APPENDIX C

Proof of Concept Scheme

DETAILED PROJECT INFORMATION: Sections 1 to 8

Project Leader Name: Yovan Fowdar	
Address: Vingta No.1, Vacoas	**The information on this form may be made public.**
~~Institution~~/Company: Generation Plus Ltd	
Project Title: Intelligent Bat Deterrent Controller (IBDC)	
TECHNICAL ABSTRACT **(200 words or less)**	**Include Potential Commercial Applications**

Mauritius fruit bat (*Pteropus niger*) is an endemic bat listed as Vulnerable (being currently considered for Critically Endangered) by International Union for Conservation of Nature (IUCN). The bats are perceived as major pests in Mauritius despite their important role in forest ecosystem as the only large frugivore on the island responsible for long distance seed dispersal and pollinator. The Mauritius fruit bat was a subject to national cull in 2015 and 2016 to reduce their impact on fruit farms which resulted in over 40,000 killed bats. However, studies from Australia or Thailand shows that culling doesn't work as bats will keep coming to feed in orchards.

The objective of this project is to develop and test non-lethal audio-visual sound based, bat deterrence which can be applied in orchards.

A single board based computer (SBC) will be used to emit varieties of sounds synchronized with light. The device will be placed in orchards and will be totally autonomous i.e. it will automatically start its process as scheduled on the device. The management/configuration of the device is done via a web interface, this includes the uploading of new audio files and definition of new scenarios. The sounds will include distressed bat sound, predator call, dog barking, car and motorbike horn, fire crackers, shotgun, high pitch sound, etc.

The device will be used in litchi and mango orchards to deter bats. If successful, it will be economically valuable and easy to use method to protect both the crop and the bats.

Key Words to Identify Research (8 maximum)
Fruit bat, sound system, orchards, non-lethal deterrence