

British Horseracing Authority

# CHELTENHAM FESTIVAL REVIEW 2018

December 2018





# Foreword

## BRANT DUNSHEA

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The Thoroughbred horse is the lifeblood of horseracing, both here in Great Britain and around the world, and one of the many examples of the centuries-old association of humans with horses. The thing that unites people who work in racing is, more than anything else, the strong relationship with the horse. Beyond that emotional, visceral connection, horses are integral to our industry and there is no reason why we would want them to be anything other than healthy, happy and safe.

Things can sometimes go wrong, despite the best efforts of the many trainers, racecourses, jockeys, racing staff and vets, whose working lives are dedicated to the horses in their care. When there is cause for concern, it is right that we investigate and, as appropriate, take remedial action. It is also important that any review of welfare-related incidents, while naturally being mindful of the emotional impact, is conducted objectively and rationally, using a robust evidence base.

Before discussing the specifics of this review of the 2018 Cheltenham Festival, I would like to set the review in its broader regulatory context. A significant proportion of British racing's regulatory and licensing activity is focused on minimising the likelihood of equine injuries and fatalities, whilst improving standards of care and safety.

The British Horseracing Authority (BHA) is the government-recognised body for the regulation and governance of thoroughbred horseracing in Great Britain.

As a responsible regulator, the BHA has a mandate under the industry's Members' Agreement, to act with autonomy and objectivity on a range of regulatory matters, including equine welfare regulation.

The BHA always strives to take this regulatory responsibility even further and specifically highlights the provision of Equine Welfare Leadership as a key strategic priority. We demand standards from all licensed participants, including jockeys, trainers, and racecourses, far in excess of those required by animal welfare legislation. As a result, British racing is one of the world's best-regulated animal activities.

Horse welfare is central to the 2017-19 BHA Business Plan, with the first of our six strategic objectives being Equine Welfare Leadership. This programme of work is led by David Sykes, BHA Director of Equine Health and Welfare, and encompasses an extensive programme of research and project work focussed on delivering improved outcomes for our equine athletes.



*BHA Vet*

British racing, through the BHA, Horserace Betting Levy Board and The Racing Foundation, invested almost £2 million in veterinary research and education alone in 2017. A number of projects were commenced in line with the objectives of the strategy to provide Equine Welfare Leadership and further work has commenced in 2018.

For example, a research project led by Exeter University, to understand how horse vision affects what and how horses will see, and how they will respond to



their environment, has been collaboratively funded by the industry. The project has investigated a range of factors, including fence and hurdle visibility, with the aim of improving obstacle design and colour to reduce faller rates and injury risks in the future.



*Equine vision study at Exeter University*

Similarly, we have extended our trial of an innovative padded hurdle design as a potential alternative to traditional hurdles. These trials are showing positive early signs of reducing faller rates and further enhancing safety for horse and jockey.

A substantive collaborative project, in conjunction with the University of Bristol and funded by The Racing Foundation, has also commenced. This will result in the development of an equine welfare assessment tool, aimed at improving the capture, analysis and benchmarking of equine welfare information and continuing to raise standards of equine welfare in British racing. A further, related project includes the development of a fully-integrated database that will enable us to comprehensively assess and monitor all BHA data relating to a thoroughbred and allow defined, appropriate, evidence-based welfare decisions to be made.

The BHA sets welfare standards for our racecourses through licensing criteria. This is supported by our Racecourse Inspectorate, which focuses on a wide range of aspects including racing surfaces, obstacle design and faller rates.

While I have concentrated on outlining the BHA's regulatory and veterinary investment and requirements

around equine welfare, it is important to note that many racecourses and racehorse trainers also go beyond the mandatory licensing and regulatory requirements, in making significant investment in, and improvements to, equine welfare. For example, racecourses make continuous improvements to racing surfaces, obstacles and post-race care facilities. Trainers frequently invest in equipment and facilities that improve the health and well-being of the horses in their care.

This reflects the collective responsibility of the industry to make continuous improvements whenever and wherever there is a need to do so. While the BHA sets the overall regulatory framework and the minimum standards, everyone in the sport has a role to play in maintaining and exceeding those standards, as well as a duty to exhibit a positive, empathetic and progressive attitude to equine welfare at all times.

Public tolerance of risks to the welfare and safety of racehorses is changing. As part of this Review, we wish to emphasise the sport's recognition and understanding of this and to underline our willingness and readiness to respond.



*Inglis Drever after winning The Ladbrokes World Hurdle*

The above examples demonstrate this proactive approach to continuous learning and improvement. With that in mind, in March this year the BHA announced a review into the 2018 Cheltenham Festival, following the sad deaths of six horses during the four days of the Festival and that of a seventh horse, which was euthanised shortly after the Festival, following complications from surgery.



Whilst the equine fatality rate in British racing has reduced by one-third in the last twenty years, from 0.3% to less than 0.2% (167 of 91,360) of runners in 2017, the industry will always continue to strive for further improvement.

Six deaths during the Cheltenham Festival is simply unacceptable. We all want to see a marked reduction in fatalities, at Cheltenham in general and at the Festival, over the next few years.

As stated earlier in this foreword, in determining an appropriate response to the death of six of our equine athletes at the 2018 Cheltenham Festival, any review of this nature must be evidence-based. It must also, however, have regard for current and ever-evolving public perceptions and attitudes. Where evidence is suggestive but not conclusive, we may require changes to be made, based on a precautionary approach, if there is a chance that this could make a positive difference.

The Review Group has considered a wide range of quantitative statistical data, along with extensive qualitative feedback and opinion to arrive at its recommendations.

The BHA is committed to ensuring the recommendations of this Review are implemented, to achieve improved outcomes in the medium term. We will continue to evolve the licensing and regulatory framework in line with these findings and future analysis. The BHA commends the findings of this review and expects the industry to take collective responsibility for the implementation of its recommendations.

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# Executive Summary

## OVERVIEW

Equine welfare is the top priority and primary focus for British horseracing. This claim must have, and be seen to have, genuine substance. The British Horseracing Authority (BHA), the sport's governing body and regulator, requires the entire industry to share and demonstrate the strongest-possible commitment to equine safety, health and well-being.

This Review is only one step towards underlining this commitment. It does not provide all the answers and, with that in mind, we must use it as part of a collective and concerted industry effort to improve equine welfare standards continuously and progressively.

In its role as regulator, the BHA:

- Identifies risks to equine welfare and opportunities for continuous improvements in standards (e.g. through reviews and research);
- Sets minimum welfare standards (through setting and reviewing the licence conditions and rules, with which all racecourses, trainers and jockeys are required to comply)
- Enforces welfare standards (e.g. via disciplinary processes, inspections and penalties);
- Undertakes research and other projects to foster innovation and improvement.

The BHA thereby sets the framework within which the industry is required to take responsibility. It is not enough for the regulator simply to define and enforce the things that can and cannot be done. The wider industry must take (and, again, be seen to take) responsibility on a daily basis, constantly taking action and making decisions in the best interests of the sport's equine athletes.

The BHA is rightly held to account for standards of equine welfare in racing. By extension, the BHA's role requires us to hold the wider industry to account to

ensure these standards are maintained and, wherever possible, improved.

Wherever there is cause for concern, the BHA will act. For example, we regularly review and revise licensing requirements for racecourses and participants and will impose restrictions or conditions on those licences to enforce change if necessary.

Outcomes from Cheltenham Racecourse ("Cheltenham"), where the fatality rate had been higher than the average for all racecourses, had been discussed and monitored at regular "mini reviews" involving Cheltenham, JCR and the BHA, which take place routinely every year. These reviews led to changes designed to reduce the risks.

We indicated to Cheltenham and JCR that, should these measures not prove to be fully effective, we would undertake a broader review. JCR and Cheltenham have always fully supported the need for a review and have actively contributed to the findings presented here.

## THE CHELTENHAM FESTIVAL 2018



*Runners in the Sky Bet Supreme Novices' Hurdle*

The four-day Cheltenham Festival, which takes place annually in March, is widely regarded as Jump racing's flagship fixture, bringing together the best British and foreign trained horses to contest some of the most prestigious and competitive races in the British Jump racing calendar.



Regrettably, there were six equine fatalities at the 2018 Festival; three occurring in the final race on the fourth and final day.

A seventh horse was euthanised shortly after the Festival, following complications from surgery. We are changing our approach to fatality reporting from 2019. However, to maintain consistency with previous data collection and reviews, which are based on reports from Racecourse Veterinary Surgeons rather than information received subsequently from other sources, we have not included the seventh fatality in this statistical analysis. However, the incident was scrutinised as part of the review procedure.

The six fatalities at this year's Festival represent a rate of 1.3% of 2018 Festival runners, compared to the nationwide Jump racing average of 0.4% (and Cheltenham's non-festival 8-year average of 0.6% and Festival 8-year average of 0.8%). They understandably caused considerable unease and discussion, both inside and outside the industry. The BHA considered this an unacceptable fatality rate and instigated a review, as previously indicated.

The Review was conducted, and this report compiled, by a Review Group set up by the BHA.

The Review has been thorough, considering a wide range of factors that may impact equine health and welfare, not only at the Festival, but in all racing at Cheltenham Racecourse. Some of the findings, and related recommendations, will also apply across other Jump racecourses.

## SCOPE OF THE REVIEW

The Review Group focused its investigations on those aspects most able to improve competitor safety and welfare.

The Review encompasses consideration of:

- Track factors (e.g. race surface condition, obstacle design, course topography);
- Race conditions and programming (e.g. claiming allowances, handicap ranges, position on race programme);

- Veterinary considerations (e.g. previous injuries);
- Participant knowledge and experience (e.g. past performances, course experience, trainer/rider incident rates)
- Other race factors (e.g. starts, field sizes and safety factors)

## REVIEW AIMS

The aim of this review is to establish whether any specific, distinguishable circumstances contributed to the high rate of fatalities at the 2018 Festival, and at Cheltenham generally, and to provide recommendations that will help to minimise the level of risk to our equine athletes. These recommendations will form the basis of an Action Plan. The BHA will be speaking to all relevant parties to ensure this Action Plan is in place by February 2019.

## REVIEW GROUP TERMS OF REFERENCE

*To review the circumstances potentially associated with the six fatalities at the 2018 Cheltenham Festival and more broadly any other recent fatalities and long-term injuries at Cheltenham Racecourse during both Festival and non-Festival fixtures. Seeking possible ways in which the level of risk to horses may be reduced in all future fixtures conducted at Cheltenham.*

## REVIEW GROUP MEMBERSHIP

The Review Group comprised the following personnel:

- Brant Dunshea – BHA Chief Regulatory Officer (Executive Lead)
- David Sykes – BHA Director of Equine Health and Welfare
- Emma Marley – Head of BHA Racecourse Operations
- BHA Racecourse Operations Department
- BHA Racing Department
- BHA Veterinary Department



- Dr Sarah Rosanowski – PhD (Veterinary Epidemiology), PGDipVCS (Distinction), Bsc – Assistant Professor in Evidence-Based Veterinary Medicine

## RESEARCH AND CONSULTATION

Reports and feedback have been generated via a wide range of sources, detailed below:

- Feedback from trainers and jockeys directly connected to the equine fatalities, and feedback from other jockeys who rode at the 2018 Festival.
- Video analysis of all fatalities and falls at the Festival conducted by: BHA Senior Inspector of Courses, Richard Linley; BHA Veterinary Advisor, Anthony Stirk; BHA Starters (ex-Jump Jockeys) Robbie Supple, Stu Turner and James Stenning; BHA Racing Department; and Jump jockey and PJA Safety Officer, Wayne Hutchinson.
- Appraisal of Festival race starts by the BHA starting team.
- Comprehensive statistical analysis conducted by Dr Sarah Rosanowski (consultant), and BHA Veterinary, Racing and Racecourse Departments.
- Evaluation of post-mortem and injury reports from the Festival and other Cheltenham fixtures.
- Assessment of the BHA Senior Inspector of Courses reports for Cheltenham over a number of years.
- Examination of Cheltenham's weather, track, drainage and obstacle preparation reports.
- Engagement with representatives of animal welfare organisations, the Royal Society for the Prevention of Cruelty to Animals (RSPCA) and World Horse Welfare (WHW).
- Stakeholder consultation with Jockey Club Racecourses (JCR), Racecourse Association (RCA), National Trainers Federation (NTF), Professional Jockeys Association (PJA), and the Racehorse Owners Association (ROA).

## MAIN FINDINGS

The following findings from our analysis provided overall factual context. These findings have informed the recommendations outlined later in this summary:

- There are numerous and significant differences between racing at the Festival, racing at Cheltenham outside of the Festival, and racing at all other Jump fixtures. As such, it is not always possible to make direct statistical comparisons;
- Non-track factors (e.g. veterinary, participant, and race conditions) could potentially have an equal, or greater influence on adverse events than factors linked to the track;
- Average faller and fatality rates for all fixtures at the course (2013-2018) are 5.77% and 0.64% respectively, above the national fatality average of 0.4%;
- There were six fatalities at Cheltenham Racecourse in race meetings prior to the Festival during the 2017/18 season, but none of these were due to factors linked to the track;
- Two fatalities occurred on Tuesday 13 March and four on the final day, Friday 16 March, at the 2018 Festival;
- Participant feedback does not highlight ground or going as a significant contributory factor to faller or fatalities at Cheltenham;
- The Senior BHA Inspector of Courses scrutinised the course on every day of the 2018 Festival, walking both New and Old Courses, and verifying the accuracy of the going reports;
- Research continues to indicate that the risk of falls and fatalities is lower on softer ground conditions;
- Steeple chase races present the greatest risk to competitor welfare;
- The Racecourse Executive confirmed that obstacles were prepared as normal, although weather reports highlight an unusual lead-in to The Festival, with snow still lying in some areas one week prior;

- Expert video analysis concluded that interference was not a leading factor in horse fatalities at the Festival 2018;
- All horses that were fatally injured at the Festival 2018 had run at least twice in the preceding core Jump season (October – March), five had run four or more times. All except one had more than ten career starts;
- All of the handicap race fatalities were within the handicap range for their races;
- One of the fatalities had previously suffered an injury sustained at a racecourse<sup>1</sup>;
- The Grand Annual Handicap Chase had a higher than average fatality and faller rate. However, it was concluded that this was not due to its positioning in the race programme;
- Over the period reviewed, the National Hunt Chase for Amateur Riders, the Grand Annual and the Champion Chase had the highest faller rate of Festival races.
- Some of our findings and recommendations are likely to apply more widely than just to Cheltenham Racecourse or The Festival.

## RECOMMENDATIONS

Based on the evidence, the BHA has concluded that no single factor was definitively responsible for the six equine fatalities at the 2018 Cheltenham Festival. Consequently, we have not recommended an all-encompassing action or sweeping solution.

However, taking the above findings into account, and based on comprehensive evaluation of all research and stakeholder feedback, the Review Group has made 17 recommendations, which are discussed in more detail within the report. These are areas where improvements must be made, and/or where preventative measures to reduce risk and enhance race safety can be taken.

These recommendations will be further developed into an Action Plan by February 2019, the implementation of which will be required by the BHA, working with Cheltenham, JCR and others as appropriate. This will

include clear objectives and timescales, and relevant recommendations will be clearly linked to Racecourse licence conditions for 2019. We will be writing to all relevant stakeholders regarding the main findings and our expectations regarding implementation.

Note that the recommendations below are listed according to the order of the report. They are not listed in order of importance and/or priority.

### Track factors

1. The Racecourse Executive must continue to adhere to recommendations made in the 2006 report whereby, in drier conditions, irrigation policies should ensure that the Festival begins on ground slower than Good (which is slower than the General Instruction for Jump racing, which is good ground, and no firmer than good to firm). This continuing stipulation applies to all Cheltenham courses (Old, New and Cross Country). Going reports at The Festival will be monitored in line with this requirement **(ACTION: Cheltenham)**.
2. JCR should continue to trial the use of the one-fit padded hurdle, the Southampton University hurdle design (supported by the RSPCA), along with other safety-driven initiatives. Further collaborative industry research and development into alternative obstacle design and materials that may reduce risk factors will continue and Cheltenham and JCR (and all other Jumps courses) are required to continue to engage positively with this **(ACTION: JCR, BHA)**.
3. Cheltenham and JCR to monitor and consider the outcomes of Exeter University's Horse Vision project, with a view to trialling obstacle colouring at their schooling grounds and subsequently at a JCR racecourse, should trials prove successful. Cheltenham, JCR (and all other Jumps courses), along with relevant stakeholders to make any recommended changes to obstacle colouring arising from these trials. The BHA will continue to expedite trials on training grounds and racecourses during 2018 and early 2019 **(ACTION: Cheltenham, JCR, BHA, racecourses)**.

<sup>1</sup> Some Plan – sustained a head wound post-fall 13.11.2016

4. Cheltenham Racecourse and the BHA must continue to monitor faller rates by individual obstacle, in order to identify emerging risk areas, taking remedial action where possible. For example, Fence 9 on the Old Course will be monitored closely and changes to this fence will be required if there is no immediate improvement in faller/fatality rates **(ACTION: Cheltenham, BHA)**.

#### Veterinary factors

5. Trainers of all horses competing at the Festival **must** have completed a Medication Declaration Form, returned to the BHA Equine Health and Welfare Department, ten days before the day of the race in which the horse is entered to run. Submission of the completed form is the responsibility of the trainer concerned. This form will outline Medication that the horse has received in the previous 35 days, and any Medication with a long-term effect that the horse has received in the previous six months. This process should also be introduced at other racecourses, prioritising those with the highest faller/fatality rates **(ACTION: Trainers, racecourses, BHA)**.
6. Pre-Race Examinations will be increased to include all runners in all races at the Festival. This inspection will also include and require presentation and review of a second Medication Declaration Form outlining any medications or treatments administered in the previous 10 days. Cheltenham to provide trot-up areas in which these examinations can take place. The BHA will enforce rule (B) 6.1.9, using this rule to withdraw horses deemed unsuitable to race, based on the results of these examinations. Stewards will investigate such incidents and take further action as required **(ACTION: Trainers, Cheltenham, BHA)**.
7. Results of Post-Mortem Examination of any fatalities will continue to be reviewed, alongside Medication Records for the 45 days prior to the day of the race, to identify common risk factors and inform future medication rules and policies **(ACTION: BHA)**.

8. Cheltenham to ensure adequate provision and most effective placement of cooling facilities, including equine cooling fans **(ACTION: Cheltenham)**.

#### Participant and experiential factors

9. The industry **must** support a major research project to develop a predictive model for identifying risk factors for all Jump racing, inclusive of non-course factors, such as horse history and performance, rider and training factors. Any risks arising from this significant work must be addressed and mitigated appropriately. A timeline and project plan to be developed as soon as possible, enabling this work to begin in early 2019 **(ACTION: BHA, all industry stakeholders)**.
10. The BHA will undertake analysis of faller rates by trainer and jockey for Cheltenham and all Jump racing. Individual trainers and/or jockeys who have an incidence of fallers significantly higher than the historical average will be required to engage constructively with the BHA to consider the drivers of, and actions to improve, high incidence rates. Findings from this analysis may result in future changes to licence and/or race entry conditions **(ACTION: BHA, trainers, jockeys)**.
11. Enhanced welfare risk management education to be integrated into compulsory training modules for riders and trainers, implemented, e.g. via the racing schools and through supporting educational materials **(ACTION: BHA, racing schools, trainers, riders)**.
12. Compulsory daily briefing of riders during the Festival to include increased focus on their responsibilities towards equine welfare **(ACTION: Cheltenham, BHA, riders)**.
13. Compulsory course walks with a jockey coach to be introduced for all riders who have not ridden the Cheltenham course since the beginning of the previous Jumps season **(ACTION: Cheltenham, BHA, riders)**.

14. The welfare of the horse is a primary responsibility of all riders. Rules relating to pulling up fatigued runners **must** be appropriately scrutinised and enforced, to encourage positive and responsible behaviour. Increased focus on this area to be included in improved training and assessment linked to the introduction of the new Stewarding model (**ACTION: BHA, riders**).

### Race conditions and programming factors

15. Race conditions of the Martin Pipe Conditional Jockeys' Handicap Hurdle must be altered to remove all rider weight claiming allowances, thereby incentivising connections to secure the services of the most experienced jockeys (**ACTION: Cheltenham, BHA**).

### Other race factors

16. The safety factor for all two-mile steeple chases should be reduced from 24 runners to a maximum of 20 on both Old and New Courses (**ACTION: Cheltenham, BHA**).
17. Cheltenham Racecourse to work with the BHA and their Media rights representatives, to develop precise race time sectionals to assess correlation between race pace and risk via predictive modelling (**ACTION: Cheltenham, BHA**).

## CONCLUSION

It is important to emphasise that the publication of this Review is not the end of the process in relation to equine welfare. It should instead be regarded as the latest step in a concerted and continuing effort by the whole of the racing industry to improve welfare and safety standards. Again, we emphasise the importance of demonstrating to public and political audiences that there is genuine substance underpinning this commitment.



*Vets keeping an eye on the runners*

We also underline that everyone involved in racing has a responsibility to showcase the sport in the best possible light at all times.

Regarding this Review, we expect its recommendations and requirements to make a positive and tangible difference, some in the short term and others in the longer term. We will continue to monitor the situation closely. Should it fail to improve, we will review any new evidence and data and act accordingly.

We also wish to emphasise that, whilst these recommendations are aimed at reducing risk of fatalities at Cheltenham Racecourse, a number are also relevant to British Racing overall, and Jump Racing in particular. They will therefore require action not only from Cheltenham, but from many others in the industry, including all Jump racecourses, trainers, jockeys (amateur riders and professionals), racehorse owners and the BHA.

The BHA will also seek to apply the principles of these recommendations in order to further reduce risk across all of our sport, e.g. enforcing change as necessary through the use of Racecourse Licencing conditions and the Rules of Racing.





*Crowd at the Cheltenham Festival*

It is clear that public and political attitudes to any actual or perceived shortcomings in animal welfare standards are toughening. These audiences provide racing with its moral, economic and political licence to operate. Remaining relevant to modern audiences requires us to reflect social norms and values. Any failures around equine welfare standards constitute a serious threat to the future of our sport.

Along with many others, we hope to relish the spectacle of remarkable racehorses displaying their skill and athleticism, at Cheltenham and beyond, for years to come. Any failure to tackle concerns over equine welfare would constitute, however, an existential threat to the sport. In light of this, we require everyone involved in the racing industry to do whatever possible to lower the risks to which racehorses are exposed and to provide the high quality of care that they truly deserve.

# Introduction

## BACKGROUND TO THE REVIEW

Horse racing is a sport inherently susceptible to risk and the industry is committed to minimising and, where possible, eliminating hazards posed to both horses and riders.

The BHA strives for transparency and publishes information about equine fatalities on its website, using research, safety measures, regulation, education and stakeholder consultation to reduce fatality rates to as close to zero as possible. This has contributed to a significant reduction of the overall fatality rate within British racing, which has decreased by a third over the past 20 years. Meanwhile the fatality rate in Jump racing has declined to 0.4% of runners.

Cheltenham racecourse stages 16 fixtures per season; their feature Festival occurring annually in March. The Festival occurs over four days, consists of 28 races, 24 of which are Class 1 races.

Cheltenham stages 24.9% of all Class 1 Jump races in Britain. These prestigious and highly competitive races are part of what makes racing at Cheltenham unique and therefore difficult to compare directly with other courses and fixtures.

Unfortunately, six equine fatalities were recorded at the 2018 Cheltenham Festival, five occurring in steeple chases and one in a hurdle race. This represents a fatality rate of 1.36% of 2018 Festival runners compared to the nationwide Jump racing average of 0.4% (and Cheltenham's non-festival 8-year average of 0.6%, and Festival 8-year average of 0.8%). The Grand Annual saw three fatalities on the fourth and final day. Other races which resulted in a fatality at this year's Festival included the Listed Novices' Handicap Chase (2m4f), the National Hunt Chase for Amateur Riders (4m) and the County Hurdle (2m1f).

The last published review in relation to the Cheltenham Festival took place in 2006. This set out a series of recommendations, addressing pre-race veterinary

checks, track conditions, obstacle placement, horse and rider eligibility along with a reduction in safety factors, all of which have been successfully implemented<sup>2</sup>.

The Review Group has explored in detail all 'adverse events' (e.g. fatalities, long-term injuries, and falls) at Cheltenham, at both the Festival and other Cheltenham fixtures, since 2007.

Various key risk factors have been identified that contributed to these adverse events culminating in 17 recommendations being made with the aim of further enhancing the health and welfare of the equine athlete when racing at Cheltenham and, to an extent, when competing in Jump racing generally.

The central areas of focus fall broadly into the following categories:

- The Courses;
- The Obstacles;
- Participant Factors;
- Starts, Safety Factors and Race Tempo;
- Programming and Race Conditions;
- Veterinary Histories and Protective Measures.

Specifically, the review centres on the many varied factors that relate to each of the above categories, in an effort to identify any key themes that emerge. This includes, but is not limited to, factors such as weather conditions, going, fence positioning, field sizes and age. Some of these factors were considered alongside programming and race conditions.

Significant emphasis is placed on the analysis of each fall and any subsequent fatality, from a veterinary perspective, to understand causation and to identify underlying issues that may assist future decision making arising from the review process.

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<sup>2</sup> See Appendix 2 for recommendations and delivered initiatives of the 2006 Cheltenham Festival Review.

## CONSULTATION WITH KEY PARTIES AND STAKEHOLDERS

The Review Group consulted with a wide range of groups as part of the Review including:

- BHA Ethics Committee (BEC)
- Cheltenham Racecourse (Cheltenham)
- Cheltenham Racecourse Veterinary Surgeons (RVS)
- Jockey Club Racecourse Management (JCR)
- Jockeys – including jockeys of 2018 Cheltenham fatalities
- National Trainers Federation (NTF)
- Professional Jockeys Association (PJA)
- Racecourse Association (RCA)
- Racehorse Owners Association (ROA)
- Racehorse Trainers - including Trainers of 2018 Cheltenham fatalities
- Royal Society for the Prevention of Cruelty to Animals (RSPCA)
- World Horse Welfare (WHW)

Consultation consisted of a combination of written responses, one-to-one discussions, verbal feedback, and meetings with participant bodies.

## STATISTICAL AND TECHNICAL RESEARCH ANALYSIS

The Review Group scrutinised statistical and technical information relating to Cheltenham Festival and non-Festival races.

The aim of this review is to determine whether there was a potential link between factors with adverse events occurring during racing at Cheltenham racecourse, with a specific focus on the Cheltenham Festival. An “adverse event” is defined as any raceday event with a fatal outcome, all falls, and all veterinary events where a horse will not return to racing within three months (e.g. fracture and tendon injury), henceforth called long term injury (LTI).

The analysis used a subset of the Jump races (hurdles and steeple chase) held at Cheltenham racecourse to

identify all horses which encountered an adverse event, and course, race, horse, trainer, and rider related risk factors. Comparison between Cheltenham Festival races and non-Festival racing have been made<sup>3</sup>.

Objectives of the statistical analysis include:

1. Describing the differences between the Cheltenham Festival, other racing at Cheltenham, and all Jump racing, with a specific focus on the variables examined in the risk factor analysis.
2. Describing the number of horses falling, injuring and experiencing a fatal raceday event at Cheltenham racecourse over the study period and specifically for the Cheltenham Festival.
3. Identifying associations between adverse events and whether or not the race was held during the Cheltenham Festival.
4. Describing the type of adverse events experienced, stratified by factors like the course/track, the race, the going, the year and the fence, for all races run at Cheltenham and specifically for the Cheltenham Festival.
5. Describing and identifying associations between fatality and other possible contributing variables.
6. Identifying associations between each adverse event outcome and other possible contributing variables (e.g. age), using variables identified in other parts of the Cheltenham review and based on previous raceday risk factor studies.
7. Discussing recommendations based on the analysis for potential intervention and/or risk mitigation.

We then analysed Logistical Regression Modelling, in order to further quantify the impact of a range of factors on a horse’s probability of falling during a race at the Cheltenham Festival. This approach allowed for the isolation of the impact of any singular factor, which is critical when results are to inform policy decisions.

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<sup>3</sup> See Appendix 1 for statistical analysis interpretation.



*Runners in the CF Roberts Electrical & Mechanical Services  
Mares' Handicap Chase*

For example, a particular race may exhibit relatively high faller rates, but without analysis of this kind, it is impossible to determine which of the race conditions might be a main contributing factor; it could be the distance, the rider type, horse type, raceday conditions etc. A logistic regression analysis can look at the impact of each of these, all things being equal.

This analysis covers all Hurdle and Chase races run at the Festival from 2007 to 2018, and so includes 5,451 runners and 308 fallers. All British and Irish form over this time period has been included for analysis. For the purposes of this study, a faller is defined as any horse which either fell, or was brought down by another during a race at the Cheltenham Festival.

The following variables were input into the model, where the dependent variable was whether or not a horse fell:

- Field size
- Going
- Race distance
- Jump type
- Horse age
- Novice status
- Rider type
- Number of runs in last 365 days
- Number of runs at Cheltenham in last 365 days
- Number of non-completes in last 365 days
- Number of career runs at Cheltenham

All Festival runners from 2007-18 have been analysed. Any form metrics will include all runs in GB and Ireland from 2002 onwards.

This particular aspect of research focused on fallers, and not fatalities. If falls are prevented, then the risk of a LTI or fatality is reduced.

Other statistical analysis conducted by the Review Group includes:

- Fence-by-fence data on all fallers and unseated riders since 2010;
- Video analysis of all Cheltenham fatalities since 2010 (festival & non-festival) including subjective causes of incidents by an experienced and diverse panel;
- Race condition changes since 2010;
- Horse performance history;
- Rider type and performance;
- Trainer performance;
- Going;
- Equine age;
- Time since last start;
- Starts in last 6 months;
- Safety Factors (Field Size);
- Race type.



## STEPS TAKEN

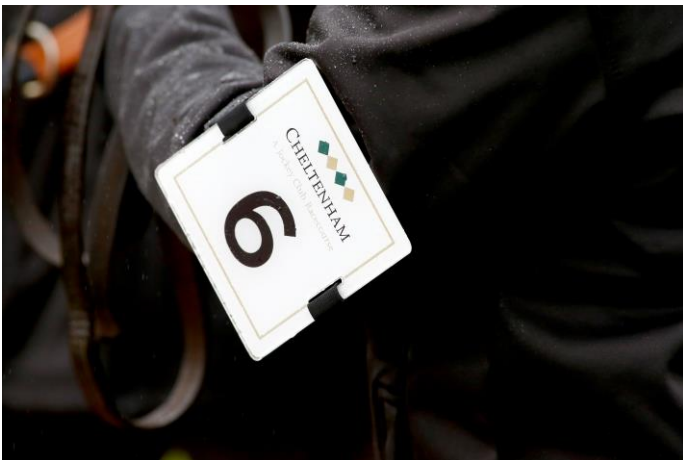
Drawing on the above consultation process and research analysis, the Review Group has produced this report, including recommendations for action.

To enable a pragmatic and timely approach to further enhance safety at Cheltenham, the Review Group has been in consultation with JCR and the BHA's Course Inspectorate regarding physical course requirements arising from this review.

It was agreed, based on the recommendations of this report, that no physical alterations were deemed necessary prior to the commencement of racing at Cheltenham in October 2018.

The Course Inspectorate interviewed trainers and senior jockeys in relation to course conditions and obstacles, extremely positive comments regarding track and obstacle presentation for racing were noted.

All areas around obstacle positions and entire racing surface will be reviewed as part of customary annual maintenance and inspection processes to ensure the highest standards of preparation for the forthcoming season.



*Groom's number armband*

# Part One

non-Festival and all Jump racing. Half of the races held at the Festival were handicap races, compared to 61.2% (102,708) of Jump racing.



*Runners in The Sky Bet Supreme Novices' Hurdle jostle for position at the start*

There were significant differences between the field sizes for hurdles, steeple chase and bumper races for starts at the Cheltenham Festival, non-Festival and other Jump races (Table 1). There was a significant difference between the field size for novice and non-novice races at the Cheltenham Festival, non-Festival and other Jump races.

Race type	Levels	Median	Interquartile range	Maximum
<b>Hurdles</b>	Festival	22	15 - 24	28
	Cheltenham	13	8 - 17	24
	Jumps	10	8 - 12	24
<b>NHF</b>	Festival	23	22 - 23	23
	Cheltenham	15	12 - 17	19
	Jumps	10	8 - 12	20
<b>Steeplechase</b>	Festival	20	15 - 23	24
	Cheltenham	12	8 - 15	20
	Jumps	8	6 - 10	40
<b>Novice</b>	Festival	15	12 - 19	28
	Cheltenham	8	6 - 11	20
	Jumps	8	6 - 11	21
<b>Non-Novice</b>	Festival	23	17 - 24	28
	Cheltenham	13	10 - 16	24
	Jumps	9	7 - 12	40

Table 1: Field size analysis Festival, non-Festival and all Jump racing (2013-18)

The median age of horses was 7 years (Interquartile range (IQR) 6 to 8) for the Festival and 7 (IQR 5 to 8) for non-Festival and other Jump racing.

## CHELTENHAM COMPARISON

### INTRODUCTION

Analysis was conducted, using a subset of the Jump races (hurdles and steeple chase) held at Cheltenham racecourse from 2013 to 2018, to identify all horses with an adverse event, and course, race, horse, trainer, and rider related risk factors. Comparison between Cheltenham Festival, non-Festival and all Jump racing has been made.

### THE DIFFERENCES BETWEEN THE CHELTHENHAM FESTIVAL, NON-FESTIVAL AND ALL JUMP RACING

In total, 1,360 (47.5%) and 1,366 (47.7%) of starts during the Festival were in hurdle and steeple chase races, respectively<sup>4</sup>.

These proportions were comparable to non-Festival racing at Cheltenham, with more steeple chase starts and fewer hurdles starts than other Jump racing. There was a significant difference between the type of races held and the number of starts for Festival, non-Festival and non-Cheltenham Jump racing.

Overall, 1,230 (43%) of starts at the Festival during the period studied were on 'Good' going, with no starts on going rated as Good to Firm, Firm or Hard. There was a significant difference between the going and the number of starts for Festival, non-Festival and non-Cheltenham Jump racing.

There were no maiden races held during the Festival, whereas 8.3% (14,529) of Jump racing starts were maiden races. There was a significant difference between the number of novice starts between Festival,

<sup>4</sup> See Appendix 3 for a comparison of variables between Festival, Cheltenham & Jump Racing 2013-18

There were statistically significant differences between starts at the Cheltenham Festival, starts in non-Festival Cheltenham racing and for all other Jump racing.



*The start of The Pertemps Network Final Handicap Hurdle*

There were significant differences between horses starting in the Festival, non-Festival and Jump racing and the time since last start, with 60.2% (1,722) of starts at the Cheltenham Festival having started a race in the 31 to 90 days previously, while horses starting at Cheltenham and all Jump racing had started in the last 30 days with 49.6% (2,273) and 56.7% (98,346), respectively<sup>5</sup>.

Festival races had a lower completion rate (78%) than non-Festival (84%) and all Jump racing (84%).

In summary, races held during the Cheltenham Festival are different to races held at Cheltenham on other occasions, and different from all other Jump racing. As such, there may be risk factors that could contribute to adverse events that are specific to the Cheltenham Festival. This review will go on to explore this possibility in more detail.

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<sup>5</sup> See Appendix 4

# Part Two

## TRACK FACTORS

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### INTRODUCTION

The Review Group sought to determine whether the conditions of the racing surface and/or the going had unduly contributed to the risk of equine fatalities at the Cheltenham Festival, and whether they could be improved in future.

It is important to note that the expertise of the Clerk of the Course and groundstaff team are highly regarded among participants and stakeholders, the team recently winning the Special Merit Award category in the 2018 RCA Groundstaff Awards for their performance in preparing the tracks for the 2018 Festival in adverse conditions<sup>6</sup>.



*Simon Claisse, Clerk of the Course at Cheltenham*

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<sup>6</sup> “The team at Cheltenham did a magnificent job in preparing the course for the Festival not least removing tons of snow manually to minimise damage to the turf, without that care and attention there is no doubt it would have jeopardised the meeting. What they achieved in such a short time frame was a huge effort by all concerned.” (RCA, 2018)

The Cheltenham Festival is a distinctive event, as racing takes place across three different courses over four consecutive days. The Review Group aimed to:

- Compare incident rates across these tracks, to establish whether a particular course, or courses, had higher adverse outcomes than others;
- Assess the effect of racing surface conditions, specifically going, and if this was a contributing factor to equine fatalities and incident rates.

### VIDEO ANALYSIS

The Review Group commenced investigations by assessing visual evidence of fallers which culminated in fatalities, followed by visual evidence of all fallers (including non-fatalities) at the Festival between 2009-18, using multi-angle video replays which could be viewed in slow motion.

This video analysis focused on determining in running Primary Perceived Risk Factors (PPRF) such as course topography, surface condition, obstacle, horse error, fatigue, speed, previous injury, interference, rider error etc., which might have contributed to the fatality.

These are primarily events that occur on the course ‘in running’ rather than risk factors applicable to an individual horse pre-race. There is a considerable degree of subjectivity involved in the process but with continued experience, such analysis could identify improvements in procedures and practices, leading to further reductions in racecourse fatality rates.

Analysis was conducted by Richard Linley (BHA Senior Inspector of Courses and ex-Jump Jockey), Anthony Stirk (BHA Veterinary Advisor), Wayne Hutchinson (Jump Jockey & PJA Safety Officer), Robbie Supple, Stu Turner and James Stenning (BHA Starters and ex-Jump Jockeys) along with members of the BHA Racing Department. The following key points were determined:

- There were no clear visual common denominators in the 2018 Festival races where a fatality occurred e.g. location on track, rider error, horse error, speed or interference.



- Two fatalities occurred at steeple chase fences on downhill slopes on the Old Course (one in the Listed Novices' Chase and one in the National Hunt Chase).
- One horse's fall in the Grand Annual (and subsequent fatality) may have been caused by interference, adjusting his stride pattern on the approach to the last fence to avoid a loose horse.
- One fatality was not related to a fall. The horse suffered a compound fracture between hurdles on the approach to the final flight. This was also the only fatality to occur in a hurdle race.
- No clear grouping of injury location was determined on either the Old or New Course to indicate any particular area of e.g. bad/false ground.
- All the fatalities occurred in fields of 16+ runners.
- Only one of the fatalities had previously recorded a racecourse-sustained injury (head wound).
- Feedback received from the trainers does not pinpoint any previous major injury issues.
- All six fatalities were trained by different trainers.
- Four of the fatalities were on the New Course (but historically there is little injury rate difference between the Old and New Courses) - three in steeple chase races one in a hurdle race.
- Five of the fatalities were chasers. This figure is nearly three times the 2017 eight year average, but the sample size is too small to say whether this is statistically significant.
- The Grand Annual Challenge Cup Handicap Chase, the final race of the 2018 Festival, had a higher than usual fatality rate.
- Three of the fatalities were due to spinal fractures while the other three were due to limb fractures.
- All fatalities had at least four career runs; the majority 10+ runs.
- All had run at least twice in the past 6 months; the majority 4+ runs.

## COMPARISON OF CROSS-COUNTRY, OLD AND NEW COURSES

Five of the six fatalities during the Festival 2018 occurred on steeple chase tracks. The one exception suffered a compound fracture between hurdles (2<sup>nd</sup> last and final flight.)

Customary practice is for the BHA Senior Inspector of Courses to conduct a full inspection of both Old and New Courses prior to their racing seasons. The Cross-Country Course, due to its unique characteristics, is inspected prior to each raceday use. This process ensures compliance with BHAGI 3.2 (Track), 3.5 (Fences) and 3.6 (Hurdles).

Non-completion, fallers, long term injuries (LTI's) and fatalities ('adverse events') across all three courses were investigated and concluded that, whilst the New Course had the highest fatality rate, it did not have the highest incidence rate of the other three outcomes investigated<sup>7</sup>.

Accordingly, the Review Group could only determine from this data that no one course was particularly responsible for adverse events, but agreed that further analysis should be done on individual obstacles (page 23).

## WEATHER

The 2017-18 Jump season proved especially challenging for both racecourses and participants with 72 Jump fixture abandonments between September 2017 and April 2018 (see table 2). During the prime preparation months for Cheltenham performers, 38 fixtures were lost due to bad weather between December 2017 and February 2018.

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<sup>7</sup> See Appendix 5 for Statistical analysis of Adverse Events by Course

Reason	Number of abandonments
2017 Welsh National was rescheduled for Saturday 6 January	1
Frost/Frozen	19
Snow	19
Unsafe Course	3
Waterlogged	30
<b>Total</b>	<b>72</b>

Table 2: Reasons for abandonments (Sept 17 – April 18)

Cheltenham was able to stage all nine of its scheduled fixtures prior to the Festival, albeit averaging slightly softer going during the 2017-18 season compared to the previous year. However, it is unlikely that track wear was a significant issue, given that 93 fewer runners appeared over these 9 fixtures when compared to the 2016/17 season<sup>8</sup>.



*The Sun Bets Stayers' Hurdle*

Due to the weather forecast the first part of the Festival inspection was completed on the 24th February 2018, subsequent inspections were completed on the 5th, 9th and 12th March as the tracks were covered with snow and frost.

Leading up to the meeting, a concerted effort was made to remove snow manually from the course where there were drifts of up to four feet high. This ensured that damage to the racing surface, which would otherwise have undoubtedly occurred, was successfully avoided.

<sup>8</sup> See Appendix 6 for Two-year runner and going data.

## RACING SURFACE AND GOING

All courses were inspected<sup>9</sup> prior to the Festival. As described, inspections were fragmented due to prevailing weather conditions and it was important to reduce any damage to the racing surface. Despite heavy snowfall in the weeks prior to the meeting no issues with Going or grass cover were reported by the Senior Inspector of Courses.

The BHA's Senior Course Inspector was in attendance for each day of the Festival and the Official Going description provided by the Clerk of the Course was corroborated by the inspector and Chairman of the Stewards on duty.

Since 2013, 43% of Festival starts have occurred on 'Good' going. Statistical analysis shows that Long Term Injuries (LTIs) are most prevalent on this going while fatalities transcend a range of conditions from 'Good' through to 'Soft'.

Non-completion is significantly higher on slower/softer conditions or 'Heavy' going, which is expected due to conditions being more taxing on the horse's stamina. This is mostly due to horses being pulled up, which is regarded as a positively-motivated welfare action.

When steeple chase and hurdle races are compared since 2007 (figures 1-4), fatalities generally decrease in softer/slower conditions. There is not a clearly identifiable trend in fallers over both codes in relation to going, albeit incidence rate of fallers over hurdles is lowest on Good to Soft.

<sup>9</sup> 5<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup> March 2018 by Senior Inspector of Courses, Richard Linley.

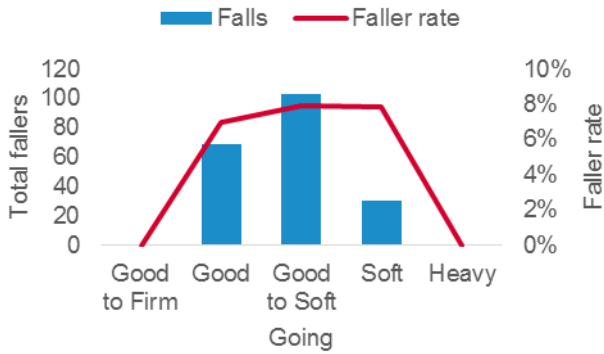


Figure 1: Incidence rate of fallers in steeple chase races at Cheltenham Festival (2007-2018) by Going Description



Figure 4: Incidence rate of fatalities in hurdle races at Cheltenham Festival (2007-2018) by Going Description



Figure 2: Incidence rate of fatalities in steeple chase races at Cheltenham Festival (2007-2018) by Going Description

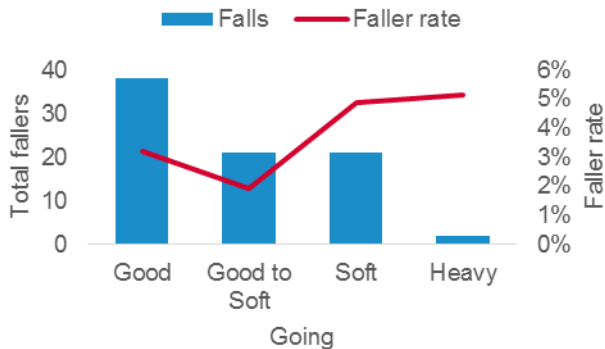


Figure 3: Incidence rate of fallers in Hurdle races at Cheltenham Festival (2007-2018) by Going Description

Since increasing the width of the course in 2004 and creating more efficient use of the racing surface, Cheltenham Racecourse has, combined with reduced safety factors for the two December and two January fixtures, managed to reserve fresh ground for the Festival, and in particular for the New Course.

Day one of the Festival (Tuesday 13 March 2018) started on 'Heavy, Soft in Places' changing to 'Soft, Heavy in Places' after Race 5 of 7, partly following rider feedback on conditions through the day.

Competing on 'Soft' or 'Heavy' going had the lowest probability of fatality and LTI, although was the cause of slightly higher probability of fallers and non-completion.

Based on this analysis the Review Group concludes that going conditions at the Festival, though potentially impactful on completion rates, was unlikely to be the cause of the six fatalities. It is important to recognise that the number of fatalities, which is small in absolute terms, presents a challenge in terms of their "statistical significance". However, the information available is useful in showing trends that can be acted on if deemed necessary in the future.

The Racecourse Executive should continue to adhere to recommendations made in the 2006 Cheltenham report whereby, in drier conditions, irrigation policies should be in place to ensure that the Festival begins on slower than Good ground.

## STAKEHOLDER VIEW ON CONDITIONS

Throughout stakeholder interviews, there was positive comment on the Cheltenham Clerk of the Course and grounds team, for their delivery of a quality racing surface with well-presented and maintained obstacles year after year.

In particular, the Cheltenham team was highly commended for their efforts during exceptionally challenging weather conditions in the run up to the 2018 Festival, which included heavy snow cover into early spring.



*Frost covers over the last fence*

The PJA's view was that, "Cheltenham's ground staff and Clerk of the Course do an excellent job." This view was shared across all stakeholder interviews, including the trainers and riders of the 2018 fatalities.

The NTF believed that Cheltenham received, "unfair criticism" for preserving ground throughout fixtures prior to the festival and that it was, "wise to preserve it for the Festival. The spread of wear and tear is well done." Providing fresh ground for the festival was one of the recommendations from 2006.

The ROA considers that owners have, "confidence in how the track is maintained at Cheltenham...." They also state that in the case of fatalities or injuries, owners are, "satisfied with the level of care that is provided by the racecourse."

## THE OBSTACLES

Cheltenham Racecourse has 24 steeple chase fences ('fences'), 16 flights of hurdles (17 when a 2½ mile hurdle race) in total across the Old and New Courses. The Cross-Country Course comprises 20 individually unique obstacles, some of which are jumped more than once during a race. The Review Group undertook to:

- Consider historical obstacle changes;
- Investigate obstacle construction, particularly fences, to ensure they are constructed and filled to the highest industry standards, and if safer alternatives are available;
- Establish if all fences have appropriate and uniform levels and drops;
- Establish if any fences have a higher rate of adverse events and if so why.

The Review Group explored fence construction, survey work on the levels and drops for each fence, analysis of video footage and fence-by-fence statistics on fallers.

## OBSTACLE CHANGES

British racecourses have always numbered obstacles from the first fence/hurdle in a two-mile start. Cheltenham is an exception where steeple chase fences are numbered first from the chute in the middle of the course, where the 2m 4 ½f and 2m 5f chase starts are located.

### Old Course

In October 2010, fence 14 was moved into the home straight, becoming fence 6 and 15, which has successfully reduced faller rates.

The water jump was rubberised in 2008, i.e. water section featured a rubberised base as a safety measure (BHAGI 3.5(6)<sup>10</sup>).

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<sup>10</sup> Fences are to be a minimum of 3 feet in height measured on the take-off side. The materials must be all birch, or birch with



## New Course

In December 2006, fence 14 at the top of the hill became a sectional fence and was moved back nearer to the bend in order to reduce faller rates.

This fence was moved a further 30 yards towards the bend in December 2016. Faller rates were successfully reduced following this move.

During the 2007-08 season, fence sections were introduced on the New Course for the December and January fixtures, in order to save ground for the Festival, following fatalities in 2006<sup>11</sup>. One of the track management criticisms at that time, was the lack of fresh ground for Championship races; therefore this enhancement through fence placement flexibility, along with reduced safety factors for December and January fixtures, facilitates the availability of fresh ground on this course for the Festival.

The water jump was rubberised in 2009 similar to the Old Course.

Other than these highlighted changes, there have been no other significant changes to fence positions or construction in recent times.

## OBSTACLE CONSTRUCTION

All obstacles are produced in line with regulations, specifically BHA General Instructions 3.5 and 3.6.

All fences at Cheltenham are made of a combination of natural materials with plastic aprons (artificial green spruce). The average height of all fences is 4' 6" and

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the bottom brought out 2½ feet to 3 feet to the take-off board with spruce or an alternative material with the approval of the Inspector of Courses. The overall width of the obstacle must be 11½ feet to 12 feet and the width of the water is to be 9 feet measured from the back of the birch to the lip of the water. The water must be a uniform depth of 3 inches. All water jumps are to have a take-off board painted in light matt orange and any ramped ground before the fence must not be built up by more than 6 inches unless otherwise decided by the Inspector of Courses.

<sup>11</sup> Eleven fatalities were recorded at the 2006 Festival inciting an independent review.

all fences are rebuilt in alternate years in order to ensure elasticity. Guard rails are padded and, along with take-off boards, are coloured orange.



*Fence at Cheltenham Racecourse*

The hurdles are made of mostly natural materials including an Ash frame with Birch laced through the structure to ensure there are no gaps and that no light is visible through the obstacle. The take-off boards and framing are orange in colour.



*Hurdle at Cheltenham Racecourse*

Although the majority of racecourses use the materials detailed above, the industry is currently investigating further developments in hurdle design. These studies are ongoing, however the Review Group recommend that all racecourses, including Cheltenham, consider future hurdle developments including padded hurdles, the Southampton University hurdle design and other safety driven initiatives.



*One Fit padded hurdle*

The Review Group is aware of a project presently being prepared for peer review by Exeter University on Equine Vision<sup>12</sup>. The project aims to establish the visibility level of obstacles to equines and whether other colours increase or hinder visibility and horse response. Once published, the outcomes of this project will be considered by the Authority and industry stakeholders with a view to begin trials on schooling grounds.

## **OBSTACLE TAKE-OFFS AND LANDINGS**

All obstacle take-offs and landings were inspected pre and post Festival. Whilst none of the areas were of specific concern to participants or the Senior Inspector of Courses, annual maintenance would include removing the 'crown', where found to be necessary, from take-off and landing areas.

Routine maintenance to increase the depth of take-off boards on all steeple chase fences has been introduced on both courses over the previous two years.

Popular with Jockeys due to the enhanced inviting nature of the fence, enabling the horse to accurately measure height on the approach, the Review Group

commends this enhancement to ensure an appropriate depth of take-off board.

## **OBSTACLE FALLER RATES**

Based on the 2018 Festival data the below information is presented in relation to obstacle types:

### **Steeple Chase Race Faller Rates**

- There were 19 steeple chase fallers and five unseated riders at the 2018 Festival. Five of the horses that fell sustained fatal injuries.
- The steeple chase faller rate of 9% was slightly above the five year Festival average of 8.6%.

### **Hurdle Race Faller Rates**

- There were 10 hurdle race fallers at the Festival, none of which sustained fatal or long-term injuries. However, there was one runner that sustained a fatal injury on the flat.
- The faller rate of 4.4% was in line with the five-year average for the Festival of 4.4%.

### **Cross Country Faller Rate**

There was one faller on the Cross-Country course and no equine injury at the 2018 Festival.

The Cross-Country Course has the lowest faller rate of all of Cheltenham's tracks with an average of 3.1%, compared to the New Course 5.2% and Old Course 6.0%. Overall, there have been no equine fatalities on this course over the past five years.

In summary, the 2018 Festival faller rate for Steeplechasing and Hurdles are slightly higher than the five-year Cheltenham Festival average.

The Review Group does not believe there are any significant differences to the obstacles when compared to recent Festivals, and the Racecourse Executive has confirmed they were prepared as normal.

<sup>12</sup> Study jointly funded by The Racing Foundation and BHA.

## FALLER ANALYSIS BY STEEPLE CHASE FENCE

The Review Group analysed data on fallers by fence with the risk of falling higher over fences than hurdles at the Festival. Historically, fence 14 on the New Course had the highest incident rate (42.86%). As previously discussed, this fence was moved closer to the bend in 2016 resulting in a reduction in falls in the two subsequent festivals (9.09% at the 2018 Festival).

At the 2018 Festival the majority of falls occurred at fences 9 and 15 on the Old Course, 31.3% and 18.8% respectively, and fence 15 on the New Course (7.1%)<sup>13</sup>.

The five steeple chase fatalities at this year's Festival all occurred after falls, two on the Old Course at fence 9. Three of the steeple chase fatalities occurred in the same race on the New Course. However, they occurred at three different, unrelated fences at fences 5, 15 and 17.

Fence 9 appears to have a considerably higher faller rate in 2018 than has historically been recorded. Through consultation with Cheltenham racecourse and the BHA inspectorate, it was confirmed that no changes had been made to the fence since the previous Festival. The Review Group therefore recommend that Cheltenham, JCR and the BHA continue to monitor all falls and unseats by fence, with particular scrutiny of fence 9 on the Old course with a view to take remedial action should faller rates remain high.

## PART TWO RECOMMENDATIONS

The Review Group ascertains that there is no significant statistical evidence or feedback from industry professionals to support drastic changes on

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<sup>13</sup> Percentage of fallers that fell on a particular course, New or Old.

how the tracks are produced in terms of going, other than routine maintenance, to the Old, New and Cross-Country Courses.

The Review Group recommends that:

**One:** The Racecourse Executive must continue to adhere to recommendations made in the 2006 report whereby, in drier conditions, irrigation policies should ensure that the Festival begins on ground slower than Good (which is slower than the General Instruction for Jump racing, which is good ground, and no firmer than good to firm). This continuing stipulation applies to all Cheltenham courses (Old, New and Cross Country). Going reports at The Festival will be monitored in line with this requirement (**ACTION: Cheltenham**).

**Two:** JCR should continue to trial the use of the one-fit padded hurdle, the Southampton University hurdle design (supported by the RSPCA), along with other safety-driven initiatives. Further collaborative industry research and development into alternative obstacle design and materials that may reduce risk factors will continue and Cheltenham and JCR (and all other Jumps courses) are required to continue to engage positively with this (**ACTION: JCR, BHA**).

**Three:** Cheltenham and JCR to monitor and consider the outcomes of Exeter University's Horse Vision project, with a view to trialling obstacle colouring at their schooling grounds and subsequently at a JCR racecourse, should trials prove successful. Cheltenham, JCR (and all other Jumps courses), along with relevant stakeholders to make any recommended changes to obstacle colouring arising from these trials. The BHA will continue to expedite trials on training grounds and racecourses during 2018 and early 2019 (**ACTION: Cheltenham, JCR, BHA, racecourses**).

**Four:** Cheltenham Racecourse and the BHA must continue to monitor faller rates by individual obstacle, in order to identify emerging risk areas, taking remedial action where possible. For example, Fence 9 on the Old Course will be monitored closely and changes to this fence will be required if there is no immediate improvement in faller/fatality rates (**ACTION: Cheltenham, BHA**).



# Part Three

## VETERINARY FACTORS

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### INTRODUCTION

The standard of veterinary services and related facilities are stipulated in the BHA General Instructions (BHAGI) 12 (Veterinary). Cheltenham, and all licensed racecourses, must meet all directives specified in these instructions, and standards are frequently inspected by BHA personnel, who can impose fines should the racecourse not meet requirements.

Equine health and welfare provisions surpass BHAGI minimum standards at the Festival. In this area, the Review Group aimed to:

- Understand causation of fatalities and identify any underlying issues that may assist in future decision making;
- Review levels of veterinary assessment deployed at the Festival and establish whether these could be improved;
- Explore further veterinary provision enhancements for future Festivals.

### Injury and Fatality Rates

For the purposes of this review, analysis of the injury and fatality data for Jump racing was performed, for the time period January 2013 – May 2018. A long-term injury is defined as a veterinary event where a horse will not return to racing within three months (e.g. a fracture or tendon injury).

Between January 2013 and May 2018, there were 175,507 starts in Jump races, 7,445 (4.2%) raced at Cheltenham racecourse and 2,862 (1.6%) raced during the Cheltenham Festival.

Of 175,507 horses that started in a Jump race, 0.52% experienced a long-term injury and 0.44% a fatal event.

Of 7,365 horses that started in a race at Cheltenham Racecourse, 0.75% experienced a long-term injury and 0.64% a fatal event.

Of 2,862 horses that started in a race at the Cheltenham Festival, 0.97% experienced a long-term injury and 0.80% a fatal event.

Other events were also analysed, including horses which pulled-up, fell or unseated their riders and horses which suffered a short-term injury.

Generally, the rates of horses experiencing any of the outcomes investigated were lowest when assessed across all Jump racing, higher for races held at the Cheltenham racecourse and highest for the Festival.

The difference in the number of horses that suffered long-term injury or fatality at Cheltenham racecourse when compared to the Cheltenham Festival is not statistically significant. However, the incidence rate of fatality at the Cheltenham Festival over the study period was significantly higher than the incidence rate for all Jump races.

### PRE-RACE EXAMINATIONS

Pre-Race Examinations (both routine and targeted) are effective for identifying individual runners who may have lameness or cardiac issues and are carried out by BHA Veterinary Officers (VOs) at all meetings, including the Cheltenham Festival. Examinations include cardiac auscultation, palpation of locomotory structures and trot-up.

At all British race meetings, horses requiring routine Pre-Race Examinations are highlighted on the Welfare Report, made available to BHA Veterinary Officers the day before a race. Reasons for examination include:

- Horses which have not run for 365 days
- Horses over the age of 11 years (flat) or 14 years (jump)
- Horses which ran the previous day
- Horses which have failed to complete 4 out of their last 6 races



- Horses which were withdrawn due to veterinary reasons within the past week

Additional targeted Pre-Race Examinations were carried out at the Cheltenham Festival in 2018 for which all horses were examined in selected races. Races were selected based on risk, using data from previous Festivals, and are detailed below:

- 13/03/2018 - Arkle Trophy Chase
- 14/03/2018 - Champion Bumper
- 15/03/2018 – 2m 4f Handicap Chase
- 16/03/2018 – Spa Novices' Hurdle

A total of 103 horses were examined in targeted Pre-Race Examinations, with all horses passed as being suitable to race.

A further 16 horses underwent routine Pre-Race Examinations. One horse was examined and subsequently suffered a fatality. No clinical abnormalities were detected in that Pre-Race Examination.

Increasing the number of Pre-Race Examinations at the Cheltenham Festival is feasible through increased veterinary staffing. This initiative is intended to detect runners with lameness or cardiac issues that could cause them to suffer a catastrophic injury or incident during their race.

## **FATALITIES AND POST-MORTEM EXAMINATIONS**

Post-mortem examinations (PMEs) have been performed on all fatalities at Cheltenham since 2012. The Review Group looked at all fatalities and PME summaries (if available) from 2014 - 2018.

In 2018, all PME results indicated significant musculoskeletal injury, with all injuries except one occurring at an obstacle. It can be assumed that such injuries occurred as a result of significant impact/trauma at a fall.

## **MEDICATION RECORDS**

In November 2017, the BHA Equine Health and Welfare Department started collecting data for a new project, to establish whether any links are apparent between medication and raceday fatalities. Trainers of horses which suffer raceday fatalities are requested to submit Medication Records for the affected horse for the 45 days prior to the race. A control group is randomly selected for each fatality, consisting of two horses that successfully competed in the same race. Medication Records are requested for the same period for these horses.

Medication Records were collected for all horses which suffered a fatality at the Cheltenham Festival 2018, and two control horses for each fatality.

Data will continue to be collected for this project indefinitely. A review of the data is planned to commence once approximately two years of information has been collated. At present, the BHA does not have sufficient information to comment on any relationship between medication and raceday fatalities.

Accordingly, the Review Group recommends that a Medication Declaration Form should be collected for all runners at the Cheltenham Festival for the 45 days prior to the day of the race in which the horse is entered to run<sup>14</sup>.

## **TESTING**

All fatalities from 2015 - 2018 were sampled post-mortem (urine and/or blood collected). Samples were sent for analysis to LGC, Fordham the BHA's analytical Laboratory. There were no adverse analytical findings reported from any of the samples collected.

Sampling of all fatalities at the Cheltenham Festival will continue, as part of the BHA Anti-Doping and Medication Control Strategy.

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<sup>14</sup> See Appendix 7 for Medication Declaration Form.

## SUITABILITY CERTIFICATION

A number of international racing jurisdictions undertake non-raceday Suitability to Race Examinations including Hong Kong, Dubai, Australia (Melbourne Cup) and the USA (Breeders Cup). These are carried out by Regulatory Veterinarians in addition to raceday Pre-Race Examinations and the horse's Medication Records must be provided in advance.

The BHA conducts non-raceday Suitability to Race Examinations for a sample of horses. These are performed by a BHA Veterinary Officer and the Trainer's veterinary surgeon, and include a review of veterinary history and medication records, alongside examination of the horse pre- and post-exercise. Reasons for examination include a history of previous long-term injury, demonstration of an asymmetrical gait or anatomical abnormality which is not thought to affect performance, or a failure of two or more raceday Pre-Race Examinations.

Presently, it is not logistically feasible to conduct such examinations for all runners at the Cheltenham Festival. However, as detailed above, it is recommended that Medication Declaration Forms are required for the 45 days prior to the day of the race in which the horse is entered to run.

## EQUINE COOLING FANS

The effect of heat stress on jump horses is an equine health and welfare consideration, irrespective of the time of year or weather conditions.

Research indicates that cooling fans, especially those with misting provisions, can assist at reducing the onset of symptoms associated with heat stress in the equine athlete. Ambient temperature (air and humidity) is the main risk factor for instigating heat stress, although running and jumping over extended distances on a variety of going in various weather conditions is also an important contributing factor.



*Equine cooling fans at Aintree Racecourse*

Whilst Cheltenham has cooling fans, they are positioned in the unsaddling enclosure, which is a significant distance from the track with an uphill walk for the horse.

The Review Group recommends increased focus in this area and adequate provision and effective placement of equine cooling fans.

## PART THREE RECOMMENDATIONS

The Review Group recommends that:

**Five:** Trainers of all horses competing at the Festival **must** have completed a Medication Declaration Form, returned to the BHA Equine Health and Welfare Department, ten days before the day of the race in which the horse is entered to run. Submission of the completed form is the responsibility of the trainer concerned. This form will outline Medication that the horse has received in the previous 35 days, and any Medication with a long-term effect that the horse has received in the previous six months. This process should also be introduced at other racecourses, prioritising those with the highest faller/fatality rates **(ACTION: Trainers, racecourses, BHA)**.

**Six:** Pre-Race Examinations will be increased to include all runners in all races at the Festival. This inspection will also include and require presentation and review of a second Medication Declaration Form outlining any medications or treatments administered in the previous 10 days. Cheltenham to provide trot-up

areas in which these examinations can take place. The BHA will enforce rule (B) 6.1.9, using this rule to withdraw horses deemed unsuitable to race, based on the results of these examinations. Stewards will investigate and take further action as required **(ACTION: Trainers, Cheltenham, BHA)**.

**Seven:** Results of Post-Mortem Examination of any fatalities will continue to be reviewed, alongside Medication Records for the 45 days prior to the day of the race, to identify common risk factors and inform future medication rules and policies **(ACTION: BHA)**.

**Eight:** Cheltenham to ensure adequate provision and most effective placement of cooling facilities, including equine cooling fans **(ACTION: Cheltenham)**.

# Part Four

## PARTICIPANT FACTORS

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### INTRODUCTION

The Review Group acknowledges that non-course factors might have meaningfully influenced horse welfare and adverse events during and prior to races at the Festival. The competitive nature of the Festival is well known and as such, factors deriving from the horse itself, the rider and trainer were explored.

Examinations focused on the following:

- Horses' race performance history and correlations to adverse outcomes;
- Rider experience and history of involvement in adverse events at the Festival and all other Cheltenham fixtures;
- Trainer experience and history of their horses' involvement in adverse events at the Festival and all other Cheltenham fixtures.

### HORSE PROFILES

Cheltenham racecourse is regarded by industry participants as a challenging venue for competitors, due to track undulations and an uphill finish along with a higher than average class of race. Ideally any athlete, equine or human, should possess a level of experience prior to competing in this championship environment.

Horse experience profiles were assessed in relation to Festival and non-Festival fatalities and faller rates.

Career performances and incident rates at all Cheltenham fixtures from 2007 to 2018 were analysed in relation to the below factors:

- Career starts;
- Cheltenham starts;

- Time since last start prior to a Festival performance.

### Career Starts and Cheltenham Performances

Horses running at the Festival are, on average, more experienced than those running over Jumps more generally. They have a median number of career starts of 7, compared to 6 for other Cheltenham meetings, and 4 across the sport in general.

While horses running at the Festival had a higher median number of previous starts than horses running in non-Festival races, the latter category includes horses starting out on their Jumps careers. Since 2007, no horse has made its racecourse debut at the Festival, apart from in the NHF race.

A Logistic Regression has been run in order to test whether a range of experience-related factors have an impact on a horse's likelihood of falling when running at the Festival. The variables investigated were:

- Number of runs in the last 365 days
- Number of runs at Cheltenham in last 365 days
- Number of career runs at Cheltenham
- Number of non-completes in last 365 days

The results are shown on Figure 5. The last two variables were not found to have a significant impact on a horse's chance of falling at the Festival, and so have been omitted from the graph.



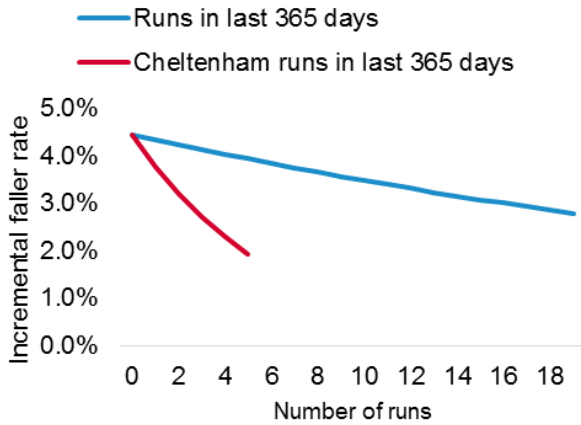


Figure 5: Cheltenham experience compared to incremental fall likelihood (2007-2018)

A negative relationship has been identified between the number of times a horse has run in the last year, and its likelihood of falling at the Festival. Other things held equal, a horse has a 0.1% smaller chance of falling if it has had a run that year. That chance of falling diminishes with each extra recent run. However, the marginal impact on faller likelihood of having recent runs is not a large one.

Of much greater significance is the number of runs a horse has had at Cheltenham in the 365 days prior to the Festival. A horse with recent experience of the course has a 0.7% smaller chance of falling when compared to a horse that has not run at Cheltenham that year. Again, this faller likelihood continues to fall with each extra run at the track.

Mandating Festival runners to have run at Cheltenham in the year prior to the Festival brings with it significant logistical challenges. Increased runner numbers during the season would put added pressure on course wear, which could potentially cause other track condition risk factors. Such a requirement may pressure connections into running a horse at a Cheltenham meeting which would otherwise be unsuitable. It could also be argued that the introduction of such a rule would be unfair on horses based in other jurisdictions.

The Review Group therefore does not support a mandatory requirement for horses to have run at Cheltenham (or elsewhere) in the year prior to the Festival. The Review Group does suggest that trainers

take guidance on the impact that recent experience can have on faller likelihoods at the Festival.

## RIDER TYPE AND PERFORMANCE

Fall data was assessed in terms of all riders who have ridden at Cheltenham (Festival and non-Festival) since 2007. Fall data of all 897 riders who have ridden at Cheltenham since 2007 was analysed. When comparing performances of riders who had ridden at Cheltenham on 10 or more occasions (243), the average faller rate was 4.10% with an instance of as high as 20%. Of the 243 performing riders, 81 were never involved in a fall and 190 have not experienced a race-ride on a horse that suffered a fatality (see table 3).

Horse Outcome	Average	Highest	Lowest
Falls	4.10%	20.00%	0.00%
Long Term Injury	1.01%	16.67%	0.00%
Fatalities	0.52%	9.09%	0.00%

Table 3: Adverse events in relation to riders at the Festival (2007-18)

There is a link between a race's rider conditions, and the likelihood of its participants falling. Horses running in amateur rider races have a 0.6% higher chance of falling than those in professional jockey races.

For conditional jockey races, the differential is 3.4% (see Figure 6).

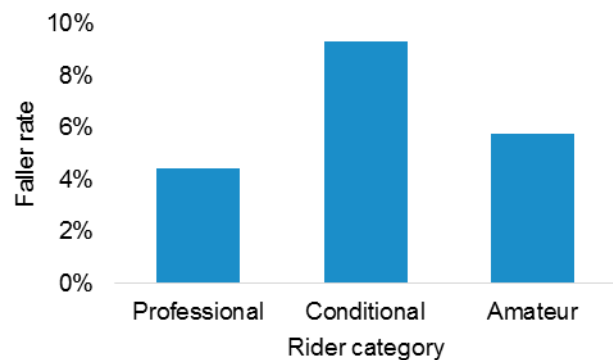


Figure 6: Logistic regression – incremental likelihood of falling in relation to rider type (2007-18)

## Pull-up rates

Stakeholder consultation raised discussion surrounding rider behaviour and the pulling up of fatigued horses to minimize the risk of adverse events occurring and prioritising the welfare of the equine participants. The notion that runners are less likely to be pulled up due to the competitiveness of the Festival, specifically the level of prize money at stake, was explored.

Comparing races at the Festival to all other Class 1 and 2 Jump races at Cheltenham suggests that there is no significant difference with horses failing to be pulled-up (table 4).

Races	Runners	PU	% PU
Non-Cheltenham Festival Class 1 or 2 jump races	38,083	4,465	11.70%
Cheltenham Festival races	5,726	731	12.80%

Table 4: Pull-up rates of Cheltenham Class 1 & 2 Jump races, Festival and non-Festival (2007-18)

Since 2014, there has only been one recorded case of the rule pertaining to pulling-up being applied at Cheltenham Festival, which resulted in no further action against the rider.

Therefore, in order to ensure focus is maintained on driving responsible rider behaviour, the Review Group recommends that increased scrutiny of this rule be applied by the Stewards.

## TRAINER PERFORMANCE

Data on the 240 trainers who have had more than 10 horses run at Cheltenham since 2007 was analysed. The average percentage of falls was 3.6% with instances of as high as 20%. The average percentage of long-term injury was 0.73% and 0.36% for fatalities. There were incidences of up to 18.18% and 10% for long-term injury and fatality respectively (table 5).

Horse outcome	Average	Highest	Lowest
Falls	3.64%	18.18%	0.00%
Long term injury	0.73%	9.09%	0.00%
Fatalities	0.36%	9.09%	0.00%

Table 5: Adverse events in relation to trainers at the Festival (2007-18)

As an illustrative example of the variability, of the 14 trainers running more than two horses in the RSA Chase since 2007, four have had fallers. Some trainers have a significantly higher faller rate than others (Figure 7).

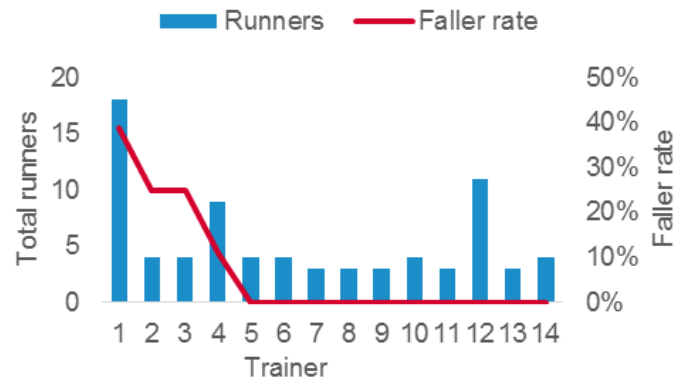


Figure 7: Percentage faller rate of the 14 trainers which since 2007 have had more than two runners in the RSA Chase.

The Review Group recommends continued analysis of trainer and jockey faller rates at all Cheltenham fixtures, and Jump racing more broadly. The BHA will engage directly with those trainers who have a faller incidence rate significantly higher than the historical average, if necessary use of licence conditions will be applied to drive improved outcomes.

From this evaluation of rider and trainer risk factors, the Review Group recommends that risk management and welfare training is enhanced in existing training modules for trainers and riders. Furthermore, the Review Group views raceday briefings as a valuable tool to educate, and remind, riders of their responsibility in relation to equine welfare.

## OWNER'S IMPACT

The Review Group considered the owners' influence on their horses' welfare following stakeholder consultation. The competitive nature of Cheltenham Festival is such that having a horse run there is an ambition of many owners.

The Review group received some qualitative feedback regarding this matter, and whilst it is acknowledged some owners may not have significant influence over the decision to run or not, in some cases the Trainer may feel pressure to meet owner expectations. The Review Group emphasise the importance of all industry stakeholders, including owners, taking collective responsibility for the welfare of their equine athletes.

## PREDICTIVE MODEL

In considering these four areas, which influence every horse's welfare, it is clear that the industry requires a robust method of determining risk factors for all Jump racing.

The Review Group recommends that the industry must support a substantive research project to develop a predictive model for identifying these risks. This model would provide insight into causes of adverse events, ultimately allowing the industry to reduce these risks to enhance equine welfare.

## PART FOUR RECOMMENDATIONS

The Review Group recommends that:

**Nine:** The industry **must** support a major research project to develop a predictive model for identifying risk factors for all Jump racing, inclusive of non-course factors, such as horse history and performance, rider and training factors. Any risks arising from this significant work must be addressed and mitigated appropriately. A timeline and project plan to be developed as soon as possible, enabling this work to begin in early 2019 (**ACTION: BHA, all industry stakeholders**).

**Ten:** The BHA will undertake analysis of faller rates by trainer and jockey for Cheltenham and all Jump racing. Individual trainers and/or jockeys who have an incidence of fallers significantly higher than the historical average will be required to engage constructively with the BHA to consider the drivers of, and actions to improve, high incidence rates. Findings from this analysis may result in future changes to

licence and/or race entry conditions (**ACTION: BHA, trainers, jockeys**).

**Eleven:** Enhanced welfare risk management education to be integrated into compulsory training modules for riders and trainers, implemented, e.g. via the racing schools and through supporting educational materials (**ACTION: BHA, racing schools, trainers, riders**).

**Twelve:** Compulsory daily briefing of riders during the Festival to include increased focus on their responsibilities towards equine welfare (**ACTION: Cheltenham, BHA, riders**).

**Thirteen:** Compulsory course walks with a jockey coach to be introduced for all riders who have not ridden the Cheltenham course since the beginning of the previous Jumps season (**ACTION: Cheltenham, BHA, riders**).

**Fourteen:** The welfare of the horse is a primary responsibility of all riders. Rules relating to pulling up fatigued runners **must** be appropriately scrutinised and enforced, to encourage positive and responsible behaviour. Increased focus on this area to be included in improved training and assessment linked to the introduction of the new Stewarding model (**ACTION: BHA, riders**).

In addition to the above recommendations the Review Group suggests that trainers take guidance from the statistical evidence. This highlights that running a horse at Cheltenham prior to the Festival to gain previous course experience may reduce the risk of falling and therefore potentially prevent fatality or LTI.

# Part Five

## RACE CONDITIONS AND PROGRAMMING FACTORS

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### INTRODUCTION

Cheltenham racecourse's race programme is steeped in history and is designed to crown Jump racing's champions of the season, uniting high class performers from Britain, Ireland and other jurisdictions. The Festival is one of Britain's premier sporting events and moved from three to four days in 2005.



*Crowd at the Cheltenham Festival*

The Festival stages 28 races, 24 of which are Class 1 contests with fourteen Grade 1, two Grade 2, six Grade 3 and two Listed races over four days<sup>15</sup>. It is important to evaluate experience factors, performance within races and where they are positioned in the Festival programme in order to determine what may compromise competitor welfare.

Accordingly, the Review Group investigated the following areas:

- Recent alterations of race conditions;
- Faller rates by race;
- Race features such as distance and type;
- Race positioning in the Festival programme.

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<sup>15</sup> See Appendix 9 for Festival races by Class

### ALTERATIONS TO RACE CONDITIONS

The following races at the Cheltenham Festival experienced changes to their race conditions<sup>16</sup> between the years 2009 and 2018. All other races remain the same during that period.

#### **David Nicholson Mares' Hurdle 2m4f (Grade 1) Tuesday, Old Course**

This event was promoted to a Grade 1 and had penalties removed in 2015.

#### **National Hunt Amateur Riders' Chase, 4m (Grade 2) Tuesday, Old Course**

Penalties were removed from this race in 2010 and moved from Wednesday to Tuesday in 2014 (Still Old Course) for Racecourse Executive operational purposes.

It was promoted to a Grade 2 in 2017 (no change to conditions).

#### **Novices' Handicap Chase 2m4½f (Listed) Tuesday, Old Course**

This race was moved from Thursday to Tuesday (New Course to Old Course) in 2011 for Racecourse Executive operational purposes, and a rating cap of 0-140 introduced in 2011. This rating band was subsequently increased in 2018 to 0-145 allowing those performers who were not quite at Grade 1 standard to find a suitable opportunity at this level.

#### **Cross Country Chase 3m7f (Class 2) Wednesday, Cross Country/Old Course**

This race was moved from Tuesday to Wednesday in 2014 for Racecourse Executive operational purposes, following its introduction to the Tuesday programme when the Festival increased to four days in 2005.

It changed from a Handicap to WFA<sup>17</sup> race in 2016.

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<sup>16</sup> See Appendix 8 for race conditions.

<sup>17</sup> Weight for age



**Golden Miller Novices' Chase 2m4f (Grade 1)  
Thursday, New Course**

This race was new to the programme in 2011 and promoted to a Grade 1 with penalties removed in 2014.

**Pertemps Handicap Hurdle 3m (Grade 3)  
Thursday, New Course**

A race series Final, this was restricted to horses which finished in the first 8 in a qualifier in 2014.

This was changed in qualification criteria in 2017 to horses which have finished in the first 6 and promoted to a Grade 3 in 2018.

**Martin Pipe Conditional Jockeys' Handicap Hurdle 2m4½f (Class 2) Friday, New Course**

The rating band for this race was increased to 0-145 in 2012.



*The 2017 Martin Pipe Conditional Jockeys' Handicap Hurdle*

In 2014, there were delays to the start of this race due to the inexperienced nature of some of the riders. As trainers naturally look to secure every advantage available to them at the sport's most competitive event, it was considered that the 3lb allowance could lead connections to take a chance on inexperience rather than perhaps looking further afield to secure a more experienced rider.

Following the 2014 race the 7lb allowance for riders who had not ridden a winner was removed along with

the additional 3lb allowance for jockeys riding for their own yards.

Of the races which have experienced a change to their conditions during recent years, both the David Nicholson Mares' and the Martin Pipe Handicap Hurdle have suffered one fatality each.

The Novices' Handicap Chase has experienced two fatalities and one since the rating band increased to 0-145.

The four-mile National Hunt Chase for Amateur riders has had three fatalities, but one since the race was promoted to Grade 2 in 2017.

**FALLER RATES BY RACE TYPE**

Faller rate at the Festivals was examined by race type and race event since 2007; Table 6 shows that steeple chases carry the highest percentage of fatality and LTI at 0.77% and 1.32% respectively. Faller rate is also highest of the codes at 7.41%.

Jump Type	Perfs	Fatal	Fatal%	LTI	LTI%	Falls	Falls %
Hurdle	2731	15	0.55%	15	0.55%	82	3.00%
NHF	275	1	0.36%	1	0.36%	0	0.00%
Steeple	2726	21	0.77%	36	1.32%	202	7.41%
<b>TOTALS</b>	<b>5732</b>	<b>37</b>	<b>0.65%</b>	<b>52</b>	<b>0.91%</b>	<b>284</b>	<b>4.95%</b>

Table 6: Festival fatal, LTI and faller rate (2007-18)

Races which have high incident rates are featured in table 7<sup>18</sup>.

Race	Incident %
4m NH Chase	12.70%
Grand Annual	10.90%
Queen Mother	10.50%
RSA Chase	10.20%
Golden Miller	8.90%
2m4f Nov HC Chase	8.90%
3m HC Chase	8.50%
Kim Muir	7.90%
Foxhunter	7.80%
2m4f HC Chase	7.40%

Table 7: Top ten race incident<sup>19</sup> percentages (2007-2018)

### The National Hunt Chase

The four-mile National Hunt Chase for Amateur riders presents the highest risk of incident (falls/brought down) at the Festival with 12.7%. This race is a unique test, and indeed unique in the race calendar, as it amalgamates two race restrictions that are very rarely combined - Amateur Riders and Novice Chasers, whilst requiring them to run over one of the longest race distances at four miles.

Some stakeholders proposed a shortening of race distance in order to reduce risk. However, on closer examination, illustrated in figure 8, there is a negative correlation between the distance of a race, and a horse's chance of falling.

This is due to the fact that races run over further distances are run at a slower pace, suggesting that any high faller incidence in the four-mile National Hunt Chase for Amateur Riders is due to factors other than distance; Novices' races in general at the Festival have a faller percentage that is 0.5% higher per runner than open races.

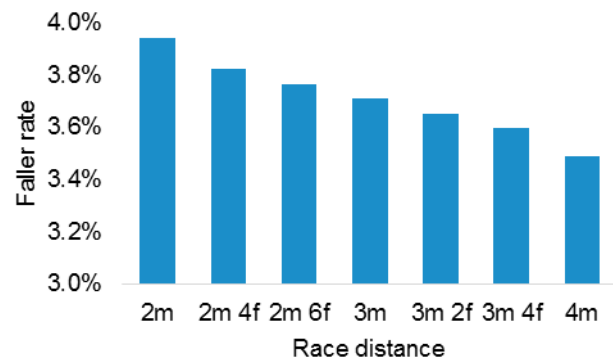


Figure 8: Logistic Regression – Incremental impact of race distance on faller likelihood in Cheltenham Festival races (2007-2018)

Research identified no clear threshold for the number of rides which could ensure adequate Amateur rider experience at the Festival, in relation to potentially imposing rider conditions on this race to create a safer environment (figure 9).

Furthermore, analysis suggests that there would be significant supply problems if stipulating that amateurs had to ride a certain number of winners (see Appendix 13).

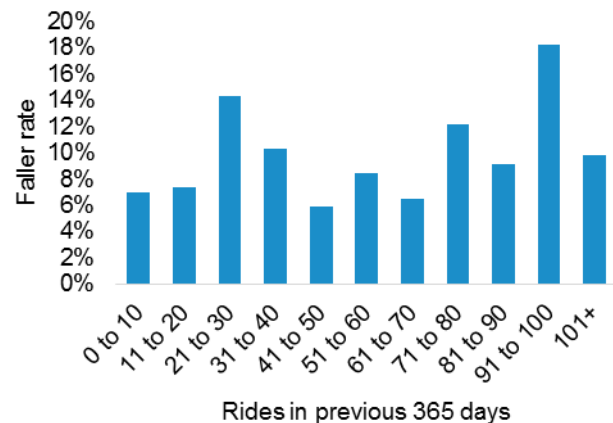


Figure 9: Proportion of riders that fall in Amateur Riders' Races at the Festival by number of rides under rules in the previous 365 days (2007-18).

<sup>18</sup> For a complete list see Appendix 10

<sup>19</sup> Falls and brought down.

There have been a number of relatively recent changes to the race conditions of the National Hunt chase, which could be expected to reduce the incident rate of the race. These have been introduced since 2007, meaning that the overall incident rate for 2007-18 of 12.7% for the National Hunt chase should be taken in context. A summary of the race condition changes, and associated faller rates, is shown below in Figure 10:

These changes have reduced the faller rate of the race. This is evidenced by looking at the five year rolling incident rate, shown below in Figure 11:

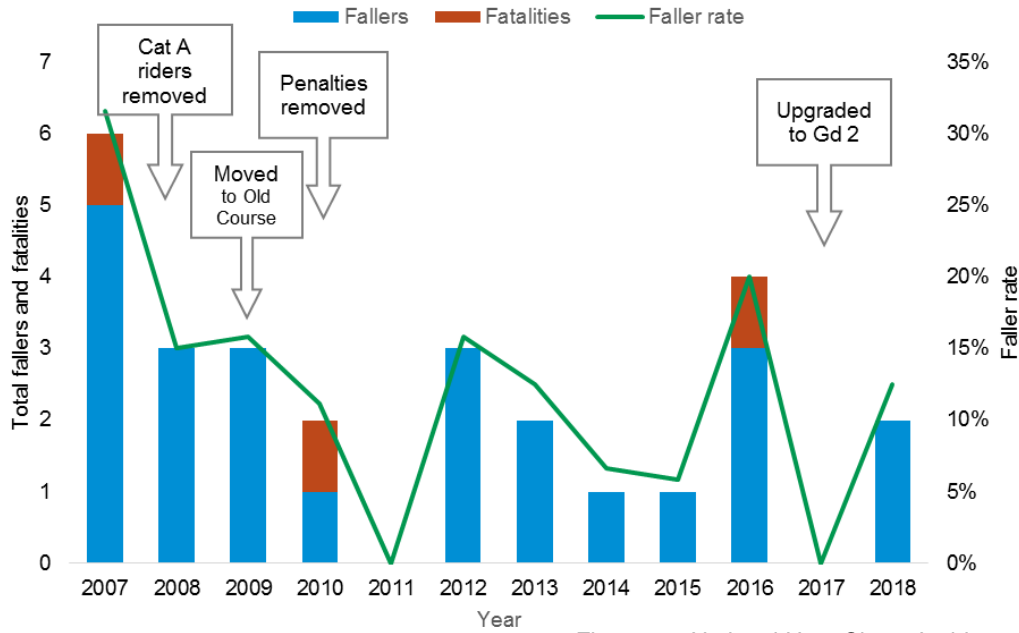


Figure 10: National Hunt Chase Incident

Condition change	Reasoning
Removal of Category A amateur riders	Race confined to the more experienced Category B amateur riders
Move to Old Course	Distance of the race made slightly shorter, and run over what is generally considered to be a less testing track
Penalties removed	Horses not made to carry extra weight depending on previous experience resulting in no horses being required to carry more than 11st 6lb
Upgraded to Grade 2	Trainers may reconsider the quality of horse they run in the race

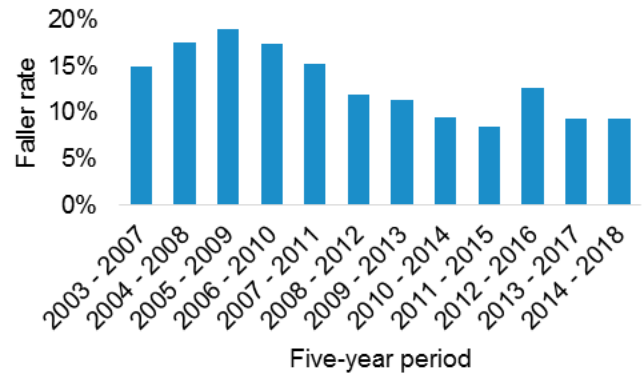


Figure 11: Five year rolling average of National Hunt Chase incident rate.

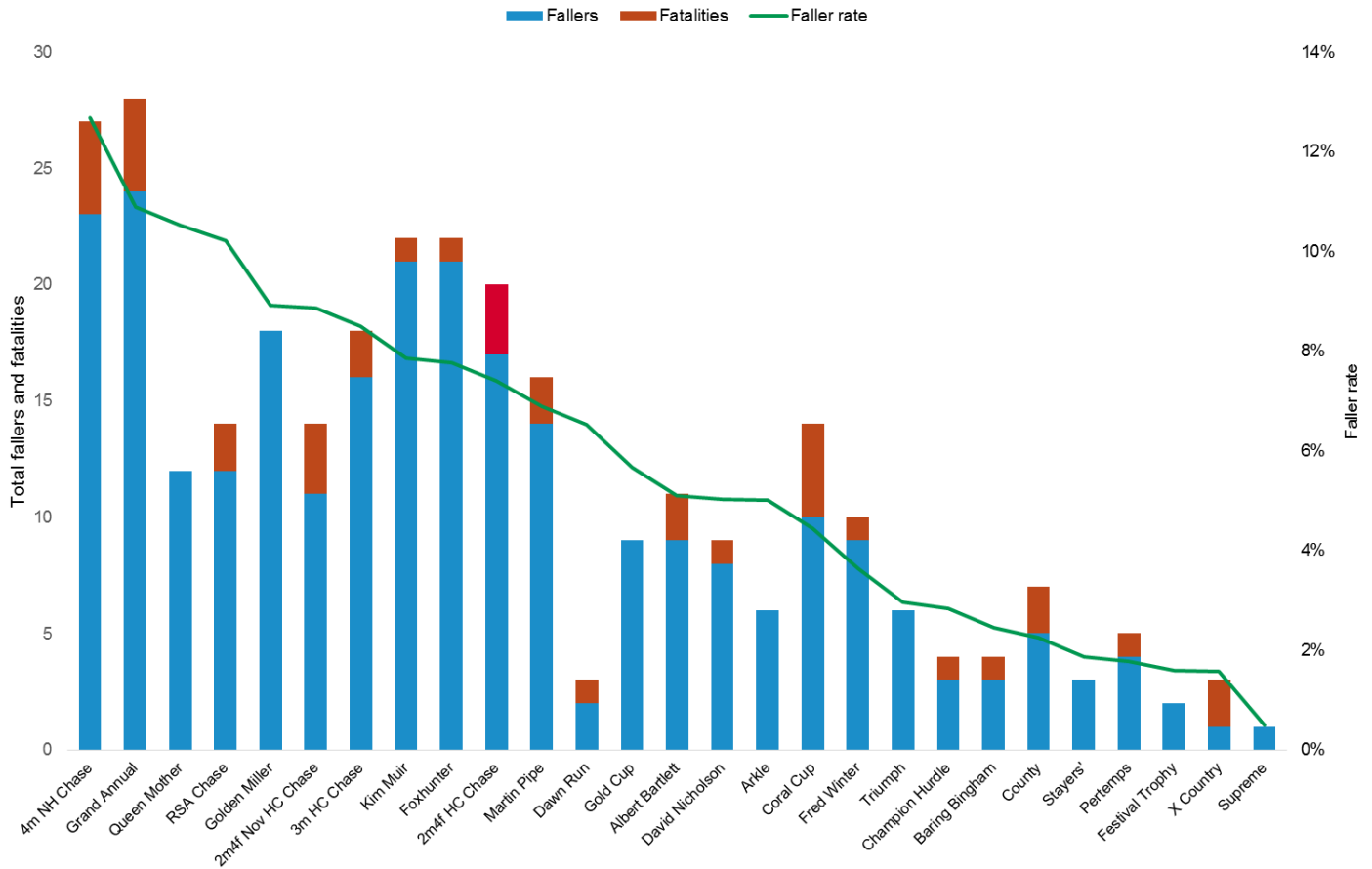


Figure 12: Faller rate by race (2007-2018)

There has been a clear decline in the incident rate of the National Hunt chase in recent years, with the exception of 2016, which saw four fallers. We have required no immediate further changes to the race conditions of the National Hunt chase in light of this but we wish to signal two strong qualifications to this decision.

Firstly, we will continue to monitor this race closely and will take action should the incident rate increase again in future.

Secondly, questions were raised during the consultation about the appropriateness of staging amateur riders' races at the Festival. Amateur riders should be aware that they are subject to particular public scrutiny and that amateur participation in its current form at future Festivals will be under material threat should further incidents occur.

### The Grand Annual

The Grand Annual Handicap Chase, the oldest race in the Jumping calendar, has seen the most fatalities during 2007-18, and has not seen any change to its race conditions during this time. It moved to the last race on the final day in 2009, swapping with the County Hurdle which moved to the second race on this day.

This race has the highest number of fallers when compared to all other races (figure 12).

Commentary in the aftermath of the 2018 Grand Annual, which saw three fatalities, suggested that the fatality rate had been adversely affected by the race being positioned at the end of Friday's card. However, analysis of the County Hurdle and Grand Annual, shown below, would suggest that the position of a race has little impact on the faller rate.



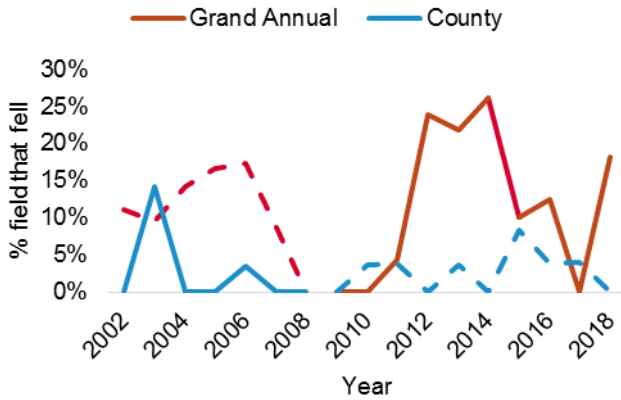


Figure 13: Average faller rates of County Hurdle and Grand Annual Chase when last race at the Festival (2002-2018)

Last Race?	County	Grand Annual
YES	2.50%	11.70%
NO	2.70%	11.10%

Table 8: Incident rate by position on racecard (2002-2018)

Consequently, the Review Group considers factors other than positioning may be more significant in relation to the Grand Annual (see Part 6).

### The Martin Pipe Conditional Jockeys Hurdle

Investigations into the only race restricted to Conditional Jockeys at the Festival were conducted due to the high incident rate associated with this rider type (see part 4, figure 6).

The Review Group investigated incident rate of this race pre and post rider condition changes (figure 14).

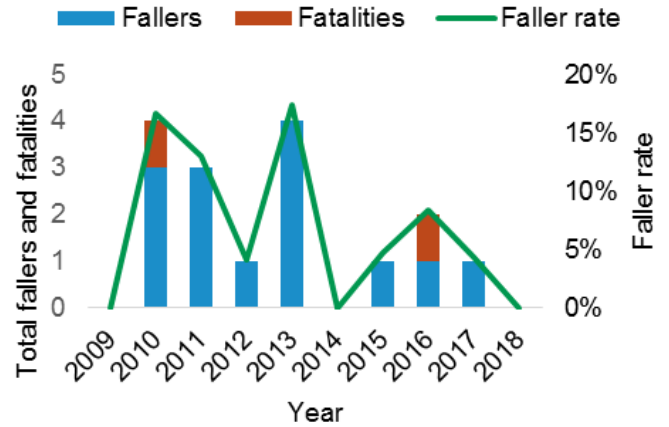


Figure 14: Incidence rate of fallers and fatalities in the Martin Pipe race by Year 2009 - 2018

The conditions of this race were altered in 2015, removing the ability for inexperienced riders to claim 7lbs, with the aim of encouraging the booking of more experienced riders. Since this change, the race has seen a reduction to four fallers from 91 runners, at an incidence rate of 4.4%.

Furthermore, analysis of all British Chase and Hurdle races shows a correlation between the number of winners a jockey has ridden in their career, and the proportion of those jockeys that fall (Figure 15). Based on this evidence of improved safety through reduced incidence rate following changes in 2015, and evidence linking experience to faller rates, the Review Group recommends taking the additional step of removing all rider claiming allowances. Together these provide evidence that incentivising trainers to engage more experienced conditional jockeys could lead to a further reduction in the faller rate, reflecting the unique demands of such a high-profile event.

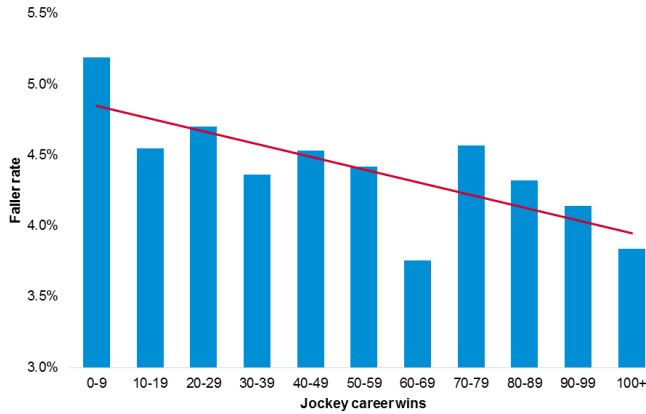


Figure 15: Previous jockey wins vs. proportion that fell, 2012-2018

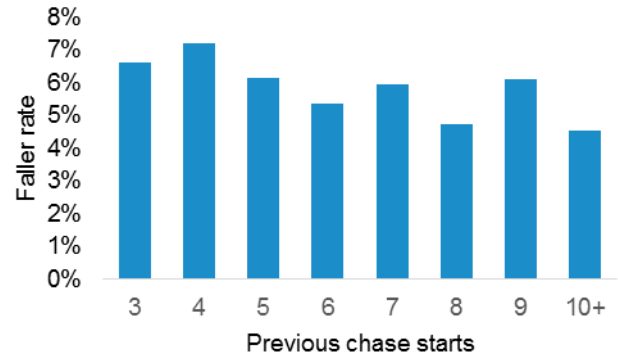


Figure 17: Percentage of Novice fallers in GB non-novice Class 1 and 2 handicap chases by number of previous chase starts (2008-2018).

### Novice Horses

Focus on steeple chase faller rates and previous experience on a national level illustrates a link between the number of previous chase starts and likelihood of falling (see figure 16). Novice chasers that have had 6 or more runs over fences are less likely to fall in non-novice Class 1 and 2 handicap steeple chases.



Figure 16: Percentage of GB Class 1 & 2 Chase fallers by number of chase starts (2008-2018)

This analysis provides evidence for stipulating that novices must have run five times in steeple chase races prior to running in open handicap chases at the Festival. However, the Review Group deems this threshold unachievable due to the potential welfare risks associated with a horse running five times during its novice season (October to March) and recommends the experience criteria be established at three runs which are already provided for in the handicapping rule structure.

Stakeholder consultation revealed a perceived issue of Festival runners being over-faced in some instances when considering faller rates. Investigations therefore focused on those horses running at the Festival that have never run in Class 3 or higher races before.

Since 2007, of the 3,915 British trained runners (excluding the Foxhunters' and NHF) which were not making their GB debut at the Festival, only 169 runners had not started in a Class 3 race or higher. Of these runners, just 5 fell, a faller rate of 2.6%. Since 2013, only 65 horses met such criteria and none fell.

Accordingly, the Review Group concludes that the majority of runners in these situations are not over faced by the competitiveness of the race when compared to faller rates.

## **PART FIVE RECOMMENDATIONS**

The Review Group recommends that:

**Fifteen:** Race conditions of the Martin Pipe Conditional Jockeys' Handicap Hurdle must be altered to remove all rider weight claiming allowances, thereby incentivising connections to secure the services of the most experienced jockeys (**ACTION: Cheltenham**).

# Part Six

## OTHER RACE FACTORS

### INTRODUCTION

The narrative of races staged both at Festival and non-Festival fixtures at Cheltenham could signpost how adverse events unfold.

Factors specific to the race environment, such as starting processes, field sizes and race tempo were investigated to determine any contribution to the creation of risk factors and subsequent adverse events.

### STARTS

Race starts can be highly-charged environments, especially at the Festival in events with high runner numbers.

Starting procedures for all Jump races in Britain changed in 2014, requiring runners to approach the start at a walk or jog, rather than a canter, in order to reduce the risk of false starts, enhance start fairness and keep horses relaxed and comfortable at the off-time. Should runners approach the start in an uncontrolled manner, the Starter would call a 'false start' and the race would commence from a standing start with the horses behind the marker poles.

Only one false start occurred at the 2018 Festival and table 9 identifies false starts at the Festival 2013 - 2018:

Year	No. of races	False starts	%
2013	27	3	11.11
2014	26	3	11.53
2015	27	5	18.51
2016	28	5	17.85
2017	28	6	21.42
2018	28	1	3.57
<b>Totals</b>	<b>164</b>	<b>23</b>	<b>14.02</b>

Table 9: Cheltenham Festival false starts (2013-15)

The Review Group assessed Festival race starts with a view to considering their contribution, if any, to fatalities along with the effect on race tempo.

Video analysis of all starts since 2014 of races involving fatalities was conducted by experienced BHA starters, who are also proficient ex-Jump jockeys. Four of the six races experiencing false starts over this period involved Amateur riders and resulted in standing starts.

The Review Group agreed that there was no video evidence to suggest that any of the starts increased the likelihood of the fatalities. The new Jump starting procedures have resulted in good feedback from riders and trainers, with the view that starts are less tense for the runners, culminating in more controlled early race tempos. Moreover, Jump race false starts have reduced nationally since introduction (table 10).

Year	Meetings	Races	Suspensions	False starts	%
2014/2015*	360*	2447	64	39	1.59
2015/2016	543	3685	71	40	1.08
2016/2017	572	3884	36	46	1.18
2017/2018	513	3762	60	34	0.90
2018**-	258	1814	2	25	1.37
<b>Totals</b>	<b>2246</b>	<b>15592</b>	<b>233</b>	<b>184</b>	<b>1.18</b>

Table 10: GB Jump racing false starts (2014-18)<sup>20</sup>

### FIELD SIZES AND SAFETY FACTORS

Cheltenham's Festival and non-Festival safety factors for all starts are shown in Appendix 12.

It is important to remember that, for the Festival, both the Old and New Courses have between 30% and 50% more width to accommodate an average 20% increase in permitted maximum field sizes, hence the variation in Festival and non-Festival safety factors.

<sup>20</sup> \*2014- 2015 new starting procedures introduced October 1st 2014

\*\* 2018 results are March - September inclusive.

Please note that prior to the new starting procedures being implemented in October 2014; no records were kept regarding false starts. False starts were more commonplace, approximately at least one false start a day, as riders were allowed to approach the starting tape at a canter which was a major cause of a false start.



Comparing Cheltenham Festival, non-Festival and all Jump racing between 2013-2018<sup>21</sup>, there were:

- Significant differences between the field sizes for hurdle, steeple chase and NHF races (Table 11);
- Significant differences between the field sizes for novice and non-novice races at the Cheltenham Festival, non-Festival and other Jump races;
- Larger field sizes for NHF, hurdle and steeple chase races held during the Cheltenham Festival than for the same types of races held at Cheltenham, or at other Jump race meetings.

Race type	Levels	Median	Interquartile range	Maximum
Hurdles	Festival	22	15 – 24	28
	Chelt	13	8 – 17	24
	Jump	10	8 – 12	24
NHF	Festival	23	22 – 23	23
	Chelt	15	12 – 17	19
	Jump	10	8 – 12	20
Chases	Festival	20	15 - 23	24
	Chelt	12	8 - 15	20
	Jump	8	6 - 10	40
Novice	Festival	15	12 - 19	28
	Chelt	8	6 - 11	20
	Jump	8	6 - 11	21
Non-novice	Festival	23	17 - 24	28
	Chelt	13	10 – 16	24
	Jump	9	7 - 12	40

Table 11: Field size for Cheltenham Festival, Cheltenham non-Festival and other Jump racing for races held between 2013 and 2018.

<sup>21</sup> Shorter date range of 2013-18 deemed more suitable to assess modern day field sizes and horse populations.

The median field size at the Cheltenham Festival was 22 (IQR 15 to 24; maximum 28). However, the median field size for a novice race was 15 (IQR 12 to 19; maximum 20) and for other races was 23 (IQR 17 to 24).

Field sizes at the Cheltenham Festival were significantly larger for novice and non-novice races compared to other races held at Cheltenham, with the median field size 8 (IQR 6 to 11) and 13 (IQR 10 to 16; maximum 24), for novice and non-novice races, respectively.

There was no significant difference between field size for novice races held at Cheltenham and Jump races held at other courses, however there was a significant difference between the size of the field at non-novice, non-festival races at Cheltenham and Jump races held at other courses. Non-novice races that were not held at Cheltenham had fewer starters, with a median of 9 (IQR 7 to 12; maximum 40).



Runners in the Jewson Novices' Handicap Chase

The green dotted line in Figure 18 below shows the link between field size, and a horse's likelihood of falling in a chase at the Festival, based on Festival data from 2007-18. Although there is a positive relationship between the two, the marginal risk associated with adding extra runners is relatively small; adding a 20th runner to a Cheltenham Festival chase increases the likelihood of falling by 0.27%.

It is useful to assess this relationship across chases of different distance categories. All Class 1 and 2 chases run in Britain between 2002 and 2018 have been

analysed, with the results shown on the solid lines in the graph (Figure 18). It highlights a significant difference in the marginal risk associated with adding runners in Class 1 and 2 two-mile chases (blue line), compared to those run over longer distances. The exponential shape of the curve indicates that the risk of adding runners in two-mile chases is greatest when the field size exceeds 20.

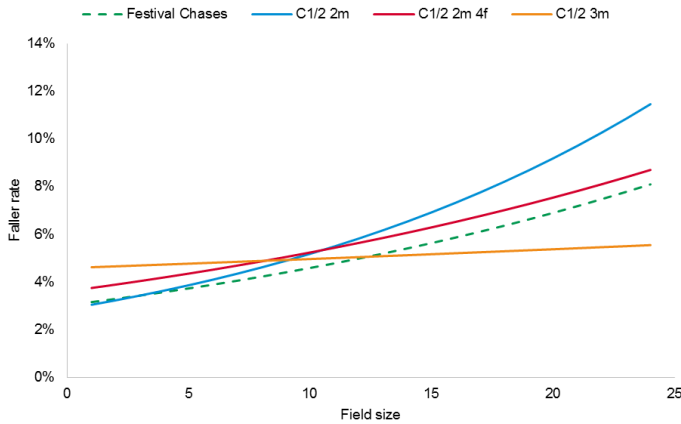


Figure 18: Logistic regression – impact of field size on chase incident likelihood by distance (2007-18)

Reducing the number of runners in a Cheltenham Festival two-mile chase from 24 to 20 would reduce the number of expected fallers from 2.8 per year, to 1.8 per year. The Review Group therefore recommends that the two mile steeple chase safety factor be reduced from 24 runners to a maximum of 20.

## RACE TEMPO

The highly competitive nature of championship racing at the Festival arguably culminates in an overall increase in pace to most races, potentially making falls more dangerous.

Whilst generally speed sensing devices are carried in runners' number cloths at Cheltenham, these only give an idea of total time taken to run a race and sectional data is incomplete and therefore unreliable. Therefore, there is minimal precise data available to determine variances in race tempo and any associated correlation with high prevalence of adverse events.

While this sectional timing technology does exist, accurate data is currently only available to All Weather tracks, partly due to course layout. The Review Group would support the development of a sectional timing capacity for Jump racing so that race tempo can be analysed as a potential risk factor.

The Review Group recommends that Cheltenham Racecourse become early adopters of the recently approved break-beam timing system for the accurate recording of official race times and work with the BHA to develop precise race time sectionals with a view to assessing impact of race pace via predictive modelling.

## PART SIX RECOMMENDATIONS

The Review Group recommends that:

**Sixteen:** The safety factor for all two-mile steeple chases should be reduced from 24 runners to a maximum of 20 on both Old and New Courses (**ACTION: Cheltenham**).

**Seventeen:** Cheltenham Racecourse to work with the BHA and their Media rights representatives, to develop precise race time sectionals to assess correlation between race pace and risk via predictive modelling (**ACTION: Cheltenham, BHA**).

# Conclusion

The aim of this review was to establish whether any specific, distinguishable circumstances contributed to the high rate of fatalities at Cheltenham, with a particular focus on the Festival, and to provide recommendations that will help to minimise the level of risk to our equine athletes.

Our research illustrates that, across all factors examined, racing at Cheltenham and the Festival has higher rates of adverse events, and therefore a higher risk profile, compared to Jump racing overall.

Based on the evidence, the BHA has not pinpointed any individual factor as being definitively and singularly capable of mitigating or eliminating the risk of horse falls, LTI or raceday fatalities.

However, we have made 17 recommendations and requirements that address a range of multiple factors. We expect these to have a cumulative effect in reducing the risk of adverse events occurring during the Festival and at other Cheltenham fixtures.

The BHA requires an action plan to be developed and implemented on the back of this review. We will work closely with Cheltenham, JCR and other industry stakeholders to complete this plan. Alongside this, we will continue to monitor and reassess faller and fatality rates at the racecourse, making further changes as required, in line with evolving evidence and data.

We will also apply the learnings and insights from this review to Jump racing more generally. A number of the recommendations and suggested improvements apply to other Jumps courses. We will continuously monitor all other courses, both individually and collectively, conducting thorough reviews where fatality rates are unusually high.

We will also ensure that equine welfare considerations continue to be a primary requirement of our licensing criteria for racecourses, trainers and riders.

Where welfare is concerned, prevention and proactivity is preferable to a reactive, punitive or remedial approach. The development of a predictive model is one of several ways in which we will seek to minimise and, where possible, to eliminate risk.

Meanwhile, notable progress is already being made in research and development around racing obstacle design and construction. Trials of a number of projects and products, based on scientific evidence, are proving successful. The introduction of the One Fit padded hurdle on British racecourses is one such example, while the Equine Vision project is exploring whether obstacle colouring could reduce a horse's risk of falling. The Jump racing industry as a whole must embrace these important advances, so we continue to make improvements wherever possible to equine safety and welfare.

Enhancements to courses and obstacles are only part of the story. An insight from this review is that non-track factors (e.g. veterinary, participant, and race conditions) could potentially be of equal, or greater, significance.

All trainers, jockeys and racehorse owners can make a contribution to the improvement of faller and fatality rates on British racecourses. Meanwhile, it is the role of the BHA to set the standards that ensure this contribution is consistently and relentlessly positive and progressive.

Over the coming months, the BHA will be discussing the implications of this Review, and the state of equine welfare in racing more generally, with a range of industry stakeholders.

For example, discussions are already taking place with the BHA Members' Committee, regarding the establishment of an industry-wide Equine Welfare Programme. This will bring together new and existing equine welfare projects and initiatives into a more coherent and cohesive body of work, as well as

improving the openness and transparency of industry reporting on equine welfare matters.

These discussions reflect the industry's recognition that public confidence in our equine welfare standards is essential to the sport's future success. Not only must our standards be high – they must be *seen* to be high.

There is no place in British racing for anyone who lacks the strongest possible commitment to equine welfare. We owe it to our sport, to the public and, most importantly, we owe it to our horses.





# Appendices

## APPENDIX 1

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### STATISTICAL ANALYSIS INTERPRETATION

The interpretation for key concepts is provided below.

#### **Incidence rate**

The number of new cases of the outcome over the review period, presented per 100 starts. The 95% confidence interval indicates the lower limit and upper limit of these values, if chance variation is removed.

#### **Incidence rate ratio**

The ratio of the incidence rate in the exposed group (e.g. Cheltenham Festival races) divided by the incidence rate in the unexposed group (e.g. non-Festival Cheltenham races).

The incidence rate ratio is interpreted as the exposed group had XX times the rate of the outcome, compared to the unexposed group.

An incidence rate of greater than 1 is an increased rate, while an incidence rate of between 0 and 0.99 is a decreased (or protective) rate.

For incidence rate ratios, 95% confidence intervals that crosses 1 in the lower or upper bound would indicate that the difference between the exposed and unexposed group is not significantly different.

## APPENDIX 2

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### CHELTENHAM FESTIVAL REVIEW 2006 RECOMMENDATIONS AND DELIVERED INITIATIVES

1. For all horses taking part at the Cheltenham Festival from 2007 onwards, a pre-race routine veterinary review (to be carried out by the HRA Veterinary Department) will be implemented by the HRA. The requirement for such a review can be justified by the uniquely intense and competitive nature of the 4 day Festival – Jump racing's equine Olympics. Cheltenham's long-term Festival equine fatality rate is just over twice the nationwide average. Cheltenham's Festival faller rates are also higher than its non-Festival equivalents. Additionally, the Cheltenham Executive and the HRA are to review the feasibility of pre-race veterinary inspections for all Cheltenham Festival runners.

DELIVERED: [Complete](#)

2. The Cheltenham Executive to review the distance and horse/rider eligibility conditions of the NH Chase Challenge Cup with the BHB Racing Department, and the Safety Factor (maximum field size) of the race with HRA Inspectorate, with a recommendation that the conditions revert to those in place prior to 2002. They are to report the findings of this review to the HRA. This recommendation is in light of there having been seven equine fatalities in this race since the changes in the Conditions in 2002 and no fatalities between 1996 and 2000. All 3 of the Chase fatalities at this year's meeting were in this race.

DELIVERED: [A number of safety figures were reduced - NH Chase 24 to 20, Coral Cup and the County Hurdle were reduced from 28 to 26.](#)

3. HRA Inspectorate to review with the Cheltenham Executive all Safety Factors specifically for the Festival meeting and report back their findings to the HRA. Whilst it is true that all nine fatalities were in races of 20+ runners, the sample size is small, and the Inspectorate should report back to the HRA Racecourse Department having liaised closely with HRA's Veterinary Department, whose research in this area is ongoing.

DELIVERED: [Safety figure reviews are always on-going and in the context of 2018 Festival, Wayne Hutchinson \[Jockeys Safety Officer\], and other senior riders interviewed, have felt that numbers of runners were not an issue.](#)

4. HRA Inspectorate and Cheltenham Executive to consider whether to aim for ground officially easier than the regulatory requirement of Good in future and report back their findings to the HRA. Clearly this is not straightforward in the context of March weather and the risk of creating extreme ground, but statistical evidence is clear that the risk of injury increases on quicker going. Cheltenham Executive to also review New Course usage profile with HRA Inspectorate.

DELIVERED: [There has not been a Festival staged on ground any quicker ground than 'Good' since 2006.](#)

5. A review of the approach/siting of fences 14 (Old Course) and 14, 15 (New Course) to be carried out by the Cheltenham Executive and the HRA Inspectorate and the findings of the review reported back to the HRA. These fences accounted for nearly half of all Chase falls and unseated riders at this year's Festival.

DELIVERED: [Fence 14 \[Old Course\] was moved to the home straight in 2010 and fence 14 has moved to a couple of positions since 2006 and now in a more permanent position which has proved to be successful in the last two years. However, this fence does move laterally through December, January and March, but only by 5-6](#)

yards. Fence 14 (old Fence 15) has a new base, increased to 6' 6", and shoulder rounded off and these aspects maintained since.

6. The Cheltenham Executive to review the take-off and landing maintenance programmes to identify if they can be enhanced at certain obstacles, and report their findings back to the HRA. This recommendation is not a criticism of existing programmes and is in the context of a particularly difficult winter this year.

**DELIVERED:** A concentrated effort on these areas has been implemented since 2006.

7. The Cheltenham Executive and HRA Inspectorate to establish whether more racing ground can be utilised through management of fence widths, and report their findings back to the HRA. This recommendation is in the context of a major track widening project having been carried out in 2004 to enable fresh ground to be provided on virtually every day of the meeting.

**DELIVERED:** In preparation for the 2006/07 season additional widths were created for the New steeple chase Course introducing 12 foot sections on all fences for the fixtures in December and January, thereby protecting ground for the final two days of the Festival.

## APPENDIX 3

### COMPARISON OF VARIABLES BETWEEN FESTIVAL, CHELTENHAM & JUMP RACING 2013 – 2018

2013-18		Festival (ex. Chelt, French & P2P form)	%	Cheltenham (ex. Festival, French & P2P form)	%	All jumps racing (ex. Chelt, French & P2P form)	%	Totals	%
<b>Going</b>	Firm, Good to Firm	0	0	7	0.2	8689	5.2	8696	5
	Good	1230	43	2187	48	60552	36.3	63969	36.7
	Good to Soft	802	28	938	21	36435	21.9	38175	21.9
	Soft or Heavy	830	29	1450	32	61038	36.6	63318	36.4
<b>Code</b>	NH Flat	136	4.8	347	7.6	15493	9.2	15976	9.1
	Hurdle	1360	47.5	2003	44	96251	57.3	99884	56.9
<b>Race Type</b>	Steeple	1366	47.7	2232	49	56190	33.5	59788	34
	Open	2014	70.4	3492	76	105020	63	110526	63.4
	Maiden	0	0	42	0.9	14487	8.7	14529	8.3
	Novice	848	29.6	1048	23	47247	28.3	49143	28.2
	Hcap	1438	50.2	2670	58	102708	61.2	106816	60.9
	WFA	1424	49.8	1912	42	65226	38.8	68562	39.1
<b>Time since last run</b>	Debut	25	0.9	311	6.8	24796	14.3	25132	13.9
	<= 30 days	667	23.3	1962	43	73550	42.4	76179	42.1
	31 to 90 days	1722	60.2	1185	26	43058	24.8	45965	25.4
	91 to 365 days	398	13.9	905	20	24912	14.4	26215	14.5
	> 365 days	50	1.7	220	4.8	7039	4.1	7309	4
<b>Completion</b>	Completion	2583	91	3769	88	127422	85.8	133774	85.9
	Non-completion	254	9	502	12	21136	14.2	21892	14.1



## APPENDIX 4

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### COMPARISON OF TIME SINCE LAST START BETWEEN FESTIVAL, CHELTENHAM & JUMP RACING 2007 – 2018

	Festival (ex P2P & French Form)	% of runners	Cheltenham (ex Festival, P2P & French form)	% of runners	All Jump racing (ex. Chelt, P2P & French form)	% of runners	Total	% of runners
Debut	25	0.9	311	6.8	24796	14.3	25132	13.9
<= 30 days	667	23.3	1962	42.8	73550	42.4	76179	42.1
31 to 90 days	1722	60.2	1185	25.9	43058	24.8	45965	25.4
91 to 365 days	398	13.9	905	19.7	24912	14.4	26215	14.5
> 365 days	50	1.7	220	4.8	7039	4.1	7309	4

## APPENDIX 5

### STATISTICAL ANALYSIS OF ADVERSE EVENTS BY COURSE 2013 – 2018

Incident	Levels	Cases	Starts	Incidence rate	OR	95% CI	P value
<b>Non-Completion</b>	Cross-country	29	96	30.2	1		0.04
	New	354	1,696	20.9	0.61	0.39 , 0.96	0.03
	Old	255	1,075	23.7	0.72	0.45 , 1.14	0.16
<b>Fallers</b>	Cross-country	3	96	3.1	1		0.35
	New	88	1696	5.2	1.7	0.53 , 5.46	0.38
	Old	65	1075	6	2	0.62 , 6.47	0.25
<b>Long Term Injury</b>	Cross-country	3	96	3.1			0.06
	New	19	1696	1.1	0.35	0.1 , 1.21	0.1
	Old	6	1075	0.6	0.17	0.04 , 0.71	0.01
<b>Fatality</b>	Cross-country	0	96	0			0
	New	16	1,696	9.4	1		0.4
	Old	7	1,075	6.5	0.69	0.28 , 1.68	0.41

## APPENDIX 6

### COMPARISON OF RUNNERS AND GOING 2016/17 – 2017/18

Fixture Date	2017-18 Season		2016-17 Season		Variance
	Runners	Going	Runners	Going	
Friday, Oct	77	Good, Gd to Sft in Pls (6.6) watered	70	GOOD (watered; 7.4)	7
Saturday, Oct	78	Good, Gd to Sft in Pls (7.0) watered	73	GOOD (7.6)	5
Friday, Nov	63	Chase & Hurdle course - GOOD TO SOFT (6.2); Cross Country - GOOD (7.1)	67	GOOD (Good to soft in places; 6.6)	-4
Saturday, Nov	68	SOFT (Good to soft in places) changing to SOFT (Heavy in places) after Race 4 (2.25)	95	GOOD TO SOFT changing to SOFT (Good to soft in places) Race 3 (1.50)	-27
Sunday, Nov	55	SOFT (Heavy in places: 5.9)	61	SOFT (Good to soft in places; 6.4)	-6
Friday, Dec	56	Chase & Hurdle courses - SOFT (Good to soft in places); Cross- Country course - GOOD TO SOFT (Soft in places)	71	Chase & Hurdle courses - GOOD (watered); Cross- Country - GOOD TO FIRM (Firm in places; watered)	-15
Saturday, Dec	49	SOFT (Good to soft in places; 6.3)	63	GOOD TO SOFT (Good in places) changing to SOFT (Good to soft in places) after Race 3 (1.15)	-14
Monday, Jan	56	HEAVY (Soft in places; 5.5)	65	GOOD TO SOFT (Soft in places) changing to SOFT after Race 1 (12:15)	-9
Saturday, Jan	64	SOFT changing to SOFT (Heavy in places) after Race 1 (12.40) changing to HEAVY after Race 2 (1.15)	94	Chase & Hurdle courses - SOFT (Good to soft in places; 6.5); Cross-Country course - GOOD TO SOFT (Good in places: 7.2)	-30
	<b>566</b>		<b>659</b>		<b>-93</b>

## APPENDIX 7

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### CHELTENHAM FESTIVAL MEDICATION DECLARATION FORM

#### Cheltenham Festival Medication Declaration

The following forms must be completed for **all** horses with entries at the Cheltenham Festival, irrespective of which country they are located in at the time.

The forms must be completed by the Trainer of the relevant horse.

#### **Medication Declaration Form A**

Must be submitted ten (10) days prior to the day of the race in which the horse is intended to run.  
All forms should be emailed to [equine@britishhorseracing.com](mailto:equine@britishhorseracing.com).

Trainers must declare:

- All medication administered within the previous thirty-five (35) days of completion of the form
- Any medications administered within the previous six (6) months of completion of the form which have a long-term effect (including corticosteroids, bisphosphonates and any other depot preparations).

#### **Medication Declaration Form B**

Must be submitted to the BHA Veterinary Officer at the Pre-Race Examination on the day of the race in which the horse is intended to run.

Trainers must declare:

- All medication administered within the previous ten (10) days – to include all medication administered subsequent to Medication Declaration Form A.

All information will be treated as strictly confidential.

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## Medication Declaration Form A

Completed forms should be submitted ten (10) days before the day of the race in which the horse is declared to run. All forms should be sent to [equine@britishhorseracing.com](mailto:equine@britishhorseracing.com).

Horse Name \_\_\_\_\_ Microchip No. \_\_\_\_\_

Race \_\_\_\_\_ Date of Race \_\_\_\_\_

I, the Trainer of the above racehorse, declare that I have recorded:

- All medication administered to the above horse within the previous thirty-five (35) days of completion of this form
- Any medications administered to the above horse within the previous six (6) months of completion of this form which have a long-term effect (including corticosteroids, bisphosphonates and any other depot preparations).

Name (print) \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Medication administered within thirty-five (35) days of completion of this form							
Product		Route of administration	Dose	Start date	Finish date	Frequency of administration	Name of person administering
Trade name	Active ingredient	Oral (O), Topical (T), Sub-cutaneous (SC) Intra-venous (IV), Intra-muscular (IM), Intra-Articular (IA)					



Medication administered within ten (10) days of the day of the race							
Product		Route of administration	Dose	Start date	Finish date	Frequency of administration	Name of person administering
Trade name	Active ingredient	Oral (O), Topical (T), Sub-cutaneous (SC) Intra-venous (IV), Intra-muscular (IM), Intra-Articular (IA)					

## APPENDIX 8

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### CHELTENHAM FESTIVAL RACE CONDITIONS

The following race conditions are races of a specified type and Grade/Class at the Cheltenham Festival:

- All non-novices' Grade 1 Steeple Chases:

These races are for five year old horses and upwards, which are allotted a rating of 130 or more by the BHA Head of Handicapping. Horses which are not qualified for a rating in Great Britain, Ireland or France may also be entered, provided the Handicapper is satisfied that the horse's racecourse performances up to and including the day prior to confirmation would merit a minimum rating of 130.

- All novices' Grade 1 Steeple Chases:

Such races are for novice five year old horses and upwards, which are allotted a rating of 120 or more by the BHA Head of Handicapping. Horses which are not qualified for a rating in Great Britain, Ireland or France may also be entered, provided the Handicapper is satisfied that the horse's racecourse performances up to and including the day prior to confirmation would merit a minimum rating of 120.

- All non-novices' Grade 1 Hurdle races<sup>22</sup>:

These races are for four year old horses and upwards, which are allotted a rating of 130 or more by the BHA Head of Handicapping. Horses which are not qualified for a rating in Great Britain, Ireland or France may also be entered, provided the Handicapper is satisfied that the horse's racecourse performances up to and including the day prior to confirmation would merit a minimum rating of 130.

- All novices' Grade 1 Hurdle races:

These races require no previous performance criteria other than being age qualified.

- All Handicap races:

Novices (and Juveniles) must have run a minimum of 3 times over the respective obstacles prior to starting.

Additionally, for the Pertemps Hurdle Series Final, horses must have finished in the first 6 in a qualifier during the current season in order to enter the Final.

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<sup>22</sup> The David Nicholson Mares' Hurdle race carries a minimum rating of 120.



## APPENDIX 9

### CHELTENHAM FESTIVAL RACES BY CLASS

Date	Race Title	Handle	Code	WFA/HC	Mdn/Nov	Class	Grade	Distance	Rating	Banc	Adv	Prize Money
12/03/2019	SUPREME NOV HUR	Supreme	Hurdle	WFA	Mdn/Nov	1	G1	2m87y	Open	£		125,000
12/03/2019	ARKLE NOV CSE	Arkle	Chase	WFA	Mdn/Nov	1	G1	1m7f199y	Open	£		175,000
12/03/2019	ULTIMA HCAP CSE	3m HC Chase	Chase	Hcap		1	G3	3m1f	Open	£		110,000
12/03/2019	CHAMPION HUR	Champion Hurdle	Hurdle	WFA		1	G1	2m87y	Open	£		450,000
12/03/2019	DAVID NICHOLSON HUR	David Nicholson	Hurdle	WFA		1	G1	2m3f200y	Open	£		120,000
12/03/2019	NATIONAL HUNT AM CSE	4m NH Chase	Chase	WFA	Mdn/Nov	1	G2	3m7f170y	Open	£		125,000
12/03/2019	CLOSE BROS NOV CSE	2m4f Nov HC Chase	Chase	Hcap	Mdn/Nov	1	Lstd	2m4f78y	0-145	£		70,000
13/03/2019	BARING BINGHAM HUR	Baring Bingham	Hurdle	WFA	Mdn/Nov	1	G1	2m5f26y	Open	£		125,000
13/03/2019	RSA NOV CSE	RSA Chase	Chase	WFA	Mdn/Nov	1	G1	3m80y	Open	£		175,000
13/03/2019	CORAL CUP HCAP HUR	Coral Cup	Hurdle	Hcap		1	G3	2m5f26y	Open	£		100,000
13/03/2019	QUEEN MOTHER CSE	Champion Chase	Chase	WFA		1	G1	1m7f199y	Open	£		400,000
13/03/2019	GLENFARCLAS CSE	X Country	Chase	WFA		2		3m6f37y	Open	£		65,000
13/03/2019	F WINTER JUV HCP HUR	Fred Winter	Hurdle	Hcap	Mdn/Nov	1	G3	2m87y	Open	£		80,000
13/03/2019	W'BYS CHAMPION NHF	Champion Bumper	NHF	WFA		1	G1	2m87y	Open	£		75,000
14/03/2019	GOLDEN MILLER CSE	Golden Miller	Chase	WFA	Mdn/Nov	1	G1	2m3f198y	Open	£		150,000
14/03/2019	PERTEMPS HCAP HUR	Pertemps	Hurdle	Hcap		1	G3	2m7f213y	Open	£		100,000
14/03/2019	FESTIVAL TROPHY CSE	Festival Trophy	Chase	WFA		1	G1	2m4f166y	Open	£		350,000
14/03/2019	STAYERS' HUR	Stayers'	Hurdle	WFA		1	G1	2m7f213y	Open	£		325,000
14/03/2019	PLATE HCAP CSE	2m4f HC Chase	Chase	Hcap		1	G3	2m4f166y	Open	£		110,000
14/03/2019	DAWN RUN NOV HUR	Dawn Run	Hurdle	WFA	Mdn/Nov	1	G2	2m179y	Open	£		90,000
14/03/2019	FULKE WALWYN AM CSE	Kim Muir	Chase	Hcap		2		3m2f	0-145	£		70,000
15/03/2019	JCB TRIUMPH HUR	Triumph	Hurdle	WFA	Mdn/Nov	1	G1	2m179y	Open	£		125,000
15/03/2019	COUNTY HCAP HUR	County	Hurdle	Hcap		1	G3	2m179y	Open	£		100,000
15/03/2019	SPA NOV HUR	Spa	Hurdle	WFA	Mdn/Nov	1	G1	2m7f213y	Open	£		125,000
15/03/2019	GOLD CUP CSE	Gold Cup	Chase	WFA		1	G1	3m2f70y	Open	£		625,000
15/03/2019	FOXHUNTER H.CSE	Foxhunter	Hunter	WFA		2		3m2f70y	Open	£		45,000
15/03/2019	M. PIPE CDL HCAP HUR	Martin Pipe	Hurdle	Hcap		2		2m4f56y	0-145	£		70,000
15/03/2019	GRAND ANNUAL HCP CSE	Grand Annual	Chase	Hcap		1	G3	2m62y	Open	£		110,000

## APPENDIX 10

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### 2007-2018 FESTIVAL RACES BY RUNNERS, FALLERS & FATALITIES

Race	Runners	Fallers	Fatalities	Incident %
4m NH Chase	213	23	4	12.7%
Grand Annual	257	24	4	10.9%
Queen Mother	114	12	0	10.5%
RSA Chase	137	12	2	10.2%
Golden Miller	202	18	0	8.9%
2m4f Nov HC Chase	158	11	3	8.9%
3m HC Chase	212	16	2	8.5%
Kim Muir	280	21	1	7.9%
Foxhunter	283	21	1	7.8%
2m4f HC Chase	270	17	3	7.4%
Martin Pipe	232	14	2	6.9%
Dawn Run	46	2	1	6.5%
Gold Cup	159	9	0	5.7%
Albert Bartlett	216	9	2	5.1%
David Nicholson	179	8	1	5.0%
Arkle	120	6	0	5.0%
Coral Cup	315	10	4	4.4%
Fred Winter	275	9	1	3.6%
Triumph	202	6	0	3.0%
Champion Hurdle	141	3	1	2.8%
Baring Bingham	163	3	1	2.5%
County	312	5	2	2.2%
Stayers'	161	3	0	1.9%
Pertemps	282	4	1	1.8%
Ryanair Chase	126	2	0	1.6%
X Country	191	1	2	1.6%
Supreme	205	1	0	0.5%

## APPENDIX 11

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### CONDITIONAL JOCKEYS' RACE PENALTY STRUCTURE

The standard penalty structure for conditional jockeys' races is as follows:

To be ridden by Conditional Jockeys or those eligible to ride  
under the provisions of Rule 61

Allowances: Riders who, prior to [date] (3 days prior)

have not ridden more than 20 winners.....3lb

Riders who have not ridden more than 10 such winners.....5lb

Riders who have not ridden any such winner.....7lb

(Only one of these allowances may be claimed and  
wins in any races run under the Rules of Racing or  
the Rules of a recognised Turf Authority will count)

Riders riding for their own stable allowed, in addition.....3lb

## APPENDIX 12

### 2018 FESTIVAL & NON-FESTIVAL SAFETY FACTORS ON NEW AND OLD COURSES

STEEPLECHASES - OLD COURSE - FESTIVAL ONLY		
STARTS	NORMAL	NOVICE
Abt 2M (1m 7f 199yds)	24	20
2M Abt 4 1/2F (2m 4f 78yds)	24	20
3M Abt 1/2F (3m 80yds)	24	20
3M Abt 1F (3m 1f)	24	20
3M Abt 1 1/2F (3m 1f 117yds)	24	20
3M Abt 3 1/2F (3m 3f 71yds)	24	20
Abt 4M (3m 7f 170yds)	24	20

STEEPLECHASE - OLD COURSE		
STARTS	NORMAL	NOVICE
Abt 2M (1m 7f 199yds)	20	16
2M Abt 4F (2m 3f 166yds)	20	16
2M Abt 4 1/2F (2m 4f 78yds)	20	16
3M Abt 1/2F (3m 80yds)	20	16
3M Abt 1F (3m 1f)	20	16
3M Abt 1 1/2F (3m 1f 117yds)	20	16
3M Abt 3 1/2F (3m 3f 71yds)	20	16
Abt 4M (3m 7f 170yds)	20	16

HURDLES - OLD COURSE - FESTIVAL ONLY		
STARTS	NORMAL	NOVICE
2M Abt 1/2F (2m 87yds)	26	22
2M Abt 4 F (2m 3f 200yds)	24	20
2M Abt 5F (2m 5f 26yds)	26	22
Abt 3M (2m 7f 208yds)	24	20
3M Abt 1 1/2F (3m 1f 67yds)	24	20

HURDLE - OLD COURSE		
STARTS	NORMAL	NOVICE
2M Abt 1/2F (2m 87yds)	24	20
2M Abt 4F (2m 3f 200yds)	24	20
2M Abt 5F (2m 5f 26yds)	24	20
Abt 3M (2m 7f 208yds)	20	16
3M Abt 1 1/2F (3m 1f 67yds)	20	16

NHFR - OLD COURSE - FESTIVAL ONLY		
STARTS	NORMAL	NOVICE
2M Abt 1/2F (2m 87yds)	24	

NHFR - OLD COURSE		
STARTS	NORMAL	NOVICE
2M Abt 1/2F (2m 87yds)	20	

STEEPLECHASES - NEW COURSE - FESTIVAL ONLY		
STARTS	NORMAL	NOVICE
2M ABT 1/2F (2m 62yds)	24	20
2M ABT 4F (2m 3f 198yds)	24	20
2M ABT 5F (2m 4f 166yds)	24	20
3M ABT 1 1/2F (3m 1f 56yds)	24	20
3M ABT 2F (3m 2f)	24	20
3M ABT 2 1/2F (3m 2f 70yds)	24	20
3M ABT 4F (3m 4f 21yds)	24	20
4M ABT 1/2F (4m 120yds)	24	20

STEEPLECHASES - NEW COURSE		
STARTS	NORMAL	NOVICE
2M ABT 1/2F (2m 62yds)	20	16
2M ABT 4F (2m 3f 198yds)	20	16
2M ABT 5F (2m 4f 166yds)		
3M ABT 1 1/2F (3m 1f 56yds)	20	16
3M ABT 2F (3m 2f)	20	16
3M ABT 2 1/2F (3m 2f 70yds)	20	16
3M ABT 4F (3m 4f 21yds)	20	16
4M ABT 1/2 F (4m 120yds)	20	16

<b>HURDLES - NEW COURSE - FESTIVAL ONLY</b>		
<u>STARTS</u>	<u>NORMAL</u>	<u>NOVICE</u>
2M ABT 1F (2m 179yds)	26	22
2M ABT 4 1/2F (2m 4f 56yds)	24	20
2M Abt 5 1/2F (2m 5f 103yds)	26	22
Abt 3M (2m 7f 213yds)	24	20

<b>HURDLES - NEW COURSE</b>		
<u>STARTS</u>	<u>NORMAL</u>	<u>NOVICE</u>
2M Abt 1F (2m 179yds)	24	20
2M ABT 4 1/2F (2m 4f 56yds)	24	20
2M Abt 5 1/2F (2m 5f 103yds)	24	20
Abt 3M (2m 7f 213yds)	24	

<b>NHFR - NEW COURSE - FESTIVAL ONLY</b>		
<u>STARTS</u>	<u>NORMAL</u>	<u>NOVICE</u>
2M Abt 1F (2m 179yds)	24	

<b>NHFR - NEW COURSE</b>		
<u>STARTS</u>	<u>NORMAL</u>	<u>NOVICE</u>
2M Abt 1F (2m 179yds)	20	
1M Abt 6 F (1m 5f 209yds)	16	
1m Abt 4	16	

<b>CROSS COUNTRY</b>		
<u>STARTS</u>	<u>NORMAL</u>	<u>NOVICE</u>
3m Abt 6F (3m 6f 37yds)	16	



## APPENDIX 13

### PERCENTAGE OF JOCKEYS EXCLUDED FROM AMATEUR RACES AT THE FESTIVAL BY POSSIBLE QUALIFICATION CRITERIA, 2007-18.

Criteria	% Jockeys excluded		
	Foxhunter	4m NH Chase	Kim Muir
10 wins of which 5 over steeplechases	91.2%	88.3%	90.4%
10 wins of which 3 over steeplechases	88.0%	79.8%	84.6%
10 wins	85.2%	70.0%	78.2%
5 wins of which 3 over steeplechases	73.5%	64.3%	68.9%
5 wins of which 1 over steeplechases	68.2%	46.0%	56.4%
3 wins of which 1 over steeplechases	52.3%	34.7%	42.1%
3 wins	49.1%	29.1%	33.9%
30 career rides and 1 win	62.2%	38.0%	47.9%
30 career rides and 1 steeplechase win	57.6%	28.6%	37.5%
30 career rides	57.6%	27.7%	36.1%

## APPENDIX 14

### ACKNOWLEDGEMENTS

The Review Group would like to thank all stakeholders for their contribution:

Aidan Coleman – Jockey

Brian Hughes – Jockey

Caroline Davies – Racecourse Services Director, Racecourse Association

Charlie Liverton – Chief Executive, Racehorse Owners Association

Dale Gibson – Executive Director (Racing), Professional Jockeys Association

Dan Skelton – Racehorse Trainer

Danny Cook – Jockey

Daryl Jacob – Jockey

David Bass – Jockey

David Muir – Racing Consultant to the Royal Society for the Prevention of Cruelty to Animals (RSPCA)

George Noad – Racing Executive, National Trainers Federation

Gordon Elliott – Racehorse Trainer

Harry Skelton – Jockey

Henry Oliver – Racehorse Trainer

Holly Cook – Racecourse Services Manager, Racecourse Association

Paul Struthers – Chief Executive, Professional Jockeys Association

Richard Johnson – Jockey

Richard Norris – Group Racing Director, The Jockey Club Racecourses

Roly Owers – Chief Executive, World Horse Welfare

Simon Claisse – Clerk of the Course, Cheltenham Racecourse

Simon Earle – Racehorse Trainer

Tom Scudamore – Jockey

Wayne Hutchinson – Jockey & Professional Jockeys Association Safety Officer

Willie Mullins – Racehorse Trainer