

**WILDLIFE HOME
MANAGEMENT PLAN**

**Adopt A Home for Wildlife
Project
2022/23**



WH05 ECOPLAY

Montserrat National Trust



Table of Contents

1. Background	2
2. Wildlife Home Name	2
3. Site Ownership and Existing Management	3
4. Site Description	3
5. Aim of Site Management	5
6. Site Surveys	6
A. Summary of Vegetation Survey.....	7
b. Summary of invertebrate survey.....	8
7. Management Objectives	10
8. Work Programme.....	11
9. Monitoring and management adaptation	11
10. Risk Assessment	12
11. Notes:	12
12. Management Plan Agreement	13
Figure 1: Location of EcoPlay on Montserrat.....	3
Figure 2: Parcel of land owned by the Montserrat National Trust (a) Map produced by GIS Department (b) Hand drawn image of parcel of land.....	4
Figure 3: (a) Close up on <i>Melponia variegatipes lautipes</i> (Stingless/Bottle Bees) (b) the nest on EcoPlay site.....	5
Figure 4: Designs for EcoPlay building.....	6
Figure 5: Some images from insects survey at EcoPlay site	10

Wildlife Home Management Plan for EcoPlay (WH05)



Figure 1: EcoPlay adjacent to the Montserrat National Trust property

1. Background

Adopt Home for Wildlife is a project which aims to protect Montserrat's unique biodiversity, ecosystems and natural capital through community action. It is being led by the Montserrat National Trust on island with support from partners coordinated by the UK Overseas Territories Conservation Forum. **Adopters** are those local people or groups who volunteer and are accepted to manage an area of land (**Wildlife Home**) within the project. A network of sites across the island is being established where action takes place to improve conditions for biodiversity and, where possible, opportunities for people to improve livelihoods and well-being are provided. Preliminary ecological surveys of the sites are conducted and with this information a management plan is developed between the Adopter and the project partners.

2. Wildlife Home Name

WH05 EcoPlay

3. Site Ownership and Existing Management

The site is owned by the Montserrat National Trust

4. Site Description

In 2021, the Montserrat National Trust became owners of a parcel of land adjacent to the Montserrat National Trust Botanic Garden. The site is located at 16°45'23N 62°13'07"W, in the village of Salem.



Figure 1: Location of EcoPlay on Montserrat

It is opposite the Montserrat Secondary School and is situated on the corner of a main road in a residential area.

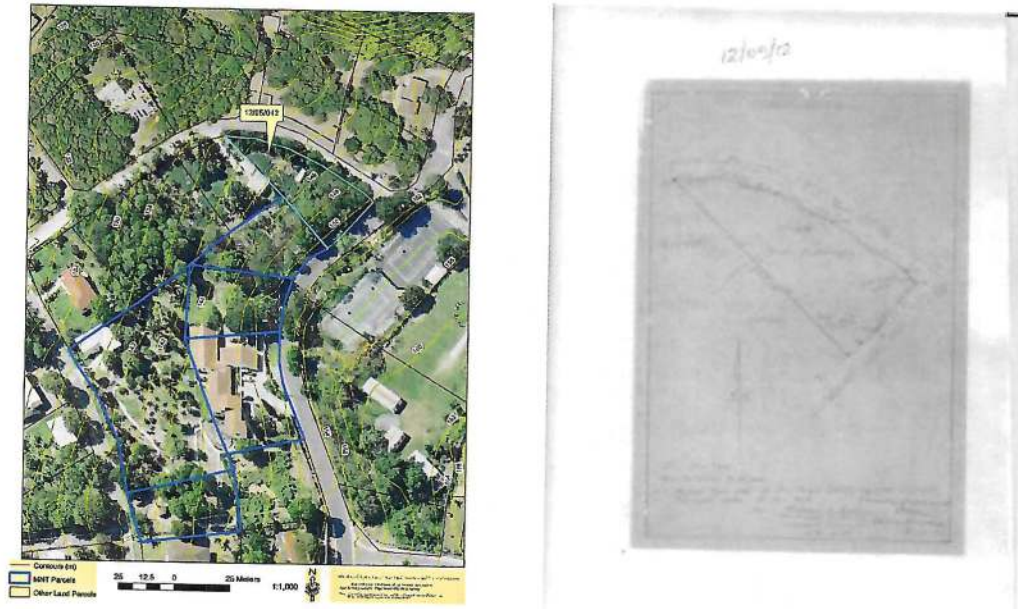


Figure 2: Parcel of land owned by the Montserrat National Trust (a) Map produced by GIS Department (b) Hand drawn image of parcel of land.

The area of the site is approximately 14,000sq ft (about 1,300 m²).

It can be categorised as anthropogenic, given that it is likely to have been modified as housing or an area which has been used for cultivation.

It has a variety of microhabitats including soil, grasses less than 12cm, fallen rotten leaves, large stones. It contained paving, fencing and some garbage. Parts of the site have long grass over 12cm, wild flowers, shrubs, trees, climbing plants. It is near man-made structures, e.g. buildings, roads.

There are some key features on this site worthy of note. Towards the south eastern boundary there are rows of established trees including Birch trees, which shelter the site but are also being utilized as nesting and foraging sites for the endemic bee, *Melponia variegatipes lautipes* (Fig. 3).



Figure 3: (a) Close up of *Melponia variegatipes lautipes* (Stingless/Bottle Bees) (b) the nest entrance on EcoPlay site

5. Aim of Site Management

The site will be transformed throughout the project. The Montserrat National Trust has decided to dedicate the space as a place where members of the community, especially children and young people, as well as visitors could come and learn about biodiversity, ecosystem services and sustainability in a safe environment. The aim of this management plan is to ensure that key natural features are retained and enhanced, and integrated with the physical development of this environmental education facility. This could also provide an example for others building at other sites. This could also provide an example for others building at other sites. The wishes of the Adopters are well expressed in a series of 3 short videos of interviews with some of the project team viewable from links in the Project Updates section of <https://www.ukotcf.org.uk/key-projects/adoptahomeforwildlife/>.

With the help of UKOTCF, the Trust secured the *pro-bono* services of an architect to develop plans for the site. The north-western area of the site (as well as borders) will provide space for exploring nature and sustainability by areas dedicated to nature including growing endemic species as well as cultivating food and medicinal plants.

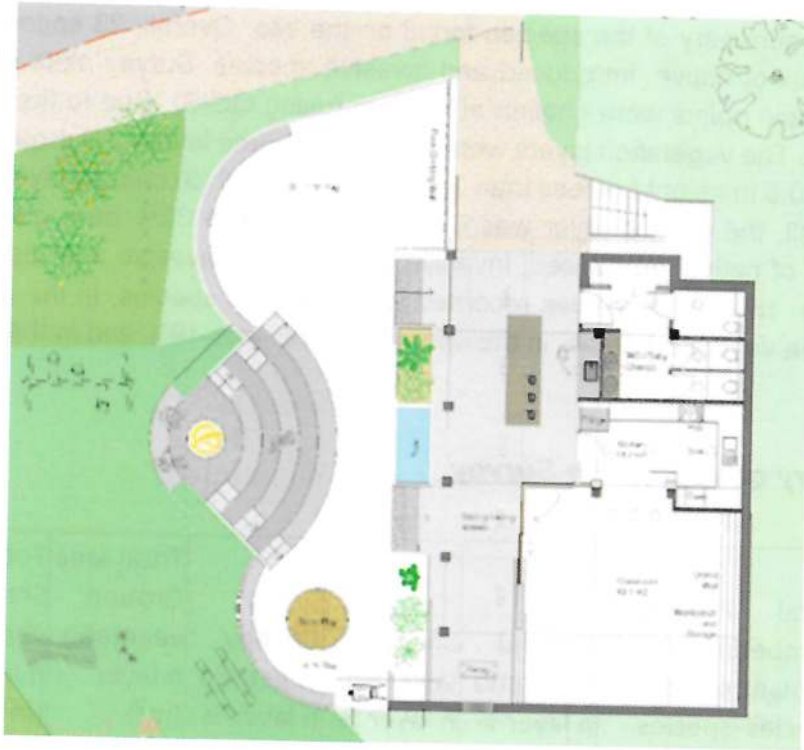


Figure 4: Designs for EcoPlay building

A first step is to understand the ecology of the site through plant and invertebrate surveys and in what quantities. This information will be used to manage the site so it provides habitat for Montserrat's biodiversity particularly its native plants and insect pollinators.

This will ensure its resilience to a number of scenarios, e.g. further natural disasters, climate change etc. One of the most important elements of site surveys will be gaining knowledge about the presence of non-native invasive species. If potentially damaging plant species are found (according to species lists developed by the Montserrat National Trust informed by earlier work) management actions will be undertaken including replacement with native species (propagated at the Montserrat National Trust's botanic garden nursery). Changes on the land will be recorded each year throughout the project.

At this particular site, the surveys have indicated quite a rich fauna and flora at the site already. It will be important to incorporate these into the site to ensure that they are not replaced or damaged when any works commence.

6. Site Surveys

The site surveys were conducted during the period March- July 2022 with several repeat visits.

Table 1 shows a summary of the species found on the site. Overall, 23 species were found on this site with a mix of native, introduced and invasive species. Survey plots consisted of a 5m circular plot. Sample points were chosen at random (using QGIS). Due to the size of the site, 3 points were used. The vegetation layers were divided into three layers: (1) ground layer; (2) shrub layer (more than 0.5 in height but less than 2.5m in height) and (3) canopy layer (more than 2.5m in height). Overall, the ground layer was 67% vegetated with 33% bare ground. Plants were identified as one of native, introduced, invasive or unknown. Invasive species were found in all vegetation layers. 18% of all species recorded were invasive species. In the ground layer, they covered 1% of the vegetated areas, in the shrub layer this was 19% and in the canopy layer this was 11%.

A. Summary of Vegetation Survey

	Total number of plant species	Proportion of total plant species	Ground vegetation layer %	Shrub vegetation layer %	Canopy vegetation layer %	Total area Ground vegetation layer (m ²)	Total area Shrub vegetation layer (m ²)	Total area Canopy vegetation layer (m ²)
Native	31	51	55	32	41	129	74	98
Introduced	12	20	8	1	1	19	3	2
Invasive	11	18	1	19	11	2	45	26
Unknown	7	11	3	1	7	7	4	16
Total	61	100	67	53	60	157	126	141

Table 1: Summary of plant survey results.

The prominent native plants in the survey are:

Species name	Common name
<i>Amaranthus dubius</i>	Wild Spinach
<i>Amaranthus spinosus</i>	Spinach
<i>Bouyeria ovata</i>	Strong Back
<i>Bursera simaruba</i>	Gum Tree
<i>Callisia repens</i>	Inch Vine
<i>Casearia sylvestris</i>	Crack Open
<i>Ceiba pentandra</i>	Silk Cotton
<i>Cissus verticillata</i>	Skipping String Vine
<i>Citharexylum spinosum</i>	Yellow Fiddlewood
<i>Coccoloba swartzii</i>	Red Wood

[Adopt a Home for Wildlife Management Plan_WH05_EcoPlay_August 2022]

<i>Commelina elegans</i>	White French Weed
<i>Cordia obliqua</i>	Clammy Cherry
<i>Desmodium incanum</i>	Alphabet Weed/ Beggarweed
<i>Digitaria insularis</i>	Sweet Grass
<i>Euphorbia hirta</i>	Milky /Asthma Plant
<i>Euphorbia hypericifolia</i>	Graceful Spurge
<i>Euphorbia prostrata</i>	Sandmat
<i>Guapira fragrans</i>	Black Loblolly
<i>Hymenaea courbaril</i>	Sticking Toe or Locust Tree
<i>Melicoccus bijugatus</i>	Guinep
<i>Mimosa pudica</i>	Sleepy Head
<i>Myrcianthes fragrans</i>	Black Birch
<i>Randia aculeata</i>	White Iron
<i>Sida acuta</i>	12 O'clock Broom
<i>Solanum americanum</i>	Dolly Tomato
<i>Swietenia mahagoni</i>	Mahogany
<i>Trichostigma octandrum</i>	White Hook
<i>Wedelia calycina</i>	Sage

The prominent invasive plants in the survey are:

Species name	Common name
<i>Azadirachta indica</i>	Neem
<i>Cyanthillium cinereum</i>	Little Iron Weed
<i>Cyperus rotundus</i>	Nut Grass
<i>Leucaena leucocephala</i>	Wild Tamarind
<i>Megathyrsus maximus</i>	Guinea Grass
<i>Papaya carica</i>	Papaya

b. Summary of invertebrate survey

There were a good number of bees recorded on site plus some butterflies/moths, indicating there is a good level of nectar-rich plants. The survey showed that the Black Birch *Myrcianthes fragrans* was very important for bees on this site. Ideally any native planting should include some nectar-rich shrub and tree species to continue to support pollinator species.

Currently there are a number of invasive trees and shrubs present; there should be an attempt to remove these invasive species and replace them with native trees and shrubs. This will also increase the presence of other invertebrate groups such as beetles and bugs, and help to improve ecosystem balance as a high number of ants were recorded.

[Adopt a Home for Wildlife Management Plan_WH05_EcoPlay_August 2022]

Insect group	Total counted	Functional group	Total individuals for functional group
Snails	0	Herbivores	3
Slugs	0		
True Bugs	3		
Worms	1	Detritivores	107
Ants	106		
Earwigs	0		
Woodlice	0		
Milipedes	0		
Bees and wasps	108		
Butterflies and moths* can be herbivores also	39		
Spiders and harvestmen	1	Predators	2
Centipedes	1		
Beetles	2	Not classed	38
True Flies (no waist)	34		
Crickets and grasshoppers	2		
UFIs unidentified flying insects	0		
Total number in count	297		

Table 2: Invertebrate survey at EcoPlay





Figure 5: Some images from insects survey at EcoPlay site

7. Management Objectives

The *EcoPlay* site probably should be aiming towards restoring, where possible given the limitations of the site area, Dry/Mesic Forest with medium/large-tree-dominated vegetation >5m tall. Typical taxa include: *Begonia obliqua*, *Araceae*, *Lauraceae*, *Inga laurina*, *Eugenia* spp., *Piper* spp.

1. Identify species

Ensure that those which remain important are, where possible, not felled when building is constructed, and add to these. Trees which would do well on the site include:

- Spanish Cedar *Cedrela odorata*
- Lignum Vitae *Gaiacum officinale*
- West Indian Mahogany *Swietenia mahagoni*
- Montserrat Pribby *Rondeletia baxifolia*
- Pepper Cinnamon *Canella winterana*
- Fiddlewood *Citharexylum fruticosum*
- Trumpet Bush *Tecoma stans*
- White Cedar *Tabebuia pallida*
- Birches *Myrcia splendens/Eugenia* spp
- Barbados Cherry *Malpighia emarginata*
- Sea Grape *Coccoloba uvifera*

2. Encourage more invertebrate fauna found in this habitat, paying particular attention to the boundaries of the property, given the building which will take place.
3. Ensure that the plans for EcoPlay are implemented in a way which is compatible with the management plan.

8. Work Programme

Priority Actions	Undertaken by	Frequency
Clear guidelines to those constructing the building and following architectural drawings.	Project team and other MNT personnel	From as early in project as possible
Continual monitoring and management of invasive species on site as ground becomes disturbed and soil material is introduced during construction	Project team and other MNT personnel	Continual
Opportunities to get involved in various activities with Adopters	MNT staff and POs	Continual
Donation and supply of native plants and organic fertilizer from MNT nursery	MNT staff, POs	Continual
Use of power tools and chipper at the Trust if needed	MNT staff	As required
Vegetation and invertebrate surveys	POs	Annually (Y1: invertebrate survey conducted in May; plant survey conducted 2022)
Progress reports (on project progress, including on this site as appropriate)	POs	Monthly

9. Monitoring and management adaptation

- Vegetation and invertebrate surveys in Y1 and Y3 with updates in Y2.
- Monthly staff meetings (on project as a whole; with feedback supplied as necessary)
- 6- monthly progress report (on project as a whole; with feedback supplied as necessary)

[Adopt a Home for Wildlife Management Plan_WH05_EcoPlay_August 2022]

- Workshops and training sessions for Adopters (throughout the project)
- Feedback and reviews by Adopters (e.g. after training/workshops etc)

10.Risk Assessment

(Note: nothing in this table should be interpreted as constraining the Adopter personnel in actions on their own land.)

Potential hazard	Who is at risk and how	Action taken	Further actions needed	Risk severity (1-3)
Lone working	Staff. Risk of injury and lack of assistance	Lone working discouraged (Note: nothing in this table should be interpreted as constraining the site-owner or -lessee in actions on their own land.)		2
Manual handling	Staff. Risk of muscular-skeletal injury.	Lone working discouraged		2
Insect bites and poisonous plants e.g. fire ants, mosquitos, cowitch	POs undertaking fieldwork	Insect repellent. Full length trousers and boots.		1
Extreme weather	Staff	Communication with other staff when conducting fieldwork		2

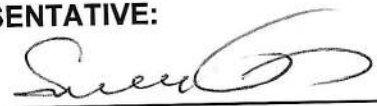
11. Notes:

Some invasive trees such as Neem, has antifungal properties that can be useful to control the spread of mites, aphids, and sucking insects that can be present periodically on other plants on the lot. Opportunities to explore alternative uses of invasive plants from a cultural context can be considered.

On the southern end of the lot is a hedge of the endemic shrub *Rodeletia buxifolia*, commonly call Pribby. These and other aspects will serve to demonstrate the opportunities to incorporate endemic plant species in site development.

12. Management Plan Agreement

ECOPLAY REPRESENTATIVE:

SIGNATURE: 

NAME: SARITA FRANCIS

DESIGNATION: EXECUTIVE DIRECTOR

ADOPT A HOME FOR WILDLIFE

SIGNATURE: 

NAME: DELMAUDE - C. RYAN

DESIGNATION: PROJECT OFFICER

DATE: 7 June 2023