

31/08/2018 - 02/09/2018

Event Management Plan

Version 5

### Distribution

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## **List of Changes**

Date	Version	Author	Changes	
2018/06/25	5	Russ Garrett	Map update, issued license details, traffic management.	
2018/03/21	4	Russ Garrett	Update security risk assessment, tent exit capacity	
2018/02/04	3	Russ Garrett	Add sections on contingencies and special effects. Comprehensive updates after authority comment.	
2017/11/17	2	Russ Garrett	Updated draft for authority comment.	
2017/02/26	1	Russ Garrett	Initial version for EMF 2018	

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## 1 Event Overview

Electromagnetic Field (EMF) is the UK's largest technology-focused camping festival: A non-profit three-day event for those with an inquisitive mind and an interest in science, engineering, technology, crafts, DIY, and computer security. EMF 2018 is the fourth major camping festival organised by Electromagnetic Field Ltd.

Held every two years, EMF can be seen as a cross between a conference and a festival, with talks and workshops on a wide range of subjects across a series of marquee-based stages.

EMF is a uniquely community-run event, with many attendees attending with existing community groups which form "villages" around shared interests. Villages arrange their own workshops, talks, and installations in addition to those organised by EMF's own content team.

EMF provides a high-speed internet connection and WiFi to the entire festival.

Our previous event in 2016 brought 1900 attendees to a site near Guildford for talks and workshops on topics ranging from genetic modification to electronics, blacksmithing to high-energy physics, reverse engineering to lock picking, computer security to crocheting, and quadcopters to beer brewing.

## 1.1 Key Information

Event Open to Public 12:00 Thursday 30<sup>th</sup> August – 17:00 Monday 3<sup>rd</sup> September 2018 Event Programme 10:00 Friday 31<sup>st</sup> August – 23:00 Sunday 2<sup>nd</sup> September 2018

Maximum Site Capacity 2500
Ticket Price £115–£140

Location Eastnor Castle Deer Park, Eastnor, Herefordshire

OS Grid Reference SO 74157 38128

## 1.2 Demographic

EMF events have historically attracted a broad spectrum of attendees due to the variety of talks and workshops available. The audience demographic is expected to range in age between 18 and 50, with the majority of attendees being between 22 and 35, and a slight male bias.

EMF is a family-friendly event with activities for children, and in 2016 there were a significant number of families attending – a number which we expect to improve on again in 2018.

## 1.3 Organisation

EMF is operated by Electromagnetic Field Ltd, a not-for-profit company limited by guarantee with no paid employees. Any surplus generated by EMF events is reinvested in future events or donated to other non-profit causes.

Electromagnetic Field is an entirely volunteer-run event, with all staff volunteering signficant amounts of their time to organise the event, and many attendees volunteering their time during the event.

Overall responsibility for the event lies with the Directors of Electromagnetic Field Ltd, Russ Garrett and Jonty Wareing.

#### 1.4 Management

We strive to operate EMF to a standard equivalent to professionally-run events. Many of the organising team have significant experience at previous EMF events, as well as several similar events held across Europe.

Those volunteers involved in running the event are formed into teams, with each team having an experienced lead and a deputy lead who are accountable for that team.

Organisational meetings of all team leads (the "organising team") are held periodically prior to the event. During the event, meetings of the organising team will be held daily to deal with any issues arising.

At all times during the public opening hours of the event, an experienced member of the organising team will be on call as the "duty site manager" with ultimate responsibility for event operations.

## 1.5 Insurance & Liability

EMF will carry public liability insurance of at least £5m with respect to the event. Employer's Liability Insurance will also be held with respect to volunteers.

#### 1.6 Site

The event will be located in grassland at Eastnor Castle Deer Park. EMF has an agreement to use the site between Friday 24<sup>th</sup> August and Thursday 6<sup>th</sup> September.

Where not otherwise secure, the site will be surrounded by a Heras-style fence for security purposes. This perimeter will surround the event structures and all camping areas. All licensable activities will happen within this perimeter.

The entrance gate will be staffed 24 hours per day, and tickets will be exchanged for wristbands on entry.

Talks at EMF will be held in three "Big Top" style structures, with staging and seating. There will be a number of smaller structures, mostly clearspan marguees, for workshops and other functions.

Further detail of the site layout, including the locations of tents, toilets, and water supply, can be found on the site plan in appendix C.

## 2 Code of Conduct

We take a strong line on harassment at our events. EMF is held under a Code of Conduct which forbids racist, sexist, and otherwise prejudiced behaviour. Attendees are made aware of this when purchasing a ticket. The Code of Conduct will be enforced by a dedicated team which will have the power to eject violators from the event.

## 3 Licensing

EMF will be held under premises license OPR01809 granted by Herefordshire Council. The Designated Premises Supervisor is Russ Garrett.

#### 3.1 Alcohol Sales

The licensed hours for alcohol sales are:

Date	Time
Thursday 30/08	17:00 - 01:00
Friday 31/08	11:00 - 02:00
Saturday 01/09	11:00 - 02:00
Sunday 02/09	11:00 - 01:00

Bars will be operated by EMF and staffed by volunteers.

Previous events have had no recorded alcohol-related disorder, and we do not expect this event to be any different.

Alcohol sales for EMF will be overseen by Russ Garrett and Steve Early who hold personal licenses.

#### **Training**

Volunteer bar staff will be required to complete training on event policies and the legal responsibilities of alcohol sales prior to undertaking any sale of alcohol on the premises.

A record of bar staff training will be kept for a period of 12 months and will be made available to responsible authorities on request.

### **Age Verification**

Bars will operate a "Challenge 25" policy for dealing with under-18s, and staff will be trained on this policy before undertaking any alcohol sales.

If a customer appears to be younger than 25, verification of age will be required before allowing the sale. Only the following documents will accepted as proof of age:

- Passport
- Full or provisional EU photocard driving license
- Proof of age card bearing the PASS hologram
- National identity card issued by a EU member state (other than the UK), Norway, Iceland, Liechtenstein
  or Switzerland.
- Biometric Immigration Document

If no such document is produced, or if there is suspicion that the document is not genuine, staff will be instructed to refuse the sale.

A register of refused sales will be kept for a period of 12 months and will be made available to responsible authorities on request.

#### **Bar Signage**

Prominent, clear, and legible signage will be placed at an interval of at most every 5 metres behind each bar, stating:

- That a Challenge 25 scheme is in operation
- That it is an offence for under 18s to purchase alcohol
- The availability of small measures

A full price list will be provided at each bar, which will include the ABV levels of each drink and the measured quantity in which spirits are being sold.

## 3.2 Regulated Entertainment

The main focus of EMF is talks and workshops, however the event will provide some live music and DJs, as well as ancillary recorded music between talks, and showing of films. Music is a secondary focus of the event, and will not be a major component of any promotion or advertising.

Hours for regulated entertainment will be:

Date	Time
Friday 31/08	11:00 - 02:00
Saturday 01/09	11:00 - 02:00
Sunday 02/09	11:00 – 23:00

Performances will be scheduled to finish at least 30 minutes before the licensed end time to avoid overruns.

Further information on EMF's noise management policy can be found in section 4.

## 3.3 Public Nuisance

The event site is not in direct proximity to any residential areas.

EMF is a camping festival, and no day tickets will be on sale. The majority of attendees are not expected to leave the site during the event. Previous events have had no recorded incidents of public nuisance.

Because of this, we consider that there is a low risk of attendees causing public nuisance outside the site.

#### 3.4 Prevention of Crime and Disorder

There has been no reported crime at previous EMF events. Due to the unique community nature of the event, crime within the event site is unlikely.

EMF aims to reduce the presence of glass on site, but due to the nature of the event it is not practical to eliminate it. Drinks will not be served in glass glasses. Attendees are requested not to bring glass onto the site.

A log will be kept at the premises, and made available on request to the Council or the Police, which will record:

- crimes reported to the venue
- ejections of attendees
- incidents of disorder
- visits by a relevant authority or emergency service
- · changes of Duty Site Manager

Attendees will be advised not to leave valuables in their cars, and a secure property lock-up will be provided on the site.

## 4 Noise

We are mindful of the need to keep noise nuisance to an absolute minimum and EMF will cooperate fully with site management, Environmental Health, and local residents to achieve this.

Programmed music performances will be confined to Stage B and a small bar area, and will be oriented to direct sound away from residential areas.

Due to the comparatively small audience size, sound levels can be kept low and easily controllable. EMF will emit significantly less noise than a comparably-sized music festival.

Staff involved with noise monitoring, the duty site manager, and sound operators will be in radio or telephone contact and instructed to effectively and swiftly reduce noise levels if necessary.

Local residents and Environmental Health will be provided with 24/7 contact details for the event control in case of an issue with noise.

Due to the nature of the event, it is unavoidable that some attendees will bring sound systems. The organisers will endeavour to ensure that any amplified music played by attendees is inaudible at noise-sensitive boundaries outside of the licensed hours, and sanctions will be imposed to enforce this.

#### 4.1 Noise Control Plan

The EMF team includes a number of people with significant experience in sound engineering and noise control. However, implementing an effective noise monitoring strategy given the geography of the area and the widespread nature of the noise sensitive locations would be impractical given the small team and limited budget.

Given the significantly lower sound emissions EMF is expected to produce compared to other events on the Eastnor site, EMF will employ a prediction-based approach to noise control.

Commercial sound prediction software [15] will be used to produce a sound propagation map for worst-case atmospheric conditions. These predictions will be compared to ensure they fall well below the noise level thresholds in table 1 at noise sensitive boundaries.

During the event, the sound level predictions will be periodically verified with a calibrated sound level meter at locations up to approximately 1km away from the event site to ensure that the predictions are accurate. These verification measurements will be logged.

 Table 1: Noise Level Thresholds (above ambient)

Time	Level
Before 23:00	15dB (LA <sub>eq</sub> )
23:00 - 02:00	10dB (LA <sub>eq</sub> )

The noise sensitive locations defined in Eastnor's existing premises license are noted in table 2.

Table 2: Noise Sensitive Locations

Clenchers Mill Lane, Eastnor Valentines Cottage, Hollybush Caves Folly Nursery, Colwall Hancocks Lane, Little Malvern Rose Mead, Evendine

Testing of sound equipment will not take place between 21:00 – 09:00 and will last for no more than 2 hours on any one day.

## 5 Children & Young People

The event will be family-friendly with a dedicated children's area. Under-12s will receive free tickets and under-18s will receive a discount. All reasonable efforts shall be made to ensure that there are no unaccompanied under-16s on site.

A DBS-checked volunteer will always be on-call in case of a lost child situation. The lost child policy can be found in appendix B.

#### 6 Water & Sanitation

Mains water is available on site from the Eastnor Castle Deer Park mains water supply. No supplementation of the water supply is expected to be needed for the event.

Taps and washbasins will be provided by EMF. All temporary water installation will be in compliance with BS 8551 [4] and water authority regulations. In the event of a water supply failure, an emergency supply facility is in place with a water supplier.

#### 6.1 Toilets

As there are no toilet facilities on site, a minimum of 25 toilets and 5 urinals, as well as two disabled toilets, will be provided by an external supplier. This is well in excess of the recommendations made by the Purple Guide [1].

Gas-fired showers will also be provided.

### 6.2 Waste Water

Waste water will be stored in existing underground septic tanks on site, or in above-ground tanks, and as far as is practical will not be allowed to run onto the ground and into watercourses.

Black and grey water will be removed from the site by tanker, and the on-site waste tanks will be left empty at the end of the event.

# 7 Waste Management

EMF will have a contract with a waste management provider to provide bins and remove waste generated by the event. This waste will be separated into general waste and recycling.

Any remaining waste after teardown will be removed by skip.

Skips and other locations where waste is stored will be located away from structures and sources of ignition in accordance with the fire risk assessment (see section 17).

Regular waste pickups will be carried out in order to ensure that waste does not accumulate around the event site.

## 8 Food & Concessions

Food on site will be provided by commercial food concessions. Food hygiene certificates, risk assessments, and insurance details will be checked and kept on file for all food concessions.

A full list of food vendors will be sent to Environmental Health no later than 14 days before the start of the event.

# 9 Stewarding & Security

As is common with similar events, we aim to provide as many staff as possible by asking attendees to volunteer.

All stewarding will be overseen by a stewarding co-ordinator, who will have experience managing stewards at similar events, and will be familiarised with how the event is operated by the stewarding team lead before going on duty.

The stewarding coordinator will have the ability to swiftly escalate issues to the appropriate team leads or the Duty Site Manager when needed.

Staffing levels are detailed in table 3.

Table 3: Staffing Levels

Role	Period	Staff
Main Gate	24/7	2 – 4
Information Point	9am-midnight	1 – 4
Roving	24/7	2 – 4
Bar	Licensed Hours	2 – 8
Per Stage Tent	During Talks	2
Control / Site Manager	24/7	1 – 3

Stewards will be provided with a briefing document containing sufficient information on how to perform their tasks, as well as how to promptly alert other staff in case of an incident.

In the unlikely event staffing levels cannot be guaranteed, external stewarding services will be sought.

## 9.1 Security

As EMF is a community event, with most people attending with existing community groups, the risk of crime or disorder within the site is considered to be very low. The risk profile of the event is much closer to a conference than a music festival. Previous EMF events have had no recorded crime or disorder.

The main risks which may require the assistance of external security stem from non-ticketholders outside the site perimeter.

Due to the volunteer nature of the event, volunteers at EMF may carry out activities which would normally require SIA licensing in accordance with the SIA guidance [16]. However, EMF aims to keep any risk to volunteers low by employing SIA-licensed private security where appropriate. A security risk assessment can be found in table 4.

Table 4: Security Risk Assessment

Hazard	Risk	Control Measures
Theft from car parks	Moderate	SIA security to patrol car parks
Unauthorised entry / risk to gate stewards	Moderate	SIA security on gates
Theft/vandalism within site	Very Low	None
Alcohol-related disorder	Very Low	None
Ejection from site	Very Low	None

Accordingly, EMF will arrange for 2–4 licensed SIA security staff to be on duty outside the gates to the venue. These staff will be on call to handle any issues arising within the site if required.

#### 10 Communication

### 10.1 Radio

All key members of staff, including stewards at gates and parking, will be issued with a radio and a contact list, and will be trained in its use.

A "control" member of staff at event control will be contactable by radio and telephone at all times and will have emergency contact details for the organisation team.

## 10.2 Telephone

A number of fixed and mobile phones will be available at the event control so contact telephone numbers can be made available to external parties and staff who may be out of radio range. Telephone numbers will be easily re-routed to staff mobile telephones in case of emergency.

As the site is in an area of marginal mobile phone coverage, key members of staff will be provided with mobile phones equipped with all-network SIM cards which are expected to provide good coverage.

The event will have an internal telephone network covering all major stages and other locations within the event, which can be used for sensitive communications.

In the event that all other communication methods fail during an emergency, the event management team has access to a landline telephone in the Golden Gates Lodge cottage within the deer park.

#### 10.3 Communications to Attendees

Public information shall be capable of being broadcast at all stages by the stage managers. Loud hailers will be available for use by relevant staff to give information directly to attendees.

As WiFi is available to the entire site at EMF, social media comprises a significant part of attendee communication, and this will also be used in emergencies as long as the internet connection is operational.

Communication to attendees before the event will be via email and social media. Attendees must provide a valid email address when purchasing tickets.

#### 11 First Aid

First aid will be provided by EMF's own team of experienced volunteers, which include those with advanced St John Ambulance qualifications and previous experience in large-scale festival first aid, as well as practicing doctors.

During setup and teardown there will be at least one qualified first-aider on duty during working hours. During the licensed period, there will be four qualified first aiders on duty during the day (10:00–02:00) and two overnight (02:00–10:00). On-call first aiders will be contactable via a dedicated mobile phone.

Further information on first aid can be found in the first aid policy in appendix A.

## 12 Temporary Structures

Temporary Structures include tents, marquees, big tops, portable cabins, towers, and similar structures.

Temporary structures on the EMF site will be designed, erected, and dismantled by contractors in accordance with the site design provided by EMF.

The only exception to this is small, simple truss structures, which may be erected by the EMF stage team to an approved design with the supplier's approval.

EMF staff will not modify structures in any way without approval from the supplier. This includes adding banners or scrim which may alter the wind loading of the structure.

Applicable guidance on temporary structures can be found in section 9 of the Purple Guide [1], the Institute of Structural Engineers guidance on temporary demountable structures [13], and the MUTA Best Practice Guide [14].

# 13 Traffic Management & Parking

Attendees will be encouraged to use public transport or car-share as much as possible. Car parking at EMF will be ticketed, and attendee cars will be parked close outside the perimeter of the site.

A shuttle bus service will be provided between Ledbury station and the event site.

Approximately 800-1000 vehicles are expected to park on site, and the capacity available for car parking is well in excess of this.

The vehicle entrance for attendees will be the main deer park entrance, east of Eastnor on the A438 (labeled route B on the plan). This will provide approximately 1km of vehicle queueing capacity on private roads within the deer park. Signs marking the entrance to the site will be placed on Eastnor's land - no signage is expected to be required on public highways. Accurate directions to the event site will be provided to all attendees in advance.

The maximum rate of vehicle arrival is expected to be 60-80 vehicles per hour for a short period on Friday morning. Sufficient stewarding capacity will be provided to ensure all vehicles are promptly parked, and no queueing is expected on public roads.

## 13.1 On-Site Vehicle Safety

Vehicle movements within the perimeter fence will be restricted to essential journeys during peak hours (11:00–23:00) and co-ordinated by radio. No un-marshalled vehicles will be allowed to move during peak hours.

The main vehicle gate (Y) will be separate to the pedestrian entrance gate to reduce interactions between pedestrians and vehicles. This gate enters onto the site via a backstage area which will have a low pedestrian flow.

The camper van area will be located within the site, close to vehicle entrance Y. Camper vans will be encouraged to arrive on the Thursday before the event, and depart later on the Monday. Arrivals outside this time will be marshalled.

Catering concessions will be able to access the site through a separate vehicle gate (X), via route A.

Only competent members of staff will be allowed to use site plant. Their training and certification will be checked before the event.

#### 13.2 Setup and Teardown

During setup and teardown, the access roads will operate as a one-way system, with arrivals via route A (Ridgeway) and departures via route B (main deer park entrance).

This one-way system will avoid slowdowns and vehicles having to unnecessarily reverse on the event site.

Contractors will be provided with delivery directions in advance of the event, including directions on the correct approach route through Ledbury town centre from the M50 J2.

## 14 Electrical Installations & Lighting

There is no existing mains electrical supply on site. All electricity will be supplied from a temporary electrical system provided by EMF.

The temporary electrical system will consist of pre-tested, modular units provided by a reputable temporary event power supplier. The system will be installed and tested by EMF staff, with assistance from external contractors where required.

The electrical system will be installed, tested, and operated by competent persons in accordance with the BS7909 code of practice for temporary events [3] and the latest BS7671 wiring regulations [2].

All final circuits rated less than 32A will be protected by 30mA, 10ms Residual Current Devices (RCDs). All other circuits, except those run through secure staff-only areas, shall be protected by RCDs with ratings chosen to maximise protection which keeping nuisance trips to a minimum.

### 14.1 Lighting

General site lighting will be provided by festoon lights along paths, with floodlights provided where necessary.

Lighting on primary throughfares will be fed from two independent generators to maintain adequate lighting during the failure of one generator.

## 15 Special Effects

EMF welcomes attendees to bring their own installations and demonstrations. Some of these installations may employ special effects with their own risks, and EMF aims to, where reasonably possible, put straightforward processes in place so these can be used safely.

These special effects policies apply to all effects on site, whether provided by EMF or attendees.

## 15.1 Strobe Lighting

EMF has previously welcomed a number of attendees with photosensitive epilepsy. Due to the risk to those people, no discharge-style strobe lights will be allowed on site, on stages, installations, or otherwise.

Those responsible for lighting systems which have the capability to flash brightly at frequencies capable of triggering photosensitive epilepsy (3-50Hz) will be informed that such effects are not permitted to be used on site.

#### 15.2 Lasers

Unless otherwise authorised by EMF, all laser effects on site will be limited to Class 1 lasers with no audience scanning or possibility of direct eye exposure.

Laser effects which do not meet the above limits must either be provided and operated by a reputable contractor, or authorised by a person competent to evaluate their safety. A permit will then be granted by EMF.

Laser safety will be evaluated with reference to HSE [7] and PLASA [8] guidance.

Unauthorised lasers, including laser pointers, must not be used on site.

If laser effects are to be used outdoors with scanning near or above the horizon, a NOTAM (Notice to Airmen) will be filed in advance with the Civil Aviation Authority.

#### 15.3 Flame Effects

The majority of flame effects which will be used at EMF are Liquefied Petroleum Gas (propane) effects.

A full set of rules for flame effects at EMF will be provided to those who intend to bring them. These rules are based on the comprehensive Flame Effects Guidelines published by the Burning Man event in the USA [6], with reference to the HSE publication SIM 05/2004/09 [5].

These rules include requirements for:

- Construction standards to prevent gas leaks
- Safe location of effects away from people and flammable objects
- Provision of fire extinguishers
- · Operating guidelines and supervision

A full design of the flame effect must be submitted to EMF prior to the event. EMF will verify the design and construction of flame effects meets these rules, and will allocate a safe location.

Once the effect has arrived on site and been checked against the submitted design, EMF will issue a permit for use. Use of flame effects without a permit at EMF will be prohibited.

## 15.4 Other Pyrotechnics

Explosive pyrotechnic special effects of any type will not be used at EMF.

#### **15.5** Smoke

Theatrical smoke effects can cause problems when used indoors if escape routes are obscured in case of an evacuation.

EMF will only use smoke effects inside temporary structures when they are cleared of chairs and other furniture, and operators will be made aware of the importance of ensuring escape routes are visible.

## 16 Contingencies

Contingencies which may require action by the organisation include (in approximate decreasing order of likelihood):

- Severe weather
- Fire
- Major accident/illness
- Collapse of structures
- Bomb/terrorist threat

In the event that an emergency situation develops, all staff will be made aware of the appropriate procedures to ensure that it is promptly escalated to the Duty Site Manager. They will assume overall control of the incident, assisted by other members of the organising team as necessary.

If an announcement has to be made to attendees, the incident team is able to ensure announcements are made via stage PA systems, loudhailers, and online channels. There is no site-wide PA system at EMF. Further information on emergency communications to attendees can be found in section 10.3.

It is the Duty Site Manager's responsibility to ensure that the emergency services are called if necessary.

### 16.1 Major Incidents

A major incident is any emergency which puts a significant number of people at risk of harm and/or requires the large-scale assistance of the emergency services.

The decision to declare a major incident will be made by the incident team in consultation with the emergency services.

Once a major incident is declared, control over staff on site will be transferred to the emergency services until the major incident has ended.

#### 16.2 Emergency Access Routes

The site has two independent access routes, as indicated on the site plan. No attendee vehicles will be entering the site via route A, so this route will be preferred clear route for approaching emergency vehicles, unless indicated otherwise.

#### 16.3 Evacuation

Due to the size of the site, the comparatively low camping density of EMF events compared to other festivals, and generous provision of fire lanes, a full evacuation of the site is unlikely to be required. However, partial evacuations may be required, especially in case of fire.

If necessary, announcements will be made to evacuate attendees to another part of the site, and the incident area cordoned off.

## **Temporary Structure Exits**

The exit width for significant temporary structures (with an enclosed area of larger than  $200m^2$ ) have been calculated in accordance with section 4.1 of the Fire Safety Guidelines for Open Air Events [9], and section 10 of the Purple Guide [1], and can be found in table 5.

Stage B will be used in both a seated and standing configuration, and calculations are made for both these configurations, with the larger of the exit widths being used.

In structures containing seating, exit calculations are made with with a maximum exit time of 2 minutes and a flow rate of 66 persons/metre/minute. In standing-only structures, exit calculations are made with a maximum exit time of 3 minutes and a flow rate of 82 persons/metre/minute.

Structures enclosing areas between  $100m^2$  and  $200m^2$  will have a minimum of two exits. Except for those structures in table 5, travel distances to the nearest exit will be kept below 18m.

Structures enclosing areas below  $100m^2$  will have a minimum of one exit with a width of 1.05m.

**Table 5:** Structure Exit Calculations (enclosed area  $> 200m^2$ )

Structure	Туре	Capacity	Size ( $m^2$ )	Total Exit width (m)	Minimum Exits	Maximum Exit Distance (m)
Stage A	Big Top	800	1350	6.1m	3	24
Stage B (seated)	Big Top	400	600	3.0m	2	24
Stage B (standing)	Big Top	1000	600	4.1m	2	24
Stage C	Big Top	400	600	3.0m	2	24

#### Site Exit Calculations

The total exit time for the EMF site is calculated here in accordance with the fire safety guidelines [9]:

· Risk level: low

• Escape time: 10 minutes

Exit flow rate: 82 persons/metre/minuteTotal site occupancy: 2500 persons

The total exit width required is therefore **3.05m**. This is below the size of the main pedestrian exit, so one additional emergency exit will be provided in case this exit is unavailable.

#### **Exit Signage**

Illuminated emergency exit signs will be provided at the exit of every temporary structure which has an enclosed area of more than  $100m^2$ , and in smaller structures if the exits are not readily apparent.

Large, visible emergency exit signage will be provided at the main site exits. All emergency exit signage will comply with the *Health and Safety (Safety Signs and Signals) Regulations 1996*.

#### 16.4 Severe Weather

Severe weather, including heavy rain, high winds, and lightning, may require the event programme to be altered or even cancelled.

Prior to and during build-up, weather forecasts will be periodically monitored to ensure that ground conditions are acceptable. During the event, forecasts will be reviewed daily for risks of severe weather.

Maximum wind ratings for temporary structures will be requested from suppliers and easily accessible at event control to ensure that the management team is aware of weather limitations.

In the event of severe weather being forecast during the event, the organising team will be informed and weather will be monitored on a regular basis. Attendees will be warned using the methods in section 10.3 if necessary.

In the event of severe weather posing a risk to temporary structures due to wind or lightning, an emergency situation will be declared in accordance with section 16. The entire event programme will be halted and attendees evacuated from those structures by stage managers with assistance from other stewards if necessary. Depending on the nature of the severe weather, it may be appropriate to evacuate attendees to their cars until the weather passes.

If severe weather produces conditions which will not allow the event to safely continue, the emergency team will begin the event cancellation process detailed in section 16.5.

During severe weather, especially at night, power must not be switched off. If necessary, circuits at risk of potential water exposure should be isolated in order to preserve power for site lighting, communications, and other essential services. During severe weather, accidental injury due to lack of adequate site lighting poses a much more significant risk than electric shock as all circuits are RCD protected.

#### 16.5 Cancellation

In some circumstances the event may have to be cancelled either before or after it has started. In this case attendees must be informed as promptly as possible.

#### **Before the Event**

If cancellation is required before the event starts, attendees will be informed by direct email and social media.

If cancellation happens shortly before the scheduled start of the event, staff will be made available at the gate to inform any arrivals of the cancellation and ensure they promptly depart.

#### **During the Event**

If cancellation is required during or very shortly before the event, those attendees on site will be informed using the methods in section 10.3. Attendees not yet on site will also be informed.

Once the cancellation process has started, all programmed activities on site will cease.

In some cases it may be appropriate to keep attendees on site overnight until they can depart safely. If the cancellation is due to severe weather, some attendees may not have access to their tents, temporary structures should be repurposed to accommodate them.

## 17 Fire Safety

This section comprises the fire risk assessment for EMF, and has been prepared with reference to government guidance for fire safety at open-air events [9] and guidance on storage of LPG cylinders [10].

## 17.1 Sources of ignition

The main potential sources of ignition at EMF are:

- Hot exhaust from generators
- Cooking appliances in backstage catering and concessions
- Camp fires, BBQs, and gas appliances used by attendees
- Flame effects
- Faulty electrical equipment
- Vehicle exhaust

#### 17.2 Sources of fuel

- Tents and marquees, including those brought by attendees
- LPG cylinders, both in use and in storage
- Vehicles
- Waste, including pallets
- Dry vegetation

There is expected to be no significant source of oxidising materials at EMF.

### 17.3 Steps to minimise risk

The following steps will be taken to mitigate risks of fire:

- Generators provided by EMF, along with fuel storage, will be sited away from all combustible materials in accordance with supplier's guidance.
- All electrical power distribution equipment to meet requirements in section 14.
- No other generators will be allowed on site.
- Combustible materials will be stored away from structures.
- LPG cylinders not in use, whether full or empty, will be stored in a fenced enclosure in open air at least 5m away from any structures.
- Skips and other accumulations of waste will be kept at least 6m from any structures, flammable items, and sources of ignition.
- Waste points will be monitored to ensure they are not overflowing.
- Temporary structures will be sourced from reputable suppliers and have appropriate fire safety certification.
- Firefighting equipment will be provided on site in accordance with section 17.4.
- Fuel-burning heaters (including LPG) will not be used on site.
- Fire lanes will be provisioned within camping areas, clearly marked, and enforced.
- Camp fires or BBQs will not be allowed on the ground.
- Attendees will be instructed not to use gas appliances in tents.
- Roving staff will be instructed to monitor the site for any fire hazards and contact control over radio.
- Catering/concessions staff will be made aware of regulations regarding gas storage.
- Catering area will be sited well away from camping area.
- Sufficient access to the site will be provided and maintained clear for access of fire appliances.
- Vehicle parking will be separate from the event.
- Weather conditions will be monitored in case of very dry conditions raising the risk of spread of fire through vegetation.
- Flame effects will not be allowed without a permit. See section 15.3 for more details.

All stewards will be briefed on steps to take if a fire is discovered which will include alerting other staff by radio and, if necessary, evacuating attendees.

Exit calculations for evacuation of temporary structures and the event site in case of fire can be found in section 16.3.

Information on emergency services access routes can be found in section 16.2.

## 17.4 Fire Extinguishers

Fire extinguishers will be provided on site in accordance with section 3 of the guidance [9], and will be distributed as detailed in table 6.

Table 6: Fire Extinguisher Provision

Location	Туре	Number	Placement
Structures $> 400m^2$	Water	2 per $200m^2$ floor space	Near exits
Structures $\leq 400m^2$	Water	2	Near exits
Low-risk structures $<90m^2$	Water	1	Near exits
Generator	Foam	1	2m from generator
Kitchens	Water/Blanket	1/1	Adjacent
Campsite fire points	Water	2	No further than 50m
LPG storage	Dry powder	1	Adjacent
Bulk waste storage	Water	1	Adjacent

Catering concessions will be required to provide their own firefighting equipment.

Some small marquees ("Village Tents") will be sited by EMF for the use of attendees in villages. If these tents are below  $25m^2$  in enclosed area, they may be sited adjacent to a campsite fire point instead of having their own fire extinguisher.

## 17.5 Fire Appliance Access

In accordance with section 3.3 of the guidance [9], all vehicle paths on site will meet the following requirements to allow access by fire appliances:

- · Road width of not less than 3.7m
- Clear width at gates not less than 3.1m
- Surface loading in excess of 12.5 tonnes
- Suitable turning area provided

No point on the site will be further than 50m from such a path.

## 17.6 Responsibility

The competent persons with responsibility for fire safety on the EMF site will be the same as those with responsibility for general safety (see section 18).

## 18 Health & Safety

Overall responsibility for safety on site will rest with Will Hargrave and Russ Garrett, both of whom have experience at many similar events and are familiar with the applicable safety and licensing law.

## 18.1 Safety Coordinator

A safety coordinator will be on duty, who will have responsibility for the safe conduct of all operations on site. The safety coordinator will have the ability to stop unsafe activities and warn or expel any person from site if necessary.

Where possible, during setup and teardown the safety coordinator will not have any additional responsibilities which would result in a conflict of interest due to time pressures.

Notwithstanding this, all team leads will be aware of how to conduct their operations safely.

## 18.2 CDM Regulations

For the purposes of the *Construction (Design and Management) Regulations 2015*, Electromagnetic Field Ltd is considered to be the Client, Principal Designer, and Principal Contractor for the event.

Accordingly, EMF is responsible for the design of the event site, as well as coordinating health, safety, and welfare amongst all contractors on site, as well as its own volunteers.

More information on CDM and the entertainment industry can be found in the HSE guidance [12].

#### 18.3 Event Risk Assessment

The overall risk assessment for the event can be found in table 7. Where control measures are covered by sections elsewhere in this document, they will be referenced in the risk assessment.

Table 7: Event Risk Assessment

Hazard	Risk	Affected Parties	Control Measures	Resulting Risk	Responsible Team	Comments
Electric Shock	Moderate	Everyone	All electrical installations to conform to BS7671. 30mA RCDs on all final circuits. Regular visual checks. Attendees who require power will be made aware of the risks. (Section 14.)	Low	Power	
Fire	Moderate	Everyone	Please refer to section 17 for the fire risk assessment.	Low	All	
Injury from vehicles operating on site	Moderate	Everyone	Vehicle movements on site to be restricted (section 13.1). Site plant to only be used by appropriately experienced persons.	Low	Stewards	
Trips & Falls	Moderate	Everyone	As far as is practical, ensure all cables are buried or flown above head height. Ensure site is adequately lit.	Moderate	Setup	Trip hazards (guy ropes, etc.) will always be present on a camp site.
Food Poisoning	Moderate	Everyone	All food concessions to have food hygeine certificates checked and on file (section 8).  Water supply to be installed and tested in accordance with regulations (section 6).  Adequate handwashing facilities to be made available, especially in bar and food prep areas.	Low	Vendors	
Glass injuries	Moderate	Everyone	Discourage bringing glass onto site. Drinks will be served in plastic or paper cups.	Low	Stewards	
Crowd Safety/Crushing	Very Low	Everyone	Stewards to monitor situation and report by radio.	Very Low	Stewards	Event has historically been low-energy.
Injury from collapse of temporary structures	Low	Everyone	All temporary structures are provided and erected by reputable external contractors.  Wind speed to be monitored and structures closed if design limits are exceeded (section 16).	Low	Setup	
Dehydration & Sun- burn	Low	Everyone	Water readily available. First aiders on site. If weather is very warm, remind attendees to drink water.	Low	First Aid	
Insect bites & stings	Low	Everyone	First aiders on site.	Low	First Aid	

## 18.4 Buildup and Teardown

## Responsibility

The table below shows the division of responsibility between EMF and external contractors for major setup and teardown tasks:

Activity	Responsible
Laying of fencing and some temporary trackway	EMF
Temporary electrical installation	EMF
Rigging and setup of staging/AV/lighting/sound equipment	EMF
Rigging of decorative and emergency site lighting	EMF
General transportation of items around site, manual handling	EMF
Laying of temporary trackway	External Contractors
Buildup of temporary structures	External Contractors

## **Risk Assessment**

Hazard	Risk	Control Measures	Resulting Risk	Comments
Injury from vehicles	Medium	EMF staff on site will be required to wear high-vis jackets while walking around site.  15mph site speed limit. Restrict vehicle movements between sunset and sunrise. Brief staff on site in how to treat construction vehicles.	Low	
Falls from Height	Moderate	Any work at heights more than 3m should only be carried out in accordance with an additional risk assessment.  MEWPs to be used instead of ladders where appropriate. Access equipment must only be used by those who are competent to use it.	Low	
Injury from collaps- ing structures	Medium	Temporary structures to be constructed by contractors only.  EMF staff to be kept clear until structures are signed off.  Weather conditions to be monitored.	Low	
Electric shock	Low	Reputable suppliers used for electrical equipment. Visual inspection before deployment of equipment. Distribution equipment to only be powered on by competent person after inspection and testing in accordance with BS7909.	Low	
Foot/leg injury	Medium	Staff informed about appropriate footwear in advance. Staff reminded of the dangers of stepping off moving vehicles, even at low speed.	Low	
Hand injury	Medium	Gloves to be provided by EMF to reduce hand injuries during manual handling.	Low	

## A First Aid Policy

#### A.1 Overview

In accordance with the Health and Safety Executive guidance, EMF will provide, at any one time, 4 first-aiders, available and on call 24 hours a day for the duration of the festival. Their remit is threefold:

- Provision of first aid to any festival attendees, and EMF staff or volunteers, throughout the duration of the festival and during setup and strike-down
- Support for the basic welfare of the festival attendees and EMF staff and volunteers
- Management of any situations involving lost children for the duration of the event, in conjunction with the Children team. (see appendix B)

First Aid practice is defined by the 10th Edition of the First Aid Manual (Published 2014, Dorling Kindersley), the official manual of the Red Cross, St John Ambulance and St Andrew's Ambulance. First-aid volunteers will be required to be familiar with this document and operate within its instructions. A copy of the manual will be available on site for reference.

#### A.2 Recruitment

All first-aiders at EMF are volunteers and must present two different kinds of credentials to the First Aid Team Lead: Each volunteer must have, as a minimum, a qualification that meets the guidelines and criteria as defined by the Health & Safety Executive (HSE) in respect of the 1981 (First Aid) Regulations, such as a First Aid at Work certificate.

Those with qualifications that are equivalent to, or superior than, first-aid-at-work will also be accepted. Examples include:

- Healthcare professionals, for example GPs, nurses, or paramedics
- Community First Responder
- First aider with St John Ambulance
- · First aider with the Red Cross
- FREC Level 3 Responders and above

In all cases, a copy of the relevant qualification(s) will be checked by the First Aid Team Lead before the event. A digital copy will be retained by the First Aid Team Lead and the event organiser in a secure format in accordance with the Data Protection Act.

#### A.3 Disclosure

As first aid volunteers may need to work with children or vulnerable adults an Enhanced Disclosure from the Disclosure and Barring Service is required. Proof of this must be presented to the First Aid Team Lead and the festival organiser before the event. Those without a current Enhanced Disclosure will be required to apply for one through the EMF before the event. Digital copies of disclosure paperwork for all volunteers will be kept securely by the First Aid Team Lead and EMF organiser in accordance with the Data Protection Act.

## A.4 Strategy

First aid cover will be provided 24 hours a day for the days when the festival is open to the public. In addition, cover will be provided for the setup and strike-down of the festival as long as EMF staff and volunteers are on site.

Cover will be organised as 3 shifts of 8 hours, with four first-aiders on duty at any one time. First aiders will operate in pairs, with one pair roaming the site, and the other pair based at the designated first aid point. Both teams will be provided with radios.

The shifts will commence at 10am in the morning. The 2am to 10am shift will be covered by two first-aiders and will be an 'on-call' service, i.e. a mobile phone number will be provided to all the EMF personnel and stewards for the first-aiders on duty.

One member of the four will be designated the "shift-leader", responsible for the organisation of the two teams for the duration of the shift.

The first aid point will also operate as a welfare point. It will therefore be equipped with bottled water, suncream, camp beds and heaters (see below).

The first aid point will be in a dedicated tent, clearly marked on the site plan, and signposted outside. Its location will be made known to EMF staff, volunteers and attendees and will be staffed from 10am to 2am through-out the event, with the overnight first aid cover provided on an on-call basis.

#### A.5 Access

Access to the site is via road. The first aid point will be located near the entrance to the site. In the event of an ambulance being required on scene, the first-aid team will liaise with the stewards to ensure the area of road around the site entrance is cleared.

Non-urgent casualties who require hospital treatment but not an ambulance will be taken to the receiving hospital via car, either by a car belonging to the first-aid team, or a taxi. In both cases, the casualty will be escorted by a member of the first-aid team, if requested to do so by the casualty or if the first-aider deems it necessary.

The site itself is a mixture of fields and tracks. There are trackways throughout the site, with extra firelanes marked for emergency vehicles. In the event an ambulance is required at another part of the site, the first-aid team will liaise with the stewards to direct the vehicle and provide clear access.

#### A.6 Communications

The First-aid team will work closely with the volunteer, info-desk and children teams.

Volunteers and stewards will be made aware of the location of the first-aid point and the mobile phone numbers for the first aid team. Both of the first aid pairs on duty will be provided with a mobile phone and these two numbers will be circulated to the info-desk, volunteer and children teams.

Volunteers and members of the general EMF team who respond to a first-aid situation should advise the casualty to make their way to the first aid point if they are able to do so. If not, the volunteer should contact the first aid team immediately and stay with the casualty until members of the first aid team arrive.

Between the hours of 2am and 10am, the first-aid team will be available via the first aid mobile number. Volunteers responding to first aid situations at this point should proceed as above, but call the first aid mobile number immediately.

Both the first aid point and the roaming team will be provided with a radio. Radio protocols, such as channels, codewords and such will be circulated at the initial briefing, on-site. Particular attention is given to the lost and found child reporting (see Lost Children Policy).

## A.7 Equipment

Equipment will be provided for each first aid volunteer. These will include a first aid kit, a high-visibility tabard and a radio. Volunteers will be advised to bring appropriate warm and waterproof clothing and footwear.

First aid supplies and equipment will be purchased from St John Ambulance supplies. The First Aid Team Lead will be responsible for the first aid equipment and consumables for the team, and checking that it meets the required standards.

## A.8 Medical waste disposal

All medical waste will be disposed of in the correctly marked bags (orange, clinical waste bags) and will be kept at the first aid point until the end of the strike-down, whereupon they will be disposed of in accordance with the local health authority's requirements. Sharps bins will be provided and disposed of in the same fashion if used.

Standard waste will be disposed of using the facilities provided by the sanitation team.

## A.9 Reporting

All first aid administered will be recorded electronically on the 'patient-report-form', with any serious incidents being reported on an additional RIDDOR form. Patient report forms will be kept by the First Aid Team Lead and the EMF organiser with a copy sent to the patient upon request. This data will be kept in a secure format and accordance with the Data Protection Act.

These members of the first aid team who are members of St John, Red Cross or another organisaton who have their own paperwork requirements may fill out their own paperwork in addition to EMF's requirements.

#### A.10 Local Authorities

Both the local ambulance service control room and the local police service will be informed, prior to festival, that an event is taking place where first aid cover is being provided.

#### Hospitals

First Aid volunteers will be made aware of the hospital location. In addition, the local ambulance service shall be made aware of EMF prior to the event.

#### **Social Services**

Given the nature of the event, it is recommended that local social services be made aware of EMF.

## A.11 Major Incidents

In the event of a major incident occurring on site, all personnel, unless actively treating a patient, are to report to the First Aid Post for instructions. This includes these first-aid volunteers who are currently on shift.

All EMF first-aid resources will be placed under the direction of the Ambulance Service NHS Trust either on site or until their arrival.

Any fatalities will be dealt with by the Police in conjunction with the Event Management Team and the NHS Ambulance Service in line with the Police Plan for this eventuality.

## **B** Lost Child Policy

This policy document has been prepared for the guidance of everyone working as part of the volunteer team at EMF and follows Home Office and Department of Health recommendations. It is essential that all team members adhere to these guidelines. In the event of a query, team members are advised to consult the team co-ordinator or her assigned deputy or the appropriate shift leader for further guidance.

These guidelines are intended as a practical framework for people working with children in voluntary settings to help ensure the safety, well-being and protection of children in their charge.

It is the responsibility of every member of the EMF volunteer teams to prevent the physical, sexual and psychological abuse or neglect of children and young people, or vulnerable adults, in our care and to report any such abuse that may be suspected or discovered.

The Lost and Found Children service will be provided 24 hours a day while ticket holders are on site. All enquiries and dealings regarding lost and found children will be co-ordinated by the EMF First Aid Team and all staff on site will be briefed about this.

The EMF First Aid Tent is the designated lost child point and will be marked as such on any maps, printed or online EMF information.

## **B.1 Reporting Protocols**

Upon receiving a report of a missing or found child, young person or vulnerable adult, staff will notify HQ as soon as practicable. HQ will forward this information on to the first aid team, either via radio (between the hours of 10am and 2am) or via mobile phone (between the hours of 2am and 10am).

All staff at EMF should be made aware as soon as possible, noting the caveat concerning radios below. All staff on gates to the site should not allow any child to leave the site until it has been confirmed with the First Aid Team that the child is not reported lost. Announcements should be made at each stage. These announcements will be treated as a priority and will be broadcast at the earliest opportunity. Announcements will not refer to the child specifically or give personal details, descriptions or names.

Found children should be reported to HQ in a similar manner. In addition, upon finding a lost child or vulnerable adult, the volunteer in question should make immediate steps to bring another volunteer to the scene as quickly as practicable, if they are on their own. It is essential that a lost child or vulnerable adult not be left in the care of one person. A pair of first-aiders from the will be dispatched and visit the scene in order to escort the child or vulnerable adult to the EMF First Aid Tent.

While in the care of the EMF First Aid Team, every effort will be made to ensure the comfort, safety and well-being of the child, young person or vulnerable adult. Efforts will be made to re-unite the individual with their parent or guardian, as appropriate, or referral to statutory agencies as appropriate.

It should be noted that the EMF First Aid Team has no right to detain any person – child or considered vulnerable adult – against his or her wishes. Efforts will be made to negotiate the best course of action for that individual.

If there is any suspicion of abuse or neglect of the child or vulnerable adult, the EMF First Aid Team Leader or Deputy Team Leader must be informed and a decision will be taken whether to involve the relevant services, such as the Police & Social Services.

Time scales will be taken into consideration. If a child or vulnerable adult is not found within a reasonable time, or a found child is not re-united with a parent or guardian within a certain time, local authorities will be contacted, and the situation escalated.

Any individual who is behaving, or expressing a serious intention to behave, in a manner likely to harm themself or others should be considered at risk. Support from security and/or Police may be needed while the situation is assessed.

Any parent/guardian of a child or young person, or friend of a missing person, who reports them missing may need support and it is to be expected that the member of EMF staff will direct them, or escort if necessary, to the EMF First Aid Tent. They may be considerably distressed. At this point, staff should keep details minimal when notifying the EMF First Aid Team; the team will take full details.

When a child is reunited with their parent or guardian, identification should be requested and recorded. Only in extreme circumstances should a child be allowed to leave without the parent providing some form of ID. Should the child seem afraid or unwilling to accompany the parent or guardian then assistance from the Police should be sought. Equally, should the parent or guardian seem in any way unfit to care for that child then assistance from the Police may be sought.

## **B.2** Radio Usage

All efforts will be made to restrict the amount of information given over the radio, such as names or other identifying details. A fixed or mobile phone line should be used wherever possible. Radio codewords for children will be in use at this event, and all staff with radios will be briefed on these.

### **B.3** Definitions and Key Terms

The Children's Act (1989) defines a child as any person under the age of 18 years. For practical considerations at events such as this, each young person will be assessed on a case by case basis with regards to the safely and well being of a minor.

The definition of a vulnerable adult is given in the 'No Secrets' guidelines published by the Department of Health in 2000 as someone "who is or may be in need of community care services by reason of mental or other disability, of age or illness; and who is or may be unable to take care of him or herself, or unable to protect him or herself against significant harm or exploitation" Further, it defines abuse as "a violation of an individual's human and civil rights by any other person(s)."

In particular, it should be noted here that adults (i.e. those aged 18 years or higher) have the right to make their own decisions unless there are clear grounds to override this as a result of their lack of capacity OR if wider public interest is involved.

The law in relation to adults offers far fewer opportunities or responsibilities in relation to intervention. The principle here is to promote negotiation with regard to the individual's capacity at that time.

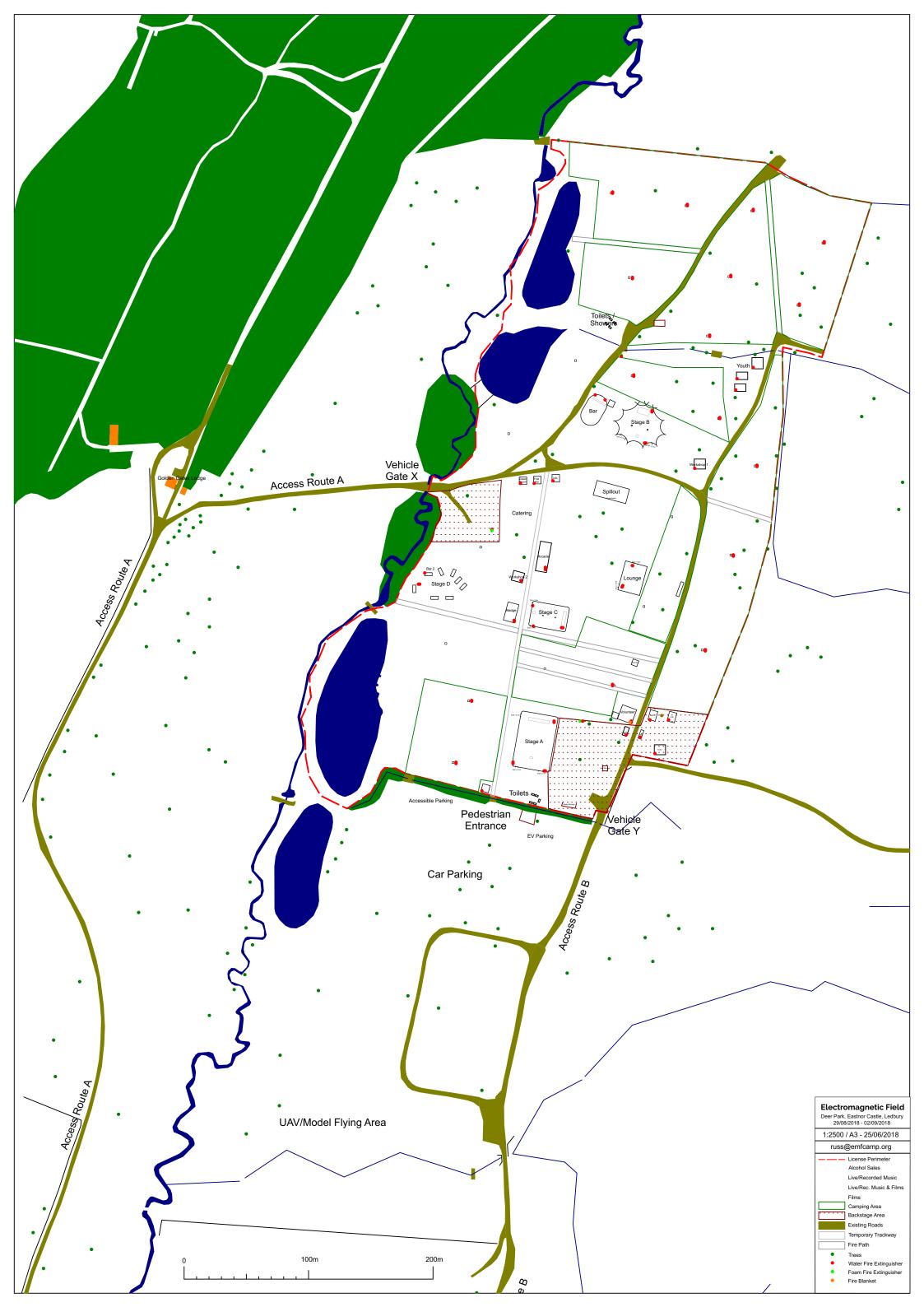
It is essential that the boundaries of confidentiality are explained to the child or young person or vulnerable adult - if possible before disclosure, i.e. where it is suspected they might be about to disclose. Under the Children's Act (1989), we have a duty to inform Social Services of any reports of abuse involving children and cannot therefore keep such details confidential. This is for the protection of the individual and possibly others. It is the role of the team co-ordinator or her assigned assistant to liaise with Social Services in this matter and she is responsible for making them aware of the disclosure.

Written notes will be kept of all relevant information. Information should however only be shared on a strictly need-to-know basis.

# C Site Location & Plan

## C.1 General Location





### References

- [1] Events Industry Forum. The Purple Guide to Health, Safety and Welfare at Music and Other Events. https://www.thepurpleguide.co.uk
- [2] BSI. BS 7671 Requirements for Electrical Installations. IET Wiring Regulations.
- [3] BSI. **BS 7909:2011** Code of Practice for Temporary Electrical Systems for Entertainment and Related Purposes.
- [4] BSI. BS 8551 Provision and Management of Temporary Water Supplies.
- [5] Health and Safety Executive. **SIM 06/2004/09** Safe Use of Liquefied Petroleum Gas (LPG) Fired Stage Flame Effects.
  - http://www.hse.gov.uk/foi/internalops/sims/cactus/5\_04\_09.htm
- [6] Burning Man. Flame Effects Guidelines. https://burningman.org/event/art-performance/fire-art-guidelines/flame-effects/
- [7] Health and Safety Executive. INDG224 The Safety of Laser Lighting Displays. http://www.hse.gov.uk/pubns/INDG224.htm
- [8] PLASA. Safety of Display Lasers. http://www.plasa.org/technical/Laser\_Guidance.asp
- [9] HM Government. Fire Safety Risk Assessment: Open Air Events and Venues. https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/14891/fsra-open-air.pdf
- [10] Calor. Code of Guidance for the Storage of Full and Empty LPG Cylinders and Cartridges https://www.calor.co.uk/media/wysiwyg/PDF/code-of-guidance-for-storage-of-cylinders.pdf
- [11] Health and Safety Executive. **HSG154** *Managing Crowds Safely*. http://www.hse.gov.uk/pubns/books/hsg154.htm
- [12] Health and Safety Executive. *CDM 2015 and the Entertainment Industry*. http://www.hse.gov.uk/entertainment/cdm-2015/index.htm
- [13] Institute of Structural Engineers. *Temporary Demountable Structures: Guidance on procurement, design and use, third edition.*
- [14] MUTA. Best Practice Guide: Safe Use and Operation of Temporary Demountable Fabric Structures. http://www.muta.org.uk/MUTAMembers/media/MUTAMembersMedia/PDFs/MUTA-s-Best-Practice-Guide.pdf
- [15] d&b audiotechnik. *NoizCalc: Technical white paper (1.1 en)*. http://www.dbaudio.com/en/support/downloads/category/download/7716.html
- [16] Security Industry Authority. Security at events: Guidance on the Private Security Industry Act 2001 https://www.sia.homeoffice.gov.uk/Documents/licensing/sia\_security\_at\_events.pdf