Flooding Solutions

Preparation, Prevention, Detection, Reaction.

"Urban flooding is a serious and growing development challenge. Against the backdrop of demographic growth, urbanization trends and climate changes, the causes of floods are shifting and their impacts are accelerating. This large and evolving challenge means that far more needs to be done by policy makers"

Abhas K. Jha, Dr. Robin Bloch & Jessica Lamond
Integrated Flood Risk Management for the 21st Century

About this Document

Mauritius is experiencing flooding since several years. The number of reported flood events has been increasing significantly. Flooding caused widespread devastation, economic damages and loss of human lives. The government of Mauritius identified this as a high priority by establishing a Ministry of Environment, National Emergency Centre and Beach Authority.

Flood Risk Management decisional process and related policies are under close scrutiny and are currently under review by the Honorable Jayeshwur Raj Dayal, CSK, PDSM, QPM, Minister in charge. In order to contribute to this review, this document provides comprehensive, forward-looking operational solutions to introduce to Mauritius Emergency & Risk Management stakeholders some technical and tactical elements of answers to manage the risk of floods in Mauritius transforming urban environment and changeable climate. The solutions proposed in this document would enable to empower appropriate identified measures and could be integrated to the existing process.

Table of Contents

A Journey in Flooding Risk Management

Flooding is a serious and growing development challenge. Against the backdrop of demographic growth, urbanisation trends and climate changes, the causes of floods are shifting and their impacts are accelerating. This large and evolving challenge means that far more needs to be done by Authorities to better understand and more effectively manage existing and future risks.

General Principles

The growing challenges of urban flooding are:

- Flooding is a global phenomenon which causes widespread devastation, economic damages and loss of human lives.
- The occurrence of floods is the most frequent among all natural disasters.

Twelve key principles for integrated urban flood risk management are widely agreed:

1. Every flood risk scenario is different: there is no flood management blueprint.

2. Designs for flood management must be able to cope with a changing and uncertain future.

3. Rapid urbanisation requires the integration of flood risk management into regular urban planning and governance.

4. An integrated strategy requires the use of both structural and non-structural measures and good metrics for "getting the balance right".

5. Heavily engineered structural measures can transfer risk upstream and downstream.

6. It is impossible to entirely eliminate the risk from flooding.

7. Many flood management measures have multiple co-benefits over and above their flood management role.

8. It is important to consider the wider social and ecological consequences of flood management spending.

9. Clarity of responsibility for constructing and running flood risk programs is critical.

10. Implementing flood risk management measures requires multi-stakeholder cooperation.

11. Continuous communication to raise awareness and reinforce preparedness is necessary.

12. Plan to recover quickly after flooding and use the recovery to build capacity.

Our solutions

1

PREPARATION

Geographical Information System

The Authorities in charge of flood risk management would have:

- to be responsible for preparing and putting in place strategies for managing flood risk from ground water, surface water and ordinary watercourses on a day-to-day basis;
- to ensure arrangements are in place for the co-ordination of flood risk management across sensible areas;
- to maintain a register of flood risk management structures, investigate flooding incidents where there s uncertainty over responsibility.

Geographical Information System (GIS) would help them to achieve these tasks.

Using GIS to predict, plan, prepare and protect from flooding

GIS will help in the **preparation**. Appropriate information for the surface water (SW) management plan will be collated, analysed and mapped in the GIS platform.

GIS will enable **data collation.** Data and information which will be collated would be held in a central store. Data on assets and historical flooding should be mapped using GIS.

GIS will assist in **understanding risk**. Flood risk should also be mapped to highlights locations at risk of SW flooding for a range of flood probabilities. The location of critical infrastructure would also be mapped, to identify whether they are at risk of SW flooding.

Benefits of GIS

GIS would enable prior taking any action:

- To measure;
- To analyse;
- To model;

To plan to take relevant decisions.

The geographic knowledge would provide many benefits:

- Understanding;
- Efficiency;
- Cost savings;
- Improved decision making;
- Better communication;
- Better collaboration;
- Better coordination.

Our Offering

Complete GIS Implementation

Our process for GIS implementation typically begins with an evaluation of your needs. We take this time to get to know you and to gain an understanding of how GIS can serve your organisation as well as learning about your potential data sources that can be utilised in your GIS. Next we take the time to conduct face-to-face interviews with your team to help us develop a strategy or roadmap for your GIS implementation, including technology hardware and software recommendations, staffing, training, and budget requirements. Our staff can meet your GIS needs before, during, and after your GIS implementation.

GIS User Training

Our team of GIS experts can set up the right kind of GIS user training to meet your needs and fill knowledge gaps. We have GIS geeks who can conduct training at any location, whether it be on-site or remote. We share our GIS knowledge with others so that they can not only perform basic GIS related tasks, but also leverage your investment in location technology in new and innovative ways.

Data Services

There are many challenges for organizations when it comes to managing spatial databases. Among those challenges include a lack of spatial database management expertise from IT personnel. Without proper maintenance, these geodatabases will begin to exhibit poor performance and inefficiencies. We provide the following services: Moving Away From Paper, Identifying The Right Content, Data Migration, Maximizing Your Data.

2

PREPARATION

Public Awareness

Improving public awareness for flood safety is crucial. The goal is to improve understanding about flood risk among individuals, families, businesses and communities. Knowledge and the right precautions can protect families, homes and finances. Surveys have demonstrated that public awareness does not ensure public preparedness. Specific educational materials should therefore be developed and communicated.

Various Communication

Communication to Adults

A better understanding of risk perception would improve communications, addressing three key concepts: (i) awareness of flood risk, (ii) worry about floods and (iii) and preparedness for flooding. The communication should provide specific information (i) on easy to implement flood mitigation measures, (ii) to give householders more confidence in protecting their property, and (iii) locally tailored information on safe evacuation routes.

Communication to Children

Children are a flooding risk extremely vulnerable group. Children are also effective risk communicators. An innovative flood safety awareness program focusing on school teachers and school children could be established. It would involve development of information, education and communication materials, improvement of school facilities through understanding flood risk potentially happening at schools, orientation sessions to teachers and students and flood awareness campaigns at schools.

Our Offering

Our team includes some experts with more than ten years in pedagogy. One of our subsidiary is also specialised in communication. We could establish and deliver the communication materials and campaign.

3

PREVENTION

Innovative Flood Defence Barrier

Floodstop is a unique, rapidly deployable flood barrier system. The barrier is assembled through a series of interlocking units. When assembled these units actually fill with the rising flood waters. This, combined with the weighted connection keys, ensure an assembled barrier will always be denser than the flood water.

Household, business and authority flood protection

Key Benefits

- More effective than sandbagging
- No construction works required
- Multi-functional
- Can be rapidly deployed
- High quality, field tested system
- Requires no specialist training
- Lightweight
- Low cost

Applications

- Flood protection
  - Rapid response
  - Semi-permanent
  - Permanent flood protection
- Reservoir deployment
  - Spill kit
  - Sludge/slurry containment
  - Fluid containment
- Road traffic delineation

For use

- Infrastructure
- Highways
- Commercial properties
- Industrial installations
- Domestic properties – community or stand alone

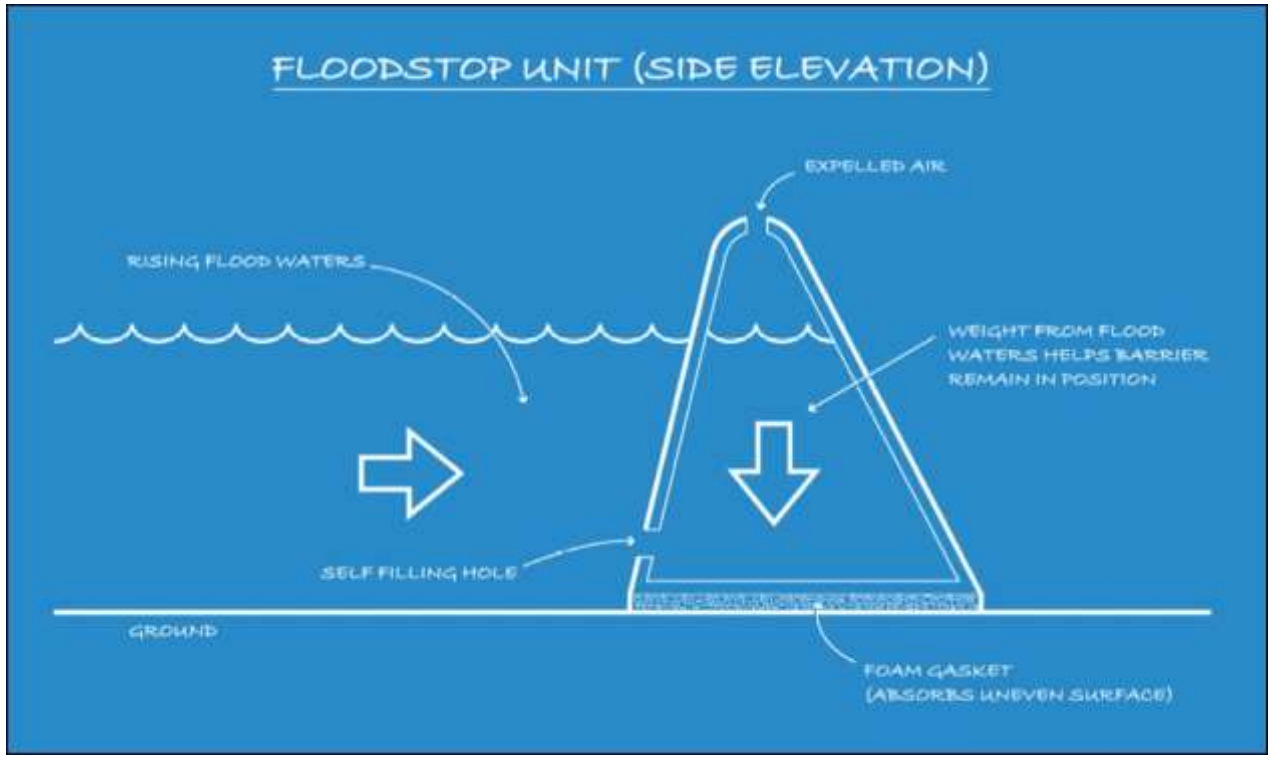










Scottish Borders Council · Hampshire County Council · VolkerStevin · ATKINS · The National Trust

Bristow · Worthing Borough Council · Stafford Borough Council

AEI Compounds · Coca-Cola · Sellafield Ltd · Aberdeenshire Council

East Lothian Council · Oxford City Council · Magnox South · VolkerStevin · King's Lynn & West Norfolk

4

PREVENTION

Storm and Flood Protection System

With the Beaver® Storm and Flood Protection System resistant and cost-efficient protective barriers can be quickly erected with few staff.

Heading 2

The elements of the flood barrier are initially inflated, easily moved into the desired position and subsequentely filled with water from a nearby water source or a hydrant. The individual elements are joined together by a patented link system. This makes it possible to build flood barriers of any length which conform to all types of terrain.

Additional hold back capacity can be obtained by adding a further single hose on top of the twin element.

The Beaver® Protection System guarantees fast assembly of temporary protective barriers and their simple and flexible use. The rapid and easy disassembly and removal, together with good storability are additional assets of this reusable system.

The Beaver protection system is by far the most sold mobile location independent bad weather and flood protection system. The Beaver protective hose dam is the mobile dam solution, with the most extremely successful emergency usages (more than 300 as at June 2013). Emergencies in part under the most difficult conditions. The around 40,000 running metres sold protect our customers from catastrophes and reduce immense financial damage.

Rapid installation

In August 2005 in the bad weather and floods in Lucerne, 8 people set up a 320 metre long Beaver hose dam in 1.5 hours.

The ability to set up a protective dam quickly is vital in bad weather and floods. Adding a further hose on top increases the dam height quickly and easily. Important: The high water mark should not exceed the dam height of the Beaver double element. Placing a third hose on top is possible for emergencies only.

Multipurpose application

The Beaver® Protection System, with its various combinations, allows for a successful fight against potential flooding situations.

Protect the landscape

Villages, towns, agriculture, settlements

Protect whole buildings

Houses, factories, industrial sites, campgrounds, sport facilities

Protect property parts

Garages, basements, staircases, entrances

Hold back and divert water

During storms and floods on lakes, rivers and brooks as well as mud and water pipe rupture

Store water

As a collecting reservoir following and accident hold back fire extinguishing fluid

Cross water

As a footbridge during floods or even as a raft with an outboard motor.

5

DETECTION

Flood Early Warning System

Flooding can occur form many sources including groundwater, storm water run-off, blocked drains and sewers (sewer flooding) and river rise etc. Often it is not possible to prevent flooding, however in areas that are prone to flooding, a few additional tens of minutes warning can make all the difference when it comes to mitigating the effects. Flood gates, air-brick seal , all take time to fit/close therefore there is little point in having a flood alarm on your front door step - it needs to be remote to give you time.

The Approach

We could provide a range of remote flood alarms housed in either stainless steel or GRP enclosures to meet the most demanding needs of both the public and industry. The alarms are available with cable outputs for triggering local sirens or alarms and with GSM, SMS, GPRS or low power radio communications for remote alarming.

To this effect we have developed a surface mounted flood alarm that is specifically intended as a retro-fit that can be installed in minutes on either a solid surface of gravel/ ballast.

The output from the flood alarm can be connected into either existing site telemetry / alarms or connected to a SMS or e-mail communicator which in turn can connect to our emergency dissemination system (ALERTCOMS) can deliver messages to an entire community 24/7.

How the System Work

Unlike traditional domestic flood alarm products which produce a local audible sound when the floodwaters are lapping at the doorstep, this all British system is designed to raise an advanced warning to an entire community of up to 1000 persons by means of telephone, internet and the cellular network, hence giving everyone the maximum amount of warning whether home or away to take action. The system is fully inclusive -by this we mean that the system that delivers warning messages equally to both the visually or hearing impaired members of the community.

The system is based upon technology that is used daily to protect important infrastructure such as the railways and electricity grid from the effects of flooding. At the heart of the system is one of our robust industrial food sensors with integrated e-mail communicator housed in a tough GRP enclosure. The whole system is normally installed at the edge of the community in a safe but in a low lying area where the rise of flood waters can be detected early.

A key part of the deployment of the system is the creation of a contact a list containing the details of these wishing to receive warning messages and by which preferred means. Those wishing to participate will be asked to subscribe by submitting their name and up to two contact numbers, one of which can be a mobile for SMS text purposes, plus and e-mail addresses for both warning messages and information updates. They will also be asked to tick a box if either they are visually or hearing impaired just to ensure that the mode of broadcast selected is appropriate for them,

Upon the rising of the floodwaters - water enters the base of the flood alarm through strategically placed inlet holes. Once the level within the flood alarm chamber exceeds a preset level the alarm is activated and starts to sends its messages to the remote data server. More than one message is sent ensuring the maximum chance of the messages getting through to the server.

The server is kept in a secure 3rd party data centre away from the risk of fire, flood or disaster. When the server receives an e-mail from the flood alarm the message is validated and the location of the flood alarm identified.

Using the relational database stored in the server, which has been created from the contact list, the server pushes out e-mails, SMS texts and calls the number on the list, taking into consideration any disabilities noted.

It goes without saying that ultimately the success of the system will depend upon the full cooperation of the community and we always recommend that subscribers upon receipt of a warning message still contact their neighbours on the off chance that they have left their telephone switched off, the battery has run down, have left their phone off the hook, have failed to check their e-mails or texts etc. Further, there will be periodic tests broadcast throughout the year and we don't want these to be mistaken for the real thing.

Finally, depending upon the flow of the river / steam through the village it may be necessary to deploy more than one flood alarm to offer a more compressive level of protection.

Flood Warning System Options Include:

- Local Siren
- Klaxon
- Flashing BeaconSMS Text - 1 to 1,000 people
- E-mail - 1 to 1,000 people
- Voice Messages for Visually Impared
- Battery Powered

6

DETECTION

Public Automated Information

Wireless Emergency Alerts (WEA) on mobile phone is an easy way to inform citizens of a flooding risk detection. Cell phone companies (on a voluntary basis) may inform their customers of a risk, without imposing an additional charge for such alerts. Alerts would be sent to cell towers providing wireless service to a target geographical area, and then all WEA-capable phones using those cell towers would receive the alert. Thus, cell phone users will receive an alert if they are in a targeted area even if they are just visiting that area.

Emergency Alerts

These are alerts issued because of an imminent threat to public safety or life, such as evacuation orders or shelter in place orders due to severe weather, a terrorist threat or chemical spill.

The way it works would be that a pre-authorized government authority sends an emergency alert to relevant agency/officer in charge, which then sends the alert to the participating cell phone companies, each of which then sends the alert to WEA capable phones in the zone of emergency.

WEA capable devices are designed to reject duplicate alerts, so cell phone user should receive each alert only once.

However, subsequent alerts may be issued that contain information similar to a prior alert.

AMBER Alerts.

The system may be used for other alerts such as AMBER Alerts. The AMBER Alert system, a method by which police officers may quickly publicise information when a child age 17 or younger is abducted such as the name and description of the child, a description of the suspected abductor, a description and license plate of the abductor's vehicle, etc.

Commercial Mobile Alert Service

A national service delivering relevant, timely, and geo-targeted alert messages to mobile devices.

STEP 1

ALERT ORIGINATION

The Authority creates and sends an alert to the agency alert aggregator.

Alerts can be

Emergency Center

Amber Alerts

Imminent Threats

STEP 2

NATIONAL ALERT AGGREGATION

The national alert aggregator receives the alert

STEP 3

ALERT TRANSLATION

The national alert aggregator translates the alert into a standardised format for carriers to broadcast the alert to any CMAS enable mobile device.

STEP 4

ALERT BROADCAST

The alert is then sent to the wireless carriers' systems,

which sends the alerts to all of their cell towers within the alert area.

STEP 5

ALERT DELIVERY

The wireless carriers deliver the alert to their subscribers who own CMAS-enabled mobile devices within the geo-targeted alert area.

7

REACTION

Mobile High Volume Flood Pumps

At large scale floods the main issue is always (i) Water volume, (ii) Access to the flood water, (iii) Time, (iv) Distance and (v) Labour availability. When a flood occurs, there is always the need to pump away the water. Large areas such as tunnels, cellars, lower floors of buildings, underground carparks, open cut quarries and mines may need to be de -watered. At such times a simple to deploy and mobile flood pump is required. For fast deployment in combination with a high volume pumping system, preferably the flood pump will have a hydraulic pump for easy access to the flood water. HYTRANS is the world leader in mobile hydraulic large capacity flood pumps.

HYTRANS Mobile High Volume Flood Pumps

HydroSub 150

Hydraulically driven submersible pump with large capacity.

HYTRANS Flood Module

Diesel engine power pack powers the hydraulic submersible pumps.

50,000 litres per minute

Large diameter flexible hose, of 150mm / 6″ up to 300mm / 12″.

Mobile Water Supply system used by:

- Fire Brigades
- Emergency Services
- Governments

The purpose is:

- To carry large volumes of liquid over long distances

How does it work?

The HYTRANS mobile water supply system consists of 4 major components:

1. Submersible Pump

The submersible pump pushes (no suction, no priming) the water into large diameter hose. The submersible pump is an innovative hydraulically driven portable submersible pump that allows quick access to any open water source. The pump lift (vertical metres between the Submersible Pump and the Power Pack) can be up to 60 metres / 195 feet.

---

2. HydroSub Power Pack

Capacities of the Power 1,500 L/min to 45,000 L/min.

The containerised diesel-driven Power Pack Packs powers the hydraulic pump and the other parts of the system. Larger units feature a built-in booster pump and (optionally) a foam proportioner. The HydroSubs feature an easy to use control panel, while at the same time the advanced IQAN software will monitor all essential parts including pressure and flow. The control system will warn the user by signal or send out SMS's to multiple designated persons of any pumping issues. With an optional modem the Hytrans unit can also remotely communicate with the Hytrans technical division for services such as program updates and run data download.

---

3. Large Diameter Hose / Flood Hose

Large diameter hoses vary from 150 mm / 6″ up to up to 300 mm / 12″ and minimise friction losses. This allows large amounts of water to be delivered efficiently over long distances. These hoses typically use Storz or Multilug couplings.. Every user of a HYTRANS system can build a HYTRANS configuration to fit the specific challenges the user is faced with.
The key user variables often are (1) Access to water, (2) Amount of water, (3) Required pressure, (4) Distance from water source to the required water delivery location and (5) HYTRANS also uses easy to deploy flood hose for high capacity / low pressure water flows.

---

4. Hose Laying and Hose Recovery

Hytrans offer a mechanised hose laying and hose recovery system for large diameter hose up to 300 mm / 12″. The result is that emergency crews can now deploy much larger sized hoses over longer distances with very limited manpower and with minimum pressure loss.

A truck equipped with a Hose Layer Container and a Hose Recovery Unit provides an excellent and work safe hose laying and retrieving operation. 1,000 metres of large 6 inch diameter hose is recovered and ready for deployment in only 30 minutes.








Track of Records

HFS used during flooding

- The Netherlands
- Belgium
- Germany
- Mexico
- Czech Republic
- Thailand
- France
- Portugal
- Switzerland

Flooding Carlisle
United Kingdom
2005

Flooding Prague
Czech Republic
2002

Flooding Limburg
The Netherlands
1999

Flooding Doncaster
United Kingdom
2007

Flooding Zug
Switzerland
2007

Flooding Mannheim
Germany
2004

Flooding Villaher-
mosa
Mexico
2007

Flooding Alblasser-
dam
The Netherlands
2005

Flooding Madeira
Portugal
2010

Flooding Ulley Dam
South Yorkshire
United Kingdom
2007

Flooding France
France
2011

Flooding Switzer-
land
2004

Flooding Knokke
Belgium
2007

Flooding Westland
The Netherlands
2004

8

REACTION

Monitoring & Communication

During flooding management, the authority needs a complete overview of the situation. Mauritius Police Force helicopters could assist the authority during the day. This is becoming much more complex during the night. Bramston & Associates propose a tactical aerostat enabling multi-tasks such as wireless camera, infra-red camera and communication relay.

The solution is easily and quickly deployable on any site within few minutes.

Helikite Tactical Aerostat

STEADY-CAM SYSTEM

Helikites are unique in having a proprietary, universal 'Steady-Cam' Camera Attachment system. This allows almost any type of camera to be easily attached and then held steady and level whilst providing a full 360 degree field of view. The 'Steady-Cam' systems also ensures that Helikite cameras are automatically lifted out of the way when the Helikites are close to the ground, so they are not damaged during landing or take off.

360 DEGREE TOTAL SURVEILLANCE

Another feature of Helikites is their ability to keep the same angle of attitude in the sky whatever the wind speed. This is very useful for all-round surveillance as it allows numerous cameras to be attached all around the Helikite to provide 360 degree surveillance. So even without the addition of camera levelling systems there is constant and reliable viewing of everything below the Helikite. A high zoom camera pointing in on direction is exceedingly useful, but it will miss what it is not pointing at. Getting constant video or photographic information from all around means nothing is missed. This is very useful for wide area policing of incidents such as riots, football matches crowds, festivals, traffic control or military training.

ECONOMICAL, TOUGH, NON-GYRO CAMERAS

Helikites are so stable that non-gyro cameras such as 'Blackeyes' are capable of giving useful airborne surveillance at minimal cost out to about 1.5Km. Cost is not something that the US and UK military has taken seriously, so normal military aerostat surveillance systems are hugely over-sized, over-manned and over-priced for civilian industry

use. Helikite surveillance systems have always been made with the civilian market in mind and so are far cheaper to buy and run long-term. Despite this Helikites are often far more capable and weather survivable compared to large standard aerostat systems costing many times more. Persistent Helikite airborne surveillance is very practical and economical in the real world.

LONG-RANGE GYRO-CAMERAS

For very long range or higher resolution video, gyro-cameras are required. There are now excellent models available from the UAV and helicopter industry. Most UAV gyro-cameras can be lifted with Helikites, but we concentrate on those that offer the best performance for the least weight and power whilst remaining within a reasonable budget. These cameras are regularly updated and all new cameras are of interest to Allsopp Helikites.

MANUFACTURERS WORLDWIDE SUPPORT

The ability of the camera manufacturers to provide timely production, good warranty and worldwide maintenance of their products is very important. This is taken into account by Allsopp Helikites when recommending cameras for use on Helikites.

AIRBORNE LONG-DISTANCE PATROLLING

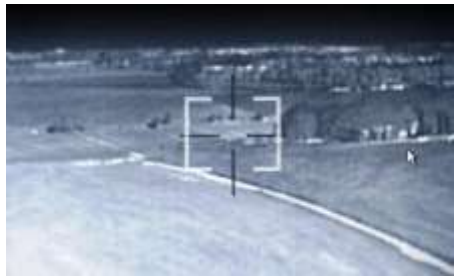
The ability of Helikites to be operated from mobile trailers as well as straight from the ground is very important for rapid deployment. Unlike other aerostats (that rapidly become unstable) Helikites can be towed at high speed behind trailers, trucks or boats with no problems at all. This allows long-distance patrolling and fast pursuit of felons in areas without overhead telephone or power cables. Patrolling in this way reduces the surveillance costs per square Km by ten times compared to fixed installations.

LARGER SURVEILLANCE SYSTEMS

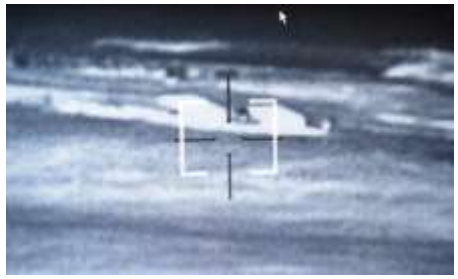
The surveillance systems shown below are all in service and operating. However, there are larger cameras that could be lifted if required, such as the FLIR GD 380, or the Wescam MX15. These could be carried by a 200m3 Desert Star Helikite. Larger camera systems cost more per unit, but, if vast areas need to be protected larger systems often cost less per square kilometre of surveillance coverage.

GYRO CAMERA SCREENSHOTS - THERMAL CAMERA

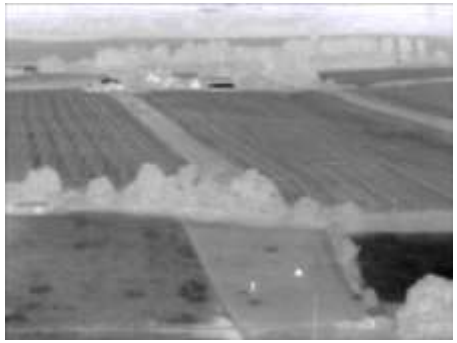
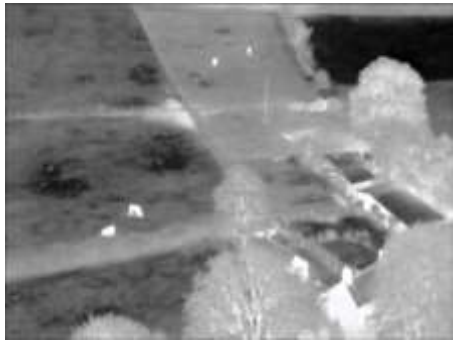


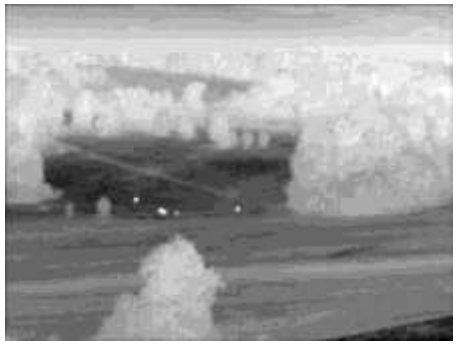



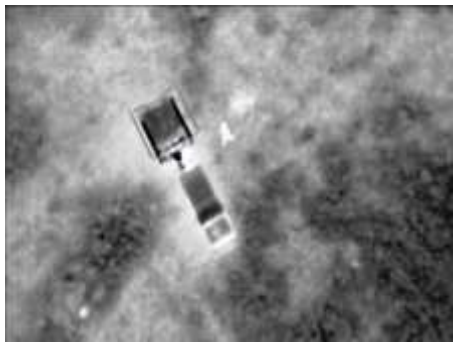
GYRO CAMERA SCREENSHOTS - DAYLIGHT CAMERA

BLACKEYES SCREENSHOTS - THERMAL CAMERA





9

About Bramston & Associates

Bramston & Associates is a full service firm specialising in risk management across Africa. With offices in USA, Europe and Africa, the firm delivers sophisticated services to an international Customer base. Our consultants have a wealth of experience in risk management. We advise on the establishment and on-going operation of African theatre's organisations, and regularly issue Customer updates on relevant issues. Our dedicated team can also draw upon the expertise of specialist from our environmental, technology, physical risk, tax, corporate, banking, litigation, intellectual property, data protection, regulatory and compliance practices whenever required to ensure a comprehensive service.

We help our customers prepare for the unexpected.

eil
Environmental Innovations Ltd

Firelce

HFS Hytrans Fire System
mobile water supply

GELTECH SOLUTIONS

fluvial INNOVATIONS

GLOBAL rescue

INSIGHT ROBOTICS

GLIMMER INTERNATIONAL

blackphone

CSITECH

PPSS Knife Protection

FISFO
Charles Joussot Systems

Intelligent camera and video
Liseum®
Surveillance monitoring experts

SelectaDNA
Advanced Forensic Marking

BEAVER PROTECTION SYSTEMS

HYTRANS

IMPORTANT NOTICE

This is an active document, progressively updated and revised as necessary, particularly following any changes.

DISCLAIMER

Bramston & Associates (the "Owner") has designed and created this document primarily as an information resource. Opinions contained in this document represent Bramston & Associates present opinion only and are subject to change without notice. The views expressed may be preliminary in nature. All information contained in this document has been compiled in good faith from sources believed to be reliable. However, no representation or warranty, expressed or implied, is made with respect to the completeness or accuracy of its contents and the information is not to be relied upon as authoritative. Anyone considering taking actions based upon the content of this document is urged to base his or her decisions upon such investigations as he or she deems necessary.

To the extent permitted by law, no liability whatsoever is accepted for any direct or consequential loss arising from use of this document or its contents.

SEND US YOUR COMMENTS

Bramston & Associates welcomes your comments and suggestions on the quality and usefulness of this document. Your input is an important part of the information used for revision.

If you find any errors or have any other suggestions for improvement, please indicate the document title and part number, and the chapter, section, and page number (if available). You can send your comments to us in by e-mail at this address:

customerservice@bramston.co

If you would like a reply, please give your name, address, telephone number, and (optionally) electronic mail address.

Bramston & Associates

United States Headquarters

Bramston & Associates
16192, Coastal Highway, Lewes
DE 19958, USA
E-mail: us@bramston.co

Mauritius

Bramston & Associates
4th Floor, Ebene Heights
Cycercity, Ebene, Mauritius
E-mail: mu@bramston.co

Mauritius

Bramston & Associates Consulting
44[E], Cyprus Lane, Leclezio Street
Curepipe 74319, Mauritius
E-mail: mu@bramston.co

www.bramston.co