

# ARCHITECTURAL AND ARCHAEOLOGICAL STUDIES AT ILE DE LA PASSE

## MAURITIUS

### THE 2004 SEASON OF FIELDWORK



*Figure 1. Excavation of Trench TR9 at the Lower Battery. (04jv0803)*

**A Report Submitted to Sponsors**

by

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**ARCHITECTURAL AND ARCHAEOLOGICAL STUDIES  
AT ILE DE LA PASSE, MAURITIUS**

**The Archaeology, Architecture and Conservation of an Historic Islet.**

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## THE PROJECT

### Architectural and Archaeological Studies at Ile de la Passe, Mauritius

The project is concerned with the archaeology, architecture and conservation of an historic islet. An extensive survey of the standing monuments, structures and other remains started in 2002. The cutting back of vegetation and clearance of blown sand is revealing hidden features, while targeted excavation (Fig. 1) is helping to resolve specific problems of chronology and identification of functions.



*Figure 2. Ile de la Passe. (04jv3102)*

### The Research Site

Ile de la Passe (Fig. 2) guards the entrance through the coral reef into Grand Port at the south-east of Mauritius. Control of this coral islet was the key to control of the Indian Ocean from the early 18<sup>th</sup> century until 1810. The islet, pivotal in the last Napoleonic naval victory over the British, the "Battle of Grand Port" celebrated on the Arc de Triumphant, boasts some of the most impressive surviving examples of early modern French military architecture in the southern hemisphere. Later British military installations are of considerable importance for the heritage of Mauritius and of interest to students of colonial history.

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Team 1 (19 January to 2 February): Mary Aubuchon, Bradley Braun, Vida Dedinas, Alexandra Nicol and George Weiss.

Team 2 (2 to 16 February): Rudy Miner, Lise Poirier, Rosanne Rosen, Mark Rosen and Rodney Supple.

### *Other participants*

Yann von Arnim, Jayshree Mungur and Natalie Summers.

### *METU Research Assistants for post-fieldwork in Ankara*

Aylin Ađar and Nurdan ayirezmez.

## **Volunteers and Visitors**

The participation of volunteers is always appreciated and helps in disseminating to a wider public the importance of Cultural Heritage. Among those who joined the team on site are David Morin, Charlotte Echtner, Isabelle E.Noel, Priscille E.Noel, Marie Helene D'Arifat and a group of school children from L'Ecole du Centre.

On Wednesday February 4 we were honoured by the visit of members of the NHF Board which included the Chairman, Mr Philippe la Hausse, and the (former) Director, Mr Premlall Mahadeo. Dr Vijaya Teelock and 24 first year students from the University of Mauritius, an educational film team of three from the University of Mauritius and a team of four from the MBC visited on that same day.

Trips were organised on other occasions for sponsors and friends all of whom expressed their enthusiasm for the site and appreciation of the progress of work, regardless of rough seas and difficult landings.

On February 10 we also welcomed a group (Fig. 3) from the Step Ahead Primary school, accompanied by Dr. Vijaya Teelock.



*Figure 3. A group from the Step Ahead Primary School disembarking on Ile de la Passe. (04jv1811)*

## ACKNOWLEDGMENTS

First of all we would like to thank the National Heritage Fund (formally the National Heritage Trust) of Mauritius for continuing support of our the work on Ile de la Passe following the initial survey season in 2002. We are particularly grateful to the Chairman, Philippe La Hausse de Lalouvière, the (former) Director, Mr Premlall Mahadeo, and NHF staff for their interest, enthusiasm and support.

The 2004 study was made possible through a grant from the Earthwatch Institute. Donations from General Construction and Phoenix Camp Mineral Ltd contributed towards operational expenses and permitted the employment of local labour for cleaning and clearing. Harel Mallac Electronics Ltd loaned a computer, essential for the digital recording, processing and archiving of data during the season while Gaz Carbonique helped with transport. Jean Claude Farla's skills and knowledge of the bay always guaranteed a good trip to and from the islet (Fig. 4). Villa Le Guerlande agreed special rates. The Coast Guards visited regularly, aiding the removal of rubbish and always willing to help.

Last, but by no means least, our thanks go to all those whose contribution made the 2004 season possible, and to our family and friends without whose generosity and hospitality the season would not have happened.



*Figure 4. A relaxing trip back in the sailing boat was always welcomed by team members after long hours of work on the islet. (04jv2818)*

## MAPS

Assiduous archival research in London by Earthwatch volunteer Alexandra Nichols has located a map which shows the entire bay together with the islets. An inset shows Ile of Passe (sic) with a list of three recommendations for completions and additions to the defences then existing. Although this map (Fig. 5), from the National Archives, London, WO 78/71, is undated and unsigned, the inset is the same as the map that was drawn up by the Lieutenant Robert Smith in 1811 which is reproduced on p. 37 of Dr Marina Carter's unpublished report and discussed by her on p. 36. Although this map shows recommendations for additions to the existing defences, there is no evidence that these were ever executed. The "Ditch", tantalizingly, is not shown, nor are the two sentry posts (Structures 8 and 9), but a *fossé* is mentioned in an 1811 inventory by Maingard, quoted by Dr Carter on p. 36.

The topographic survey commissioned by the NHT from A. S. Calloo, sworn surveyor, in 2002 provides the base map for all studies. Ten stations set in concrete form the reference points for current and future surveying. The map itself is tied to the National Grid of Mauritius. An arbitrary height of 100m above sea level was given to Station A. This map was updated after the 2004 season of fieldwork, most notably by the addition of Structures 32 and 33 (Figs 6 and 7). Plans at different scales were also prepared (Figs 8, 9 and 10)

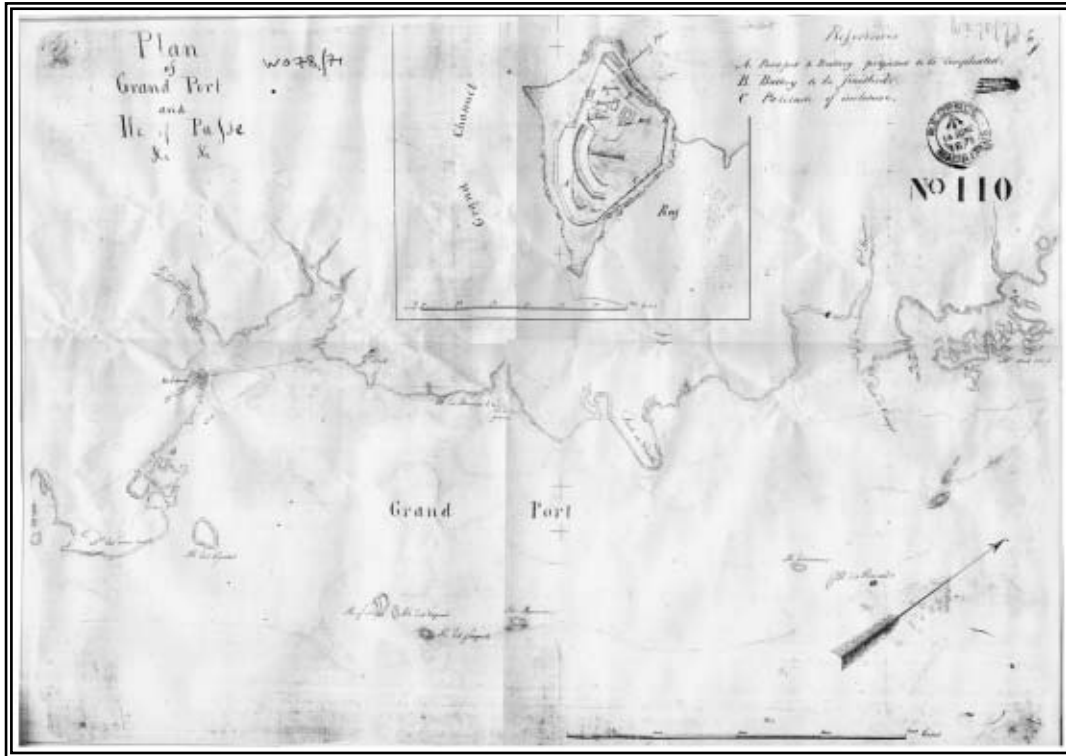


Figure 5. Map No. 110 of Grand Port from The National Archives, London, (WO 78/71) with a map of Ile de la Passe inset.

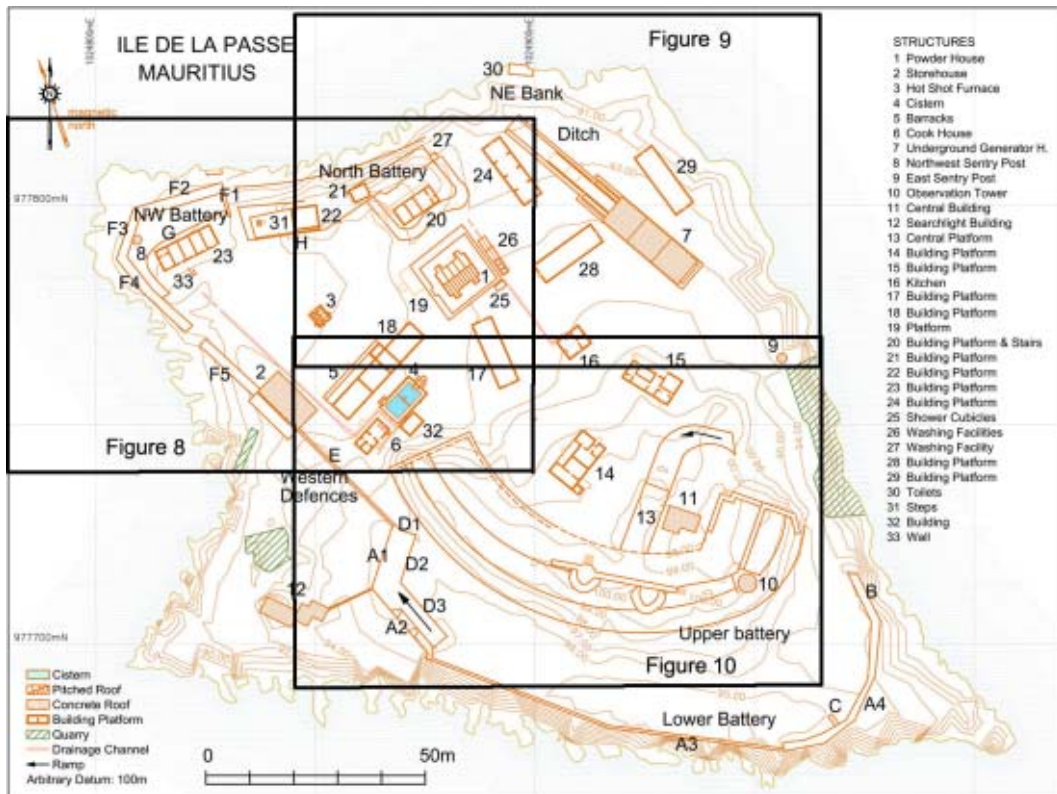


Figure 6. Key plan to show location of figures 8, 9 and 10.



Figure 7. Map of Ile de la Passe showing standing monuments, structures and other features.

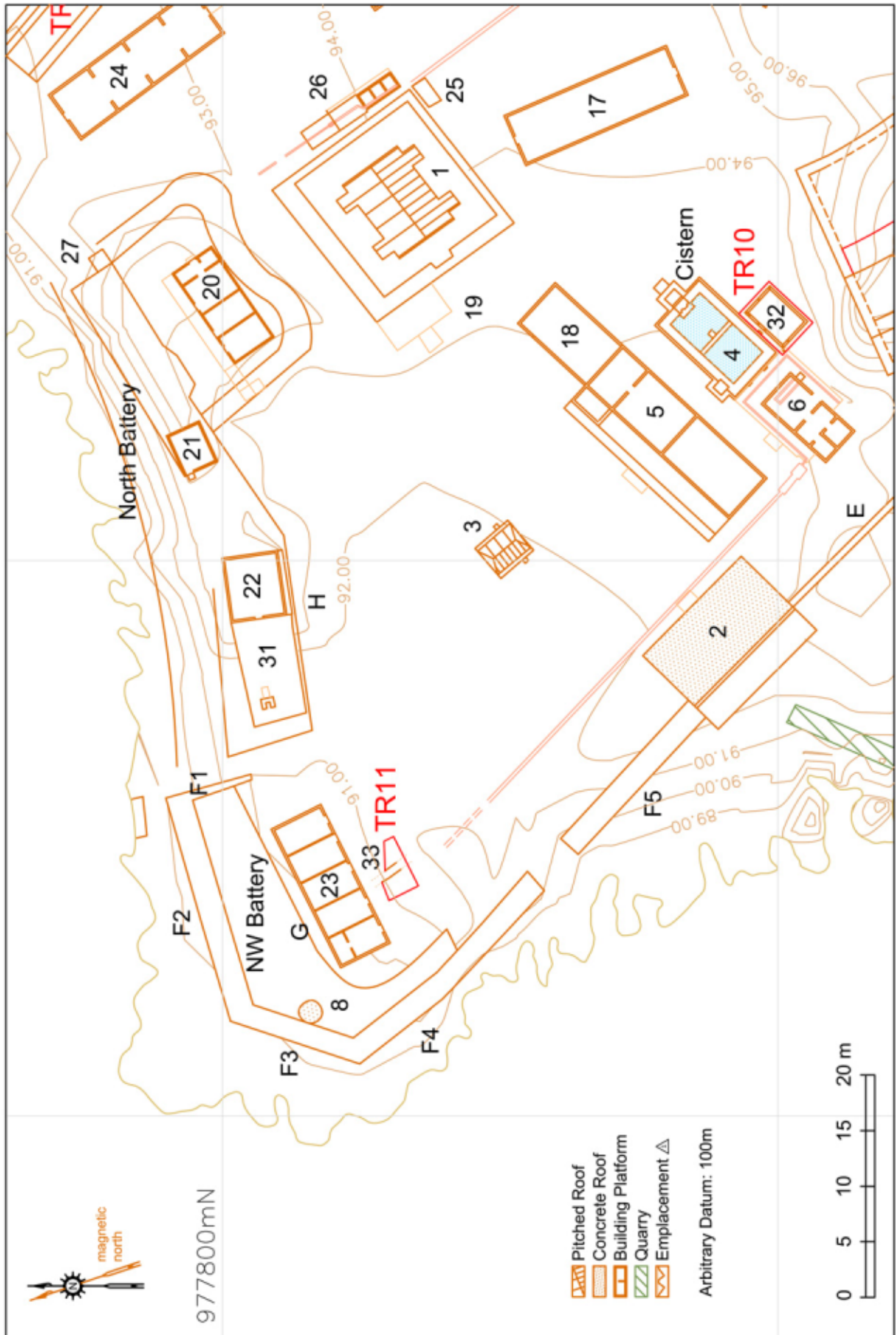


Figure 8. Plan of the north-west area showing location of major monuments and trenches TR10 and TR11.



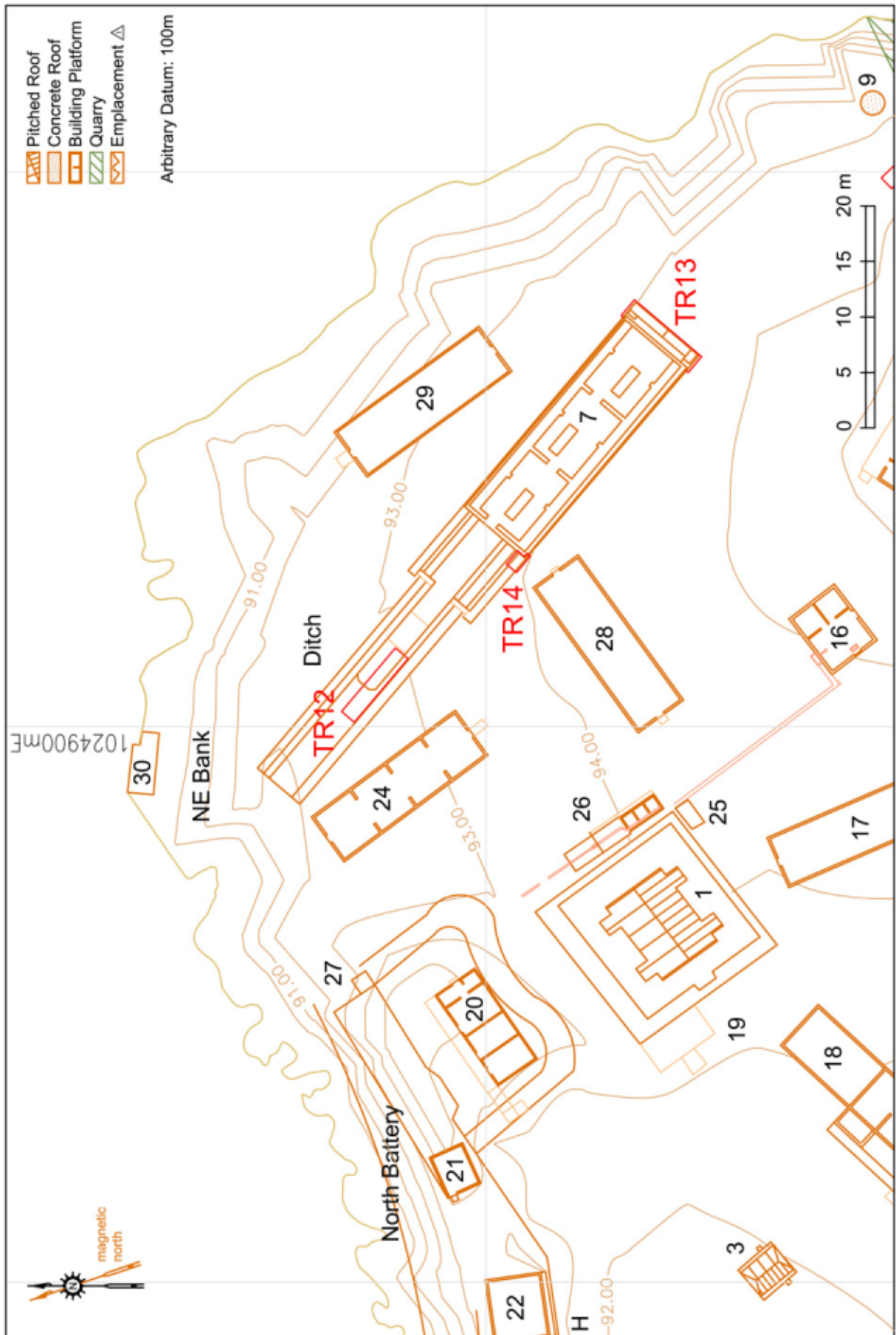


Figure 9. Plan showing the Ditch and location of trenches TR12, TR13 and TR14.

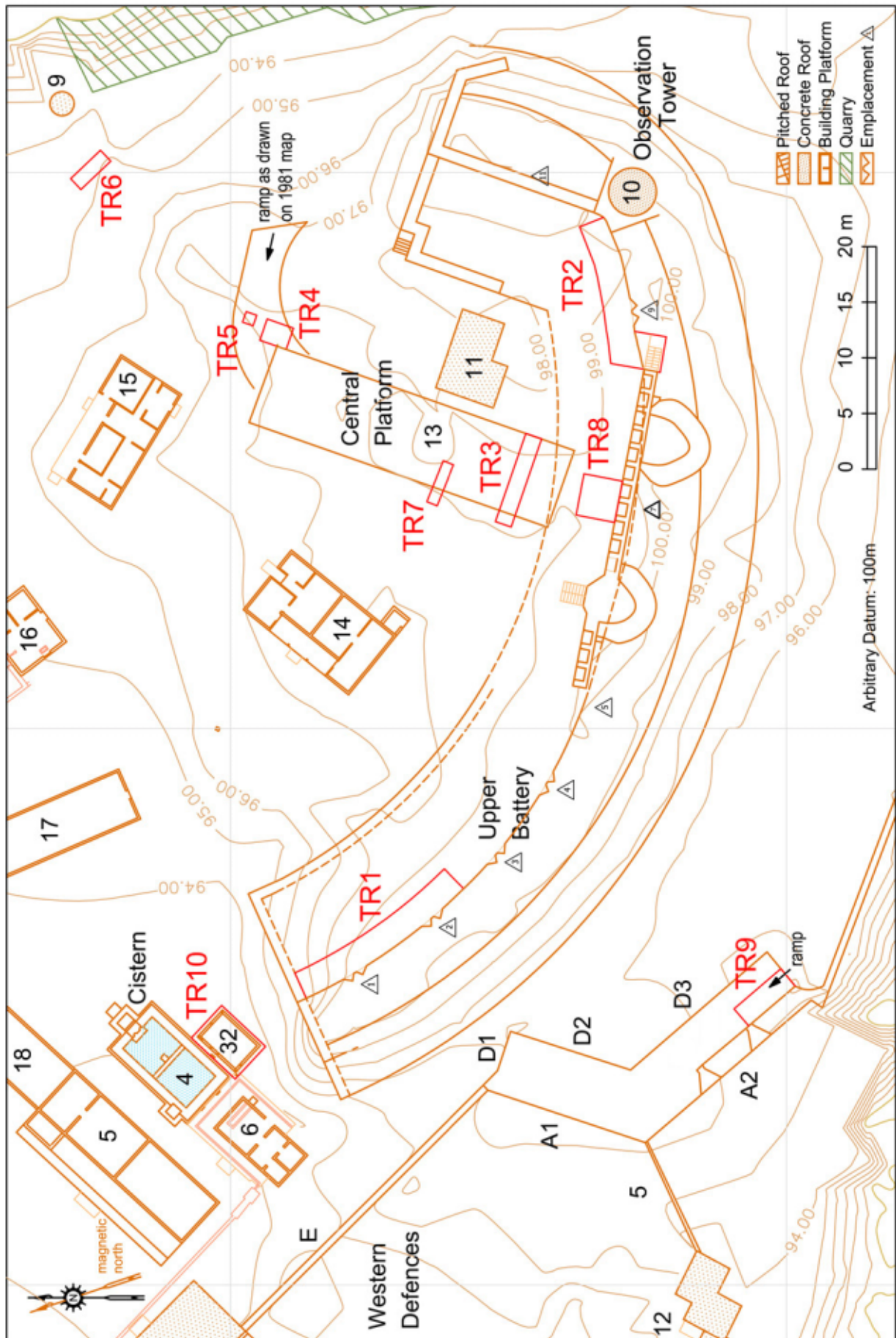


Figure 10. Plan showing the Central Platform, the Upper Battery, the western end of the Lower Battery, adjacent structures and trenches TR1 to TR10.

## INTRODUCTION

The 2004 season of fieldwork on Ile de la Passe concentrated on carefully targeted excavation aimed at the resolution of specific problems relating to adaptations to the Lower Battery, installations behind the Upper Battery, the Central Platform, the Ditch and features at the north-western corner of the islet. In addition, further documentation of the built structures was undertaken, of which the clearance and recording of a World War Two (WW II) cement floor (Structure 32) above an earlier feature on the south side of the Cistern was the most significant. Finally, further recording of the graffiti was undertaken although this arduous task remains far from complete.

We were most grateful to Mr Yann von Arnim for making an underwater reconnaissance around the islet. All fragments and artifacts recovered by Mr von Arnim have been catalogued and handed to the NHF for deposition in the Mauritius Institute. An illustrated catalogue has been submitted under separate cover.

We are also extremely grateful to Mr Owen Griffiths and Dr Anwar Janoo for their identifications of the small (and unexciting) fragments of animal bones and other organic remains (Appendix II), which have also been deposited in the Mauritius Institute.

The team (Fig. 11) comprised the authors of this report, who were the Principle Investigators, NHT Representative Mr Vickram Mugdon, together with two teams of volunteers from the *Earthwatch Institute*, each of which comprised five volunteers who participated for two weeks. There were, in addition, local volunteers on occasions. Local workmen were employed to clear vegetation, to clean up the islet and to help with heavy excavation work and backfilling.



*Figure 11. Geoffrey at Trench TR9 giving an overview of the aims and objectives to the NHF representative, Vickram, and the Earthwatch Team 1, Mary, Brad, Vida, Alexandra and George. (04jv0212)*

### **The Islet and its Monuments at the Start of the 2004 Season**

Between the end of the 2003 season and the start of the 2004 campaign a considerable amount of rubbish had once again accumulated on Ile de la Passe but, in part because of poor weather over the Christmas and New year period, the islet was not in such a foul condition as it had been at the start of the 2003 campaign. The Coast Guard (Fig. 12) kindly removed many sacks of rubbish for proper disposal on the mainland and by the end of the 2004 campaign the islet was left free of recent rubbish

Of particular concern, however, was that yet more damage had been done to standing structures as a result of cooking-fires having been lit against walls and inside buildings. While the extent of this damage is not in itself disastrous, with the possible exception of the very important Hot Shot Furnace which continues to be used for fires, the accumulative effect is substantial and will soon result in the loss of graffiti, some of which have not inconsiderable historical importance for Mauritius. Besides this loss, fire damaged wall faces will be both difficult and expensive to repair. New graffiti (Fig. 13) standing out as bright white scars on the darkened coral is also to be deplored.



*Figure 12. The Coast Guard collected the sacks of rubbish to dispose of them on the mainland. (04jv2110)*



*Figure 13. Freshly scrawled graffiti by the Landing Place stand out as bright white scars on the darkened coral. (04jv0414)*

## OVERVIEW OF RESULTS

This summary of progress and results obtained in 2004 precedes fuller and more complete documentation of the work that was done.

### **Recording and Clearing of Standing Architectural Monuments, Structures and Features**

By the end of the 2003 season all standing monuments had been documented but, when appropriate, we continue to add to the digital record, not least as and when photographs are taken in a variety of lighting conditions.

A mechanized grass cutter was used to trim the grass around the base of the monuments that had been cleaned last year. This procedure not only enhances the look of the islet in itself, but it also discourages visitors from throwing rubbish, such as tins and bottles, into the long grass.

Cutting back the grass around the cistern (Fig. 14) led to the discovery of hidden remains, Structure 32, which were then excavated (trench TR10). Clearing operations at the northern end also uncovered the floor of the corridor with post holes (Fig. 15).



*Figure 14. A grass-cutter with nylon line is ideal for cutting back creeping vegetation. (04jv0205)*



*Figure 15. Clearing between Wall G of the NW Battery and WW II Structure 23 revealed a corridor with post holes, indicating covered access to the rooms. The iron mortars, recently placed on the floor, were measured and drawn. (04jv1201)*

### **Excavations at the Lower Battery, Central Platform and Upper Battery.**

Excavation of trench TR9 at the northern end of the Lower Battery (Figs 1, 11 and 16) revealed the inner face of the original battery wall (A3) and precisely half of the south-eastern blocked gun emplacement. It was unrewarding that no significant discoveries were made.



*Figure 16. Brad at the northern end of the Lower Battery showing the ramp before excavation of trench TR9. (04jv0102)*

At the Central Platform (Structure 13 also shown on Fig. 5) the extension of trench TR3 (Fig. 17), begun in 2003, together with excavation of trench TR7 confirmed that there were a minimum of two phases to this built feature. This result added very considerable weight to the interpretation that we are here dealing with carefully constructed platform that supported flagpoles or masts for signalling.



*Figure 17. Mark and Rosanne excavating in trench TR3. (04jv1808)*

Trench TR8 (Fig. 18) located between the Central Platform and the Upper Battery revealed, as had been anticipated, traces of tracking for a Girbeauval traversing platform on which a cannon would have been mounted behind one of the emplacements.



*Figure 18. Rudy, Rod and Lise measuring and drawing up the excavated features in trench TR8. (04jv3516)*

### **Full examination of the enigmatic "Ditch" and its associated features**

A further search for graffiti on the sides of the ditch (Fig. 19) confirmed our 2003 observation that the cutting predates 1840.



*Figure 19. Graffiti on the side of the ditch confirms its existence in 1840. (04jv2106)*

Trenches TR12, TR13 and TR14 were positioned so as to answer outstanding questions with as little impact on the remains as possible.

Trench TR12 (Fig. 20), in the base of the ditch, showed that the feature was never completed but also, somewhat disappointingly, that it had been completely cleaned out in World War II.

Trenches TR13 and TR14 confirmed the dimensions of the channel around the top of the Ditch and provided some support for the idea that this was a secondary feature associated with a roof. It is likely that this channel belongs with the Observation Tower and associated structures, and should therefore be dated to late 19<sup>th</sup> or early 20<sup>th</sup> century.



*Figure 20. Rudy and Vickram, helped by a workman, drawing the top of the stone fill of trench TR12 in the enigmatic Ditch. The entrance to the Generator Hall can be seen in the background. (04jv2021)*

### *Wild Life*

If finds from the trenches were disappointing, wild life was not. A blind snake (Fig. 21), *Rhamphotyphlops braminus*, found in trench TR12, was identified as by the Wild Life Foundation reptile expert Nick Cole. The snake is a common exotic species.



*Figure 21. A blind snake from trench TR12. (04jv1803)*



### **Structure 32 and Trench TR10**

Structure 32 (Fig. 22), adjacent to the Cistern, appears to have a cement floor laid over an earlier structure. Once completely exposed in trench TR10, the remains were photographed and planned.



*Figure 22. Structure 32 uncovered in trench TR10. (04jv2415)*

### **Structure 33 and Trench TR11**

Trench TR11, in the north-western sector of the islet (Fig. 23), was begun because traces of walling could be seen emerging from the eroding scarp. Very limited excavation revealed some evidence of stratigraphy in which burnt features can be seen. Charcoal and bone is also well preserved, although very fragmentary. This area will be a focus of research in 2005.



*Figure 23. Trench TR11 investigated stratigraphy associated with Structure 33 seen in an eroding scarp. (04jv2417)*

### **Essential Conservation and Backfilling**

Essential conservation work (Fig. 24) to prevent further degradation and deterioration was also carried out. The islet attracts many visitors and it is essential that campers are deterred from dislodging stones to use for anchoring temporary shelters.



*Figure 24. The workmen uniting efforts to put back a large basalt block dislodged from the settling tank of the Cistern. (04jv0905)*

At the end of the season most trenches were backfilled (Fig. 25) so as to preserve the built remains as well as to prevent collapse of the trench edges. Wherever exposure of the tops of masonry features was compatible with their preservation their visibility was retained.



*Figure 25. Jayshree overseeing backfilling at the Central Platform. (04jv2304)*

## Recording graffiti

Systematic recording of graffiti (Fig. 26) continued at the Powder House. This represents the greatest challenge because of the restricted distance between the inner faces of the Enclosing Wall and the Powder House itself. A good start was made, but it is clear that systematic coverage will require several stepladders and planks, a number of individuals and not inconsiderable patience and dedication!

To quote from last year's Report: "One major concern associated with recording graffiti is the time needed after work in the field to process digital images and to transcribe each individual graffito. We ourselves would be happy to pass on a copy of the digital photograph archive in order for this study to be made by a competent expert."

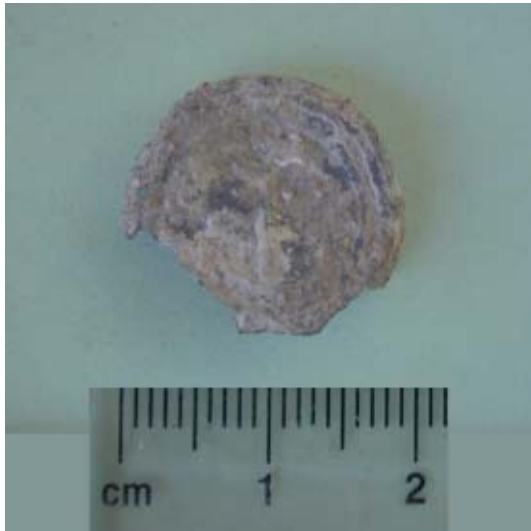


*Figure 26. Rod, Rosanne and Mark measuring control points needed for the rectification of digital photos. Graffiti on the enclosure wall of the Powder House is being recorded and drawn using this technique. (04jv2111)*

## Guns and Finds

The two iron mortars (Fig. 15) and the one extant side of an iron bed were measured and drawn and the carronade, now set upright for the mooring of boats by the Landing Point, was recorded.

No finds from either the surface or from trenches were of particular importance. A French pewter button of well-known type (Fig. 27) was the sole find of significance from trench TR9. Other metal finds catalogued during the 2004 season included several canisters, grape shots, musket balls, bullets, nails and screws. No diagnostic fragments of glass or porcelain from the excavations seem to be as early as the French period. Charcoal and bones were kept for identification and study. All finds were photographed and catalogued.



*Figure 27. Pewter button with embossed anchor from Trench TR9 at the Lower Battery. (04jv4102)*

## The Presentation of Cultural Heritage to a Wide Public

During a normal working day we would have several groups of visitors on the islet. If conditions for disembarking are not too difficult they would land and most of them, whether tourists or Mauritians, would express curiosity about our activities. Guided tours, signposts and leaflets will each have a role to play in an overall heritage management plan.

We were delighted to have among our visitors groups of school children (Fig. 28). Presenting the young generation of Mauritians with aspects of their cultural heritage is essential since the future of sites and monuments will soon be in their hands.



*Figure 28. The group of children from the Step Ahead Primary School showed great interest and enthusiasm for the work taking place on Ile de la Passe. (04jv1822)*

## ARCHAEOLOGICAL AND HISTORICAL CONCLUSIONS



*Figure 29. Ile de la Passe and neighbouring islets at sunset.*

The evidence revealed through archaeological investigation at Ile de la Passe (Fig. 29) fulfils a number of vital roles. Firstly, the immediacy of the material remains with which archaeology is concerned brings a freshness and vitality to the historical and archival records, while the buildings and remains of buildings together with the gun emplacements, mortars and more mundane fragments of military occupation are evocative in themselves. Architectural and archaeological studies continue to fill in gaps in the archival record, such as the sequence of structural phases and function associated with the Central Platform. At the same time studies are providing tangible evidence for the various schemes that were drawn up by military architects, some of which were never built while others were unfinished. Thus the debates around the defensive value of Ile de la Passe for the protection of Mauritius are seen to be reflected in the piecemeal modifications and the failure to fully implement large schemes.

There is slight but important evidence for the installation of Gribeauval traversing platforms behind newly designed emplacements on the Upper Battery, which provided the gun crews with the facility to follow their target and for neighbouring crews to concentrate fire on a single target while at the same time allowing for smaller gun crews. In order to permit the broad sweep of the traverse the barrels of the guns could not be restricted by the width of a splayed embrasure (as was the case in the earlier Lower Battery). The new emplacements had basalt sills above triangular niches, the latter probably for lights. Although this meant that the heads of the gun crews were more likely to be visible above the parapet, the much more elevated location of the Upper Battery, together with its greater distance from the water, would have made them very difficult to hit from a boat in the channel. These sophisticated arrangements and advanced weaponry, as well as the setting up of huge iron mortars cast in France, indicate that when it was considered necessary Ile de France could be provided with state of the art weaponry.

Although coastal batteries were set up on Ile de la Passe, in other ways the islet resembled a ship. All supplies, building materials, ammunition and guns, food and drinking water had to be supplied from the mainland. The sea can be rough and landing difficult. Officers, soldiers, craftsmen and labourers were isolated from the mainland, cut off from the company of others and creature comforts. To be posted on Ile de la Passe must have seemed like cruel punishment. This might be reflected in the almost complete absence of rubbish from periods of military occupation. Officers would have had a hard time keeping the men from excessive boredom which could be partially alleviated by continual cleaning. It is only since the Second World War, whence the islet has been given over to fishing parties and campers, that rubbish has accumulated. Exceptionally, however, it has been seen that there may be some possibility of documenting certain aspects of French military life on Ile de la Passe through further careful excavation in trench TR11. Here preliminary results include evidence of burning and the good preservation of animal bone from levels that should probably be dated early on in the period of French activity. There is also a slight possibility that faunal remains from yet earlier times might be recovered from immediately above the bedrock.

Outstanding archaeological problems to be addressed in future seasons include a fuller understanding of the Central Platform, particularly the additional phases at its north-eastern end, and the possibility that evidence survives for a French barrack building that maps show in front of the Powder House.

## PUBLIC OUTREACH

Ile de la Passe was sometimes thought to be pivotal to control of the Indian Ocean. At times it was strongly fortified, particularly by the French. Many of these fortifications are well preserved. How the People of Mauritius and visitors from the four corners of the world will share the responsibility of preserving the islet and its heritage will dictate its future. The dramatic and evocative situation of the islet, together with the strong visual impact of well preserved and perhaps unique structures, make for a Cultural Heritage Resource of unsurpassable importance for future generations of Mauritians. The mute stones speak volumes that can be experienced from any number of views, accessible to adults and children alike from any strand of the complex web of Mauritian culture. Organised visits, especially of schoolchildren and students, bring to life aspects of the past that have shaped Mauritius and which help to define what it means to be Mauritian.

On the 4<sup>th</sup> of February filming crews from the MBC and the University documented the visit from members of the NHF Board of Directors and a group from the University of Mauritius (Fig. 30).

A public lecture, organised Dr. Vijaya Teelock and hosted by the University of Mauritius and The National Heritage Fund, was delivered on the 11th February 2004. Radio and television crews covered the event.

Several articles appeared in the local press including one in the *Week End* of the 29<sup>th</sup> February (Fig. 31), by Jean Claude Antoine who joined the team on Ile de la Passe.



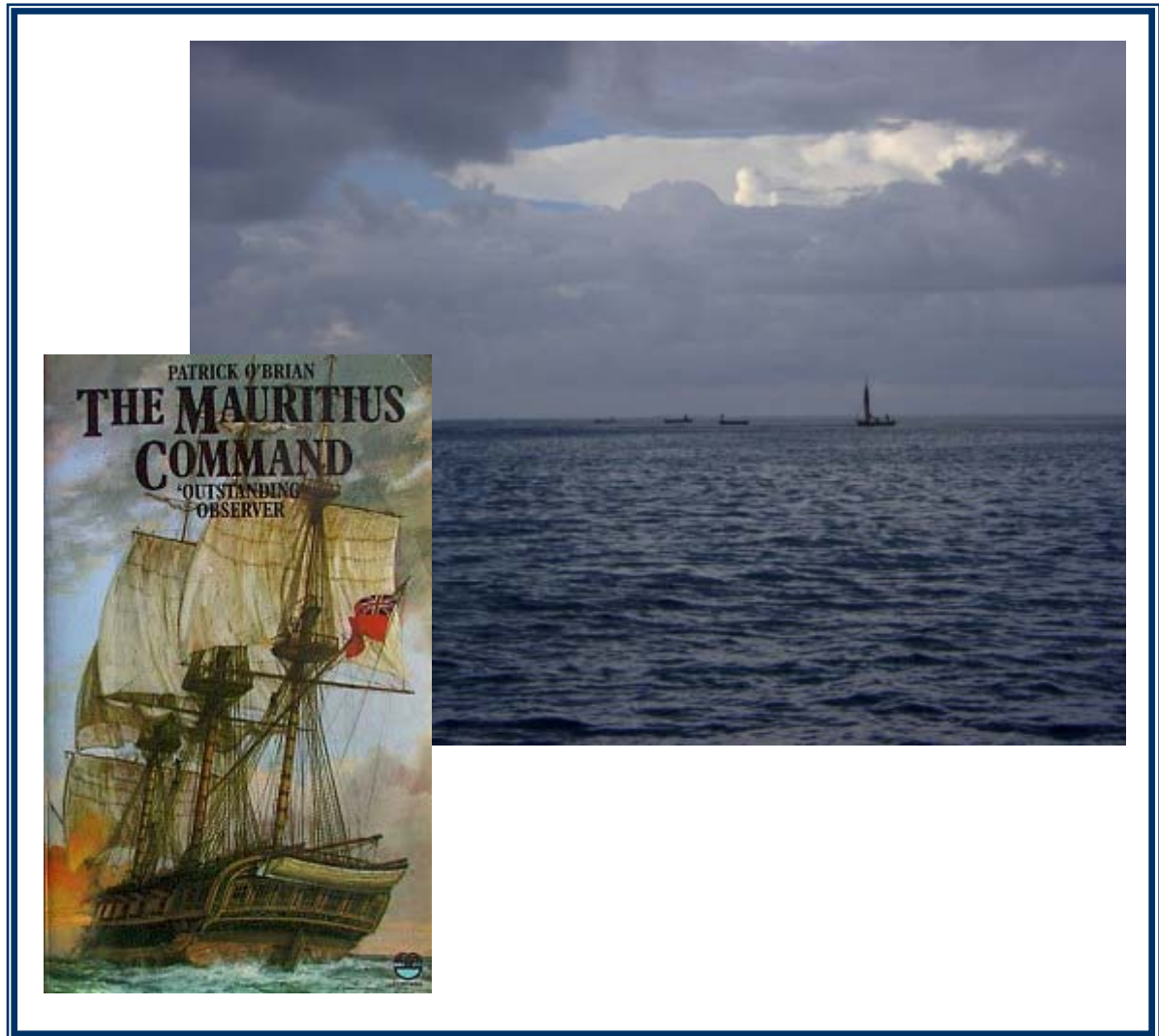
*Figure 30. A visit by Members of the NHF Board, Staff and Students from the University of Mauritius immortalised by the MBC. (04jv1510)*



*Figure 31. An article on Ile de la Passe by Jean Claude Antoine appeared in the Week End of the 29<sup>th</sup> February 2004.*

## FUTURE PERSPECTIVES

Cutting edge technology provides real time virtual reality recreations of the past in the present (Fig. 32). The potential is enormous. Mauritian school children and foreign guests could be re-enacting the battle of Grand Port in 2010, exactly two hundred years after the French won the naval battle against the British. Who knows, perhaps even the outcome could be changed?



*Figure 32. The real setting can provide the backdrop for the virtual reality.*