

Fence Difficulty in GB and Irish Chases

One aspect of chase races that seems to be largely ignored is fence difficulty. I realised I hadn't seen much research on this so I decided it was worth investigating for my second article.

I settled on horses that Fell or Unseated Rider to measure difficulty. Adding Unseated Rider bumped up the sample size quite a bit and seemed logical because although it can be caused by a slip or jink it's usually the fence that causes the problem. There are various issues that mean this is by no means a perfect way of measuring fence difficulty. Some tracks have a greater proportion of races run over longer distances and therefore more fences to jump and some tracks that have more races for inexperienced horses. Some tracks have repositioned fences for safety reasons – for example Cheltenham Old Course 2nd last fence has been moved 3 times in the last 10 years.

I set up the Exporter to export the 7 fields below for all chases in GB and Ireland from January 1st 2013 to December 31st 2023:

The screenshot shows the 'Data Exporter' interface with several sections:

- Race Data:** Includes checkboxes for Race Date & Time, Course, Course Direction, Course Characteristics, Distance, Value, Distance in Yards, Race Type, Number of Runners, Class, New Class Number, Minimum Age, Maximum Age, Handicap Limit (if applicable), Race Name, Time In Seconds, Going, Official Going, Classifications, Race Date, Race Time, Total SP %, CD Pace IV Leaders, CD Pace IV Prominent, CD Pace IV Held Up, LTO CD Pace IV Leaders, LTO CD Pace IV Prominent, LTO CD Pace IV Held Up.
- Runner Data:** Includes checkboxes for Racecard Number, Draw, Draw Impact Value, Finishing Position, Horse Name, Horse Country, Distance To Next, Distance To Winner, Jockey, Jockey Claim, Trainer, Age (at time of Race), Weight Carried (pounds), Penalty Carried, Weight Rank, Days Since Last Run, Equipment, Horse Colour, Horse Sex, Horse Sex Abbrev, Horse Dam, Horse Sire, Form String, Pace String, Favorite Indicator, Industry Odds (SP), Industry Odds (SP) Decimal, Betfair Decimal SP, Betfair ESTIMATE Decimal, Comments In Running, Won (1=1st, 0=Last), Place (1=Placed, 0=UnPlaced), PRC Average, PRC Last Run, PRC 2nd Last Run, PRC 3rd Last Run, Pace Abbreviation, Pace Rating, Pace Rating Rank, Official Rating, Official Rating Rank, Tissue Odds (textual eg. Evens, 6/1 et), Tissue Odds Decimal, Tissue Rating, Tissue Rating Rank, TIC+PFR, PFR, PFR Rank, Main Rating, Main Rating Rank, Main+Stats Rating, Main+Stats Rating Rank, Stats Rating, Stats Rating Rank, Trainer Stats Rating, Trainer Stats Rating Rank, Jockey Stats Rating, Jockey Stats Rating Rank, Trainer/Jockey Stats Rating, Trainer/Jockey Stats Rating Rank, Horse Stats Rating, Horse Stats Rating Rank, User Rating 1, User Rating 1 Rank, User Rating 1 Decimal Odds.
- Calculated and Filtered Data:** Includes checkboxes for dyHA, dyLTO, dyAVG, dyAVG(x), dyMR, dyMR(x), dy2HA, VDW, HC, Finished Races SR, Runs Before, Won Before, Won SR Before, Won P/L Before, Plc Before, Plc SR Before, Plc Since, Won Since, Won SR Since, Won P/L Since, Plc Since, Plc SR Since, Class LTO (Same Code), New Class LTO (Same Code), Distance LTO (Same Code), Distance In Yards LTO (Same Code), Value LTO (Same Code), Pounds LTO (Same Code), Official Rating LTO (Same Code), FinPos LTO (Same Code), Course LTO (Same Code), Distance to Winner LTO (Same Code), SP Odds LTO (Numerical) (Same Code), SP Odds LTO (Decimal) (Same Code), Betfair SP Odds LTO (Numerical) (Same Code), Betfair SP Odds LTO (Decimal) (Same Code), DLSR(F), DLSR(O), FLAT TURF Runs Before, FLAT AW Runs Before, CHASE Runs Before, HURDLE Runs Before, NHF Runs Before, ALL FLAT Runs Before, ALL JUMPS Runs Before, FLAT TURF Wins Before, FLAT AW Wins Before, CHASE Wins Before, HURDLE Wins Before, NHF Wins Before, ALL FLAT Wins Before, ALL JUMPS Wins Before, History (CD, BF etc), Class LTO, New Class LTO, Distance LTO, Distance In Yards LTO, Value LTO, Pounds LTO, Official Rating LTO, FinPos LTO, Course LTO, Distance to Winner LTO, SP Odds LTO (Numerical), SP Odds LTO (Decimal).
- Date Restrictions:** Includes Start Date (January 2013) and End Date (December 2023) calendars. Course is set to 'ALL COURSES'. Tick for 'CHASE' is selected. 'Export' button is visible.
- Tick Selections:** Includes 'Select FIRST 85 calculated fields', 'Select SECOND 85 calculated fields', 'Select THIRD 85 calculated fields', and 'Saved Export Ticks' (EXPORT 1, EXPORT 2, EXPORT 3, EXPORT 4, EXPORT 5).

A useful recent feature of the Exporter are the saved Export ticks in the right where if you have different fields required for different exports it will remember which ones you selected for future exports. The Race name field was included so I could differentiate between Aintree Mildmay and Aintree National.

The Horse Country field was included in case I decided to do some work which required looking back at previous runs. This would enable me to create a unique horse reference in case some horses shared the same name.

This gave me a file with 160693 runs in this format:

	A	B	C	D	E	F	G	H	I
	Course	Race	Race Date	Race Time	Position	Horse	Horse Country		
2	Catterick	Buy A 2013 Annual Badge Today Beg	01/01/2013	13:10	1	Rapidolyte De Ladalk	GB		
3	Catterick	Buy A 2013 Annual Badge Today Beg	01/01/2013	13:10	2	See What Happens I	IRE		
4	Catterick	Buy A 2013 Annual Badge Today Beg	01/01/2013	13:10	247	Cara Court	IRE		
5	Catterick	Buy A 2013 Annual Badge Today Beg	01/01/2013	13:10	247	Hollins	GB		
5	Catterick	Buy A 2013 Annual Badge Today Beg	01/01/2013	13:10	249	Gin Cobbler	GB		
7	Catterick	Buy A 2013 Annual Badge Today Beg	01/01/2013	13:10	250	My Idea	GB		
8	Catterick	Mirror Punters Club Handicap Cha	01/01/2013	14:20	1	Brave Spartacus	IRE		
9	Catterick	Mirror Punters Club Handicap Cha	01/01/2013	14:20	2	Classical Mist	GB		
9	Catterick	Mirror Punters Club Handicap Cha	01/01/2013	14:20	3	Montoya's Son	IRE		
1	Catterick	Mirror Punters Club Handicap Cha	01/01/2013	14:20	4	Tommysteel	IRE		
2	Catterick	Mirror Punters Club Handicap Cha	01/01/2013	14:20	250	Alpha One	IRE		
3	Catterick	Mirror Punters Club Handicap Cha	01/01/2013	14:20	254	Ormus	GB		
4	Catterick	Racinguk.com Handicap Chase (Cl	01/01/2013	14:55	1	No Way Hozay	GB		
5	Catterick	Racinguk.com Handicap Chase (Cl	01/01/2013	14:55	2	Turf Trivia	GB		
6	Catterick	Racinguk.com Handicap Chase (Cl	01/01/2013	14:55	3	Ibn Hiyyan	USA		
7	Catterick	Racinguk.com Handicap Chase (Cl	01/01/2013	14:55	250	Hopeand	GB		
8	Exeter	Royal Castle Hotel Beginners' Chas	01/01/2013	13:30	1	Buddy Bolero	IRE		
8	Exeter	Royal Castle Hotel Beginners' Chas	01/01/2013	13:30	2	Theatrical Star	GB		

Position 247 indicates Unseated Rider and Position 250 indicates Fell.

The 5 races run over Grand National fences are:

- Fox Hunters' Chase
- Topham chase
- Grand National Chase
- Becher Handicap Chase
- Grand Sefton

A bit of work in Excel ends up with a new Course column with Aintree Mildmay and National, a Fell/UR flag and a Count column for Pivot tables

ite	Race Ti	Positio	Horse	Horse C	Fell/PU	Course	Count
01/01/2013	15:15	6	Lupita				1
01/01/2013	15:15	250	Thomas V				1
01/01/2013	15:15	254	Global W				1
01/01/2013	15:15	254	Meet The				1
01/01/2013	14:35	1	Western L				1
01/01/2013	14:35	2	Rupert La				1
01/01/2013	14:35	3	Golanbro				1
01/01/2013	14:35	4	Knockgra				1
01/01/2013	14:35	5	Lord Rud				1
01/01/2013	14:35	6	Witness C				1
01/01/2013	15:10	1	Tarquini				1
01/01/2013	15:10	2	Shellys C				1
01/01/2013	15:10	3	Murchu				1
01/01/2013	15:10	4	Karinga C				1
01/01/2013	15:10	5	Sword Fis				1
01/01/2013	15:10	6	Spot The				1
01/01/2013	15:10	7	Highdown				1
01/01/2013	15:10	8	Amber Kr				1
01/01/2013	15:10	254	Current R				1
01/01/2013	15:10	254	Doctor De				1
01/01/2013	15:10	254	Telenor				1
01/01/2013	13:55	1	Evella				1
01/01/2013	13:55	2	Farewella				1
01/01/2013	13:55	253	See You Jack	GB	0	Fakenhan	1
01/01/2013	15:05	1	Groomed	IRE	0	Fakenhan	1
01/01/2013	15:05	2	Persian Herald	GB	0	Fakenhan	1
01/01/2013	15:05	3	Earth Tremor	IRE	0	Fakenhan	1
01/01/2013	15:05	247	Watch House	IRE	1	Fakenhan	1
01/01/2013	13:05	1	Bocciani	GER	0	Musselbu	1
01/01/2013	13:05	2	Swift Arrow	IRE	0	Musselbu	1
01/01/2013	13:05	3	Niceonefrankie	GB	0	Musselbu	1
01/01/2013	13:05	4	Lets Get Serious	IRE	0	Musselbu	1

A pivot table then gives the breakdown of Fell/UR runners by year in the format below.

A full breakdown for every track is available at the end of this article in Appendix 2

Example:

	Runs	Fell/UR	% Fell/UR
Ayr	2391	203	8.49
2013	192	20	10.42
2014	204	15	7.35
2015	225	33	14.67
2016	251	27	10.76
2017	248	16	6.45
2018	257	18	7.00
2019	232	20	8.62
2020	141	10	7.09
2021	200	15	7.50
2022	233	15	6.44
2023	208	14	6.73

Ayr is similar to quite a few tracks where the % of Fell/UR runners has reduced in recent years.

Other examples are Down Royal and Fakenham:

	Runs	Fell/UR	% Fell/UR
Down Royal	1724	139	8.06
2013	181	22	12.15
2014	159	17	10.69
2015	179	32	17.88
2016	163	14	8.59
2017	180	16	8.89
2018	145	7	4.83
2019	142	9	6.34
2020	129	1	0.78
2021	152	9	5.92
2022	147	8	5.44
2023	147	4	2.72
Fakenham	1779	224	12.59
2013	143	29	20.28
2014	162	35	21.60
2015	172	24	13.95
2016	182	30	16.48
2017	167	19	11.38
2018	159	18	11.32
2019	148	16	10.81
2020	135	11	8.15
2021	203	14	6.90
2022	158	14	8.86
2023	150	14	9.33

A good look at the list at the end of the article shows quite a bit of variation.

I needed a way of defining the fence difficulty at each track. One option was to do a rolling average but that would have given varying figures for each year by track. That would not have been ideal because it would have made the cut-off on January 1st each year when it should really be the start of each season.

After trying a few things, I just settled on taking the average for 2017 on. The purpose of this research was not to investigate each track individually but to find wider trends based on fence difficulty across a range of tracks.

% of Fell/UR in Chase Races by Track since 2017

		% Fell/UR
Aintree National		21.13
Leopardstown	IRE	12.91
Punchestown	IRE	11.07
Listowel	IRE	10.70
Sligo	IRE	10.69
Thurles	IRE	10.23
Naas	IRE	9.78
Killarney	IRE	9.56
Fakenham		9.46
Plumpton		9.35
Ludlow		9.10
Newcastle		8.58
Haydock		8.52
Fairyhouse	IRE	8.52
Limerick	IRE	8.40
Catterick		8.35
Galway	IRE	8.31
Tipperary	IRE	8.16
Wetherby		7.90
Tramore	IRE	7.86
Gowran Park	IRE	7.40
Cheltenham		7.31
Clonmel	IRE	7.23
Cork	IRE	7.21
Taunton		7.18
Ayr		7.11
Wincanton		6.95
Navan	IRE	6.92
Wexford	IRE	6.66
Towcester		6.58
Ascot		6.55
Chepstow		6.37
Downpatrick	IRE	6.31
Perth		6.31
Kempton		6.28
Sandown		6.22
Hereford		6.12
Newbury		6.05
Musselburgh		5.96
Kelso		5.94
Ffos Las		5.88
Lingfield		5.86

Hexham		5.86
Roscommon	IRE	5.69
Doncaster		5.53
Market Rasen		5.48
Exeter		5.42
Kilbeggan	IRE	5.39
Southwell		5.35
Bangor-On-Dee		5.31
Stratford		5.29
Sedgefield		5.21
Down Royal	IRE	5.18
Leicester		5.05
Huntingdon		5.01
Ballinrobe	IRE	4.94
Newton Abbot		4.68
Aintree Mildmay		4.58
Uttoxeter		4.53
Carlisle		4.24
Fontwell		3.96
Worcester		3.87
Warwick		3.81
Cartmel		3.40

As expected the Irish tracks dominate the top of the list which may well explain why the % of Irish-trained winners has been going up for quite a while. The % number of Fell/UR at Irish tracks has declined since 2013 but not at the same rate as GB tracks. **See the graph at the end of this article (Appendix 1).**

Instead of repeatedly selecting groups of tracks in System Builder we can import the track difficulty % since January 1st 2017 as one of the ratings values:

- C:\Program Files\Proform\user ratingimporters
- C:\Proform\user rating importers

There are 4 user rating importers, one for each user rating. Click on the link to download the relevant importer

- [User Rating -1- Importer.exe](#)
- [User Rating -2- Importer.exe](#)
- [User Rating -3- Importer.exe](#)
- [User Rating -4- Importer.exe](#)

Each file reads a comma separated file which should be ordered as follows:

1. Course
2. Date
3. Time
4. Horse
5. Rating

For example

```

Bath,20/05/2011,14:10,Toffee Tart,184
Bath,20/05/2011,14:10,Vieira da Silva,106
Bath,20/05/2011,14:10,Ida Inkley,98
Bath,20/05/2011,14:10,Bella Ponte,89
Bath,20/05/2011,14:10,Purple Angel,80
Bath,20/05/2011,14:10,Betty Fontaine,1
Bath,20/05/2011,14:40,Sasheen,143
Bath,20/05/2011,14:40,Bold Cross,127
Bath,20/05/2011,14:40,Fifty Cents,121
Bath,20/05/2011,14:40,Fire King,116
Bath,20/05/2011,14:40,Aviso,112
Bath,20/05/2011,14:40,Pytheas,95
Bath,20/05/2011,15:10,Cadmium Loch,131
Bath,20/05/2011,15:10,Miss Firefox,129
Bath,20/05/2011,15:10,Cathcart Castle,128
Bath,20/05/2011,15:10,Fire Crystal,125
                    
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“ I joined Profo money for over 4 make a profit wit

Cheltenham with Profor

March 4th, 202
By Andrew Mo
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Read more

I assembled a file containing Course, Date, Time, Horse, Rating like the one below:

			Tour Des	
Cheltenham	01/01/2017	12:50	Champs	7.31
Cheltenham	01/01/2017	12:50	Doctor Harper	7.31
Cheltenham	01/01/2017	12:50	Arpege D'alene	7.31
Cheltenham	01/01/2017	12:50	Sizing Codelco	7.31
Cheltenham	01/01/2017	12:50	Warrantor	7.31
Cheltenham	01/01/2017	12:50	Racing Pulse	7.31
Cheltenham	01/01/2017	12:50	Chase The Spud	7.31
Cheltenham	01/01/2017	12:50	Aubusson	7.31
Cheltenham	01/01/2017	12:50	A Good Skin	7.31
Cheltenham	01/01/2017	12:50	Belmount	7.31
Cheltenham	01/01/2017	12:50	Any Currency	7.31
Cheltenham	01/01/2017	12:50	Capard King	7.31

			Kingswell	
Cheltenham	01/01/2017	12:50	Theatre	7.31
Cheltenham	01/01/2017	12:50	Lamb Or Cod	7.31
Cheltenham	01/01/2017	12:50	Samingarry	7.31
Cheltenham	01/01/2017	12:50	Vyta Du Roc	7.31
Musselburgh	01/01/2017	13:05	Rolling Thunder	5.96
Musselburgh	01/01/2017	13:05	St Johns Point	5.96
Musselburgh	01/01/2017	13:05	Mister Don	5.96
Musselburgh	01/01/2017	13:05	Apachee Prince	5.96
Musselburgh	01/01/2017	13:05	Misfits	5.96
Musselburgh	01/01/2017	13:05	Toreador	5.96
			Valentino's	
Musselburgh	01/01/2017	13:05	Choice	5.96

The track % Fell/UR was then imported into the User Rating 4 field using a csv file as per the instructions. This field can accommodate decimal places, unlike User Rating 1, 2 and 3 fields. If you already have a rating in UR4 you can simply multiply these figures by 100 and import into UR1, 2 or 3 and just remember that if you want to look at tracks with for example a % Faller/UR rate of less than 6% you must enter <600.

Once imported this meant every horse with a chase run since January 1st 2017 to 31st December 2023 had a rating for each run representing the track difficulty which can now be analysed in System Builder.

Proform Members can access this file from the members only Telegram group.

You can import this and do your own analysis. If you wish to change the ratings remember Aintree Mildmay and National Course races must be identified by the current values because the track name is the same.

How fence difficulty can affect profitability:

I didn't spend time finding ideal cut-off points to prove/disprove anything. The 6.0% Fell/UR cut-off was simply chosen because it's almost half-way down the list of GB tracks in terms of difficulty. Class 1 and 2 races were excluded because top class horses/races often don't conform to the same patterns as lower class races.

I set up System Builder like this:

Course tab: Only UK courses selected

LTO Horse tab: LTO Pace Abbrev only 'H' ticked, LTO Placed Yes/No '1' entered.

Date tab: '2018 to 2023' ticked.

Horse tab: in DSLR (days since last run) '<366' entered, SP (Starting Price) Rank '<4' entered.

LTO Race tab: LTO Race Types only 'Chase' ticked.

Race tab: In 'Race Types' only 'Chase' ticked, in 'Race Classes' only '3,4,5,6,7' ticked, in 'Distance' I entered '<4800' and 'Number of Runners' I entered '>3'.

Note I chose 2018 on instead of 2017 on because if I wanted to look at a horse's previous run within the past year I would still be using percentages from the overall sample being used. If I looked at early 2017 then I would probably be looking at runs from 2016 and 2016 data is not part of the figures.

Then in **Presentation Ratings tab** I ticked 'by User Rating 4 value' to be able to see the results in track difficulty order.

So we have class 3 and below races where the horse ran in a chase last run in the previous 365 days, is in the top 3 in the betting, placed lto after being held up and is running in a race of more than 3 runners that is **shorter than 2m 6f**.

If in the **Ratings (Speed and User) tab** I enter '<6.0' in the User Ratings by Value/User Rating 4 field I get the results for those tracks with a Fell/PUp rate of less than 6.0%. To find out which track is indicated you'll have to match the User rating 4 with the % of Fell/UR runners in the table listed earlier.

System Results (BOG ON) Betfair Price Used : Betfair SP (Prices up-to-date to: 30/03/2024)													
User Rating 4	Runners	Winners	Win S/R	IV	PRB	PRB*2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair
3.4	19	3	15.79	1.30	60.09	46.55	-1.27	4.27	0.70	0.48	42.11	-5.98	-31.50
3.81	25	8	32.00	2.77	60.64	50.13	2.32	5.68	1.41	1.22	60.00	6.33	25.34
3.87	38	7	18.42	1.53	55.95	44.06	-0.94	7.94	0.88	0.14	31.58	5.62	14.80
3.96	48	10	20.83	1.34	61.69	48.86	-3.13	13.13	0.76	1.03	37.50	-9.46	-19.70
4.24	20	4	20.00	1.46	55.40	44.26	-0.99	4.99	0.80	0.26	45.00	-1.87	-9.34
4.53	37	8	21.62	1.89	67.70	54.09	0.10	7.90	1.01	0.00	43.24	-0.83	-2.25
4.58	7	0	0.00	0.00	50.20	32.33	-1.39	1.39	0.00	1.74	28.57	-7.00	-100.00
4.68	39	8	20.51	1.36	61.33	47.76	-1.19	9.19	0.87	0.20	43.59	-3.48	-8.92
5.01	29	4	13.79	1.05	58.06	44.53	-2.67	6.67	0.60	1.38	34.48	-12.67	-43.69
5.05	21	5	23.81	2.09	59.70	50.44	0.56	4.44	1.13	0.09	47.62	1.92	9.16
5.21	46	8	17.39	1.39	57.72	45.18	-2.78	10.78	0.74	0.94	43.48	-17.63	-38.32
5.29	49	11	22.45	1.72	63.45	49.52	-0.33	11.33	0.97	0.01	42.86	3.12	6.37
5.31	30	3	10.00	0.78	59.61	44.05	-4.10	7.10	0.42	3.10	40.00	-16.04	-53.48
5.35	53	10	18.87	1.38	60.32	48.46	-2.42	12.42	0.80	0.62	35.85	-12.34	-23.27
5.42	28	7	25.00	1.81	57.32	44.58	0.22	6.78	1.03	0.01	50.00	-2.69	-9.62
5.48	50	10	20.00	1.60	64.35	51.98	-1.80	11.80	0.85	0.36	42.00	2.20	4.40
5.53	13	3	23.08	1.60	61.72	44.45	-0.16	3.16	0.95	0.01	38.46	0.98	7.51
5.86	50	13	26.00	2.19	59.01	48.21	2.50	10.50	1.24	0.75	54.00	6.02	12.04
5.88	18	3	16.67	1.32	64.71	51.29	-1.83	4.83	0.62	0.95	22.22	-9.49	-52.73
5.94	22	5	22.73	1.44	53.43	42.99	-0.35	5.35	0.93	0.03	45.45	-5.29	-24.04
5.96	20	3	15.00	1.07	59.17	45.61	-1.92	4.92	0.61	1.00	40.00	-10.79	-53.93

Actual/Expected wins generally below 1.0 and Betfair starting price P+L generally in minus.

and the bottom line is this:

System Results (BOG ON) Betfair Price Used : Betfair SP (Prices up-to-date to: 30/03/2024)													
Runners	Winners	Win S/R	IV	PRB	PRB*2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair	
662	133	20.09	1.55	60.25	47.58	-21.57	154.57	0.86	3.93	41.99	-89.36	-13.50	-

We are looking at a sample where the average BFSP is 4.99 so a loss of 89.36 is starting to look significant.

Now let's look at the tracks with a 'difficulty' of more than 6.0% (I enter '>6.0' in the User Ratings by Value/User Rating 4 field):

System Results (BOG ON) Betfair Price Used : Betfair SP (Prices up-to-date to: 30/03/2024)													
User Rating 4	Runners	Winners	Win S/R	IV	PRB	PRB*2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair
6.05	8	2	25.00	1.63	42.71	34.81	-0.04	2.04	0.98	0.00	37.50	-2.43	-30.41
6.12	26	7	26.92	2.20	57.87	46.88	1.27	5.73	1.22	0.36	38.46	6.76	26.02
6.22	9	4	44.44	3.78	65.87	54.89	2.17	1.83	2.19	3.25	44.44	9.69	107.67
6.28	22	4	18.18	1.42	63.08	48.61	-1.01	5.01	0.80	0.26	27.27	-3.68	-16.74
6.31	26	5	19.23	1.37	58.55	45.54	-0.21	5.21	0.96	0.01	38.46	2.14	8.22
6.37	21	4	19.05	1.53	63.43	52.22	-1.25	5.25	0.76	0.40	52.38	-3.95	-18.79
6.55	6	1	16.67	1.03	40.83	26.71	-0.45	1.45	0.69	0.18	50.00	-3.31	-55.24
6.58	8	3	37.50	2.31	60.42	51.74	0.60	2.40	1.25	0.21	62.50	0.68	8.56
6.95	30	8	26.67	2.23	64.02	50.55	2.03	5.97	1.34	0.86	40.00	7.40	24.67
7.11	21	4	19.05	1.35	64.36	48.64	-1.16	5.16	0.77	0.35	47.62	-5.97	-28.41
7.18	17	2	11.76	0.97	52.45	41.29	-1.42	3.42	0.58	0.74	41.18	-8.26	-48.57
7.31	6	0	0.00	0.00	49.53	36.97	-1.00	1.00	0.00	1.20	33.33	-6.00	-100.00
7.9	26	9	34.62	2.73	70.55	58.64	2.66	6.34	1.42	1.47	50.00	18.13	69.74
8.35	16	6	37.50	2.65	64.91	58.27	1.83	4.17	1.44	1.08	56.25	2.50	15.65
8.52	11	1	9.09	0.62	67.44	53.66	-1.74	2.74	0.36	1.47	54.55	-8.10	-73.63
8.58	22	7	31.82	2.39	70.90	58.56	1.90	5.10	1.37	0.92	54.55	13.03	59.22
9.1	30	11	36.67	2.64	60.24	51.82	3.86	7.14	1.54	2.74	63.33	14.81	49.37
9.35	25	6	24.00	1.57	57.56	45.36	-0.26	6.26	0.96	0.01	40.00	1.80	7.18
9.46	19	5	26.32	1.59	61.08	48.14	0.80	4.20	1.19	0.19	52.63	-1.79	-9.42

The bottom line is this:

System Results (BOG ON) Betfair Price Used : Betfair SP (Prices up-to-date to:													
Runners	Winners	Win S/R	IV	PRB	PRB*2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair	
349	89	25.50	1.90	61.47	49.62	8.57	80.43	1.11	1.19	46.42	33.47	9.59	

Nothing too exciting but when compared to the previous example it's looking like the market might not be taking into account fence difficulty with races of 2m 6f or less where hold-up horses with a fair run LTO are concerned.

Now let's flip it round and look at longer distance races:

So we have class 3 and below races where the horse ran in a chase last run in the previous 365 days, is in the top 3 in the betting, placed lto after being held up and is running in a race of more than 3 runners that is **2m 6f or further**. We're only changing the distance to **>4800** yards in the **Race tab**.

Tracks with a 'difficulty' of **less than 6.0%** (>6.0' in the User Ratings by Value/User Rating 4 field):

System Results (BOG ON) Betfair Price Used : Betfair SP (Prices up-to-date to: 30/03/2024													
User Rating 4	Runners	Winners	Win S/R	IV	PRB	PRB*2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair
3.4	15	4	26.67	2.13	69.45	54.26	0.52	3.48	1.15	0.10	40.00	-1.72	-11.46
3.81	29	6	20.69	1.71	59.99	46.85	0.26	5.74	1.05	0.02	41.38	0.71	2.44
3.87	16	7	43.75	4.23	72.36	62.74	3.68	3.32	2.11	5.14	43.75	21.30	133.14
3.96	17	6	35.29	2.37	62.54	54.67	1.21	4.79	1.25	0.42	58.82	2.10	12.37
4.24	15	0	0.00	0.00	46.08	36.16	-2.81	2.81	0.00	3.46	60.00	-15.00	-100.00
4.53	41	10	24.39	1.91	55.67	45.29	0.79	9.21	1.09	0.09	43.90	-1.12	-2.73
4.58	3	2	66.67	4.89	95.24	91.16	1.37	0.63	3.17	3.77	66.67	7.43	247.60
4.68	18	4	22.22	1.52	64.03	50.83	-0.18	4.18	0.96	0.01	50.00	-1.38	-7.65
5.01	25	7	28.00	2.27	58.58	48.63	1.87	5.13	1.36	0.86	64.00	4.39	17.57
5.05	11	4	36.36	2.87	71.27	62.05	1.16	2.84	1.41	0.63	54.55	8.51	77.39
5.21	34	12	35.29	2.58	67.71	59.66	3.79	8.21	1.46	2.31	44.12	18.93	55.67
5.29	25	7	28.00	2.51	71.44	59.56	1.45	5.55	1.26	0.49	52.00	6.93	27.73
5.31	17	7	41.18	2.83	64.92	56.79	2.98	4.02	1.74	2.89	52.94	9.76	57.40
5.35	33	11	33.33	2.50	63.62	55.39	2.88	8.12	1.35	1.35	51.52	13.88	42.07
5.42	26	8	30.77	2.85	70.11	61.48	2.67	5.33	1.50	1.68	61.54	13.50	51.91
5.48	28	6	21.43	1.85	60.92	48.81	0.03	5.97	1.01	0.00	46.43	0.45	1.61
5.53	26	6	23.08	1.86	58.84	46.38	0.13	5.87	1.02	0.00	38.46	5.45	20.97
5.86	54	8	14.81	1.38	60.79	48.03	-2.84	10.84	0.74	0.93	53.70	-15.63	-28.94
5.88	29	6	20.69	1.77	52.93	43.84	0.05	5.95	1.01	0.00	41.38	-6.10	-21.05
5.94	28	12	42.86	3.45	73.38	63.19	5.58	6.42	1.87	6.29	57.14	34.29	122.47
5.96	18	6	33.33	2.35	75.76	63.48	0.57	5.43	1.10	0.09	61.11	2.26	12.55

With a bottom line of:

System Results (BOG ON) Betfair Price Used : Betfair SP (Prices up-to-date to:													
Runners	Winners	Win S/R	IV	PRB	PRB*2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair	
508	139	27.36	2.23	63.48	52.86	25.14	113.86	1.22	7.16	50.39	108.95	21.45	

Average bfsp of 5.28 so this is looking good. Actual/Expected wins 1.22. Chi score of 7.16 very encouraging.

And for tracks with a 'difficulty' of **greater than 6.0%** (**Ratings (Speed and User) tab '>6.0'**):

User Rating 4	Runners	Winners	Win S/R	IV	PRB	PRB^2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair
6.05	13	3	23.08	2.06	56.48	46.53	0.61	2.39	1.25	0.19	53.85	2.79	21.45
6.12	10	1	10.00	0.96	71.90	55.17	-0.68	1.68	0.59	0.33	20.00	-4.83	-48.35
6.22	7	1	14.29	1.20	62.47	50.99	-0.40	1.40	0.71	0.14	42.86	-4.11	-58.69
6.28	4	1	25.00	1.81	45.83	36.81	0.01	0.99	1.01	0.00	50.00	0.53	13.20
6.31	19	3	15.79	1.24	38.71	29.58	-0.96	3.96	0.76	0.29	21.05	-6.16	-32.43
6.37	35	4	11.43	1.05	52.48	41.46	-3.10	7.10	0.56	1.70	34.29	-8.65	-24.70
6.55	3	0	0.00	0.00	69.44	50.23	-0.58	0.58	0.00	0.71	33.33	-3.00	-100.00
6.58	4	3	75.00	4.75	89.29	83.16	1.87	1.13	2.66	4.33	75.00	6.44	160.97
6.95	27	2	7.41	0.64	47.03	35.30	-3.74	5.74	0.35	3.09	37.04	-18.53	-68.64
7.11	12	2	16.67	1.31	51.87	43.24	-0.56	2.56	0.78	0.16	50.00	-0.45	-3.71
7.18	26	5	19.23	1.78	56.14	45.58	-0.36	5.36	0.93	0.03	50.00	-2.52	-9.68
7.31	10	2	20.00	2.38	61.18	49.74	0.48	1.52	1.32	0.18	70.00	3.12	31.23
7.9	23	4	17.39	1.36	52.80	42.07	-1.49	5.49	0.73	0.53	56.52	-8.20	-35.65
8.35	17	2	11.76	0.96	65.38	51.62	-1.98	3.98	0.50	1.29	35.29	-8.47	-49.83
8.52	7	1	14.29	1.31	54.56	43.79	-0.43	1.43	0.70	0.16	28.57	0.45	6.41
8.58	21	5	23.81	1.67	61.50	49.53	-0.44	5.44	0.92	0.05	33.33	-1.37	-6.52
9.1	30	2	6.67	0.54	60.15	46.21	-5.16	7.16	0.28	4.88	26.67	-21.92	-73.08
9.35	21	6	28.57	2.38	65.58	55.69	1.05	4.95	1.21	0.29	57.14	-1.46	-6.93
9.46	11	1	9.09	0.58	39.90	28.78	-1.34	2.34	0.43	0.98	45.45	-8.39	-76.30

With a bottom line of:

Runners	Winners	Win S/R	IV	PRB	PRB^2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair
300	48	16.00	1.35	55.98	44.59	-17.19	65.19	0.74	5.79	41.00	-84.73	-28.24

A hold-up runner in the first 3 in the betting having placed lto seems to have more chance of being a value bet at longer distances on a track with easy fences or at shorter distances on a track with more difficult fences. This could well be because front/prominent runners need a test in order to be disadvantaged. The easier the fences the further they need to run to be inconvenienced?

If horses held up last time out at longer distances at tracks with more difficult fences aren't generally value bets then where exactly does the value tend to lie? I had a look at prominent/front runners lto and that didn't really give me anything totally convincing but feel free to load in the file and have a look for yourselves.

I used the settings below to find that with difficult fences and longer distances the value seems to generally lie with hold-up horses lto that did NOT place and are not in the first 3 in the betting:

Course tab: Only UK courses selected

LTO Horse tab: LTO Pace Abbrev only 'H' ticked, LTO Placed Yes/No '0' entered.

Date tab: '2018 to 2023' ticked.

Horse tab: in DSLR (days since last run) '<366' entered, SP (Starting Price) Rank '>3' entered.

LTO Race tab: LTO Race Types only 'Chase' ticked.

Race tab: In 'Race Types' only 'Chase' ticked, in 'Race Classes' only '3,4,5,6,7' ticked, in 'Distance' entered '>4800' and 'Number of Runners' '>3'.

Ratings (Speed and User) tab/User Rating 4 value '>6.0'

Then for difficult fences lto of >6.0:

System Results (BOG ON) Betfair Price Used : Betfair SP (Prices up-to-date to: 3													
Runners	Winners	Win S/R	IV	PRB	PRB^2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair	b
874	67	7.67	0.66	38.57	27.71	11.76	55.24	1.21	2.67	47.25	275.87	31.56	-

And for less difficult fences lto (<6.0):

System Results (BOG ON) Betfair Price Used : Betfair SP (Prices up-to-date to: 3													
Runners	Winners	Win S/R	IV	PRB	PRB^2	WAX	EX Wins	A/E	Chi Scr	50%SR	P/L Betfair	ROI Betfair	b
883	66	7.47	0.66	38.57	26.92	11.10	54.90	1.20	2.39	47.45	133.80	15.15	-

Doesn't seem to matter – almost identical A/E. And distance of previous race doesn't seem to matter too much either if you look at <4800 yards and >4800 yards in the LTO Race tab.

This seems to suggest longer distance races with more difficult fences make it harder for horses with better form LTO to perform to market expectations and we have more outsiders winning. Logically we will be seeing more mistakes because of the number of difficult fences. Even if the extra fences are jumped cleanly the extra energy used in clearing them compared to easy fences must make a difference.

All this is just a start. I'm going to have a good dig around in my own database and see what extra I can find. There'll be other angles to be found, particularly with those long distance races over difficult fences. It'll not all be about run style lto. Try selecting only novice handicap chases and see what happens with runners that haven't really done much yet – not top 2 in the weights or not in the top 3 in the betting for example. Then have a look at the difference between easier fences and harder fences. You will find that outsiders win a lot more at easier tracks. Is the main reason for this because they don't have to run better than expected AND worry about jumping tricky fences? I haven't had a good look at Ireland yet but early research shows it doesn't behave the same as GB tracks but that's often the case.

I would caution against building a system based on fence difficulty involving a range of tracks and then eliminating the tracks in that range that make a loss (or a profit if building a lay system) unless you have a very good reason to do so. When any sample is broken down you will get elements that don't appear to be desirable but this is often simply variance. If the underlying principle is sound the worse performing tracks should improve and the best performing tracks would decline as things regress to the mean.

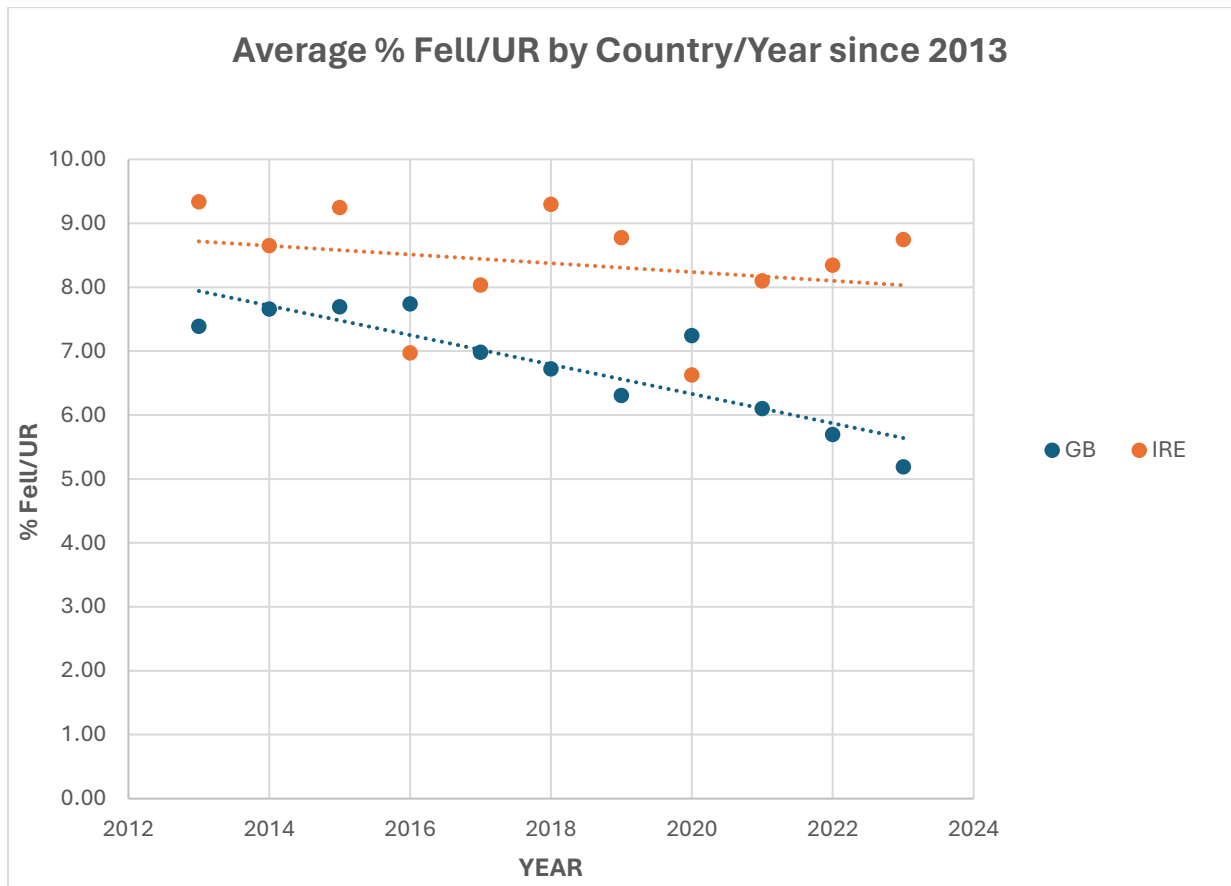
By Richard Slater

Very interested in finding angles in horse racing since the late 90s. I live in Yorkshire with my remarkably tolerant wife and 11 year-old twins. I've worked mainly in the sports betting industry since 2004, although unfortunately I don't deal with horse racing at the moment. Still developing logistic regression models which are designed to spot wrongly-priced horses and future market moves and I'll be working hard on finding even better ways of modelling this in 2024.

Appendix 1

Summary of % of Fell/UR at all Irish tracks compared with GB tracks since 2013:

The graph below clearly shows that GB tracks have reduced in difficulty a lot more since 2013 compared to Irish tracks. Does this explain the dominance of Irish horses at Cheltenham?



Appendix 2

Fell/Unseated Rider by Track and Year since 2013:

	Runs	Fel/UR	Fel/UR %
Aintree			
Mildmay	1652	85	5.15
2013	150	7	4.67
2014	165	13	7.88
2015	147	10	6.80
2016	163	8	4.91
2017	165	8	4.85
2018	163	8	4.91
2019	146	3	2.05
2020	79	3	3.80
2021	164	10	6.10
2022	145	6	4.14
2023	165	9	5.45
Aintree			
National	1282	299	23.32
2013	131	27	20.61
2014	132	32	24.24
2015	128	42	32.81
2016	129	37	28.68
2017	123	28	22.76
2018	115	28	24.35
2019	126	18	14.29
2020	32	8	25.00
2021	121	23	19.01
2022	128	26	20.31
2023	117	30	25.64
Ascot	1826	118	6.46
2013	169	19	11.24
2014	182	9	4.95
2015	183	5	2.73
2016	193	13	6.74
2017	158	6	3.80
2018	173	8	4.62
2019	184	7	3.80
2020	144	13	9.03
2021	182	12	6.59
2022	121	7	5.79
2023	137	19	13.87

Ayr	2391	203	8.49
2013	192	20	10.42
2014	204	15	7.35
2015	225	33	14.67
2016	251	27	10.76
2017	248	16	6.45
2018	257	18	7.00
2019	232	20	8.62
2020	141	10	7.09
2021	200	15	7.50
2022	233	15	6.44
2023	208	14	6.73
Ballinrobe	1078	80	7.42
2013	119	10	8.40
2014	106	8	7.55
2015	105	27	25.71
2016	141	5	3.55
2017	73	3	4.11
2018	97	6	6.19
2019	81	2	2.47
2020	54	2	3.70
2021	109	4	3.67
2022	99	5	5.05
2023	94	8	8.51
Bangor-On-Dee	2664	137	5.14
2013	234	11	4.70
2014	184	7	3.80
2015	258	12	4.65
2016	255	15	5.88
2017	247	13	5.26
2018	310	17	5.48
2019	247	16	6.48
2020	264	11	4.17
2021	247	5	2.02
2022	233	18	7.73
2023	185	12	6.49
Carlisle	2645	109	4.12
2013	294	17	5.78
2014	258	7	2.71
2015	249	9	3.61
2016	239	8	3.35
2017	224	8	3.57
2018	252	9	3.57
2019	225	17	7.56
2020	195	8	4.10
2021	246	11	4.47

2022	225	7	3.11
2023	238	8	3.36
Cartmel	1993	84	4.21
2013	169	14	8.28
2014	175	8	4.57
2015	185	8	4.32
2016	229	12	5.24
2017	186	4	2.15
2018	211	12	5.69
2019	198	7	3.54
2020	76	3	3.95
2021	197	8	4.06
2022	187	4	2.14
2023	180	4	2.22
Catterick	1729	166	9.60
2013	159	19	11.95
2014	148	22	14.86
2015	164	19	11.59
2016	144	13	9.03
2017	183	14	7.65
2018	143	10	6.99
2019	121	10	8.26
2020	175	20	11.43
2021	175	20	11.43
2022	160	12	7.50
2023	157	7	4.46
Cheltenham	6425	519	8.08
2013	643	52	8.09
2014	619	59	9.53
2015	653	48	7.35
2016	650	78	12.00
2017	636	49	7.70
2018	593	53	8.94
2019	568	42	7.39
2020	461	43	9.33
2021	484	32	6.61
2022	478	24	5.02
2023	640	39	6.09
Chepstow	3591	227	6.32
2013	356	21	5.90
2014	314	19	6.05
2015	287	21	7.32
2016	374	22	5.88
2017	318	26	8.18
2018	366	32	8.74
2019	341	14	4.11

2020	191	3	1.57
2021	382	26	6.81
2022	341	24	7.04
2023	321	19	5.92
Clonmel	2150	179	8.33
2013	231	24	10.39
2014	197	21	10.66
2015	167	21	12.57
2016	172	13	7.56
2017	200	26	13.00
2018	133	13	9.77
2019	188	11	5.85
2020	160	9	5.63
2021	260	17	6.54
2022	213	7	3.29
2023	229	17	7.42
Cork	1638	141	8.61
2013	192	27	14.06
2014	175	20	11.43
2015	101	8	7.92
2016	116	10	8.62
2017	167	6	3.59
2018	164	17	10.37
2019	159	8	5.03
2020	114	6	5.26
2021	158	15	9.49
2022	143	13	9.09
2023	149	11	7.38
Doncaster	2199	151	6.87
2013	180	14	7.78
2014	220	9	4.09
2015	221	31	14.03
2016	221	22	9.95
2017	183	7	3.83
2018	155	6	3.87
2019	121	9	7.44
2020	254	15	5.91
2021	213	10	4.69
2022	193	11	5.70
2023	238	17	7.14
Down Royal	1724	139	8.06
2013	181	22	12.15
2014	159	17	10.69
2015	179	32	17.88
2016	163	14	8.59
2017	180	16	8.89

2018	145	7	4.83
2019	142	9	6.34
2020	129	1	0.78
2021	152	9	5.92
2022	147	8	5.44
2023	147	4	2.72
Downpatrick	1947	125	6.42
2013	208	28	13.46
2014	168	6	3.57
2015	199	7	3.52
2016	184	9	4.89
2017	187	8	4.28
2018	147	7	4.76
2019	166	11	6.63
2020	131	5	3.82
2021	198	16	8.08
2022	186	15	8.06
2023	173	13	7.51
Exeter	3166	166	5.24
2013	285	16	5.61
2014	291	13	4.47
2015	311	10	3.22
2016	267	18	6.74
2017	305	20	6.56
2018	252	17	6.75
2019	328	21	6.40
2020	262	15	5.73
2021	279	11	3.94
2022	281	12	4.27
2023	305	13	4.26
Fairyhouse	4180	349	8.35
2013	306	14	4.58
2014	401	40	9.98
2015	358	30	8.38
2016	381	32	8.40
2017	415	35	8.43
2018	376	36	9.57
2019	353	33	9.35
2020	340	15	4.41
2021	437	33	7.55
2022	445	48	10.79
2023	368	33	8.97
Fakenham	1779	224	12.59
2013	143	29	20.28
2014	162	35	21.60
2015	172	24	13.95

2016	182	30	16.48
2017	167	19	11.38
2018	159	18	11.32
2019	148	16	10.81
2020	135	11	8.15
2021	203	14	6.90
2022	158	14	8.86
2023	150	14	9.33
Ffos Las	2874	182	6.33
2013	335	22	6.57
2014	283	25	8.83
2015	209	16	7.66
2016	226	12	5.31
2017	225	7	3.11
2018	245	17	6.94
2019	273	17	6.23
2020	188	15	7.98
2021	296	20	6.76
2022	287	16	5.57
2023	307	15	4.89
Fontwell	3805	206	5.41
2013	456	35	7.68
2014	400	22	5.50
2015	385	33	8.57
2016	367	29	7.90
2017	362	11	3.04
2018	386	23	5.96
2019	345	11	3.19
2020	247	10	4.05
2021	323	11	3.41
2022	301	14	4.65
2023	233	7	3.00
Galway	1988	152	7.65
2013	169	10	5.92
2014	170	17	10.00
2015	185	12	6.49
2016	200	8	4.00
2017	184	18	9.78
2018	221	28	12.67
2019	187	17	9.09
2020	181	17	9.39
2021	186	13	6.99
2022	163	9	5.52
2023	142	3	2.11
Gowran Park	1558	137	8.79
2013	136	20	14.71

2014	161	10	6.21
2015	156	20	12.82
2016	146	16	10.96
2017	120	9	7.50
2018	138	10	7.25
2019	146	11	7.53
2020	145	5	3.45
2021	155	11	7.10
2022	134	12	8.96
2023	121	13	10.74
Haydock	1927	147	7.63
2013	188	5	2.66
2014	190	14	7.37
2015	197	19	9.64
2016	167	8	4.79
2017	209	18	8.61
2018	189	22	11.64
2019	185	18	9.73
2020	110	13	11.82
2021	200	12	6.00
2022	154	11	7.14
2023	138	7	5.07
Hereford	1467	90	6.13
2016	77	5	6.49
2017	149	17	11.41
2018	215	12	5.58
2019	180	8	4.44
2020	165	10	6.06
2021	149	13	8.72
2022	236	11	4.66
2023	296	14	4.73
Hexham	3462	212	6.12
2013	340	24	7.06
2014	286	16	5.59
2015	323	26	8.05
2016	327	18	5.50
2017	364	23	6.32
2018	366	18	4.92
2019	311	18	5.79
2020	203	12	5.91
2021	379	22	5.80
2022	266	19	7.14
2023	297	16	5.39
Huntingdon	2803	140	4.99
2013	290	11	3.79
2014	252	15	5.95

2015	232	7	3.02
2016	232	17	7.33
2017	247	15	6.07
2018	247	14	5.67
2019	312	24	7.69
2020	209	16	7.66
2021	248	5	2.02
2022	245	6	2.45
2023	289	10	3.46
Kelso	3061	189	6.17
2013	318	19	5.97
2014	295	23	7.80
2015	313	24	7.67
2016	301	14	4.65
2017	265	17	6.42
2018	265	18	6.79
2019	308	29	9.42
2020	223	10	4.48
2021	278	15	5.40
2022	274	13	4.74
2023	221	7	3.17
Kempton	2574	210	8.16
2013	246	23	9.35
2014	248	22	8.87
2015	258	25	9.69
2016	277	43	15.52
2017	228	20	8.77
2018	257	17	6.61
2019	216	18	8.33
2020	208	12	5.77
2021	193	13	6.74
2022	214	10	4.67
2023	229	7	3.06
Kilbeggan	2072	130	6.27
2013	211	17	8.06
2014	152	17	11.18
2015	154	10	6.49
2016	183	12	6.56
2017	182	12	6.59
2018	165	11	6.67
2019	161	13	8.07
2020	216	13	6.02
2021	231	5	2.16
2022	200	9	4.50
2023	217	11	5.07
Killarney	1860	152	8.17

2013	211	12	5.69
2014	172	13	7.56
2015	166	13	7.83
2016	181	6	3.31
2017	169	16	9.47
2018	154	13	8.44
2019	135	15	11.11
2020	140	12	8.57
2021	196	22	11.22
2022	172	16	9.30
2023	164	14	8.54
Leicester	2159	123	5.70
2013	251	15	5.98
2014	267	17	6.37
2015	270	18	6.67
2016	163	12	7.36
2017	218	13	5.96
2018	133	5	3.76
2019	188	7	3.72
2020	118	11	9.32
2021	203	12	5.91
2022	232	9	3.88
2023	116	4	3.45
Leopardstown	2197	249	11.33
2013	217	15	6.91
2014	191	17	8.90
2015	174	15	8.62
2016	205	20	9.76
2017	206	33	16.02
2018	209	32	15.31
2019	188	24	12.77
2020	226	24	10.62
2021	218	24	11.01
2022	186	18	9.68
2023	177	27	15.25
Limerick	2936	263	8.96
2013	326	43	13.19
2014	280	30	10.71
2015	244	28	11.48
2016	264	9	3.41
2017	289	24	8.30
2018	271	23	8.49
2019	249	19	7.63
2020	132	20	15.15
2021	354	26	7.34
2022	305	28	9.18

2023	222	13	5.86
Lingfield	1391	77	5.54
2013	183	6	3.28
2014	65	5	7.69
2015	115	5	4.35
2016	90	6	6.67
2017	144	9	6.25
2018	99	5	5.05
2019	117	2	1.71
2020	124	5	4.03
2021	138	8	5.80
2022	187	22	11.76
2023	129	4	3.10
Listowel	1208	139	11.51
2013	169	16	9.47
2014	111	8	7.21
2015	96	21	21.88
2016	94	15	15.96
2017	97	6	6.19
2018	117	15	12.82
2019	110	13	11.82
2020	89	7	7.87
2021	125	14	11.20
2022	104	14	13.46
2023	96	10	10.42
Ludlow	3050	262	8.59
2013	346	21	6.07
2014	314	21	6.69
2015	326	25	7.67
2016	273	32	11.72
2017	332	43	12.95
2018	270	27	10.00
2019	255	26	10.20
2020	209	28	13.40
2021	242	17	7.02
2022	233	10	4.29
2023	250	12	4.80
Market Rasen	3875	210	5.42
2013	361	19	5.26
2014	365	28	7.67
2015	321	13	4.05
2016	381	16	4.20
2017	338	14	4.14
2018	411	23	5.60
2019	380	21	5.53
2020	331	24	7.25

2021	363	25	6.89
2022	310	15	4.84
2023	314	12	3.82
Musselburgh	1864	146	7.83
2013	127	13	10.24
2014	162	17	10.49
2015	172	25	14.53
2016	195	19	9.74
2017	166	7	4.22
2018	154	16	10.39
2019	144	4	2.78
2020	219	13	5.94
2021	208	11	5.29
2022	140	9	6.43
2023	177	12	6.78
Naas	1674	131	7.83
2013	141	6	4.26
2014	156	4	2.56
2015	159	10	6.29
2016	175	9	5.14
2017	138	7	5.07
2018	129	11	8.53
2019	167	13	7.78
2020	167	12	7.19
2021	186	20	10.75
2022	138	20	14.49
2023	118	19	16.10
Navan	2228	163	7.32
2013	228	17	7.46
2014	241	23	9.54
2015	228	16	7.02
2016	231	17	7.36
2017	199	6	3.02
2018	168	12	7.14
2019	211	25	11.85
2020	223	11	4.93
2021	186	10	5.38
2022	145	10	6.90
2023	168	16	9.52
Newbury	2581	186	7.21
2013	252	29	11.51
2014	250	12	4.80
2015	295	33	11.19
2016	247	19	7.69
2017	243	21	8.64
2018	197	10	5.08

2019	258	14	5.43
2020	177	17	9.60
2021	249	14	5.62
2022	210	11	5.24
2023	203	6	2.96
Newcastle	2051	181	8.82
2013	188	16	8.51
2014	172	13	7.56
2015	200	16	8.00
2016	186	24	12.90
2017	179	23	12.85
2018	168	20	11.90
2019	208	18	8.65
2020	157	20	12.74
2021	167	10	5.99
2022	230	12	5.22
2023	196	9	4.59
Newton Abbot	2961	136	4.59
2013	390	25	6.41
2014	335	20	5.97
2015	284	8	2.82
2016	305	6	1.97
2017	253	12	4.74
2018	314	13	4.14
2019	239	7	2.93
2020	181	8	4.42
2021	233	16	6.87
2022	226	13	5.75
2023	201	8	3.98
Perth	2760	190	6.88
2013	296	14	4.73
2014	256	27	10.55
2015	241	20	8.30
2016	286	23	8.04
2017	260	15	5.77
2018	281	16	5.69
2019	251	13	5.18
2020	169	16	9.47
2021	289	15	5.19
2022	234	13	5.56
2023	197	18	9.14
Plumpton	2455	210	8.55
2013	252	20	7.94
2014	236	17	7.20
2015	237	13	5.49
2016	201	17	8.46

2017	234	31	13.25
2018	206	21	10.19
2019	226	16	7.08
2020	160	18	11.25
2021	255	20	7.84
2022	218	22	10.09
2023	230	15	6.52
Punchestown	4981	497	9.98
2013	500	62	12.40
2014	479	37	7.72
2015	485	34	7.01
2016	428	22	5.14
2017	479	49	10.23
2018	492	54	10.98
2019	446	55	12.33
2020	371	35	9.43
2021	500	62	12.40
2022	426	41	9.62
2023	375	46	12.27
Roscommon	954	54	5.66
2013	131	10	7.63
2014	112	5	4.46
2015	111	5	4.50
2016	55	3	5.45
2017	75	5	6.67
2018	106	9	8.49
2019	105	6	5.71
2020	68	5	7.35
2021	66	4	6.06
2022	65	0	0.00
2023	60	2	3.33
Sandown	2230	123	5.52
2013	231	8	3.46
2014	183	8	4.37
2015	225	10	4.44
2016	208	11	5.29
2017	218	14	6.42
2018	223	18	8.07
2019	233	7	3.00
2020	113	10	8.85
2021	233	19	8.15
2022	162	6	3.70
2023	201	12	5.97
Sedgefield	3304	190	5.75
2013	285	18	6.32
2014	311	26	8.36

2015	327	23	7.03
2016	310	15	4.84
2017	304	21	6.91
2018	246	21	8.54
2019	311	16	5.14
2020	331	12	3.63
2021	315	17	5.40
2022	320	14	4.38
2023	244	7	2.87
Sligo	655	61	9.31
2013	67	4	5.97
2014	44	3	6.82
2015	55	4	7.27
2016	40	2	5.00
2017	96	4	4.17
2018	56	7	12.50
2019	70	4	5.71
2020	60	5	8.33
2021	61	10	16.39
2022	59	12	20.34
2023	47	6	12.77
Southwell	3260	202	6.20
2013	333	26	7.81
2014	291	25	8.59
2015	318	24	7.55
2016	298	19	6.38
2017	304	19	6.25
2018	335	11	3.28
2019	301	11	3.65
2020	289	34	11.76
2021	234	12	5.13
2022	283	9	3.18
2023	274	12	4.38
Stratford	3817	210	5.50
2013	360	11	3.06
2014	364	26	7.14
2015	383	26	6.79
2016	346	22	6.36
2017	383	20	5.22
2018	367	18	4.90
2019	361	19	5.26
2020	246	8	3.25
2021	399	25	6.27
2022	322	23	7.14
2023	286	12	4.20
Taunton	2109	166	7.87

2013	151	8	5.30
2014	175	12	6.86
2015	244	20	8.20
2016	202	30	14.85
2017	223	17	7.62
2018	190	19	10.00
2019	215	18	8.37
2020	168	17	10.12
2021	149	10	6.71
2022	196	7	3.57
2023	196	8	4.08
Thurles	2847	311	10.92
2013	308	34	11.04
2014	298	37	12.42
2015	235	29	12.34
2016	257	32	12.45
2017	276	32	11.59
2018	206	27	13.11
2019	186	33	17.74
2020	273	34	12.45
2021	272	26	9.56
2022	271	13	4.80
2023	265	14	5.28
Tipperary	1339	127	9.48
2013	86	11	12.79
2014	108	15	13.89
2015	106	13	12.26
2016	95	11	11.58
2017	97	5	5.15
2018	133	8	6.02
2019	134	11	8.21
2020	167	11	6.59
2021	151	8	5.30
2022	117	16	13.68
2023	145	18	12.41
Towcester	1330	110	8.27
2013	341	29	8.50
2014	330	29	8.79
2015	178	16	8.99
2016	177	16	9.04
2017	171	12	7.02
2018	133	8	6.02
Tramore	2549	214	8.40
2013	250	31	12.40
2014	239	23	9.62
2015	213	15	7.04

2016	206	16	7.77
2017	226	21	9.29
2018	237	25	10.55
2019	217	20	9.22
2020	194	11	5.67
2021	264	18	6.82
2022	259	17	6.56
2023	244	17	6.97
Uttoxeter	4754	208	4.38
2013	429	17	3.96
2014	346	15	4.34
2015	421	17	4.04
2016	510	21	4.12
2017	425	22	5.18
2018	510	19	3.73
2019	385	20	5.19
2020	454	15	3.30
2021	493	20	4.06
2022	420	25	5.95
2023	361	17	4.71
Warwick	3225	132	4.09
2013	186	6	3.23
2014	204	7	3.43
2015	282	12	4.26
2016	348	23	6.61
2017	297	11	3.70
2018	337	13	3.86
2019	364	14	3.85
2020	252	10	3.97
2021	401	15	3.74
2022	271	8	2.95
2023	283	13	4.59
Wetherby	3089	243	7.87
2013	334	34	10.18
2014	342	29	8.48
2015	234	14	5.98
2016	305	18	5.90
2017	302	19	6.29
2018	231	16	6.93
2019	256	25	9.77
2020	283	21	7.42
2021	291	35	12.03
2022	287	18	6.27
2023	224	14	6.25
Wexford	2380	168	7.06
2013	243	17	7.00

2014	193	19	9.84
2015	162	16	9.88
2016	191	10	5.24
2017	244	15	6.15
2018	238	16	6.72
2019	247	16	6.48
2020	129	13	10.08
2021	248	16	6.45
2022	243	14	5.76
2023	242	16	6.61
Wincanton	3099	252	8.13
2013	326	37	11.35
2014	291	31	10.65
2015	251	22	8.76
2016	232	23	9.91
2017	284	38	13.38
2018	262	12	4.58
2019	325	22	6.77
2020	254	21	8.27
2021	320	16	5.00
2022	264	19	7.20
2023	290	11	3.79
Worcester	3871	197	5.09
2013	460	32	6.96
2014	428	26	6.07
2015	390	30	7.69
2016	399	24	6.02
2017	398	15	3.77
2018	387	18	4.65
2019	283	9	3.18
2021	461	20	4.34
2022	342	13	3.80
2023	323	10	3.10