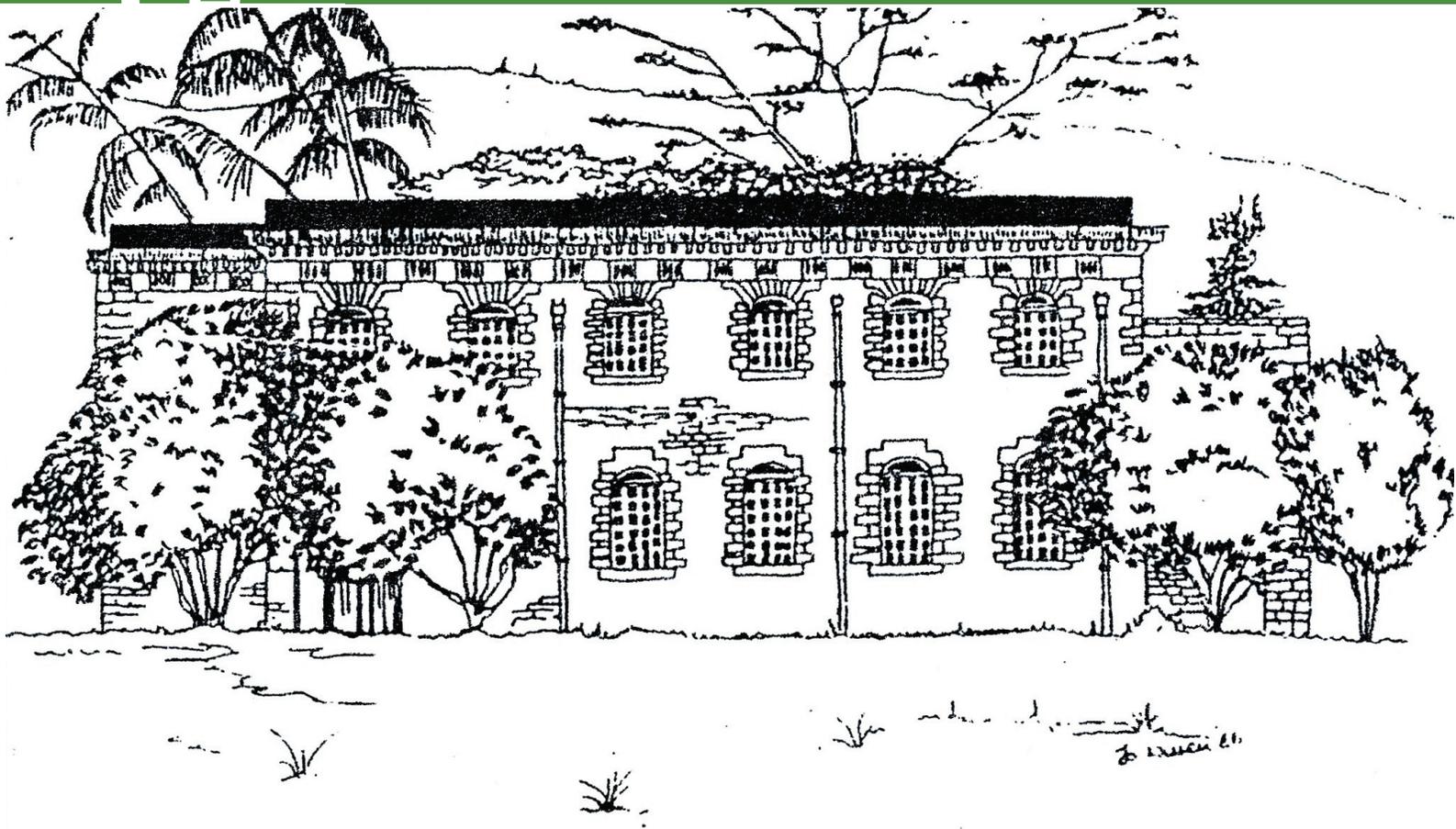
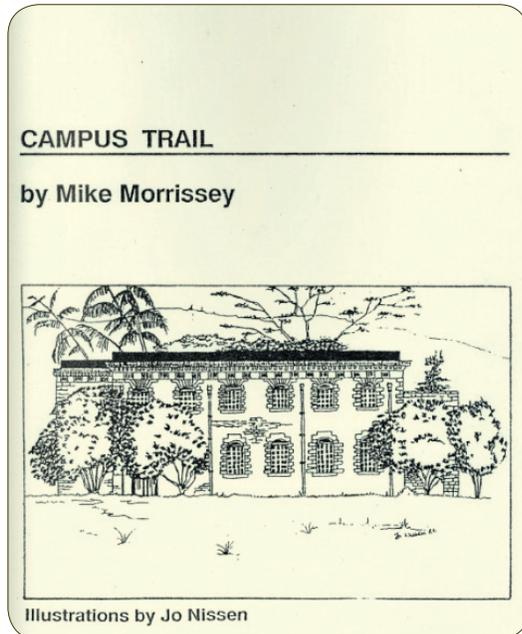


The Mona Campus Trail



Mike Morrissey



This walking trail has been followed for several decades by students of social studies education and environmental education of the Mona Campus of the University of the West Indies. Their feedback on the walk and the exercises (called Trail Teasers) has been incorporated, and the author acknowledges their contribution.

Comments by the following faculty members over the years also contributed to this Mona Campus Trail: Brian Hudson, Pam Mordecai, Ruby King, Diane Browne, Joyce Glasgow, Mike Gill, Barry Higman and Janice Ho Lung.

The late Mrs. Jo Nissen, who was at the time of the first edition in 1986 a student of the Jamaica School of Art, generously volunteered to illustrate this booklet.

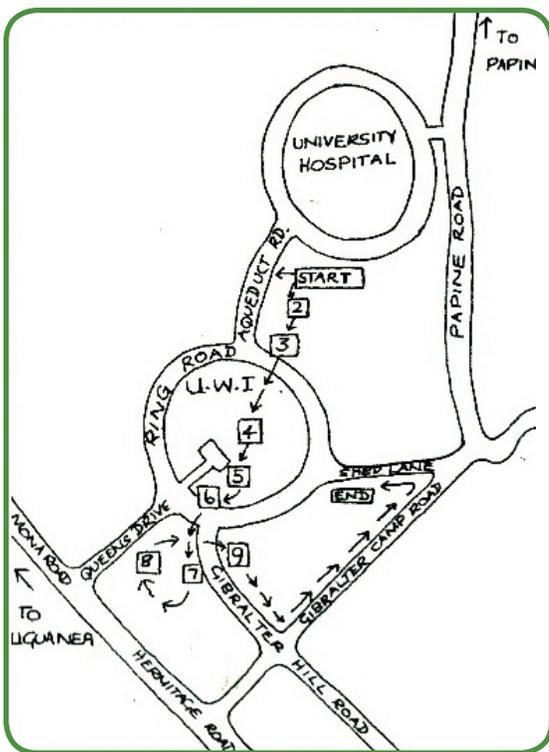
First printed edition 1987

This edition 2013

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Welcome to the Mona Campus of the University of the West Indies! Whether you are a prospective student, an enrolled student, an alumnus, or an interested visitor, you are invited to get a feel for the atmosphere and character of the Campus by following this Trail. Here is a sketch map of the route we will follow, beginning near the back of the University Press building on Aqueduct Road.



The route to follow

If you have never been on a walking trail before, we should explain. A trail is a carefully designed route to highlight key aspects of an environment. This guide leads you step by step along a chosen route, and poses a number of Teasers - six in all – as you go along. The Teasers may demand a little mental effort to solve. Solutions are given on the inside back cover.

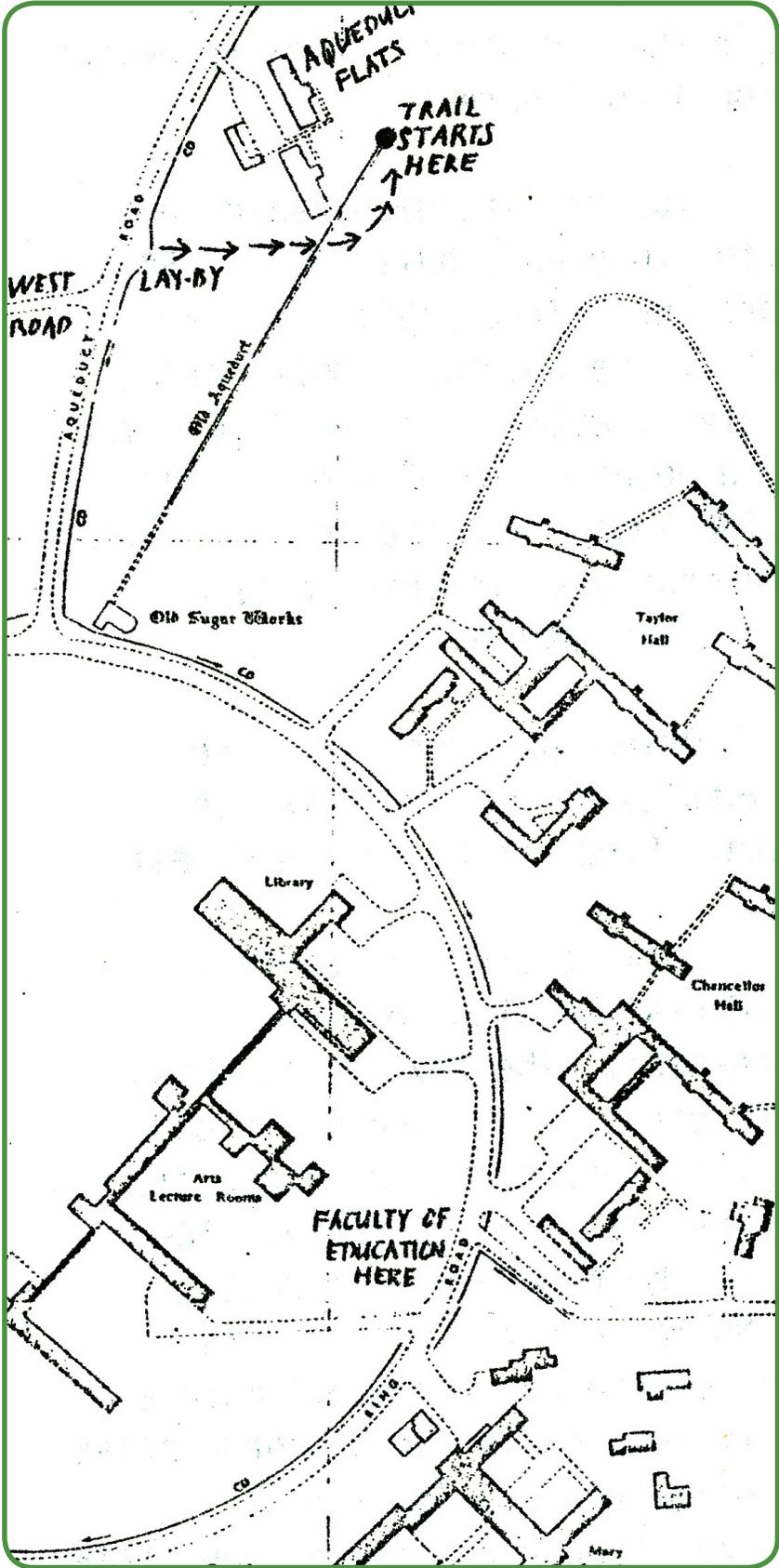
The trail does not give a comprehensive history, nor a complete guide to the university's environment. Rather, it will introduce the physical setting of the university, make you aware of the changing use of these lands over the centuries, point out some historical relics that are interspersed with modern buildings, and familiarise you with the way the campus was originally laid out. We hope it will sharpen your skills of observation and stimulate an appetite for conversation about the past and future of your campus.

We provide you with space in the guide - if you print it - to write down answers to the Trail Teasers. Try to solve these without referring to the answers which are given inside the back cover.

Now find your way to the starting point, shown on the map overleaf, cutting through the grass to the ruins of the aqueduct, opposite the point where West Road leads off Aqueduct Road (the link between the two Ring Roads of the university campus).

Walk under one of the arches of the aqueduct and then head north behind Aqueduct Flats to where the old stone structure begins (**Stop 1** as shown on the Route Map, page 1).

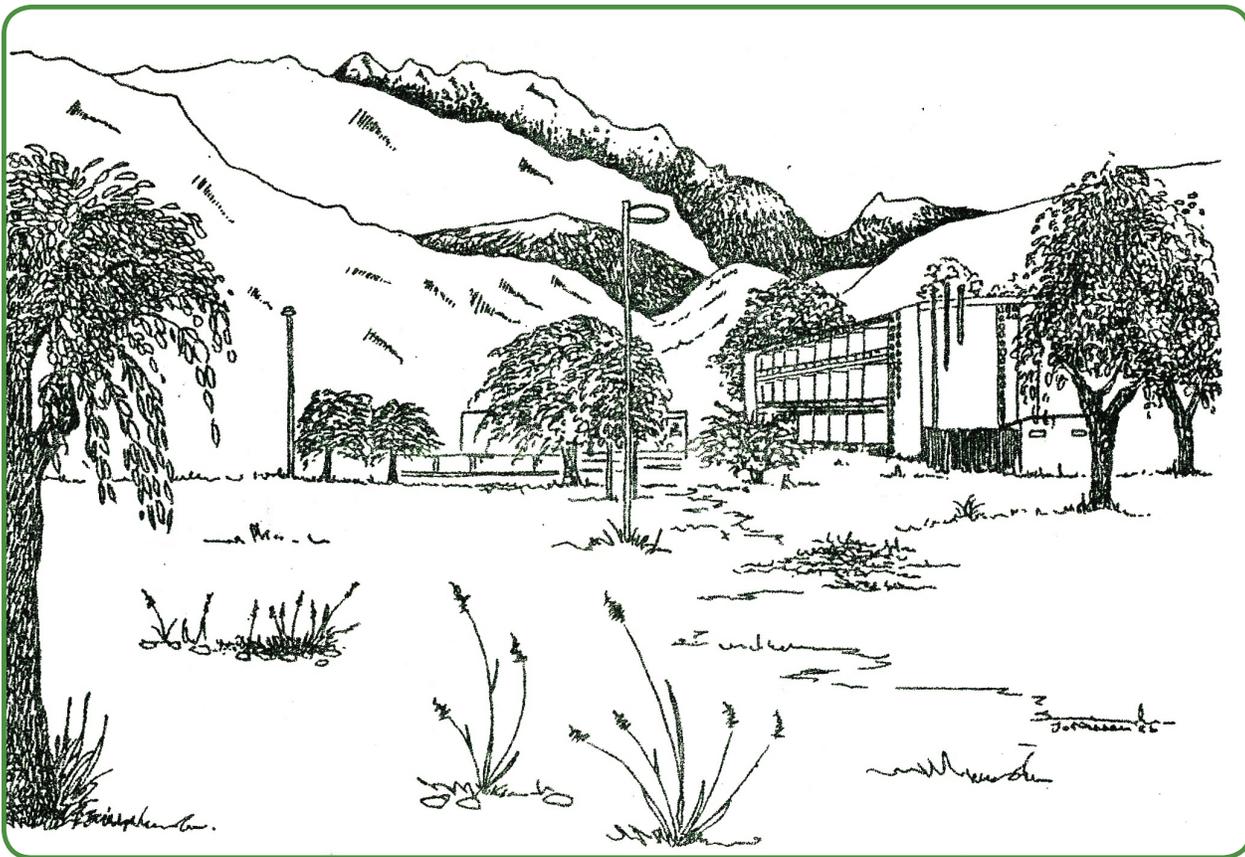
The Starting Point





You are standing beside a solid stone wall built over 250 years ago, in about 1758. It is part of the aqueduct constructed to divert water from the Hope River - at a point north of present-day Papine Square - to the estates which once prospered in this eastern corner of the Liguanea Plain.

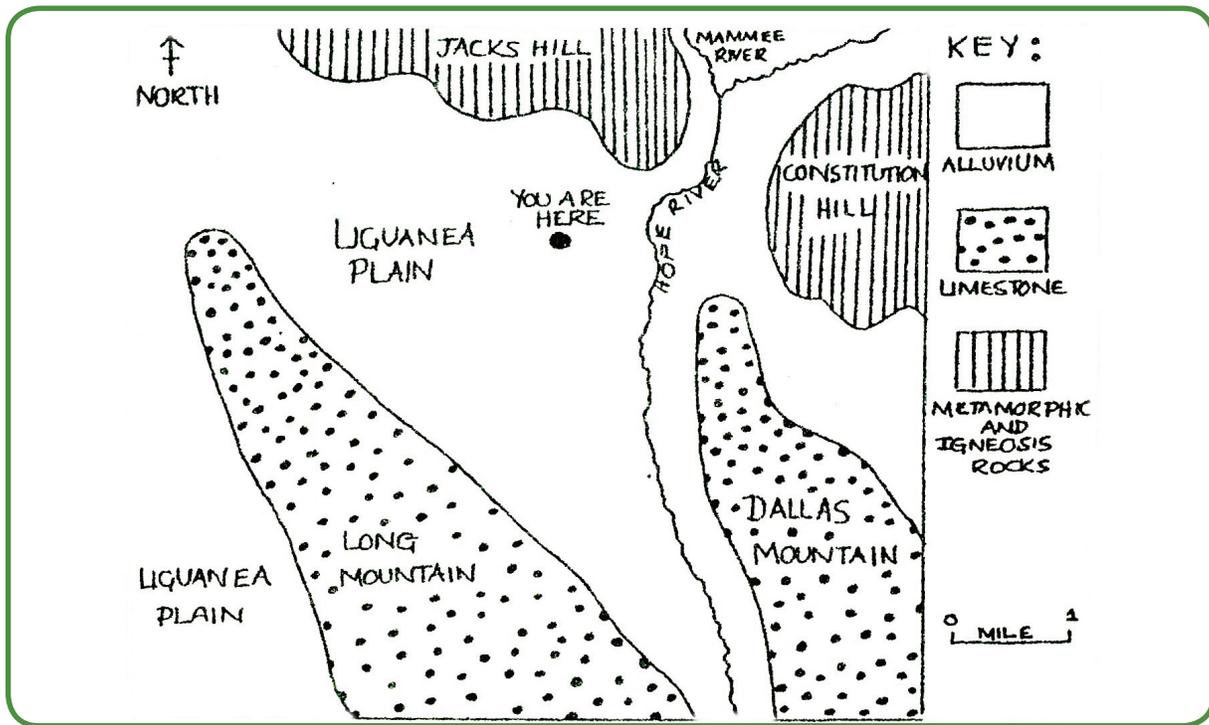
Oriente yourself. The University Main Library is due south. Find north, east and west.



View from the starting point toward the Blue Mountains

Look toward the Hospital Residents' housing to your northeast. The skyline is shown in the sketch (above). The Hope River and its tributaries rise on these slopes, and on the hills to the north. The Flora, the Hog Hole, the Salt, the Mammee and the Hope Rivers have scoured the conglomerate and igneous rocks that predominate in the hills you are looking up at.

The Hope itself rises near Newcastle, a military settlement since the 1840s at 4000 feet elevation to the north east. The tributaries merge with the main river at Gordon Town and Industry. The Hope River then winds through a narrow gorge where a weir was constructed centuries ago to divert part of the river's flow into the old aqueduct you are standing beside.



Geology of the area

The debris which was eroded from those hills, carried by the Hope in spate over tens of thousands of years, created the Liguanea Plain upon which you are standing. The river's gradient lessens as it approaches the sea, and the alluvial material was deposited in an enormous fan. Its slope gently slopes from 720 feet above sea level at Papine and takes six miles to reach sea level at Ocean Boulevard, downtown Kingston. The Campus site slopes down to 570 feet elevation at the main gate on Mona Road.

South east and south west of Campus are limestone hills - Long Mountain and Dallas Mountain. Identify both of these hills and answer Trail Teaser 1.

Trail Teaser 1

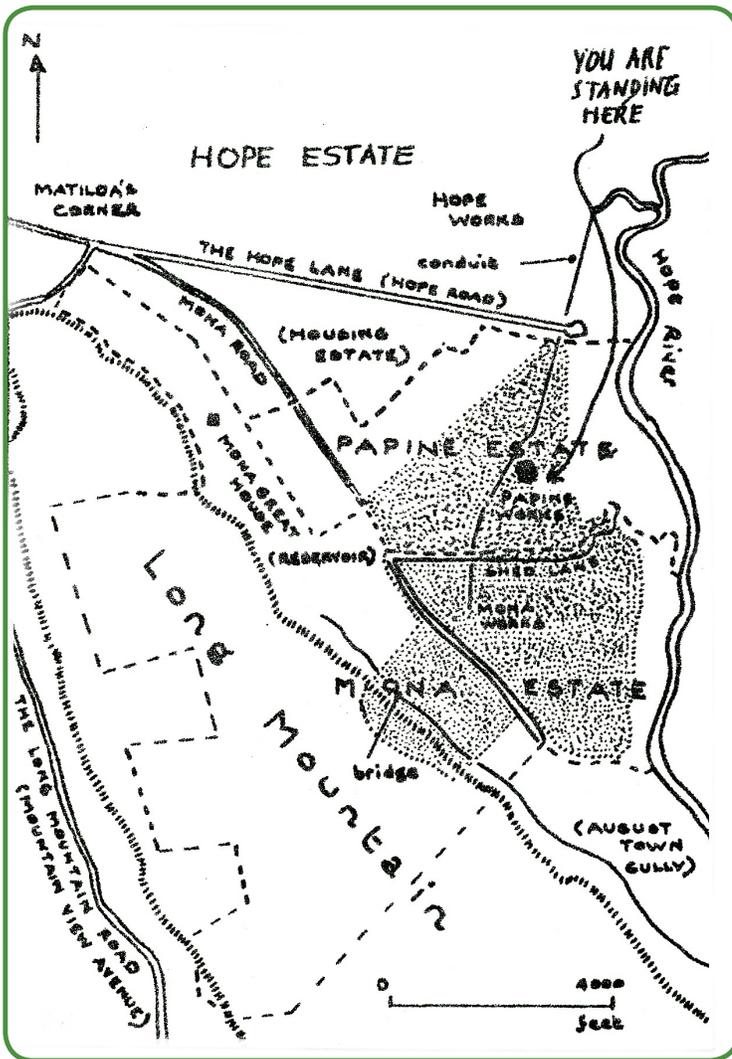
Look carefully at the characteristics of the hills around Campus. List the contrasts apparent between the limestone hills to the south and the hills of metamorphic and igneous rocks to the north and east.

Limestone hills	Metamorphic and igneous hills
a.	a.
b.	b.
c.	c.



Three estates were established in this part of the Liguanea plain: Hope, Papine and Mona. These names have been in use for more than two centuries. The old estate boundaries are shown in the map below.

You are now standing in the old Papine estate - on the site of that estate's slave quarters. Archeological digs since the 1980s uncovered many artifacts used by the enslaved Africans who were brought here.



The fresh cool water from the Hope river was channeled through conduits and small reservoirs through the Hope estate to the duct beside you. Examine it carefully. Note the rounded, smooth river stones, varying in colour and texture, which were used in its construction. Consider the engineering skills which would have been involved to ensure the gentle gradient of the duct which allowed the water to flow down from estate to estate by gravity.

Slave labour was utilised to move the building materials up from the Hope valley. Imagine the sweat, tears, pain, punishment and death that those enslaved people would have endured. Imagine the sounds of digging songs of long ago as these stones were carried and put in place.

From here we will be walking south through campus, following the route shown in the sketch map on page 1. We will stop at each of the numbered points.

Hope, Papine and Mona estates

Walk south now beside the aqueduct for a short distance. Observe that its support changes from a solid wall to a series of arches as the duct's height above the sloping ground increases. Count the arches as you walk past them and stop by the sixth (**Stop 2**).

Beside this arch, and the seventh one, is the remains of an old tank used to store water. There is a run-off sluice from the duct used to maintain the water level in the tank.



Part of the Papine estate aqueduct

Examine one of these arches carefully. The first ten arches each has a span of 66 bricks and a width of ten feet. Now answer Trail Teaser 2.

Trail Teaser 2

a. Why does the aqueduct change from a solid structure to an arched structure?

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b. How do you think the arches were built?

.....
.....

c. Why do you think that clay bricks rather than river stones were used in construction of the arch?

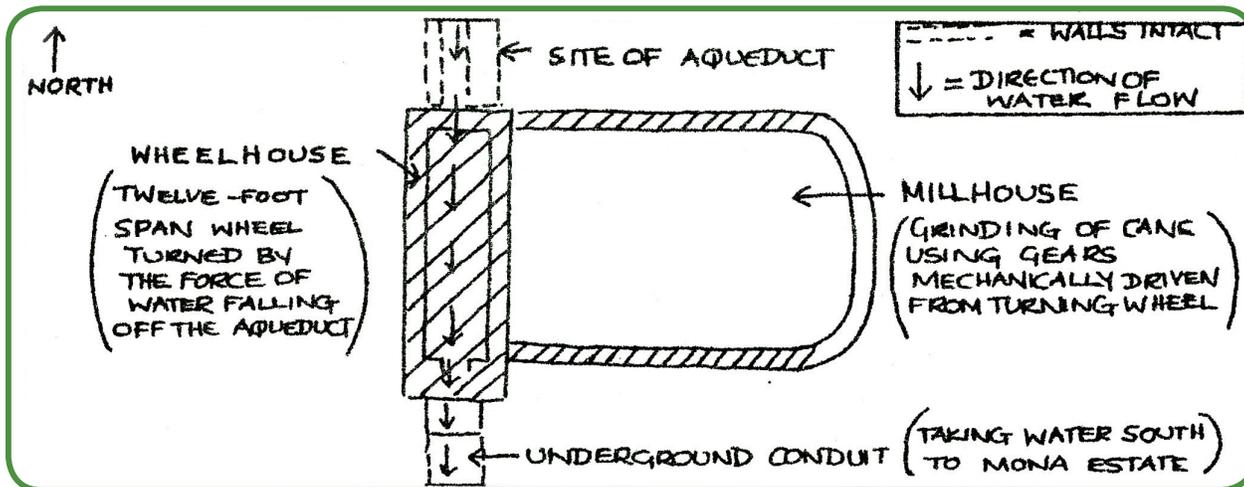
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Now walk beside the aqueduct. The last surviving arch is 20 feet high - the final few arches before the ring road collapsed in an earthquake. You will notice from the huge chunks of wall lying around that the aqueduct had no modern reinforcement so was susceptible to violent earth movements. Why no reinforcement?

Stop when you reach the ruins beside the ring road, **Stop 3**

Papine estate and Mona estate were both sugar properties. Each had its own sugar works. You are standing beside the surviving structure of the Papine works - the wheel house and the mill house. Water carried by the aqueduct turned a wheel twelve feet in diameter that rotated in the wheel house. Look at the sketch plan below and identify in the ruins the wheel house, the mill house, and the likely whereabouts of the underground conduit that would have then carried the water on down slope to Mona estate.



Sketch plan of the Papine estate Mill House

From this point you have a good view of Long Mountain to your south. It's covered with sparse vegetation, bush and trees which survive in the lower rainfall of the south and the poorly developed soils of the limestone slopes. Can you see gaps in the vegetative cover? What human activities have made these scars and gaps? Should we conserve the vegetation of these hills? What are the long term consequences if the forest cover is removed?

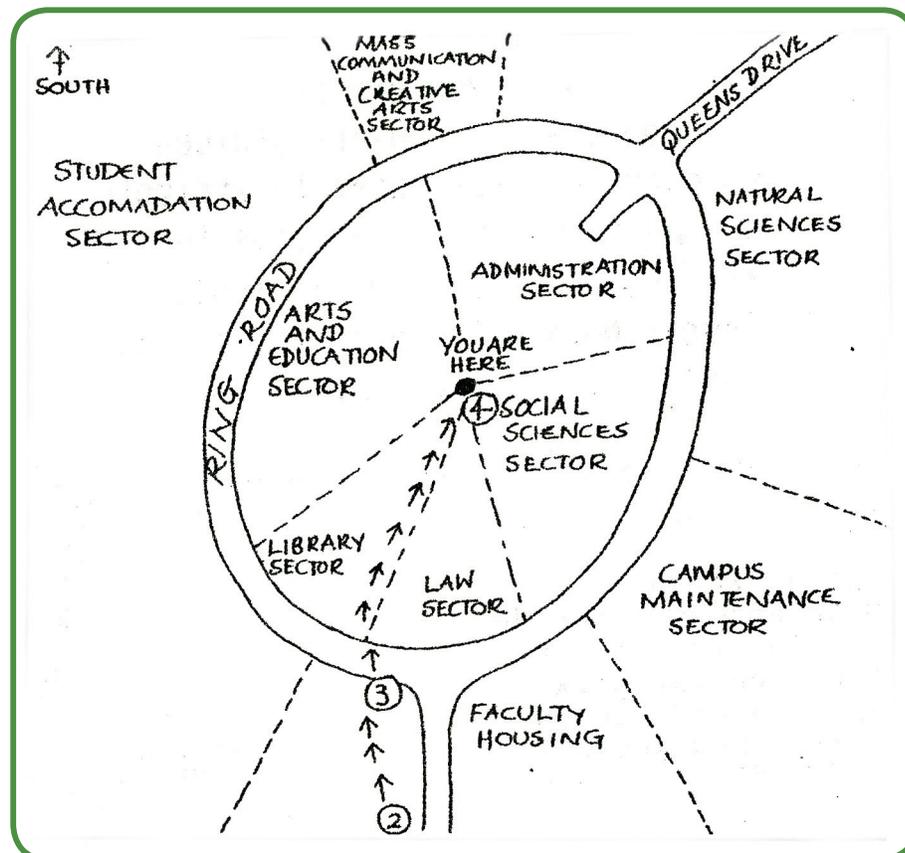
The entire area on which campus is built was forested before European colonisation. Try to imagine the feel and smells and sounds at this spot 500 years ago, before the forest was first cleared to make way for sugar cane.

Across the road are the ruins of other parts of Papine works. Bougainvillea bushes hide the foundations of other estate buildings.

Walk on, pass by the foundations to the east of the Norman Manley Law School and come to a halt on the middle of the grassed area to the north of the Mona registry buildings, **Stop 4**.

You are now standing in the centre of the divided circle that constitutes the plan of the university as conceptualised in the 1950s. You can survey the buildings all around you. This sketch map explains the plan. The circle was originally divided into six segments for the original faculties of social sciences, law, arts and education, and for support functions of administration and library.

Sketch map of
Mona Campus layout





Now walk on past the registry and assembly hall in the direction of the bank and bookshop. Cross the road and you will see the point where the aqueduct reappears, after being channeled underground from the site of Papine works. This is **Stop 5**.

This section of the road which now leads to the Arts faculty car park was part of the old Shed Lane. It once crossed the entire area now occupied by Campus, from the Biochemistry gate on Mona Road to the Chancellor Hall gate on Papine Road. These two gates are no longer used. You can see Shed Lane in the map on page 7. Another part of Shed Lane still exists, between Mary Seacole Hall and Chancellor Hall. This lane once marked the boundary between the old Papine and Mona estates.

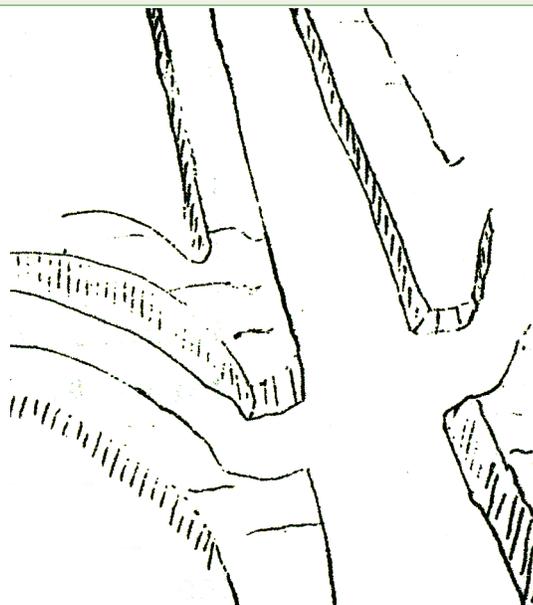
Since leaving the ruins of Papine estate sugar works, you have been walking along the route of the underground duct which brought water down to the Mona aqueduct.

Near to where you are now standing you can see two old run off sluices. When the water was not being used for milling sugar cane at the Mona works, it was used for irrigation. That's what the sluices were for. Trail teaser 3 has a sketch of this interesting yet unmarked historical relic.

Trail Teaser 3

Here is a sketch of the Mona aqueduct near the entrance to the NCB car park. Examine the old stonework carefully. How would these run-off sluices worked?

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Now continue walking south beside the aqueduct until you reach the last arch before the Ring road. Stop here, **Stop 6**, examine the stonework carefully, and answer Trail Teaser 4 on the next page.

Trail Teaser 4

Try to answer these four questions about the construction and function of the aqueduct.

What material faces the wall of the aqueduct here? Where do you think it came from?

Why did the water have to flow down at this elevation?



Where do you think the bricks may have come from? Why?

What material was used to fill the structure? How is it different from the material used to face its walls?

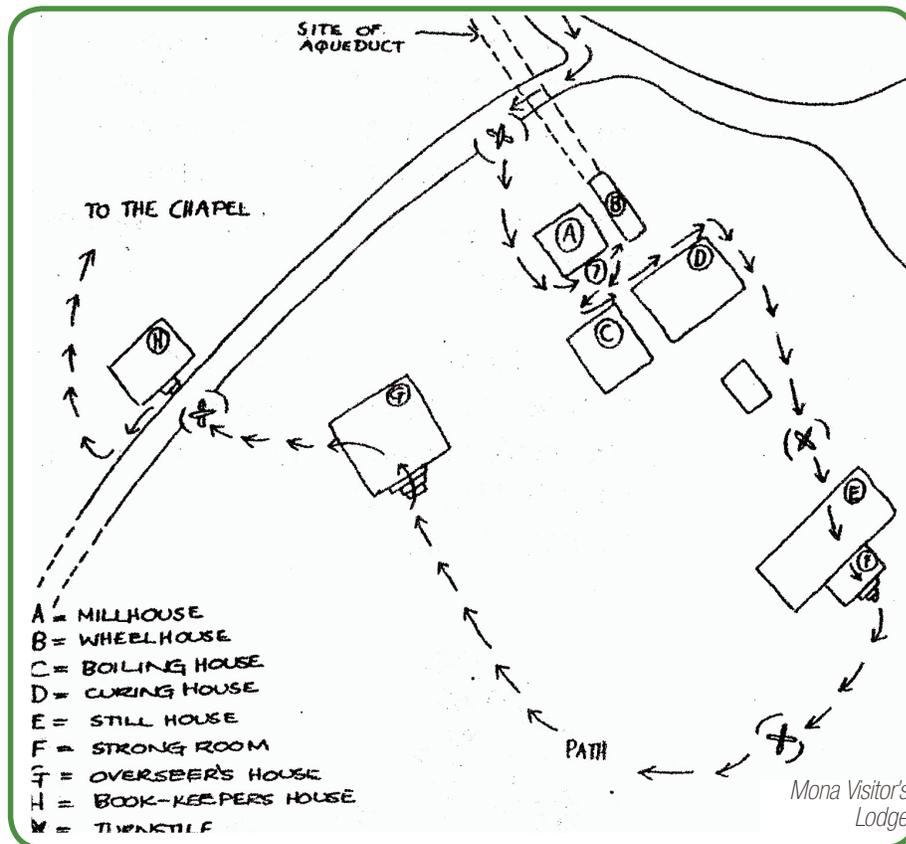


Now follow the aqueduct to its southerly end. Pass by the entrances to the Chapel car park. Take the next turning to the right. Go through the turnstile a chain further on your left.

You are now in the environs of the old Mona sugar works. Walk across the little bridge and find a seat to your left, in front of the grass-covered mound. You have now reached **Stop 7**.

Mona estate had its own sugar works, sharing the water supply with Hope and Papine estates, as you discovered. The water which was used to turn the mill at Mona had already provided energy for crushing cane on the other two estates.

Sketch plan of the Mona estate
Sugar Works



The sketch plan, above, shows you the function of each of the buildings around you. Walk around and identify each structure following the arrows on the map:

- The **Mill House** was where cane was crushed and ground and juice extracted
- The **Wheel House** beside it once contained a giant water wheel which turned under the force of cascading water
- The sugar was crystallised in the **Boiling House** where bagasse was used as fuel

- d. The wet sugar was then drained in the **Curing House** (it is now a plant nursery)
- e. Some of the wet sugar was used to make rum in the **Still House** - an arch of the Still House is inscribed 1759
- f. Liquour produced was secured in the **Strong Room**, the remains of which can be seen south of the Still House, facing the Mona Visitors' Lodge and Conference Centre. This hotel now makes use of the ruins as the backdrop for weddings and big cocktail events.

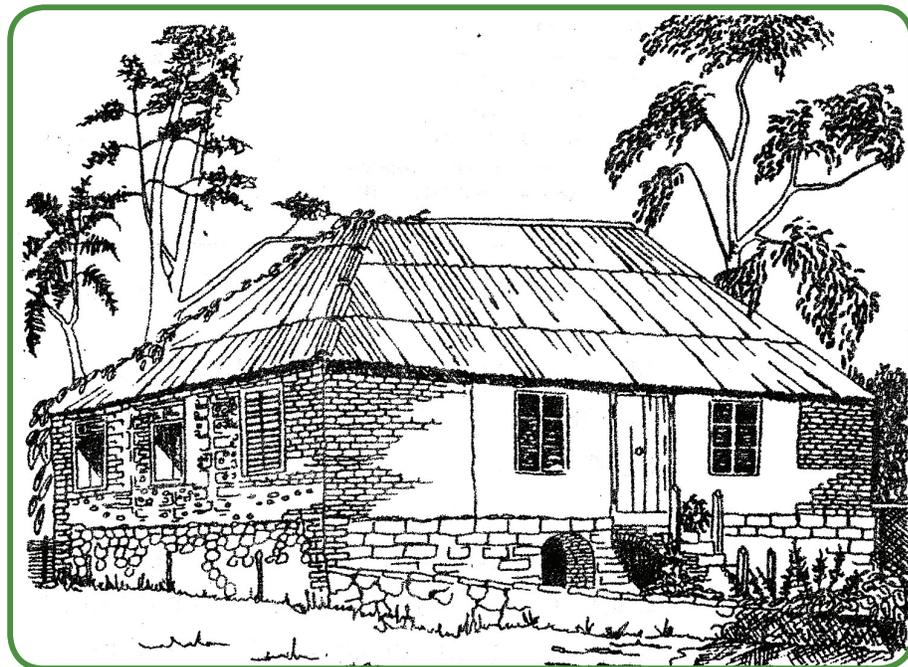
Sugar and rum production at Mona ceased in 1910. Mona was the last sugar estate in the parish of St Andrew to go out of cane production. These structures are all that remain of Mona estate today.

Can you imagine the sound of water cascading from the aqueduct, the noise of the wheel turning and moving the gears which turned the mill! Imagine the smells of cane juice, smoldering bagasse, the sweet rum vapour of the distillery? Your eyes would have been smarting from the smoke which settled in the air.

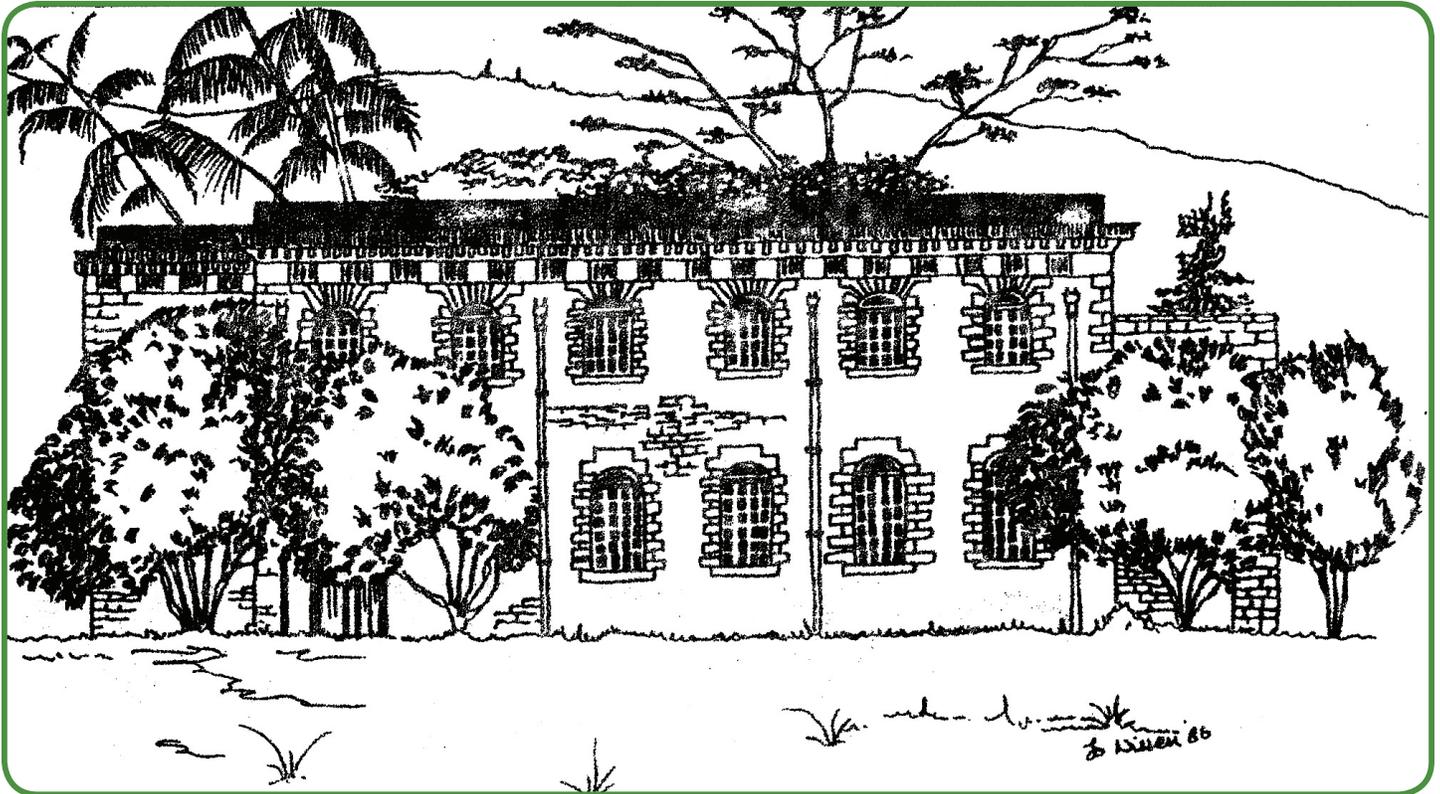
Now continue walking, following the arrow on the sketch plan, through another turnstile, and follow the footpath in the direction of the Chapel. You will arrive at the remaining foundations of the **Estate Overseer's House** (g on the plan).

To your left, through yet another turnstile, you will come to the **Book Keeper's House** (h) – the only building that has survived intact. This building now most appropriately houses the University's Archaeology Laboratory.

Book Keeper's House, Mona estate in 1986



Look west from here, across the field toward the Science Faculty. This is the site of Mona estate's slave village, which was home at Emancipations to 160 enslaved African and Jamaican-born men and women. They are commemorated by the cut stone obelisk which you may be able to spot near the entrance to the Geography and Geology Department.



The Chapel

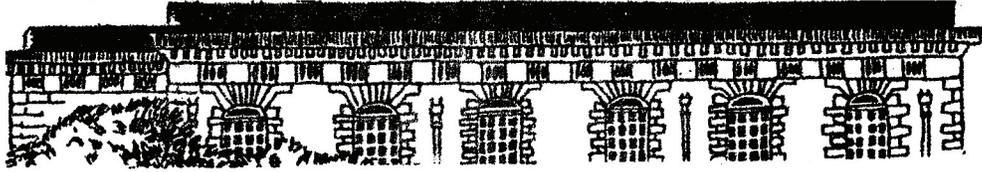
Continue walking north now to the University Chapel (**Stop 8**).

The Chapel is a much grander structure than any of the original buildings on small estates like Papine and Mona. This is because it's a building that was moved here, in 1956. Stone by stone, the building was taken apart in the old Gale's Valley estate, in the Queen of Spain's Valley in Trelawny. Built originally over 200 years ago as the Curing House of a large and prosperous plantation, it was a good example of West Indian-Georgian architecture. A number of benefactors provided for its removal and reconstruction on the Mona Campus and its conversion into a chapel.

On the north-facing side of the Chapel, near the roof, the name of the planter who commissioned the original structure in Gale's Valley can be seen running the entire length of the wall, just below the coping. Trail Teaser 5 challenges you to decipher his name.

Trail Teaser 5

Fill in the appropriate spaces on this sketch of a detail of the Chapel with the name of the planter who commissioned the structure as a curing house and the date of construction



You should return to the Chapel on another occasion and familiarize yourself with its detail. Meanwhile, on to the last leg of the Mona Campus Trail!

Walk east now, passing the Chapel and back on the road beside the Mona Aqueduct. In front of you is a large wooden building now known as the **Old Dramatic Theatre**. Look carefully at this building, your final stop (**Stop 9**).



The Old Dramatic Theatre



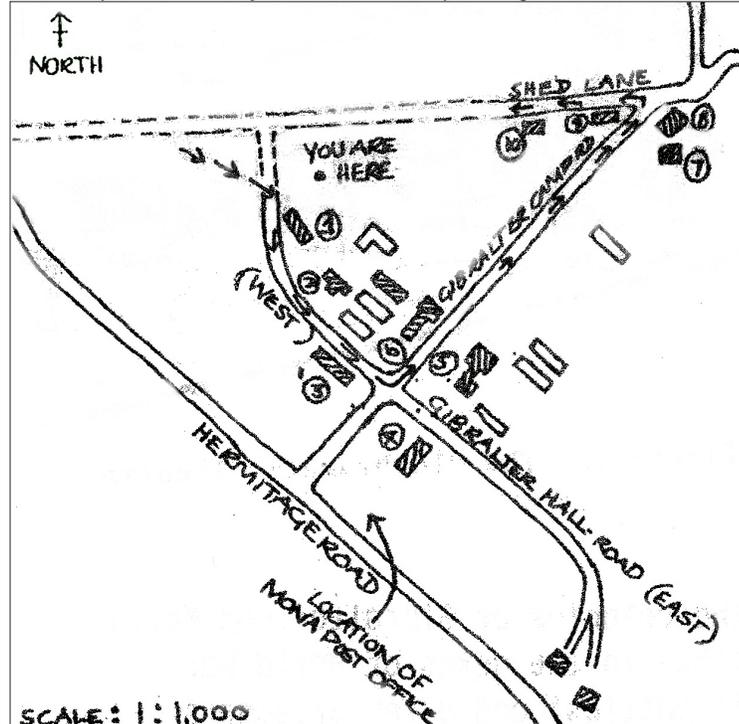
If this building looks to you like a typical British colonial military structure, like buildings in Up Park Camp or Newcastle Camp, this is because that is what it was. This and many other buildings in this part of the Campus were constructed in 1940 to house refugees from Malta and Gibraltar, both British enclaves in the Mediterranean at the time. Many were refugees were escaping the Second World War. Some were interns. To the east, near the entrance to the Mass Communication building, you can see the concrete trough where refugees and some prisoners of war would wash their clothes.

When Mona and Papine estates were selected in 1948 to house the newly established University College of the West Indies, these camp buildings became lecture rooms and halls of residence.

Trail Teaser 6 gives you a map of the old Camp buildings. Follow the arrowed route along Gibraltar Camp Road (passing the University Health Centre) then turn back to the Ring Road down Shed Lane. As you walk, identify the old Camp structures, or their foundations, and note the present uses of those buildings which have survived.

Trail Teaser 6

Name the present university uses of the old Camp buildings which have survived.



-  Still standing and in use
-  Demolished or Foundations only

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

You have now reached the end of the Trail. It was developed to give you some insights into the environment in which you are now studying. It is a place which has its own past, as well as present. The space has transitioned from forest lands, the home of Tianos, through sugar and slavery, a temporary home for refugees of a world war, and then the site of the first university of the English-speaking Caribbean. It's the setting now for West Indian learning, innovation and creativity.



Answers to Trail Teasers

Teaser 1

The limestone hills to the south are rounded in topography, have no rivers, and have never been cultivated. Soil depth is thin and white limestone rock can be gleaned on the surface in cleared areas.

In contrast, the metamorphic and igneous hills to the north and east have been deeply dissected by tributaries of the Hope river. Little of its original forest vegetation remains as these hills have been cleared for cultivation over five centuries. Soils were originally fertile, but have suffered severe erosion.

Teaser 2

- a. The arch is an architectural device to economise on construction material, and, at the same time to permit free access under the aqueduct.
- b. The bricks were laid on a wooden frame in such a way that, when the frame was removed, the arch could not collapse. The same frame would have been used for a series of arches. Each curved section therefore has identical dimensions.
- c. Its much easier to construct an arch using clay bricks of uniform size than to have to cut stones to shape.

Teaser 3

Wooden sluice gates were fitted to the main duct and to run-off sluices. The gate on the main sluice would have been closed, and gates on the run-off sluices raised, to divert water for irrigation purposes.

Teaser 4

The cut limestone facing the aqueduct at this point was quarried on the Mona property (which extended south to Long Mountain, including the area now occupied by the Mona Dam, the new Vice Chancellery and College Common. Quarries still operate on the sides of Long Mountain. The structure was filled however with stones and boulders from the fields of the property and from the nearby Hope River. The clay bricks are most likely from England, brought as ballast in sailing vessels whose return cargo would have been sugar and rum.

The reason for building the aqueduct in the first place was to give the diverted waters of the Hope sufficient elevation to turn the water wheel on reaching the Wheel House of Papine estate and Mona estate.

Teaser 5

EDWARD MORANT GALE ESQUIRE 1799

Teaser 6

1. Old Dramatic Theatre
2. School of Printing
3. Heritage Park [only the concrete bases of these buildings remain: the area is dedicated to the earliest batch of students and teachers]
4. Demolished to construct Hall of Residence
5. Campus Personnel Department
6. Part of Department of Social & Preventive Medicine
7. Joint Board of Teacher Education/ Jamaica Tertiary Education Commission
8. UWI Endowment Fund
- 9 and 10. Now a Park. Nunnery buildings were leveled

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