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Coroner's Officer
Norfolk Coroner's Service
Carrow House
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Via email

4 September 2020

Dear Jes

Re: Ava-May Littleboy

1. This letter constitutes the response of the Health and Safety Executive (HSE) to the Coroner's Report dated 2 April 2020, sent to HSE on 15th July 2020. The Coroner has asked whether there is any action that HSE is able to take that may assist in the prevention of future deaths.
2. HSE would like to express at the outset its deepest sympathy and condolences for the family of Ava-May Littleboy, the child killed in the tragic accident which is the subject of the Report.

Background

3. HSE holds the national policy lead for health and safety law which applies to the fairground industry including the supply, hire and use of inflatable play equipment for commercial purposes, although it does not apply to private, domestic buyers and users.
4. Enforcement allocation is split between the Health and Safety Executive (HSE) and Local Authorities and is dependent upon the type of amusement equipment in use. HSE is the regulator for fairground rides and associated equipment used on fairgrounds and theme parks whilst Local Authorities enforce sites with equipment such as coin-operated children's rides outside shops, bouncy castles at pubs, hotels and other LA-enforced premises.

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5. HSE has a dedicated team (the National Fairground Inspection Team – NFIT) whose responsibilities include proactive inspection of fairgrounds as well as reactive investigation e.g. of concerns and serious accidents. In common with HSE’s overall strategic approach to regulation, proactive inspection of the fairground industry is based on targeting areas of highest risk.

Legal Framework

6. Sections 2 and 3 of the Health and Safety at Work etc. Act 1974 respectively place duties on (i) those operating fairground equipment (including inflatable devices) to ensure, so far as is reasonably practicable, the health, safety and welfare of their employees and (ii) that members of the public are not, so far as is reasonably practicable, exposed to risks to their health and safety.
7. Section 6 of the 1974 Act places a duty on designers, manufacturers, importers and suppliers of fairground amusement equipment to ensure that, so far as is reasonably practicable, it is safe and without risk to health, when used in connection with entertaining the public.
8. The Provision and Use of Work Equipment Regulations 1998 require that fairground equipment is maintained in an efficient state, in efficient working order and in good repair, and subject to inspection at suitable intervals to ensure its continued safe operation.

HS(G) 175 - Fairgrounds and amusement parks: Guidance on safe practice

9. The operation of fairground amusement devices is generally considered to be a high hazard activity. That is to say that an untoward event arising from operation of amusement devices, including inflatables, could have serious consequences, involving serious multiple injuries or fatalities.
10. In such situations, it is important that the risk, or likelihood, of such an event occurring is reduced to the lowest degree reasonably practicable, with a higher level of precautions taken than would generally be expected in situations of low hazard, i.e. where any harm which materialised would be minor.
11. In recognition of this, HSE has worked with the industry to produce detailed guidance on the precautions to be taken. HSE publication [HS\(G\)175, 'Fairgrounds and Amusement Parks: Guidance on safe practice'](#) focuses on the safety of employers, employees and the general public using fairgrounds and amusement parks and gives advice on measures to control risk. It provides advice on issues relating to attractions, including design, manufacture, inspection, operation, maintenance, repair, and modification and is free to download from the HSE website.
12. Although the Coroner’s report dated 2 April 2020, records that the Inquest heard evidence in relation to the content of HS(G) 175 ‘Fairgrounds and Amusement Parks: Guidance on safe practice’, it may be of assistance to set out the specific requirements applicable to the matters set out in the Coroner’s report.

13. Specifically, HS(G)175 sets out the roles of the designer, manufacturer, importers and suppliers who have a duty to ensure that the attractions are safe for use when first supplied and to provide their customers with appropriate information to allow safe use. It also details how people undertaking each of these roles can discharge their duties under Section 6 of the Health and Safety at Work etc Act 1974.
14. HS(G)175 also sets out the 'System for safety of attractions', which consist of a series of 'steps' and 'checks' intended to ensure safety of an amusement device from design, through to operation and maintenance of the ride.
15. This can be found in tabular form (table 1) on page 8 of HS(G)175. The requirement for 'checks' is intended to avoid a situation where defects, faults and errors could go undetected and is consistent with the usual goal of a Safety Engineer, which is the avoidance of conditions where a single failure (whether a 'hardware' failure or a human behavioural failure) could lead directly to a high hazard situation without opportunity for corrective action.
16. The approach by HS(G)175 of requiring steps and checks can be illustrated with the example of ride design. The requirement (or 'step') in table 1 is for design "by competent designers with knowledge of the relevant standards". The additional requirement is for an independent check on the soundness of the overall design concept, by the process known as 'Design Review', which forms part of the pre-use inspection process.
17. The other aspects of the pre-use inspection process relate to the manufacture of the device and include the requirement to complete an assessment of conformity to design (ACD) which confirms that the device is manufactured and constructed to the reviewed design specification.
18. The process is then concluded by the completion of the "initial test", which is a series of tests to check that the device operates safely in accordance with the reviewed design specification and the instructions in the operations manual.
19. The first step when considering HS(G) 175 is to identify in Table 2, the type of device that is under consideration. The table sets out the recommended action for various types of attraction, confirming the need for a design review, assessment to conformity to design, initial test and in-service inspection or an alternative.
20. HSE have considered the devices listed in table 2 of HS(G) 175 and can confirm that the device involved in the incident under investigation is not specifically listed.
21. Although there is reference to "inflatable (bouncy)" the recommendations stipulated in table 2 would not be applicable, as the device did not fall within the scope of BS EN 14960: 2019 or its predecessor BS EN 14960: 2013.
22. The scope of BS EN 14960 is limited to inflatable play equipment defined as "a structure relying on a continuous supply of air to maintain its shape, on or in which users may play, bounce", and as the incident device was a "sealed air unit" the standard would not have been applicable.
23. Therefore, the incident device **could not** have been inspected under the Pertexa Inflatable Play Accreditation (PIPA) scheme, which specifically limits the devices that can be inspected under its scheme to those that fall within the scope of BS EN 14960.

24. Furthermore, HSE do not consider that the device should be categorised as “other inflatable (not used for bouncing or sliding)”. as the incident device was being used primarily for bouncing.
25. There is a further reference to a “pneumatic or air supported structure” in table 2, but HSE do not consider the incident device to be a pneumatic or air supported structure HSE understand that this reference applies to inflatable structures such as “inflatable start/finish race arches” and other similar structures.
26. Although the incident device is not specifically listed within table 2 of HS(G) 175, this is an indicative list of amusement devices which are used within the UK, rather than an exhaustive list. HSE would expect that the principles set out in HS(G) 175 would be applied to all types of amusement device imported and used in the UK, including the incident device.
27. Section C of HS(G) 175 details how a designer, manufacturer, importer and supplier of an attraction can discharge their duties under Section 6 of the Health and Safety at Work etc Act 1974.
28. In relation to fairground amusement devices, section 6 of the HSW Act states that *“it shall be the duty of any person who designs, manufactures, imports or supplies any article of fairground equipment:*
- *to ensure, so far as is reasonably practicable, that the article is so designed and constructed that it will be safe and without risks to health at all times when it is being used for or in connection with the entertainment of members of the public;*
 - *to carry out or arrange for the carrying out of such testing and examination as may be necessary for the performance of the duty imposed on him by the preceding paragraph;*
 - *to take such steps as are necessary to secure that persons supplied by that person with the article are provided with adequate information about the use for which the article is designed or has been tested and about any conditions necessary to ensure that it will be safe and without risks to health at all times when it is being used for or in connection with the entertainment of members of the public; and*
 - *to take such steps as are necessary to secure, so far as is reasonably practicable, that persons so supplied are provided with all such revisions of information provided to them by virtue of the preceding paragraph as are necessary by reason of its becoming known that anything gives rise to a serious risk to health or safety”.*
29. Section C defines the roles of an importer and supplier and sets out what actions they need to complete in order to discharge their relevant legal duties under Section 6 as follows:
30. **“Importers...** *You are an importer if you bring a device into the country either temporarily or permanently. If you buy a foreign device through an agent who is permanently resident*

in Great Britain, the agent is normally the importer are responsible for ensuring that the pre-use inspections (design review, ACD and initial test) are carried out and that the designer and manufacturer have followed the information in this guidance. You can do this by checking that the operations manual contains the necessary reports on the pre-use inspections.

31. *The device should not be used unless these pre-use inspections have been carried out and a suitable documentation and certification has been issued.*
32. *It is recommended that in purchase contracts for new devices you should request that designers, manufacturers and importers follow the appropriate guidance in this book and in Safety of amusement devices: Design.*
33. *You should take care to check that the documentation you receive follows the requirements of the pre-use inspections in this guidance. Differences in methodology, practice, procedures and certification requirements between countries can lead to different interpretations of what is required, for example:*
 - *use of design criteria inappropriate for Great Britain, e.g. wind loading;*
 - *incomplete review, e.g. with no, or inadequate, attention to control systems or passenger-containment systems;*
 - *false assumptions, e.g. that a component or a safety-control system will never fail or that it will fail safe.*
34. **Suppliers**...*You become a supplier if you sell (or hire out) any device, new or second-hand. Make sure you do everything possible to check that the designer, manufacturer and importer, as appropriate, have complied with their legal requirements and have followed the advice in this guidance.*
35. *You should do this by checking that the operations manual contains the necessary reports on the pre-use inspections: design review, ACD and initial test. If these have not been done, you should take steps to have these completed before the device is first used.*
36. *You must provide the controller with all the information and instruction necessary for safe use before the device is first used. You should include the reports of pre-use inspections and any modifications stemming from them. Written information provided should be in English (and in the language of the controller if different).*
37. *If you hire out a device, you should confirm that there are documents demonstrating that the device has been subjected to pre-use and in-service annual inspection by competent persons”.*
38. *The guidance set out in HS(G) 175 is well established guidance and is well known and understood within the UK fairground industry. Furthermore, HSE would suggest that if a person was unable to discharge any of the requirements set out for either the importer or supplier, that there would be adequate provision of competent organisations and individuals that could provide the necessary assistance on their behalf.*
39. *Primarily, in such circumstances HSE would expect any importer or supplier unable to meet the requirements set out in paragraphs 72-80 of HS(G) 175 on their own, to engage*

the services of an Inspection Body (IB) registered with the Amusement Device Inspection Procedures Scheme (ADIPS).

40. The scheme is currently administered by ADIPS Ltd on behalf of the Amusement Device Safety Council and is based on the system for the safety of attractions set out in HS(G) 175.
41. ADIPS Ltd acts as registration body for the competence assessment, registration and administrative control of IBs.
42. Furthermore, the ADIPs scheme is currently supported by HSE, and by all the major ride-owning trade associations who recommend it to their members for the pre-use inspection, in-service annual inspection and certification of all amusement devices.
43. HSE would consider that ADIPs have registered within their scheme suitably qualified and experienced IBs who could have completed the necessary pre-use inspection work in relation to the incident device.

Pre use inspection process

44. In addition, to the guidance in Section C of HS(G) 175 which addresses the roles and responsibilities of the designer, manufacturer, importer and supplier, the guidance clearly defines the various stages of the pre-use inspection process in Section D.
45. At paragraph 100 of Section D it states that *“The controller of an amusement device is responsible for ensuring that the three pre-use inspections are satisfactorily carried out before it is put into operation with the public, either for the first time following its manufacture or import, or after any safety-critical modification”*.
46. In circumstances where the “controller” does not have the necessary knowledge or understanding to ensure that the necessary pre-use inspection has been completed, then it would be reasonably practicable to engage the services of an Inspection Body (IB) registered with the Amusement Device Inspection Procedures Scheme (ADIPS).
47. In addition, the guidance states that *“The controller may appoint an IB to take overall responsibility for arranging the work, confirming the completion of the pre-use process and issuing the DOC, although the final responsibility for the adequate completion of the pre-use inspection process rests with the controller”*.
48. The requirements set out in HS(G) 175 in relation to the “controller” are very well defined and HSE would suggest that it is reasonably practicable for the person fulfilling this role to discharge their duty by confirming that the necessary pre-use inspection work has been completed and that the device is in fact safe for use.
49. HSE consider that the pre-use inspection process set out in HS(G) 175 provides a suitably robust framework for ensuring that fairground amusement devices are in fact safe before they it is brought into use for the first time.
50. The individual aspects of the pre-use inspection process are detailed in Section D of HS(G) 175 which can be found in Appendix 1 to this letter.

Legal Duties

51. As detailed HSE have published guidance in HS(G)175, which sets out how the owner/operator of an amusement device can discharge their legal duties.
52. Within the guidance HSE recognise and support three industry schemes for the Inspection and testing of amusement devices, including the Amusement Device Inspection Procedures Scheme (ADIPS), which HSE consider would have been an appropriate body to engage to complete the necessary inspection of the device to ensure that it was in fact safe.
53. However, it should be noted that HS(G)175 is guidance and there is no legal requirement for the owner/operator to use the ADIPS scheme and they are free to engage the services of any competent body to carry out the necessary work to discharge their legal duties.
54. Additionally, it should be noted that there is no legal requirement imposed on an inspection body including ADIPS registered bodies, to report to the relevant Enforcing Authority (HSE or Local Authority) the details of any amusement device that has either not been subject to a suitable inspection or has in fact failed an inspection.
55. The duty remains with the owner/operator to ensure that the amusement device is in fact safe as required under sections 2 and 3 of Health and Safety at Work etc. Act 1974.
56. Finally, HS(G)175 states that *“any person to whom this guidance is directed who finds a generic or serious fault on a device, which could have wider safety implications for that or other similar devices, should inform their trade association and the National Association for Leisure Industry Certification (NAFLIC). Trade associations may decide to distribute the relevant information to their members or others in the interests of safety on fairgrounds”*.
57. HSE can confirm that ADIPS inspection bodies routinely provide safety critical information to NAFLIC Technical Committee, who use this information to produce regular technical bulletins for their membership, which details the safety critical defects with amusement devices along with the remedial action required to address these issues.
58. It is also worth noting that NAFLIC maintain a digital library of these technical bulletins on their website, which can be freely accessed by their members and other parties.

Future work

59. HSE continue to work with industry stakeholders in the entertainment and leisure sector through the Amusement Safety Device Council, to improve the safety of amusement devices and following the incident at Gorleston has written to them to remind them of their obligations and signposted them to the relevant information.

60. Additionally, HSE has reviewed the scope of its existing guidance and intends to publish additional guidance on the design, operation and inspection of sealed inflatable devices, which is currently being drafted in consultation with representatives of the amusement industry.
61. Finally, the safe operation of amusement devices remains a priority for HSE and Local Authorities and forms an integral part of the annual inspection programme delivered by the designated team of inspectors who make up the HSE's National Fairground Inspection Team and the Local Authorities Health and Safety Officers.
62. I hope this reply is helpful in addressing the issues raised in your Coroner's report dated 2 April 2020. If, however, the Coroner has any further questions or requires clarification, HSE would be pleased to assist.

Yours sincerely

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Head of Entertainment, Leisure, Consumer and Commercial Services Sector