

JDIP ROLL OUT

US\$400-MILLION PROGRAMME LAUNCHED IN EIGHT PARISHES



Prime Minister, Honourable Bruce Golding speaking at one of the parish launches of the Jamaica Development Infrastructure Programme (JDIP). The programme which is valued at US\$400-Million will see several roads, bridges and other infrastructural developments across the island. The JDIP has been launched in the parishes of Trelawny, St. Ann, St. Mary, Portland, St. Thomas, Manchester, St. Elizabeth, and St. Catherine. See related stories inside.

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SOME EFFECTS OF THE RAIN ASSOCIATED TROPICAL STORM NICOLE



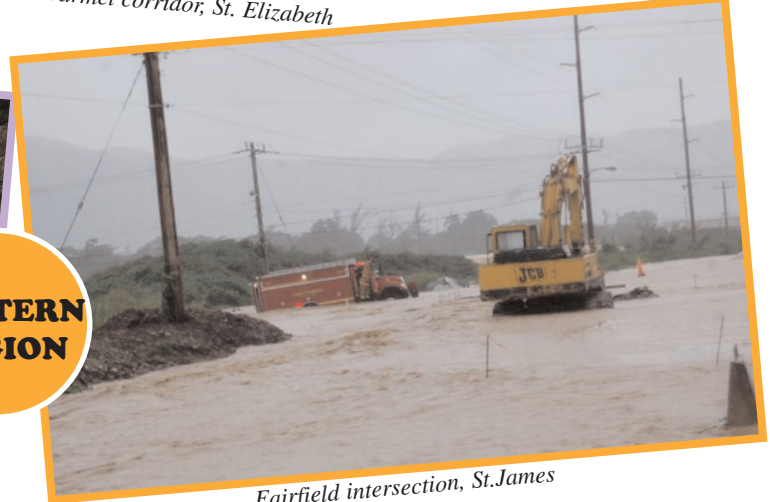
White Hall to Baptist main road,
St. Elizabeth



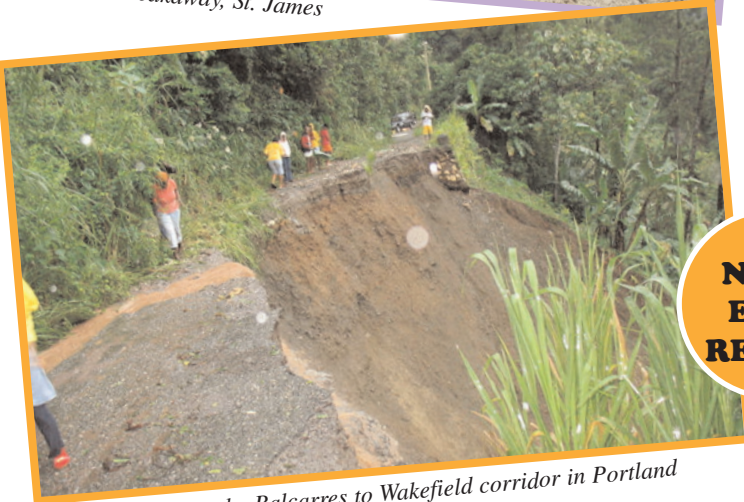
Rising water on New Market to
Carmel corridor, St. Elizabeth



Johns Hall breakaway, St. James



Fairfield intersection, St. James



Break away along the Balcarres to Wakefield corridor in Portland



Break away -Llandewey to Windsor Forest (Cocoa Walk), St. Thomas

**CENTRAL
REGION**

**WESTERN
REGION**

**NORT-
EAST
REGION**

WELCOME JDIP!

The Jamaica Development Infrastructure Programme (JDIP) is singly the largest, most comprehensive infrastructural programme to be implemented in Jamaica and, as articulated by NWA's C.E.O., Patrick Wong (Message for China Harbour Engineering Conference held September 23-24, 2010), it "represents a redemptive partnership between the Government of Jamaica and the Government of China". Through this partnership, the sum of US\$400-million (approximately J\$36-billion), has been made available to undertake major road and infrastructural work across Jamaica. The programme will be undertaken on all roads, both main and parochial, over a period of five (5) years, commencing in October 2010 and ending in 2015.

THE JDIP IS BEING IMPLEMENTED THROUGH CONTRACTOR, CHINA

Harbour Engineering Company (CHEC), a company from the People's Republic of China, with operations in over seventy (70) countries across the world. China Harbour will select sub-contractors who will carry out activities under JDIP in the various parishes.

MAIN TARGETS OF JDIP:-

- Increased driver comfort along all roads - main and parochial;
- Improved road safety;
- Increased capacity of roads to handle vehicular volume;
- Improved traffic management in town/city centres;
- Rehabilitation of parochial roads, housing scheme roads and farm roads;
- Rehabilitation of main roads;
- More effective periodic maintenance of road infrastructure.

The programme also seeks to achieve the institutional strengthening of Ministries and Agencies responsible for roads. This in order to enhance the ability of these bodies to deliver to all Jamaica, service of the highest quality.

LAUNCH OF JDIP ISLAND-WIDE

On August 19, 2010, the Ministry of Transport and Works/National Works Agency embarked on the 1st in a series of ceremonies to mark the official launch of the JDIP across the island. This island-wide launch, which commenced in St. Catherine, is scheduled to culminate in Kingston and St. Andrew in October 2010.

As at September 22, 2010, the JDIP has been launched in eight (8) Parishes as follows:-

1. St. Catherine	-	August 19, 2010: Ebony Vale Baptist Church (off St. John's Road).
2. St. Elizabeth	-	August 31, 2010: Lewisville High School, New Market.
3. St. Thomas	-	September 1, 2010: Paul Bogle Round-About, Morant Bay.
4. Portland	-	September 2, 2010: Rafters' Rest, St. Margaret's Bay.
5. Manchester	-	September 9, 2010: The Christiana Early Childhood and Pre -School, Main Street, Christiana.
6. Trelawny	-	September 9, 2010: Albert Town Community Centre, Albert Town.
7. St. Ann	-	September 10, 2010: Turtle River Park, Main Street, Ocho Rios.
8. St. Mary	-	September 22, 2010: Eden Park Sports Complex, Jacks River.

The launch of the JDIP in the remaining six (6) parishes is expected to be completed by the end of October 2010.



NWA NATIONAL WORKS AGENCY

WHAT JDIP MEANS FOR ST. ANN AND THE PEOPLE OF JAMAICA

THE JAMAICA DEVELOPMENT INFRASTRUCTURE PROGRAMME (JDIP) FACT SHEET

BACKGROUND

The Jamaica Development Infrastructure Programme (JDIP) represents a major undertaking by the new Government of Jamaica (GoJ) to significantly improve the island's neglected road network in order to enhance the quality of life of the citizens of Jamaica, and to stimulate economic development. JDIP is the result of an innovative partnership between the GoJ and Government of China and is singly the largest, most comprehensive infrastructural programme to be implemented in Jamaica.

FUNDING

The Government of the Peoples Republic of China has provided funding through the Export Import (EXIM) Bank of China. The funds have been augmented by the Road Maintenance Fund (RMF), through the collection of the Fuel Cess. This partnership has made available, the sum of US\$400-million (approximately J\$36-billion) for a programme of works to be effected island-wide, on roads and road furniture, such as bridges, drains and traffic systems. The programme will be undertaken on all roads both main and parochial.

JDIP expected to improve Infrastructure conditions in Northeastern parishes

The Northeastern region is characterized by mountainous terrains and numerous waterways which, over the years, have created difficulties for infrastructural maintenance and development. This limited involvement has been blamed for the steady decline in economic growth in the parishes of St. Thomas, Portland and St. Mary. St. Ann, also, has suffered from infrastructural decline and residents maintain that the less urban areas of this parish are often neglected in the selection of infrastructural work



St. Mary Launch JDIP: From left Patrick Wong - CEO, NWA; Hon. Mike Henry - Minister of Transport and Works; Hon Robert "Bobby" Montaque MP for Western St. Mary



St. Thomas Launch JDIP: From left Mr. Liu Jialin-(CHC); Patrick Wong - CEO, NWA; Hon. Mike Henry - Minister of Transport and Works; Hon. James Robertson - MP for Western St. James

It is not uncommon for one to hear Portland being associated with 'bad roads', or St. Thomas being referred to as a 'disaster area' or St. Mary being deemed the 'island's poorest parish', mainly as a result of infrastructural deterioration. In fact, these are descriptions that residents continuously complain about and have, for years, sought redress. In St. Mary, for example, residents habitually take to the streets to vent their frustrations about what they deem to be continuous neglect.

It is no doubt, therefore, that the Jamaica Development Infrastructure Programme (JDIP) will greatly benefit these areas. The five (5) year programme, which runs from 2010 to 2015 and has been dubbed the "Chinese program", will see major infrastructural work being carried out across all parishes, with northeastern parishes being no exception. What is peculiar about this programme is that it envelops all types of roadways and infrastructure, without distinctions being made about responsibility.

JDIP IN THE NORTHEAST

Based on the terrain of northeastern parishes, works to be undertaken in the region under this programme will include river training, the construction or repair of bridges, the rehabilitation or maintenance of roads and the construction of retaining walls. The pro-

gramme has already been launched in all northeastern parishes and residents welcome the initiative as they see it as a positive move in the right direction.

In the first year of the program which continues until March 31, 2011, the Northeastern region will see the initiation of the construction of seven (7) bridges, which includes the Rio Grande Bridge in Portland, the Westmoreland and Enfield bridges in St. Mary and the Johnson River Bridge in St. Thomas. Also, within this first year, thirty-six roadways in the region are slated to be rehabilitated, another ninety-four (94) roads will benefit from periodic maintenance and river training is scheduled to take place at eighteen different locations.

It goes without saying, therefore, that the JDIP programme will, even in its first year, prove to be beneficial to over 120 communities with thousands of residents in the four (4) parishes of the northeastern region. Students attending over ninety schools will also be impacted and a significant number of churches. Once completed the JDIP is expected to address a great number of infrastructural issues and many hope it will rectify the most significant problem areas and improve the overall quality of life for all citizens.



Portland Launch JDIP: From left Mr. Liu Jialin - Deputy Project Manager (CHC); Patrick Wong - CEO, NWA; Hon. Mike Henry - Minister of Transport and Works; Daryl Vaz - MP for Western Portland; Donald Rhodd - MP for East Portland

... ST. ELIZABETH AND MANCHESTER TOO TO BENEFIT

Several roads in St Elizabeth will be rehabilitated as part of the first year roll out of JDIP. The road that received the largest applause is the Mocho to Springfield to Brighton in North West St Elizabeth. This road is one of the worst in the parish and has been over several years, the source of several demonstrations due to its poor condition. Several basic, primary schools and churches exist along this corridor to the large farming communities of Pisgah and Ginger Hill. Other roads to be rehabilitated includes Newell to Bethany, Crane Road to Parottee, Punches to Font Hill, Carisbrook to Dry Harbour, Smoothland to Mount Plymouth, Belvedere to Queensbury, and the Clinic road in Santa Cruz.



In St. Elizabeth, Prim Minister the Houourable Bruce Golding is seen here with ZhongDong Tang, Managing Director of CHEC Jamaica.

Under the programme, a number of corridors will also be targeted for periodic maintenance. These are Chocolate Hole, Pedro Cross to Lititz, Delightful, Institution Drive and Market Street in Santa Cruz, Santa Cruz to Malvern, Tombstone to Gutters, Scotts Cove to Luana, Black River to Pedro Cross, Cheltingham to Springfield and Clifton to White Hall. The citizens of the capital, Black River had expressed their concerns about the rapid erosion of the sea-wall from Hendriks Wharf to the Hospital. This too will be addressed in the first phase of this work under the programme

In Manchester, a much needed by-pass will be constructed for the town of Christiana. The bustling town has for many years been choked by heavy pedestrian and motor traffic, jostling for pride of place along its only access and exit point - Main Street.

Minister of Finance and Public Service, Hon Audley Shaw who is also the Member of Parliament for the area, announced that approximately \$J500 million would be spent to have the road constructed. This road will help to remove the heavy congestion in the central business district and its construction is also expected to drive developments around the town.



Hon Audley Shaw addressing the launch in Christiana.

The roads that will be rehabilitated are Caines Shop to Skull Point, Dump to Highgate Hall, Retreat to Hatfield, Rocky Park Road, Lower Christiana, Brontie Road, Royal Flat Land Settlement, and Webb road and Wildman Street in Christiana. There will be periodic maintain ace on Clifton to Cedar Grove, Mandeville to Spur Tree via Swaby Hope, Mandeville to Rudd's Corner, Williamsfield to Greenvale, Sedburgh to Clandon, Walderston to Grantham, Bottom Street to Toolis, Mizpah to Bellefield, Devon to ALLISON, Alston to Christiana, Greenvale to Spur Tree, Downs to Gutters, Downs to Alligator Pond, Mile Gully to Oxford among others.

Special emphasis will be placed on traffic management in the capital town of Mandeville. Some of the road junctions where traffic signals will be installed are Caledonia Ave/South Race Course, Caledonia Ave/North Race Course, Manchester AVENUE/Grove Road, Main Street/Hargreaves/Caledonia Avenue and Main Street/Hargreaves/Nashville Road. There will be the repainting of pedestrian crossings at the Mandeville Hospital Entrance and the Mandeville Primary School.



Residents at the Manchester Launch of JDIP

Welcome JDIP... Contd from page 3

ECONOMIC EXPECTATIONS

The programme is expected to facilitate economic development through the provision of better roads across Jamaica, such that people, goods and services may move across various parts of the island freer, faster and safer. As stated by the Hon. Prime Minister, Bruce Golding, in his address to stakeholders at the launch of JDIP in Manchester, "...wherever roads are [in Jamaica], so long as people need the roads, we are going to fix them."

While recognizing that the programme will have a significant impact on the quality of the island's infrastructure, Chief Executive Officer, Patrick Wong has consistently pointed out that it will not be "the panacea for all of the country's road issues." However, the expectation that the types of activities to be undertaken under the programme will drive economic progress, is a reasonable one.

In addition to the economic improvement inherent in the provision of better roads, the JDIP is expected to create a significant number of jobs over the life of the programme. It is estimated that some "6,700 jobs will be realized across Jamaica". This expressed



Prime Minister Bruce Golding speaking at the JDIP Launch in St. Elizabeth

by the Hon. Minister of Transport and Works, Mike Henry at the launch of JDIP in Trelawny.

Indeed, the National Works Agency welcomes the JDIP!

Saluting Wallace "Wally" Nyrop

The long and distinguished career of Wally Nyrop has come to an end. Wally as he was affectionately called died recently after a short illness. He was 90 years old. Wally, as part of the Stanley Consultants team was the Resident Engineer for Segment Two of the North-coast Highway Project and is credited along with Alfonso Marshall of the NWA for spearheading key developments along the corridor. These include the Rio Bueno Bypass which was not originally part of the project and the dualisation of 13 kilometers of Section 1 (Montego Bay to Falmouth) of the 96 kilometers stretch.

Mr. Marshall as the Project Managing Engineer for Segment Two of NCHIP and had daily interactions with Mr. Nyrop. "We have lost a blessed man, a good engineer and someone with a vision and a drive for professional excellence," Marshall said. He recounts the many challenges that were faced on the project, but which were resolved through the experience and non-confrontational approach of Wally. "He was a gentle giant in the



Rio Bueno By-pass



Wally Nyrop (right) reviewing engineering drawings with his team members.
From left, K. Kutty, G. Lippins, T. Thankappan and A. Evans.

engineering field and will be sadly missed," Marshall said.

Wally was Born in Elgin, New England, he was the son of the late Martin Edwin and Vesta Alice Kelly Nyrop and was the husband of the late Yun Joon Lee Nyrop. Mr. Nyrop was a veteran, having served in the United States Army during both World War II and the Korean War. He later worked as civil engineer with Stanley Consultants where his work allowed him to live overseas for many years, including several years in Jamaica. He was a member of the Seventh Day Adventist Church.

Mr. Nyrop is survived by his daughters, Virginia N. Bald and husband Stephen of Norfolk, Virginia and Sonya Nyrop and husband Ed Cornejo of Riverside, California; a sister, Elsie Nyrop Forbes of Maryland; a brother, Richard Nyrop of Richmond, Virginia; and two grandchildren, Kai and Elijah.

THE PLIGHT WITHIN THE PALISADOES PENINSULA...

a robust solution at long last!

The Palisadoes Peninsula, long battered and vulnerable for what seemed like eons, is finally getting the kind of attention it needs. Located in Eastern St. Andrew, the Palisadoes Peninsula, extends approximately fourteen (14) kilometres westward from Caribbean Terrace to the historic township of Port Royal and provides an armour for several institutions of national interest, including the Norman Manley International Airport, the Caribbean Maritime Institute, Royal Jamaica Yacht Club, the Jamaica Flour Mills, the Jamaica Cement Company and of course the Kingston Harbour and the community of Port Royal.

BACKGROUND

This important asset has, over the years, suffered consistent surges which occur as a result of natural disasters such as flood rains, especially those accompanying tropical depressions, storms and hurricanes. This has led to a massive erosion of the peninsula's natural dune. 2004 marks a case in point. The already deteriorated condition of the Peninsula was greatly exacerbated by the passage of Hurricane Ivan. Ivan had generated waves with return periods in excess of 150 years and had transported most of the sand in the dunes to the Kingston Harbour-side, leaving the Caribbean Sea-side of the Peninsula vulnerable to several events of smaller magnitude. In response to the severe condition of the Peninsula, the Ministry of Transport and Works, in December 2006, commissioned Gamma S.A., Cuba, to design emergency rehabilitative and protective works for the peninsula (dubbed the Cuban Study), and in 2007 commenced work to rehabilitate and protect 310 metres of the Peninsula, deemed to be the most critical of the area shown to be seriously undermined.

However, in August of said year (2007), upon completion of 109 metres of the critical zone within the Peninsula, the island was struck by Hurricane Dean which further devastated the already degraded



Palisadoes work site

Palisadoes coastline. This necessitated a review of damage along the Palisadoes Shoreline and a redesign of required rehabilitative and protective works. Thus in 2008, a review and redesign of the Palisadoes Peninsula was conducted by the Caribbean Development Bank (CDB), through Sandwell.

THE NEW DESIGN

The new design for the Rehabilitation and Protection of the Palisadoes Shoreline was finalized, in 2009, by the NWA and local consultants for the project, Civil Environmental and Coastal Engineers & Planners (CEAC). This design provides for a more robust solution to the plight within the Peninsula, a major amendment carried

by this new design being an upgrade of the flood flow return period, from a 22-year, to a 100-year return period (i.e. the shoreline would be expected to withstand storm surges only anticipated to re-occur every 100 years).

PROJECT COST AND CONTRACTOR

An amount of US\$65,377,404.62 has been allocated, through the China EXIM Bank, for the rehabilitation and protection of the Peninsula, to be undertaken by the contractor China Harbour Engineering Company Limited.

Launch of Palisadoes Shoreline Rehabilitation and Protection Project
On April 22, 2010, the Ministry of Transport

THE IMPACT OF RAINS ASSOCIATED WITH TROPICAL STORM NICOLE

on the Central Region

Torrential rain and other adverse weather conditions associated with Tropical Storm Nicole impacted the parishes of St Elizabeth, Clarendon and Manchester from September 26 to October 3 2010. The event produced bands of showers and thunderstorms that resulted in as much as 20 inches of rain in some parts of the parishes. For days, the rains had left several communities partially marooned. The parish of St Elizabeth was significantly impacted.



River meets road at Apple Valley Park-Maggotty St Elizabeth



Flooding at New Holland -St Elizabeth

with water. This was the same along Nain to Myersville, Goshen among others. In the southern section, roads such as Luana to Black River, Park to Mountainside, and Claremont Park to Malvern Well, and Williamsfield to Fullerswood suffered from inundation.

Several roads were also severely scoured. These included the Old Lacovia Road, Brompton to Cotterwood and the devastated White Hall to Baptist main road. The parish of Clarendon was impacted tremendously as well. There were flooding in the Mitchell Town, Portland Cottage and Rocky Point villages, but this was Mitigated due to effective drain cleaning earlier this year. The box culvert at Crooked River was washed out along the Danks to Mears bridge corridor.

The roadways from Middle Quarters to Jacks Gate and New Market to Carmel was blocked due to inundation. The water in New Market in the Parish North West close to the Westmoreland and St James border rose and surrounded the town. Other populations centers close to or within the ambit of the Upper and Lower Black River Morass were hard hit with the river and its tributaries being swollen as a result of the run off from the hills of Trelawny. The Maggotty round-a-bout, the nexus of Vauxhall to Union, Tombstone to Vauxhall and Vauxhall to Arcadia was inundated with waist height water for days. The situation affected access to Maggotty High, YS Falls and Apple Valley Park. The entire town of Maggotty was marooned by high water along with a massive landslide on Rice Piece Hill.

The junction of New Holland to Red Gate with Tombstone to Luana in the Vicinity of Howies Restaurant was blocked by water for nearly a week, along with sections near to Middle Quarters. Inundation along the Santa Cruz Bypass was created by the overflow of the Black River and run off from the Santa Cruz mountains marooned citizens in districts such as Doctor Rock and New River. In the North East the roadway from Siloah to Aberdeen in the vicinity of Williamsfield, Thornton and the Siloah Bridge was covered



Severe scouring along the White Hall to Baptist main road, St.Elizabeth

EFFECTS OF RAINS ASSOCIATED WITH TROPICAL STORM NICOLE ON THE ROAD INFRASTRUCTURE

in the Western Region

In the Wake of Tropical storm Nicole, the name Nicole now has a new significance to many Jamaicans.

Heavy rains associated with Tropical Storm Nicole between September 28 and 29, 2010, left billions of dollars in infrastructural damage. Sadly the rains also resulted in the loss of lives.

By the end of September the torrential rains had begun to abate, however residents still remained apprehensive that the worse had passed since thick clouds still hovered ominously overhead. These were signs of the rains which would undoubtedly continue into the month of October.

Following the passage of the storm, the National Works Agency (NWA) response



Section of the Bethel Town roadway, Westmoreland



Fairfield intersection, St. James

teams were out in full force and were able to have most roads reopened within days of the passage of the storm.

Based on the assessments of the NWA technical teams, the parishes of Westmoreland and St. James were particularly hardest hit. The parishes of Hanover and Trelawny also suffered significant damage. Several roadways were inundated for days, forcing commuters to use alternate routes. The road network also suffered damage in the form of landslides, scouring, breakaways and the failure of retaining walls.

NORTHEASTERN PARISHES RAVAGED

by the heavy rains



A section of the Balcarres to Wakefield corridor, Portland

September is a month often associated with Tropical Cyclones in Jamaica, and September 2010 was no exception. Eight systems developed in the Atlantic Basin during the month but it was the last one, Tropical Storm (TS) Nicole on September 28 - 29, that became a bad memory for many Jamaicans. Rains, associated with the storm, pillaged communities causing flooding which resulted in loss of life and devastation to numerous roads and civil infrastructure.

As expected, the Northeastern parishes of St. Thomas and St. Mary suffered much infrastructural damage as a result of flood-

ing, breakaways, fallen trees, severe scouring of roadways and major landslips, which caused much distress to residents. In fact, one community in St. Thomas, Hagley Gap, was left marooned as a result of a damaged Ford which is the only entrance/exit point for vehicular traffic.

The parishes of Portland and St. Ann were, also, not spared. Fallen electricity poles and trees, and some amount of scoured road surfaces created some amount of chaos in the usually little affected parish of St. Ann. National attention was, also, brought to the parish when flood waters in the community of Pedro River rose to an

alarming twenty-seven (27) feet on October 2, prompting the implementation of a ferry/boat system to aid affected citizens. In the upper Buff Bay Valley community of Cascade in Portland, the Balcarres to Wakefield main road was severed by a major breakaway, at Spring Hill in the vicinity of Cedar Hurst, leaving it impassable. As a result, vehicular traffic to Buff Bay is now impossible.

Overall, some thirty-five (35) roadways were affected by Tropical Storm Nicole in the northeastern region, most of which have since been restored to partial or complete use.

The Plight with Palisadoes... Contd. from page 7

and Works/National Works Agency, in collaboration with the China Engineering Company (CHEC), launched the Palisadoes Shoreline Rehabilitation and Protection Project; and on August 20, 2010, broke ground for the commencement of works along 5.4 kilometres of the peninsula, extending from the Harbour View Round-About to the Airport Round-About. The works include:-

- Shoreline protection: revetment works ranging from 3 metres underground to 6.4 metres above sea level;
- Lifting of the roadway to a maximum of 3.2 metres above sea level;
- Relocation of utilities to underground (water, light, cable);
- Construction of a 10-metre wide boardwalk, extending 3.6 kilometres along the Harbour Side of the Peninsula.

THE SOLUTION IN FULL GEAR: COMMENCEMENT OF WORKS

On September 2, 2010, the contractor China Harbour Engineering Company, through its subcontractor, Y.P. Seaton and Associates commenced rehabilitative and protective works on the Palisadoes

shoreline, in keeping with the new project design, which upon completion is anticipated to deliver a more stable solution to the vulnerability of the Peninsula. Presently, preparatory works are well advanced:-

CARIBBEAN SEA SIDE

- All clearing and grubbing activities have been completed;
- All excavation relating to buried and exposed revetments has been concluded;
- Core fill has commenced; Harbour Side
- Relocating Mangroves to safe site in accordance with NEPA's licenses currently underway.

Project Manager in the NWA, Mr. Andrew Sturridge, is enthused about this project. "We have done our homework," he says, "and we anticipate a smooth operation on the Palisadoes Project over the next twenty-four (24) months. At the end of this time, we expect to experience a product which was successfully and effectively executed by the NWA and its Contractors and Consultant."

PROJECT COMPLETION DATE

Rehabilitation and Protection of the Palisadoes Shoreline is scheduled for completion in September 2012.

Tropical Storm Nicole - Central Region... Contd. from page 8



Inundation of the Alligator Pond to Downs road -Manchester

Several roads were blocked by landslides. These include Kupius to Colonel Ridge, Colonel Ridge to Kellits, Danks to Crofts Hill, Summerfield to Thompson Town, Mocho to Frankfield, Bucknor, Guinea

Corner to Corner Shop, Nine Turns to Riches, and the parish council roads of Prospect, Cabbage Hill, Carthy Hill, Pumpkin to Reckford, among several others.

Scouring took place along the corridors from Woodside to Nine Turn, Danks to Croft Hill, Free Town to Four Paths, May Pen to Hayes, Hayes to Dawkins Pen, Alley to rest, Sevens to Rock River and Toll Gate to Rest. Debris and silt blocked several drains that facilitated erosion and inundation of the road surface. Drain cleaning will be necessary for Chesterfield to Rocky Point, Portland Cottage, St Johns to Pedro River, James Hill to Sandy River, Howard Avenue, Lewis Street and Church Street in May Pen along with several other drains.

The parish of Manchester was not spared. There were landslides and fallen tree along Dump to Moravia, Newport to Pusey Hill, Christiana to Alston, and Grantham to Walderston, Mandeville to Rhudds Corner and along the parochial roads such as Morrison Hill, Brontie, Halifax and Colleyville. The road was inundated along Clifton to Cedar Grove (in the vicinity of Belair High) John Crow Hole, Old England to Royal Flats and the Guts River to Alligator Pond. Scouring and Blocked drains were prevalent along Rhudds Corner to Rows Corner, Gutters to Downs, Newport to Pusey Hill, Pusey Hill to Restore, and Craighead to Lambert and Cross Keys to Rhudds Corner.

CONCRETE PAVEMENT:

AN INVESTMENT THAT WITHSTOOD NICOLE'S WRATH!

Thunder showers associated with the system of Tropical Storm Nicole caused damage to roadways, bridges and other infrastructure. The National Works Agency (NWA) confirmed that over 300 reports of roads, bridges, gullies among others were received over a four days from September 28 to October 1. Some roads were severely scoured, others were impassable, and many were reduced to single lane.

The Bog Walk Gorge fared badly! Or did it? It had to be closed for several days owing to large deposits of silt and debris. Motorists were rerouted through Barry and Sligoville. When the rain subsided, officers from the NWA were able to tour this corridor and found that the concrete pavement in the Gorge had for the most part withstood the wrath of Tropical Storm Nicole.

This raises a fundamental question about pavement type selection. It is an important decision based on many variables, not one to be taken lightly. Some factors to be considered in taking this decision include traffic volume, soil characteristics, construction considerations and cost comparison.

Asphalt roads wear more quickly than concrete roads. However many countries are replacing concrete with asphalt, because it is cheaper even though concrete ones have demonstrated some major advantages, such as extended life and reliability.

ADVANTAGES OF CONCRETE PAVEMENTS

Concrete roads have a service life of forty years whereas asphalt roads last for ten years. During their service life concrete roads do not require frequent repair or

patching as do asphalt roads. Vehicles consume 15-20% less fuel when using concrete roads. This is because these roads do not get deflected under wheels of loaded vehicles. These roads unlike asphalt ones do not get damaged by leak-



A section of the Concrete pavement within the Bog Walk Gorge, St. Catherine

ing oil from vehicles. Vehicles being driven on concrete roads consume less fuel and emit less poisonous gases. On the other hand Asphalt produces a high level of polluting gases at the time of construction. Asphalt is produced from imported petroleum, the price of which is increasing while concrete is produced locally from limestone which is in abundant supply. However cement requires fuel (oil or coal) for production in Jamaica.

DISADVANTAGES OF CONCRETE PAVEMENTS

Paving costs of the concrete road is higher when compared to asphalt paved roads. When a concrete road breaks, the whole concrete slab has to be replaced. In rainy weather vehicles tend to slip or slide on a concrete road depending on the surface finish.

ADVANTAGES OF ASPHALT PAVEMENTS

Asphalt roads are less costly when compared to concrete ones. Moreover, it takes less time to build an Asphalt road than a concrete one and Asphalt dries faster.

Asphalt is a recyclable material. Repairing Asphalt roads is less difficult and much easier as only a part of the asphalt road needs to be repaired. Asphalt roads can be over-layered over the existing layer. These roads provide better traction and skid resistance for vehicles.

DISADVANTAGES OF ASPHALT PAVEMENTS

Heavy rainfall and other extreme weather conditions damage asphalt roads. They need to be repaired within six years. Melting asphalt produces lots of harmful green house gases and costly petroleum is required to produce asphalt. Asphalt pavements can be slippery when wet. They are extremely susceptible to overloading and localised base failure.

CONCLUSION

Concrete roads are highly durable and more environmentally friendly than asphalt ones. The construction costs of asphalt roads are far less than its concrete counterpart. However, while asphalt roads are less costly to construct the life cycle cost is higher. In addition, the condition of asphalt pavement degrades gradually over the first ten years while concrete pavements only show defects at the end of year 15 onwards. Thus the surface condition of the concrete pavement is more consistent over its project life.

Should Jamaica follow the pattern of other countries? The policy makers must decide!

Sadiq Mahabeer

ENGINEERING IS MY PASSION

Sadiq Mahabeer grew up in the rural community of Banks, in South West Clarendon. The major occupation of residents in this area of Clarendon is seasonal work on the large sugar plantation owned by Monymusk Sugar Company. It was natural therefore that his late father Vincent Mahabeer, worked as a Supervisor on the Estate. His mother, Lilieth, a housewife, who he speaks of with pride and fondness, still resides in Banks. He is the second of five children, two boys and three girls. Sadiq spent his early years of school life at Race Course Primary, where he came under the guidance of the Principal Caswell McLeish and his Class Teacher. Ms. Maud Brown. They both saw the potential in young Sadiq and their constant encouragement while he was at Race Course Primary helped him to realize his potential.

He sat the Common Entrance Examination in 1989 and was successful. For the next five years he attended Clarendon College (CC), where he again came under the influence of several outstanding Educators, who identified young Mahabeer's ability in the Sciences, Mathematics and Technical Drawing. Sadiq has a passion to design and experienced his creativity coming to life while attending CC. This passion encouraged him to focus on the engineering subjects, in particular construction and pursue a career in engineering.

The young student did not disappoint and passed eight subjects in the Caribbean Examination Council Examinations, and General Certificate in Education, all with distinctions, in both the sciences and mathematics. Sadiq decided against entering Sixth Form and opted instead for entering the world of work for a year. He worked at the Sugar Company of Jamaica during this period as a payroll Clerk. From this encounter he gained valuable life experiences.

But Sadiq had a serious affliction with the 'engineering bug' and decided to enter the University of Technology in 1996, where he studied Construction Engineering. He was successful and was awarded certification in 1998. During these years at the university,



Sadiq Mahabeer - Parish Manager, St. Catherine

he received awards for outstanding academic performance. Not satisfied, he continued for another year at Utech, this time studying Structural Engineering. Sadiq became a member of the influential UTech Construction Club, which hosted several Seminars and Conferences, related to modern techniques in construction engineering. He graduated in 1999 with a Diploma in Structural Engineering.

During this period 1999-2000, Sadiq was employed to the Ministry of Transport and Works as an Assistant Superintendent. He worked with the Building Department, under the guidance of Mr. Lincoln Simpson, who is presently employed with the National Works Agency as a Building Officer with the Estate Management Division.

Between 2000 and 2001 Sadiq was seconded to work with the Rural Road Improvement Programme as a Senior Clerk of Works. He worked in the western regional parishes of Hanover and Westmoreland, undertaking projects to rehabilitate the rural main road network. He gained employment at the newly established Executive Agency, the NWA and worked in the Directorate of Regional Implementation between 2001 and 2004, with then Director, Milton Hodelin. Sadiq was the first Coordinator of the highly successful Spray Patching Programme. In mid 2003 he was reassigned to St. Catherine parish as Assistant Parish Manager with special responsibility for the Spanish Town Division.

It appeared that Sadiq had met all his challenges at the NWA. So in 2005 he moved to the Jamaica Public Service Company (JPS) where he set out to conquer new frontiers. He was first employed as a Contracts Analyst and soon promoted to Project Officer in charge of Customer Growth Projects and Pole-Line Relocation Projects

During his tenure at the JPS he was also assigned to the Project Management Unit, assuming responsibility for addressing the needs of Key-Account Customers. Prior to his departure from the JPS he had major responsibility as Capacity Analyst for the Loss Prevention Project.

Sadiq rejoined the National Works Agency in December 2009 as Parish Manager for St. Catherine. Sadiq says "An opening came up and I accepted the challenge because I am convinced that I can make a worthwhile contribution to the Agency and I have a passion for engineering". Sadiq believes that, "vision with planning and doing things right first can bring Jamaica's infrastructure to first world standard; we just need to first believe it can happen".

He is happily married to wife Nardia James-Mahabeer. The couple has one son, 18 month old Khalil. Sadiq has a love for motor racing and architecture and is often seen at the Vernamfield Raceway in Clarendon. He also loves gardening, music and playing football. Although he loves to play football he does not possess all the requisite skills to play well.

DISASTER RISK REDUCTION KEY TO MITIGATING THE DISASTROUS EFFECTS OF FLOODING.

Tropical Storm Nicole and the subsequent flood rains are poignant reminders of how susceptible the island of Jamaica is to the ravages of flood rains. This weather system lashed the island between September 28 and 29, 2010 and resulted in billions of dollars of infrastructural damage and the loss of lives and livelihoods.

Jamaica, by virtue of its climate and location, is susceptible to hurricanes, tropical storms and other weather systems especially during the Atlantic Hurricane Season (June 1 - November 30). Our Tropical Marine climate ensures that we enjoy warm climatic conditions all year round. This feature draws thousands of tourists to our shores each year, but also proves to be quite disadvantageous as each year we suffer the effects of flood rains, especially during the Hurricane season.

Over the last thirty years, we have seen an increase in the frequency and severity of floods associated with tropical depressions, tropical storms and hurricanes. We have also seen that certain areas such as Chigwell in Hanover, New Market in St. Elizabeth and Portland Cottage in Clarendon are repeatedly battered by weather systems. The announcement of a flash Flood warning usually sends residents living and working in these communities scampering for cover, as they have become all too aware of the devastating effects which flood rains have on their communities. In extreme situations, some communities have been cut off for days from neighboring communities due to rising storm water.

These occurrences beg the question.... What makes some communities more susceptible to flooding than others?

The Roadster sought answers to this question from Dr. Barbara Carby, Director of the Disaster Risk Reduction Centre of the University of the West Indies - Mona Campus.

Dr. Carby explained that the natural dynamics of certain areas make them more prone to the disastrous effects of flood rains. She explained that the areas which are most likely to be affected by flooding are:

- Lower sections of limestone valleys
- Low Lying coastal areas
- Flood plains of major rivers
- Areas near gully banks
- Areas where there is significant deforestation

According to Dr. Carby, "Population growth, unplanned settlements and improper disposal of waste, also influence how susceptible an area is to flooding. Together these factors have resulted in several areas becoming impermeable. Hence the resultant increases in the instances of flooding."

Dr. Carby explained that population growth has resulted in increase demand for land space for both commercial and domestic purposes. This has led to a situation where even more 'green'



A house that collapsed in a gully

spaces are being denuded to meet the varying needs of the populace. She also explained that the practice of building structures in areas not suitable for developments have resulted in the natural water ways in several areas being undermined.

THE WAY FORWARD

Hurricanes, tropical Storms and other weather systems are harsh realities of life here in Jamaica and the wider Caribbean. There is nothing which can be done to control these natural forces. However we can take the necessary steps to lessen the harmful effects of these disasters. These include:

- Employing better agricultural practices which protect the environment.
- Ensuring waste is properly disposed.
- Maintenance of drainage channels and structures.
- Constructing settlements and businesses in such a way that they do not undermine natural drainage systems.
- Ensuring that adequate provisions are made for drainage channels and structures.

Dr. Carby encourages persons to take the necessary steps to protect their lives and properties. She also believes that there may be a need for the re-examination of our laws and regulations with a view to enabling us to mitigate against the disastrous effects of natural disasters.

Additionally, Dr. Carby asserted that there is need for more stringent enforcement of laws related to the improper garbage disposal practices; the practice of diverting storm water from private properties onto nearby roadways; the illegal occupation of land (squatting); and developments in wetlands and other areas which are not suitable for development.

These unplanned developments continue to wreak havoc on the environment and on the lives of persons living and working in these areas. The Kennedy Grove Housing Scheme in Clarendon and the Nightingale Housing scheme in St. Catherine serve as examples of the result of such practices. These two housing developments have in the past been transformed into virtual rivers following storm activities.

SOME EFFECTS OF THE RAIN ASSOCIATED TROPICAL STORM NICOLE

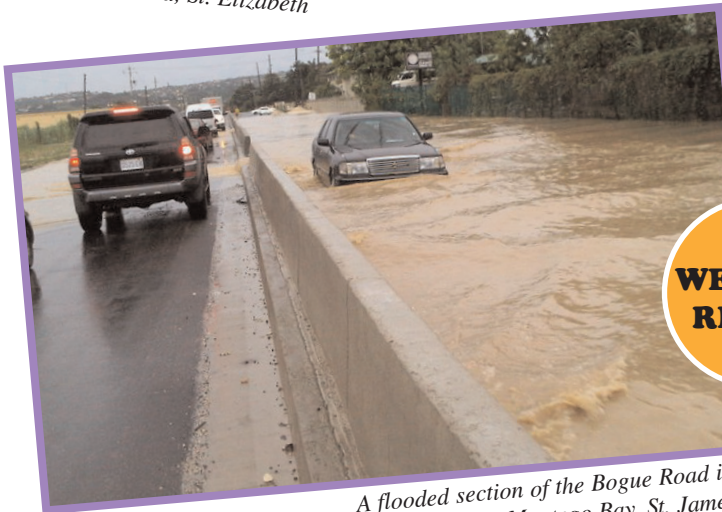


*Scouring along the Brompton to
Cotterwood Road, St. Elizabeth*

CENTRAL REGION

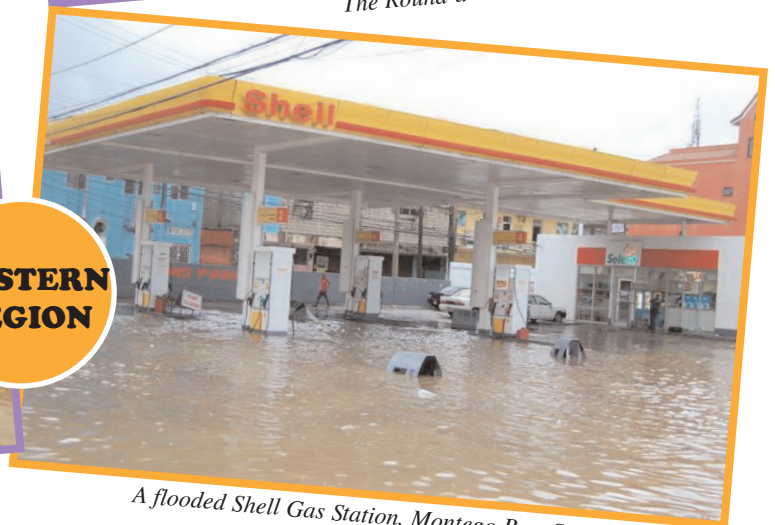


The Round-a-bout in Maggotty, St Elizabeth



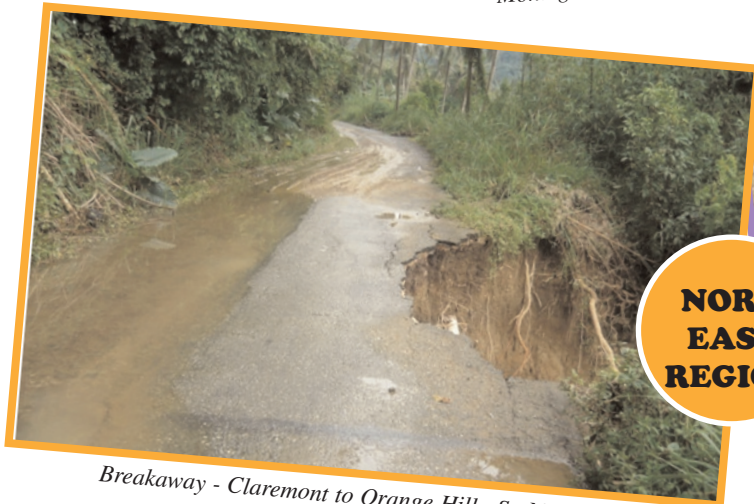
*A flooded section of the Bogue Road in
Montego Bay, St. James*

WESTERN REGION

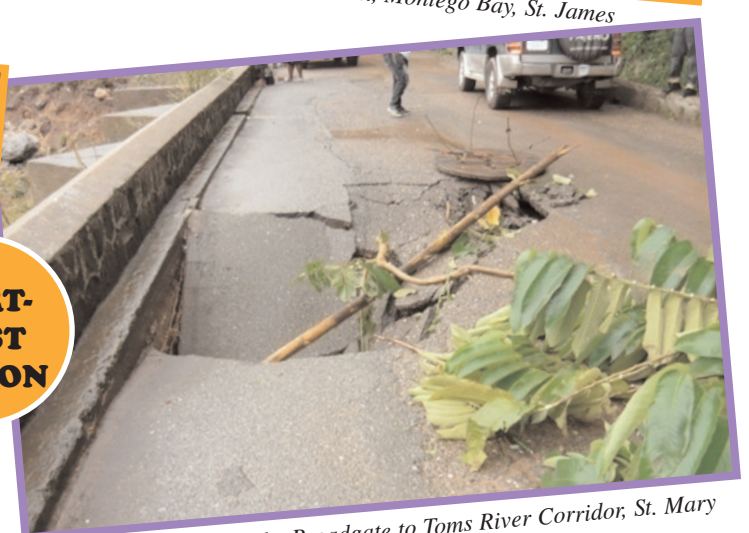


A flooded Shell Gas Station, Montego Bay, St. James

NORT- EAST REGION



Breakaway - Claremont to Orange Hill, St. Mary



Collapsed section of the Broadgate to Toms River Corridor, St. Mary

JOKES

Ha HA Ha!



"Your hard work has paid off, Harold. I've decided to give you a \$3 an hour raise. But it cost \$4 an hour to process it. So I'll be deducting \$1 an hour from your pay."



Due to his grammar mistake, Wilbur found a position. It just wasn't the one he wanted.

Team NWA
let your voice be heard!

We welcome your

articles, poems,

inspirations, quotes, etc

send to: susanwebb@nwa.gov.jm

Smoothies



Smoothies are thick, blended beverages, usually made from a variety of fruits, though sometimes yogurt or ice is added. As an easily consumed beverage, smoothies are an effective way to get several servings of fruits in a single drink. Try one Today!

Smoothie Nutrition

Though most smoothies are composed primarily of fruit, they can have a very high sugar content. Smoothies from major chains are often especially high in sugar, and can replace fruit with fruit juice. Jamba Juice's Citrus Squeeze is made of orange juice, pineapple juice and strawberries, and contains 440 calories, four grams of fiber, and 97 grams of sugar. Its greatest health benefit is the extremely high dose of vitamin C.

Jamaican Ginger Smoothie Recipe

(serves 1)

Ingredients

- 1 banana chopped
- fresh ginger (according to taste)
- 4-5 large strawberries
- 1 cup of cranberry juice
- 1 1/2 - 2 cups of ice

METHOD

To make this free smoothie drink, put everything into a blender. Blend on high speed until ice is smooth. For an added touch, garnish with mint leaves.

Jamaican Mango Smoothie Recipe

Mango smoothie recipe with yogurt and fresh diced mango, made in the blender with ice.

INGREDIENTS

- 1 cup Jamaican mango, peeled and diced
- 1 cup plain or vanilla nonfat yogurt
- 1/2 cup crushed ice
- 1/2 cup milk

PREPARATION

1. Place Jamaican mango, yogurt and ice in a blender or food processor and blend or process.
2. Add milk to thin to desire.