STATES OF JERSEY

EX GRATIA PAYMENT TO TERRY MCDONALD (P.130/2013): COMMENTS

Presented to the States on 19th November 2013
by the Minister for Home Affairs

STATES GREFFE

2013 Price code: F P.130 Com.

COMMENTS

1. INTRODUCTION

Although the Deputy of St. Martin has indicated to the Minister for Home Affairs that he does not intend to allege that there was any fault on the part of the Ministers for Home Affairs, Economic Development or Planning and Environment in relation to this matter, there are a number of reasons why the issue of fault or lack of fault needs to be dealt with in these comments. These reasons include –

(a) The fact that the Deputy of St. Martin has referred in the report attached to his proposition to the very good material that was presented by the then Deputy of St. John (now Connétable of St. John) at the time of his proposition (P.21/2011). Unfortunately, by so doing, he is effectively incorporating into his comment material which alleges fault on the part of the 3 Ministers.

(b) The probability that, even if the Deputy of St. Martin were to make no such allegations in his opening speech, other members of the Assembly may do so.

(c) The need to ensure that all the members of the Assembly are properly briefed upon the facts and have access to the relevant documents in order to assist them in making their decision. That is particularly so because of the inaccurate information which has circulated in the Island in relation to this matter over a number of years. We are concerned, in particular, that members of the Assembly who have not read the very full and detailed report of the 3 Ministers (entitled 'Importation of Fireworks in 2007 for a Charity Event: investigation (P.21/2011) – combined report of the Ministers for Home Affairs, Planning and Environment and Economic Development' (R.113/2011)) may then come into the debate with a wrong understanding of the underlying facts. For this reason, a copy of that report has been attached as an **Annex** to these Comments. References in these Comments to Appendices are references to the documents contained in the various Appendices to R.113/2011.

2. THE ROLE OF THE PLANNING AND ENVIRONMENT MINISTER AND DEPARTMENT

The allegation of fault against the Minister for Planning and Environment is, effectively, that members of his staff who were concerned with the issue of water pollution issues wrote to Mr. McDonald just before the fireworks display was due to occur in order to threaten him with prosecution under the Water Pollution (Jersey) Law 2000; that this came as a surprise to Mr. McDonald and that, being a former police officer, Mr. McDonald did not want to risk prosecution and, therefore, withdrew from the record rocket attempt.

This issue is dealt with in some detail in section 2 of R.113/2011.

In fact, Mr. McDonald wrote to the Head of Fisheries and Marine Resources on 3rd April 2007 detailing his plans for dealing with the remains of the rockets (Appendix 1) and, following a meeting with the relevant officer or officers, he received a letter from the Environment Division of the Planning and Environment Department on 14th May 2007 which outlined his responsibilities under the Water Pollution Law (Appendix 2).

On 22nd May 2007, Mr. McDonald produced a Risk Assessment document (Appendix 3) and the issue of 'Pollution Threat to fish, birds/environment, etc. is dealt with on page 54 of that document, which is page 73 of R.113/2011. From this, it is apparent that Mr. McDonald was aware that a beach clearance team would be needed to pick up all 110,000 rocket sticks. The need for the rockets to be totally biodegradable is also acknowledged there.

On 27th July 2007, the Environment Division produced a report in response to Mr. McDonald's proposals (Appendix 7), in which they make various recommendations, which include a recommendation in relation to pollution levels in section 2.2 of that report. They also produced a report to assess the Pollution to controlled waters and toxicity (Appendix 8).

The 2 reports of 24th and 27th July 2007 did not recommend that the event should not take place, but sought to determine the risk and provide measures for Mr. McDonald to follow so that environmental damage could be minimised. I invite the Members of the Assembly to read these in order to determine the facts for themselves.

Subsequently, as recommended, Mr. McDonald undertook a daylight test-firing trial on 1st August 2007. Mr. McDonald was informed on site that nothing observed at the test-firing trial altered the Department's position that the attempt could go ahead without difficulty if the simple guidance given was observed. However, Mr. McDonald gave media interviews later the same day as the test-firing to say that he was to call off the world record-breaking event. The then Minister for Planning and Environment had publicly stated his support for the rocket launch a few days before the event was called off.

In conversation with the then Environment Director on site, Mr. McDonald stated that he thought that cancelling the event was the right thing to do, that he had noted the concerns being raised by some sections of the public, and that he felt the public generally were less supportive of this type of event than they had been of his previous record-breaking attempt years earlier. He was told that this was a matter for him to decide, but that if the event did go ahead he should adhere to the guidance issued by the Department.

It follows from the above –

(a) that Mr. McDonald was aware of the issue of potential pollution right from the start;

(b) that he was given sensible and appropriate advice as to how to mitigate that risk by officers of the Planning and Environment Department, who did not oppose the record attempt provided that their advice was followed;

(c) that the Minister for Planning and Environment of the time was supportive of the record-breaking attempt proceeding; and

(d) that Mr. McDonald nevertheless decided not to proceed.

3. THE ROLE OF THE MINISTER FOR HOME AFFAIRS AND THE HOME AFFAIRS DEPARTMENTS

Before I look at the possible issue of fault on the part of the Home Affairs Department, I want to point out that the Home Affairs section of the Report of the 3 Ministers (section 4) in its opening paragraphs, supports the view of the Planning and Environment Department that Mr. McDonald was very well aware of environmental issues.

The second paragraph of that section reads as follows –

> 'In April 2007, some 3 months before the rockets were imported, Mr. McDonald met with the Explosives Licensing Officer (ELO) and the Explosives Ordnance Disposal (EOD) Officer at the request of Mr. McDonald. Mr. McDonald was asked if any of the fireworks were blue, as all fireworks contain different chemicals to produce the desired colour, and blue rockets often contain copper oxide which is a particularly toxic chemical for marine life. The ELO recalls that Mr. McDonald responded that the colours were not a problem, as all the rockets would be biodegradable. Mr. McDonald further added that the Environmental Health Officers had raised concerns about pollution. Both the ELO and the EOD Officer drew attention to the possible risk of pollution to the beach at West Park and the sea, which could be caused by the rocket sticks and spent casings. Mr. McDonald told the ELO and the EOD Officer that there would be plenty of volunteers to clear the area after the display.'

The only allegation of fault of which we are aware in relation to Home Affairs Department relates to the permit which was granted to Mr. McDonald by the States of Jersey Fire and Rescue Service to import the fireworks. The issue relates to the fact that the initial licence to import fireworks dated 13th July 2007 (Appendix 15) stipulated that the imported fireworks could be stored at Vinchelez Farm, St. Ouen, whereas Mr. McDonald was subsequently informed that they could not be stored there and a revised licence was issued on 8th October 2007 (Appendix 16) for them to be stored at Ronez Quarry.

There is a lot of detail on this contained in section 4 of R.113/2011 and we would refer Members of the Assembly to that Section without repeating the detail. A full assessment, including a site visit, had been made prior to the issuing of the licence to determine the suitability of Vinchelez Farm for storage purposes of the large quantity of fireworks and a Tactical Plan had been drawn up (Appendix 17). However, this had been based upon information provided by Mr. McDonald that Vinchelez Farm was empty. When, upon making a further site visit on 17th July 2007, it was discovered that Vinchelez Farm was still partly occupied, Mr. McDonald was informed that Vinchelez Farm could not be used for storage purposes of the fireworks unless the staff accommodation was empty.

Subsequently, Mr. McDonald made alternative arrangements for storage with Ronez Quarry and, although the revised licence is dated much later, it is clear that the Fire and Rescue Service had accepted the revised storage arrangements with Ronez Quarry as being acceptable.

It would have been completely unsafe and unacceptable for the Fire and Rescue Service to have allowed storage at Vinchelez Farm to continue whilst people were continuing to live in staff accommodation there.

Furthermore, even if there had been some basis of complaint against the Fire and Rescue Service, which has always been denied, there is no logical link between the place of storage and the decision to not proceed with the record-breaking attempt.

On the other hand, it is clear that the Home Affairs Department were concerned, at an early stage after the decision, not to proceed with the record attempt, in relation to public safety issues relating to the continuing presence in the Island of such a large quantity of fireworks in one place.

The last 3 paragraphs of the Planning and Environment section of R.113/2011 (section 3) refers to meetings which took place in late 2007 and early 2008 with a view to the disposal of the fireworks; and it is clear from this that from a very early stage the Home Affairs Department were willing, at their own cost, to dispose of the fireworks. However, that initiative was thwarted because of the difficulty in getting both Mr. McDonald and the supplier of the fireworks to agree to this option. This is referred to in Mr. McDonald's letter dated 19th March 2008 to the Environment Division, in which he indicates that he does not own the fireworks because he has never paid for them and explains that his current financial difficulties mean that he cannot borrow money in order to pay for the debts associated with the fireworks (Appendix 9).

The Home Affairs Department and the Minister and Assistant Minister renewed their efforts to resolve the stalemate in early 2009, and Appendices 18 to 27 contain correspondence on this. Eventually, by his letter dated 9th February 2011 (Appendix 28), Mr. McDonald agreed to the destruction of the fireworks. The Ministerial Decision in relation to this is at Appendix 29. The cost to the Home Affairs Department in relation to the controlled destruction of approximately 5.75 tons of fireworks was £4,713.00. This was carried out for public safety reasons and because Mr. McDonald did not then have the financial means at the time to pay for this.

4. THE ROLE OF THE MINISTER FOR ECONOMIC DEVELOPMENT

The allegations of fault against the Minister for Economic Development lie in 2 possible areas. The first relates to whether the Economic Development Department should have paid the sum of £20,000 towards the costs of the Record Attempt, and the second relates to whether they should have made greater efforts to assist Mr. McDonald once he had got into difficulties.

In relation to the first area, Mr. McDonald first wrote to the Economic Development Department (EDD) Regulatory Services on 23rd March 2007, and he then sought permission and support to proceed with the Record Attempt (Appendix 10).

The response to this was a letter dated 3rd April 2007, which indicated that the Department had no objection to Mr. McDonald's endeavour. However, it also indicated that this was subject to other permissions involving other bodies. At some time in May 2007, Mr. A. Lewis telephoned the Minister for Economic Development and the then Minister replied by e-mail (Appendix 11) to the effect that EDD could potentially get involved with it.

Subsequently, by e-mail dated 8th June 2007, the then Minister for Economic Development made a caveated (or conditional) offer in the following terms (Appendix 13) –

> 'We have considered the Battle of Rockets proposal and will be happy to provide a grant of £20,000 based on the projected outputs of the event detailed in your email of 3rd June – this should cover the majority of the cost of the rockets and associated insurance. I would like to attach a caveat – namely that the world record attempt forms part of a larger pyrotechnic display linked to the finale of the Moonlight Parade. We believe that this is an absolute requirement to make the event capable of delivering additionality and for it to attract in kind marketing support through our various channels to market.'

The position of the Minister for Economic Development is simply that the caveat or condition was never met. The world record attempt did not form part of the Moonlight Parade because Mr. McDonald decided not to proceed with it.

In relation to the issue of subsequent assistance, it is clear that the Economic Development Department played a part in the attempt in early 2008 to come up with a solution. That has already been referred to in the Home Affairs section of these Comments. However, a letter from EDD to Mr. McDonald dated 6th February 2008 (Appendix 14) confirms these discussions. Unfortunately, this initiative did not succeed, presumably for the reasons set out in Mr. McDonald's letter dated 20th March 2008 (Appendix 9).

In passing, I would mention that according to the section of R.113/2011 produced by the Minister for Planning and Environment, the Minister for Economic Development in early 2008 was of the opinion that public funding of Mr. McDonald's debts was not an option.

In the report attached to the Deputy of St. Martin's Proposition, there is a timeline which includes an allegation that in August 2008 another local fireworks company offered to pay off (over time) all the associated debt if the States could provide an interest-free loan. It is also stated there that this was refused as unworkable. There was no reference to this offer in the Minister for Economic Development's section of R.113/2011. However, the Minister for Home Affairs has been able to obtain a copy of the letter of offer, which is dated 1st April 2008 and was addressed to the then Minister for Economic Development. That offer would have required the Minister for Economic Development to pay not just for the fireworks, but also all the associated costs, with a gradual but not guaranteed repayment over an indefinite period of time. The offer also required the States to agree on other matters in terms which were unacceptable. The offer was considered but was eventually refused at some time in June 2008 as being unworkable and unacceptable.

5. FINAL THOUGHTS ON THE PROPOSITION

The letter of Mr. McDonald dated 20th March 2008 (Appendix 9) is significant in this regard because in it he does not allege any fault on the part of any of the 3 Ministers or their Departments. In fact, in the letter he expresses his thanks to various departments. His letter includes this paragraph –

> "I really do appreciate everything that you have done to try to help resolve my problems. There never was 'a them and us' situation and I will make that abundantly clear in my press releases, together with mention of the support from Senator Ozouf and others along the way."

We find it sad that Mr. McDonald was not able to maintain that position, and that in later press briefings and the information attached to P.21/2011 has sought to blame various departments. From the letter of 20th March 2008, we believe that it is clear that Mr. McDonald's original position was that he hoped that the people of Jersey would lobby States members to help him out of his problems because of his past service to the Island and because he had been trying to do something for Jersey.

We hope that the Deputy of St. Martin and other members of the States will be able to maintain that position.

The decision for Members then will then come down to 2 options –

1. That members take the view that Mr. McDonald, whilst very well-meaning, got himself into a tangle which left him with debts but it is not the responsibility of the States of Jersey to get people, no matter how well meaning, out of financial tangles which are of their own making.

2. That members take the view that, although Mr. McDonald got himself into a tangle which was of his own making which left him with debts; nevertheless, because of his past record of service to the Island and desire on this occasion to do something for the Island, the States of Jersey should pay the sum of £50,000 as requested in the proposition.

We do not find that we can support the expenditure of public money in circumstances in which there has been no fault on the part of any of the departments involved.

Statement under Standing Order 37A [Presentation of comment relating to a proposition]

These comments have been presented after the noon deadline due to –

(a) the need to investigate a matter which was raised in the proposition and not covered by the previous report of the 3 Ministers;

(b) the difficulties in obtaining the agreement of all 3 Ministers when information in relation to (a) was discovered late on.

STATES OF JERSEY

IMPORTATION OF FIREWORKS IN 2007 FOR A CHARITY EVENT: INVESTIGATION (P.21/2011) – COMBINED REPORT BY THE MINISTERS FOR HOME AFFAIRS, PLANNING AND ENVIRONMENT AND ECONOMIC DEVELOPMENT

Presented to the States on 15th September 2011
by the Minister for Home Affairs

STATES GREFFE

2011 Price code: F R.113

REPORT

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REPORT

Section 1: INTRODUCTION

In P.21/2011, the Deputy of St. John proposed the following –

"**THE STATES are asked to decide whether they are of opinion –**

(a) to request the Ministers for Home Affairs, Economic Development and Planning and Environment to review the events surrounding the importation of over 100,000 fireworks for a charity attempt at a world record in 2007, and in particular the actions taken by their departments in relation to this matter, with a view to ascertaining why difficulties arose which led to the eventual cancellation of the proposed launching of the fireworks and a substantial financial loss for the organiser even though the importation was initially approved by all relevant authorities and a Bailiff's permit issued for the event;

(b) to request the Ministers to present to the States no later than the end of May 2011 a report setting out the results of their investigations and details of any appropriate actions they intend to take to compensate the organiser for the losses he incurred."

This proposition was debated on Thursday 17th March 2011 and received unanimous support.

Each department referred to in paragraph (a) above has supplied a résumé of their involvement in the matter and these are supplied in Sections 2 to 4 in the following report.

The inclusion of individual reports supported by evidence in the form of **Appendices** seeks to give readers the facts behind the events prior to, during, and after the failed rocket attempt.

Section 2: DEPARTMENT REPORT – ENVIRONMENT.

The Environment Division received a letter from Mr. McDonald regarding his proposed World Record-Breaking attempt on 5th April 2007 (see **Appendix 1**) and representatives from the Department met Mr. McDonald on 2nd May 2007 to discuss the issue.

At this meeting, it was explained to Mr. McDonald that his proposal had the potential to cause pollution of controlled waters and he was asked for a statement of how the project would be managed. It was made clear that his statement would have to include the type and weight of the chemicals contained in the fireworks.

It was apparent from the earliest discussions that the proposed launch would involve approximately 7 tonnes of material (2 container-loads of mixed toxic chemicals, cardboard and wood) being launched into the air and then falling into the sea or onto the shoreline.

A letter was sent to Mr. McDonald from the Department on 14th May 2007 (see **Appendix 2**). The letter reminded him that details of the chemical components of the rockets were required and also highlighted his responsibilities under the Water Pollution (Jersey) Law 2000. Without details of the chemical component of the rockets, the Department was unable to accurately determine the likely threat of pollution of St. Aubin's Bay that the record attempt posed.

Mr. McDonald provided an initial 'Risk Assessment' on 22nd May (see **Appendix 3**), but this did not contain the information that had been requested in the letter dated 14th May. On 8th June 2007, the Department received a partial list of chemicals (see **Appendix 4**). Between 9th and 11th June, discussions were held between the Department and Mr. McDonald requesting the remainder of the information.

The details of the chemical content for all rocket types were received on 12th July (see **Appendix 5**). An updated risk assessment was received from Mr. McDonald on 16th July 2007 (see **Appendix 6**). Environmental Protection assessed this information and produced 2 reports in response by 27th July. These reports were –

1. A guidance document entitled '*World Record Rocket Launch Attempt – a response from the Environment Division, States of Jersey*.' This focussed on the main areas of risk associated with the attempt and provided mitigating measures which could be simply put in place by Mr. McDonald to avoid environmental pollution. Example topics covered in this report were; 'Risk to areas of ecological importance (including eel grass beds)', and 'Clean-up of site'. These recommendations offered easy and low-cost recommendations and mainly involved avoiding sensitive areas of the beach, and ensuring that all the firework debris was collected up before the incoming tide (see **Appendix 7**).

2. **'***World Record Rocket Launch Attempt – An Assessment of Pollution to controlled waters and Toxicity'*: This assessed the likely pollution potential to St. Aubin's Bay of approximately 1.8 tonnes of raw chemicals entering controlled waters. Also borne in mind was the 4.8 tonnes of cardboard and wood detritus that would have to be

cleared from the beach. It was found that the main environmental damage to the bay would be from vehicle access and debris (see **Appendix 8**).

The 2 reports did not recommend that the event should not take place, but sought to determine the risk and provide measures for Mr. McDonald to follow so that environmental damage could be minimised.

A daylight test-firing trial was then undertaken by Mr. McDonald on 1st August 2007 to evaluate how far the rockets would travel when fired. This was to help Mr. McDonald work out the zones on the beach for firing and debris collection. Mr. McDonald did not test-fire the quantity of fireworks he had initially proposed, and officers on site during the test-firing noted that he seemed surprised when they went off with a bang and not a crackle – which the rockets he had ordered were supposed to do.

Mr. McDonald was informed on site that nothing observed at the test-firing trial altered the Department's position that the attempt could go ahead without difficulty if the simple guidance given was observed. However, Mr. McDonald gave media interviews on site on the same day as the test-firing to say that he was to call off the world record-breaking event. The then Minister for Planning and Environment had publicly stated his support for the rocket launch a few days before the event was called off, and this was reported in the JEP on 2nd August 2007.

In conversation with the then Environment Director on site, Mr. McDonald stated that he thought that cancelling the event was the right thing to do, that he had noted the concerns being raised by some sections of the public, and that he felt the public generally were less supportive of this type of event than they had been of his previous record-breaking attempt years earlier. He was told that this was a matter for him to decide, but that if the event did go ahead he should adhere to the guidance issued by the Department.

The Environment Division remained in contact with Mr. McDonald after the cancellation, and after it transpired that he was unable to sell his fireworks and was in financial difficulties he talked to the Minister for Economic Development on 18th January 2008. The Minister advised that public funding of his debts was not an option.

A joint party including representatives from the Law Officers' Department, Transport and Technical Services, Home Affairs, Environment, and Economic Development reviewed Mr. McDonald's issue on 22nd January 2008. Disposal options were reviewed, as Home Affairs judged the temporary storage as not suitable for the longer term.

Environmental Protection met Mr. McDonald on 31st January 2008 to inform him that Home Affairs were willing to dispose of fireworks at their cost. In addition to this, officers from Economic Development met Mr. McDonald to offer advice on his businesses and debt position. A letter from Mr. McDonald was then received on 20th March 2008 stating his intention to 'go public' and ask the people of the Island for financial support (see **Appendix 9**).

Section 3: DEPARTMENT REPORT – ECONOMIC DEVELOPMENT

The original request for support of the 'Rocket Launch' was received in a letter (see **Appendix 10**) dated 23rd March 2007 addressed to an officer from the Regulatory Services Section of the Department from Mr. McDonald in which he set out his plan for the event and requested in-principle permission for use of St. Aubin's Bay as the launch site.

Reference was made in the letter to the need to obtain permission from a number of agencies, and the letter carried an assurance that all materials would be 'totally biodegradable' with the added assurance that adequate measures would be taken to gather all spent materials after the event. The letter from Mr. McDonald made no reference to, or request for financial support from, the Economic Development Department (EDD).

The officer replied on 3rd April (see **Appendix 11**) that the Department had no objection, provided that all relevant bodies also gave their permission for the event to take place.

The next involvement for EDD was initiated by Mr. Anthony Lewis, then News Editor of the Jersey Evening Post and a major figure within the 'Side by Side' charity, who telephoned the then Minister for Economic Development, Senator Philip Ozouf, in May 2007 requesting the financial support of the Department in underwriting the project.

The Minister responded favourably to the idea and asked a number of questions in an e-mail (see Appendix 12) on 22nd May 2007 in regard to the proposed event prior to a meeting between the Department officials, Mr. Lewis and Battle of Flowers representatives.

The e-mail response from Mr. Lewis (see **Appendix 13**) deals with a number of the issues raised. These are mostly in connection with the efficacy of the event and its ability to raise the charitable donations.

The Economic Development Department, after considering the proposal, confirmed, in an e-mail dated 8th June, that a grant of £20,000 would be made available. The offer of financial support was subject to the world record attempt formed part of a larger pyrotechnic display linked to the finale of the Moonlight Parade of the Jersey Battle of Flowers in August of that year. Copy of the caveated offer of £20,000 is also referenced in Appendix 13.

The EDD £20,000 grant was to be released to Mr. McDonald. The Battle of Flowers Council would have paid for additional fireworks which would have been let off as part of the same display, thus creating a much larger impact through the combination of the rocket launch and the finale firework display. It was an express condition that the grant was conditional on the world record attempt proceeding as the finale to the Battle of Flowers Moonlight Parade. Neither, Mr. Lewis nor Mr. McDonald raised any concerns with the grant offer, or the caveat attached, and continued to organise the record attempt.

Ultimately, as the rocket launch was cancelled several days before the display was due to take place, the question of payment to the 'Side by Side' charity did not arise again, and thereafter the matter was handled for the time being by other agencies of the States.

EDD was next involved when Mr. McDonald approached the Department in January 2008. He had 2 meetings seeking advice about the claims being made against him to pay for the supply of a large number of fireworks from Essex Pyrotechnics.

At the time of the first meeting on 30th January 2008, lawyers representing Essex Pyrotechnics had issued a written warning to Mr. McDonald that legal proceedings would commence if the monies owed for the fireworks supplied were not paid immediately. During the initial meetings, Mr. McDonald indicated that Lloyds Bank had agreed to provide new loan facilities, and he agreed to contact the bank to discuss a new facility.

The work undertaken by EDD, following the initial meeting, was limited to establishing how much Mr. McDonald owed to his creditors, and his options to deal with the pressing claims for payment. The outcome of EDD's work confirmed that Mr. McDonald would have to secure a bank loan of £25,000 to enable him to pay his creditors. This may have required Mr. McDonald to enter into a formal voluntary arrangement with his creditors.

The work undertaken by EDD concluded that Mr. McDonald's creditors could have been satisfied over a period of time if the loan of £25,000 was secured. This was confirmed in writing by an officer from the Department who wrote to Mr. McDonald on 6th February 2008 confirming the above and, if required, offered EDD continued assistance and financial advice (see **Appendix 14**).

The EDD officer followed up the letter with a call to Mr. McDonald, and arranged a meeting on 27th February 2008 to discuss progress with the bank loan and paying his creditors. It was at this second meeting that Mr. McDonald confirmed that he was not prepared to provide the security requested (his mother's house) by the bank to secure the loan. Mr. McDonald was reminded that his creditors would probably continue to pursue monies owed through the courts and that EDD offer of advice and assistance remained.

Mr. McDonald has not made contact with EDD since the last meeting on 27th February 2008.

Section 4: DEPARTMENT REPORT – HOME AFFAIRS DEPARTMENT

This report summarises the actions taken by the Home Affairs Department in relation to the importation of rockets by Mr. T. McDonald for a charity world record attempt in 2007.

In April 2007, some 3 months before the rockets were imported; Mr. McDonald met with the Explosives Licensing Officer (ELO) and the Explosives Ordnance Disposal (EOD) Officer at the request of Mr. McDonald. Mr. McDonald was asked if any of the fireworks were blue, as all fireworks contain different chemicals to produce the desired colour, and blue rockets often contain copper oxide which is a particularly toxic chemical for marine life. The ELO recalls that Mr. McDonald responded that the colours were not a problem, as all the rockets would be biodegradable. Mr. McDonald further added that Environmental Health Officers had already raised concerns about pollution. Both the ELO and the EOD Officer drew attention to the possible risk of pollution to the beach at West Park and the sea, which could be caused by the rocket sticks and spent casings. Mr. McDonald told the ELO and EOD Officer that there would be plenty of volunteers to clear the area after the display.

The involvement of the States of Jersey Fire and Rescue Service (SJFRS) in respect of any firework display is primarily to provide the display organisers with the necessary licence to import the pyrotechnics; it is not within their remit to sanction or agree to any displays taking place. However, a representative of the SJFRS does sit on the Bailiff's Entertainment Panel where the decision whether such events should take place is made. The Panel heard Mr. McDonald's application on 13th June 2007. When requested to do so, the SJFRS will review the display organiser's risk assessment regarding any fire safety issues and make comments accordingly. Mr. McDonald's risk assessments were viewed and discussed with the SJFRS and the amended risk assessments reflected adequate fire safety measures for the proposed event.

Mr. McDonald's 'Risk Assessment Update number 2', dated 10th July 2007, states in relation to the blue rockets: "*Finally, I have just established that our blue rockets are <u>not</u> now to be produced by the Chinese Factory. Our entire launch will now consist of red and white rockets (The Jersey Colours) accompanied by lead free crackle*". Earlier in the same document, Mr. McDonald had written: "*I have now received and passed on the full chemical compound mixtures for the red and white rockets to the Environmental Service Department for their consideration*."

On 12th July 2007, in his Risk Assessment Update number 2, Mr. McDonald advised that the preparation area for the fireworks was to be Vinchelez Farm, St. Ouen.

Mr. McDonald wrote –

> "*It is an ideal location for such use as it is isolated, easily secured and has sufficient covered space for our use, together with adequate parking areas. It is also fairly easily accessible to large vehicles such as tractors and trailers and P-30 plated lorries. In addition to a large agricultural shed there are two large stone built stores one of which will be ideal to store the empty rocket frames in and the other will act as a temporary magazine for the fully loaded trays. There will no longer be a need to utilise 20ft containers as temporary storage. Loading will take place within the confines of the main metal clad shed which will be sub-divided into five areas, for safety purposes."*.

When Mr. McDonald first met with the SJFRS to discuss the importation, they discussed storage, and it was agreed that 5 ISO containers would be provided. Ultimately, Mr. McDonald had difficulty getting 5 containers, so it was agreed with the SJFRS that once the fireworks were at Vinchelez Farm, they would almost immediately be broken down into smaller amounts and stored separately in their firing boxes on flat-bed trailers.

Before the SJFRS issued the licence, they met with Mr. McDonald on a number of occasions at Fire Service HQ and also at Vinchelez Farm. During the visit to the farm, SJFRS photographed the areas which were proposed for the storage of the fireworks and where the display rigs would be set up and loaded with the fireworks prior to transportation to the firing site.

On 13th July 2007, the States of Jersey Fire and Rescue Service (SJFRS) issued to Mr. Terry McDonald a licence to import 5780 kg Gross (1008 kg Net Explosive Quantity) of fireworks (Licence number FWI 01/07) (see **Appendix 15**). The expected date of arrival of the 125,000 fireworks was 24th July 2007 and the licence stipulated that the fireworks were to be kept in an approved store located at Vinchelez Farm, St. Ouen (stored in an ISO container). ISO containers are the standard steel containers that one sees on the back of articulated vehicles.

The import licence was ultimately amended on 2 occasions to stipulate that the fireworks could be stored at Ronez Quarry (see **Appendix 16**).

It would appear that it was originally intended to use more of Vinchelez Farm than was ultimately proposed. A telephone message dated 16th July 2007 from Mr. McDonald to SJFRS says: "*Update re Vinchelez Farm. Only have use of half farm – agricultural sheds. Re-hashed plans.*".

The record of a site visit on 17th July 2007 noted the following points –

Sutton Transport

- *Transportation from Harbour*
- *Containers to stay on site as storage*
- *Should event be cancelled fireworks will be returned to container for export*

Fireworks

- *To be stored in transportation containers*
- *Completed trays to be stored in enclosed compartment, north end of shed*
- *Four areas allocated indoors for loading fireworks into trays*
- *One tray constructed per allocated area*
- *1,500 fireworks per tray*

Premises

- *Old granite building not been (sic) used …*
- *Security cameras to be temporarily installed around premises monitoring people entering & exiting site …*
- *10 persons currently resident at site are due to leave before work begins*

The SJFRS discussed the presence of people resident on the site with Mr. McDonald, as they had originally been told that Vinchelez Farm was empty. On their site visit they found that an area, which was originally intended for storage, was being used as accommodation. The SJFRS told Mr. McDonald that the area would not be able to be used unless the accommodation was empty. They did not, however, impose any condition that staff had to move out.

The Deputy of St. John's report refers to a telephone call received by Mr. McDonald from the SJFRS 2 hours before the rockets were due to arrive. Unfortunately, the SJFRS have no recollection of this event and have no recorded evidence of any conversations. It is known, however, that one of the senior officers (now deceased) had discussions with Mr. McDonald regarding the storage of the fireworks at Ronez, and this may be what the Deputy of St. John is referring to.

Once it became apparent that Vinchelez Farm could not be used, as it still had people resident on site, it is believed that Mr. McDonald liaised with Ronez Quarries, and arranged for the rockets to be stored there. As detailed above, he had a conversation in this respect with one of the senior officers from the Fire and Rescue Service and an amended import licence was subsequently issued, which refers to Ronez Quarry as the storage site.

The SJFRS prepared a Tactical Plan for the farm (see **Appendix 17**). The Plan stipulated that: *"Fireworks will initially be located in the transportation containers (no. 8 on site plan), when assembly is in progress there will be up to 6,000 fireworks located in assembly areas in the shed (1500 fireworks per area – 3, 4, 5 & 6 on site plan). Once a launch tray has been completed it will be moved to the store room (2 on site plan)."*

Fireworks were to be taken from the containers to the sheds, where up to 1,500 fireworks could be prepared at any one time in each of the designated areas (the fireworks would be fused, matched and filled). Once the launch trays containing the 'live' fireworks were ready, they were to be moved to a separate store room.

The SJFRS liaised with the ELO on a number of occasions regarding the pyrotechnics. The main concern was the large number of fireworks being held in one place. The SJFRS assured the ELO that they were happy with the arrangements, and the fact that once the fireworks were at Vinchelez Farm they would almost immediately be broken down into smaller amounts (900 kg loads) and stored separately in their firing boxes on flat-bed trailers.

Approximately 6,000 kgs of fireworks were ultimately stored in one location (Ronez Quarry). Although the Explosives Law Code of Requirements states that a maximum of 900 kgs should be stored in one place, the SJFRS took a broad view of the overall quantity of fireworks in one place and satisfied themselves that the storage arrangements (at the foot of a quarry) were acceptable from a fire safety point of view. It is understood that containers were in very short supply at the time, and Mr. McDonald had been unable to source 5 separate containers.

In a letter dated 29th July 2007 from Mr. McDonald to the SJFRS, Mr. McDonald wrote in respect of the test-firing of rockets that was due to take place on 1st August 2007: "*The main concerns, I suspect, will be how far or how high the rockets will travel, how much paper is scattered, the noise levels and volume of smoke produced and the likely environmental impact of the mass firing itself*.".

In Mr. McDonald's risk assessment, dated 20th May 2007, he makes only one reference to the possibility of the display not taking place: "*From a safety point of view I would be the first to suggest that if it did not take place as scheduled it should not take place at all. This will be further addressed at a later stage because it poses its own problems concerning the disposal of the rockets in a safe and acceptable manner. The subject of further risk assessments I'm afraid."* (pages 32/33).

After Mr. McDonald took the decision to cancel the display, the rockets remained at Ronez Quarry and Mr. McDonald made efforts to find a purchaser, whilst remaining on site with the rockets. For reasons of public safety, the EOD Officer and ELO inspected the rockets at regular intervals.

In 2008, the Home Affairs Department understands that Mr. McDonald had the opportunity to dispose of the fireworks to another UK firework company. However, this ultimately did not come to fruition because of the difficulties in ascertaining who had the title of the rockets.

During 2009, there were various exchanges of correspondence between the Home Affairs Department and both Mr. McDonald and the supplier of the fireworks who, the Department was given to understand, had not received payment for the rockets from Mr. McDonald, and maintained that he remained, therefore, the owner of the rockets.

On 6th February 2009, the Department wrote to the supplier of the fireworks, advising him that the pyrotechnics could not stay in Jersey, and that they should either be safely destroyed, or shipped back to him (see **Appendix 18**). No response was received in respect of this letter.

On 26th February 2009, the Minister wrote to the Attorney General seeking his advice on the legal situation in relation to the rockets (see **Appendix 19**).

In April 2009, Mr. McDonald left Ronez Quarry and effectively abandoned the rockets.

On 6th April 2009, the Department wrote to the Managing Director of Ronez Quarries asking that the rockets be allowed to remain safely at the quarry pending further enquiries (see **Appendix 20**).

The Department wrote to both the owner and Mr. McDonald on 16th April 2009, having taken advice (see **Appendix 21**). Whilst not accepting any responsibility for the situation in which Mr. McDonald found himself, the Department offered at its own expense to arrange to ship the rockets back to the owner within 2 weeks. The owner replied to this letter on 22nd April 2009, seeking clarification in relation to some points, but not accepting the terms of the letter (see **Appendix 22**). Mr. McDonald replied, declining to accept any of the terms of the Department's letter.

There was a subsequent exchange with the owner, but this reached an impasse (see **Appendix 23**). In a telephone conversation with the Department, the owner stated that the rockets were no longer of any commercial value to him and that if they were returned to him he intended to destroy them. On 31st July 2009, the Department wrote to the owner, suggesting that the rockets be either exported to him or destroyed (see **Appendix 24**). No response was received.

On 22nd September 2009, the Department wrote to the Managing Director of Ronez Quarries (see **Appendix 25**).

Appropriate legal advice was obtained, and acting on that advice the Department again wrote to the owner on 20th January 2010, to advise him that the safe destruction of the rockets would commence on 19th February 2010 if he did not write to the Department to set out his plans to either remove or destroy the rockets (see **Appendix 26**). No response was received from the owner.

A letter was sent on the same day to Mr. McDonald in the same terms (see **Appendix 27**). He responded on 9th February 2010 that he was "…more than happy for this (their destruction) to happen…" (see **Appendix 28**).

Consequently, on 30th March 2010, the Minister for Home Affairs signed a Ministerial Decision (MD-HA-2010-0024) approving the disposal of the rockets by controlled burning. (The Ministerial Decision was an exempt decision at the time (see **Appendix 29**).)

The controlled burning of the rockets at Ronez was delayed because the quarry activities moved to the vicinity of the area that had been identified as a suitable location for the burning.

The EOD Officer, assisted by the ELO, carried out the disposal of the rockets between 16th October and 9th November 2010. This took a total of 133.5 hours of operational time for the EOD Officer and 25.25 hours of operational time for the ELO, resulting in the destruction of approximately 5.75 tons of pyrotechnical material, consisting of 626 cases of rockets and 3 cases of match fuse.

The EOD Officer provides a certain number of man-hours for operational work as part of his contract. The cost of the destruction was therefore offset partially by utilising the unexpended operational hours in the 2010 contract. The additional cost to the Department of carrying out the destruction of the rockets, consisting in additional man-hours, mileage, sample analysis and the purchase of some equipment totalled £4,713.00.

Section 5: REPORT SUMMARY

The previous sections, with the support of the following Appendices, show significant and well-documented evidence of a high level of extremely positive and helpful involvement from States' officers and Ministers from the very beginning of Mr. McDonald's proposed intentions.

The chronologically supplied information puts the facts surrounding States' involvement behind the assertions made in P.21/2011, giving the reader a fuller understanding of how many people, departments, and elected members offered help, and in what way that help was offered to the organiser.

It is clear that far from the States' intention being to stop the attempt, efforts were made to ensure that if the attempt was to go ahead it did so with financial and practical support from a variety of sources in the States of Jersey.

The degree to which this advice and information was accepted, taken up, and understood is in question, as it is clear that had the organiser laid the foundations correctly from a financial and an environmental perspective, the outcome may have been a successful culmination to an already arranged event.

The Ministers for Home Affairs, Planning and Environment and Economic Development are therefore assured that the issue has been dealt with in an appropriate manner and that, because of this, no compensation to Mr. McDonald is necessary from the public purse.

Section 6: APPENDICES

APPENDIX 1

Letter. Mr. McDonald to Head of Fisheries and Marine Resources. 3 April 07

'MAXVILLE',
Mont-a-l'Abbe,
St. Helier,
Jersey, Channel Islands.
JE2 3HA.

Telephone: 01534 721343
Mobile: 07797 711193
Fax: 01534 285096

3 April 2007

[redacted]
Fisheries Officer
Rural Economy
Howard Davis Farm
La Route de la Trinité
Trinity
Jersey JE3 5JP

Environment
- 5 APR 2007

Dear [redacted]

I am certain that you will remember in August of 1997 Jersey successfully gained a World Record for the largest number of simultaneously launched firework rockets, a total of 39,210. This record had remained intact until August of 2006 when Professor Roy Lowry of the University of Plymouth simultaneously launched 60,000 rockets at the British Firework Championships in Plymouth and successfully broke our record. It is my intention to attempt to regain Jersey's Record by firing 110,000 rockets from the beach below the Jersey Battle of Flowers Moonlight Parade arena on the night of Friday 10 August 2007.

To do this I need to seek the permission and support of a number of States Departments and individuals and to date I am pleased to be able to tell you that there have not been any objections at all.

I am certain you will appreciate that in this day and age green issues have become all important and the carbon footprint of this event is very much in our minds and I can confirm that the rockets themselves will be totally biodegradable. I nevertheless have to be seen to be taking every reasonable precaution. In an effort to ensure that as many rocket sticks as possible are collected up and disposed of safely.

In 1997 we were working on a rising tide and time was of the essence. We just had time to position the rockets, lay out a 1,000 metres or so of old netting and this in an effort to capture as many sticks as possible from the subsequent falling tide. We fired the rockets and picked up as many as possible before being forced to leave the beach quite quickly!

This year we are hoping to fire at about 22.30 hours. Low tide is at 24 mins past midnight. Hopefully by deploying a large group of volunteers armed with rakes, torches, bin bags and rubber gloves we hope to clear most of the sticks before being forced to leave the beach by the tide once again.

I still want to be in a position however whereby I can demonstrate to 'interested parties' that we are doing everything humanly possible to leave the beach exactly as we found it. With this fact firmly in mind I would like to seek your permission to deploy a line of angle iron posts (below our firing position) from which I can stretch out and secure a tangle net which will consist of whatever nets we can obtain from appeals via the Island media for old fishing nets to be donated for such use.

I do appreciate the potential repercussions and ramifications associated with this request and I can assure you that if our clean up operation is successful in the limited time available to us the tangle net will not be deployed at all. Hopefully this will be the case. I just wish that we could do a trial run to give me a better idea about just how long it will actually take to pick what will be the entire contents of a 20ft container packed to capacity with rockets.

For information purposes I will also be arranging for a mobile lighting unit to be positioned on the beach to make the task easier and I am awaiting 'ball park figures' from local removal operators (such as [redacted] and [redacted]) to assist with this task by supplying paid litter collectors and light pick up trucks to facilitate our task. These 'professionals' will be utilised in addition to the unpaid volunteers of course.

Please do not hesitate to contact me if you require further information concerning this matter.

Before closing I just want to point out that in 1997 we staged the launch on behalf of the BBC Children in Need Appeal and this year it will be on behalf of the local charity, Side-By-Side which was formed following the tsunami disaster on Boxing Day 2004. This fact has not been made public yet and won't be until all of the necessary permissions are in place for blatantly obvious reasons.

I look forward to hearing from you in due course.

Kind regards

Yours sincerely

APPENDIX 2

Letter. Environment Division to Mr. McDonald. 14 May 07

"**Planning and Environment Department**

Environment Division
Howard Davis Farm, La Route de la Trinite
Trinity, Jersey, JE3 5JP
Tel: +44 (0)1534 441600
Fax: +44 (0)1534 441601

Mr Terry McDonald Maxville Mont-a-l'Abbe St Helier Jersey JE2 3HA	14 May 2007

Our ref:
Your ref:

Dear Mr McDonald

Firework Record Attempt 10 August 2007

Thank you attending a meeting recently at Howard Davis Farm to explain and discuss the proposed firework record attempt scheduled for 10 August 2007.

I am writing to you with respect to aspects of water pollution and waste management covered during discussions and not in relation to fisheries, animal welfare or ecology whose representatives also attended the meeting.

I recognise your shared concern to minimise any negative environmental impact during the event.

With this in mind, I would like to bring to your attention the requirement to comply with the provisions of the Water Pollution (Jersey) Law 2000 and the Waste Management (Jersey) Law 2005.

Article 4 of the Water Pollution (Jersey) Law defines pollution as the introduction directly or indirectly into controlled waters of any substance, or energy, where its introduction results or is likely to result in:

a) a hazard to human health
b) harm to any living resources or aquatic ecosystem
c) damage to any amenity
d) interference with any legitimate use of controlled waters.

Controlled waters includes coastal waters, the foreshore and beaches.

With this in mind, I would therefore ask you to forward a breakdown of the composition of chemicals used in the rockets so that we can assess any likely potential environmental impact arising from them.

I would also appreciate it if you can forward your contingency plan to deal with waste from the rockets, including rockets which were not ignited during the displayed and with respect to safe disposal of all unfired rockets in the event that the display is cancelled. The transport and safe disposal of this waste is covered by the Waste Management (Jersey) Law 2005.

Should you have any questions, or wish to discuss any pollution or waste related aspect of the record attempt, please do not hesitate to contact me.

Many thanks

Assistant Director - Environmental Protection"

APPENDIX 3

RISK ASSESSMENT

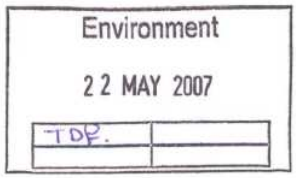
FOR WORLD RECORD ROCKET LAUNCH ATTEMPT

AT THE JERSEY

BATTLE OF FLOWERS MOONLIGHT PARADE

FRIDAY 10 AUGUST 2007

AT APPROXIMATELY 22.30 HOURS



Compiled by:
Terry McDonald
Maxville
La Grande Route de Mont a l'Abbe
St Helier
Jersey JE2 3HA

Tel: 01534 721343
Mobile: 07797 711193
E-mail: terry.mcdonald@jerseymail.co.uk
Dated: 20 May 2007

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Please be advised

There are still more documents to be added to this comprehensive Risk Assessment. Many cannot be completed until all of the arrangements, key persons and so on are put in place and confirmed. They will follow on as and when they are completed together with 'up grades' and any changes made as we get closer to the event.

Item to follow include:

1. Physical specifications of the rockets
2. Details concerning Insurance Cover put in place.
3. Explosives Licences, Firework Importation Licences etc
4. List of Appropriate Persons to handles the explosives
5. Control and Command Structure
6. Maps and plans of preparation area/location
7. Grid Reference plans of the firing site itself
8. Results from Test Firings carried out
9. List of the composition of chemicals used in the rockets
10. The actual Firework Risk Assessment.

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AIMS OF THE EVENT

The aims of staging this event are as follows:-

1. To attempt to raise a significant amount of money for the Jersey Side by Side Charity.

2. To reclaim a World Record set in Jersey in August 1997 and lost to Plymouth in August 2006.

3. To give support to the Jersey Battle of Flowers Association by providing them with a spectacular, noisy, colourful but above all safe finale to the Moonlight Parade.

4. To provide an opportunity for Islanders from all walks of life to participate in, support and donate to an event which will probably be a once in a lifetime experience for one and all.

5. To hopefully support Jersey Tourism by projecting Jersey to potentially a world wide audience and show the beauty of the Island, the excellence of the Jersey Battle of Flowers and the ingenuity of Islanders directly involved with all of the aspects of this event.

6. To hopefully stage an event that will be witnessed and enjoyed by thousands not only in the Island but elsewhere by the means of television programmes, the internet, magazines, periodicals and newspapers.

7. To raise the profile of the Jersey Side by Side Charity and raise awareness about its current efforts to build a girls school in earthquake hit Pakistan.

8. To show to the world at large that we as an Island community still continue to be one of the fore runners in raising substantial amounts of money for both local charities and overseas aid projects. This is something that Jersey excels at and can be justly proud of.

9. To demonstrate that events of this magnitude, complexity and in all honesty risk can be staged in this small Island which has the infrastructure, topography, financial support and abilities required to stage such events and to do so in a professional manner.

10. To show most importantly of all that not only can Jersey produce such spectaculars, raise thousands of pounds by doing so for worthwhile causes but it can also do all of this safely and from an environmental point of view leave the areas of operation spotlessly clean, undamaged and exactly how we found them.

HISTORY OF THE EVENT

In 1986 Standard Fireworks of Huddersfield successfully carried out the simultaneous launch of 26,280 firework rockets from Brighton Pier and established a World Record in the process.

This record remained unchallenged until august of 1997 when, as a finale to the Jersey Battle of Flowers Moonlight Parade and also as a major fundraising event for the BBC Children in Need Appeal, I broke Standards record for Jersey by attempting to launch 40,000 rockets which culminated in a new World Record of 39,210.

Standard had fired 30,000 to gain their record and we had fired 40,000 to gain ours. In both cases there were, as expected, a reasonably large number of hang fires or miss fires found in the launching trays after firing.

These are normally due to a fault in the manufacturing process or bad fusing by the operator(s) at the time or individual rockets being jammed too tightly together in the weld mesh of the launching trays. A ten percent failure rate has to be anticipated when staging events of this sort.

It is interesting to note that both Brighton's and Jersey's records coincidentally remained unchallenged for a period of nine years which tends to indicate that not too many people are prepared to undergo the challenge or input the time and effort required to stage events of this sort safely especially when the end results are all over and done with in about ten seconds flat.

In 1997 we were very fortunate to have obtained a supply of rockets which had failed the Health and Safety Executive tests for Category 3 rockets (which are made for sale to members of the public) by virtue of the fact that they had been found to be erratic in flight but otherwise fully operational. This particular batch of 56,000 rockets were due to be destroyed by controlled burning in the UK and at a total financial loss to the importer concerned.

They were more than pleased when we offered to buy them (at even below cost price) because the sum offered was in fact greater than the cost of carrying out a controlled burn at the time! Although they were unsuitable for sale to the general public for use on 5th November they were still safe for use by professional operators on a totally open site such as a sea beach and as a mass ascension firing.

We were also fortunate that each of the individual rockets carried a pay load of either coloured stars or crackle mixture and were also designed to emit a loud pyrotechnic whistle whilst rising to the apex of their flight.

In reality this meant that not only was the sight of so many rockets exploding simultaneously in the dark night sky really spectacular but the associated sound was equally memorable and impressive to say the least.

Standard Fireworks had utilised flight rockets for their 1986 launch and these basically just lift off without any real noise and do not contain a burst of any sort but

just peter out at the apogee of flight. It gained them a World Record but the visible and audible end results were not nearly as spectacular as our 1997 launch.

In August of 2006 Professor Roy Lowry a lecturer in Physics at Plymouth University decided to challenge Jersey's World Record by attempting to fire 60,000 rockets at The British Fireworks Championships and this on the opening night of the event.

On this occasion he had been supplied with mini rockets by Standard Fireworks of Huddersfield who I strongly suspect were a little annoyed at losing their World Record to Jersey.

These rockets were banned from sale as a Category 3 item to the general public in 2001 by virtue of the fact that they were capable of being held in the hand, ignited and pointed in any direction and for whatever reason by the firer. They were being abused by miscreants and I believe resulted in a number of accidents and incidents in the UK.

They were the smallest rockets ever made with a stick the size of a match stick and about 20cm in length. The head was in fact a small pyrotechnic whistle driver the size of a Bic Biro and about 5cm in length. Each one contained a mini maroon which produced a loud pop when the driver or so called rocket motor burnt out.

True pyrotechnic professionals were glad when they were banned from sale for blatantly obvious reasons.

Our supply of rockets in 1997 did have one real downside and that was the fact that each was filled with a bright pink coloured plastic nose cap which was certainly not biodegradable.

Having promised the public of the Island well prior to firing in 1997 that we would be responsible for ensuring that all of our flotsam and jetsam would be picked up and disposed of safely we carried out searches of the beach at St Aubins Bay for the following 6 to 8 high tides thinking that would be sufficient to ensure we had kept out promise but, we got well and truly caught out when we were still receiving phone calls from beach users six to eight weeks later concerning pink plastic nose caps which were still washing up with the tides at areas as far away as Greve de L'Ecq. These were clearly visible in amongst the sea weed at the high tide marks. We honoured our promise and responded to each and every call received and collected in approximately 7,000 more caps and rightly so. I was ever so relieved when the calls finally stopped I must admit.

In August 1997 we fired our rockets at low water and utilised a tangle net made out of old discarded fishing nets positioned just behind us on metal pigtail posts and this in an effort to allow the tide to flood in and subsequently deposit a lot of the buoyant fired rocket sticks at the high tide line but, with the hope that any which were sucked back down by the retreating tide would get well and truly snared up in the tangle nets.

Our plan was a partial success in so far as we gathered up approximately 30,000 plus sticks and rocket heads but hundreds of pink nose caps slipped past the nets and floated off to present us with an ongoing recovery problem. Lessons learnt I'm pleased to say.

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The bottom line is that based on knowledge and experience gained by impartially examining the methods used and end results of no less than three of these simultaneous rocket launches we are now in a much better, stronger and most importantly of all more knowledgeable position to attempt a fourth later this year.

Living in an Island famous World Wide for its charitable fun raising efforts and methods, I have always said that for anything to be a real success it has to be new, totally different, able to stimulate peoples imagination and desire to be involved in some way, be noisy, colourful, spectacular and involve as many people as possible (in both active and passive roles) and above all it has to be staged safely. The other important criteria in my humble position is that it should not be produced or staged on a regular basis because the paying public lose interest quite quickly and often only part with money for one reason only – to get the fundraisers to leave them in peace!

I know the potential that this wonderful and unusual event has to raise an awful lot of money for a reputable cause and this year the recipient will be The Jersey Side by Side Charity formed following the disastrous tsunami that took place on Boxing Day of 2004. The needs of people directly affected by that catastrophe are all too real and very much ongoing for a long time to come.

Our hope is to play a small part in the relief of that pain and suffering with proceeds raised from the event.

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BEACH FIRING SITE

SUITABILITY OF THE VENUE (FIRING SITE)

KEY RISKS IDENTIFIED	CONTROL MEASURES
Unauthorised access by people and animals at any time	Adequate pre event publicity given by media Beach Closed officially Jersey Event Post Gazette. Signposted at all access points. Barrier tape deployed on Pig Tail posts as required. Patrolled by Hon Police/Marshals/Security Officers/Fire Marshals. Site lighting deployed. Reinforced by 4 wheel drive parked vehicle. All personnel in radio contact and readily identifiable. Open/sterile area good all round visibility. Adequate safety distance to audience. Public address facilities/equipment operational on site. Presence of other responsible people to assist with security if need be including First Aiders/tractor drivers etc.
At or just before firing	Stop firing device manned and operational by people on high ground equipped with binoculars.
Soft sand in area	All vehicles will be of the four wheel drive type supported by a pay loader / JCB to act as a tow vehicle.

KEY RISKS IDENTIFIED	CONTROL MEASURES
Access by people in boats or viewing from a dangerous area	Subject of media warnings well in advance and JEP Gazette Notice. Reinforce by a marine exclusion zone and subject to further warnings on Marine VHF Channel 16. Area to be patrolled by a suitable equipped and manned safety boat.
Emergency Access to the site and Rendezvouz Point	Via numerous slipways between La Haule and West Park the more viable ones will be manned to prevent obstruction to Services by parked cars/crowds.
Radio Hazards (RAD HAZ) and extraneous electrical energy	No radios or mobile phones will be permitted to within 150 ft of the live fireworks.
Premature/accidental ignition of any of the assembled fireworks	Mass evacuation of the area plan put into operation. All work stops – fire is allowed to burn out. Ample soak time (min of 20 minutes) must elapse before work can recommence in the area. All personnel move away to a safe distance and only return when allowed to do so by the Fire Service.
Electrical storm in the vicinity and or bad weather prevailing on the night	For an electrical storm All work must stop and the area be abandoned (but guarded) by all personnel. A decision will be made as to whether the firing can be delayed by up to an hour or cancelled.

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KEY RISKS IDENTIFIED	CONTROL MEASURES
Minor injuries/slips, trips and falls	Prevented by good working practices but minor injuries sustained can be treated by the on site first aid team.
The high risk matching up and fusing up operations	Minimised by the fact that only suitable, authorised and qualified personnel will be dealing with this dangerous part of the operation and in the accepted manner of safe working practices.

SUITABILITY OF THE VENUE FOR THE EVENT

The mass firing of 100,000 or more firework rockets demands a large and almost sterile area of operation. One has to take into serious consideration the weight of explosives being deployed and the ever present danger of a mass explosion instead of the expected mass ascension and allow for this in the planning stages.

A sea beach which has been officially closed to members of the public (i.e. via the Jersey Evening Post, Gazette Notices, combined with verbal and written warnings from the Islands media) reinforced by the appropriate signage, barriers and so on is about as close to an ideal spot for such activities as one could find in an Island or small and densely populated as ours. The total absence of any combustible materials such as buildings or trees, grass and gorse combined with a totally flat damps work surface means excellent access and egress combined with good all round visibility for those activity engaged in the task in hand.

Security of the area will also be complimented and reinforced by the physical presence of adequate mobile lighting units, a two manned four wheel drive patrol vehicle fitted with warning lights and a public address system and every known access point will be guarded by a marshal or member of the Honorary Police Force.

In addition an on site (but at a safe distance away from the firing point) First Aid Unit manned and equipped by 4 members of the States of Jersey Ambulance Service Support Unit will be available to provide (the hopefully never to be required) First Aid cover for participants on the beach.

I suspect that there will also be a need to supply or provide an emergency patrol boat to help 'police' the large number of private boats which one again can reasonably be expected to venture out and moor up as close as possible to the spectacle (the Jersey way again!). Consideration is also being given to officially establishing a marine exclusion zone around the area this again to be made public via the Jersey Evening Post Gazette Notice, media warnings and verbal warnings on marine channels via the Jersey Marine Radio Station – Jersey Radio.

The prevailing weather conditions on the day will pay a huge part in the safety consideration for this event because although we have an excellent launch site and an equally excellent drop or fall out zone on the sterile sea beach, what goes up must come down and somewhere!

Wind direction and speed play the most important part when considering launching fireworks rockets. The item itself is always very unpredictable in flight. Cracked or broken sticks badly fitted drivers (motors) and manufacturing defects all play a big part as well and one must always expect the unexpected with rockets. No two ever perform in the same way. Fact!

Rockets, when first launched tend to track or fly into the wind but as soon as the driver burns out and the payload of the missile is ejected or ignited the stick tends to act like a very unbalanced wing which can be carried long distances by the prevailing

wind before falling to the ground and very often whilst still burning (afterglow as its called in the industry). Approximately 70% of the rocket type being used for this launch will fall back to earth under the effect of gravity and this at 60 feet per second.

The rockets have been designed to reach the minimum height required by The Guinness Book of Records rules, 30 meters but no more (or in reality not much more than that) but, one has to realise that a considerable number will travel that distance horizontally by virtue of the delay in getting a 100,000 or more rockets to launch simultaneously. Some will reach a few meters in the air before being struck from behind or a glancing blow by their peers which in reality (because all we can deal with is the reality) many will be pushed off course within seconds of lift off resulting in a huge and totally uncontrollable fireball of rockets travelling in all directions.

The minimum safety distance for such an event needs to be 300 feet or approximately three times the anticipated maximum vertical height but in reality I will be choosing a site on the beach at St Aubin which gives me considerably more fall out area or drop zone than that for blatantly obvious reasons.

This exact site is as yet to be established because I have not at the time of writing this first draft risk assessment actually seen or been able to test an actual rocket of the type that will be used on the night. Buying fireworks from China is far from easy but in on effort to ensure that we are in fact getting exactly what we are asking for Mr Tom Archer of Essex Pyrotechnics (our actual buyer) has already travelled to the factory in China and this in an effort to ensure that our needs are being catered for and to the letter. He has already witnessed test firings of similar items for himself and is more than satisfied with the end results to date. He will be returning to the factory in May on a similar fact finding mission.

When all is said and done however from the moment the firing button is pressed we totally lose control over what happens next. So, with that fact firmly in mind I have two and only two variable options open to me at present. The first is that I can delay the launch time from 22.30 hours to perhaps 23.30 (or even midnight) so that the receding tide will provide me with more beach to utilise and provide an even greater safety distance and the second is to move the entire launch site away from the beach directly below the Battle arena to a spot further along the beach towards Bel Royal when there is always considerably more beach exposed at all states of tides.

Both options present their own problems from a policing and a beach clearance operation point of view and both mean a potentially large reduction in audience numbers but, these are small prices to pay in comparison to public safety. If this task was easy we would see many more attempts being made than one on average every nine years!

Access to the site is available from La Haule, the Sugar Basin and Bel Royal slipways. There are soft spots on the beach but these tend to move being totally dependant on the range of tides and weather condition prevailing at the time. Most soft spots also tend to be found directly below the various effluent outfalls where a constant and fairly substantial supply of water is flowing over the sand as it journeys to the sea. This potential down side for vehicular access is readily overcome by utilising powerful four wheel drive tractors and trailers fitted with large balloon type

tyres. The weight of the combined load of ten or twelve wooden tables loaded with rockets will, in all honesty, be almost insignificant to vehicles of this calibre.

We will have an ever more powerful four wheel drive JCB or pay loader on stand by in the vicinity just in case of problems.

Taking everything into consideration one could not hope to find a better or safer launch site than the one chosen by us for this event.

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AUDIENCE PROFILES

KEY RISKS IDENTIFIED	CONTROL MEASURES
Thousands of people are expected to want to view this free event. Many will be local residents of all ages and mobilities reinforced by equally large numbers of visitors to the Island.	Adequate Policing, Marshalling and Security will exist supported by more than adequate methods of communicating to these crowds and the majority of these control measures will be focused on the main close proximity viewing areas.
The areas for viewing the spectacle from are numerous and scattered far and wide	Others such as Noirmont, Regent Road and so on will not be encompassed other than by standard policing methods by both States and Honorary Police Officers on mobile patrol. People will mainly be left to their own devices.

Audience Profile / Estimated Numbers

When this event was staged in August 1997 it drew a record crowd (estimated as 40,000 plus) to the Moonlight Parade. Never before (or ever since) have so many people attended to see a spectacle of this magnitude. One has to accept that the majority of the audience on Battle day tend to be visitors to the Island many of whom deliberately timed their holiday to coincide with the Battle of Flowers. The evening or Moonlight Parade is a different kettle of fish entirely. The majority of that audience tend to be local people who genuinely feel that they have seen so many battle parades it's not worth going to see as it all tends to be variations on a theme. However, the Moonlight Parade is something totally different. Same floats but seen in a totally different light if you will excuse the pun!

The atmosphere, audience participation, ambiance, fun and enjoyment is still new and fresh and much more relaxed compared with the old fashioned formality of the day Parade. This is why the locals prefer to be of that there is no doubt.

I honestly don't know just how much things have changed in the last ten years from a rocket launch perspective because, even though I have been at and played an active part in all of the Parades over those ten years nothing has ever been staged (like the 1997 rocket launch) with which to compare notes or end results.

I honestly believe that people will adopt the attitude of remember the last one ten years ago (memories which will not doubt be actively refreshed by the Islands media between now and Battle 2007) that really was something to see and it was free, an important point for consideration when trying to envisage attendance numbers.

In addition the fact that this spectacle will be almost 3 times larger and hopefully 3 times more impressive I suspect that a lot of people will want to be there in person to see, hear, smell, experience and be part of this event. This will also include a lot of people who wouldn't normally go to the Moonlight Parade but would normally be quite happy to watch the highlights on television.

I also suspect that my reputation for staging spectacular firework events like numerous 5th November displays, The Combined Services displays, the International Pyrotechnic Seminar of 1989, Operation Limelight (the illumination of the Islands entire coastline with flares) of 1995 and the 1997 rocket launch still holds good in a small Island where reputation really is all. Forty years to build a reputation and potentially 40 seconds to lose it!

I don't want to sound arrogant or pompous in any way at all but people do remember these major island events. They also realise that I am getting a bit long in the tooth to be 'doing fireworks' and that this will probably be my last major event so for them it is a once in a lifetime chance to see it for themselves because much as I would like to think my young replacements will be carrying on in the same vane and traditions in future I suspect they are all quite happy to jog along doing straight forward displays without too much hassle (or too many long risk assessments) and making a reasonable profit for their activities. I'm pleased to say that financial remuneration never played a major part in my firework career. End results, satisfied customers and sponsors and above all the production of safe displays were always more important to me together

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with reputation and job satisfaction. This formula always guaranteed repeat business and so long as we were not running at a loss I was happy.

I suspect that on the night of Friday 10th August 2007 every single vantage point will be filled to capacity with spectators including West Mount, Regent Road, the top of Sand Street car park, Noirmont Point and the Esplanade Walks etc etc. The Jersey way for a lot of people will mean totally avoiding the crush of the actual Battle crowds and finding a good place to watch form where, as soon as it is all over one can jump back in the car and drive back home cross country. That is the Jersey way and as comprehensive as this risk assessment is I am afraid it cannot reasonably be expected to encapsulate crowd numbers or safety in all of the outlying satellite areas for viewing the spectacle.

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CROWD CONTROL

The two major problems associated with crowd control at this event in my humble opinion will be:

Firstly, the assembled audience for the Moonlight Parade moving from their seats on either side of the road at Victoria Avenue to what they see as being the best vantage points from which to view the rocket launch.

I have witnessed this happen many times since 1983 when I first began staging both daylight finales to the Battle and firework displays for the Moonlight Parade. This mass migration by the crowd tends to take place well before the end of the actual parade and is exacerbated by float moving up and down the dual carriageways on Victoria Avenue accompanied by bands, performers etc. Limited visibility by the drivers of the floats combined with darkness and the fact that they are surrounded by other floats festooned with an array and assortment of flashing lights, strobes, artificial smoke and confetti showers only adds to the problems and confusion.

Secondly, there will be many people trying to gain access to the firing area or launch site both in vehicles and on foot. These are people who have not been to the parade but want to see the rocket launch. I can envisage many vehicles being parked up and some almost abandoned at the road side or in private drives and certainly in every available car park in the area.

This will be our major problem. An already huge crowd moving in a set direction and in a determined fashion aggravated by hundreds of others arriving from all directions to watch the same spectacle. Hopefully many will have the sense to avoid this melee and head for alternative viewing areas located all around the main arena areas. In addition and equally hopefully many will decide to make a night of it and attend the Moonlight Parade as part of the main audience.

We are dealing with the unknown and all we can do is try to estimate the audience numbers which will be attending.

The fact that Victoria Avenue will remain closed until midnight will help to minimise the greatest risk of all and that is mixing huge crowds with moving traffic. Until we know the exact location of the launch site combined with the exact firing time, road closures will have to be looked at closer to the date in an effort to minimise the risks involved.

Other important items for consideration include public disorder, alcohol consumption levels, pick pockets/theft, lost and found children, crowd crushing, confusion, slips, trips and falls, resident hostility to the event and of course broken down vehicles (especially floats) combined with the spillage of oil or hydraulic fluid over potentially large distances or areas of the carriage way(s) and last but by no means least disabled and vulnerable people.

Bomb warnings/hoax and security threats will also have to be taken into consideration as well as potentially inadequate sanitary facilities in the area.

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Two more saving graces are that this is a free event (so no queues for tickets etc) and one which will not last long once people are in place for viewing. The rocket launch will literally be over in twenty seconds and even if the setting of the scene phase (of 1 minute) is added to a ten minute firework display at the end it will all be over within a maximum of 20 to 25 minutes.

There will be a mass exodus by people away from the area but this time very much at their own pace and to a 1,000 different locations both of which help to reduce all of the associated risks.

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TRANSFER OF PREPARED FIREWORKS (BY ROAD)

KEY RISKS IDENTIFIED	CONTROL MEASURES
Heat/shock/friction (prevention of)	All trays of fireworks will only be placed in a trailer that has been swept out and is clear of all debris of any sort. Appropriate action will be taken b the loader and driver to ensure the load cannot move in transit. The trailer(s) must be secure and well covered before departure.
Accidental or premature ignition of the explosive load at any stage	If an ignition were to occur at any stage no attempt should be made to fight the fire but the vehicle must stop immediately and others following on must make every effort to avoid it. Hopefully the rockets will be contained by the secured covering materials. The States of Jersey Fire and Rescue Service must be informed of any such fire immediately and as much information about 'the nature' of the fire given to the operator including whether it has spread elsewhere than the trailer (i.e. to property in the immediate vicinity) etc.
Escort vehicle	Will be an Honorary Police vehicle in direct contact with Police Headquarters. It will be a two manned vehicle to assist with diversion of traffic away from the scene and ensure a direct access for other Emergency Services

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KEY RISKS IDENTIFIED	CONTROL MEASURES
Escort vehicle (Tail end Charlie) at rear of the convoy	A vehicle with three men on board will follow the convoy at all times. It will carry a large sign with a warning for other road users. i.e. WARNING – long convoy of vehicles ahead. Please do not overtake. Fireworks in transit to St Aubins Bay for Battle of Flowers. Thank you. All vehicles in the convoy will have a 1.4G orange diamond sign displayed together with another saying "No Smoking No Naked Lights". All personnel will be wearing high visibility jackets. The route to be taken will be that decided by The Explosives Officer and the States of Jersey Fire and Rescue Service. No stops will be made during the journey (other than for emergency purposes or perhaps a mechanical breakdown). Adequate publicity will be given via the media in an effort to warn other road users that this convoy is happening on Friday 10 August 2007 – departing _____ at and arriving at the slipway at _____ at approximately ___ pm. Requests will also be made to other drivers not to become part of it (ie at filter in turn junctions for example) and not to overtake it from behind either.

TRANSFER OF PREPARED FIREWORKS TO CONTAINERS AND AT A LATER STAGE INTO TRAILERS

KEY RISKS IDENTIFIED	CONTROL MEASURES
Heat/shock/friction and the prevention of this risk	Adequate training/supervision/the use of PPE and keeping all work areas scrupulously clean at all times will all help to minimise the risks as will fire preventative measures put in place.
Lifting of heavy weights	Will not apply to this task as the rockets are being supplied in boxes of 500 which will not exceed 10KG in weight. The trays of fireworks (once prepared) will be carried by two persons accompanied by a third to check the route, open doors and locks and so on.
Risk of fire and explosion	Minimised by safe working practices, sufficient training and adequate supervision and fire prevention methods.
Risk of fires spreading elsewhere	Minimised by only allowing one container of live fireworks to be open at a time and weights kept to a minimum at all times. As soon as a trailer has been loaded with trays of live fireworks it will be secured and covered prior to being towed away from the next one to be loaded. Nothing other than fireworks (rockets) black match/piped match and gerbs to be carried on the trailers. All tow vehicles i.e. tractors to be equipped with a fire extinguisher of a suitable class or type to tackle engine fires.

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PREPARATION AREA AND SURROUNDS

KEY RISKS IDENTIFIED	CONTROL MEASURES
Magazine containing 125,000 rockets/black match/gerbs etc To a total weight of ___KG (NEQ)	a) Explosive magazine rules put into operation supported by adequate signage, fire prevention measures and security as well.
Risk of fire and/or explosion of contents	b) All the standard methods of storing and handling fireworks put in place. Safety distances apply to other containers.
Heat/shock/friction	c) Training of participants together with adequate supervision combined with clean working practices and the provision of brushes/dustpans/mats and dustbins etc
People smoking in the area and or naked light	Combination of a + b + c regularly enforced by supervisors.
Injuries to participants including dust/grit/powder in the eye and contamination by chemicals from handling the fireworks and materials	First Aid and Eye Wash facilities made available together with the provision of adequate pairs of goggles and gloves (PPE) these to be worn at all times when handling fireworks.
Fire/explosion in the area	Adequate escape routes provided and limited weights of explosives in area at any one time. Good evacuation plan in place with warning bells.
Fire/explosion spreads to other high risk area i.e. magazine or stores	Combustible materials kept to a minimum at all times/all other magazines and stores locked/adequate fire fighting equipment in place to provide a first response. Training and supervision play a vital part.

Trips and falls	To be minimised by a clean and safe working area devoid of trip hazards and good working practices.
Degredation of gunpowder by the absorption of water	Minimise amount of materials exposed at any one time – remove to container equipped with tor balls – place inside, close and lock the door. Constant checking using hand held moisture level meter.
Static electricity/dust contamination/explosion	The floor of the work area will be kept scrupulously clean at all times and might have to be hamped down at night when the area is free of fireworks and people. All other work surface/areas where powder residues could build up and to be cleaned daily.
Injuries caused to personnel by touching or picking up a live and still burning firework	A 20 min soak time will be put in place immediately after firing during which time NO ONE will touch the fireworks on the beach or still in the trays in the trailers. The hang fires, mis-fires in the trays will be driven away from the beach to be counted (giving even more soak time). The now wet sticks and drivers can now be collected in by people using PPE.
Slips, trips and falls	Minimised by on site lighting and safe working practices.
Contamination of skin by gunpowder and other chemical residues	All collectors will be wearing suitable disposable gloves for this task.
Lifting of heavy weight	Will not apply as rocket debris will be placed in black bin bags for disposal. Their actual volume will prevent too many being placed in the bags at one as will rips and tears.

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Eye injuries caused by handling/lifting/throwing of bin bags full of rocket sticks onto small pick up trucks with high sides	Minimise by providing all involved with protective goggles which must be worn at all times.
Pedestrian and vehicle contact(s) 12 tractor and trailers (in/out of area) 3 pick up trucks/safety patrol vehicles Catering van and portaloo driver and trailer No other vehicles will be in the sterile area	Minimised by adequate site lighting, the wearing of high visibility clothing and cyalume light sticks together of course with safe working practices and good old fashioned common sense!
Any other accidents of any sort	Lighting of site is good. First Aid men and facilities exist on site and access to the area by Emergency Services Vehicles is good and from a number of places/slips.
Risk of leaving or missing any live fireworks or component parts on the beach after the clearance operation is complete for others (especially children) to find because they will come down to look for such items. Trust me. I know!	The beach will be well and truly cleared by the incoming tide which will 'drown' any stars/drivers, off cuts of fuses and so on well before unauthorised people could get to them. A 'belt and braces' search will be carried out on the light tide mark following this event and for a couple of days afterwards too.

KEY RISKS

The most significant risks associated with the production of this event comprise of items which I know have already been incorporated into the Jersey Battle of Flowers Association Risk Assessment but are nevertheless important to reiterate in this document and these are as follows:-

- Injuries/death from failing to control the audience due to overcrowding/crushing/inappropriate or uncontrolled flows and inadequate evacuation procedures and so on.

- Injuries/death involving road traffic accidents and in particular pedestrians coming into contact with vehicles including illuminated floats which are difficult to control (due mainly to restricted driver visibility) in daylight hours let alone at night surrounded in flashing lights of all types and in many cases artificial smoke.

- The time and location of firing is an important issue if we are to avoid any form of mass exodus by the crowds attending the Moonlight Parade. If for example we are forced to move the launch site away from directly below the battle arena to an area further along the beach towards Bel Royal I anticipate thousands of people moving quickly away from the arena in an effort to find the best vantage points elsewhere. Site evacuation of any sort always carries its own risks such as panic and crushing and this needs to be managed safely and the additional problems associated with mobility and disablement need particular attention. If this is to be the case then I believe that it would be prudent from a crowd safety point of view to give the public ample time to make their way away from the main arena to the firing location. The Moonlight Parade is schedules to end at 22.30 hours and I am of the opinion that the majority of that audience will want to watch the rocket launch. This I suspect will include many people who are in or on the floats together with their entourage of helpers. One has to pick a firing time which allows a crowd of this size which includes people of all types, ages and levels of mobility to safely move form one viewing area to another and in ample time to watch the next spectacle.

  Delaying the firing time to 23.30 would I suspect allow adequate time for a safe exodus by this number of people. I am also very aware (based on well over 30 years of firing public displays) that any further delay(s) would cause the audience to become restless. This too would have to be managed by the use of the public address system and the live radio coverage which will be broadcast by Channel 103FM on the night.

- Serious Public Disorder exacerbated by alcohol consumption and or the use /abuse of illegal drugs.

- Child Abduction.

- Failure to provide adequate communications and or equipment or any subsequent failure of those facilities.

- Failure to provide adequate Emergency Service Cover.

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- Bomb threat/terrorism or any other security risk.
- Injuries/death arising from the fireworks themselves.
- Adverse weather conditions prevailing at the time.
- Mass explosion of the rockets within the shipping container at any stage from its arrival in the Island which will include its transportation by road form the docks to its final resting place at _____.

ADDITIONAL KEY RISKS applicable to the importation, transportation and storage of the rockets can be found under the heading of safe working practices/preparation area.

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SAFE WORKING PRACTICES/PREPARATION AREA

- A single 20ft container previously positioned in a safe area will contain 125,000 rockets, approximately 200 small fountains or gerbs and a quantity of quick match. The electric fuses/electric matches will be stored elsewhere away from the site in an Authorised/Licensed Magazine suitable for such use. These will not be required in the preparation area workplace.

- The constant threat of fire and or explosion must be foremost in the minds of everyone working in the preparation area.

- **HEAT, SHOCK AND FRICTION** are the greatest risks of all form a storage and use point of view concerning the fireworks and associated items.

MINIMISING THE RISKS INVOLVED

- The need for adequate fire prevention measures must be put in place well before work commences.

- Everyone who has access to the work place must be made aware of the risks involved and how to minimise those risk.

- Everyone involved in the preparation of the fireworks must undergo a basic training session well prior to commencing work.

- Adequate supervisors who possess the knowledge and experience of handling fireworks safely must be present at all times to oversee the work being carried out.

- Safe access and egress to and from the preparation area must be established well prior to the event and maintained throughout the entire operation to help facilitate the arrival of emergency services vehicles and personnel.

- Raw fireworks (i.e. unopened boxes) must be kept in the container designated as a temporary fireworks magazine at all times.

- This magazine will be kept locked at all times until removal of boxes of raw fireworks are required.

- The limit of 5 boxes (and or a thousand rockets) at a time will be removed and taken into the workplace/preparation area. The magazine container will be relocked immediately.

- Action must be taken in an effort to ensure that the container magazine is kept in a clean, tidy and safe condition at all times. The floor must be swept regularly utilising the brushes

and dustpans provided and the debris removed must be placed in the covered dustbin located nearby.

- Every effort must be made by persons entering the magazine to ensure that their footwear is free of stones, gravel and other debris to help minimise the risks associated with friction. Mats will be provided for such use and these too must be shaken out on a regular basis to prevent the build up of debris. This will also be manoeuvred into the covered dustbin.

- Smoking will not be permitted anywhere in the area of storage or work and this issue will be reinforced by the installation and display of adequate and appropriate signage. It will be further reinforced by the supervisors present on site.

- Fire extinguishers will provided and positioned in appropriate positions all around the area of operations but no one will be encouraged to stop and fight a fire, the emphasis will be placed on methods of fire prevention combined with the immediate evacuation of the area if the presence of a fire is detected and notified by the ringing of the evacuation warning bell.

- The States of Jersey Fire and Rescue Service will be notified immediately of any such incidents.

- People present will be instructed to go to the predetermined rendezvous point where the priority will be to ensure that everyone inside the building at the time the alarm was raised has been accounted for and is in fact present at the rendezvous point.

- No one will be permitted to return to the workplace for any reason until the all clear has been given.

- Action must be taken to ensure that the access routes are clear pending the arrival of the Emergency Services(s).

- Taking into consideration the nature of the work, handling live fireworks (which contain a variety of chemicals many of which are far from beneficial to health) disposable rubber or nitrile gloves will be worn at all times together with appropriate safety goggles by everyone handling the raw fireworks and at every stage of preparation. This PPE (personal protective equipment) will be provided and in adequate numbers to ensure that the users can change them as and when they feel it to be necessary.

- A limit will be imposed on the work/preparation area floor of a maximum of 5 frames of rockets being worked on or prepared at any stage. This will help to minimise the explosive weights involved combined with the numbers of persons present in the area at any time. Six people per frame is acceptable together with a supervisor for each table. The number of people present in the area at any one time must not be allowed to exceed forty persons.

- As soon as a frame of rockets has been fused, matched and filled it will be removed form the workplace (making every effort to avoid heat, shock or friction at all times) and taken to one

of the empty 20ft containers positioned nearby. These will only ever contain fully prepared trays of rockets, suitable covers and Tor Balls (an item which contains a quantity of silica gel crystals together with a fluid reservoir underneath) which will be utilised to help minimise the levels of moisture in the air inside the container as they are even more hygroscopic than black powder itself and hopefully will absorb any such residues more quickly than the frames of rockets themselves.

- A Type 1 INO 4454 test meter (humidity and temperature meter) will be utilised from time to time to help to accurately establish/measure the water content/humidity of the air in the magazine and containers.

  Increasing amounts of moisture are known to produce significant increases in the burning time of gunpowder grains. Water will degrade the performance of most pyrotechnics by virtue of unwanted side reactions and in the case of black powder the adverse effect of moisture is also believed to be as a direct result of its occupation of the free volume of the substance. However an increase of moisture level from 1 to 3% is sufficient to reduce the burning rate by approximately half.

  Managing these problems is an important part of this rocket launch and hopefully, the risks are being managed and minimised by fully utilising the previously mentioned methods.

- Action must be taken to ensure that these satellite storage containers are kept in a clean tidy and dust free condition and this is an identical way to the main temporary magazine itself. This to help minimise the risks of heat, shock or friction once again.

- Action must also be taken to ensure that when the doors to the main magazine are open any doors fitted to the work place are closed together with the doors on all of the other containers on site. An accidental ignition inside any one area must NEVER be allowed to compromise or put at risk the contents of any of the other work places or stores.

- The workplace floor and area must be kept clear of all personal effects such as handbags, rucksacks and anything else that could be construed as a trip hazard and the consumption of food and drink will not be permitted in that area either.

- Empty rocket boxes and any other items of associated combustible materials must be removed from the work place on a regular basis and transported to the pre-designated area. These 'wrappings' must be treated in the same way as the live fireworks because they will contain and be contaminated by loose gunpowder albeit in small quantities together with other chemicals used in the manufacturing process.

- Flash photography of any sort will not be permitted in the workplace. Teams who have successfully filled a particular frame and want to be photographed with it can do so outside the building and well away from other areas of operations.

- Consideration must also be given to the presence of static electricity and the build up of explosive residues within the work place area and especially on the floor. Totally dependant on the weather conditions prevailing at the time there might be a need to damp down the

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work area floor at the end of each work period AND there certainly will be a need to pick up any debris, fuses, broken sticks etc on a daily basis or better still as often as possible.

- The ever present danger posed by loose black powder in the atmosphere will be minimised by the fact that only one class of explosives are present in the workplace namely Category 4 fireworks. The risk can come from energy ignition such as an electrostatic discharge of any sort or of course sparks. Explosives can be ignited if there is sufficient energy present and dependant on the explosive characteristics of the material being handled. Gun power / black powder accompanied by a large selection of other chemicals used in the manufacture of the fireworks have a very low ignition point and this must be remembered when managing the risks. Heat, shock and friction also play an important part in this risk management and must be avoided at all times.

- One also has to be constantly aware of the danger posed by spontaneous combustion and the fact that over the years there have been instances of firework stores catching fire or exploding and for no apparent reason or cause whatsoever. This is an ever present danger to all those involved with fireworks and from a risk point of view is very real but equally very hard to manage. Being aware of this fact and treating the actual materials with respect at all times are the two main ways of avoiding it.

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TRANSFER OF ROCKET FRAMES FROM SEALED CONTAINERS TO TRACTOR DRAWN TRAILERS (including times of travel, safest route etc)

I anticipate ending up with two or more likely three containers full of rockets in trays or frames containing 1,000 rockets each. These have to be removed and placed into high sided trailers which have previously been swept out (to avoid heat, shock or friction) which will hold 10 or possible 12 trays each. This task will be carried out by the tractors drivers and mates assisted by the experienced firework operators. Once again only one container will be open at a time and the entire contents fully transferred before the next one is unlocked and opened.

As each trailer is filled to capacity it will be covered by a plastic reinforced tarpaulin and moved away from the loading area. Each tractor will be equipped with a fire extinguisher of a class and type capable of dealing with an engine fire on the vehicle itself and fitted with the appropriate signage. A fire in the trailer will not be tackled as it is too much of a risk to life and limb. Hopefully, the plastic reinforced tarpaulin cover will help to contain a premature flight by the rockets most of which I suspect will be contained in flight by the covering itself or the resulting sticky mess created. A lot of the hot gases under pressure will vent out through the half steel door fitted to the rear of the trailer and covered only by the tarpaulin. This 'deflagration' cannot result in a mass explosion of sufficient force to damage the trailer itself and certainly would not have the explosive brisance or power to create any form of shrapnel. Black powder cannot detonate in the true sense. Its maximum burning rate or deflagration is only 500 ms well below the velocities of detonation required for items to be classified as high explosives.

The tractors and trailers will form a convoy headed by a marked Police car (but unaccompanied by a fire appliance of any sort a decision reached following discussion with Fire Officer). This convoy will carry the standard 1.4G diamond stickers and "the tail end Charlie" trailer AND/OR our following support vehicle will carry/display a sign which warns other drivers not to overtake any why. This placard will tell people what the convoy is, what it carries, where it is going and why.

The route to be taken by this convoy will be what has been deemed to be the shortest and safest route and this, following discussions with the Police, Fire Service and Explosives Officer. It will be as follows, and will depart from _____ at _____ and hopefully arrive at _____ slipway at approximately _____. On arrival at the slip it will park up on the beach and literally follow the tide down to the firing position. No smoking signs, pig tail posts and barrier tape will be deployed and moved with the convoy and this for obvious reasons. Refreshments will be provided throughout the day from a mobile beach kiosk which will form part of the convoy from its arrival on the beach. It will stay with the tasks until the firing time and beyond to provide refreshments during the beach cleaning operations. I suspect cold drinks and ice creams will be the order of the day (a hopefully hot August day) followed by hot drinks, burgers and sausage rolls at the end of the night.

The welfare of the participants will be further catered for by the provision of portaloos positioned on a flat bed trailer pulled by a 4 wheel drive vehicle. This too will accompany the convoy from its arrival on the beach until the end of the beach cleaning. On arrival at the pre-determined firing site location all of the tractor towing units will be unhitched from their explosive loads, the bogey wheels of the trailer lowered onto scaffold board lengths to prevent them sinking into the soft sand and then the tractors will be moved to a safe area and lined up in formation in an effort to enhance the professionalism involved with this event.

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The rockets will remain on the trailers for firing and as soon as the launch has taken place and the 20 minute soak time for fireworks elapsed they will be reconnected to the tractors and towed away from the area to allow the beach cleaning operation to swing into action. The convoy will leave the beach via _____ slip but before doing so firework operators will remove and count all of the mis-fires which are still in the launching frames because the total of this unfired remainder will have to be deducted from the total fired in an effort to claim a new World Record.

This task has to be carried out in the presence of Mr Ian Black, The Treasurer of the States who is acting as the official adjudicator for this event. This task will also be filmed and photographed by independent people (i.e. the media) as they too will be required to use the results to reinforce the record claim at a later stage. The trailers will depart the area as soon as their individual frames have been cleared and counted to return (individually i.e. not as a convoy) to their respective homes or farms.

The following day they will return to _____ to unload the now empty frames which will be pressure cleaned in situ before being dismantled and prepared for storage. As an aside they are to be stored in or at _____ just in case someone else would like to hire them (in return for a donation to Side by Side) to stage their own challenge to our new World Record at some time in the future, which I suspect will be in at least another 9 years time. One thing is for certain true firework operators are defined as:

"People who operate firework displays (usually in conditions of total darkness and in cold and damp weather with little financial reward) but inestimable dedication to their profession".

Need I say more!

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THE BEACH FIRING SITE/WORKPLACE

As soon as the trailers have been positioned safely in situ and the towing units driven away the trained firework operators can begin their task of 'matching up' the entire batch in preparation for firing.

Mobile lighting units mounted on trailers towed by 4 wheel drive vehicles will assist to make this intricate task easier and safer by bathing the area in light (The Radio Hazard produced by this task will be addressed further on in this Risk Assessment). The high sides of the trailers will be gently lowered to expose the rocket frames and will also act to protect the trailer balloon tyres from the heat of the lift off. Security on the beach will be tight and exactly as previouslv described in this document.

Matching up is not a task that can be carried out in a rush it has to be painstakingly done so as to ensure that all of the trays or frames of rockets are made live.

It is at this stage the Radio Hazard has to be taken into serious consideration. When fireworks are fired electrically they are firstly connected to the electric fuses. These fuse heads can inadvertently ignite if subjected to radio hazards (Rad Haz) when in the vicinity of radio frequency sources such as mobile phones and walkie talkie radios. In an effort to prevent this, the use of mobile phones and transmitter radios will not be permitted within an exclusion zone of 150 ft to the closest firework.

In addition other extraneous electrical energy sources can sometimes be capable of igniting a fuse head. These sources of energy include electrical storms in close proximity to the firing site so this event will not take place if there is the likelihood of such weather conditions prevailing on the night.

Arching can take place in electrical equipment too especially generators and this is why the mobile site lighting unit will be well and truly earthed into the wet sand via a copper earthing rod and electrical fuses will not be taken within 100 ft of it. The weather conditions prevailing on the night will play a vitally important part in this operation. The rockets will not be launched if the wind direction is unsuitable or the wind speed exceeds _____ knots.

I suspect that Pluvius Insurance cover will be in place to cover the possibility of a no show by virtue of wind or rain or fog but sadly this is normally measured well away from the firing site at Jersey Airport and will not necessarily represent what is actually happening at St Aubins Bay. This will be addressed and discussed in the not too distant future.

The possibility of a no show poses a number of problems to us and I suspect that the decision to call it off would have to be made by no later than _____ on the day itself. If we have to abandon the launch there are a very few options open to us. I have to assume that at this stage the rockets are already loaded on the trailers but have not been matched up. They could be left in situ at _____ but in this day and age would present a major headache from a security point of view. They would also be more exposed to the elements than they had ever been at any stage so far. Heavy rainfall could or I would say have a very detrimental effect on the exposed quick match fuses to an extent whereby I would not be happy to try again at a later stage when the weather has cleared. The longer they are left exposed the greater the risk of moisture damage becomes.

From a safety point of view I would be the first to suggest that if it did not take place as scheduled it should not take place at all. This will be further addressed at a later stage because it poses its own

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problems concerning the disposal of the rockets in a safe and acceptable manner. The subject of further risk assessments I am afraid.

If the launch is to go ahead as planned as soon as all of the trays of rockets have been matched up the next process involves the connection of the numerous fuses to what I suspect will be an assortment of firing boxes and blasting machines. There are various ways of doing this the most common being in series exactly like the lights on a Christmas tree. This system has the advantage that the circuit can be tested for resistance and or continuity (problems usually being caused by defective fuse heads or loose connections).

The current needed to operate a large number of fuse heads connected in series is greater than that required for a single fuse. However if the applied current is above a certain minimum value the collective excitation time (during which the bridgewires heat up to the ignition temperature of the lead mononitroresorcinate or LMNR) is shorter than the lag time (which is when the fusehead ignites and the bridgewire breaks) and a successful multiple firing will result. Some circuits will be fused up in parallel which is a much simpler system to install but by using the combination of the two options success is virtually guaranteed.

The VIP (as yet to be identified) will push a firing button but it will not be connected to the rockets themselves. It will instead be wired to an air burst maroon positioned on the beach below their position. The resultant bang will be the signal to fire the actual rockets and this will be done simultaneously by quite a few operators I suspect. The use of this air burst device will be made public well prior to the event for blatantly obvious reasons. All of the firing crews and additional personnel will be well out of harms way when the launch takes place. I expect there to be about 100 people on the beach at the time including approximately 25 operators, 4 first aid men, 3 lorry drivers (with 3 mates with them) approximately 25 collectors of rocket sticks, a lighting operator/driver, the safety patrol crew of 2 plus 20 assorted Honorary Police officers, marshals, stewards and security men and a maximum of 10 photographers/media personnel. One must not forget the catering van crew or the driver of the portaloo vehicle! All will be wearing protective helmets and goggles and all will be sporting reflective yellow or orange coloured tabards or jackets. In addition they will be wearing a cyalume light stick about their person. Red ones for firework operators, yellow for security personnel, lighting crew, first aid and stick collectors, and white for members of the press corps. This makes identification of people so much easier at night and over such a large area.

When it is safe to do so (i.e. after 20 minutes has elapsed) the clean up operation will begin. This will involve everyone apart from those with security tasks or first aiders. People will be issued with rakes, rubber gloves, head or hand torches and heavy duty dust bin bags. In addition, they will also be provided with safety goggles to help minimise the risk involved in handling large number of rocket sticks. As the bags are filled they will be thrown into the back of three small (but high sided) pick up trucks which I suspect will be filled to overflowing by the end of the task. These will be driven away from the area and parked up elsewhere pending final disposal of the sticks at the Belozanne incinerator on Satuday or Sunday if possible.

I have already been in touch with the incinerator operators concerning this important issue and they will accept this unusual load for disposal at their facilities.

Inspections of the high water mark will be carried out for a few days after the launch in an effort to ensure that any debris which escaped collection on the night has not been washed up on our

beautiful beach at St Aubin. If it has it will be picked up then and disposed of safely. I see this task as being almost as important as the safe launch of the rockets in the first place.

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TIME SPANS

The rockets that are to be used for this World Record attempt have been ordered on our behalf by Mr Tom Archer of Essex Pyrotechnics of 6 Wicken Road, Newport, Saffron Walden, CB11 3QG and this on 15th April 2007.

If all goes to plan and taking into consideration that they are being specially made for this event in the _____ province of China we anticipate their arrival in the Island at the end of June or first week of July 2007.

They will be transported by road to the designated place of work namely _____:-

Where they will remain under lock and key in the 20ft shipping container which has been accepted and passed for such use as a temporary fireworks magazine by the States of Jersey Fire and Rescue Service Fire Safety Department.

A total of 125,000 rockets are being shipped over so that we can actually launch a minimum of 110,000 on the night and the remainder will be used for large test firings sometime between the beginning of July and August. These vitally important test firings will be staged both during daylight and the hours of darkness and will also serve as an important opportunity for "interested parties" such as the Fire Service, Police, Health and Safety, Harbour Office, Tourism Department, Environmental Officers and so on to see for themselves our modus operandi and still have time to make observations and or changes as they see fit.

The tests will also give the Islands media an opportunity to see for themselves the potential size and nature of the main firing on 10th August thereby enabling them to pick the best camera positions and angles because one thing is for certain, this event is going to attract an awful lot of publicity for Jersey on a world wide stage and I honestly believe that we will also see both National and Sky Television coverage of this launch. This will hopefully be of real importance to our Tourism Industry. Apart from the setting up of test firings the bulk of the rockets will remain in situ in the container protected by security equipment and personnel on a regular basis until the time comes to prepare the mass loading of the trays.

This operation will be carried out during the first week of August for two reasons. Firstly, it is a labour intensive task that will take quite a long time to complete safely and accurately and secondly, gunpowder is a very hygroscopic substance and readily absorbs moisture from the atmosphere. Once out of their sealed inner boxes the explosive composition is really totally exposed and the chemical process begins. Weather conditions prevailing at the time will play a very important part in this operation but this vagary and imponderable has been given serious consideration and will feature a number of times under the heading of a safe method of working in this Comprehensive Risk Assessment.

Briefly, once laid out in trays of a thousand, the rockets will be moved out of the preparation area into clean dry empty containers where they will be covered to help minimise the absorption of moisture and the container will then be closed and locked pending the arrival of more trays.

The explosive load of one hundred and ten trays (minimum) will be loaded into high sided trailers which will be pulled by 4 wheel drive tractors in a convoy under police escort from the preparation site to the beach at Bel Royal and this at about _____ on Friday 10th August.

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When this lengthy convoy has arrived safely it will be parked up on the beach where slowly but surely it will follow the tide down to the pre-determined firing position where the trailers will be disconnected to allow the tractors to depart and park up at a safe distance away from the launch site.

Work can then begin on lowering the trailer sides (to help protect the tyres from the heat of the lift off) and also allow access to the ten or so trays contained by each trailer. All will need to be fused together and firing cables run out to the pre-determined firing point.

Once again if all goes to plan the rockets will be ready to launch by 22.30 hours.

Once fired the spent fireworks will be allowed a soak time on the wet sand to ensure that none are still likely to explode before the clean up operation swings into action. This involves a large number of people armed with torches, rubber gloves, bin bags and rakes picking up as many sticks and burnt out cases as are humanly possible before the tide turns (low tide on the night is at 24 mins past midnight) and returns to the firing position. This will allow the clean up operators a minimum of 3½ hours to complete this task before safely leaving the beach with ample time to spare.

I anticipate that three or four light pick up trucks fitted with high sides will be required to transport the debris away and this will be disposed of at Belozanne within a week.

We will be checking the high tide mark for a week after this event has been staged 'just in case' as they say but, I do not envisage any similar problems to 1997 as the 2007 batch of rockets are being specially manufactured to be totally biodegradable. Hindsight is indeed a wonder thing. This event will be put to bed completely by 20th August 2007.

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THE FIREWORK ROCKET ITSELF, BLACK POWDER AND METHODS OF IGNITION

Gunpowder or black powder as it is often known was first discovered we believe by the Chinese in about 1,000AD. It has changed little over the years but now it is a lot more refined, powerful and of course quality controlled. It still contains the basic ingredients of approximately 75% saltpetre, 15% charcoal and 10% sulphur. This mixture varies dependant on the required end results of the powder.

One thing has not changed and this is the fact that it still requires heat, shock or friction to cause ignition. These three 'key risks' will feature on a regular basis and in various areas of this Risk Assessment.

Black powder is the main explosive ingredient of the rockets being used for this launch. In the manufacturing process the fuel rich gunpowder is pressed in increments into the rocket case (or tube or motor) utilising a long tapering spigot which when it is withdrawn leaves a charge inside the case with a central hole or conduct tapering outwards towards the nozzle or choke. This is done to provide a surface area of propellant required to provide the rapid generation of thrust on ignition. This is an initial rapid acceleration after which the flame dies down and the rocket coasts. This sudden acceleration happens because the area of propellant is increased near the nozzle or venturi tube. The cone shape means that the surface area of the propellant is perhaps a 100 times that of the area of the nozzle. As the fuel is consumed it's area increases and the flow of gas (thrust) increases.

Stability in flight is crudely provided by the stick or tail that ensures the centre of gravity is forward of the centre of pressure. Here the effect of cross wind perpendicular to the direction of motion combined with the drag force act to restore the tail stabilised rocket back to alignment with the motion of the centre of gravity.

When the device has reached its apogee or apex of flight the contents of the head or pot are ignited by a small delay pellet or fuse. This payload or garniture as it is known in the trade will consist of small stars each about the size of a pea containing ingredients such as aluminium, barium, magnesium, potassium guns, and binders. The exact recipe for the mixtures contained in any rocket tend to be closely guarded secrets known only to the individual manufacturer.

The whistle effect (produced by approximately a third of our rockets and no more than that) will be produced by the usual active ingredients of whistle compositions which are normally based on aromatic compounds such as gallic acid, sodium salicylate and potassium benzoate. These are missed with oxididers before being pressed into the tube. On combustion a loud whistling sound is produced whose pitch is directly related to the length and diameter of the tube.

In reality the sound is actually produced from oscillations during burning when the chemicals create small explosions or decrepitations on the burning surface which changes the pressure of the escaping gases. ALL WHISTLE COMPOSITIONS ARE HAZARDOUS TO HANDLE AND HAVE A REAL TENDENCY TO EXPLODE. The pyrotechnic whistle is a wonderful effect especially when fired in goodly numbers but, the ever present danger of premature explosions have to be addressed.

I have decided to include a total of approximately a third (i.e. 33,000) of whistle tail rockets in our launch. These will be positioned in a well scattered fashion throughout the individual trays of rockets and further scattered by the fact that each trailer will only contain ten or twelve trays.

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The potential for a flash over or mass explosion will be further minimised by the high wooden sides of the trays, the air gap between each tray and the fact that the next trailer load will be well positioned beyond the sympathetic distance applicable to this hazard. Most of the rockets in each individual tray will contain a burst of either red, white or blue coloured stars or gold crackle. These are not nearly as prone to flash over (mass explosion) as pyrotechnic whistles and by virtue of such will act as a further buffer to its whistling neighbour.

In 1997 the entire batch of 40,000 rockets were filled with pyrotechnic whistle drivers and these launched en mass without a problem. This problem still exists just the same but has been addressed from a safety point of view and to an acceptable level of risk taking into consideration the remote nature of the site and proximity to human beings (i.e. the firing crew and no one else in the vicinity).

Every rocket will be manufactured with a quick match tail. This means that the gunpowder is glued onto a supporting cotton yarn using an adhesive such as gum Arabic. This forms the string like fuse.

Although the rockets will be small and normally quite suitable for sale to members of the public as a Category 3 item for 5th November for example they will not be labelled in any way or fitted with a delay fuse of any sort which means that they will be classified as a Category 4 rocket for use only by professional operators and under display conditions.

The quick match fuse is virtually instantaneous when used under these circumstances this being due to the heat effects associated with its construction. All three types of heat transfer (convection, conduction and radiation) are not only present but in reality superimposed on each other.

Quickmatch sadly is rather fragile and tends to kink or lose powder unless it is coated in some way. Piped match is quickmatch that has been enclosed within a paper pipe which serves to significantly increase the burning rate and also offers a level of protection against damage and the damp atmosphere surrounding it. Quickmatch tails of the rockets will sit on quickmatch fuses laid out over the grid wire of the launch tables so that the flame front will advance quickly and be able to jump ahead of itself and create a second or third flame front and each table will be connected to the next by a minimum of two lines of piped match in an effort to ensure virtually instant continuity of the flame front from table to table and back again. Its extra carcus strength and weather protection properties makes it perfect for such use.

The only source of ignition which gives total and instantaneous control of the firing are of course electric fuses connected to a firing box or blasting machine which is key controlled for added safety. It can only be made live by the operator who has the key in his possession. Electric fuses are a basic component of electric detonators and by virtue of such are an item controlled by the Explosives Jersey Law of 1974.

These wirebridge fuse heads or electric matches as they are more commonly known consists of a small bead of explosive held on a support which is essentially a pair of conducting foils separated by an insulating layer or wafer. The foils terminate in a bridgewire or fusewire embedded in the explosive bead. Few explosives function satisfactorily from the transient hot glow of a bridgewire but one known as LMNR does when it is used in conjunction with more conventioinal oxidisers and fuels the fast deflagration or burning ignites the surrounding composition to produce a spurt of hot flame which will readily ignite gunpowder in the form of quickmatch or pipedmatch. Each

fusehead contains about 20mg of explosive composition which ignite within milliseconds of the current being applied. All of this will be further addressed under the heading of safe working practices applicable to the preparation shed and beach area of operations and others where applicable.

Consideration is also being given to the possibility of utilising small electrically initiated gerbs strapped to the firing tables as an alternative method of mass ignition of the table contents. A gerb is a small firework that has been manufactured as a cross between a fountain and a rocket. Gerbs can be used as drivers but are not normally so instantaneously powerful as a rocket in the true sense. It relies on gunpowder to produce its thrust the pressure being increased by a restricting choke or nozzle made of clay. When ignited its composition of mealed powder, potassium nitrate, sulphur and charcoal react together to produce a gold effect. The addition of other ingredients can produce silver or coloured gerbs. All produce a fair amount of smoke and flame and would be ideal to ensure a multi faceted flame front within the tray of rockets.

The final decision will only be made as to which (if not a combination of both) methods is most suitable for our purposes. This can only be made after numerous test firings have been carried out with the products themselves and much closer to launch date. Nothing is ever set in stone where fireworks are concerned.

BS7114

The British Standard for fireworks dictates that all fireworks imported into the UK must conform to British Standard (BS)7114. It is divided into 3 sections:

Part 1, The Classification of Fireworks
Part 2, The Specification of Fireworks
Part 3, The Methods of test of Fireworks.

In Part 1 the fireworks are sub-divided into 4 categories that relate to where the fireworks are used and the level of associated hazards. Basically Category 1 are indoor fireworks, Category 2 are for outdoor use in confined spaces such as small gardens and Category 3 are designed for outdoor use in large open spaces. Whilst Category 4 are of such size that they are not intended for use by the general public and by virtue of such do not feature significantly in BS7114 the Category of our rockets would normally fall well and truly into Category 3 apart from one main area and that is the labelling requirement which apply to the packaging as well as to the individual fireworks. The rockets would also fail a Category 3 test because they are not fitted with a delay fuse of any sort as required by BS7114.

Our rockets will be imported into the Island, transported and used as Category 4 items basically for the above mentioned reasons only and NOT because they are of such a size that they could not be used by the general public.

This all means that our workforce would be fully entitled to buy rockets of this size and type during the permitted period for sale of such goods and subsequently fire them at home or elsewhere in the Island on or about 5th November. The workforce will only be working on rockets (albeit it Category 4 ones) which they could normally buy. This means that their knowledge and experience can be considerably less than the average professional pyrotechnician especially taking into consideration the fact that they will NOT be taking part in the most dangerous part of the operation namely the launching. I am satisfied that, with some basic training, adequate explanation of the safety rules put into place for this task and adequate supervision at the place of work everyone will be more than capable of completing the task in hand efficiently and above all safely. That is what really counts in my book.

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SOUND AND NOISE

1. Every effort will be made to ensure that noise is kept to a minimum at the preparation site and surrounding areas at _____.

2. The noise created by the pyrotechnic whistles fitted to approximately a third of the 110,000 rockets to be fired will be the subject of monitoring by Mr _____ of _____. Tests will be carried out using approved monitoring equipment at both the daylight and night time test firings of rockets. 5,000 units will be fired at each test and it will then be possible to establish if the noise created by the mass ascension will be within the acceptable levels or not.

   I strongly suspect at the time of writing this first draft of the Risk Assessment for this event that the levels of sound will be well and truly within the limits that have been set for such things especially taking into consideration the fact that the mass firing is to take place on an open area of beach situated well away from the audience. Wind direction and speed will obviously play a part but, I do not see this as being a major risk at all at this moment in time.

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PRODUCTION OF SMOKE BY THE MASSED LAUNCH OF 110,000 ROCKETS

KEY RISKS IDENTIFIED	CONTROL MEASURES
The almost instantaneous production or release of a fairly dense cloud of hot gasses (of numerous sorts none of which are beneficial to health) moving in whichever direction (and at whatever speed) the wind takes it. The risk posed to motorists and pedestrians alike by the almost instantaneous appearance of this man made fog.	This cloud cannot be avoided or controlled as it is a bi-product of the mass ascension. All we can do is make the general public aware of this fact and well in advance of the event itself by requesting the Island's media to carry/broadcast the appropriate warnings.

PRODUCTION OF SMOKE

When we fired 40,000 rockets in 1997 they produced a considerable amount of smoke which was not dense acrid but more like a grey fog which was carried by the force 4 wind towards the Weighbridge. For a few seconds it was almost impossible to see buildings on the Esplanade but the wind quickly dispersed it completely.

The smoke did not pose a danger to health in the true sense because it was only present in the air at ground level for a maximum of about a minute and it was on the move during that time. Luckily it did not present a hazard to passing motorists because although it appeared quickly it was possible to see it even when travelling at speed giving drivers time to react.

This time however with almost three times as many rockets being launched simultaneously there is a need to anticipate a much greater volume of smoke being produced.

I will not know exactly how much to anticipate until I have carried out test firings on the first batch and this during daylight hours when the cloud of smoke is much easier to see and follow with the naked eye. This is one of the main reasons for carrying out such a test in daylight. The other main reason is of course to see exactly just how far the rockets will travel before falling back to earth.

The 2007 batch are totally different to the ones used in 1997 and this is why we literally have to wait and see what happens during the test firings.

Wind direction and speed will of course play a major part in the manner and speed at which the smoke is dissipated on the day itself.

My only real concern about the smoke production is for the welfare of drivers of motor vehicles in the area. This can certainly be addressed by utilising the media to carry adequate warnings of this anthropogenic fog and well prior to the event itself. It is a hazard and a real risk to drivers so like all other risks it has to be identified, addressed and managed to minimise the potential harm it could cause to motorists and pedestrians alike.

Let us not kid ourselves about this man made smoke it is not a healthy thing to inhale in any way, shape or form. It will be detrimental to air quality but in reality (and that is all we can deal with in risk assessment is reality) it will be short lived and well down the scale in comparison to fumes from traffic congestion Belozanne incinerator pollution and aircraft which fly over the Island on a daily and night basis! In reality – a flea on a hogs back in my humble opinion. I do care about air quality and how it can adversely affect ecosystems and more importantly human health but I'm pleased to say that this particular human activity has only occurred twice in ten years and it will be the last time that this human being organises the firing of 100,000 plus rockets and unintentionally helps to accelerate global warming as a direct and uncontrollable offshoot (please excuse the pun) of this event.

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MUSIC/PUBLIC ADDRESS/LIVE BROADCAST

It is our intention to make more of this event than just a 15 second wonder. It will be important as part of the build up to the firing to set the scene for spectators in some way and at the time of writing consideration is being given to utilising a method that we last used in 1985 as part of Operation Limelight when approximately 1,500 people fired red flares mounted on wooden stakes simultaneously and all co-ordinated by BBC Radio Jersey and at 100 yard intervals of the entire coastline of the Island.

This time we would only need to deploy approximately 100 people on the beach at well spaced locations between West Park and St Aubin. They would be enhanced by the presence of even more people at Elizabeth Castle and St Aubin's Fort. This would indeed help create a wonderful backdrop to the actual launch itself and add considerably to the time factors.

Each person would carry a small transistor radio and be equipped with a 60 second red marine flare and a 30 second powerful strobe flare mounted on the same post. When given the signal to fire the area would be bathed in powerful red magnesium light boosted by reflections from the wet beach and the smoke created would hang like a mist or fog. 30 seconds later it would be enhanced by the strobe flares cutting in and helping to create an ambiance that could not be safely created in other ways.

A further radio broadcast would signal the countdown to firing the rockets and so on. This is now a safe and proven method of getting people to ignite pyrothechnics simultaneously on time and over a very large area indeed.

There is also a possibility at the time of writing that the launch will be followed by a short but very impressive firework display (fired with musical accompaniment) which will also be broadcast over the radio frequency for all to enjoy. The Battle of Flowers arena Public Address System will also be utilised to help broadcast the music to accompany the fireworks.

Arrangements are yet to be made with Channel 103FM and/or BBC Radio Jersey to broadcast live on the night as part of the overall event planning but once this has been put in place it will be, together with the red and strobe flare sequence and firework display the subject of a further Risk Assessment for this event.

Having a facility of this sort in place will also assist with crowd management – lost and/or found children, warnings of for example, pickpockets operating within the audience and so on and this will add greatly to the overall safety package especially if we are forced to run late for any reason(s).

The fact that powerful strobe flares are possibly to be used will be the subject of further warnings to the public via the media because these devices can present a real health hazard to people who suffer from photosensitive epilepsy.

PUBLIC WARNINGS

An event of this nature dictates that as many people as possible are made aware that it is taking place and for a number of reasons.

People of a nervous disposition, senior citizens, animal owners and other vulnerable members of society need to be notified of such things and well in advance so that they can prepare or take whatever action they deem to be necessary to minimise the noise and fear caused by fireworks.

This will be 'serviced' by the Islands media during the weeks leading up to the event.

Members of the audience on the day also need to be notified and this will be serviced by a warning notice in the Battle of Flowers souvenir programme and Public Address announcements made at the time.

Boat owners also need to know and in an effort to do just that warnings will also be broadcast on the Marine VHF Channel 16 in the days leading up to the event and more so on the day itself.

Other people who have no interest whatsoever in this event still need to know that it is taking place if only to avoid the area at the relevant times and once again the media will be utilised for these people.

Residents of the area in particular need to know and for blatantly obvious reasons and consideration is being given to a Public Relations mail drop to individual houses and premises in an effort to ensure that they are fully aware that this event is being staged.

Not everyone likes fireworks and by virtue of that fact I feel that we as organisers have a moral obligation or duty of care to ensure that as for as humanly possible everyone is at least aware that it is taking place.

There will be moans, letters to the Jersey Evening Post, calls to the BBC Radio phone in programmes and so on concerning the noise, smoke, inconvenience caused, hold ups, environmental issues and so on, of that, there is no doubt.

You can't please all of the people all of the time but all you can do is to take reasonable steps to ensure that at least they were aware it was taking place and where, when and for how long.

I suspect that these negative people will only form about 5% of the community and I can live with that as they say.

COMMUNICATIONS (on the day itself)

ALL HAVE TO TAKE INTO CONSIDERATION THE RAD HAZ POTENTIAL POSED BY ELECTRICALLY FIRED PYROTECHNICS – MIN SAFETY DISTANCE TO BE MAINTAINED FROM CLOSEST FIREWORK IS 150 MTRS.

The Jersey Battle of Flowers Association will be in possession of a large number of radios (hired from the Department of Electronics) with which to 'control' the actual daylight and moonlight parade marshalling. Their base station will be positioned at the covered bus shelter on the inner road near West Park. This site affords good all round visibility and being on high ground has the added advantage of direct and uninterrupted line of sight/radio transmissions to all of the hand held units deployed. This system has proved itself to be totally dependable, clear and robust during the last few years of deployment at the annual Battle Parades.

The control point operator will also be in possession of a Police hand held Tetrad Radio to enable him to communicate directly with the Force Control Room (Gold and Silver Command) at Police Headquarters in Rouge Bouillon.

In addition he will have a VHF marine base station capable of direct communication with the safety boat (a) which will be monitoring and policing the marine exclusion zone firstly by calling up a Channel 16 and then choosing a talk channel of choice (Channel 8 or 14 being those most used).

The call signs will be Battle Base calling Battle Safety Boat.

The control point operator will also be in direct radio contact with the public address system (which covers the entire arena area) announcer.

This will enable him to have a second line of communication with marshals and spectators alike.

Mobile phone are utilised by the organisation as a real means of communication but must not be relied upon in case of a major incident of any sort as the entire system can 'crash' due to over loading by subscribers.

No mobile phones or radio transmitter/receivers will be permitted to operate closer than 150 mtrs to the pyrotechnics assembled on the beach from the moment the matching operations begin and until the site in declared safe. Messages will be conveyed to and from the 'live area personnel' by runners and/or the safety patrol vehicle crew (who for information purposes will be in possession of both a battle radio and a hand held Marine VHF set to enable them to communicate directly with the safety boat crew on the accepted channels. They too will observe the 150 mtr RAD HAZ distance.

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EMERGENCY STOP FIRING SYSTEM

There is a real need to have in place an emergency stop firing system for every event of this type and magnitude.

It could be utilised for example if/when unauthorised persons gained access to the firing site or a dog were to be sighted in the danger area. It could also be used/operated is something happened in the audience which could or would lead to a major incident of any sort being implemented. Persons engaged in firework activities on the beach might not know that any such incident was taking place and equally someone on the beach might see something or someone which would require the stop firing system to be used.

The stop firing system (and competent operator) would have to be deployed in the immediate vicinity of the firing button for blatantly obvious reasons.

It would consist of a large rotating orange beacon and siren horns attached to a 12v case battery all contained in a sealed waterproof box at the epicentre of the firing/launch site. It would be operated remotely from the firing point and no where else. All of the lines of communication encapsulated under the heading of communications in this Risk Assessment would incorporate the existence of this device.

I built one many years ago and deployed and operated it on all of my firing sites in the Island and this over many years. It is a tried and tested method of letting everyone involved with the fireworks (most of whom will be wearing helmets, flash masks, goggles and ear defenders) know that there is a problem which necessitates the delay in firing either the strobe sequence rockets or display itself. Accuracy, brevity and speed at the push of a button, what better way to get such an important message across to so many so efficiently.

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SAFETY PATROL VEHICLE/SAFETY BOAT

The Safety Patrol Vehicle will be a two manned 4 wheel drive vehicle equipped with a remote control spotlight, flashing orange beacon, first aid kit, tow rope, shovels, fire extinguishers (AFFF, Controllable discharge water, CO_2 and dry powder types) and on board P.A. system and a radio to communicate with Battle Base. Both men will carry mobile phones.

The crew will be A) Driver _____
B) Assistant _____

Mobile Phone numbers A) _____ B) _____

It will also carry equipment to assist other vehicles (or itself) to escape from soft sand.

It will patrol the area agreed as being the official beach closure for this event and beyond if need be. Both men will ear high visibility vests at all times as well as activated cyalume light sticks (in green). They will also be equipped with safety helmets, goggles, flashmasks and gloves in case they have to enter a firework area or fall out zone.

They will not use VHF Radios or mobile phones within 150 mtrs of the live fireworks at any time because of the RAD HAZ problems/potential.

They will also carry 2 life jackets of the CO_2 inversion inflation type in case they have to enter to water for any reason.

THE SAFETY PATROL BOAT

The safety patrol boat will be a two manned rigid inflatable boat equipped with both a Marine VHF radio and a Battle radio. It will also carry a powerful spotlight as a safety item.

The crew will be A) Driver _____
C) Assistant _____

Mobile Phone numbers A) _____ B) _____

It will be equipped with a hand held P.A. unit, orange flashing beacon, man overboard recovery equipment, First Aid Kit and similar fire extinguishers to those carried in the patrol vehicle. Both crew members will be wearing fully serviced life jackets (of the automatic CO_2 inflation on immersion type) together with spares in case they have to pick up 'others' for whatever reason. Both men will also be equipped with safety helmets and visors just in case they have to enter or operate in a firework area/fall out area for any reason.

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They will patrol the agreed exclusion zone as yet to be established and agreed with the harbour office authorities.

The 2 man crew will wear high visibility vests at all times as well as activated cyalume light sticks in green.

They will not use their VHF radio or mobile phones within 150 mtrs of the live fireworks at any time because of the RAD HAZ problems/potential.

49

MARSHALS AND STEWARDS

Sadly Jersey does not have a team of fully trained marshals and stewards for events. Event organisers are totally dependent on volunteers coming forward to act in such capacities at major Island Events such as the Battle of Flowers, Jersey Live, Live 8 picnics in the park and so on.

The Jersey Motorcycle and Light Car Club do however have some and they are normally deployed at Hill Climbs, sprints, road races and so on. I will be recruiting some of these more competent people to assist the Battle of Flowers Marshals on launch night. Their knowledge and experience will be invaluable to us and I know that their presence can only add to the safety and security of this event. I will of course be writing a marshals brief in the not too distant future particular to this event and its special needs and risks. This will form part of this risk assessment in the not too distant future.

I will also be holding a marshals briefing meeting about a week prior to the launch because this important task is often left until the last minute or on the day itself and this is not acceptable in my humble opinion. People need to know what they are doing, why and how to do it properly and with sufficient lead in time to give them a chance to think about their duties, discuss them and most importantly of all come back with questions, doubts or problems and in ample time for such things to be resolved to the satisfaction of all parties. Marshals and stewards will be provided with high visibility jackets and activated cyalume light sticks and section leaders will carry a Battle radio to facilitate communication with this work force. Refreshments will also be provided on the night from a welfare point of view.

FIRE MARSHALS

I feel that by virtue of the very nature of this event combined with the class, type, numbers and weights of explosives involved and of course areas of operation and work there is a real need to have the permanent presence of qualified fire marshals in situ at every phase of the operation.

From past experience I have found that retired fire fighters make the best and certainly most aware and capable fire marshals of all. It is my intention to recruit such people (together with serving fire officers on their days off) to assist with our tasks.

We will need them to be part of the test firings, the preparation of the trays for the main launch, the transportation by road of the assembled fireworks and of course as part of the safety crews on the launch site.

In the recent past (i.e. for example the Family Nursing and Home Care Proms in the Park event of 2006 with a firework climax to the evening) I had four such individuals present throughout fully equipped with helmets, flash masks, goggles, gloves and flame retardant overalls and they had available an assorted range of fire extinguishers, buckets of water and sand too.

They alone had the knowledge and experience needed to be the first and immediate response to a fire caused by pyrotechnics. Hopefully their services will never be required but I will ensure their presence nevertheless in the interests of the Health and Safety of all those involved in this mammoth task.

51

WASTE MANAGEMENT

1. Consideration has been given to the provision of food and beverages for all those involved with this task and this firstly at the preparation area and secondly at the beach on the day of firing. A mobile catering van will be provided for the duration by _____ who will be responsible for disposing of his own rubbish in an acceptable manner.

2. 2 Mobile Portaloos will also be made available to participants from the start of the preparatory work on the rockets to the completion time of the beach clearance operations. These will be hired from _____ and conveyed from site to site on a trailer towed by a 4-wheel drive vehicle. The driver of this vehicle will be _____.

3. Confirmation has been received from Mr Richard Fauvel, the Principal Engineer, Solid Waste products at Transport and Technical Services to the effect that all of the spent rocket cases can be taken to Belozanne for burning.

   They will be conveyed there in 3 small high sided pick up trucks supplied by _____ and this following collection from the beach by an army of both paid collectors and volunteers.

4. The miss fires/hang fires are other potentially live rockets will be disposed of by a controlled burning operation. This is to be carried out under the supervision of _____ sometime after the event has taken place and when the weather is deemed to be suitable to stage such an operation and at a site yet to be finalised for such use.

5. All firework leftovers i.e. boxes/cartons, wrappings etc used and discarded at the preparation area will also be the subject of a controlled burning to be carried out under the supervision of _____ sometime after the event in a similar manner to miss fires/hang fires. Cartons and boxes must always be treated as containing live fireworks by virtue of loose gun or black powder residues left in them. This is an added safety precaution.

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ENVIRONMENTAL IMPACT/CARBON FOOTPRINT OF THE EVENT

The all important green issues of staging an event of this sort must be taken into consideration at this the planning and preparation stages of the event. I have identified a number of areas which I suspect will be of concern to some individuals. These include noise, smoke, the chemical contents of the fireworks, potential damage to wildlife (and in particular fish and sea birds) and even light pollution has to feature in the risk assessment in this day and age.

Firstly, I feel the need to point out that this is only the second time in ten years that Jersey has been used as a stage for such an event. I also strongly suspect that it will be the last time for such a mass rocket launch as it is not a cheap or easy thing to stage safely.

We have also moved the 'goal posts' to coin an old phrase to such an extent that others will hopefully see it as too much aggravation to attempt to better it.

The history of the event shows that there have only been three such happenings to date and these on average every ten years or so. It started in Brighton in 1986, then Jersey in 1997, Plymouth in 2006 and now Jersey once again in 2007. Hopefully, and I do mean this in all honesty, this will be the end of it. Mountain climbed, flag raised, challenge gone but who knows for certain. I know I won't be doing it again and that is all that I can say for certain.

NOISE

The fact that 110,000 rockets are to be launched simultaneously will create a considerable amount of noise on their own. The fact that 37,000 of them will be of the whistling type will add to this sound (and hopefully spectacle too) but what we need to ensure is, that this sound is not detrimental to the human ear. All said and done this mass ascension will only last about 15 seconds and will be fired on a flat open beach and well away from the audience itself.

I have no idea whatsoever just how much noise or at what frequency, level or pitch it will be at firing but in an effort to establish these facts I will be carrying out two test firings well prior to the event to enable interested parties to attend bringing with them the appropriate measuring instruments to help establish these important facts.

One test firing will be in daylight hours, the other during the hours of darkness and this mainly to help encapsulate the needs of as many people as possible including 'outsiders' such as the media, photographers, camera crews and so on who have worries of their own in an effort to successfully capture the launch for subsequent broadcast.

I suspect that the noise levels will be within the accepted parameters set for such events and most importantly of all its short duration is the most important factor for consideration in direct comparison to the sound actually produced on the night.

SMOKE

At the time of writing this 1st draft Risk Assessment I have no idea at all just how much smoke is to be produced by the rockets that we will be using. Once again the test firings will reveal all.

CHEMICALS

Chemicals used in the construction/manufacture of Chinese fireworks have to comply with British Standard 7114 for importation purposes. They are normally subject to random testing by H.S.E. in the UK but the actual trade secrets concerning the active ingredients used tend to be passed down from generation to generation within particular Chinese families. I have not doubt in my mind that our rockets have been made by a reputable manufacturer in China and an equally reputable importer from the UK will be bringing them into the country. The atmosphere of planet earth could well do without this added rocket launch but in reality the emissions produced are the equivalent of a tick on a hogs back but nevertheless not something I would like to be involved with or responsible for on a regular basis!

LIGHT POLLUTION

Yet again we need to witness a test firing to establish the levels produced but I do not think the launch will pose a major problem from this particular area of concern.

POLLUTION/THREAT TO FISH, BIRDS/ENVIRONMENT ETC

If all goes to plan and the rockets can be fired at 10.30pm in a safe area of the beach sufficiently far away from the audience not to pose problems of fall out I will have two hours or more to deploy a beach clearance team to pick up all of the 110,000 rocket sticks before the rising tide reaches the firing position once again. The test firings will give me a better knowledge about this task but it is a very important one from a conservation point of view.

If for any reason we suspect that we will be unable to collect in all of the sticks in time a long tangle net will be strung between 6' tall metal stakes over 100 mtrs of so of the beach below the firing point to hopefully capture the sticks carried up by the rising tide and sucked back out by the subsequent/next falling tide. In addition searches will be carried out at the high water mark of the following 5 or 6 high tides in an effort to ensure that no flotsam or jetsam directly connected with this event remains on the beach.

Taking everything into consideration I am of the opinion that preparation and planning is the most important part of any event and as organisers we have instructed the Chinese to manufacture (and for the first time ever I believe) rockets that are totally biodegradable in each and every part of the construction.

Our UK importer has already travelled to China to ensure that we are getting exactly what we have ordered. He has already witnessed test firings of similar items which he is more than happy with and in addition he is returning to the factory in China to

ensure the quality control is to his liking as well and this during the month of May 2007.

Together, these are more than reasonable steps to help ensure that this launch is to be carried out not only in the safest way possible but also in the greenest way possible too.

55

CONCLUSIONS

I feel the need to point out that I have written this draft risk assessment for the rocket launch in a most unusual fashion and manner. For the first time ever I have been forced to write such a document without seeing or knowing much about the 'capabilities' of the actual rockets, without having established the exact location or the launch site and without having located or gained permission to use a suitable agricultural shed or building in which to assemble the frames of rockets. I do not even know the exact launch time at this moment in time.

Like all good risk assessments this document will have to be updated on a regular basis. Numerous site visits and inspections will have to be carried out by Fire Service personnel, Explosives Officers, Health and Safety Officers and so on and this as and when we can firm up arrangements.

The entire event depends on the goodwill, generosity, support and desire by many to become actively involved in the event. One only has to look at the aims and objectives of staging it to realise that 'things' will only start to happen in earnest from the moment it is made public.

There will be a great need for a lot of people from all walks of life to say to themselves "Yes this is something worthwhile and something I would like to be involved with to help make it happen for Jersey".

From a Health and Safety / Risk Assessment point of view these vagaries and imponderables are of concern and worry I am certain.

The reality however is that this is a community event and I hope that it will involve as many members of our community as possible. We also need to sell as many of the individual rockets as possible to the same community but for many this will be their opportunity to be actively involved in it even from a distance.

When I stop and take into consideration all of the aspects of the tasks in hand the more I get to feel that people will want to take part and the feel good factor increases on a daily basis. The Jersey grapevine has already dissipated the fact that we are doing it and the offers of help are already coming in. The official announcement via the media that it is taking place will I suspect open the floodgates and I have no doubts whatsoever that we will, in fact, have the backing of the people of Jersey in the World Record attempt. Only time will tell of course but to date everything has been very very positive indeed.

When all is said and done this event has to be staged professionally and very much like a military operation. Discipline will provide the desired end results and it's the only way that I know of doing things. My team are used to this method of operation. It has worked for us many times in the past and hopefully it will do so once again.

APPENDIX 4

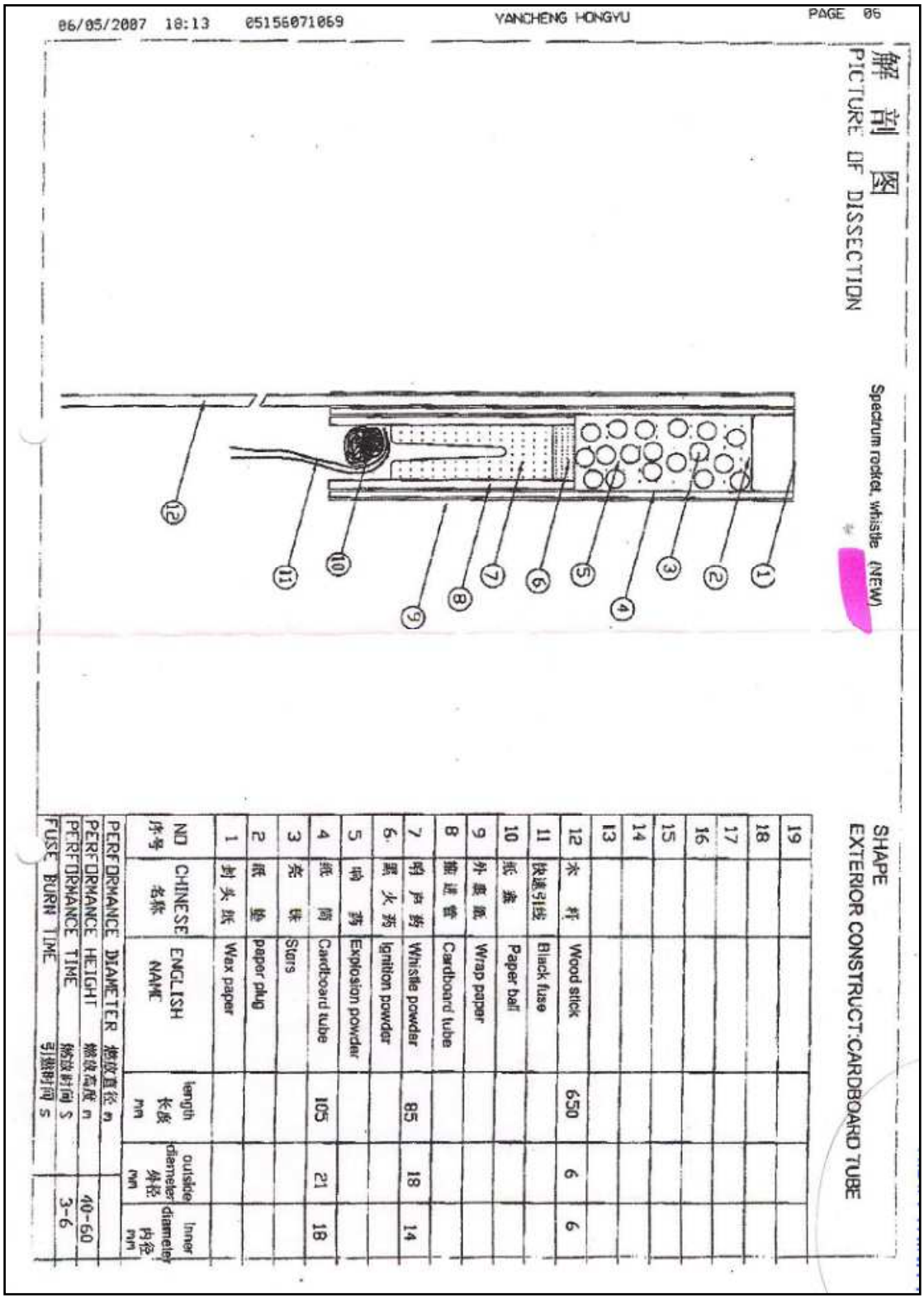
Partial List of Chemicals. 8 June 07

Spectrum rockets, whistle		weight per firework	total weight in kg
potassium benzoate	KC7H5O2	2.38	88.06
potassium perchlorate	KClO4	7.15	264.55
aluminium and Magnesium alloy	Al + Mg	0.875	32.375
sulphur	S	0.475	17.575
aluminium	Al	0.5	18.5
carbon	C	0.95	35.15
resinox (phenolic resin)	C48H42O7	0.17	6.29
potassium nitrate	KNO3	2.625	97.125
copper oxide	CuO	0.875	32.375
Spectrum rockets, red			
lac	C16H24O5	0.35	12.95
potassium perchlorate	KClO4	3.44	127.28
aluminium and Magnesium alloy	Al + Mg	1.4	51.8
sulphur	S	0.45	16.65
aluminium	Al	0.5	18.5
carbon	C	1.95	72.15
resinox (phenolic resin)	C48H42O7	0.42	15.54
strontium carbonate	SrCO3	1.4	51.8
potassium nitrate	KNO3	5.6	207.2
polyvinyl chloride	(C2H3CL)n	0.49	18.13

Totals	total weight in kg
potassium benzoate	88.06
potassium perchlorate	391.83
aluminium and Magnesium alloy	84.175
sulphur	34.225
aluminium	37
carbon	107.3
resinox (phenolic resin)	21.83
potassium nitrate	304.325
copper oxide	32.375
lac	12.95
strontium carbonate	51.8
polyvinyl chloride	18.13

APPENDIX 5

Chemical content details. 12 June 07



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解剖图

PICTURE OF DISSECTION

Spectrum rocket, whistle (NEW)

SHAPE

EXTERIOR CONSTRUCT:CARDBOARD TUBE

NO 序号	CHINESE 名称	ENGLISH NAME	length 长度 mm	outside diameter 外径 mm	Inner diameter 内径 mm
PERFORMANCE DIAMETER 燃放直径 n					
PERFORMANCE HEIGHT 燃放高度 n					40-60
PERFORMANCE TIME 燃放时间 S					3-6
FUSE BURN TIME 引燃时间 s					
1	封头纸	Wax paper			
2	纸垫	paper plug			
3	尧珠	Stars			
4	纸筒	Cardboard tube	105	21	18
5	响药	Explosion powder			
6	黑火药	Ignition powder			
7	响声药	Whistle powder	85	18	14
8	输送管	Cardboard tube			
9	外裹纸	Wrap paper			
10	纸塞	Paper ball			
11	快速引线	Black fuse			
12	木杆	Wood stick	650	6	6
13					
14					
15					
16					
17					
18					
19					

CHEMICAL COMPOSITION FOR CHINA FIREWORKS AND FIRECRACKRS

烟花含药成份表

货 号 ART NO. HYD-006E (NEW) 品名 NAME: Spectrum rockets, whistle (NEW)

每只含药量 Powder weight of each piece: 16 g (克) 规格 SIZE: Φ27*650

成份 CHINESE	COMPOSITION ENGLISH	百分比 RATE (%)									MAXIMUM WEIGHT 最高药量 (g)
		purple 紫	red 红	green 绿	gold 黄	Crackle star	blue 蓝	Whistle powder	explosion powder 响药	Ignition powder	
苯甲酸甲	potassium benzoate—$KC_7H_5O_2$							28			2.380
虫 胶	lac—$C_{16}H_{24}O_5$										
草 酸 钠	sodium oxalate—$Na_2C_2O_4$										
高氯酸钾	potassium perchlorate—$KCLO_4$					20		70	50		7.150
铝镁合金粉	AL+MG alloy					25					0.875
硫 磺	sulfur—S					5				10	0.475
三氧化二铋	Bi_2O_3										
铝 粉	aluminum—AL								50		0.500
杉 炭	carbon—C					10				20	0.950
酚醛树脂	resinox—$C_{48}H_{42}O_7$							2			0.170
碳 酸 锶	strontium carbonate—$SrCO_3$										
硝 酸 钡	batium nitrate—Ba $(NO_3)_2$										
硝 酸 钾	potassium nitrate—KNO_3					15				70	2.625
氧 化 铜	copper oxide—CuO					25					0.875
聚氯乙烯	polyvinyl chloride— $(C_2H_3CL)_n$										
钛 粉	titanium—Ti										
铝 渣	flitter—AL										
冰 晶 石	cryolite—Na_3ALF_6										
糯 米 粉	glutinous rice										
黏着剂											
各效果药基	powder weight for each effect					3.5		8.5	1	3	16.000

ALL CHEMICALS IN THE DEVICE ARE IDENTIFIED IN TABLE 4.3—1 OF APA STANDARD 87—1

CHEMICAL COMPOSITION
FOR CHINA FIREWORKS AND FIRECRACKRS
烟花含药成份表

(old)

货　　号 ART NO. HVD-006E (old)　　品名 NAME: Spectrum rockets, whistle

每只含药量 Powder weight of each piece: 16 g (克)　　规格 SIZE: φ27*650

成份 CHINESE	COMPOSITION ENGLISH	百分比 RATE (%) purple 紫	red 红	green 绿	gold 黄	Crackle star	blue 蓝	Whistle powder		explosion powder 响药	Ignition powder	MAXIMUM WEIGHT 最高药量 (g)
苯甲酸甲	potassium benzoate—$KC_7H_5O_2$							28				2.100
虫　胶	lac—$C_{16}H_{24}O_5$											
草酸钠	sodium oxalate—$Na_2C_2O_4$											
高氯酸钾	potassium perchlorate—$KCLO_4$					20		70		50		6.650
铝镁合金粉	AL+MG alloy					25						1.125
硫　磺	sulfur—S					5					10	0.525
三氧化二铋	Bi_2O_3											
铝　粉	aluminum AL									50		0.500
杉　炭	carbon—C					10					20	1.050
酚醛树脂	resinox—$C_{48}H_{42}O_7$							2				0.150
碳酸锶	strontium carbonate—$SrCO_3$											
硝酸钡	batium nitrate—$Ba(NO_3)_2$											
硝酸钾	potassium nitrate—KNO_3					15					70	2.775
氧化铜	copper oxide—CuO					25						1.125
聚氯乙烯	polyvinyl chloride—$(C_2H_3CL)n$											
钛　粉	titanium—Ti											
铝　渣	flitter—AL											
冰晶石	cryolite—Na_3ALF_6											
糯米粉	glutinous rice											
雷音剂												
各效果药量	powder weight for each effect					4.5		7.5		1	3	16.000

ALL CHEMICALS IN THE DEVICE ARE IDENTIFIED IN TABLE 4.3—1 OF APA STANDARD 87—1

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解剖图 PICTURE OF DISSECTION

Spectrum rocket, whistle (old)

SHAPE EXTERIOR CONSTRUCT:CARDBOARD TUBE

NO 序号	CHINESE 名称	ENGLISH NAME	length 长度 mm	outside diameter 外径 mm	inner diameter 内径 mm
PERFORMANCE DIAMETER 燃放直径 m					
PERFORMANCE HEIGHT 燃放高度 m					40-60
PERFORMANCE TIME 燃放时间 s					3-6
FUSE BURN TIME 引燃时间 s					
19					
18					
17					
16					
15					
14					
13	木 钉	Wood stick	650	6	6
12	快速引线	Black fuse			
11	黑 火 药	Ignition powder			
10	喷 口	Mud orifice			
9	外 裹 纸	Wrap paper			
8	响 声 药	Whistle powder			
7	黑 火 药	Ignition powder			
6	推 进 管	Cardboard tube	75	18	12
5	纸 筒	Cardboard tube	120	21	18
4	亮 珠	Stars			
3	爆 药	Explosion powder			
2	纸 塞	paper plug			
1	封 头 纸	Wax paper			

APPENDIX 6

Updated Risk Assessment

Terry

WORLD RECORD ROCKET LAUNCH ATTEMPT

Changes/ Alternatives /Updates to FIRST Risk Assessment dated 20th May 2007

There have been a number of changes made to my original Risk Assessment Produced on 20th May 2007. They are as follows:

Page 16 **Crowd Control**

As things have developed, I strongly suspect that the rocket launch will now be staged from the beach, below a point somewhere between First Tower and Bel Royal. The Battle of Flowers arena ends well before First Tower and in fact in line with the western end of the Lower Park below what used to be Mrs Clarke's House.

It would be ludicrous and in fact dangerous to attempt to move the audience of The Moonlight parade approximately half a mile west just to watch rocket launch, which in all honesty will be a fifteen second wonder. One also has to remember that thousands of others (who have NOT paid to see The Moonlight Parade) will want to see the rocket launch and will be making their way to the area.

In addition a lot of floats and exhibits leaving the arena will be making their way West from approximately 22:30, whilst others are to be parked up on the lay bys between First tower and Bel Royal. A number of these will be paper flower floats covered with untreated paper flowers (i.e. non flame retardant proof paper), secured with highly inflammable glue such as Evo Stick and all of this on top of a wire mesh frame and petrol powered tractor. All will have petrol driven generators on board as well to provide power for lighting and sound systems.

If a paper flower float caught fire it would completely burn out in minutes readily assisted by an updraft supply of air sucked up from below the skirt. Burning embers would also put any other paper flower floats in the

immediate vicinity of the conflagration at risk.

What I am really saying here is that I intend to move the rocket launch west to minimise the risk and unfortunately my safety distances will be compromised by this movement of floats towards the launch site. I intend to provide The Jersey Battle of Flowers Moonlight Parade with a real finale` which will be a fast and furious low level firework display from the beach directly below the battle arena itself. This for two reasons, firstly the rocket launch will only last about 15/20 seconds and more importantly the fireworks display will help to keep people in their seats or at least within the confines of the battle arena itself.

I strongly suspect that we need to stage the rocket launch at about 22:15 (i.e. **before** the main exodus of people and floats from the arena) and the firework display at 22:30 to help keep them all in situ. ~~&~~ Does?

This will serve two purposes:

A) It will not compromise my safety distances in any way.
B) A lot of the sight seers for the launch who have come to the area specifically to watch the rockets, will hopefully be moving away from the area before the audience from The Moonlight Parade gets on the move.

In the interests of Public Safety I feel we need to (a) keep the audience in their seats for as long as possible (b) create an area between First Tower and Bel Royal Slip clear of people as far as possible and not allow a second audience into the area and (c) only allow viewing of the rocket launch from West Park to almost First Tower and from beyond Bel Royal Slipway.

Page 26 **The Preparation Area**

This has now been established as being Vinchelez Farm at St Ouens, Premises located behind Vinchelez de Haut Manor and owned by Senator James Perchard. The Farm is located inside a triangle of roads namely La Rue de L'Etocquet, La Rue Plaitte Raie and Le Cointin (Jersey Telecoms Telephone Directory Map, Pg 1 location D2 on pg 33 refers.)

It is an ideal location for such use as it is isolated, easily secured and has sufficient covered space for our use, together with adequate parking areas. It is also fairly easily accessible to large vehicles such as tractors and trailers and P-30 plated lorries.

12/07/2007

In addition to large a agricultural shed there are two large stone built stores one of which will be ideal to store the empty rocket frames in and the other will act as a temporary magazine for the fully loaded trays. There will no longer be a need to utilise 20ft containers as temporary storage.

Loading will take place within the confines of the main metal clad shed which will be sub-divided into five areas, for safety purposes. Consideration will be given to making access to the site one way only, but this will be done with the assistance of St Ouen's Honorary Police who will be reinforcing the security presence on site for the duration, by making it part of their parochial patrol route.

Page 30 **Transfer of Rocket Frames to Tractor Drawn Trailers**

Having now seen the size, shape and physical construction of the rocket frames produced by HM Prison Workshops, each tray will need to be lifted by four men for safety reasons. The weight of the combined tray and live rockets will be approximately 90lbs. Safer and easier with a four man lift.

Page 32 **The Beach Firing Site**

The exact location will only be established **after** the test firings have been carried out, and will still be very much dependent on weather conditions prevailing on the day. It will however be somewhere between the German Bunker at First Tower and Bel Royal Slipway. The rockets will **not** be fired if the wind speed exceeds 6 knots or the wind direction is unsuitable for safety reasons.

Page 41 **Sound and Noise**

A section of the firework factory in China suffered an explosion in their whistle Manufacturing Department, resulting in 2 men being badly burned but luckily with no fatalities being caused. The unit has been totally destroyed so **none** of our rockets will be fitted with whistle drivers. This will greatly reduce the noise of the launch and greatly reduce the chance of an accidental flash over caused by exploding whistles.

As I said all along in my first Risk Assessment the whistles were the most dangerous part of the rocket and the most unstable to handle. Sadly for those injured in the blast in China this has proved to be so true! This is now one less worry for me. The rockets themselves are still being produced and hopefully will arrive in time!

12/07/2007

Page 43 **Production of Smoke**

Tom Archer has reported back to me following his recent trip to China that having witnessed for himself the test launch of a large number of our rockets my observations concerning the smoke produced have to be taken seriously. They **are** a real smoke producer of that there is no doubt.

Page 54 **Chemicals**

I have now received and passed on the full chemical compound mixtures for the red and white rockets to the Enviromental Service Department for their consideration. I have yet to receive the specifications for the blue rockets at the time of writing, as I have not received them from out importer Essex Pyrotechnics. Blue rockets from an enviromental point of view tend to contain the more unpleasant/ dangerous chemicals so this information has been chased up for blatantly obvious reasons! (see final paragraph too please!)

Other important information and changes

20k - 27k ish

The rockets are due to arrive in the UK on or about 20th July. We should have them in Jersey no more than a week later. This will make the vitally important task of staging the two test firings more urgent and difficult but they WILL take place, they have to. I might reduce the numbers from 5000 to 1000 for both the day and night tests to make them easier to do and quicker to clean up afterwards but they WILL still give ALL OF US a chance to see them fired 'en masse' prior to the main launch date.

Insurance Cover

Having looked closely at Insurance Cover for this event and having discussed it in detail with both Tom Archer and Jim Bevis I have decided to put in place insurance in my own name to cover this event. It was also a cheaper option and will NOT 'put at risk' the policies held by Essex Pyrotechnics and Starburst Fireworks respectively.

I will also now be responsible for the importation of the rockets themselves to Jersey. That way, only one man is in all honesty, accountable if things do go wrong! Hopefully they will not though!

To do all of this professionally I have registered the new Trading name of

Elf and Safe T so that I can honestly say and more importantly prove that everyone is working for me in the true sense. To hold Employers Liability Insurance one has to be an employer and there has to be a Servant Master relationship between parties involved. This has now been achieved by the new business and written contracts of employment for all those involved!!

I cannot insure Senator James Perchard's premises at Vinchelez Farm because I do not own them (i.e. no insurance interest in the property) so I have contacted his Insurance Company to see if they will extend his cover for our activities at the premises. I have not received a reply as yet at the time of writing but, its looking promising. IF MARAE DO HIS PROPERTY - INSURANCE TO CLEAR WASTE?

Firework Display

The funding for the Firework Display at the end of the Parade has been provided by The Jersey Battle of Flowers Association (£3,000), and the remainder from Economic Development Department, as part of a £20,000 grant to the event to cover the actual purchase price of the rockets from China with which to stage the event. The remainder will come from the event income itself all being well.

I have promised the Island the Parade will end with a £10,000 display at the end of the night and it certainly will but, it will be a fast fired low level display best viewed by those in the arena (who in all honesty have paid to watch it as part of the event) and not designed to be a full blown ariel show clearly visible to all and sundry from anywhere from La Collette to Noirmont Point.

This fact will be made public well prior to the event again in an effort to assist with crowd control on the night itself.

Launch Trays

Thanks to Mr Guy Gibbens the (now outgoing) Prison Governor, no less than 50 superb launch trays have been produced by Convicted Prisoners in the workshops at HMP La Moye. Still more are yet to be produced. These are now stored at Vincelez Farm ready for use.

I need to make mention of this excellent task because this is a community orientated event and I do not see why those in the Prison community should be excluded! They have volunteered to do the task and are taking great pride in their work and this is very much to their credit. To me, they are as

WHAT WILL HAPPEN TO WASTE LAUNCH TRAYS?

much a part of my team as everyone else involved and real credit is due to them. No float construction = no Battle of Flowers, No launch tray construction = no Rocket Launch.
Its a pity that they can't be on the beach with the rest of the team on the night to see the end results for themselves.

Personal Protective Equipment (PPE)

My order with Normans is starting to arrive in the Island. I have already taken delivery of 100 yellow safety helmets for use by all on the firing site. The nice part is that, apart from getting them at cost price the items will be held in stock at the end of the day and will be available for other events in future. If other Organisers of Charity events (with a need for such items) would like to make a small donation to Side by Side I am certain they will be made available to them. This to me is a bonus created by the rocket launch. Camerons are the only people in Jersey (who originally supplied 100 yellow safety high visible jackets for The Great Ormond Street Bonfire back in 2003) who can supply or loan any form of PPE and their stocks are down to about 30 such jackets as they have been used so many times since, by other charities (and some not returned of course!) Now, Side by Side will have Helmets, Jackets, Safety Goggles and so on, available. What a nice bonus that is for the Islands Charity event Organisers.

Penultimately

A further Risk Assessment on the rocket launch (in the approved and acceptable modern style for such documents) has been compiled by Mr James Bevis of Starburst Fireworks and has already been submitted to The States Fire and Rescue Service together, with a similar Risk Assessment for the firework display at the end of the rocket launch. Copies of this additional information will be made available to the other appropriate authorities in the not too distant future.

Finally, I have just established that our blue rockets are not now to be produced by the Chinese Factory. Our entire launch will now consist of red and white rockets (The Jersey Colours) accompanied by lead free crackle. There will still be approximately 110,000 rockets (or more) being fired on the night itself.

A further amended /updated risk assessment will follow in the next week to ten days and the final one will be submitted following the test firings at the

beginning of August. That one will be brief I assure you, but like all of them, accurate and honest.

Thank you all for your ongoing advice, support, guidance and assistance with this high risk but hopefully spectacular event. It is appreciated I assure you.

Compiled by; Terry McDonald
Risk Assessment Update number 2
10 July 2007

APPENDIX 7

Report by Environment Division

"World Record Rocket Launch Attempt- a response from the Environment Division, States of Jersey[1]

24 July 2007

1. Introduction

1.1 The Environment Division's position concerning the record attempt

Fireworks contain a variety of chemicals that vary according to the display effect required. High temperature combustion causes these to combine in almost infinite array, many of which are toxic and pose a high potential risk both to human health and the environment.

This is particularly the case for a short and intense display over a relatively small area, such as the record attempt planned in St Aubin's Bay.

The Environment Division would, in all cases, strongly advise against any addition of chemical or waste products or any large-scale disturbance to the bay area. However, the Division recognises the social context and benefits of the record launch attempt, as well as, the traditional nature of displays to mark the finale of the Battle of Flowers.

Whilst the Environment Division does not support any potential risk to the environment, it has sought to provide a balanced perspective and to identify and quantify these risks and, more importantly, ways in which they can be minimised.

The Division considers that the main potential risk to the environment will be through the physical setting and clearing-up of the firework area, rather than by the fireworks themselves. To this end, comprehensive guidelines have been detailed within this document.

The Division strongly advises these should be adhered to. The record attempt, and its effects on the environment, will be closely monitored by relevant officers. Any significant harm to the aquatic environment or damage to the amenity value of the bay that is caused by the record attempt will be investigated as a pollution incident under the Water Pollution (Jersey) Law, 2000.

1.2 Background information

The paper is a response by the Environment Division, States of Jersey to Mr Terry McDonald concerning an attempt to gain the world record for the most firework rockets launched at one time. The record attempt is scheduled to take place at the Jersey Battle of Flowers Moonlight Parade, Friday 10 August 2007 at approximately 22.30hrs.

A total of 111,000 rockets will be fired simultaneously. These comprise, in equal numbers, of white, red and 'crackle' rockets. The estimated height of each rocket is 40-60m. The rocket launch will last for approximately fifteen seconds. It will take place in the inter-tidal zone of St Aubin's Bay, Jersey.

This response is based on information forwarded to date to the Environment Division by Mr McDonald (the organiser of the record attempt). This includes Parts 1 and 2 of the Risk Assessment and full chemical breakdown of rockets to be used.

The response is not an endorsement of the record attempt by the Environment Division, but advice on how best to minimise the environmental impact.

The response will be updated when further information becomes available (e.g. updates of the Risk Assessment and findings of the test firings).

2. Considerations to address

2.1 Noise levels

Part 1 of the Risk Assessment included the launching of 37,000 'whistle' rockets. These have now been replaced by 37,000 'crackle' rockets. According to Mr McDonald these emit less noise.

Mr McDonald states that the noise emitted by the 'crackle' rockets is unknown. The noise will only be quantified during the planned two test firings (during the day and night) of 5,000 rockets (including 1,700 red, white and crackle rockets) that is scheduled for late July.

Prior to the display a maroon rocket will be launched to signal firework operators to simultaneously ignite the rockets.

Recommendations

1. That monitoring equipment is used to assess the noise levels during both the day and night test firing. These should be placed downwind and at locations where the maximum noise level is expected to occur.

   Quantifying precise total noise levels will be problematic, given the test firing of only a small number of rockets (some 1,700) compared to the total of 37,000 crackle rockets used in the record attempt. The method used to up-rate and calculate the total noise level from the test firing should be forwarded to the Environment Division and Health Protection.

2. The noise emitted by the starting maroon rocket should be stated.

3. Details of the plan to warn surrounding households (pet owners), livestock owners, local veterinary practices and any relevant businesses e.g. boarding kennels and catteries should be discussed with the States Vet and Health Protection.

Contact at the Environment Division: [redacted] States Vet (tel: 441644)
Contact at Health Protection: Mr [redacted], Community Health (tel: 443738)

2.2 Pollution levels

Fireworks contain a mix of chemicals that give special effects according to the type of rocket. A breakdown of the chemical components was requested by, and has been forwarded to, the Environment Division.

It is understood that blue and whistle rockets are no longer to be used. Blue rockets are stated as being one of the most polluting rockets. Notwithstanding, a wide variety of chemical compounds are produced on combustion of the rockets. Many of these have the potential to cause detrimental effects to the beach and the aquatic ecosystem.

Should significant harm to any living resources or the aquatic ecosystems, or damage to any amenity, or interference with any legitimate use of controlled waters occur (see definition of pollution in Annex 1), then Mr McDonald could be liable to prosecution under the Water Pollution (Jersey) Law, 2000.

Recommendations

1. That the angle of firing the rockets is made as low as feasible to allow the maximum dispersion of the fall-out of chemicals onto the beach.

2. That rockets are fired 500m away from any ecologically sensitive area (see section 2.3).

3. That Mr McDonald is aware that pollution arising from the record attempt could make him liable for prosecution under the Water Pollution (Jersey) Law, 2000.

2.3 Risk to areas of ecological importance (including eel grass beds)

Eel grass beds occur within the inter-tidal zone of St Aubin's Bay. The beds are important fish breeding and feeding areas, as well as feeding areas for migratory birds.

They are also identified as a priority habitat within the Biodiversity Strategy and thereby protected as part of Jersey's international obligations under the Convention on Biological Diversity and the Bern Convention on the Conservation of European Wildlife and Natural Habitats and also locally under the Conservation of Wildlife (Jersey) Law 2000. Eel grass beds are included in the biodiversity action plans for Jersey. The precautionary principle will be adopted. Should there be any possibility of damage to the eel grass beds by the display (including vehicle, human traffic) then it will need to be re-located to a more suitable area.

The Risk Assessment does not give the precise location where the rockets will be fired (mentions somewhere between the German Bunker, First Tower and the slipway at Bel Royal). The position between high and low-water mark is further not defined. Mr McDonald states that this can only be determined after the test firing.

Recommendations

1. That the coordinates and surface area of the firing site, the direction of firing, and the area of likely fall-out of rocket debris is identified and forwarded to the Environment Division as soon as possible.

2. That M[redacted] assesses these areas with respect to potential damage to the eel grass beds, or any other ecological important area, and advises on the suitability of the firing site. Any deviation from this site (due to wind conditions on the day etc.) will require agreement from Mr Freeman.

Contact at Environment Division: Mr[redacted] Principal Ecologist (tel: 441628)

2.4 Risk of damage/pollution from vehicles

The Risk Assessment mentions that a minimum of seventeen vehicles (tractors/trailers, lighting, clean up, first aid, catering and portaloo vehicles) will be on the beach. Leaking fuel and oil from the vehicles represents a risk to the environment.

St Aubin's Bay is monitored for bathing water quality and any pollutants could affect the results.

Recommendations

1. That vehicle movement on the beach is kept to a minimum and kept as close as practical to the firing site.

2. The fuel tanks/oil sumps of all vehicles and trailers used in the attempt should be inspected for leakage. If leakage is found the vehicle should either be replaced with one that is not leaking or the leak should be repaired before the vehicle is allowed to drive on the beach.

3. The risk of vehicles becoming stuck in the sand, with possible consequences for pollution from fuel tanks etc, due to submergence by the rising tide should be minimised (adequate tow ropes, mats etc should be available).

4. Portaloos must be used, securely tied to trailers and spillage prevented.

Contact at the Environment Division[redacted], Environmental Protection Officer (tel: 441691)

2.5 Clean up of site

The Risk Assessment states that approximately one hundred people will collect the rocket sticks, cardboard debris etc. A maximum of 4.8 tonne of material (pre-burnt dry weight) will need to be collected over 3.5 hours (i.e. fourteen kilograms per person per hour).

Recommendations

1. That Mr McDonald is aware that if any sticks, cardboard/burnt debris or other waste material is left on the beach then he could be liable for prosecution under the Water Pollution (Jersey) Law, 2000. According to Article 3 (4), the definition of 'pollution' includes any debris material resulting from the firework record attempt (see Annex 1).

2. The Risk Assessment states that the rubbish will be placed into three high-sided pick ups. It would appear that this number needs to be increased due to the weight of sand and water mixed in with the debris that will increase total weight.

3. The sand and water component of the collected debris will contain chemicals resulting from the combustion of the fireworks. Therefore, it will be beneficial to bag, and remove, the total raked material and not be too concerned to separate the debris and sand mix.

4. Mr McDonald should provide information concerning the safe disposal of the contaminated waste rocket trays.

5. That all debris is double bagged (to lessen bag puncture by the sticks) and that bags are tied securely. Collection vehicle should be parked under cover (out of the rain) prior to delivery to the waste facility at Bellozane. This will safeguard against the run-off by rain of heavy metals or other determinants into controlled waters.

6. It is recommended that all clean-up personnel wear rubber gloves to prevent skin contact with heavy metals.

7. An Environmental Protection Officer should be on-site to evaluate the extent of the clean-up before the tide covers the site.

Contact at the Environment Division: [redacted] (tel: 441691)

2.6 Non-fired rockets

According to Mr McDonald, if the event is cancelled then the rockets will be transported back to the storage sheds and placed in containers. If they are deemed usable they will be shipped to the UK. According to the Waste Management (Jersey) Law the fireworks in this state do not constitute a waste (as they are to be used) and there is no legal requirement for an application to be made in respect of a Hazardous Waste Carriers certificate.

Conversely, if the rockets were unable to be re-used, then they would constitute a waste, and possibly a Hazardous Waste as defined in Schedule 2 of the Waste Management Law (Jersey) 2005, and a suitable method of disposal in line with the provisions of The Law will be required. If it is proposed that Mr McDonald's own company is to move hazardous waste on the Island an application must be made to the Environment Division in respect of a Hazardous Waste Carriers Certificate.

It is understood from telephone conversations held with Mr McDonald, that it is planned to burn waste rockets at the incinerator, Transport and technical Services, Bellozanne.

Recommendations

1. That a waste management plan dealing with waste rockets is provided to the Manager for Waste, Environment Division (see contact below) for review and, if appropriate, approval.

2. That the acceptance of non-fired rockets for incineration by Transport and Technical Services is clarified in a letter.

Contact at Environment Division: [redacted], Assistant Director Environmental Protection, tel: 441645

3. Conclusion

Documents forwarded to date by Mr McDonald concerning the firework record attempt launch have been studied by the Environment Division.

Various recommendations to minimise environmental damage have been made. Mr McDonald should liase with the officers responsible to show that these considerations have been fully taken into account. Information, where requested, should be forwarded, as soon as possible, to the contact officer.

The recommendations may be re-viewed once further information is made available by Mr McDonald.

Any queries, or liaison, should be made through [redacted] tel: 441691.

References

McDonald, T. (2007). Risk assessment number 1. 20 May 2007. 57p.

McDonald, T. (2007). Risk assessment update number 2. 10 July 2007. 7p.

Chemical composition of the white, red and crackle rockets.

Annex 1

Water Pollution (Jersey) Law, 2000.

Article 3 (4).

4. Meaning of Pollution
In this Law, "pollution" includes the introduction directly or indirectly into controlled waters of any substance, or energy, where its introduction results or is likely to result in-

(a) a hazard to human health or water supplies;
(b) harm to any living resources or aquatic ecosystems;
(c) damage to any amenity; or
(d) interference with any legitimate use of controlled waters,

and whether or not its introduction is or would be the only contributing factor to that hazard, harm, damage or interference."

APPENDIX 8

Report by Environment Division

"World record rocket launch attempt- an assessment of pollution to controlled waters and toxicity[1]

27 July 2007

1. Introduction

1.1 The Environment Division's position concerning the record attempt

The Environment Division would, in all cases, strongly advise against any addition of chemical or waste products, or any large-scale disturbance, to the St Aubin's Bay area. However, the Division recognises the social context and benefits of the firework world record attempt, as well as, the traditional nature of displays to mark the finale of the Battle of Flowers.

Whilst the Environment Division does not support any potential risk to the environment, it has sought to provide a balanced perspective and to identify and quantify these risks and, more importantly, practical means by which they can be minimised.

The Division considers that the main potential risk to the environment will be through the physical setting and clearing-up of the firework area, rather than by the fireworks themselves. To this end, comprehensive guidelines to safeguard the bay area have been forwarded and discussed with Mr McDonald. Adherence to these will be closely monitored and assessed by the relevant Environment Officers.

Any significant harm to the aquatic environment or damage to the amenity value of the bay caused by the record attempt will be investigated as a pollution incident under the Water Pollution (Jersey) Law, 2000.

1.2 Background information

The paper assesses the likely risk of pollution to controlled waters and, where possible, the toxicity to the aquatic ecosystem resulting from the world-record attempt to launch the highest number of firework rockets at one time.

The record attempt will take place within the inter-tidal zone of St Aubin's Bay, and is scheduled during the Jersey Battle of Flowers Moonlight Parade, Friday 10 August 2007 at approximately 22.30hrs. The event is organised by Mr Terry McDonald.

A total of 111,000 rockets are planned to be fired simultaneously. These comprise, in equal numbers, of white, red and 'crackle' rockets. The estimated height that each rocket will reach is 40-60m. The rocket launch will last for approximately fifteen seconds.

The paper is based on information forwarded to date to the Environment Division by Mr McDonald. This includes Parts 1 and 2 of the Risk Assessment and a chemical breakdown of the rocket types to be used.

The record attempt has received some negative public comment regarding the potential impact on the marine ecosystem within St Aubin's Bay.

2. Impact of the rocket launch on the marine ecosystem

2.1 Chemical composition of the rockets (pre-combustion) and concentration of chemicals

The composition, by weight, of the chemicals used in the record attempt was requested by, and has been forwarded to, the Environment Division. The weight per rocket has been raised to the total number of rockets (Table 1).

Table 1. Total weights (kg) and concentration (mg l^{-1}) in St Aubin's Bay of chemicals for the pre-ignited rockets used in the record attempt

Chemical	Formula	Weight (Kg) Red *[1]	White	Crackle	Total Weight	Concentr at high water[1]	LD50 RAT (mg kg^{-1})
Potassium nitrate	KNO_3	207	207	317	732	0.0058	LD50 3,750
Potassium perchlorate	$KClO_4$	127	122	44	294	0.0023	n/a
Carbon	C	72	72	114	258	0.0020	-
Aluminium &	Al +	52	60	32	144	0.0011	LD50 >2000
Aluminium	Al	19	96	19	133	0.0011	n/a
Sulphur	S	17	17	33	67	0.0005	LD50 8 mg
Strontium carbonate	$SrCO_3$	52	-	-	52	0.0004	5 mg/m^3
Resinox (phenolic	$C_{48}H_{42}$	16	18	-	34	0.0003	n/a
Copper oxide	CuO	-	-	32	32	0.0003	LD50 278 mg
Polyvinyl chloride	$(C_2H_3$	18	-	-	18	0.0001	n/a
Lac	$C_{16}H_{24}$	13	-	-	13	0.0001	n/a
Total		**592**	**592**	**592**	**1,77**	0.0140	

where: LD50 is the amount of a material, given orally all at once, which causes the death of 50% of a group of test rats.
n/a; data on LD50 not established.

The total weight of chemicals of the 111,000 pre-ignited rockets is approximately 1.8 tonne[1]. If this total quantity fell into St Aubin's Bay and was evenly diluted within the bay (through tidal and wave mixing) then the concentration at high water would be 0.014 mg per litre sea water (Table 1). Where data is available, values for constituent chemicals are lower than the LD50 values (where one litre of sea water is 1.03 Kg).

This figure represents a maximum concentration, given that the high-temperature combustion of the rockets will convert much of the initial weight into air-born gases.

For example, slightly more than one tonne (58% of the total weight) of the chemicals comprise of potassium nitrate and potassium perchlorate (constituents of gunpowder) which are used to propel the rocket. The majority of these two chemicals will be converted into a gaseous state during firing and will therefore not all directly enter St Aubin's Bay.

However, many of the resulting chemicals will, in the first instance, be deposited within a more limited 'fall-out' area defined by the angle and height of rocket firing and the wind strength and direction. Therefore, the initial concentration of chemical by-products within this more limited area will be greater.

This is particularly relevant for the insoluble metal oxides and sulphates produced during combustion. Being insoluble they will not easily be dispersed away from the fall-out area. The soluble products (chlorides, nitrates and perchlorates etc.) will, however, be more easily dispersed.

2.2 Uses, human health risks and toxicity of the chemicals in the pre-ignited rockets

Table 2 shows that most of the pre-combusted chemicals used in the record attempt are soluble and, in their raw state, of a low health risk (apart from copper oxide). However, of more importance are the chemicals, and their solubility and toxicity resulting from high temperature combustion.

Table 2 Uses, health risks and toxicity of chemicals used in the firework display (pre-combustion state)

Chemical	Uses	Human health risk	Toxicity
Potassium nitrate	Gunpowder (saltpetre)	Irritation to skin (itching), eyes and respiratory tract (coughing, shortness of breath).	Combustion over 400ºC causes decomposition, forming toxic nitrogen dioxide and oxygen
Potassium perchlorate	Gunpowder, has replaced unstable potassium chlorate	Irritation to skin, eyes and lungs.	Heating to decomposition releases toxic fumes such as potassium oxide. Highly soluble, easily dispersed (Schneider, 2001).
Carbon	Naturally occurring	-	Low, will form CO_2 on combustion.
Aluminium and magnesium alloy	Naturally occurring material	Medication to relieve heartburn, sore stomach, or acid indigestion. Irritant mucus membranes in large does.	Low
Aluminium	Light weight construction. Most abundant metal on earth.	No studies have found a correlation between aluminium oxide and	Highly insoluble as a solid. Flammable in powder form.

		neurological effect. Irritant to mucus membranes, contact dermatitis.	
Sulphur	Manufacture of acids, bleaching. Naturally occurring chemical.	Sulphur required by the body. Sulphuric substances may affect behaviour and circulation.	Sulphur non toxic. By-product sulphuric substances are toxic.
Strontium carbonate	Manufacture of TV-tube glass, ceramic ferrites. Provides red colour in the rockets.	Irritation to skin, eyes, and respiratory tract if inhaled at 10 mg m^{-3}.	Slightly soluble in water, low health risk
Resinox (phenolic resin)	Reaction of phenols with simple aldehydes and used to make molded products (e.g. snooker balls, and as coatings and adhesives.	-	-
Copper oxide	Fungicides, seed dressings, boat anti-fouling paint.	Headache cough sweating nausea and fever may be caused by freshly formed fumes or dust of copper oxide.	Toxic to aquatic organisms.
Polyvinyl chloride	One of the most widely used plastics. Found in products such as packaging, cling film, bottles and materials such as window frames, cables, pipes, flooring, wallpaper and window blinds.	May cause cancer and birth defects	Low toxicity. Liberate toxic dioxins on ignition in fireworks. Molecular weight too high to be available to most organisms.
Lac	Varnishes, French polish (shellac)	Complex natural substance. Derived from tree resin.	Low

2.3 Human health risks and toxicity of the chemicals resulting from combustion of the rockets

The wide range of chemicals available, the intense heat of pyrotechnic flames, and the almost infinite number of ways in which they can be combined makes a detailed breakdown of combustion products difficult (von Oertzen, 2001).

For example, the combustion of the three elements of gunpowder (potassium nitrate, carbon and sulphur) results in the production of potassium carbonate, potassium sulphate, hydrogen sulphide and eight other chemical products. These chemicals are further enhanced by the use of perchlorate, the oxidisation of metals, metal salts, and binders that are used for colour or sound effects in the firework displays.

However, the record attempt consists only of white, red and crackle rockets. Apart from the constituents of gunpowder (potassium nitrate, potassium perchlorate, carbon and sulphur) and binders (resinox and lac), only strontium carbonate, aluminium and magnesium alloys and copper oxide are used for colours and sound.

This potential mix of chemicals is, therefore, likely to be less than a normal firework display that contains a multitude of colours and sound effects. For example, lead and barium and the blue coloured rockets (that give off high proportions of dioxins) are not being used in the record attempt.

It remains however that given the high temperature reaction that, potentially, a large array of chemical products will be formed during the record attempt. It is extremely difficult to quantify the type and quantities of the compounds that will be produced, on which an assessment to the risk of environmental pollution or toxicity can be made.

Literature further provides little information. Environmental papers generally report products of combustion as metal oxides, nitrates, chlorides, sulphates and carbonates etc. and do not give details of individual products (von Oertzen, 2001).

Given that specific information on potential pollutants of the record attempt is limited, a wider assessment of environmental impact has been made. Many of the chemicals that are deposited on the beach will be water soluble (perchlorates, hydrogen sulphate, chlorides etc.). The display is to take place approximately 3.5 hours before the beach is submerged by the rising tide and four days before the spring tides (10.82m springs). The tidal currents will help maximise the dilution of the soluble chemicals and mixing of the insoluble elements.

The insoluble chemicals include most of the metal oxides and sulphates produced from combustion of the rockets (including aluminium, magnesium and copper oxides). The fact that they are insoluble means that they are difficult to incorporate into the food chain (apart from direct ingestion by

bottom feeding fish or wading birds). These will probably persist longer in the bay, although wave and tidal action will help to disperse these in the longer-term.

The concentration of these insoluble products is expected to be much lower than the soil guideline values (SGVs) that have been developed for the UK and the Dutch Intervention Guidance for groundwater. It is recognised that these values only cover a few of the chemicals produced from combusted fireworks. However, taking copper as an example, if all the copper fell in its raw state within the confines of the fall-out area then a concentration of 5.5 mg kg^{-1} sand would be expected.[1] This is below the Dutch Intervention Guideline of 75 mg kg^{-1} and the LD50 Rat of 470 mg kg^{-1}.

Given the lack of knowledge concerning the chemicals produced, an indication of the effects of firework displays on the environment can be gained from case examples. A 10-year study of an estimated 2,000 firework displays over water at Walt Disney's EPCOT centre in Florida (Debusk *et al*. 1992) found little effect on the aquatic ecosystem. The study concluded that minimal risk to the environment would be caused by infrequent firework displays.

3. Summary and Conclusion

1. The large number of firework fired during the record attempt and their resultant combustion products contain toxic and environmentally damaging chemicals.

2. Many of the products will be soluble and become highly diluted and removed from the open bay area. Insoluble chemicals will not easily be absorbed into the marine food chain and the limited analysis able to be undertaken indicates that the initial concentration will be below risk levels.

3. A case study shows that single one-off firework events are unlikely to result in large-scale damage to the environment. Particularly, for an ecosystem which is open and subject to regular wind and tide mixing.

4. It is considered that the greatest potential risk to the environment will be caused by the physical setting and clearing-up of the launch area (damage from vehicle and foot traffic, raking sand etc). The Environment Division has written a detailed paper to Mr McDonald that gives comprehensive guidelines on how the risks to the Bay's environment can be minimised.

5. The test firing, rocket launch and beach clean up will be closely monitored by the Environment Division with ongoing advice given.

6. Any significant harm to the aquatic environment or damage to the amenity value of the bay that is caused by the record attempt will be investigated as a pollution incident under the Water Pollution (Jersey) Law, 2000.

References

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APPENDIX 9

Letter. Mr. McDonald to Environment Division. 19 March 08

Appendix 9. Letter. Mr McDonald to Environment Division 19 March 08.

M[redacted]
Assistant Director-Environmental Protection
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Planning and Environment
Environment Division
Howard Davis Farm
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'Maxville'
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19th March 2008

Dear [redacted]

I have thought long and hard about the offer to have the rockets destroyed locally by burning, but I feel the need to emphasise that I do not actually own them as they have never been paid for.

My biggest worries however, are the outstanding debts of approximately £40,000 which I have discussed with Mr [redacted]. Acting on his advice I have contacted my own bank, Lloyds TSB and others concerning such a loan, but unfortunately being without the security of a property and combined with my age, (58 this year) they cannot agree to such a loan.

In addition, as I have already pointed out, I was forced to close down my small business, Site Security Services in June of 2007 following major problems, again, over unpaid bills and the subsequent withdrawal of a verbal contract with Serco Jersey Ltd who staged the Fete de Noue Ice Rink in December 2006.

This left me with about £25,000 worth of loans and bank overdrafts to pay. Lloyds TSB agreed to lend me that sum but on two conditions:-

1. That I found a part or full time job to assist with repayments (this I have done)
2. I had to resolve the problem over non payment of the failed rocket launch bills, **before** they would even consider such a loan to me.

The bank would **not** offer someone with current debts of £25,000 a loan, when that person was facing possible further debts of forty to fifty thousand pounds and that, I can fully understand.

Bearing in mind the fact that my business loans were from family and close friends, I feel that I have to repay them before tackling the rocket problems. Taking everything into consideration I cannot do anything at all, no matter which way I turn, so I have decided that I will see what the residents of Jersey think about my situation. At the end of the day they are the people who have provided the money which currently exists in the public

1

funds. I feel that it is only right that they should have a say in exactly how those funds are spent.

I have absolutely nothing to hide from anyone, and nothing whatsoever to loose by 'going public'. In fact I have everything to gain. I hope and pray that the public will remember just how much I really have done for Jersey during the last 40 or so years. Only time will tell of course but, I am quietly confident that the people will remember my input!

I really do appreciate everything that you have done to try to help resolve my problems. There never was 'a them and us' situation and I will make this abundantly clear in my press releases, together with mention of the support from Senator Ozouf and others along the way.

I am now in a tight corner and my only real option is to come out fighting, which luckily is something I am quite good at when needs must.

A sad end to something which set out with the best of intentions to do some good for the Jersey Battle of Flowers, The Jersey Side by Side Charity and most importantly of all, our Island of Jersey itself and on a World Stage.

Yours sincerely

T A Mc Donald

APPENDIX 10

Letter from Mr. McDonald to EDD Regulatory Services. 23 March 2007

terry.mcdonald@jerseymail.co.uk

'MAXVILLE',
Mont-a-l'Abbe,
St. Helier,
Jersey, Channel Islands.
JE2 3HA.

Telephone: 01534 721343
Mobile: 07797 711193
Fax: 01534 285096

23 March 2007

[redacted]

Regulatory Services Department
Jersey Tourism
Liberation Square
St Helier, JE1 1BB

[redacted]

Dear [redacted]

In August 1997 at the Jersey Battle Flowers Moonlight Parade Jersey successfully gained a World Record for the largest number of simultaneously launched firework rockets, a total of 39,210. This record had remained in tact until August 2006 when Professor Roy Lowry of the University of Plymouth simultaneously launched 60,000 rockets at the British Firework Championships in Plymouth and successfully broke our record. It is my intention to attempt to reclaim Jersey's Record by firing 110,000 rockets on the beach below the Jersey Battle of Flowers Moonlight Parade arena on the night of Friday 10 August 2007.

To do this I need to seek the permission and support of a number of States Departments and individuals including Jersey Tourism who have control over the island's beaches for such events. I have already written to the Constables of St Helier and St Lawrence because at this moment in time we are not sure exactly where on St Aubins Bay the launch will take place and this by virtue of the state of the tide combined with the all important safety issues. I will be having meetings with both States and Honorary Police, Fire Service, Health and Safety and other interested parties in the not too distant future. From a tourism point of view it is important for me to point out that in this day and age green issues have become all important and the carbon footprint of this event is very much in our minds and I can confirm that the rockets themselves will be totally biodegradable and that we will be positioning tangle nets on the beach in an effort to capture all of the rocket sticks that we will be unable to gather up on the night itself. We will then be carrying out a number of searches of the beach during the following days to pick up any stragglers. It is my intention to leave the beach exactly as we found it and for your information in 1997 we were still picking up sticks no less than 6 weeks after the event.

I am at the stage whereby I need to seek your official permission and backing to carry out this spectacular event together with many others so that I can report back to the charity that everything is in order for us to proceed. At some stage in the future I would like to liaise with your department to see how the staging of this unusual event will most benefit your department for blatantly obvious reasons.

This World Record attempt is already gaining worldwide interest and will receive excellent coverage by both the local and national media and I hope that it will be of benefit to the charity concerned, the Jersey Battle of Flowers, Jersey Tourism and the Island as a whole.

I look forward to hearing from you in due course concerning this matter.

Kind regards and yours sincerely

Terry McDonald

APPENDIX 11

Response to Mr. McDonald from EDD Regulatory Services. 3 April 2007

Economic Development
REGULATORY SERVICES
Liberation Square
St Helier
JE1 1BB
Tel: +1534 448838
Fax: + 1534 448898

3RD April 2007

Mr Terry McDonald
'Maxville'
Mont-a-l'Abbé
St Helier
JE2 3HA

Dear Mr McDonald

110,000 Rockets ~ Friday 10th August 2007

Further to your letter and our telephone conversation last week I can confirm that this department has no objection to your endeavour to regain the World Record for the largest number of simultaneously launched fireworks.

This is obviously subject to other permissions and I understand that all other relevant bodies are already being consulted.

As regards the marketing side of this event, I have passed on a copy of your letter to [redacted]

Trust all goes well and that the weather will be kind.

Yours sincerely

[redacted]
Hospitality & Leisure Manager ~ Regulatory Services

APPENDIX 12

Response to Mr. A. Lewis from Senator P.F.C. Ozouf

> **********
>
>
>
>
>
> Dear Anthony,
>
> Further to our telephone conversation. The rockets sound like an
> exciting one and one which Economic Development could - potentially - get involved
with.
>
> [redacted] will kindly confirm that we have set up a meeting arrangements
> for me. As you have suggested, the meeting will include [redacted] an
[redacted] ([redacted]: can you please le[redacted] know anyone else from Jersey Tourism
side)>
>
> It would be helpful if you could let us have a note about the
> project for us to chew over ahead of the meeting. These are questions
> off the top of my head:
>
> * Project background - what is it and why do it
> * Outline of previous record (apologies but I don't know)
> * Project Team who is responsible, whose doing risk assessment also
whether any permissions are needed etc
> * How the event will actually work i.e. dove tail into the Evening
Parade - does it compliment a Fireworks Display or is the display
> * The extent of your discussions so far with Battle Association and
their support for it
> * Full estimate costs of project
> * Estimated revenue including basis on which you think you can sell
110k rockets!
> * Risks of projects - including particularly Carbon offset
> * Linkage to SidebySide - rationale
> * Your assessment of media interest outside the island
> * What you are looking for from ED
>
>
> If I can think of anything else I will let you know or either of
> the Mikes will add to this.
>
> Look forward to seeing you next week.
>
> Regards, Philip
>
>
>
>
>
> _____
> Senator Philip Ozouf
> Minister for Economic Development
> t. 01534 448824 | m. 07797 713838
>

-----Original Message-----
From: Philip Ozouf (Senator) [mailto:PFC.Ozouf@gov.je]
Sent: Tue 5/22/2007 4:26 PM
To: Anthony Lewis
Cc: [redacted]
Subject: Battle of Rockets

****

APPENDIX 13

Caveat Grant Provision EDD to Mr. A. Lewis and explanatory note from Mr. A. Lewis to Senator Ozouf. 8 June 2007

[redacted]

From: Anthony Lewis [ALewis@jerseyeveningpost.com]
Sent: 08 June 2007 15:00
To: [redacted]
Cc: [redacted]; terry.mcdonald@jerseymail.co.uk; [redacted]
Subject: RE: Battle of Rockets

****
This e-mail has been received directly from the Internet: you should exercise a degree of caution since there can be no guarantee that the source or content of the message is authentic.

If you receive inappropriate e-mail from an external source it is your responsibility to notify Computer Services Helpdesk (telephone 440440).

The Full States e-mail Usage Policy can be found here:
http://intranet1/aware/internet_email_issues.htm
****

[redacted],

Thanks, we'll come back to you as Terry and the Battle Association will need to discuss the caveat.

Best wishes,

Anthony

> ----------[redacted]
> From: [redacted]
> Sent: Friday, June 8, 2007 6:51 AM
> To: [redacted]
> Cc: [redacted] terry.mcdonald@jerseymail.co.uk; [redacted]
> Subject: RE: Battle of Rockets
>
> Dear Anthony
>
> We have considered the Battle of Rockets proposal and will be happy to provide a grant of £20,000 based on the projected outputs of the event detailed in your email of 3rd June - this should cover the majority of the cost of rockets and associated insurance. I would like to attach a caveat - namely that the world record attempt forms part of a larger pyrotechnic display linked to the finale of the Moonlight Parade. We believe that this is an absolute requirement to make the event capable of delivering additionality and for it to attract in kind marketing support through our various channels to market.
>
> Please contact [redacted] at Jersey Tourism to conclude arrangements.
>
> Best regards
>
> [redacted]
>
> Chief Executive Officer
> Economic Development Department
> States of Jersey
> Tel: + 44 (0)1534 448146
>
>
> -----Original Message-----
> From: Anthony Lewis [mailto:ALewis@jerseyeveningpost.com]
> Sent: 03 June 2007 21:39
> To: Anthony Lewis; Philip Ozouf (Senator)

1

> [redacted] terry.mcdonald@jerseymail.co.uk
> Subject: RE: Battle of Rockets
>
>
> **********
> *
> This e-mail has been received directly from the Internet: you should exercise a degree of caution since there can be no guarantee that the source or content of the message is authentic.
>
> If you receive inappropriate e-mail from an external source it is your
> responsibility to notify Computer Services Helpdesk (telephone
> 440440).
>
> The Full States e-mail Usage Policy can be found here:
> http://intranet1/aware/internet_email_issues.htm
> **********
>
> Dear Philip (and all),
>
> Please find attached a summary of the aims of the World Record
> attempt, as requested at the end of our meeting on Friday. On behalf of all the parties involved, may I just say thank you to you and your officers for sparing the time to see us and for taking the proposal so seriously.
>
> I honestly believe that this could not only raise money for a very
> good cause but could also help re-launch the Battle of Flowers and generate significant positive publicity for the Island.
>
> If you need any more information, please do not hesitate to get in
> touch,
>
> Yours sincerely,
>
>
> Anthony Lewis
>
>
> -----Original Message-----
> From: Anthony Lewis
> Sent: Fri 6/1/2007 10:18 AM
> To: Philip Ozouf (Senator)
> Cc: [redacted]
> Subject: RE: Battle of Rockets
>
>
> Dear Philip (and all),
>
> Sorry, it suddenly occurred to me that I had not responded to your request for some notes ahead of today's meeting. I'm on leave and have swicthed brain off - apologies.
>
> Terry McDonald has, in any event, compiled a comprehensive risk assessment which covers most of your points, and we can
> obviously fill in any gaps at today's meeting.
>
> From a Jersey Side by Side point of view, the project represents an exciting opportunity to do several things:
> a) - raise all the money we need for our partnership project with the Red Cross in Mera Bakot in Pakistan, where we aim to build a girls school in a town devastated by the 2005 earthquake. Our target is £80,000.
> b) - bring the entire Island together in a community fund raising effort
> c) - gain national and international exposure for Jersey's continuing
> efforts to help communities less fortunate than ours.
>
> The money will be raised by 'selling' rockets at > £1 each. This enables children to buy one or two, and companies to 'bulk buy'.
> Our intention would be to establish a website to sell them, and all
> the donors will have their details added to a register so that every single one of them is acknowledged as being part of Jersey's world record attempt. With the permission of the Battle of Flowers Association, we would 'top up' the online

2

donations by collecting in the arena and across the St Helier seafront on the night of the attempt (probably with the help of the uniformed youth organisations).
>
> Why do I think it will be a success from a fund raising point of
> view? This is an intangible, but is based on my experience of the Jersey public's willingness to get behind something original, exciting and ultimately well-intentioned. The opportunity to be a part of this project will give ownership to the community at the Island's foremost community event and I believe it is an opportunity they will readily grasp. Plus, of course, there will be more tourists in the Island than at any other time of the year and I believe that they will also happily reach into their pockets for the opportunity to witness something which could be the highlight of their holiday.
>
> In terms of media interest, I believe it will be widespread for the following reasons:
> * The previous record breaking effort received national and international coverage.
> * This attempt seeks not only to beat that effort but to obliterate it.
> * August is a quiet time for news - TV and press newsrooms are always looking for ideas to fill their airtime/pages at this time.
> * There is an international humanitarian aspect to it.
>
> Undoubtedly, much of my belief in this project is based on gut
> instinct. And while that cannot be described as 'evidence-based' it is based on my experience with fund raising, awareness projects and events such as the Picnic in the Park, Jersey Live, the screening of Live 8, the ice skating rink, the original Side by Side event on the beach in 2005.
>
> The project also represents, I believe, an important opportunity to
> help the Jersey Battle of Flowers Association rebuild its relationship with the public which was so damaged by last year's events. I know that the new committee is working hard to ensure that the Battle recovers and is stronger this year and their willingness to embrace Terry's idea is a sign that they are looking ahead very positvely.
>
> By underwriting the attempt, there is undoubtedly a risk for EDD, but
> I believe it is a risk that the public/taxpayer would be happy to see undertaken. It is a far cry from page 3 models and X Factor entrants. It is a community project which the entire Island can be a part of, it has an enormous 'feelgood' factor and it could create the kind of positive national and international publicity which money can't buy.
>
> Thanks, and see you this afternoon,
>
> Anthony
>
>

APPENDIX 14

Letter from EDD to Mr. McDonald – Financial advice and assistance dated 6 February 2008

Economic Development
Enterprise and Business Development
26/28 Bath Street,
St Helier, Jersey, JE2 4ST
Tel: +44 (0)1534 448140
Fax: +44 (0)1534 448170

Mr T. A. McDonald
Maxville
Mont a L'Abbe
St Helier
Jersey
JE2 3HA

6 February 2008

Dear Mr Mc Donald,

Fireworks – Assistance from the Economic Development Department

Thank you for coming to meet with me last week and explaining your situation. I have since been sent a copy of the letter dated 23rd February from [redacted], Assistance Director –Environmental Protection detailing the offer of support, at no cost to you, to dispose of the firework on, or before, the end of February 2008.

As we discussed at our meeting on the 30th January your creditor's unpaid invoices need to be resolved quickly. We need to act promptly if we are to prevent the lawyers, acting for Essex Pyrotechnics, continuing and issuing court proceedings. Once this happens costs will only escalate which will only add to the challenge ahead.

You indicated that Lloyds Bank Plc have previously offered their support to increase your loan facility and you agreed to contact them in an attempt to secure at new 5 year loan of £25,000. Once this facility is in place we will assist you in managing the payment of your outstanding creditors, some of which we may be able to encourage settling at a lower amount.

I will contact you early next week to discuss progress made with Lloyds Bank. In the meantime if you need any further help please do not hesitate to contact me.

Yours sincerely

[redacted]
Director of Business & Enterprise Development (Acting)

Direct Dial: +44 (0)1534 448141
E-mail: [redacted]
www.gov.je/economicdevelopment

APPENDIX 15

Licence to import explosives (Licence No. FWI 01/07) dated 13 July 2007

Mr Terry McDonald
Maxville
Mont a L'abbe
St Helier
JE2 3HA

13 July 2007

Licence No: FWI 01/07

EXPLOSIVES (JERSEY) LAW 1970 LICENCE TO IMPORT FIREWORKS

The Minister for Home Affairs, under Article 2 of the Explosives (Jersey) Law 1970, hereby licences

Terry Mc Donald

to import the following quantities of fireworks subject to the condition specified overleaf but free from the requirements imposed by Article 2(8) and 4(1) and from any condition prescribed under Article 4(A) and Article 6 of the Law as amended:-

5780kg Gross (1008 NEQ) Pyrotechnics

From Suppliers

Essex Pyrotechnics
6 Wicken Road
Newport
Saffron Walden
CB11 3QE

Expected date of arrival: 24th July

This licence expires on: 12th August

[redacted]
Station Manager
Risk Reduction

direct dial +44 (0) 1534 633521
email: [redacted]
www.gov.je

cc Harbourmaster
Chief Agent, Imports Department
[redacted]

* Conditions of issue of licence to Import Fireworks

1. These fireworks will be kept in an approved store located at

   Vinchelez Farm, St Ouen
   (stored in ISO container)

2. This licence is granted for one importation only.

3. Consignments of fireworks shall only be imported or re-shipped at St Helier Harbour.

4. Adequate and appropriate storage space must be available to house the consignment of fireworks, to the satisfaction of the Chief Officer of the States of Jersey Fire and Rescue Service.

5. The quantity of fireworks which may be conveyed by road in mechanical vehicles is limited to:-

Commercial vehicles	450 Kg
Private vehicle	45 Kg
Public Transport	Nil

6. **This department must be informed 24 hours in advance of any shipment over 450kg**

7. Where it is required to convey larger quantities than those set out above in one vehicle, then special arrangements must be made in consultation with the Chief Officer of the States of Jersey Fire and Rescue Service.

8. All due precautions must be taken by the licensee to prevent unauthorised persons having access to the fireworks and to prevent any act from being committed which is likely to cause a fire or explosion.

9. If any accident by fire or by explosion occurs in or about or in connection with any premises licensed for the importation of fireworks, then such accident must be reported to the Chief Officer of the States of Jersey Fire and Rescue Service.

10. This licence is not transferable.

11. A certificate of insurance in "an approved amount" covering both conveyance and storage must be produced. For the time being, "an approved amount" is regarded as £1,000,000.

12. A certificate or statement setting out the origin of the consignment must be produced. Where the origin is outside the United Kingdom, it will be necessary to produce evidence that the fireworks conform to the standards of the Explosive Officers of the United Kingdom Health and Safety Executive.

This Licence does not include ignitor cord, electric fuses, or any other explosives not mentioned. Contact must be made with Mr [redacted] the Explosives Licensing Officer for these items on telephone (01534) 744680 or Fax (01534) 498106.

APPENDIX 16

Licence to import explosives (Licence No. FWI 01/07 (Revised 3)) dated 8 October 2007 and licence to import explosives (Licence No. FWI 01/07 (Revised 4)) dated 24 January 2008

Mr Terry McDonald
Maxville
Mont a L'abbe
St Helier
JE2 3HA

8 October 2007

Licence No: FWI 01/07 (Revised 3)

EXPLOSIVES (JERSEY) LAW 1970 LICENCE TO IMPORT FIREWORKS

The Minister for Home Affairs, under Article 2 of the Explosives (Jersey) Law 1970, hereby licences

Terry Mc Donald

to import the following quantities of fireworks subject to the condition specified overleaf but free from the requirements imposed by Article 2(8) and 4(1) and from any condition prescribed under Article 4(A) and Article 6 of the Law as amended:-

5780kg Gross (1008 NEQ) Pyrotechnics

From Suppliers

Essex Pyrotechnics
6 Wicken Road
Newport
Saffron Walden
CB11 3QE

Storage location revised, this consignment of pyrotechnics will now be stored at Ronez Quarry, La Route de Nord, St. John.

Expected date of arrival: 24th July 2007

This licence expires on: 31st December 2007

[redacted]
Area Manager
Risk Reduction

direct dial +44 (0) 1534 633502
email: [redacted]
www.gov.je

cc Mr [redacted]

Mr Terry McDonald
Maxville
Mont a L'abbe
St Helier
JE2 3HA

24 January 2008

Licence No: FWI 01/07 (Revised 4)

EXPLOSIVES (JERSEY) LAW 1970 LICENCE TO IMPORT FIREWORKS

The Minister for Home Affairs, under Article 2 of the Explosives (Jersey) Law 1970, hereby licences

Terry Mc Donald

to import the following quantities of fireworks subject to the condition specified overleaf but free from the requirements imposed by Article 2(8) and 4(1) and from any condition prescribed under Article 4(A) and Article 6 of the Law as amended:-

5780kg Gross (1008 NEQ) Pyrotechnics

From Suppliers

Essex Pyrotechnics
6 Wicken Road
Newport
Saffron Walden
CB11 3QE

Storage location revised, this consignment of pyrotechnics will now be stored at Ronez Quarry, La Route de Nord, St. John.

Expected date of arrival: 24th July 2007

This licence expires on: 29th February 2008

[redacted]

Area Manager
Risk Reduction

direct dial +44 (0) 1534 633502
email [redacted]
www.gov.je

cc M[redacted]

* Conditions of issue of licence to Import Fireworks

1. These fireworks will be kept in an approved store located at

   Ronez Quarries La Route du Nord St. John.
   (stored in ISO containers)

2. This licence is granted for one importation only.

3. Consignments of fireworks shall only be imported or re-shipped at St Helier Harbour.

4. Adequate and appropriate storage space must be available to house the consignment of fireworks, to the satisfaction of the Chief Officer of the States of Jersey Fire and Rescue Service.

5. The quantity of fireworks which may be conveyed by road in mechanical vehicles is limited to:-

Commercial vehicles	450 Kg
Private vehicle	45 Kg
Public Transport	Nil

6. **This department must be informed 24 hours in advance of any shipment over 450kg**

7. Where it is required to convey larger quantities than those set out above in one vehicle, then special arrangements must be made in consultation with the Chief Officer of the States of Jersey Fire and Rescue Service.

8. All due precautions must be taken by the licensee to prevent unauthorised persons having access to the fireworks and to prevent any act from being committed which is likely to cause a fire or explosion.

9. If any accident by fire or by explosion occurs in or about or in connection with any premises licensed for the importation of fireworks, then such accident must be reported to the Chief Officer of the States of Jersey Fire and Rescue Service.

10. This licence is not transferable.

11. A certificate of insurance in "an approved amount" covering both conveyance and storage must be produced. For the time being, "an approved amount" is regarded as £1,000,000.

12. A certificate or statement setting out the origin of the consignment must be produced. Where the origin is outside the United Kingdom, it will be necessary to produce evidence that the fireworks conform to the standards of the Explosive Officers of the United Kingdom Health and Safety Executive.

This Licence does not include ignitor cord, electric fuses, or any other explosives not mentioned. Contact must be made with M[redacted]he Explosives Licensing Officer for these items on telephone (01534) 744680 or Fax (01534) 498106.

APPENDIX 17

SJFRS Tactical plan for temporary risk at Vinchelez Farm, St. Ouen, undated

States of Jersey

Tactical Plan for Temporary Risk at Vinchelez Farm St. Ouen

Assembly of Firework Display

Background

Vinchelez Farm in St. Ouen is to be temporarily used as the assembly area for the fireworks being launched after the Battle of Flowers night parade held on Friday August 10th.

There will be approximately 5000Kg of fireworks held on site, initially held in 2 transportation containers.

The fireworks, 1500 of them are being assembled into wooden trays by members of the public ready for the launch night, there could be up to 4 teams, each of which will be overseen by a competent person working for Terry McDonald who will be trading as "Elf and Safe T" Terry McDonald will also be providing 24hr security on site, this will include cameras (recording at all times) and senses, the security will be monitored from a caravan *(7 on site plan)*.

Contact Numbers:
Mobile 07797 711193
Landline:

Location

Vinchelez Farm, Perry's Guide ***Page 15 G1***, is located in St. Ouen.

Fireworks

Fireworks will initially be located in the transportation containers *(N° 8 on site plan)*, when assembly is in progress there will be up to 6000 fireworks located in assembly areas in the shed *(1500 fireworks per area - 3, 4, 5 & 6 on site plan)*. Once a launch tray has been completed it will be moved to the store room *(2 on site plan)*

In an Emergency

Any incident at the farm should be attended by two appliances. For access to the site take the 1st left after St. Ouen's Village and make your way along 'La Route de Trodez', then take a right onto 'La Rue Platte Raie', the closest hydrant is located at this junction, take the first right again and you will find yourself outside the southern entrance to the site. Alternatively you can take the second right along 'La Rue Platte Raie' and this will give you access to the North entrance.

Pleas refer to General Order 04-10 Fire fighting & Explosives, this General Order should be used as a guide, fireworks could be potentially more dangerous due to the fact that they are a projectile. The most hazardous time with the fireworks is going to be when they are in transportation to the launch site in St. Aubin's Bay, this is it is impossible to provide a completely controlled environment as will be at the farm.

Maximum number of persons on site at one time will be 15

Refrigerator coolant is contained in the numerous industrial cooling units.

Vinchelez Farm Key

1. Sterile area, no equipment or fireworks store in this area.
2. Old Refrigerated store used to hold completed trays.
3. Construction area for a single tray approximately 1500 fireworks could be located in this area.
4. Construction area for a single tray approximately 1500 fireworks could be located in this area.
5. Construction area for a single tray approximately 1500 fireworks could be located in this area. *Large machinery located near exit door.*
6. Construction area for a single tray approximately 1500 fireworks could be located in this area.
7. Security caravan, Terry McDonald should be on site & manning this 24hr a day.
8. Containers holding fireworks, could possibly be up to 3 containers held on site.
9. Old farm building, expected to be vacated before fireworks have arrived

APPENDIX 18

Letter from Chief Officer, Home Affairs Department to Mr. T. Archer, Essex Pyrotechnics Ltd., dated 6 February 2009

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

States of Jersey

HAD/12/2

6 February 2009

Dear Mr Archer

PYROTECHNICS IN THE POSSESSION OF MR. TERRY McDONALD

I am writing on behalf of the Minister for Home Affairs in Jersey in connection with the importation into Jersey in the summer of 2007 of approximately 5,000kgs of pyrotechnics. The Minister has political oversight and responsibility for emergency services, explosives licensing and, therefore, ultimately for general public safety.

I understand that you are currently claiming that you are the owner of the pyrotechnics, probably upon the basis that title to them will not pass to Mr McDonald until they have been paid for. If that is so then, as the owner of the pyrotechnics, you have very clear responsibilities in relation to public safety. Whilst I appreciate that the business aspects of the supply of these pyrotechnics to Mr McDonald remain unresolved, our only concern is for the safety of the Jersey public which, from the Island's perspective, now takes precedence. It will be quite clear that the pyrotechnics cannot stay in Jersey. Either they must be safely destroyed here or they must be shipped back to you in the UK.

The current situation is that Mr McDonald is looking after these pyrotechnics at a quarry in Jersey. He has been informed that they must be moved; however, there is no other location in Jersey where they can be stored safely. Furthermore, the pyrotechnics will eventually deteriorate and become increasingly dangerous the longer they are stored.

If either suggested course is agreed by both you and Mr McDonald, then it would have to be upon the basis that the legal position between yourself and Mr McDonald and, indeed, between Mr McDonald and any other party, would not be affected by this.

I must stress that the Department's interest in this matter relates entirely to public safety. Consequently, can I please ask that you come back to me immediately with your proposals as to how your pyrotechnics are to be disposed of or removed from Jersey.

Yours sincerely

[redacted]

Chief Officer

APPENDIX 19

Letter from the Minister for Home Affairs to H.M. Attorney General, dated 26 February 2009

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

HM Attorney General
[redacted]
Law Officers' Department
Morier House
St Helier
JE1 1DD

26 February 2009

Dear Attorney General

PYROTECHNICS LOCATED AT RONEZ QUARRY

I would be grateful for your urgent advice regarding the well-publicised consignment of pyrotechnics (which I shall refer to as rockets) which Terry McDonald has been `guarding' at Ronez Quarry for the past 18 months. I have attached a comprehensive background brief which explains why the rockets were brought to the Island, how they came to be at Ronez Quarry and what has happened in the meantime. I will not labour these points; however, they are likely to bear upon the advice that you provide.

I have had discussion with the Minister for Economic Development as, understandably, the management of Ronez Quarry have said that they want the rockets removed by the end of March. Strictly speaking, this is of course his problem to sort out with the UK supplier. So far, the supplier has declined to take them back and Mr McDonald has not been able to dispose of them to a third party. Whether we like it or not, therefore, it appears to me that this is becoming an Island problem which may need some sort of intervention to solve.

The optimum solution would be for the rockets to be sent back to the UK. Consequently, the Department has written to the supplier asking him formally how he intends to remove the rockets that we are led to believe he still owns. I am also enclosing a copy of that letter. We have yet to receive a reply. I have considered the possibility of moving them to another location; however, we do not have sufficient storage space in States leased magazines at Crabbé to accommodate the rockets. We would have to empty the smallest magazine but, even if the wholesaler and the local distributor, J J Le Sueur, agreed this would reduce the amount of explosives that could be imported to the Island in one consignment which would have financial implications. Firstly, we get charged for transporting 10,000kgs whether we import that quantity or not because of the container sizes, and secondly, we would have to import more frequently because of the reduced magazine space.

We are left, therefore, with the possibility of destruction. Having reviewed the provisions of the Explosives (Jersey) Law, 1970, I do not appear to have a power to seize the rockets; moreover, they appear to remain the property of the supplier. Such a power has already been written into the draft Explosives (Jersey) Law, 200- which is shortly to go out to consultation.

Physical destruction would be awkward but could be carried out by the EOD Officer in batches at the quarry.

The advice I require, therefore, is twofold. Firstly, in the absence of a specific power of seizure in the current law, would it be possible to obtain a court order to effect this for the purposes of destruction on grounds of public safety? Secondly, how would we stand regarding a civil claim were we to destroy the rockets which, we understand, belong to a contractor in the UK who has yet to be paid for them.

Given the timescale for their removal, I would appreciate your urgent attention to providing this advice so that I may decide how best to proceed.

Yours sincerely

B I Le Marquand
Minister

Enc

APPENDIX 20

Letter from Chief Officer, Home Affairs Department to Mr. M. Osborne, Ronez Quarries, dated 6 April 2009

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

Mr M Osborne
Managing Director
Ronez Quarries
La Route du Nord
St John
JE3 4AR

6 April 2009

Dear Mike

Further to our conversation yesterday, I write concerning the pyrotechnics which are currently stored at the quarry.

The Home Affairs Department acknowledges the part played by Ronez Limited in providing an alternative location for the pyrotechnics, at short notice, some 18 months ago. It is appreciated that the pyrotechnics cannot remain on your property indefinitely and we are aware that you are in direct discussion with the holder of the pyrotechnics as to their future disposal. The Department wishes to assist in the matter where appropriate; to that end, we are in the process of taking advice so that account can be taken of important considerations such as the ownership of the pyrotechnics, their location on private property, their current condition and whether there is a suitable alternative location in the Island. We would be grateful for your forbearance while the Department obtains this advice. In the meantime, it would clearly be helpful if the pyrotechnics could remain located safely at the quarry.

I have just been notified that the pyrotechnics have effectively been abandoned on site, and I have reported this to the necessary authorities in case it affects the advice that we are given.

Yours sincerely

[redacted]
Chief Officer

APPENDIX 21

Letters from Chief Officer, Home Affairs Department to Mr. McDonald and Mr. T. Archer, Essex Pyrotechnics Ltd., dated 16 April 2009

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

PRIVATE AND CONFIDENTIAL

Mr T McDonald
C/O Maxville
Mont a l'Abbe'
St. Helier
JE2 3HA

16 April 2009

Dear Mr McDonald

I refer to a quantity of 110,000 rockets weighing 5,780 kgs which were shipped to you in Jersey under Licence number FWI 01/07 issued in July 2007. As you are aware, the rockets have not been used as planned.

The States of Jersey does not accept responsibility for the situation which has arisen in relation to these rockets but is keen to work with yourself and Mr Archer to resolve the situation. It does so, however, on the clear understanding that it does not accept any legal liability for any loss or damage suffered by any person as a result of these rockets being shipped to and stored in the Island. In addition, the States of Jersey does not accept any liability for any storage costs incurred to date or any other costs owed to any party arising from the storage of these rockets on the Island.

I understand that you have not paid for the rockets and that both you and Mr Archer have proceeded on the basis that, in legal terms, title in the rockets has not passed to you. I have received a copy of a letter written by you to Mr Archer in which you purport to resign as Mr Archer's unpaid employee. It would appear that you are saying that you have been holding the rockets in Jersey as agent for Mr Archer and that you have now terminated that agency arrangement. It also appears that Mr Archer still owns the rockets.

I would be grateful if you could write to me confirming the following:

1. That Mr Archer is the legal owner of the rockets sent to you under Licence number FWI 01/07 issued in July 2007.

2. That you have held the rockets sent under Licence number FWI 01/07 as agent for Mr Archer.

It is the responsibility of the legal owner of the rockets, and yourself as his agent, to either arrange for them to be stored in safe and appropriate conditions or to ship them to another destination. However, in the circumstances, the States of Jersey is keen to ensure that these rockets are

removed from the Island in a safe and secure way at the earliest opportunity and is therefore prepared to enter into a suitable arrangement to enable this to take place.

I understand that Mr Archer is prepared to accept the rockets back into his possession if they are shipped to Poole by, or on behalf of, the States of Jersey. I understand that Mr Archer will then invoice you direct for any costs associated with taking the rockets back into his possession and for any costs owed to him as a result of entering into this arrangement with you.

I write to confirm that the States of Jersey will arrange to ship the rockets to Poole to be taken into Mr Archer's possession as the legal owner, or on his behalf, on a mutually convenient date in the next 2 weeks. It will be the responsibility of yourself and Mr Archer to sort out the details and to keep this department informed of your proposals, but I have also written to Mr Archer outlining what documentation he will need to obtain and forward to me in order to have the rockets shipped to the UK.

This offer is only open to you if the necessary arrangements are made so that the rockets are shipped off the Island in the next 2 weeks. This offer is only made if you agree to the following terms and conditions in writing:

1. That you will not seek any costs or expenses from the States of Jersey associated with the transportation of the rockets from Poole to their destination in England.

2. That you will not make any claim against the States of Jersey for any damage or loss suffered as a result of these rockets being shipped to and stored in the Island or during the transportation into the possession of Mr Archer as the legal owner, or on his behalf.

You might wish to take legal advice on this letter. **If you are happy with the terms of it please sign the attached copy.** In order to save time, I would be grateful if you could fax it to me and put the original in the post. My fax number and postal address are shown at the top of the letter.

Yours sincerely

[redacted]r
Chief Officer

Mr T McDonald

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

Mr T H R Archer
Managing Director
Essex Pyrotechnics Ltd
6 Wicken Road
Newport
SAFFRON WALDEN
Essex
CB11 3QG

16 April 2009

Dear Mr Archer

I refer to a quantity of 110,000 rockets weighing 5,780 kgs which were shipped to Mr McDonald in Jersey under Licence number FWI 01/07 issued in July 2007. As you are aware, the rockets have not been used as planned.

The States of Jersey does not accept responsibility for the situation which has arisen in relation to these rockets but is keen to work with yourself and Mr McDonald to resolve the situation. It does so, however, on the clear understanding that it does not accept any legal liability for any loss or damage suffered by any person as a result of these rockets being shipped to and stored in the Island. In addition, the States of Jersey does not accept any liability for any storage costs incurred to date or any other costs owed to any party arising from the storage of these rockets on the Island.

I understand that Mr McDonald has not paid for the rockets and that both you and Mr McDonald have proceeded on the basis that, in legal terms, title in the rockets has not passed to Mr McDonald. I have received a copy of a letter written by Mr McDonald to you in which he purports to resign as your unpaid employee. It would appear that he is saying that he has been holding the rockets in Jersey as agent for you and that he has now terminated that agency arrangement. It would also appear that you still own the rockets.

I understand that the rockets have been insured by you while they are in Jersey and I would be grateful, therefore, if you could write to me confirming that you will continue to insure them until further notice. I would also be grateful if you could confirm that you are the legal owner of the rockets sent to Mr McDonald under Licence number FWI 01/07 issued in July 2007.

It is your responsibility as the legal owner of the rockets, and Mr McDonald as your agent, to either arrange for them to be stored in safe and appropriate conditions or to ship them to another destination. However, in the circumstances, the States of Jersey is keen to ensure that these rockets are removed from the Island in a safe and secure way at the earliest opportunity and is therefore prepared to enter into a suitable arrangement to enable this to take place.

I understand that you are prepared to accept the rockets back into your possession if they are shipped to Poole by or on behalf of the States of Jersey. I understand that you will then invoice Mr McDonald direct for any costs associated with taking the rockets back into your possession and for any costs owed to you as a result of entering into this arrangement with Mr McDonald.

I write to confirm that the States of Jersey will arrange to ship the rockets to Poole to be taken into your possession as the legal owner, or on your behalf, on a mutually convenient date in the next 2 weeks.

It will be the responsibility of yourself and McDonald to sort out the details and to keep this department informed of your proposals. Consequently, to facilitate the export of your rockets from Jersey, I will need a written application from you together with a copy of a Competent Authority Document (CAD) issued by the HSE Inspector of Explosives and a schedule detailing the names, part numbers, packaging mark and classification information. We have been advised that the rockets should be in their original classified packaging with the marking details consistent with that recorded on the CAD. We are also advised that it is possible that the rockets may have been subject to the re-classification exercise which was undertaken in 2007 in that they may now have a higher hazard classification than that originally assigned by the HSE. I will need your assurance that that is not the case before the rockets can be exported to the UK.

This offer is only open to you if the necessary arrangements are made so that the rockets are shipped off the Island in the next 2 weeks. This offer is only made if you agree to the following terms and conditions in writing:

1. That you will not seek any costs or expenses from the States of Jersey associated with the transportation of the rockets from Poole to their destination in England.

2. That you will not make any claim against the States of Jersey for any damage or loss suffered as a result of these rockets being shipped to and stored in the Island or during the transportation into the possession of yourself as the legal owner, or on your behalf.

You might wish to take legal advice on this letter. **If you are happy with the terms of it, please sign the attached copy.** In order to save time, I would be grateful if you could fax it to me and put the original in the post. My fax number and postal address are shown at the top of the letter.

Yours sincerely

[redacted]

Chief Officer

Mr T H R Archer

APPENDIX 22

Fax from Mr. T. Archer, Essex Pyrotechnics Ltd., to Chief Officer, Home Affairs Department, dated 22 April 2009

22 Apr 09 11:22 Tom Archer + 44 (0)1799 541415 p.

FAX memo from:

22 April 2009

Essex Pyrotechnics Ltd

Voice: 01799 541414
FAX: 01799 541415

THRA321@AOL.COM

6 Wicken Rd
Newport
Saffron Walden
Essex
U.K.
CB11 3QG

To: [redacted]
From: Tom Archer
No. of pages: 1

Re. your letter 16/4/09 - Ref HAD/DPT/12/2

As you know, the issue of Terry McDonald and the rockets is a long-running saga; one which we are keen to resolve.

Mr McDonald was responsible for conveying the rockets to The States of Jersey, and is therefore responsible for all matters relating to compliance with Jersey law until such time as the rockets are either consumed or repatriated.

We have an insurable interest in the rockets, by virtue of having not been paid for them.

We have repeatedly offered to accept the return of the rockets, provided Mr McDonald gave us a legally enforceable document that would guarantee us eventual payment. He has agreed verbally to do this, but has failed to communicate with our solicitors to complete the process.

We recently had reason to believe that Mr McDonald may have been intent upon abandoning his responsibilities under Jersey law.

We indicated that if that was indeed the case, and The States of Jersey was therefore compelled to seize the rockets and consign them for destruction; we would cooperate by collecting them from Poole Harbour, and invoicing the cost of disposal to Mr McDonald.

From your letter it is not clear that such a scenario has indeed arisen. It might be difficult for us to recoup the cost of destruction, if The States of Jersey were merely acting as Mr McDonald's agent.

I would therefore be grateful if you would clarify that point.

Yours,

T.H.R. Archer

APPENDIX 23

Letters from Chief Officer, Home Affairs Department to Mr. T. Archer, Essex Pyrotechnics Ltd., dated 24 April 2009, 1 May 2009, 8 May 2009 and 20 May 2009

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

24 April 2009

Dear Mr Archer

Thank you for your letter of the 22 April 2009 received by fax.

You asked me to clarify the circumstances that have arisen. The States of Jersey has not seized the rockets nor taken a decision to destroy them. Mr McDonald has abandoned them; however, as it would appear that you still own the rockets, the purpose of our letter was to enquire whether we could enter into a suitable arrangement to have the rockers returned to you. I must stress that we are not acting as Mr McDonald's agent. Our purpose is to ensure that these rockets are removed from the Island in a safe and secure way at the earliest opportunity.

I note that Mr McDonald has yet to communicate with your solicitors to complete the process over eventual payment. Can I suggest that it might facilitate matters if your solicitors were to send an appropriate document to Mr McDonald for him to sign.

I trust that I have been able to clarify the point you raised and that you are able to sign and return by fax the copy of my previous letter which I enclosed.

Yours sincerely

[redacted]

Chief Officer

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

Mr T H R Archer
Managing Director
Essex Pyrotechnics Ltd
6 Wicken Road
Newport
SAFFRON WALDEN
Essex
CB11 3QG

1 May 2009

Dear Mr Archer

Further to my letter of the 16 April 2009 and your subsequent reply, it may be beneficial for our respective legal advisers to be in direct contact with each other. This may help to expedite matters.

If you agree with this suggestion, I would be grateful if you could send the name and contact details of your legal adviser either by fax or email.

Yours sincerely

[redacted]
Chief Officer

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

Mr T H R Archer
Managing Director
Essex Pyrotechnics Ltd
6 Wicken Road
Newport
SAFFRON WALDEN
Essex
CB11 3QG

8 May 2009

Dear Mr Archer

I would be grateful if you would respond to my letter of the 1 May 2009, sent by fax, so that we can progress the return of the rockets.

Our suggestion was that we put our respective legal advisers in touch with each other. If you would prefer not to do this, please let me know and we will endeavour to answer the questions raised in your letter more directly.

Yours sincerely

[redacted]
Chief Officer

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

Mr T H R Archer
Managing Director
Essex Pyrotechnics Ltd
6 Wicken Road
Newport
SAFFRON WALDEN
Essex
CB11 3QG

20 May 2009

Dear Mr Archer

Further to my letter of the 8 May 2009, sent by fax, please find enclosed a letter from our Law Officer's Department which you may wish to pass on to your lawyers.

This letter should help to clarify the legal position and we feel that there would be benefit in our respective legal advisers being in direct contact with each other. I trust that this will help to expedite matters towards a satisfactory resolution, and that arrangements can be put in place to have the rockets returned to you.

Yours sincerely

[redacted]
Chief Officer

Enc

APPENDIX 24

Letter from Chief Officer, Home Affairs Department to Mr. T. Archer, Essex Pyrotechnics Ltd., dated 31 July 2009

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

Mr T H R Archer
Essex Pyrotechnics Ltd
6 Wicken Road
Newport
SAFFRON WALDEN
CB11 3QG

31 July 2009

Without Prejudice

Dear Mr Archer

Re Pyrotechnics

I refer to my letters to you of 16 and 24 April and the 18 May 2009.

I also refer to our telephone conversation of the 9 June 2009 when you informed me that the pyrotechnics are no longer of any commercial use to you and that if they were returned to you, your intention is to destroy them. You have previously stated (in your faxed letter of the 22 April 2009) that you have an insurable interest in the pyrotechnics as a result of not having been paid for them.

I have received a copy of a letter written to you by the Managing Director of Ronez Quarry, asking that you take urgent steps to remove the pyrotechnics from their land. Mr McDonald, who imported the pyrotechnics onto Jersey, has apparently abandoned the pyrotechnics and waived any legal title he may have had over them. The issue of the exact nature of the legal relationship between yourself and Mr McDonald may eventually fall to be decided by a Court but that is not a matter for the States. No action by the States should be taken as amounting to any acceptance of liability for any loss or damage suffered by anyone in connection with the importation of and storage of the pyrotechnics on the island. However, the States is concerned to bring this matter to a satisfactory conclusion as far as public safety is concerned and it appears that, in light of the letter from Ronez, action must be taken with regard to the pyrotechnics in the very near future.

It appears that the only 2 options available are to destroy the pyrotechnics on Jersey or to arrange for them to be shipped to you. To export the pyrotechnics from Jersey into your possession would involve you in expense in making the necessary arrangements from your end.

If asked by Ronez to remove the pyrotechnics from their land, the States will do so within 2 weeks of that request. The States will arrange for the pyrotechnics to be safely destroyed at the earliest possible opportunity. In the circumstances the States will not charge you for the destruction costs providing no claim is made by you against the States for any reason connected with the pyrotechnics in any way. However, the States reserves all its rights in connection with any litigation which might arise from this matter.

Please acknowledge safe receipt of this letter.

Yours sincerely

[redacted]
Chief Officer

APPENDIX 25

Letter from Chief Officer, Home Affairs Department to Mr. M. Osborne, Ronez Quarries, dated 22 September 2009

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

Mr M Osborne
Managing Director
Ronez Quarries
La Route du Nord
St John
JE3 4AR

22 September 2009

Dear Mike

Thank for your letter of 11 September 2009 confirming that you had had no response to your letter of 29 July to Mr Archer of Essex Pyrotechnics Ltd.

In view of the lack of contact from Mr Archer, the Minister has decided to take further advise prior to taking any conclusive action. I do not think that this will involve a long delay, but I will endeavour to keep you advised as to progress.

Yours sincerely

[redacted]
Chief Officer

APPENDIX 26

Letter from Chief Officer, Home Affairs Department to Mr. T. Archer, Essex Pyrotechnics Ltd., dated 20 January 2010

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

PRIVATE AND CONFIDENTIAL
Mr T H R Archer
Managing Director
Essex Pyrotechnics Ltd
6 Wicken Road
Newport
SAFFRON WALDEN
Essex
CB11 3QG

20 January 2010

Dear Mr Archer

Re Pyrotechnics

I refer to my letters to you of 16 and 24 April, 18 May and the 31 July 2009.

I also refer to our telephone conversation of the 9 June 2009 when you informed me that the pyrotechnics are no longer of any commercial use to you and that if they were returned to you, your intention is to destroy them.

I write to give you notice that, because you have not contacted me to inform me of your intention to remove the rockets from the Island or dispose of them safely, I will make arrangements to begin to destroy the rockets on the 19 February 2010. If you do not want this to happen then you must write to me by the 12 February setting out your plans to remove the rockets or destroy them safely yourself within an acceptable timescale.

The Home Affairs Department is prepared to destroy the rockets at its own expense.

For the sake of clarity I reiterate that the States of Jersey does not accept any liability for any loss to you or any other person as a result of the rockets having been brought onto the Island.

I reserve the right to bring this letter to the attention of the Court in the event that you or any other person seeks to make a claim against the States as a result of the destruction of the rockets.

I would advise you to take legal advice on the implications of this letter.

Please acknowledge receipt of this letter.

Yours sincerely

[redacted]

Chief Officer

Cc: Mr T McDonald

APPENDIX 27

Letter from Chief Officer, Home Affairs Department to Mr. McDonald, dated 20 January 2010

Home Affairs Department
11 Royal Square
St Helier
JE2 4WA
Tel: 01534 445507
Fax: 01534 447933

HAD/DPT/12/2

PRIVATE AND CONFIDENTIAL
Mr T McDonald
C/O Maxville
Mont a l'Abbe'
St. Helier
JE2 3HA

20 January 2010

Dear Mr McDonald

Re Pyrotechnics

I refer to my letters to you of 16 and 24 April, 18 May and the 31 July 2009.

I also refer to your letter to me of the 29 April 2009 when you stated that "the rockets are still owned by Mr Archer..."

I write to give you notice that, because you have not contacted me to inform me of your intention to remove the rockets from the Island or dispose of them safely, I will make arrangements to begin to destroy the rockets on the 19 February 2010. If you do not want this to happen then you must write to me by the 12 February setting out your plans to remove the rockets or destroy them safely yourself within an acceptable timescale.

The Home Affairs Department is prepared to destroy the rockets at its own expense.

For the sake of clarity I reiterate that the States of Jersey does not accept any liability for any loss to you or any other person as a result of the rockets having been brought onto the Island.

I reserve the right to bring this letter to the attention of the Court in the event that you or any other person seeks to make a claim against the States as a result of the destruction of the rockets.

I would advise you to take legal advice on the implications of this letter.

Please acknowledge receipt of this letter.

Yours sincerely

[redacted]
Chief Officer

Cc: Tom Archer, EPL

APPENDIX 28

Letter from Mr. McDonald to Chief Officer, Home Affairs Department, dated 09 February 2010

RECEIVED

10 FEB 2010

Telephone: 01534 721343
Mobile: 07797 711193
Fax: 01534 285096
e-mail: terry.mcdonald@jerseymail.co.uk

'MAXVILLE',
Mont-a-l'Abbe,
St. Helier,
Jersey Channel Islands,
JE2 3HA.

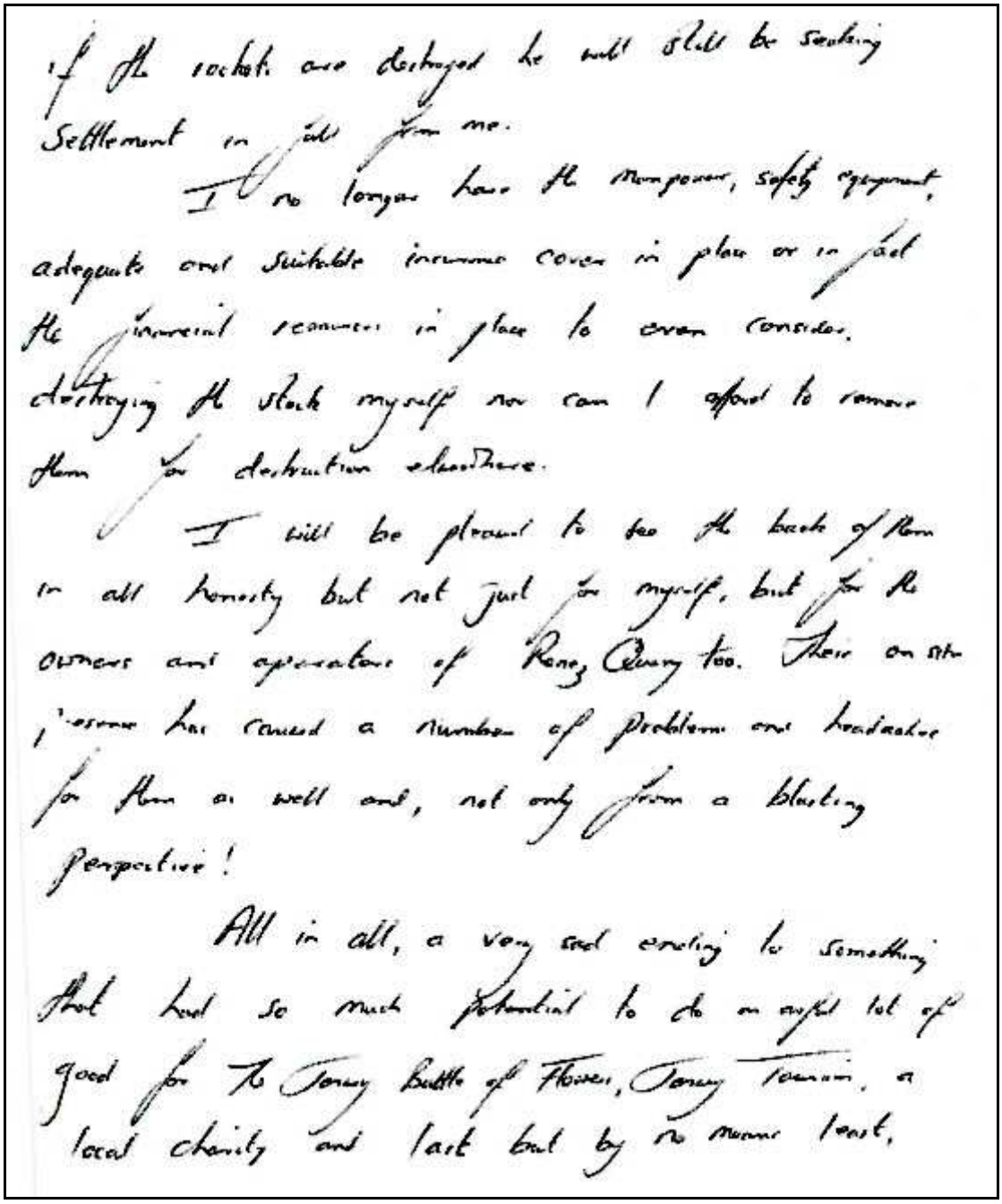
Tuesday 9th February 2010

Dear [redacted]

Many thanks for your letter of 20th January 2010 (your Ref's: HAD/DRT/12/2) concerning the fact that the rockets at Ronez will start to be destroyed on 19th February 2010.

I am more than happy for this to happen because they have almost ruined my life for almost three years and might well do so in the not too distant future! I still feel the need to reiterate the fact that I have never paid for the shells we let the Jersey charity, Side by Side. They still belong to Mr Tom Archer and he still has full title to them.

I know that he is fully conversant with all of the facts concerning this matter and he has stated in an email to me, dated 02/02/10 that,

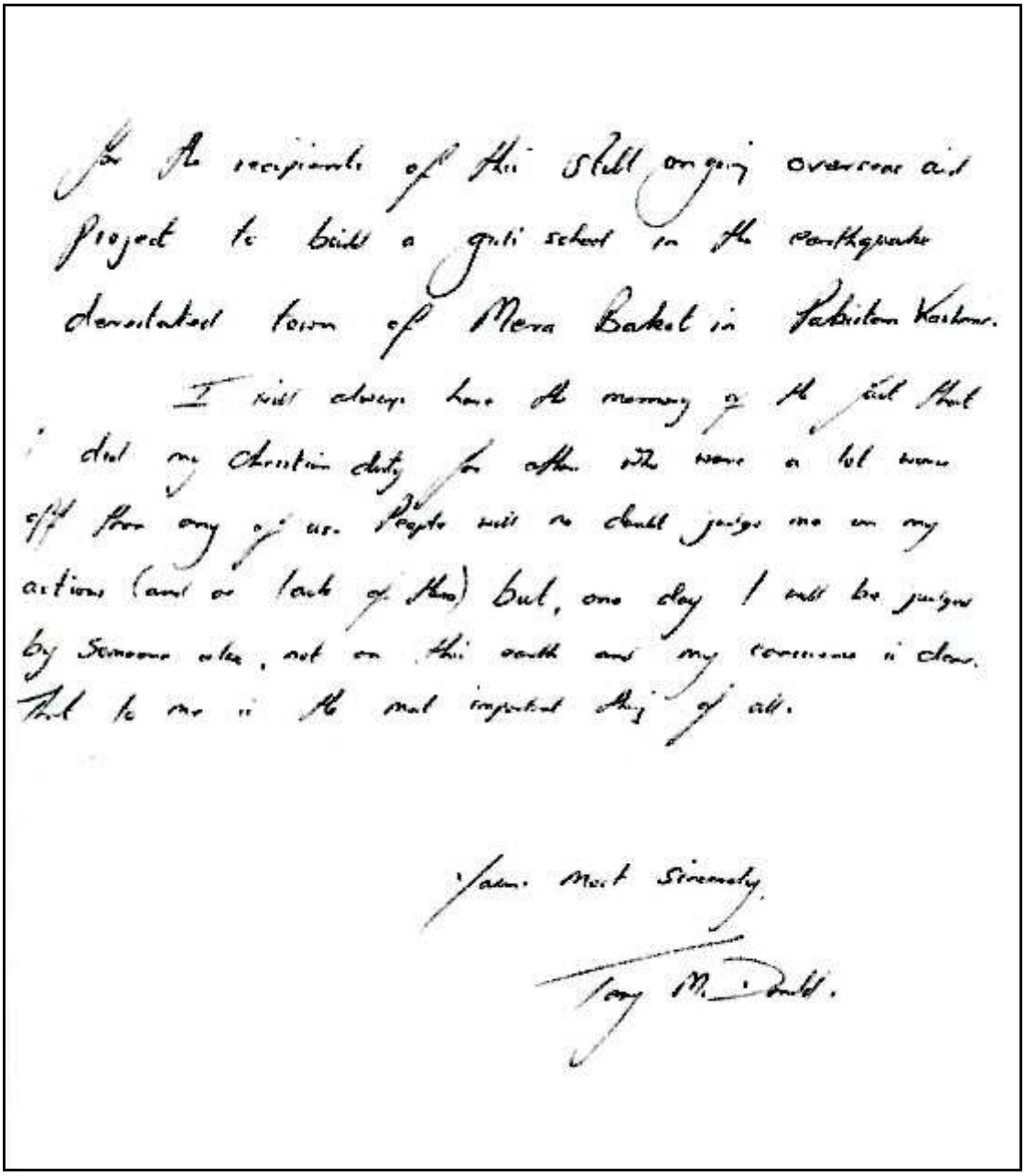


If the rockets are destroyed he will still be seeking Settlement in full from me.

I no longer have the manpower, safety equipment, adequate and suitable insurance cover in place or in fact the financial resources in place to even consider destroying the stock myself nor can I afford to remove them for destruction elsewhere.

I will be pleased to see the back of them in all honesty but not just for myself, but for the owners and operators of Ronez Quarry too. Their on site presence has caused a number of problems and headaches for them as well and, not only from a blasting perspective!

All in all, a very sad ending to something that had so much potential to do an awful lot of good for the Jersey Battle of Flowers, Jersey Tourism, a local charity and last but by no means least,



for the recipients of this still ongoing overseas aid project to build a girls school in the earthquake devastated town of Mera Bakol in Pakistan Kashmir.

I will always have the memory of the fact that I did my Christian duty to others who were a lot worse off than any of us. People will no doubt judge me on my actions (and or lack of them) but, one day I will be judged by someone else, not on this earth and my conscience is clear. That to me is the most important thing of all.

Yours Most Sincerely,

Tony McDonald.

APPENDIX 29

Ministerial Decision MD-HA-2010-0024

Decision Summary

Home Affairs Department

Ministerial Decision

States of Jersey

Decision Reference: MD-HA-2010-0024			
Decision Summary Title *(File Name)*:	Disposal of pyrotechnics	**Date of Decision Summary:**	24 March 2010
Decision Summary Author:	Executive Officer Home Affairs	**Decision Summary: Public or Exempt?** *(State clauses from Code of Practice booklet)*	Public
Type of Report: Oral or Written?	Written	**Person Giving Oral Report:**	N/A
Written Report Title *(File Name)*:	Disposal of pyrotechnics	**Date of Written Report:**	26 February 2010
Written Report Author:	Chief Officer Home Affairs	**Written Report : Public or Exempt?** *(State clauses from Code of Practice booklet)*	Exempt 3.2.1. (a)(x)
Subject: Disposal of 125,000 pyrotechnics plus fusing by means of controlled burning.			
Decision(s): The Minister approved the disposal of 125,000 pyrotechnics by means of controlled burning in situ at Ronez Quarry.			
Reason(s) for Decision: The pyrotechnics were imported for the purpose of a world record attempt in 2007. The attempt did not proceed, and the pyrotechnics have been stored in Ronez Quarry since that time. The importer has abandoned the pyrotechnics and the UK owner of the pyrotechnics has advised the Department that the pyrotechnics are of no commercial use to him and that he would destroy them if they were returned to him. It is appropriate for the pyrotechnics to be destroyed as they constitute a risk to the public. The Explosives Ordnance Disposal (EOD) Officer, who is contracted by the Department, has the necessary skills to dispose of the pyrotechnics in a safe and environmentally-friendly manner.			
Resource Implications: The cost estimate for the destruction of the pyrotechnics is £3,300, which the Department has agreed to meet because of the potential risk to the public. It being understood that the States of Jersey accepts no liability for loss to either the importer or the owner of the pyrotechnics as a result of them having been brought to the Island.			
Action required: The Chief Officer to instruct the EOD Officer to dispose of the pyrotechnics in batches by means of controlled burning.			
Signature:		**Position:** Minister for Home Affairs	
Date Signed:		**Date of Decision** *(If different from Date Signed)*:	