DECISION

RIBBLE VALLEY BOROUGH COUNCIL
REPORT TO COMMUNITY SERVICES COMMITTEE

Agenda Item No.

meeting date: 21 MAY 2013
title: EVENTS IN THE CASTLE GROUNDS
submitted by: JOHN HEAP, DIRECTOR OF COMMUNITY SERVICES
principal author: CHRIS HUGHES, HEAD OF CULTURAL & LEISURE SERVICES

1 PURPOSE OF THE REPORT

1.1 To bring members up-to-date with determining the occupancy levels for events taking place in the Castle Grounds, and any specific issues relating to this year's proposed Bonfire.

1.2 Relevance to the Council's ambitions and priorities:

- **Council Ambitions**
  - to make people's lives safer and healthier
  - to ensure services are accessible to all

2 BACKGROUND

2.1 In March 2013, officers presented a report on proposals to determine maximum occupancy levels for events taking place in the castle grounds, relating specifically to the bandstand and castle field.

2.2 Whilst there was no issue with a proposal of 2,000 for events on the Bandstand, members were made aware that a proposal of 5,000 for castle field had been challenged by the Clitheroe Bonfire Committee, who felt it should be much greater, and that an independent assessment be sought.

2.3 Members concluded that the only way to resolve the difference in opinion was to commission an independent assessment, and asked officers to identify a suitably qualified and impartial organisation to undertake the work.

3 CURRENT SITUATION

3.1 After a good deal of research, officers identified Capita Symonds as a suitable organisation, as they had significant experience in event management, and had no connection to any of the parties concerned with the bonfire.

3.2 Capita Symonds has produced a comprehensive report (please see appendix) which concluded that the maximum capacity for the castle field (using the bonfire as an example) should be 6,582 people, based on the production of a robust event safety plan.

4. ISSUES

4.1 The independent assessment of the maximum crowd capacity of the Castle grounds as prepared by Capita Symonds was presented to a meeting of the Ribble Valley Safety Advisory Group. Representatives of Lancashire Fire & Rescue Service, who have enforcement responsibilities under the Regulatory Reform (Fire Safety) Order 2005 for the maximum safe crowd size at events, accepted the independent report and agreed that events on the castle ground could achieve the stated maximum capacities provided that the safety measures and conditions stipulated in the report were complied with.

4.2 The meeting was also attended by representatives of the Clitheroe Bonfire Committee. The representatives of the Bonfire Committee expressed their disappointment that the maximum capacity of the ground was not higher that the stated 6,582 people.

4.3 After further consideration of the matter, the Bonfire Committee subsequently proposed an outline for a 2013 event to be held on the Castle grounds. A key feature of the proposal was that access onto the Castle grounds will be by ticket only, which are to be purchased in advance of the event. The numbers of tickets to be printed will be limited so that the crowd size cannot exceed 5,000 which is below the maximum figure as given by the independent report.

4.4 The Bonfire Committee are currently preparing their Event Safety Management Plan, which will be proportionate to the risk presented by this event. Officers of the Council are assisting the event organisers with this process. Once completed the event plan will be presented for consideration to the Ribble Valley Safety Advisory Group

5 RISK ASSESSMENT

The approval of this report may have the following implications:

- **Resources** – there are no direct resource issues, although the setting of occupancy limits will slightly reduce the level of staff resources involved, compared with if each event capacity were to be individually negotiated.

- **Technical / Legal** – criminal and civil law will apply, in varying circumstances, to landowners, operators and organisers of events in the form of the Health & Safety at Work Act 1974, the Occupiers Liability Act 1957, and the Regulatory Reform Order 2005 (Fire Safety). In simplistic terms, the Council – acting through this Committee – has a duty of care not to permit its land to be used for public events that it is not convinced are safe.

- **Political** – the Council should, as landowner and custodian of the site, ensure that it is taking a responsible attitude towards people attending events/activities taking place on its premises, whether they are organised by the Council or a third party, whilst making every effort to facilitate the use of the site by the community for public events.

- **Reputation** – As landowner, the Council must ensure that the safe use of all premises takes precedence over all other issues. We must, however, show clear evidence as to how we have arrived at maximum occupancy levels, and an independent assessment by a suitably experienced/qualified company does just that.

6 RECOMMENDED THAT COMMITTEE

6.1 Notes the contents of the report;

6.2 Agrees the following maximum occupancy levels:

- Bandstand – 2,000
- Castle Field – 6,582

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CHRIS HUGHES
HEAD OF CULTURAL & LEISURE SERVICES

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Community Services 21.5.13 / Events in the Castle Grounds / Chris Hughes / IW

CAPITA SYMONDS

INDEPENDANT REPORT AND OPINION

Clitheroe Castle Bonfire Safe Capacities

17th March 2013

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EXPERT REPORT AND OPINION
BY Chris Woodford - FdA (Crowd & Safety Management), TECH IOSH, Dip NEBOSH, Dip Crim, Dip Event Safety Management

1.0 QUALIFICATIONS AND PERSONAL EXPERIENCE

1.1 I am an Events Health & Safety Consultant for Capita Symonds, and have worked in the field of leisure safety for over twenty years. I am a respected authority in leisure and event safety. My expertise includes risk management, Crowd and Safety Management, risk assessments, site appraisals and site design.

1.2 I specialise in Crowd and Safety Management and in 2006 I was elected as Secretary and Vice Chairman of the United Kingdom Crowd Management Association (UKCMA), a position I still hold. I currently deputise for the Chairman of the UKCMA as a member of the Events Industry Group (EIG), for the Event Safety Guide and am currently assisting in the editing of the new HSE Guide on Event Safety.

1.3 I was previously a Self Employed Events & Safety Manager.

1.4 I currently lecture at the University of Central London on an accredited diploma course for Events Management, covering the subjects of Event Risk Management, Safety Planning and Crisis Management.

1.7 I hold the following qualifications:

Foundation Degree Arts (Crowd & Safety Management)
Diploma in Event Safety Management
Diploma in Criminology
Diploma in Health and Safety at Work (NEBOSH)

1.8 I currently undertake over 50 major events each year and my recent experience includes, but is not limited to:

- DRUPA 2012 - Dusseldorf - Event Safety Coordinator for the world's largest print exhibition. Responsible for all contractors and suppliers safety documentation, client safety assessments, work permits and overall safety coordination for the construction of the event. Liaison with the Messe Dusseldorf on all emergency planning and safety matters.

- Cocoon in the Park 2012 & 2013 – Leeds - Event Safety Coordinator for this 1 day techno dance event with a 10,000 capacity. Responsible for all supplier safety documentation and on site safety coordination for the construction and implementation of the event. Close liaison with the City Council on all safety and emergency planning matters

- TT Mayhem 2012 & 2013 – Isle of Man - Event Safety Coordinator for the 5 day stunt show held on Douglas promenade during the annual TT bike race. Responsible for all safety matters surrounding suppliers, construction, show layout and stunt preparation. Responsible for all Traffic Orders and road closures.

- Nike Olympic Athlete Hospitality 2012 – London –Event safety coordinator for Nike. Working hand in hand with the German production company and the grade 1 listed venue, was responsible for all safety, traffic and safety elements, scheduling operations for the 3 week construction, 4 weeks show time, and de-rig elements.

- Nike World Basketball Festival 2012 – Brixton – Event safety coordinator for this 1 day event. Worked closely and was responsible for all police, security and local authority liaison, safety aspects of the build, show and de-rig.

- EDF Energy – Mood of The Nation 2012 –Safety Officer for this interactive light show, utilising the EDF London Eye to display messages from the public, translated as light messages.

- London Olympics 2012 – Appointed as lead field of play safety officer for the Triathlon events, Cycling Road race, Cycling time trials, Men's and Women's marathon, and the Paralympic Marathon Over an 8 month period was responsible for elements of the course layout, safety and operational management on the event days involved.

- Brownstock Festival 2012 & 2013 – Safety Officer for this 3 day, 6,000 capacity festival event held in Essex.

- Greatest Team Ever Parade –Lead Safety Officer overseeing the safety planning over a 4 month period, culminating in the largest parade ever undertaken in the UK.

- Luton Carnival 2013 – Safety Officer for the event, overseeing safety planning and specifically Crowd Management and procession management.

2.0 INTRODUCTION

2.1 I have been appointed by Mr Chris Hughes of Ribble Valley Borough Council

2.2 I have been instructed to prepare an independent report to determine what I believe to be the safe occupancy capacity relating to the annual Clitheroe Castle Bonfire event.

2.3 I have no firsthand knowledge of the Bonfire Event, nor of any incidents or occurrences that have or may not have occurred in the past.

2.4 I have viewed and read the following documents:

- RD Assessment of Capacity 2012
- RVBC (CS) Assessment of Capacity 2012
- Bonfire Risk Assessment 2011

2.5 I visited the site of the event on Saturday 16th March 2013, in the company of Mr Terry Longden. All measurements were made by myself utilising an approved and calibrated laser measuring device.

2.6 There are many guides, opinions and best practise methods available in the public domain in order to calculate the safe capacity of an event; however none of them encompass the full spectrum of issues that I believe (and do take into account), should be taken into account, when determining the safe capacity at any outdoor event.

3.0 DEFINITIONS USED / METHODOLOGY

- **Occupant Capacity** – The occupant capacity of any outdoor event is not, as widely referenced, just the total number of persons who can safely be present at that event, but is the total number of persons who can safely be present at that event having taken into account many factors of safety planning, including (but not limited to):
    - ✓ Occupant Density
    - ✓ Available Exit Capacity
    - ✓ Exit route accessibility
    - ✓ Access and Egress routes maintenance
    - ✓ Pedestrian and Traffic management plans
    - ✓ Crowd Management plans
    - ✓ Topography
    - ✓ Contingency Planning
    - ✓ Evacuation Planning
    - ✓ Audience profiling
    - ✓ Possible Entertainment profiling
    - ✓ Lighting
    - ✓ Weather
    - ✓ Ground Conditions

- **Occupant Density** – The occupant density is the number of people who can safely physically fit into the space available. To obtain this occupant density figure, the following process is followed:
    - ✓ Measure the potential available viewing space
    - ✓ Measure all structures, catering / retail outlets, marquees, (sight line obstructions if relevant), etc
    - ✓ Deduct the second figure from the first figure to give a definitive total available space
    - ✓ Divide this total by the relevant occupancy load factor

  For the purposes of this report, I have prepared a plan of the area (Appendix 1), and have labelled the available space.

- **Occupancy Load Factor** – The occupancy load factor is a figure that changes dependant on the type of activities being held, the audience type, and the location of the event. Many guides will quote a wide range of parameters, varying from 1 person

per sqm, to 1 person per 0.5sqm. A small modicum of personal interpretation has to be undertaken in outdoor event load factors, as the type of audience expected can significantly alter the perception as to whether the load factor is safe and comfortable for the intended audience. Given that the audience profile for this event is predominantly mixed sex family groups, in daylight with good weather and ground conditions, the lowest load factor I would be comfortable with is 1 person for every 0.5sqm. Having taken the underlying ground conditions into consideration, the time of year, and that the event is held in the dark, I would recommend a load factor of 1 person for every 0.7sqm

- **Exit Capacity** – The exit capacity is the number of persons that can enter and exit the event under normal circumstances, or be evacuated from the event if required using the available exits. Following many pints of reference, best practise guidelines and not least the guidance in the Regulatory Reform (Fire Safety) Order 2005, the largest exit available will be deducted from any exit capacity calculations. This is to take into account that the location of any incident requiring evacuation may actually be at or near an exit.

- **Available Space –** the amount of available space that can be used by those attending to watch the event is very much dependent upon the following factors:

    - ✓ Size of Bonfire – the bigger the bonfire, the bigger the safe exclusion zone around it.
    - ✓ Class of Fireworks – The larger the category of firework, the larger the safe zone has to be (area between the spectators and the firing zone) and the larger the fallout area has to be (the area behind the firing zone away from the spectators). It is my understanding that the Clitheroe Castle Bonfire utilises Category 4 fireworks. The safe zone is therefore recommended to be no less than 50m from the spectators to the firing zone (and as wide as the fireworks are laid out + 10m each side). The fall out zone is recommended to be no less than 100m from the back of the firing zone to its outer edge, and again as wide as the fireworks are laid out + 10m each side. The positive issue regarding the fireworks at Clitheroe is that the firing area is enclosed and away from the viewing area, and in my opinion is in an ideal location.

- ✓ Sightlines – if there is one point of focus for entertainment viewing, then a realistic 'obstructed/restricted view' measurement should be made and deducted from the available space.
- ✓ Exits and Entrances – a clear unobstructed area should be kept free around all entrances and exits, and the size of these areas should be deducted from the available space.
- ✓ Catering / retail / ancillary attractions & services – In essence, all items that take up space, should be measured and the total figure deducted from the available space.

- **Evacuation Times** – There is no legislation in place concerning the evacuation times from open air sites in the UK. The standard best practise is to seek advice from the Local Fire Authority. Guidance on the matter from many different bodies, agencies and sources is wide ranging, and many Fire Authorities advise on anywhere between 8 to 12 minutes. It seems common to adopt the legislation laid down in the Guide to Safety at Sports Grounds, which states that the venue will be evacuated in 8 minutes or under, however the methodology behind stadia risk assessment and an outdoor event risk assessment are totally different and I would prefer that a sensible pragmatic approach of Risk Assessment should be taken. If this event were in ideal conditions, i.e. in daylight, on a firm surface and in a totally familiar location to all attending, then I would use an evacuation time for this event of 10 minutes. I would err on the side of caution however, given that the event is in darkness, the audience profile is that of family groups, children, pushchairs are in abundance, etc. Balanced with those cautions it is also given that the wider boundaries of the area are well away from the higher potential hazard sources, it is flat level ground, and the area is not complicated or confusing to navigate around. I see no need to impose a lower evacuation time than 10 minutes*****.

  In stating the evacuation time, it is vitally important that confirmation and indeed approval of evacuation times is sought from the Local Fire Authority in order to comply with The Regulatory Reform (Fire Safety) Order 2005 and The Health & Safety at Work etc Act 1974 in relation to responsibilities of those in charge of the event and the land. The Fire Authority should at all times be consulted, and have the ultimate authority to veto evacuation timings and emergency evacuation calculations.

- **Flow Rates** – Guidance for outdoor events is misleading. A standard industry approach is to state that we can evacuate 80 persons per minute, through each metre of exit space. This calculation was originally taken from Building codes and regulations and later revised in the Guide to Fire Precautions in Existing Places of Entertainment and Like Premises. I believe that 80 persons per metre per minute is not acceptable for an outdoor event in the UK in Winter, in the dark, on grass, and organised to predominantly attract families and children. A further mitigating factor in reducing the flow rate is the distance from the bonfire event to the nearest A&E department. As this is over 10 miles away, the assessment of risk increases. I believe that this event should not be looking at evacuating any faster than 60 persons per metre, per minute.

4.0 CALCULATIONS

4.1 The first part of the process was to understand the actual viewing space. This is a bonfire, with a fireworks display. It is advertised as Clitheroe Castle Bonfire. Therefore my assumption is that the available viewing space is anywhere within the grounds, where you can safely view the bonfire and associated entertainment that may be provided. That area is clearly the recreational field, and not the Castle grounds.

4.1.1 The total available viewing space was calculated at 8,914.17 sqm.

4.1.2 I have then considered the areas that should be deducted and the reasons why:

- The Bonfire – I have assumed that the Bonfire would be approximately 15m in diameter and have also had to assume that safe distance barriered off from the bonfire would be approximately another 7.5m all round, giving a 30m diameter base. This equates to 706.5sqm.

- The pathway running alongside the railway line. This area is also behind trees, creates a sight line issue and should be kept clear as the only hard standing emergency vehicle route through the event site.

- Catering area – Marked on the plan as catering and toilets. This is also an area that is behind trees, will have members of the public queuing for catering / toilets, and should not be considered as a viewing area. It is an ideal area for all welfare services.

- Entrances – On each entrance I have marked down a 30m diameter area that should be kept clear and stewards should not allow people to congregate or view in these areas. This ensures all your entrances and exits are clear at all times.

4.1.3 The resulting available viewing space is therefore calculated to be 6,547sqm. At 0.7sqm per person, this equates to 9,352 capacity.

4.2 Exit Widths – There are 6 entrances and exits as shown below (and marked accordingly on the plan at Appendix 1)

- Entrance 1 - 6m
- Entrance 2 - 3.3m
- Entrance 3 - 2m
- Entrance 4 - 1.17m
- Entrance 5 - 1.8m
- Entrance 6 - 2.7m
- TOTAL - 16.97m

4.2.2 After deducting the largest exit, we are left with a total exit capacity of 10.97m

4.2.3 To find out if the total exit width is sufficient I take the final capacity figure, divide it by the sum of total exit width multiplied by the flow rate:

60 (flow rate) x 10.97 (exit width) = 658.2

Therefore – 9,352 (capacity) ÷ 658.2 = 14m of exit width required.

4.2.4 We therefore can see that although we do have the physical space to accommodate 9,352 persons, it is unsafe to do so as we do not have sufficient exit width.

4.2.5 This mathematical process however has shown that with an available exit width of 10.97m, we can safely accommodate 6,582 persons.

5.0 CONCLUSION

In order to run and manage a safe occupancy figure of 6,582 persons for this event, the following items must be adhered to.

5.1 An event safety plan should be written and should include:

- A plan showing stewarding locations, not only on the recreational field, but throughout all routes to final exits
- Stewards briefings on roles and responsibilities, and actions to take during emergency situations
- A common grid referenced site plan showing all entrances and exits and final routes out of the site
- A medical plan showing numbers, types and positions.
- A suitable and sufficient Risk assessment
- A Traffic Management plan. I believe that shutting Wesleyan Row and Eshton Terrace will aid public safety for the egress of the event, but it would not necessarily affect the safe occupant capacity.
- A capacity plan, showing how the capacity is to be managed and monitored. The plan must show how a possible oversubscribed attendance would be managed and the communication involved.
- A lighting plan with the results of a lighting test to show that all entrances and exits are well illuminated, as well as all the pathways leading out of the event site.
- A bonfire plan, with dimensions and positioning. At present I am making huge assumptions regarding the size of the bonfire. I have shown on the plan (appendix 1), what I believe to be the safe distances and position for the bonfire based on that assumed size. If it is agreed to be bigger, then this must be re visited to allow free flow of crowd movement and viewing all around, and ensures the entrance on Eshton Terrace is not compromised.
- A communications plan. This should show how all parties have communicated pre event, and will communicate during and after the event. It should also show how communication is made to those attending in the event of an emergency.
- An emergency plan detailing who plans, coordinates and manages any emergency situation, including the assumption of handover of responsibility in a crisis.

5.2 If all the items in 6.1 are in place, and they are to the satisfaction of all parties, then Clitheroe Castle Bonfire can safely proceed with an Occupant Capacity of 6,582 persons.

6.0 OPINION

6.1 Whilst carrying out research for this report, it has been impossible not to note the news items listed in the local press regarding the involvement of the ESAG. In my opinion it is right and proper that public safety at events is considered in a pragmatic and sensible way, and advice and help is given by experts in their respective fields. Without this communication, carried out in a spirit of cooperation, I do not see how the event could lawfully continue. By lawful, I do not mean in respect of licensing and planning, but in respect of Health & Safety legislation, and indeed liability by all parties concerned.

6.2 Whilst I have made reference to the two documents already submitted on capacity calculations, it should be noted that I consider both of them to be flawed, in two very similar ways.

The calculations submitted by RVBC have followed the correct processes and calculations, but have failed to take account of the variances that can, and should be used, once local knowledge, historical data, and safety planning has been taken into consideration. Not a major flaw, but too restrictive.

The calculations submitted by the Bonfire Organisers have the same flaw as RVBC, with the added confusion of no explanation of where the first set of figures were derived from, i.e. no reference to the actual area being quoted. I am at a loss as to how a figure of 20,000 sqm and a possibly occupant capacity of 46,000 has been achieved.

6.3 It is also my opinion that an immediate place of safety for those attending this event is the nearest space available off the recreation field.

There is a school of thought that will argue that the whole of the castle grounds should be included in the capacity; however none of those areas can be used to view the bonfire safely. The argument that the fireworks can be viewed from the castle grounds is restrictive and opens up the argument that you can view them 3 miles away, so why not manage a 3 mile radius. An endless argument that has no answers, apart from, as stated in para 6.1, if a correct and properly managed capacity plan and stewarding plan is drawn up, systems and procedures for restricting entry to the Castle Grounds will be in place and negate all those arguments.

7.0 DECLARATION

I have set out in my report what I understand from those instructing me to be the one question in respect of which my opinions as an independent consultant are required.

I have done my best, in preparing this report, to be accurate and complete. I have mentioned all matters which I regard as relevant to the opinions I have expressed. Any matters on which I have expressed an opinion lie within my field of expertise.

I have not included anything in this report which has been suggested to me by anyone, including any member of Ribble Valley Borough Council or any member of the Event Safety Advisory Group, without forming my own independent view of the matter.

Where, in my view, there is a range of reasonable opinion, I have indicated the extent of that range in the report.

At the time of signing the report I consider it to be complete and accurate. I will notify those instructing me if, for any reason, I subsequently consider that the report requires any correction or qualification.

I believe that the facts that I have stated in this report are true and that the opinions that I have expressed are correct.

I confirm that insofar as the facts stated in my report are within my own knowledge, I have made clear which they are and I believe them to be true and that the opinions I have expressed represent a true and complete professional opinion.

Chris Woodford

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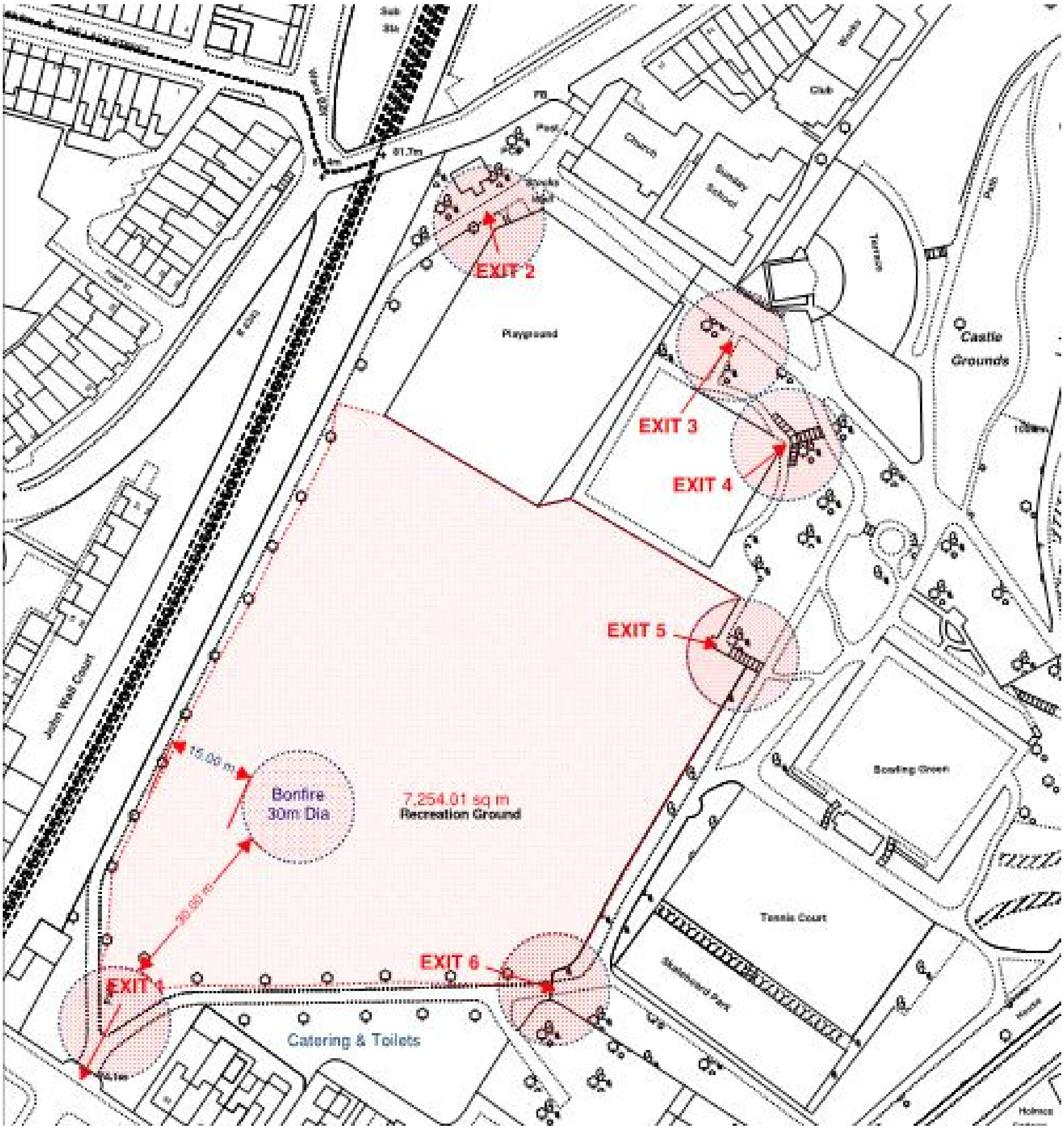
APPENDIX 1



EXIT 1
EXIT 2
EXIT 3
EXIT 4
EXIT 5
EXIT 6
Playground
Castle Grounds
Bonfire
30m Dia
15.00 m
30.00 m
7,254.01 sq m
Recreation Ground
Catering & Toilets
Bowling Green
Tennis Court