

**REPORT TO:** Musselburgh Racing Associated Committee

**MEETING DATE:** 7 January 2020

**BY:** Racecourse Health & Safety Officer and General Manager

**SUBJECT:** Health & Safety Report

---

## **1 PURPOSE**

To advise the MRAC of Health and Safety Management at Musselburgh Racecourse.

## **2 RECOMMENDATIONS**

2.1 The MRAC are asked to note the report.

## **3 BACKGROUND**

### **3.1 HEALTH AND SAFETY DIARY DATES TO NOTE:**

- **21/10/19** – A full medical Table Top Incident planning meeting held in the Lothian Suite at Musselburgh Racecourse. All relevant parties attended to exercise events and incidents that may occur during any given raceday
- Health and Safety Representative Meetings have / are being held at Musselburgh Racecourse:

**Attendees** – Adam Nish – Caretaker / Philip Duncan – Operations Manager / Rory Innes – Track Manager / Elizabeth Allen – Office Manager / Steve Horlick – Health and Safety Advisor

**22/01/19 – Hospitality Room Musselburgh Racecourse**

**23/10/19 – Hospitality Room Musselburgh Racecourse**

**12/11/19** – Annual review of all racecourse risk assessments – Ongoing process to ensure all documentation is relevant, factual and appropriate.

- **20/11/19** – Full internal racecourse management Major Incident Table Top Exercise meeting was held within the Lothian Suite at Musselburgh Racecourse. Outside parties from the Emergency Services attended. Police / Medical Services. Full scenario based exercise to review procedures and reactions to incidents that may occur on any raceday.

**The Emergency Services advise that they are moving away from rigid protocols and moving towards procedures, intended to allow a greater degree of common sense and flexibility to deal with emergency incidents.**

- **11/12/19** - Annual Safety Advisory Group meeting to be held at the Police room, Penston House, MacMary Industrial Estate. Philip Duncan, Ops Manager and Steve Horlick, Racecourse Safety Officer to attend.

The Racecourse will present a proposal to the Group to consider Linkfield Road as a one-way system to improve the safety of the access and egress on Ladies Day.

- **January 2020** – All annual servicing and testing of services to commence in line with Safety Certificate requirements. Safety Certificate application to be made February 2020.
- **January 2020** – Annual Fire Risk Assessment to be carried out on all buildings of the racecourse.
- **January 2020** - All contractors' information letters to be reviewed by the end of March to ensure all contractors visiting the racecourse adhere to safety protocol at all times. The letter will also detail that individual contractors need to possess the correct and required documentation and insurances that are to be made available on request at any time by Musselburgh Racecourse.

## 3.2 STAFF TRAINING UPDATE

### **Training Requirements:**

- First Aid Training – A number of staff will be nominated to attend a First Aid course within January 2020. This will ensure that a nominated First Aid trained staff member is within each racecourse department at all times. Date to be completed March 31<sup>st</sup> 2020.

## 3.3 HEALTH AND SAFETY

### **RACECOURSE NON RACEDAY ACTIVITY:**

**Objective:** In order to fully maximise the use of the racecourse on non racedays as well as racedays, the Musselburgh Racecourse Management assessed it to be safe to organise non raceday events to be held on and within the racecourse boundaries.

Following the objections by Enjoy Leisure Ltd on a number of occasions to these events being held, it was agreed to contract an Independent Health and Safety Consultant to assess the issues raised to the non raceday events being held at regular times.

The Independent Consultant, Ethos Environmental Services, assessed in detail the following aspects:

- The risk at each individual golf hole – 9 holes
- The trajectory of golf balls as they are hit from all areas of the golf course

- The inclusion of designated exclusion zones around certain holes that have been identified as the highest risk areas.

Their full report (available as a separate document – background paper 7.1) has assessed that the aforementioned non raceday activities/events can be held safely through management control measures and recognised safety procedures.

The existing Risk Assessments have been updated to include Ethos Environmental Services technical data, as stated above (see background paper 7.2). The control measures involving the exclusion zones at certain holes, have been included in the Risk Assessments.

**Conclusion:**

It is assessed through Musselburgh Racecourse Management Risk Assessment processes and the report lodged by Ethos Environmental Services, that the planned events and activities on non racedays can be safely controlled and managed to create a safe environment. The risk to participants, staff, golfers and the general public can be controlled to an acceptable level.

**3.4 CAPITAL EXPENSE UPDATE**

Desirable Future Capital Expenditure:

- Continuous maintenance on recognised safety issues throughout the site has taken place. The Main Stand Grandstand steppings have been inspected and repaired where necessary as well as the tarmac area and manhole covers in front of the Betting Shop.
- It has also been highlighted continuous repairs are required around the Parade Ring and the steppings as stated. Regular checks take place to ensure any issues that arise are dealt with quickly. Checks and remedial works required are documented through the Inspection Forms used on a raceday and non raceday.
- The surface around the grandstand is deteriorating. It will need attention as the deterioration will accelerate, especially during the winter months.

**3.4 LEGISLATIVE CHANGES**

No changes to report to affect this period. All new legislation has been issued on 1<sup>st</sup> October 2019. No relevant changes to affect the current situation.

**3.5 ONGOING INDIVIDUAL HEALTH AND SAFETY ISSUES**

**Claims** – There are currently no claims ongoing against the racecourse.

**4 POLICY IMPLICATIONS**

4.1 None.

## **5 INTEGRATED IMPACT ASSESSMENT**

- 5.1 The subject of this report does not affect the wellbeing of the community or have a significant impact on equality, the environment or economy.

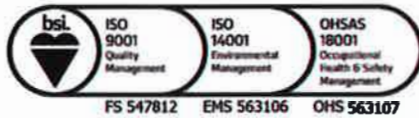
## **6 RESOURCE IMPLICATIONS**

- 6.1 Financial - none.  
6.2 Personnel - none.  
6.3 Other - none.

## **7 BACKGROUND PAPERS**

- 7.1 Appendix 1: Ethos Env Independent Risk Assessment Report  
7.2 Appendix 2: Risk Assessment – example 1  
7.3 Appendix 3: Risk Assessment – example 2

<b>AUTHOR'S NAME</b>	Steve Horlick / Bill Farnsworth
<b>DESIGNATION</b>	Safety Officer / GM
<b>CONTACT INFO</b>	07912 343 131 / 07710536134
<b>DATE</b>	Wednesday, 18 December 2019



**ethosenvironmental**

---

**TECHNICAL REPORT P7893**

---

**MUSSELBURGH RACECOURSE  
AND GOLF COURSE**

---

**BALL STRIKE RISK  
ASSESSMENT EXERCISE**

---

---

***Prepared For***

---

**Musselburgh Racecourse**  
Linkfield Road  
Musselburgh  
EH21 7RG

---

***Prepared By***

---

**ETHOS ENVIRONMENTAL LIMITED**  
**HEAD OFFICE**  
Unit 16 Dumbryden Industrial Estate  
32 Dumbryden Road  
EDINBURGH  
EH14 2AB

---

Tel: 0131 453 5111



E-mail: [scott@ethosenvironmental.co.uk](mailto:scott@ethosenvironmental.co.uk)

**AUGUST 2019**

---

P7893	Page 1 of 31	Ethos Environmental Limited
Golf Risk Assessment		Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019

## QUALITY STATEMENT

<b>Project Title</b>		Health and Safety Consultancy Racecourse		<b>Project Number</b>	
				P7893	
<b>Document Title</b>		Golf Risk Assessment Report		<b>Date of site work</b>	<b>Report Issue Date</b>
				15/08/2019	27/11/2019
<b>Revision</b>	<b>Date Written</b>	<b>Filename</b>	P7893 Golf Risk Assessment Report		
Issue: 1.2	24/09/19	<b>Description</b>	Amended version – issue with risk assessment repaired and diagrams		
		<b>Activity</b>	<b>Prepared By</b>	<b>Checked By</b>	
		<b>Name</b>	Scott Carlin	Brian Gardner	
		<b>Signature</b>			
<b>Issue</b>		<b>Filename</b>			
		<b>Description</b>			
			<b>Prepared By</b>	<b>Checked By</b>	
		<b>Name</b>			
		<b>Signature</b>			

# Contents

---

QUALITY STATEMENT.....	2
Contents.....	3
1.0 Introduction .....	4
2.0 Background .....	5
2.1 Golf Course.....	5
2.2 Musselburgh Racecourse .....	5
3.0 Risk Assessment.....	6
3.1 General.....	6
3.2 Rationale for Risk Assessment .....	6
3.3 Hole Evaluation .....	7
Hole 1 .....	7
Hole 2 .....	7
Hole 3 .....	7
Hole 4 .....	8
Hole 5 .....	8
Hole 6 .....	8
Hole 7 .....	8
Hole 8 .....	8
Hole 9 .....	8
3.4 Golf Course Good Practice .....	9
3.5 Racecourse Good Practice .....	9
4.0 Conclusions .....	10
Appendix 1: Layout of Golf Course.....	11
Appendix 2: Golf Course Hole Information .....	12
Appendix 3: Average Shot Length .....	17
Appendix 4: Average Shot Distribution .....	19
Appendix 5: Evaluation of Hole Shot Spread .....	20
Appendix 6: Elevated Risk of Offline Golf Balls .....	30
Appendix 7: Risk Assessment .....	31

## 1.0 Introduction

---

At the request of Mr Bill Farnsworth, General Manager, Musselburgh Racecourse, a risk assessment exercise was undertaken to assess the risk of golfing activities on personnel involved with proposed non-race activities at the Musselburgh Racecourse.

The Musselburgh Racecourse surrounds the Musselburgh Old Course Golf Course, which is on land in the middle of the course.

This assessment was undertaken by Mr Scott Carlin TechIOSH, Senior Consultant, with Ethos Environmental Ltd. on 14<sup>th</sup> August 2019.

P7893		Ethos Environmental Limited
Golf Risk Assessment	Page 4 of 31	Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019



## 2.0 Background

---

### 2.1 Golf Course

**Musselburgh Links – The Old Golf Course is reputed to be the oldest in the world. It is located on “common good land”<sup>1</sup> in the centre of the Musselburgh Racecourse.**

### 2.2 Musselburgh Racecourse

**Musselburgh Racecourse is a horse racing venue located in the Millhill area of Musselburgh, East Lothian, close to the River Esk. It is the second biggest racecourse in Scotland.**

**The course offers both flat racing and National Hunt meetings (though it only introduced jumping in 1987) and is 2 km long. In the middle of the course is a nine-hole golf course, dating from at least 1672.**

---

<sup>1</sup> ‘Common Good Land’ is defined within the Land Reform (Scotland) Act 2003 (hereinafter referred to as the “the 2003 Act”). In terms of section 6(e) of the 2003 Act, access rights are not exercisable over land which has been developed or set out (i) as a sports or playing field; or (ii) for a particular recreational purpose. However, under Section 7 of the 2003 Act, this provision only applies when the recreation area in question is in use for that purpose (i.e. horse racing or as a golf course). Outwith these times the racecourse and golf course cannot prevent members of the public from taking access to the land.

P7893		Ethos Environmental Limited
Golf Risk Assessment	Page 5 of 31	Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019

## 3.0 Risk Assessment

---

### 3.1 General

It is the intention of Musselburgh Racecourse to hold other events, outwith the racing calendar such as school trips, sponsored walks and business events.

Currently, the golf course does not operate during racing meetings, as this would introduce an unacceptable level of risk to both the horses and the riders.

The land on which the Golf Course rests is "common good" land (see Ref 1 above) which allows the general public to access the land. It is not uncommon for the public to walk across the land on days when golf is operating and golfers must take due care, to ensure that members of the public are not injured by balls.

The course typically runs from a west to east direction and back again, with the outward holes on the south of the land and the inward across the north side. The holes run more or less parallel to the race circuit, with the inner jump circuit, closest to the golf course.

In any golf course, golfers are required to take due care and attention in order not to injure other golfers, greenkeepers or members of the public.

From the Racecourse point of view, the racecourse must also ensure that no members of the public enter the track area when horse racing is taking place.

Having additional members of the public occupying areas around the course will introduce an elevated risk of ball strikes, however this is primarily due to the fact that there are potentially more targets to hit, rather than an increase in offline golf shots.

### 3.2 Rationale for Risk Assessment

In order to evaluate the risk to persons occupying the racecourse when golfing activities are being undertaken, the following things were assessed.

1. Which Holes in the golf course present the most significant risk of an accidental ball strike injury.
2. The average distance of each hole and the average distance of each golf shot, given the anticipated club selection.
3. The average dispersion of an average male amateur golfer aiming for a 160 ft (48.7m) target.
4. The likelihood of offline shots reaching the racecourse and where.
5. Controls which can be implemented to further minimise residual risk.

This information was included in the final risk assessment document.

P7893	Page 6 of 31	Ethos Environmental Limited
Golf Risk Assessment		Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019

### 3.3 Hole Evaluation

#### Hole 1

Hole 1 is situated to the west of the golf course. The main tee (yellow) is situated close to the starter shed on the northwest of the site. The tee crosses the racecourse and the ball is played in a southerly direction, playing towards the west stand of the racecourse.

It is likely that golfers may use a driver at this hole in order to get closest to the flag. The prevailing wind is westerly and as such, players will need to contend with a cross wind across the hole, which will assist in keeping balls towards the golf course and away from the racecourse on the west side.

It was noted that in the average distribution on aiming from a 160yrd target, some balls were short 100ft (30m) and 100yds (30m) wide.

Significantly overshooting the green may result on balls landing on the Racecourse, south of the green (45m from centre of green) or towards the stand to the south west of the site (50m from centre of green). It is understood that there are on occasions marquees erected on the internal side of the racecourse fence around Hole 1 green and parallel to Hole 2. This may also be at risk from overshooting (48m).

#### Hole 2

Hole 2 runs west to east on the south side of the golf course. This hole runs parallel to the start/finish straight of the racecourse. Although persons occupying the racecourse at the area close to the stands are likely to be unaffected by personnel teeing off from the yellow tees on this hole, there is a risk that wayward shots may find itself on the racecourse. It is unlikely that personnel parallel with the second tee are likely to be affected as most tee shots will begin in a straight line before veering off in either a *hook* or a *slice*.

The hole mostly affects the inner circuit of the course, which is used for jumps. It is possible that schools may occupy this part of the course for measuring the length, width and height of the course as part of a school exercise.

#### Hole 3

Hole 3 also runs west to east on the south side of the golf course. This hole runs parallel to the start/finish straight of the racecourse, although is orientated in a slight north easterly direction, directing it slightly away from the racecourse.

Again, persons occupying the racecourse at the area close to the stands are likely to be unaffected. It was noticed that during Ladies Day, a marquee is parallel to the tee of Hole 3, however, this is unlikely to be affected by wayward golf shots.

Personnel teeing off from the yellow tees on this hole, will be level with the middle of the start finish straight of the course. Personnel level with the Tee are not at risk from tee shots from the Hole 3 but may be affected by shots towards the green from Hole 2. There is a slight risk that balls may stray onto the inner circuit of the course parallel with the middle of the fairway.

P7893	Page 7 of 31	Ethos Environmental Limited
Golf Risk Assessment		Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019

#### Hole 4

Hole 4 runs west to east also. It has the tee inside the track and the ball is played over the track to the green which sits beyond the racetracks easternmost point. Given that the golf course is closed during racing meets, it is highly unlikely that balls will interfere with activities being undertaken at the stand areas.

There is a high risk of ball strikes where balls are played over the course and personnel should not be allowed to walk over this location during shots being played. There is also a risk that balls may stray onto the starter position on the south east of the site.

#### Hole 5

Hole 5 runs from the southeast to the northwest. It is a Par 3, with the centre of the green resting approximately 55m from the side of the course. Given the distance of the green from the course, it is unlikely that balls will reach the racetrack or affect any activities being undertaken on the track.

#### Hole 6

Hole 6 runs from northeast to southwest. The green is close to the inner circuit of the track and there is a possibility that balls from this hole may overshoot onto the racetrack. Wayward shots from the tee are more likely to encroach onto the adjacent holes' fairways.

#### Hole 7

Hole 7 is unlikely to end up on the racecourse due to the design of the hole. The hole runs east to west and due to the fact that the hole is a Par 5 with a slight bend at around 170m, golfers are less likely to try to cut the dogleg, too deeply, if at all, for less experienced players.

There is a slight risk that the second shot played on this hole, may enter the racecourse as players aim slightly right to avoid a bunker hazard

#### Hole 8

Hole 8 is a Par 3 which runs in between Holes 9 and 2. It's is unlikely that a wayward shot would reach the track.

#### Hole 9

Hole 9 runs east to west close to the north side of the racecourse. and due to the fact that the hole is a Par 4 with a dog leg around 180m, golfers are less likely to try to cut the dogleg, too deeply, if at all, for less experienced players.

There is a risk that tee shots may enter the racecourse parallel with the fairway.

P7893	Page 8 of 31	Ethos Environmental Limited
Golf Risk Assessment		Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019

### 3.4 Golf Course Good Practice

Most Golf Courses have specific hazard location concerning elevated potential of ball strikes. This is especially pertinent where a green lies close to the tee of the subsequent hole. Local rules may forbid players to play towards greens until other players have left the adjacent tee or similar.

In general, all golfers must be made aware of the “common good” status of the land and to watch for members of the public as well as other golfers, prior to taking a shot.

With regards to potential people on the racecourse, golfers must:

- Never play until personnel in front of you are out of range.
- Never play if you feel a person has encroached too much onto the line of your intended shot. Always ensure they move to a safer position before playing.
- Always shout “FORE” to warn others of stray shots heading in their direction.
- Never play shots if you cannot be certain the intended landing area is clear of other golfers, green staff or members of the public. Utilise playing partners to ensure you are safe and the intended landing area is clear.

These general rules should be adhered to as well as any local course rules. Additional rules pertaining to occupants of the racecourse may also need to be added.

### 3.5 Racecourse Good Practice

If the Racecourse is to allow personnel onto the racecourse when the golf course is in use, personnel should avoid the marked areas on the plans when the relevant holes are in use.

It is also essential that personnel occupying the racecourse are provided with a safety induction which includes the risk of ball strikes.

The induction should cover:

1. Areas of elevated risk, such as where balls are played over the course.
2. What to do in the event of hearing “Fore” (e.g. take evasive action by turning away from the direction of the shout and by covering your face and head with your arms).
3. Always be mindful of golfers in play and pause where there may be an encroachment into the line of the golfers play.
4. Always follow signs and follow steward’s direction.
5. A presentation on the higher risk areas on the course.

It is essential that a “joined-up” approach is agreed when establishing a working set of rules for the racecourse and the golf course.

P7893	Page 9 of 31	Ethos Environmental Limited
Golf Risk Assessment		Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019

## 4.0 Conclusions

---

Analysis of the distribution of golf shots for an average male amateur golfer and the typical distance of shots, suggests that the risk of ball strikes can be managed by:

- creating general exclusion zones within the racecourse which cannot be accessed when the particular holes are in use and
- controlling access through higher risk areas (e.g. areas where balls are played over the racecourse), by either a traffic light system or stewards on event days.

It is essential that the Racecourse and Golf Course come together to formulate a working set of rules that works for both parties, as inductions will need to be provided to personnel occupying the racecourse. Cards for the course may need to mention personnel on the racecourse.

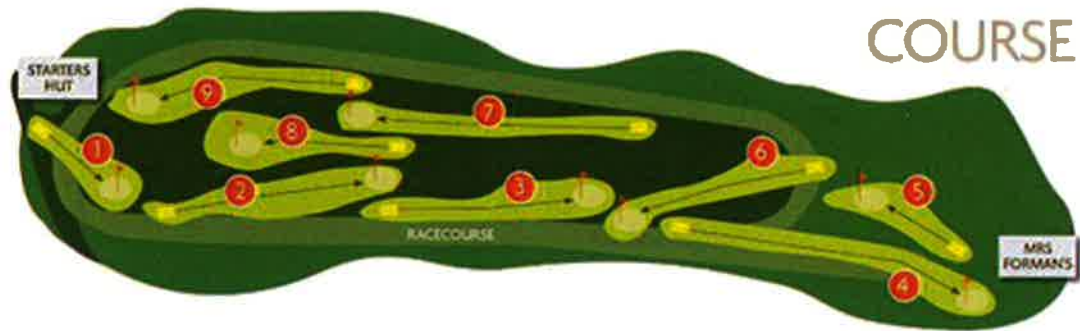
In general, the risks of ball strikes to personnel occupying the racecourse on golfing days can be adequately managed through controlling access to certain areas.

If it is seen that balls are routinely moving outwith the golf area onto the racecourse, then consideration should be given to the installation of appropriate fencing to control the offline shots. However, this will only be necessary where offline balls are routinely occurring and presenting an unacceptable level of risk.

The key issue is finding a solution that works for both the golf Course and the Racecourse. A safe solution can only be developed when both organisations are working together. Such cooperation will ensure that the land can be used more frequently and in general increase the amenity of the land for all parties.

## Appendix 1: Layout of Golf Course

---



## Appendix 2: Golf Course Hole Information

---

### 1st Hole – The Short Hole

---

#### Men's

YELLOW 141 Yards, Par 3

WHITE 240 Yards, Par 3

SI 17

#### Ladies

RED 142 Yards, Par 3



---

This hole requires an accurate shot to what can be considered a well-defended green. You may experience some right to left cross winds, and due to the raised green, make sure you take enough club.

**History Trivia:** This hole was added in 1832, becoming the course's eighth hole at the time.

### 2nd Hole – The Graves

---

#### Men's

YELLOW 317 Yards, Par 4

WHITE 348 Yards, Par 4

SI 15

#### Ladies

RED 332 Yards, par 4

SI 9



---

Beware of the two hidden bunkers on this hole. They are approximately, three quarters of the way down the fairway!

**History Trivia:** It has been suggested that this may have been a burial ground for soldiers who died at the Battle of Pinkie in 1547. They were buried on Musselburgh Links to discourage golfers from playing there, as golf was frowned upon at that time.



### 3rd Hole – Barracks Entry

**Men's**

**YELLOW 298 Yards, Par 4**  
**WHITE 357 Yards, par 4**  
**SI 3**

**Ladies**

**RED 313 yards, par 4**  
**SI 11**



This is a tricky par 4. With heavy gorse bushing on the left and the racetrack on the right, it's important to get a clean drive. There are also a few bunkers down the fairway, just to catch you out!

**History Trivia:** This hole is called Barracks Entry due to it being opposite the road leading to the barracks in Pinkie Road.

### 4th Hole – Mrs Forman's

**Men's**

**YELLOW 412 Yards, par 4**  
**WHITE 431 Yards, par 4**  
**SI 1**

**Ladies**

**RED 322 Yards, Par 4**  
**SI 1**



With a difficult semi-blind tee shot, and an awkward approach Mrs Forman's is another hard par 4 to be aware of. The green is a great example of a traditional putting area, meaning there are often few straight putts.

**History Trivia:** This was a most popular resting point on the course and drinks used to be served to the golfers through a window adjacent to the green.

## 5th Hole – The Sea Hole

### Men's

YELLOW 167 yards, par 3

WHITE 183 yards, par 3

SI 11

### Ladies

RED 177 Yards, par 3

SI 17



A lovely but tricky par 3, due to the numerous bunkers which protect the green.

**History Trivia:** This hole has been copied and incorporated in many courses (more than any other hole on the Links) with sleepers protecting the green.

## 6th Hole – The Table

### Men's

YELLOW 316 Yards, par 4

WHITE 326 Yards, par 4

SI 9

### Ladies

RED 321 Yards, par 4

SI 5



The 6th is a great hole, offering stunning views of Arthur's Seat. The recommended line of this hole is down the left side of the fairway, which will give you a straight shot onto the green.

**History Trivia:** The formidable "Pandy" (a euphemism for pandemonium bunker). Willie Park Junior used to enjoy playing this hole as he was a long hitter and could easily carry a "Pandy" bunker and he normally played his second to the foot of the table plateau green.

## 7th Hole - The Bathing Coach

### Men's

YELLOW 457 Yards, par 5

WHITE 479 Yards, par 5

SI 13

### Ladies

RED 472 Yards, par 5

SI 3



This hole provides the best opportunity for a birdie. The wind can play a big factor in this hole, so be mindful of your approach and certainly try and avoid the bunkers. The green is very large and can make for having some awkward pin positions, so your putting technique can be put to the test.

**History Trivia:** This hole received its name because a bathing coach stood near to the green for many years.

## 8th Hole - Hole Across

### Men's

YELLOW 220 Yards, par 3

WHITE 240 Yards, par 3

SI 5

### Ladies

RED 229 Yards, par 4

SI 7



Another tricky par 3 to master. The hole is slightly uphill and tee shots are often going into a prevailing wind.

**History Trivia:** This hole was previously the ninth hole and was added in 1870 in preparation for the course holding the Open Championships.

P7893	Page 15 of 31	Ethos Environmental Limited
Golf Risk Assessment		Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019

**9th Hole - The Gas**

**Men's**

YELLOW	340 Yards, par 4
WHITE	364 Yards, par 4
SI	7

**Ladies**

RED	357 Yards, par 4
SI	15



The 9th, called The Gas Hole is another bunker favourite with nine bunkers in total and long rough siding the fairway for good measure.

**History Trivia:** History Trivia: This hole was so called due to the gasworks being situated behind the green.

## Appendix 3: Average Shot Length

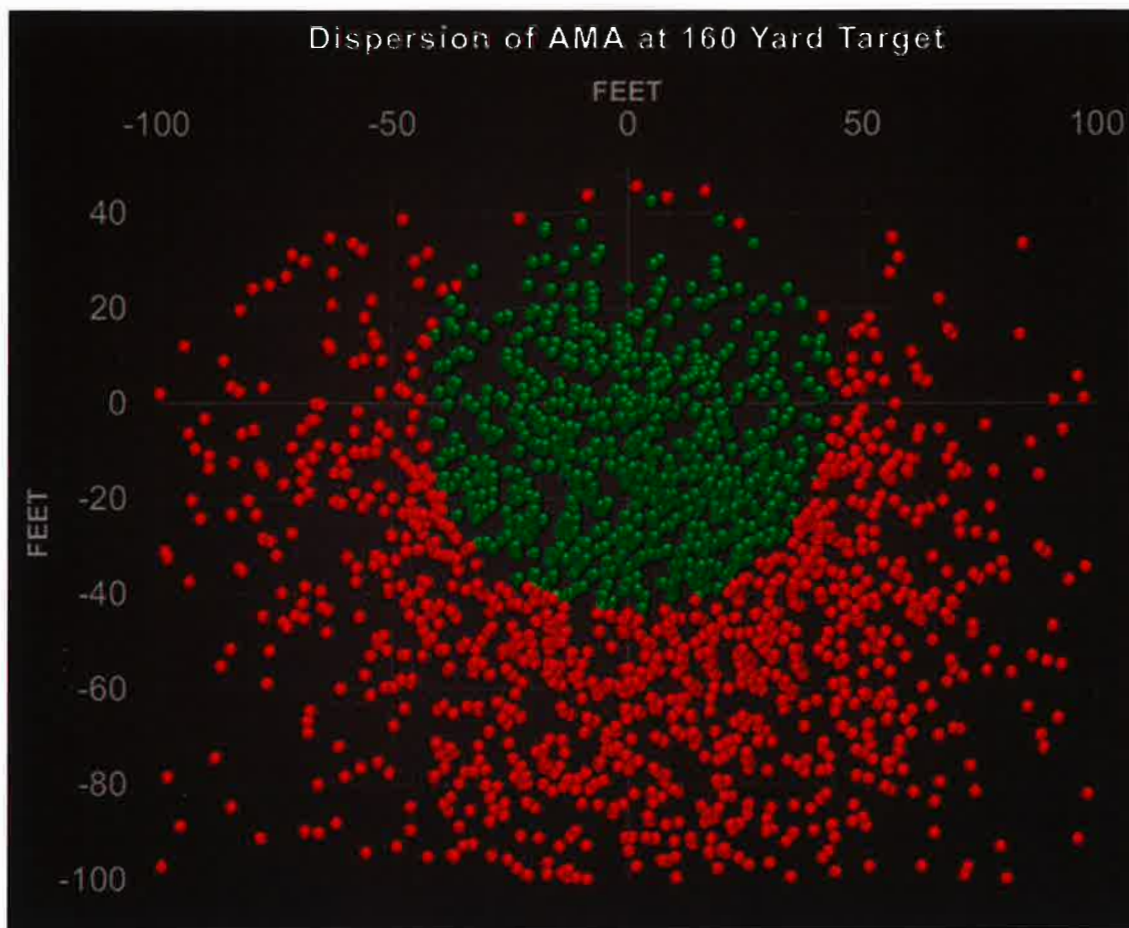
**Table A3.1: Average Shot Distances by Club for Men and Women**

Club	Men's Average Distance (yds)	Women's Average Distance (yds)	Men's Average Distance (m)	Women's Average Distance (m)
Driver	230	200	210	183
3-wood	210	180	192	165
2-iron	190	170	174	155
3-iron	180	160	165	146
4-iron	170	150	155	137
5-iron	160	140	146	128
6-iron	150	130	137	119
7-iron	140	120	128	110
8-iron	130	110	119	101
9-iron	120	100	110	91
Pitching wedge	110	90	101	82
Sand wedge	90	80	82	73
Lob wedge	65	6	59	5

**Table A3.2: Average Shot Distances for Short, Mid and Long Hitters**

Club	Loft (degrees)	Distance for men (metres)			Distance for women (metres)		
		Short	Mid	Long	Short	Mid	Long
Driver	8 - 13	183	210	229	119	147	183
2-wood	12 - 15	175	201	219	114	141	175
3-wood	12 - 17	172	197	214	111	138	172
4-wood	15 - 19	160	183	199	104	128	160
5-wood	19 - 21	156	178	194	101	125	156
6-wood	21 - 23	148	169	184	96	119	148
7-wood	23 - 25	140	160	174	91	112	140
8-wood	25 - 27	132	151	164	85	106	132
9-wood	26 - 28	120	137	150	78	96	120
1-iron	15 - 18	162	197	221	99	127	162
2-iron	18 - 20	147	178	200	90	116	147
3-iron	21 - 24	136	165	185	83	107	136
4-iron	25 - 28	128	155	175	78	101	128
5-iron	28 - 32	121	146	165	73	95	121
6-iron	32 - 36	113	137	154	69	89	113
7-iron	36 - 40	106	128	144	64	83	106
8-iron	40 - 44	98	119	134	60	77	98
9-iron	45 - 48	87	105	118	53	68	87
Pitching wedge	48 - 52	79	96	108	48	62	79
Gap wedge	52 - 54	72	87	98	44	56	72
Sand wedge	54 - 58	60	73	82	37	47	60
Lob wedge	58 - 62	53	64	72	32	42	53

Appendix 4: Average Shot Distribution<sup>2</sup>

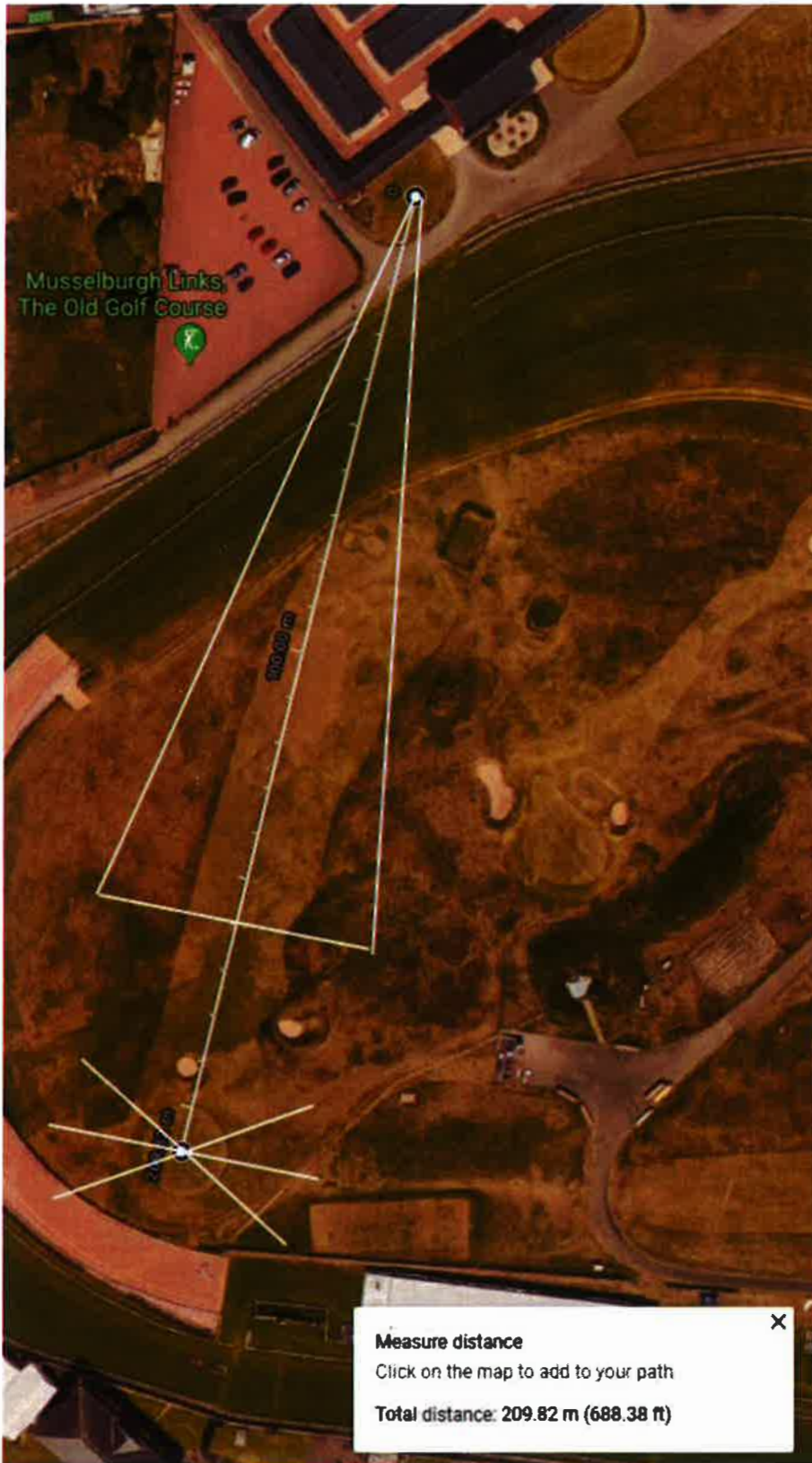


<sup>2</sup> From [Blog.trackmangolf.com](http://Blog.trackmangolf.com)

## Appendix 5: Evaluation of Hole Shot Spread

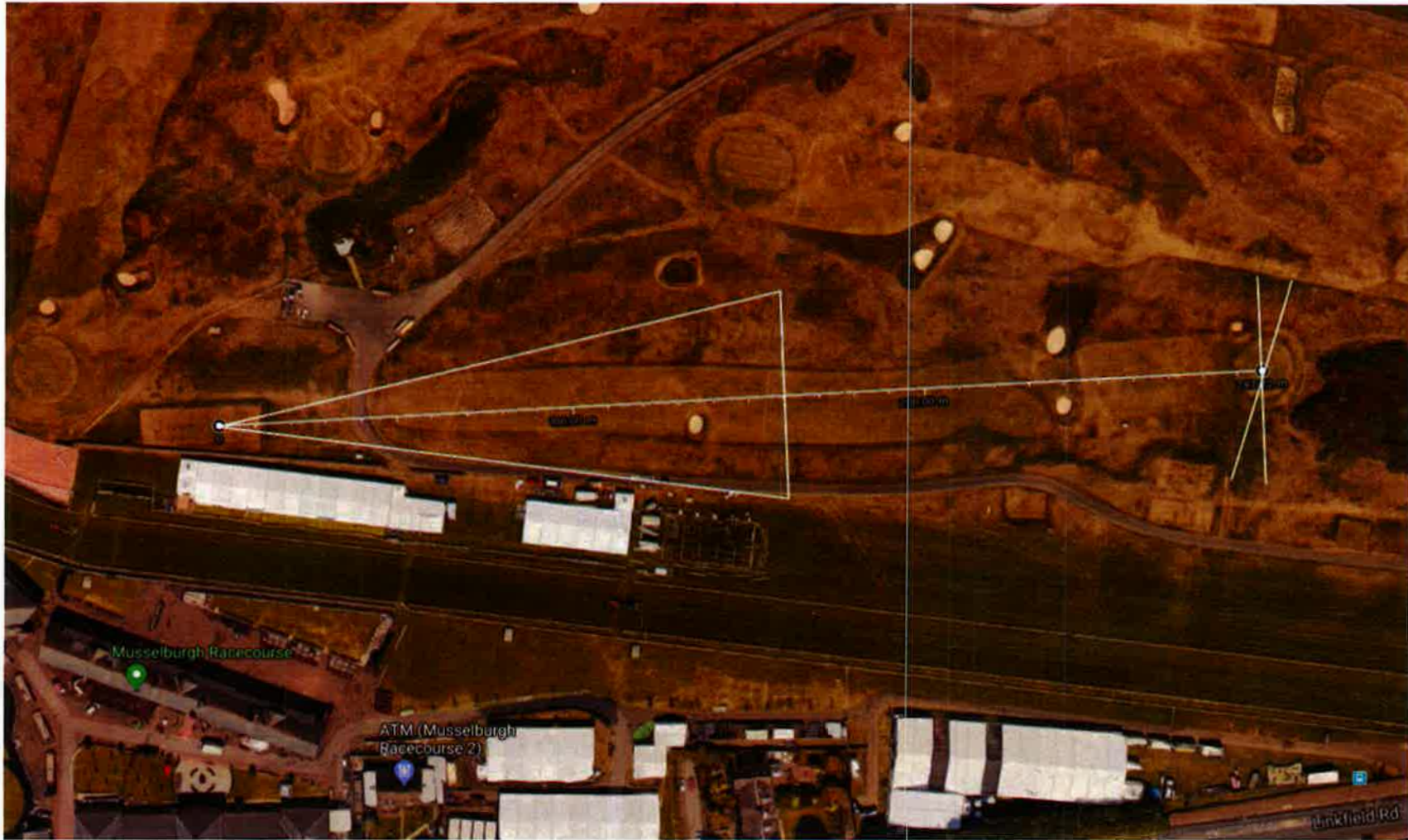
---





Hole 1

P7893	Page 21 of 31	Ethos Environmental Limited
Golf Risk Assessment		Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019



Hole 2

P7893	Page 22 of 31	Ethos Environmental Limited
Golf Risk Assessment		Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019



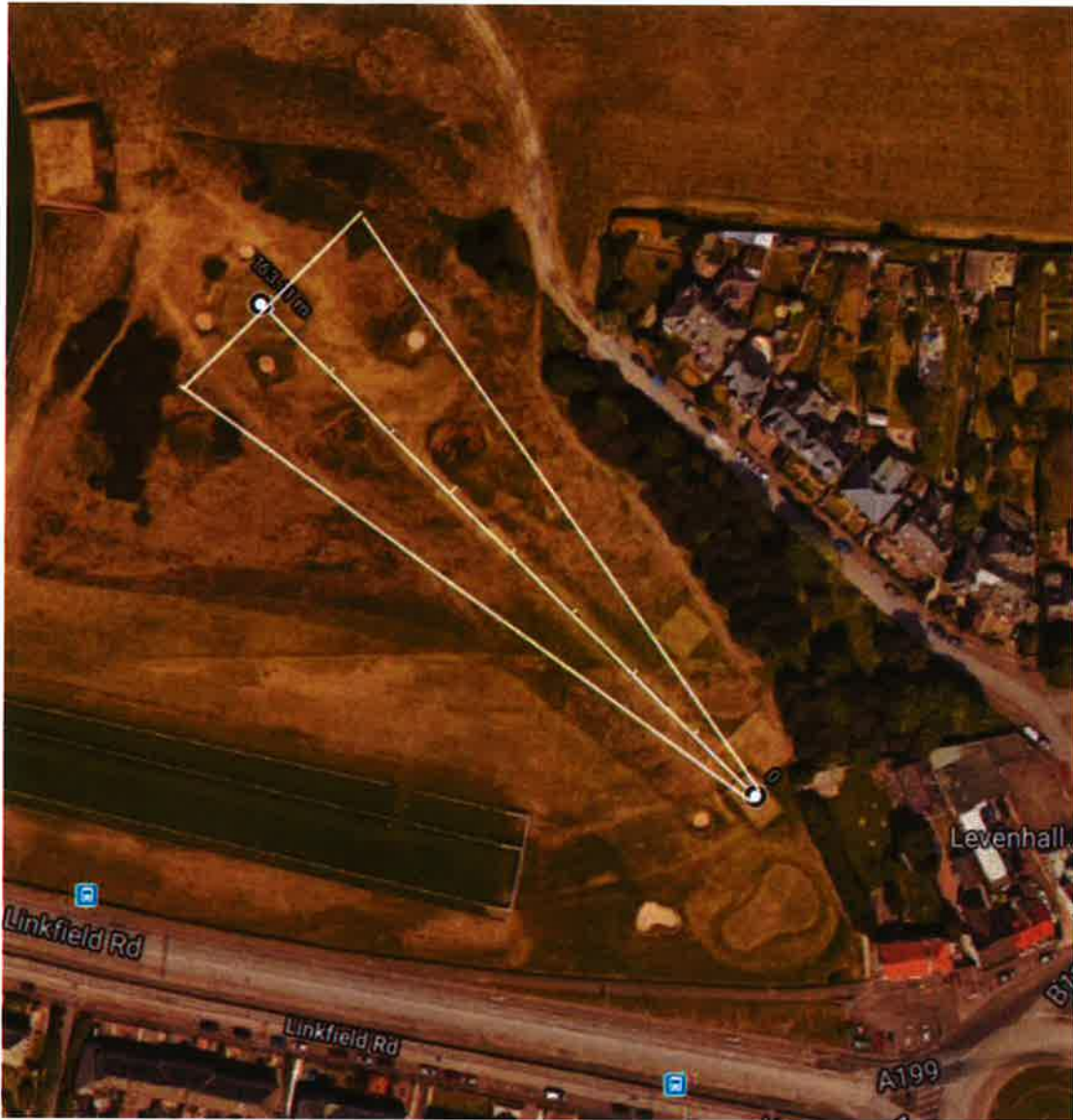
Hole 3

P7893	Ethos Environmental Limited
Golf Risk Assessment	Health and Safety Risk Assessment
Musselburgh Racecourse	August 2019
Page 23 of 31	

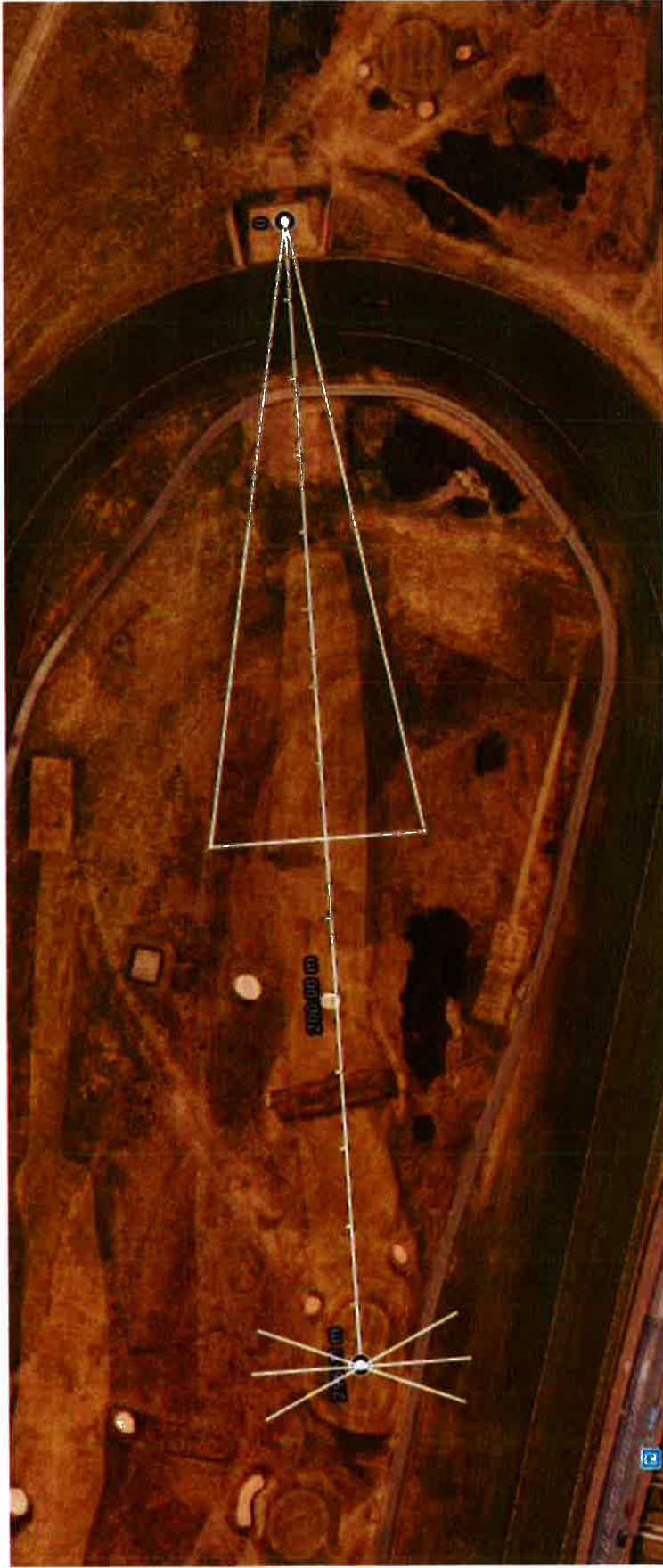


Hole 4

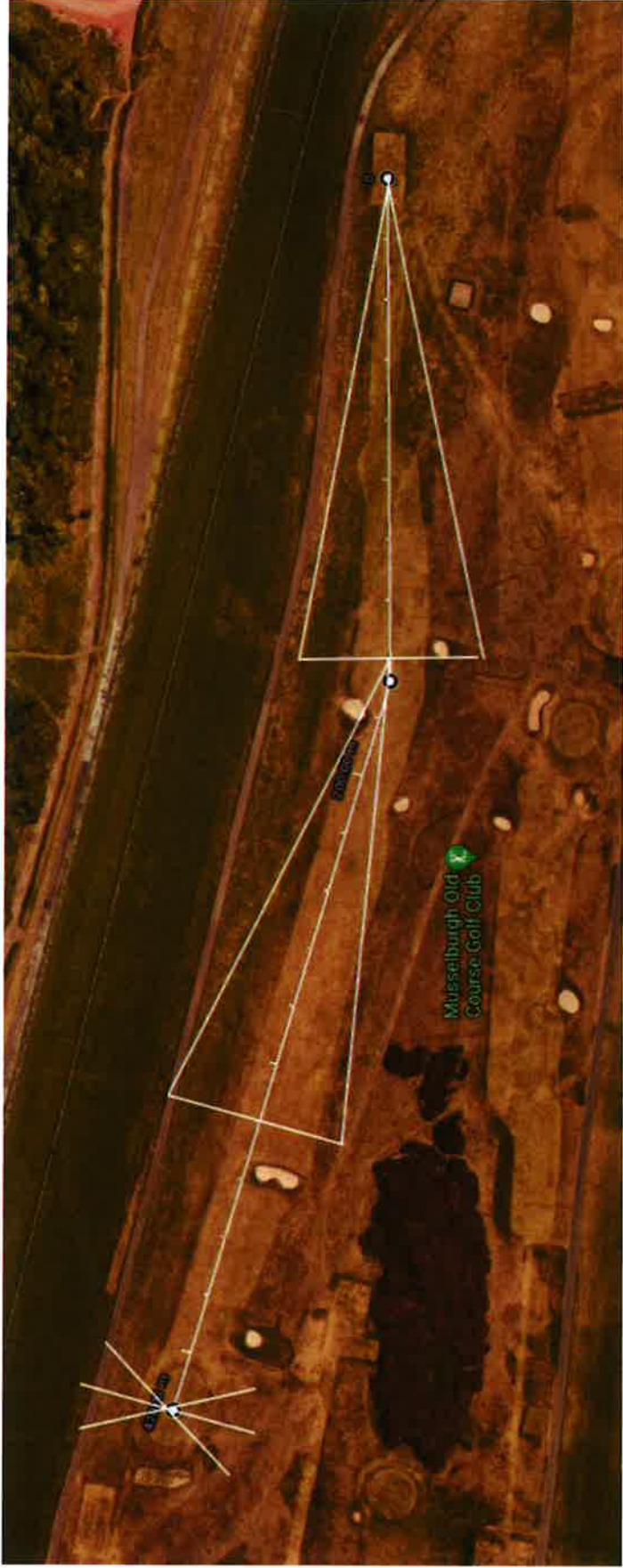
P7893		Ethos Environmental Limited
Golf Risk Assessment	Page 24 of 31	Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019



Hole 5

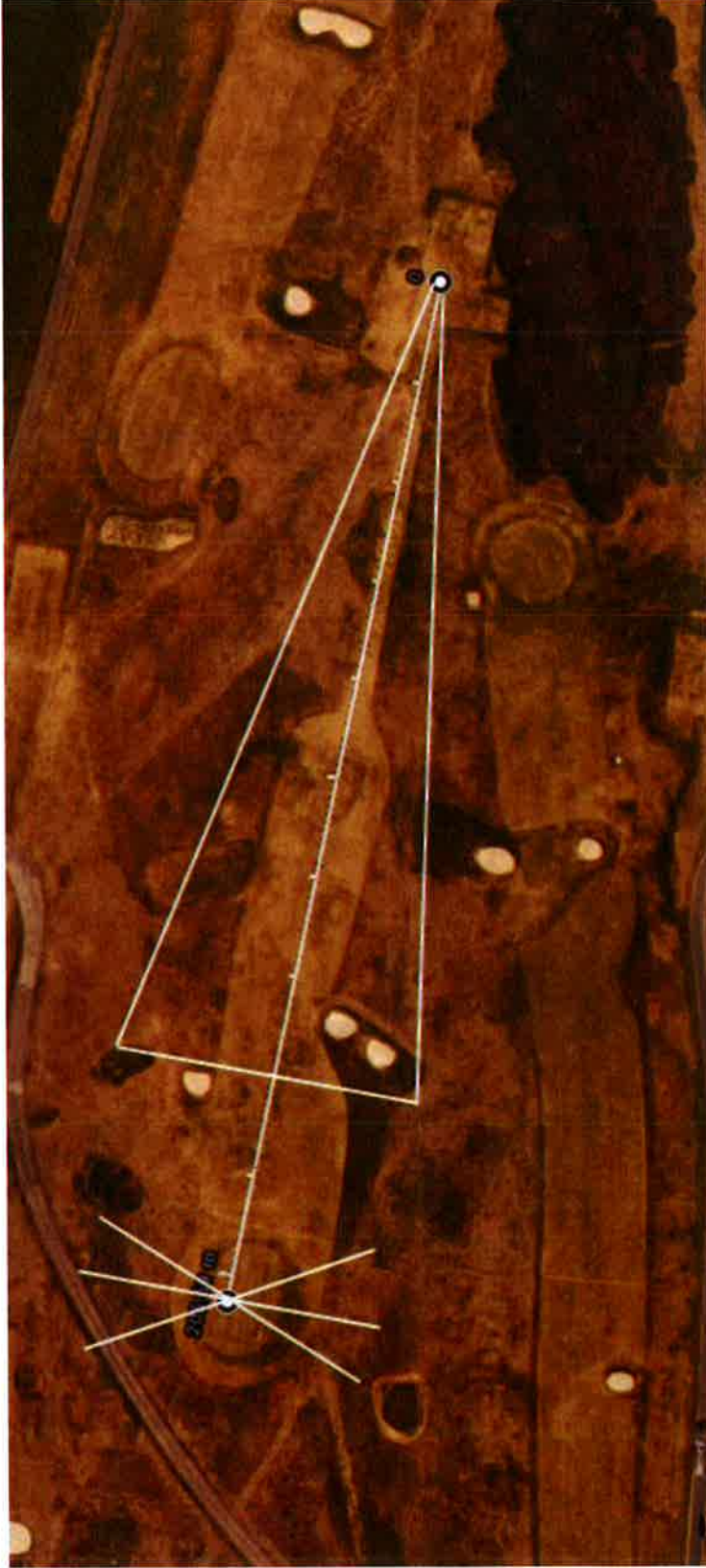


Hole 6



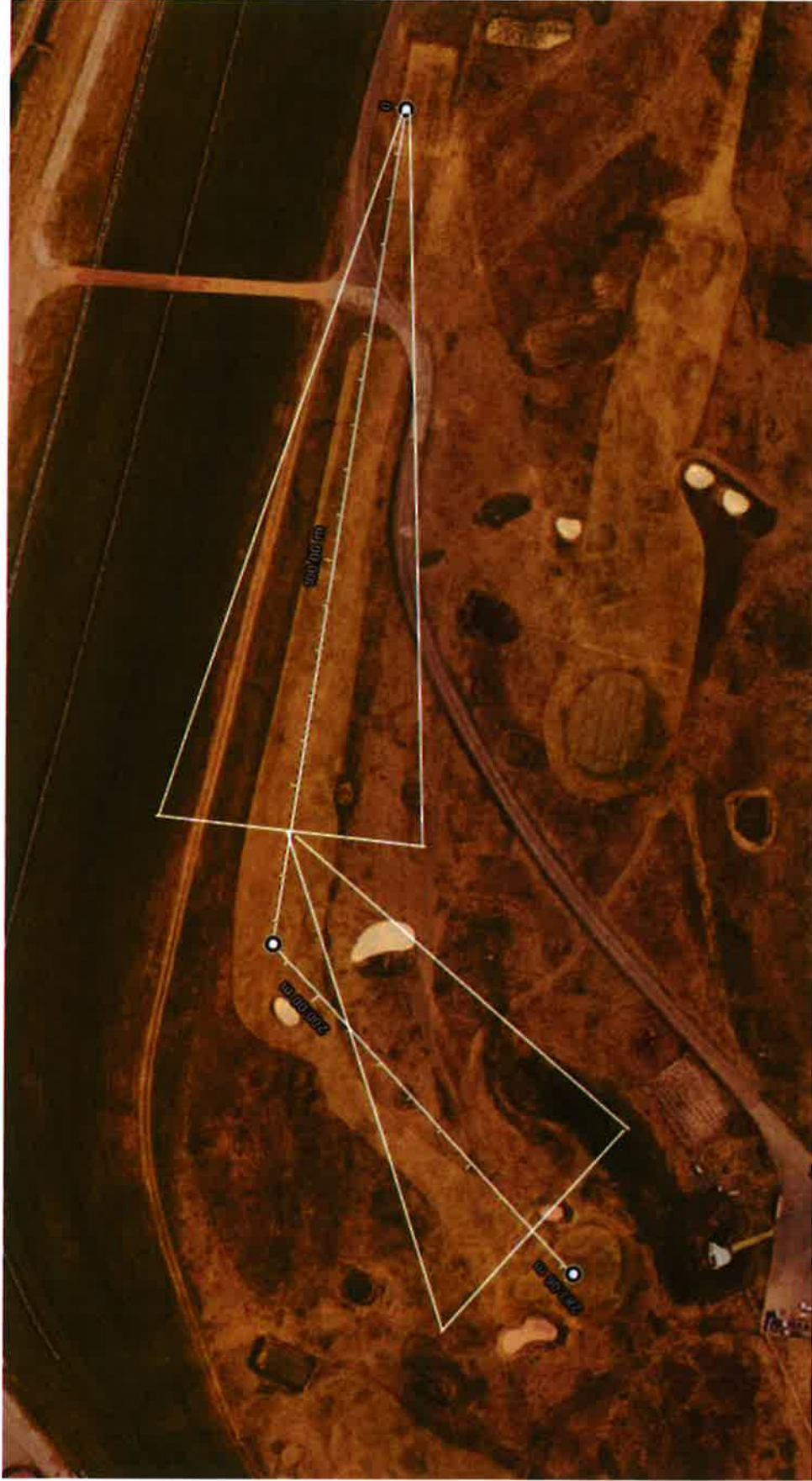
Hole 7

P7893	Ethos Environmental Limited	Health and Safety Risk Assessment
Golf Risk Assessment	Page 27 of 31	August 2019
Musselburgh Racecourse		



Hole 8





Hole 9

P7893		Ethos Environmental Limited
Golf Risk Assessment	Page 29 of 31	Health and Safety Risk Assessment
Musselburgh Racecourse		August 2019

Appendix 6: Elevated Risk of Offline Golf Balls



Appendix 7: Risk Assessment

---

P7893			
Golf Risk Assessment		Page 31 of 31	Ethos Environmental Limited
Musselburgh Racecourse			Health and Safety Risk Assessment
			August 2019



Organisation name: MUSSELBURGH RACECOURSE

**RISK ASSESSMENT REF NUMBER : 0132 – SCHOOL CHILDREN PHOTO SHOOT**

What/Where are the hazards?	Who might be harmed and how?	What are you already doing?	Do you need to do anything else to manage this risk?	Action by whom?	Action by when?	Completion Date
<p><i>The hazard:</i></p> <p><i>School children in close proximity to a pony for a photo shoot.</i></p> <p><i>The photo shoot will take place on the racecourse track and within the racecourse Parade Ring</i></p>	<p><i>Collison with the children and the pony</i></p> <p><i>Risk of injury</i></p> <p><b>RISK LEVEL : LOW</b></p>	<p><i>The school children will be accompanied at all times.</i></p> <p><i>The Supervisors will be:</i></p> <p><i>3 x Racecourse employees</i></p> <p><i>Qualified Nursery Supervisors</i></p> <p><i>The pony will be under control at all times and led by an experienced / competent person.</i></p> <p><i>The children will be kept within a safe distance from the pony at all tims.</i></p>	<p><i>Continued supervision throughout the event by experienced persons form the racecourse and continuous supervision by the Nursery Supervisors of the children</i></p>	<p><i>Nursery Supervisors</i></p> <p><i>Musselburgh Racecourse Managers</i></p>	<p><i>26/02/18</i></p>	<p><i>To be used for further photo shoots</i></p>



Organisation name: MUSSELBURGH RACECOURSE

RISK ASSESSMENT REF NUMBER : 0133

What/Where are the hazards?	Who might be harmed and how?	Control Measures Required	Do you need to do anything else to manage this risk?	Action by whom?	Action by when?	Completion Date
<p>School children and teachers/supervisors visiting Musselburgh Racecourse for various activities</p> <p>All areas throughout the racecourse site</p> <p>Preparations maybe taking place for the staging of the racecourse racedays</p>	<p>School children / teachers / supervisors</p> <p>Collision with vehicles</p> <p>Collison with golf playing within the centre part of the racecourse</p> <p><b>RISK LEVEL – LOW/MEDIUM</b></p>	<p>Teachers / supervisors of school children visiting to be briefed of the possibility of vehicle movement throughout the racecourse site</p> <p>Teachers / supervisors of school children visiting of the golf activity within the centre part of the racecourse</p> <p>Groups of children to be under supervision at all times</p> <p>Teachers / supervisors of school children visiting to be instructed to remain within the confines of the racecourse and not to enter the golf course at any time</p> <p>Signage in place to warn of vehicle movement throughout the racecourse</p> <p>Musselburgh racecourse to inform the golf course management of times and activities of school children groups on site and to receive recognition of the visit notification</p> <p>Teachers / Supervisors of school children to sign to state they have received risk assessment and have been briefed on the above points</p> <p>When the children group are being taken onto the racecourse track the teachers will be responsible for monitoring the golfing activity at that time. if it is deemed appropriate, the teachers will keep the children off the racecourse track until it is clear to proceed or liaise with the golfers in that vicinity to stop playing until the children s exercise is complete and clear.</p>	<p>Monitor all groups whilst on site to ensure the group are adhering to control measures stated.</p> <p>All relevant parties are committed to ensuring that the children s activities are conducted in the safest environment within all reasonable means.</p> <p>Ladies Day/Premier Days racing preparation to be briefed each day to the school children Supervisor in order for the children not to be in he vicinity of any works being carried out.</p> <p>On site Contractors to be briefed of the children being on site on arrival and a copy of their itinerary received.</p>	<p>Racecourse management</p> <p>School children teachers / supervisors</p> <p>Ops Manager</p> <p>Golf course management</p>	<p>21/05/18</p> <p>Reviewed at Quarterly Health and Safety Meetings</p> <p>Updated : 04/12/19</p>	<p>Reviewed bt Independent Health and Safety Consultant</p> <p>Report received December 2019 to state control measures will be place</p> <p>Racecourse Risk assessments to be used in conjunction of the stated report</p>

What/Where are the hazards?	Who might be harmed and how?	Control Measures Required	Do you need to do anything else to manage this risk?	Action by whom?	Action by when?	Completion Date
		<p><i>There will be a minimum of 2 teachers at all times with the group who will be radio communication with each other with one of the teacher located on the 2<sup>nd</sup> tee.in order to communicate with oncoming golfers.</i></p> <p><i>The teachers will be wearing high viz to identify them as supervisors of the children.</i></p> <p><i>There will be an exclusion zones noominated around specific hole that will be briefed to the School teachers before the event.</i></p> <p><i>Golfers will be warned as to the proximity of school children .</i></p> <p><i>Racecourse staff member to be in radio contact with the Scholl teachers to manage the transit of the school children at all times</i></p>				