

# ROADSTER



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*“Paving the Way”*

## Flood Rains Leave Billions in Infrastructure Damage Across 9 Parishes.



Prime Minister Andrew Holness (2nd left), Permanent Secretary, in the Ministry of Economic Growth & Job Creation Audrey Sewell (right), Director General of the Office of Disaster Preparedness & Emergency Management (ODPEM), Major Clive Davis (Centre) NWA CEO, E.G. Hunter (right-Back) and Communication Manager at the Office of the Prime Minister, Robert Morgan (left). They were part of the tour party that looked at some of the damage caused by heavy rains in May. The rains left several communities inaccessible for days. See related stories and pictorial inside.

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## An April and May to Remember... Government responds to adverse weather condition



Member of Parliament for South-East Clarendon, Hon. Rudyard Spencer (right) makes a point to NWA Director of Regional Implementation & Special Projects, Varden Downner, while touring affected sections of Clarendon.



A tractor being used as a taxi by some residents of St. Thomas, as the Golden Grove Main road was flooded and was only passable by such vehicles.



M.P. Spencer, Varden Downner and NWA's Regional Manager for the South Region, Denton Moore looking at one of the affected drains.



Varden Downner (left), along with members of the St. Thomas team: (left to right) Assistant Parish Manager, David Walton, Parish Manager, Leighton Uter and Assistant Parish Manager, Shamoui Glaves looking at one of the areas by the Plaintrain Garden River



A severed Dover Main Road in St. Catherine. It was one of the stops Prime Minister Andrew Holness made on his tour of damaged areas.



M.P. Pearnel Charles shows Minister Warmington and Robinson one of the challenging areas in his constituency.

## *NWA ringing in changes as works progress along the Mandela Highway*

With its sights set on the September 2018 completion, the NWA continues to ring in new traffic changes along the Mandela Highway, where its near \$8 – billion rehabilitation project is taking shape. The project which includes the lifting of the road, construction of bridges, laying of new drains and the widening of the road is making steady progress.

To date the NWA has implemented a number of changes to the flow of traffic, as it moves to make the corridor more reliable and less stressful for the public. Already, shifts have taken place with the traffic being re-routed to allow for the construction of one of the abutments to the overhead bridge. A section of the westbound carriageway has also been converted to four lanes in order to accommodate traffic in both easterly and westerly directions.

Effective Saturday, July 1, another major change was implemented. This change saw traffic heading into the city being re-routed onto what will eventually be part of the new road. This stretch will form part of the service road to the Mandela Highway.

Project Supervisor Charles Thomas explained to the ROADSTER that traffic heading towards Kingston had been diverted onto the newly constructed "Q Ramp" on the northern side of the project. The ramp is located just beyond the Hydrel Group of Schools. The traffic will exit back onto Mandela Highway in the vicinity of Tom Pringle Drive.

Mr. Thomas said that the changes are to facilitate the continuation of works on the current eastbound lanes to include soil nourishment, sub-base and base course layers, as well as the construction of two box culverts. The 'Q' ramp is outfitted with safety features such as temporary street lights and road markings.

Major accomplishments on the Mandela Highway six-lane improvement project to date include the completion of 40% of the concrete asphaltic overlay works along the corridor.



The latest diversion to be created along the Mandela Highway. This road which is referred to as the Q-Ramp takes traffic heading into Kingston from the direction of Spanish Town

Three box culverts and two retaining walls have been constructed on the north side or eastbound lane in the vicinity of the Ferry police station and the Hydrel Group of Schools.

In addition, six of seventeen CSP storm drains have been laid thus far with significant progress on the construction of two integral structures along the stretch.

The pile foundation, abutment walls, T-beam and bearing platforms of the brand-new Fresh Water Bridge have been completed with the structure designed to mitigate scouring. While the pile foundation and pile caps for the overpass bridge, located near the entrance to the Q ramp, also on the north-side of the project, is complete. Piles are those objects which are driven deep into the earth until they reach solid soil to safely anchor the pier or foot of a bridge.

An ultrasonic test has been carried out on the present structure to assess its integrity and the quality of works has been given the thumbs up.

To date 44% of the contractual period has elapsed with approximately 60% of the works complete as the Mandela Highway improvement project continue to progress at a decent pace.

## \$ 20 – million drainage improvement work for Mannings Hill Road in St. Andrew



The Ford that will soon be, “the Ford that was,” along Mannings Hill Road. The Box Culvert is to be built in this location.

Mannings Hill Road in St. Andrew is one of the busiest corridors in the city of Kingston. The road lies between sections of the Manor Park community and Red Hills Road and is a major point of entry to Havendale, Smokeyvale and other highly sought after St. Andrew communities. Traffic snarls is therefore not a surprise to some, especially at peak hours, but to see a section of the corridor converted to a virtual river course during inclement weather could scare even the most intrepid among us.

It is with this in mind and the need to make the corridor more resilient and reliable that the NWA has undertaken a \$20 – million project along this very busy corridor. The project is being executed along the road in the vicinity of Lawrence Avenue and Sullivan Avenue. The road was closed at the end of June and is expected to remain that way for a period of three months, which is the duration of a contract signed with NF Barnes Limited.

Director of Regional Implementation and Special Projects at the NWA, Varden Downer, told the ROADSTER that the existing drainage facilities which include a gully and a fording were inadequate and ultimately resulted in damage to the invert of the gully, as well as scouring of the road surface. It is such impact that then caused a serious backing up of traffic along the road, often after a bout of heavy rains.

Mr. Downer said that the project will seek to rectify that issue. The project include the construction of a concrete box culvert, concrete u-drains, retaining walls and new gully inverts. The road is expected to be lifted over the box culvert, thereby ensuring that the stretch is more reliable and facilitates travel during all types of weather.

During the closure, the alternative routes will be Constant Spring Grove to Constant Spring Road then onto Saxthorpe Avenue or the reverse. Motorists can also use Lawrence Avenue to Sullivan Place then onto Sullivan Avenue or the reverse.

One motorist who saw the NWA team at the location during a recent walk through commented that the work was timely and that he was looking forward to its completion.

## 240-Million Dollar Road Rehabilitation Project for Mitchell Town to Portland Cottage, Clarendon

For residents of the Lancelot Hall, Portland Cottage, Mitchell Town and Rocky Point communities in South Eastern Clarendon, the traverse to their homes and businesses has been difficult due to the existing poor road conditions. The surface of the roadway from Lancelot Hall through Mitchell Town to Portland Cottage has deteriorated overtime leaving many residents frustrated.

They are however now receiving a well-needed reprieve as the National Works Agency (NWA) through the Major Infrastructure Development Programme (MIDP) has allocated nearly 240 million Jamaican dollars for the rehabilitation of 7.7 kilometers (km) of roadway.



Cleaning of drains

The scope of work for this project includes bushing, trimming of banks and the cutting of overhanging trees along the roadway. Headwalls and a rubble masonry retaining wall are being constructed while soft spots have been excavated and refilled.

There is also a drainage component to the project which includes the cleaning of side drains, blocked culverts and earth drains together with the construction of V and U Drains. Pavement works includes scarifying, grading, sub base, base course and prime coating after which the roadway will be overlaid with Asphaltic Concrete. The rehabilitated road will be complete with road marking and signs.

The project has been contracted to Build Rite Construction Company and as at June 25, 2016, works were 40% complete. The progress of the rehabilitation has been curtailed by heavy rains during the months of April, May and June. During the sustained rainfall of June 16 to 19, in particular, severe scouring took place along the corridor and hampered the rehabilitative progress. Rehabilitation work started on the roadway on March 23 and is expected to last for six months.



Scarified road surface in preparation for road formation



A Back Hoe at work

## *Road from Middle Quarters to New Market, St. Elizabeth gets much-needed attention at last*

A Retaining Wall under construction along the corridor



After several bouts of protest including road blocks over the bad condition of the Middle Quarters to New Market main road in North West St Elizabeth, rehabilitative work has finally begun along the corridor. During several days of protest recently, residents blocked the roadway which is an important access point to the community of Middle Quarters and the resort city of Montego Bay via New Market. The road is also a key access point to the growing community of Darliston in Westmoreland. The National Works Agency (NWA) under the Major Infrastructure Development Programme (MIDP) has allocated just over 285 million Jamaican dollars to rehabilitate this most important main road corridor.

The works under the rehabilitation project will be completed in phases. Bushing, trimming of banks and the cutting of overhanging trees have already been done. The construction of head walls and the repair of rubble masonry retaining walls are currently in progress. Drainage work has started along the 15 kilometers stretch of roadway to include the cleaning of earth drains, paved side drain outlets and blocked culverts. The next phase of works will significantly improve drainage along the corridor, as earth drains will be constructed; concrete pipe culverts installed and concrete U drains repaired.

Unfortunately, the April, May and June flood rain events have stymied the progress of some aspects of the works. These include the milling (removal of old Asphalt) of the road, preparation of the base, prime coating and Asphaltic wearing surface.

When completed the project will boast repaired kerb and channels, new kerbs, road markings, replaced manhole grills, the construction of concrete slab over gate-ways and the installation of road signs.

The project, which got underway on March 23, 2017 is expected to be completed within six months of the start date. Though a decision is yet to be made discussions are ongoing about a revised schedule, given the time lost due to the severe rain event. Additionally, the National Water Commission recently disclosed that it intended to undertake pipe-laying work along a section of the roadway. The nature of those works is still being negotiated. At the end of June, sub-contractors Build Rite Construction had completed 20% of the original works.

The rehabilitation of the Middle Quarters to New Market road is highly anticipated as it will impact the lives of thousands of commuters positively. For one, the road is an alternative route for passengers travelling to the Sangster International Airport in Montego Bay and sees several tour buses laden with foreign guests on any given day.

This is a popular route for scores of students who travel to the Lewisville High School while the market in Lewisville is one of the most popular in Jamaica. Bryan Allen, a twenty-year veteran teacher at the Happy Grove Primary School, said that the road was in an awful state before and he had to spend a lot of money fixing the front end of his motor car. He added that taxi drivers do not want to transport school children because of the condition of the roadway which overtime has led to a decline in the student population at his primary school. With the start of the road rehabilitation project there is a foreseeable resolution for a number of difficulties which the residents of this part of St. Elizabeth have endured over the years.



U-drain being constructed with outlets for storm water run off

## *Almost There...Sedburg To Clandon Road, Manchester Near Completion*

The road section of Sedburg to Clandon in Manchester is renowned for a very prominent educational institution, Holmwood Technical High School. During peak hours in the mornings and afternoons the corridor is normally congested with taxis and jam-packed coaster buses transporting students to Holmwood and other schools across the parish.

Over the years, the corridor has been dogged by complaints of poor road surface but soon this will no longer be the case. The National Works Agency (NWA) under the Major Infrastructure Development Programme (MIDP) has recently embarked on a \$90 million Jamaican dollar road rehabilitation project along the corridor.

At the end of June, works was 85% complete, just two months after the project started on April 4, 2017, progressing way ahead of the stipulated six-month contract period.

Road Contractors S & G Road Surfacing Materials Limited is undertaking the works on behalf of the NWA. The scope of the works include bushing, trimming of banks and cutting of trees as well as the cleaning of side drains, earth drains, blocked culverts and the construction of U drains.

The Sedburg to Clandon corridor is integral to activities in the communities of Cobbla, Christiana, Spalding, Devon, Craighead and Mizpah. A student athlete from the nearby Holmwood Technical High school heaped praises on the project. She declared that the road will be an ease on the feet especially during training and cross country runs.

The construction of sidewalks and kerbs and channels along the roadway are the only outstanding components of the road work project, but these too are nearing completion. The project will be finished with road markings, pedestrian crossing and road signs.



Tack coat being applied during overlay works



Overlaying works in progress



Kerb blocks being laid as an added drainage feature along the road

## *Papine to Redlight Main Road in St. Andrew benefits from a much needed rehabilitation project*



Traffic Management along Irish Town road, as rehabilitative work progresses

Often when persons talk about the road from Papine to Redlight they refer to the narrow, winding roadway through the hills of St. Andrew that is usually prone to landslides and breakaways. Of course, the mountainous terrain and the precipitous slopes are also scare factors for many. The roadway, however, despite its natural perils, leads to several communities, a number of popular attractions and hideaways and is home to breath-taking views.

From time to time, the Papine to Redlight thoroughfare, also known as "Irish Town Road" and which is an important link within St. Andrew's network of roads, has benefitted from rehabilitative works undertaken by the National Works Agency (NWA). In fact, a major retaining wall construction programme was undertaken in 2011 that targeted massive breakaways along the thoroughfare, as well as some drainage issues, and which increased the safety of motorists and commuters who have to use the roadway.

At the time that project was done, many residents and commuters were appreciative, but many looked forward to a project where the surface of the roadway would be the major area of concentration. One such rehabilitative project was rolled out at the end of March this year. The project, which is expected to be completed by the end of October, will focus on the rehabilitation of thirteen (13) kilometres of roadway from the outskirts of Papine Square into Redlight District.

Under the programme, some amount of drainage restoration and construction works will be done, to include the installation of high density polyethylene (HDPE) culverts. Several random rubble (RR) retaining walls will also be constructed. Currently thirteen locations are benefitting from wall construction. Also, as part of the programme the roadway is being paved with

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**Papine to Redlight Main Road ... Continued from page 9**

Asphaltic Concrete and will be completed with road markings; guardrails, in sections; kerbs and channels and some steel grating. The works, which got underway in April, was hampered to some extent by rains during the month of May but the works have progressed subsequently and as at the end of June 2017 was 25% completed.

The project is being undertaken as part of the Major Infrastructure Development Programme at a cost of just over \$269 million Jamaican dollars. Most residents have expressed gratitude, in relation to the project, so much so that they are, for the most part, prepared to tolerate traffic delays and other inconveniences, they have experienced as a result of the progress of works. Others, while grateful, have expressed hope that there will be a continuation of this type of rehabilitation to the rugged and treacherous Section.



Excavation for the foundation of a Rubble Random retaining wall on Irish Town Road



A section of the Papine to Redlight roadway that has been paved with Asphaltic Concrete

## Road and Drainage Rehabilitation Project Now Underway at Mona Road

Mona Road is a high-traffic thoroughfare that has long suffered from major drainage challenges. Whenever it rains, storm water flows continuously along the roadway impeding both vehicular traffic and pedestrians. This often leads to traffic delays and inconveniences, which are compounded by the road being located in a heavily-populated area, owing in part that it is a main access point to the University of the West Indies Mona campus. But alas the National Works Agency (NWA) has a major drainage solution in train.

Mona Road's perennial drainage problem is now being addressed by a 76.4 million Jamaican dollar Road and

Drainage Rehabilitation Project that got underway in early April of this

year. Major drainage improvement works will be undertaken as part of this project and some sections of the roadway will be rehabilitated in the process.



HDPE Pipe Culverts being installed along Mona Road as part of drainage solution

Persons who use the thoroughfare will have noticed the ongoing works to install pipe culverts, construct a box culvert and manholes along the southern section of the roadway in which storm water will redirected from the corridor.

The pipe culverts are of two types: a 900 and 1200 millimetre high density polyethylene (HDPE) pipes which will run along 83 and 141 metres of the roadway respectively.

The sections of the roadway that will be disturbed during drainage construction and installation will be reinstated with Asphaltic Concrete and a section of the roadway, in the vicinity of Wellington and Auralia Drives will be widened to accommodate turning lanes.

The residents of the Blue Castle community, in particular, whose fears of losing their perimeter fencing was assuaged by the NWA are now satisfied that the moving of their chain link fencing three metres beyond the existing road edge and within the road reserve will not impede access to their homes but is necessary for the satisfactory completion of the works. The relocation of the fence is to accommodate the widening of the roadway which, at the end of the project, will be complete with new sidewalks, kerbs and channels, two (2) pedestrian crossings and road markings to improve the safety of road users.

Since the start of the project, the NWA has continuously engaged the community, providing information and clarification about the project. Several misconceptions have been cleared up about the scope of works and residents are happy with the works that are being done. The project is scheduled to be completed at the end of October.

## Residents Welcome \$700 Million Dollar Major Infrastructure Development Programme in the West



A crew from Surrey Paving and Aggregates Limited paving a section of the Highgate Hall roadway in Southern Trelawny. The roadway is being rehabilitated under the Wire Fence to Warsop road improvement contract.

Residents of several rural communities across Western Jamaica are expressing appreciation for the Major Infrastructure Development Programme (MIDP) which is being undertaken by the National Works Agency. The Programme which got underway in April 2017 is investing approximately \$700 Million Jamaican dollars in road infrastructural rehabilitation and development across three parishes.

The programme targets five critical roadways in the parishes of Trelawny, St. James and Hanover. These are the Wire Fence to Highgate Hall corridor in Trelawny; the stretch of roadway between Sign and Virgin Valley, Guava Walk, the Williams Street to Flowerhill corridor in St. James and the Lethe to Copse main road in Hanover.

The state of the roadways has been a cause of concern for residents for some time, many of whom have lobbied their political representatives and the National Works Agency to have these corridors repaired. However due to financial constraints the agency was unable to address the situation earlier.

Guava Walk, St. James resident, Mark Reid speaking with the ROADSTER recently, expressed his appreciation for what he says is a "much needed project."

"I am happy about the project. I only wish it had started a long time ago, we suffering with it long now," he said. "The taxi man dem used to fraid fi come up here, because of how the road bad. Many nights I have had to walk for quite a distance to go home when they decide they not going any further," he added.

Residents also expressed that they were eagerly awaiting the completion of these projects as their travel times will now be significantly reduced.

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## *Multimillion Dollar upgrade for Rhynie Drive*

Rhynie Drive, located in the quiet residential community of Unity Hall, St. James is receiving a well-needed facelift. This, as the National Works Agency (NWA) is undertaking rehabilitative works valued at some \$30 million Jamaican dollars aimed at improving driving comfort along the roadway.

The roadway, which is located 14 kilometres (km) from the Montego Bay city centre, has deteriorated overtime, resulting in sections of the road surface being heavily rutted. This has caused some amount of distress to citizens who have advocated for the repair of Rhynie Drive, as well as other roads in the area.

In June 2017, the NWA commenced a robust rehabilitation programme along the corridor. The project involves the rehabilitation of just over one (1) km of roadway to include extensive drainage improvement works and the reshaping and resurfacing of the roadway using Asphaltic Concrete.

Residents have expressed their delight at this latest effort and are now eagerly awaiting its completion. This project is being executed through the Road Maintenance Fund (RMF), and is expected to be completed by September 2017.



Base formation works along a section of Rhynie Drive in St. James.

### **Residents Welcome \$700 Million Dollar ... continued from page 12**

“Christiana, Manchester is where we in Litchfield and other areas in South Trelawny do business. Even though the town is nearby it takes so long to get there because of how bad the road is,” said Teresh Stone, a resident of Litchfield, Trelawny. “I can’t wait until the roadway is finished,” she added.

The Litchfield roadway lies along the Wire Fence to Warsop corridor in Southern Trelawny. These projects involve complete rehabilitation of the targeted roadways to include drainage improvement, the reshaping and asphaltting of roadways and, in some instances, the construction of retaining walls.

Funding for the programme is made available through the China Exim Bank and is being executed by the China Harbour Engineering Company, under local contract. The projects, which are at varying stages of completion, are expected to be completed by October 2017.



Construction Manager at the NWA, Caswell Whyte, issues instructions to a labourer on sight at the Guava Walk, St. James road rehabilitation project.

## *The NWA Undertakes Multi-Million Dollar Mitigation Programme in the West ahead of the Hurricane Season*



Drain cleaning in progress at the Fisherman Inn drain in St. James

June 1, 2017, marked the beginning of what has been forecasted to be an active North Atlantic Hurricane Season. It is anticipated that the island is likely to experience above average activity over the period, unlike that which has been experienced in recent years. The National Oceanic Atmospheric Administration (NOAA) has predicted that the season may see a maximum of seventeen named storms, nine of which may become hurricanes.

In preparation for the season, the National Works Agency commenced a \$28 million dollar pre-hurricane drain cleaning programme in its Western Region to include the parishes of Trelawney, Hanover, St. James and Westmoreland. The programme got underway in May 2017.

A number of critical drains and gullies in flood prone areas are receiving attention under the programme, which was delayed in sections of some parishes as a result of the re-deployment of earth-moving equipment to road clearing drain cleaning efforts in relation to the May flood rains.

Among the drains identified for cleaning under the pre-hurricane drain cleaning programme are the Venture Gutter in Hanover; drains along the Flankers Loop road in St. James; the Tilston drain in Trelawny; and the drains in Three Miles River in Westmoreland. These drain cleaning activities together with the more current 13 million dollar Special Mitigation Drain Cleaning and Debushing Summer Programme in the western region form part of the Agency's island wide Disaster Mitigation Programme.

## Heart Of The Impact, Clarendon ONE IN 100 YEAR FLOOD EVENT

When a National Works Agency team finally gained access to the worst-affected parts of northern Clarendon nearly a week following the May 13-18 flood rains, the road infrastructural damage found was admittedly nothing the very experienced and knowledgeable team had ever seen in that part of the country.

NWA's structural engineers and flood control experts were visiting the area to continue preliminary assessment to determine the type of rehabilitative works required to restore normalcy to the lives of thousands of residents who had been adversely affected by the damage to the main road infrastructure.

Manager of Communication and Customer Services, Stephen Shaw, says he was unprepared for the magnitude of damage he saw while clerk of works Bryan Duquesney, who has been around the Flood Control Unit for over two decades, had just one word to describe the impact 'devastation'.

The flood rains left a trail of ruined road infrastructure all along the banks of Rio Minho from the Rio Minho bridge in May Pen to as far as the Dam Head footbridge in Frankfield. The river damaged gabion baskets and groynes; washed out bridge approaches; eroded abutments; caused road breakaways and retaining walls to fail and dislodged bridges. Leaving the experts to figure out what could have accounted for such extensive damage to structures designed to last upwards of seventy five years?

A resident who joined the touring party at Grantham where it had stopped to examine damaged gabion baskets told the tale of an engorged Rio Minho (the longest river in Jamaica) which had risen frighteningly higher than the trees along its banks sweeping over his community in the dead of night.



Minister of State with responsibility for works Hon. Everaldo Warmington gestures to a massive breakaway along the Trout Hall to Grantham main road during a tour with Clarendon Northwest MP Richard Azan and Labour and Social Security Minister, Hon. Shahine Robinson in June



Both the Green River Bridge approach roads were washed out during the May flood rains.



The four-year old Bailey bridge at Southwood was deposited at Dam Head 2km downstream by 40 feet high flood waters

Heart of the impact, Clarendon ... continued from page 15

Thanking God for having spared his life, he expressed surprise that the damage had not been greater. His account of the high volume of flood water in the Rio Minho's channel was born out in both the National Meteorological Service and Water Resources Authority's official rainfall intensity data for the period.

For the six days between Saturday, May 13 and Thursday, May 18, for example, Mocho in the north-central section of the parish received nearly eighteen inches of rainfall and New Yarmouth in the south western end received thirteen inches at its most intense. For just one of the two days between Monday, May 15 and Tuesday, May 16, Orange River and Goshen registered close to 6.5 inches of rainfall.

In just six days these locations got as much as three times the amount of rainfall they were used to receiving in a month making the May 13-18 flood rains truly unusual, severe and unprecedented weather. The experts all agree that it would have only taken a one in one hundred year flood event to wreak such significant damage on road infrastructure designed to outlive three generations of users.

'What we saw wasn't the norm,' contends flood control expert, Edgar Llewellyn. 'It wasn't something that could be engineered against.'

'There is an economic cost to engineer against an act of God's structural engineer, Shawn Smith explains. 'Imagine trying to prevent the sea from coming onto the Palisades during a flood event, we would probably have to build a wall 10 meters high to ensure that it [the road] last the one hundred years.'

'In that case then we wouldn't have the toll road and other major infrastructure developments. We wouldn't be able to afford it,' Smith concluded.



Since the flood rains, residents of Southwood have returned to using a fording in the river to safely access their community



The Jacob's Hut bridge in Central Clarendon was overwhelmed by the sheer volume of water in its channel and caved in during April's heavy rains



A breakaway at Kilsyth reduced the roadway to single lane traffic and imperilling motorists

## Clarendon - Bolstered Bridges



View of the piles which became exposed due to severe scouring during the May 13-18 heavy flood rains



Pile protection using mass concrete to securely anchor the piers of the Rio Minho Bridge

While the rain-related damage to some key structures in northern Clarendon was quite extensive, the technical officers of the National Works Agency (NWA) immediately began to design better solutions.

On June 1 the Government of Jamaica approved spending on emergency repairs to some critical structures, mostly bridges, along major corridors out of concern for public safety and in a bid to protect them from further deterioration. The Rio Minho, Pumpkin, Alley and Green River bridges are to be given attention as part of the emergency works.

Mass concrete will be used at the Rio Minho Bridge location to protect the exposed piles which anchors the piers of the bridge. The soil around the piles, which was previously underpinned by gabion baskets, was severely scoured by the fast-moving waters in the channel during the flood rains. Emergency works on the bridge located along the Bustamante Highway in Clarendon, a major high traffic section of the parish's main road network begun on June 21, 2017.

The approach roads at the Green River Bridge in Trout Hall which failed under the high volume of water in the river channel will not only be rehabilitated but both its northern and southern approaches will be protected with new retaining walls. While the designs for the permanent works are being finalized, temporary restoration works have been carried out on the structure once again allowing for vehicular access.



BEFORE and AFTER photographs of the temporary restoration works at the Green River Bridge

**Bolstered Bridges ... continued from page 17**



Rotted gabion baskets and eroded embankment at Pumpkin Bridge



Temporary restoration works at the Alley Bridge

The Bailey bridge at Pumpkin (the first of its kind to be placed on gabion baskets in Jamaica) is to be extended on to more solid land as its abutments are undermined. The southern approach road at the Alley Bridge, which was severely scoured, will be repaired using boulders, engineering fill and pavement. The new slope protection design will prevent water from scouring the underneath of the bridge which serves as a fording during heavy rains.

The Alley Bridge was however temporarily restored to allow for the recommencement of vital economic activity in the area, a mere six days following the event.

The rebuilding of the bridge at Jacob's Hut and the box culvert at Dykes Hill, Sanguinetti will require significant capital expenditure and as such those projects will be undertaken by the National Works Agency in the medium to long-term.

The NWA recognizes that extensive river training at key locations along the Rio Minho which have been severely scoured following consecutive flood events is important to protect existing and rehabilitated structures and road infrastructure, several of which were built nearly a generation ago.



Collapsed box culvert at Dykes Hill will have to be rebuilt



The reconstruction of the Jacob's Hut Bridge is a long term capital project

## Clarendon - Access Restored In Record Time



Resilient Dam Head residents who even without unimpeded access along Trout Hall – Grantham roadway are still determined to get over and with their lives



Work underway on the Mears Bridge to Grennock's Bridge corridor to clear one of several landslides at James Hill

Following the five-day flood rain event in mid-May access was restored in a systematic way along affected corridors in northern Clarendon clearing the way for first responders to get to the heart of the impact area to provide relief and to begin to remove material that imperiled the roadway.

During the event some thirty-three roadways across the parish were either inundated or blocked by landslides, some quite massive. As per the National Works Agency's mandate, earth-moving equipment, located close to or in the impact area, was engaged to restore access starting with the main road network, then parish council roads.

The estimate of the cost to reopen the affected roads was approximately 2.1 billion dollars across all parishes. Bills totaling some 400 million dollars or 20% of the estimate

were for works in the parish of Clarendon alone. Access was restored to all main roads and a number of parish council roads which were impacted within four days of the event, save a section of the Grantham to Trout Hall corridor.

That roadway which was most severely damaged at Dam Head was temporarily restored during the first week of June allowing for the resumption of public transportation service and the restoration of power supply to the area.

CLARENDON	
Number of roadways impacted	33
Number of landslides cleared	27
Number of bridges affected	5
Amount spend to clear roads/clean drains	J\$399,690,000.00



BEFORE, DURING and AFTER photographs of the severely damaged Trout Hall – Grantham which requires various types of permanent rehabilitative work along the corridor

## Riverside's Pride

How would we direct a stranger to the mango-laden community of Riverside Park in Central St. Catherine?

Well, let's start at the Brunswick. Depending on the direction from which you are travelling, when you get to the Total Service Station on Brunswick Avenue you will head in the direction of Eltham High school; drive past the Eltham schemes and continue along the road until you can no longer go straight; make the right and as soon as you pass the power plant, start looking out for the entrance to Riverside Park off Denido Boulevard on your left.

Sherwin Dennis, Project Manager at the National Works Agency, admits that he was only hearing of the small housing development for the first time in March 2017 when he was assigned to oversee the 103 million dollar project to rehabilitate and improve several roadways and pathways in the community.

Riverside Park is a quiet, fruitful place with an interesting mix of detached dwelling houses and two-storey apartment complexes. The residents tell the ROADSTER that the community was developed in the 1970s, but no one remembers exactly when.

What they recall with vivid recollection was the state of the roads before the rehabilitation project.

"Bad, bad, bad," Arnold Edwards admitted, 'I am not ashamed to tell you. It was in a terrible state. We should have a picture of it (the road) in its old state.'

Sherwin Dennis, concurs that the roads were indeed in need of repair.

Riverside Park was to be transformed into a community of predominantly newly-paved roads following three months of works as an NWA Major Infrastructure Development Program (MIDP) project.

The scope of the project included the overlaying



Denido Boulevard, main entrance to Riverside Park, part of 22707 M<sup>2</sup>, which has been overlaid with asphaltic concrete



A paved pathway in Riverside which serves as football pitch for community's youngsters



The placement of building material on newly-paved roadway, a major concern

of 3.5 kilometres of road surface with Asphaltic Concrete; the cleaning of 2,000 meters of side drains and the construction of 500 metres of kerbs and channels and 350 metres of sidewalks.

When the ROADSTER visited the community in June, following the completion of works three months ahead of schedule, we noticed a flurry of home improvement activities taking place on a number of the streets including fence-painting, tree-planting and even home extensions.

'It's like it (the new roads) start life anew for everybody,' explains a delighted Hyacinth Gidden who was only too eager to tell the ROADSTER how the new roads have impacted her community. 'Boy, I notice children you know late, 9 O' clock them out there a play, ride bicycle, ride scooter to how it bring life to them, a serious something me a tell you, you know.'

We were curious to find out if this renewal could be related in any way to the multi-million-dollar investment made in the community by way of the road rehabilitation project.

Some residents see the newly-paved roads as a brand new slate and an opportunity to improve the community. Some have even started.

'We a try plant up the neighborhood and them little part there that you see,' explains Arnold Edwards pointing to an area along the road which had recently been weeded. "We want them little part there cut down, start plant up some trees as I tell you."

Referring to retired civil servant Hyacinth Glidden he continued, 'Like all that lady every morning she come out and she sweep up her place (a pathway).'

Sherwin Dennis is not surprised by the positive impact the road improvement works are already having on residents.

'New roads provide better accessibility to people's homes,' he explained. "It also facilitates better traffic flow as well as improves the value of home and property."

"You see like how the road fix now, if everybody just come together and paint up their house and



A resident sweeps debris from the newly rehabilitated roadway, a practice which protects roadway from deterioration

thing the place will look brand new again," suggested twenty-year Riverside Park resident William Saddler.

With proper care and maintenance Riverside's new roads should last ten to fifteen years. Saddler and Edwards are encouraging their neighbours, like they have done, to follow suit by maintaining the streets in their block so as to keep the sheen of newness on for as long as possible.

In fact the National Works Agency encourages residents to take ownership of their roads by one, not damaging it by breaking the surface as this will lead to the development of potholes.

Two, residents should not burn tyres or any other material on the roadway as this will cause the surface to deteriorate and finally residents should avoid blocking the roadway with building or other materials. This puts additional stress on the roadway and undermines the base of the road.

The residents to whom the ROADSTER spoke seem to have embraced their duty to their community of newly-paved roads. "You see a just we have to do it, don't bother watch nobody," they concluded.

***"Keeping Drains  
and Gullies  
Debris-Free  
May save the life  
of you and me"***



**MAJOR INFRASTRUCTURE DEVELOPMENT PROGRAMME (MIDP)  
BOX CULVERT, DUMBARTON, ST. MARY**



The drainage system at Dumbarton, St. Ann is undergoing significant improvements under the Major Infrastructure Development Project (MIDP). The works which entail the construction of a 13 and half meter long reinforced concrete box culvert, sidewalks, rubble stone gabion wall for river training purposes and pavement of the roadway are well advanced. With 60% of the works already done as at July 2017, the project is scheduled to be delivered two months ahead of the original completion date of October 22, 2017.



Approximately 1km of Succaba Road, in Old Harbour, St. Catherine was rehabilitated by sub-contractors Construction Solutions Limited under the National Works Agency's (NWA's) Major Infrastructure Development Project. The roadway which was overlaid with Asphaltic Concrete and complete with 800 meter of kerb and channel was deemed satisfactory and taken over by the NWA on June 28, 2017.

**MAJOR INFRASTRUCTURE DEVELOPMENT PROGRAMME (MIDP)  
OCHO RIOS BYPASS ROAD, ST. ANN**



Significant progress has been made on works to overlay 3.7 km of the Ocho Rios By-pass with Asphaltic Concrete. The project which is 85% complete, is expected to be delivered on August 28, 2017. The works value approximately 101 million Jamaican dollars and will be complete with road markings including pedestrian crossings.

## An April and May to Remember... Government responds to adverse weather condition



Some of the garbage which contributed to flooding in Mineral Heights, Clarendon in April



State Minister with Responsibility for Works C. Everaldo Warmington in discussion with Minister of Parliament for North Central Clarendon Pernel Charles and Minister of Labour Shanine Robinson while visiting several Clarendon communities after the May Floods.



Minister Warmington engaging Member of Parliament for North West Clarendon, Ricard Azan in the company of Varden Downer.



M.P. for South Western St. Ann Zavia Mayne engages PM Andrew Holness during his tour of sections of four of the affected parishes after the May rains event.

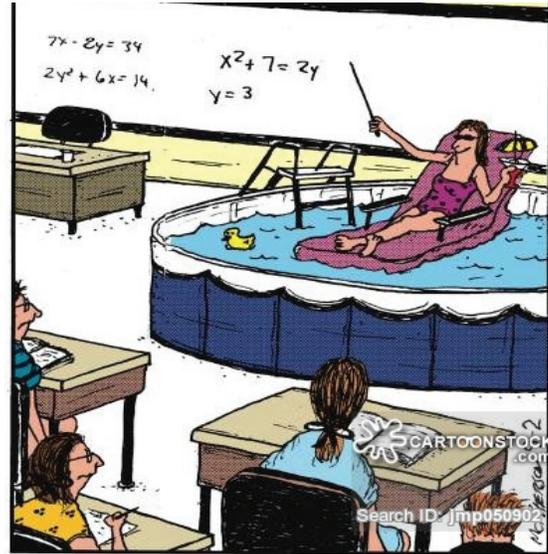


Prime Minister Andrew Holness looks at some damage caused by the May flood rains. Permanent Secretary in the Ministry of Economic Growth and Job Creation Audrey Sewell (2nd from right) looks on.



Some residents of Douglas Castle showing off their new mode of transport following the flooding of their road, which rendered it impassable to motor vehicles.

# Live Love Laugh



With summer vacation over, Mrs. Locke was having a tough time transitioning back to teaching.



## Staycation vs. Vacation Costs: Weighing Your Options

If you're one of the many Jamaicans looking to save a little green and still have fun, consider being a tourist in your own town. Whether you're located in the town or country there may be a lot you've never thought to explore. Plus, there are great savings available when you stay home during your time off.

### Lower staycation costs help you save for future vacations

When faced with the thought of a staycation, many families may wonder if it's worth it. Will I be tempted to clean the house or finally build that shed? Is there even enough to do around me? Can I really save that much? When it comes to saving on vacation costs, staying home is a clear winner; there are no airfare or hotel costs, and you don't need to worry about paying to board pets or eating out for every meal. Because even if you choose to eat out a few nights, hire a Helper for the week or stay over at a bed-and-breakfast or hotel one night, you'll still have saved more than if you had taken the whole family to a remote destination. When you factor in the price of gas for day trips, dining out, groceries, a sitter and a few activities, you may be able to keep your spending at a minimum, than if you had spent your vacation elsewhere.

### Tips for a staycation

Speak to a local travel agent to find out what they would tell tourists to see while visiting your area. Perhaps there's a cool cave, trail or beach several miles away, or a museum you never visited that has demonstrations or low admission fees. You might be surprised what you've left unexplored in your own backyard.

Staycations give you the opportunity to try that new restaurant in town, spend a night without the kids while leaving them with a trusted sitter, relax and read a book at the beach or hike a trail you never knew was there, visit friends and elderly relatives. Use online social couponing sites to find great deals in your area, buy gourmet groceries to prepare something you wouldn't normally splurge on, and take advantage of local activities like visiting parks, museums, beaches or zoos. Plus, the reduced travel time of a staycation gives you more time to relax and enjoy the vacation.

### Create a plan and a budget for your staycation

Even with lower staycation costs vs. vacation costs, it's still possible to overdo it when you're at home. Plan your trip just as you would if you were going away – what will you do each day, how much will it cost and what will you need to participate? Whether you're planning a staycation or vacation, it's important to budget properly and keep track of your funds. Open a separate bank account and make regular deposits each month before your time off to ensure you have what you need when you're ready to stay home. Then, avoid spending with a credit card and only withdraw from the designated staycation account to stay on budget.