	<i>Temporarily seal the area if possible</i>
4	<i>Superstructure</i>	<i>Roof of all blocks</i>	<i>Housing for portable gondola brackets. Collect stagnant water if choked.</i>	<i>Ensure all housings are not choked and all openings properly sealed.</i>
		<i>Precast staircase / air-con ledge</i>	<i>Stagnant water collected at lifting point</i>	<i>Immediately seal after the precast member is installed.</i>
		<i>MSCP</i>	<i>Stagnant water in planter boxes at roof garden area</i>	<i>Apply larvicide and to remove stagnant water regularly.</i>

#To insert photos of the location if available

2. Comments, if any

Report Prepared and Submitted by VCO:	Acknowledged by S.O.:	Accepted by (PM):
Name:	Name:	Name:
Designation:	Designation:	Designation:
Signature:	Signature:	Signature:
Date:	Date:	Date:

For reference only

Format for Work Reports for Rodent Control Services

Sample Baseline Report

1. Findings:

S/N	Location#	Findings			Probable cause of rodent burrow/infestation	Action taken and recommendation
		Signs of infestation	No. of burrow(s)	No. of nest(s)		
1	Turf area opposite Living Quarters [Insert Photo]	Examples: Burrows			Examples: Littering	Examples: Seal up burrows [Insert Photo]
2	Office [Insert Photo]	Rodent droppings			Unkempt premises	Seal up crevices [Insert Photo]
3		Live rodents			Bin chute area	
4		Rub marks			Renovation site	
5					Defects in Bin centre	
6					Poor housekeeping	
7					Indiscriminate disposal of food waste	
8						
9						

#To insert photos of the affected areas and the follow up treatment made.

2. Comments, if any

Report Prepared and Submitted by VCO:	Acknowledged by (S.O.):	Accepted by (PM):
Name:	Name:	Name:
Designation:	Designation:	Designation:
Signature:	Signature:	Signature:
Date:	Date:	Date:

Format for Work Reports for Mosquito Control Services

Sample Service Report

Date: _____

Types of Breeding Habitat Found	Location of Findings at or around the Worksite (Zone / Block / Level / Unit)	Actions Taken and Comments

Types of Sanitation/ Hygiene Lapses Identified	Location of Sanitation/ Hygiene Lapses at or around the Worksite (Zone / Block / Level / Unit)	Actions Taken and Comments

a) Comments, if any

Report Prepared and Submitted by VCO:	Acknowledged by S.O.:	Accepted by (PM):
Name:	Name:	Name:
Designation:	Designation:	Designation:
Signature:	Signature:	Signature:
Date:	Date:	Date:

Format for Work Reports for Rodent Control Services

Sample Service Report

Date: _____

a) Rodent activity/ burrows identified

Date	Time (Hrs)	Location [#]	Findings			Probable cause of rodent burrow/ infestation	Action taken and recommendation	Recommendation
			Signs of infestation	No. of burrow(s)	No. of nest(s)			
1 Jan 19	2200	Turf area opposite Workers' Quarters [Insert Photo]	Examples: Burrows			Examples: Littering	Examples: Seal up burrows [Insert Photo]	

[#] To insert photos of the affected areas and the follow up treatment made.

b) Preventive measures taken

Location [#]	No. of trapping devices deployed [#]		No. of baiting stations [#]	No. of rodents removed			Total no. of rodents removed
	Glue Board	Cage		Date	Trapped	Dead	
Example: Storage area [Insert photo]	[Insert photo]	[Insert photo]	[Insert photo]				

[#] To insert photos of the affected areas and the follow up treatment made.

c) Comments, if any

Report Prepared and Submitted by VCO:	Acknowledged by S.O.:	Accepted by (PM):
Name:	Name:	Name:
Designation:	Designation:	Designation:
Signature:	Signature:	Signature:
Date:	Date:	Date:

Formats for Work Reports for Rodent Control Services

Sample Monthly Service Report

Consolidated findings for (Month)

Date	No. of Rodent burrows			No. of Rodent nests detected	No. of trapping devices deployed		No. of baiting stations	No. of rodents removed		Total no. of rodents removed
	Found	Treated	Sealed		Glue Board	Cage		Trapped	Dead	
Total										

a) Comments, if any

Report Prepared and Submitted by VCO:	Acknowledged by S.O.:	Accepted by (PM):
Name:	Name:	Name:
Designation:	Designation:	Designation:
Signature:	Signature:	Signature:
Date:	Date:	Date:

For reference only

VECTOR CONTROL TECHNICIANS/ WORKERS EMPLOYED BY CONTRACTOR

Number of Vector Control Technician deployed for this Contract:	
Number of Vector Control Worker deployed for this Contract:	
Name of Supervisor-in-charge for this Contract:	
Date of update:	

Vector Control Technician

S/N	Name of Technician	NRIC/ FIN	NEA License Number	Full /Provisional Licence	Date of Licence Expiry

Vector Control Worker

S/N	Name of Worker	NRIC/ FIN	NEA Certificate Number	Full /Provisional Certificate	Date of Certificate Expiry