



BRITISH  
ATHLETICS



# UPDATED: THROWS CAGE SAFETY GUIDANCE

## MARCH 2021



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## Background

In May 2018 a throws related incident was reported by the organiser of a Youth Development League fixture held at an athletics venue in England. The incident involved a hammer thrown from what was at the time, a UKA specification hammer/discus cage located adjacent to the 200m start. The hammer carried six lanes of a track before landing in a populated spectator area where the wire and handle struck an athlete causing a minor leg injury.

Clearly, the injury could have been far worse - even fatal. Following an in-depth review of cage safety in November 2018, UK Athletics introduced a new specification for all hammer and discus cages. The new UKA specification – which is supported by World Athletics reduces the danger area in which an implement can potentially land ([cage danger zone](#))†.

*†World Athletics Hammer/ combined hammer & discus cages are not affected by this change.*

*Discus only cages must now meet the new World Athletics standard - [UKA Rulebook 35 \(3\) page 258](#)*

## What is a cage danger zone?

In simple terms a cage danger zone is the area in which a throws implement (discus, hammer, club, weight throw), can potentially land. The danger zone is theoretical (i.e. not marked on the infield) and is calculated by taking a theoretical release point of an implement and drawing a line from this point to the edge of the gate netting (Nb. the calculation assumes that the gates are closed in the appropriate position).

On a typical combined hammer and discus throws safety cage there are two separate danger zones due to the different gate positions for the two main disciplines (Hammer and discus).

Figures 1.0 and 2.0 on page 4 provide examples of a hammer danger zones for UKA specification cages:

- [Figure 1.0](#) - current and;
- [Figure 2.0](#) - post modification.

# CAGE DANGER ZONES

FIGURE 1.0

EXAMPLE HAMMER THROW DANGER ZONE – PRE NOV 2018 UKA SPECIFICATION CAGE

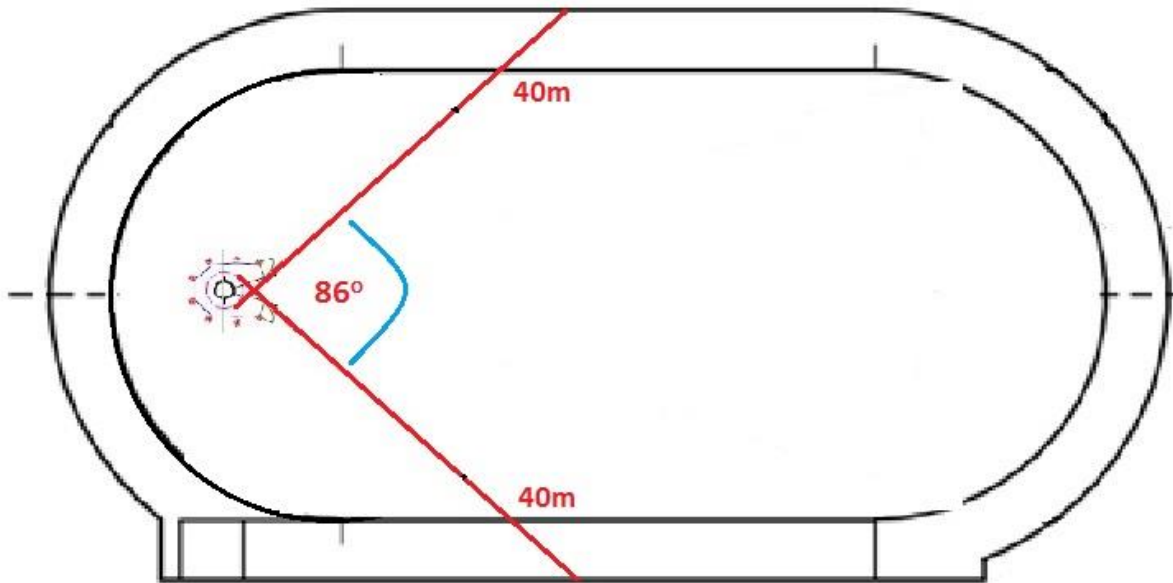
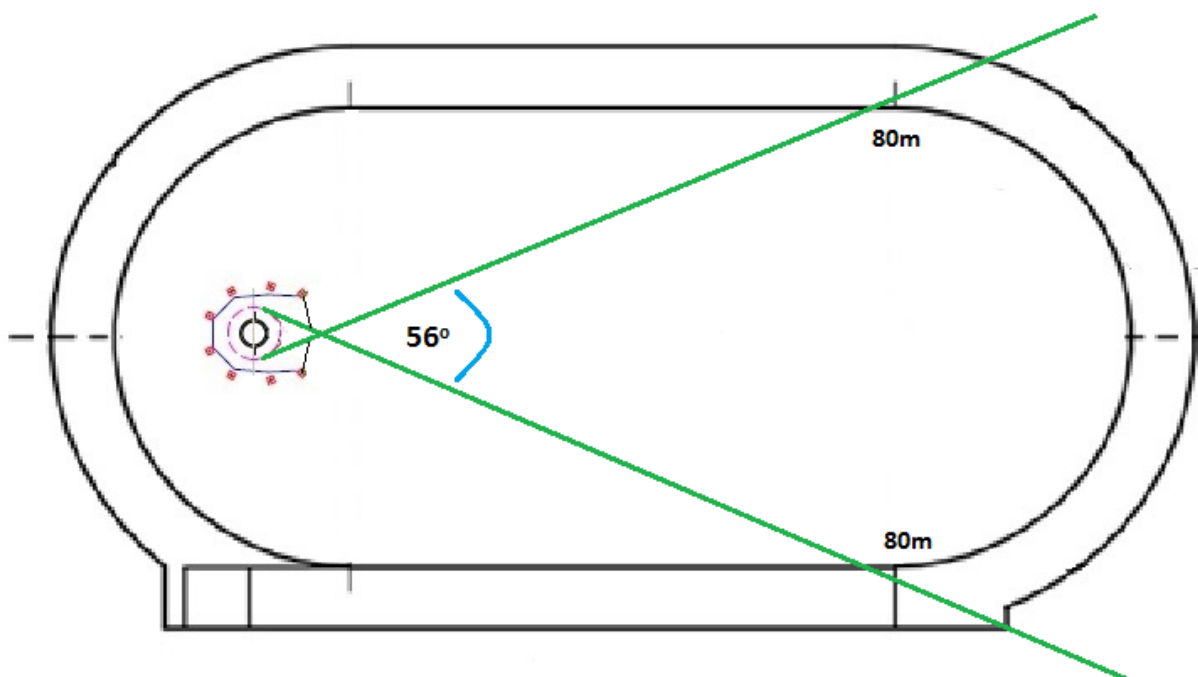


FIGURE 2.0

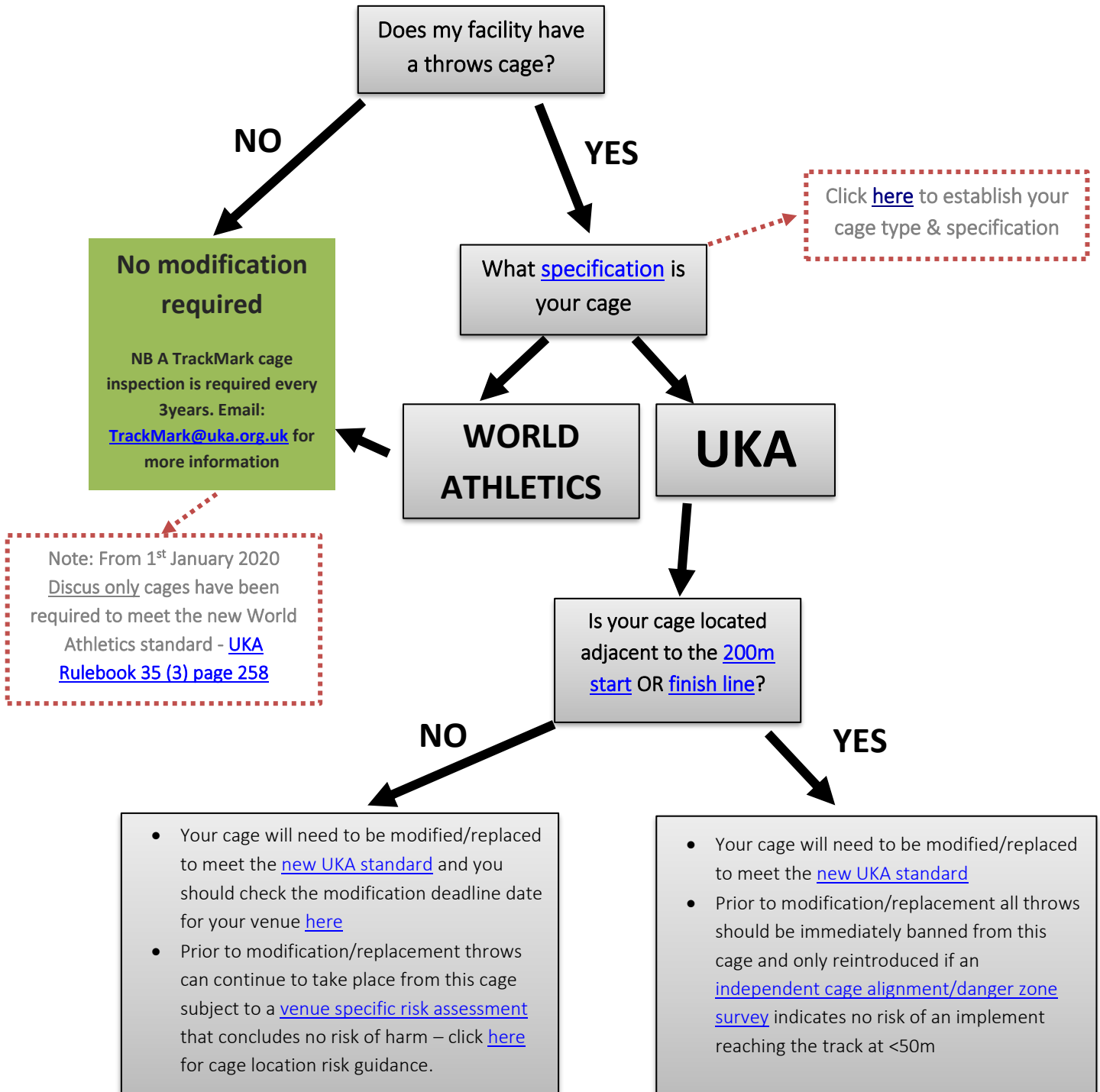
EXAMPLE HAMMER THROW DANGER ZONE – MODIFIED CAGE



# New UKA Cage specification

All pre-November 2018 UKA specification hammer/combined discus & hammer safety cages and discus only cages MUST be replaced or modified to meet the intent of the World Athletics specification. I.e. achieve a danger zone of no more than 56° (Hammer) and 69° (Discus).

## Facility Operators: What do I need to do?



## Cage Modification / replacement to meet the new specification

Throws Cage compliance is split into two groups:

### **Priority 1 – ALL venues seeking to host [License Level 2](#) events that include Hammer, Discus, club and weight throw**

To obtain a Level 2 licence these venues MUST have a cage that meets World Athletics' cage safety specifications (i.e. be either a World Athletics specification cage OR a pre-2018 UKA specification cage that has been modified and TrackMark certified as having met the new UKA specification).

### **Priority 2 - Venues seeking to host [Level 1 Licensed competitions](#) (Local, County and Area Leagues, YDL, Open meetings, Medal meetings) in 2021/2022 and training only venues.**

These venues should ideally meet either the World Athletics or NEW UKA cage specification.

However, as an interim measure for the 2021 and 2022 outdoor seasons any venues with cages that do not meet the new cage specification <sup>¥</sup>will likely be granted a Level 1 license subject to formal confirmation from the event/competition provider that a throws specific risk assessment has been carried out at the venue and that appropriate control measures have been introduced to bring any risks down to an acceptable level. Note: A risk assessment declaration will be required for EVERY event applied for.

<sup>¥</sup>For venues where the cage is located adjacent to either the 200m start or the finish line a license will not be granted unless either the cage is compliant OR an independently commissioned cage danger zone survey shows no risk of a right handed throw reaching the track at less than 50metres.

### **Deadline**

**From 1<sup>st</sup> April 2023 all throws cages (including those located at training only venues), must meet the WA/new UKA specification.**

## Interim arrangements for throwing activity at venues where cage modification is required

In the period prior to a cage modification being undertaken UKA will accept the continuation of the following throws activity during training situations.

### Discus/club throws

Discus throws, and club throws shall be allowed from all throws cages **except for** those located adjacent to either the 200m start line or the finish line. ([See page 8](#)).

**Note:** *When throwing discus from combined hammer/discus cages coaches and athletes MUST ALWAYS ensure that the cage gates are locked in the appropriate position: Parallel to the centreline for single circle UKA specification cages and parallel to the sector line for two circle UKA specification cages).*

For more detailed information see [Appendix 2](#)

### Hammer/Weight Throw

Hammer and weight throws shall be allowed from all throws cages except for those located adjacent to either the 200m start line or the finish line. ([See page 8](#)).

**Note 1:** *Until the cage is modified, and the danger zones reduced to the [new UKA standard](#) all throws activity should be subject to a venue specific risk assessment that concludes there is no risk of harm – click [here](#) for cage location risk guidance.*

**Note 2:** *When throwing hammer coaches/athletes MUST ALWAYS ensure that the cage gates are locked in the position appropriate to the thrower (right handed/left handed).*

For more detailed information see [Appendix 2](#)

## Cages located immediately adjacent to the 200m start or finish line

Research and incident data show that there is a higher risk of implements striking the track when thrown from pre 2018 UKA specification cages located adjacent to either the 200m start or the finish line. Therefore, all throws activity should initially be banned from cages in these locations.

However, UKA does acknowledge that in some cases cages in these locations are aligned in such a way as to mitigate the risk of an implement reaching the track, and accordingly the reintroduction of throwing from these cages will be supported as long as an [independent cage alignment/danger zone survey](#) demonstrates that there is no risk of an implement striking the track at less than 50metres. ([Figure 1.0](#) provides a simple illustration of a cage alignment/danger zone drawing.)

For a list of approved surveyors able to carry out a cage alignment/danger zone drawing please email: [ehunt@englandathletics.org](mailto:ehunt@englandathletics.org)

For cages located at the 200m and finish line in cases where an approved survey drawing confirms that a right handed throws danger zone bisects the track at <50m then the throws ban should be upheld, and throws should not be reintroduced until such a time as the cage is replaced or modified to meet the new UKA specification i.e. a danger zone of no more than 56° (Hammer) and 69° (Discus).

For more information see [Appendix 2](#)



## Typical cage modification/replacement costs

As a facility operator we appreciate that you will need some indication of the cost of cage modifications. This is challenging to provide as there are many different types of cages many of which will vary in age/condition.

However, in very broad terms we would estimate the following:

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### Combined Hammer and Discus Cage

- Single Circle Cage Modification      Circa £7 - £20k
- Two Circle Cage Modification      Circa £5k - £10k
- Replacement cage      Circa £35k

### Discus Only cage

- Discus cage modification      Circa £7k
- Replacement cage      Circa £20k

*Note: Existing World Athletics specification cages DO NOT require modification but are still subject to a TrackMark inspection and Cage load test that needs to be carried out every three years.*

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## Additional guidance

For further information on throws cage safety and the safe management of throwing activity please click on the links below:

### Cage safety & specification guidance

- [Cage Danger Zone calculation](#)
- [Revised UKA specification - UKA single circle cages](#)
- [Revised UKA specification - UKA two circle cages](#)
- [Revised UKA specification - UKA discus only cages](#)
- [Example cage danger zone survey](#)
- [SAFETY VIDEO - Throws Cage](#)

### General throws safety guidance

- [Risk Assessment Guidance and templates](#)
- [Safe Code of Practice for Training](#)
- [Risk Assessment - Outdoor Throws Training](#)
- [Safe Athletics: Track & Field safety guide for competition](#)
- [Risk Assessments - Outdoor Throws Competition](#)

**For further information please contact UK Athletics:**

UK Athletics:

Facilities Admin:

[facilities@uka.org.uk](mailto:facilities@uka.org.uk)

# **APPENDIX 1**

# **IDENTIFYING YOUR CAGE**

# **TYPE & SPECIFICATION**

## Identify the cage type(s)

There are two main types of throws cages in the UK:

1. Hammer / Hammer & Discus combined cages
2. Discus Only cages

Table 1.0 below summarises the main differences between the two

*Note: Most cages in the UK are Combined Hammer & Discus Cages*

**Table 1.0 – Cage Type**

HAMMER/ COMBINED HAMMER & DISCUS	DISCUS ONLY
	
<ul style="list-style-type: none"> <li>• Main cage netting height of 7m with an increased netting height at the front of the cage (UKA 9m / World Athletics 10m)</li> </ul>	<ul style="list-style-type: none"> <li>• Standard cage netting height throughout (4m)</li> </ul>
<ul style="list-style-type: none"> <li>• Gates at the front of the cage on both sides</li> </ul>	<ul style="list-style-type: none"> <li>• No gates</li> </ul>
<ul style="list-style-type: none"> <li>• Designed for both hammer and discus</li> </ul>	<ul style="list-style-type: none"> <li>• Designed for discus only</li> </ul>
<ul style="list-style-type: none"> <li>• To determine your hammer cage specification, click <a href="#">here</a>.</li> </ul>	<ul style="list-style-type: none"> <li>• To determine your discus cage specification, click <a href="#">here</a>.</li> </ul>

# HAMMER / COMBINED HAMMER & DISCUS CAGES



## DETERMINING YOUR HAMMER / COMBINED HAMMER & DISCUS CAGE SPECIFICATION

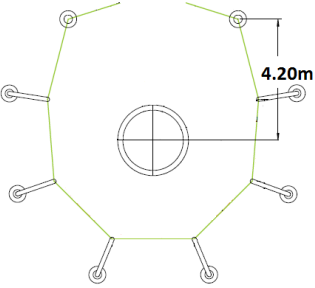
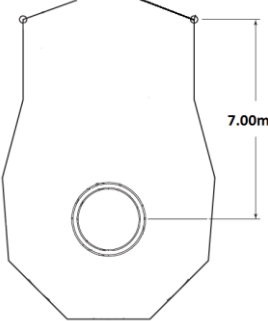
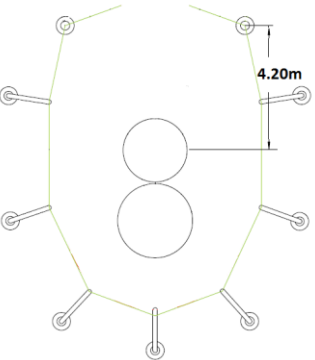
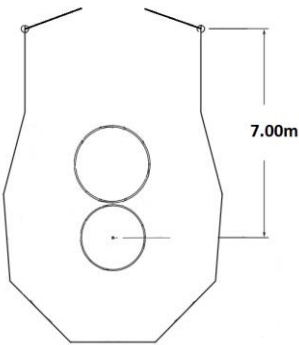
To establish whether your cage is a UKA or a World Athletics specification cage follow the simple steps below.

*Note: You will need an 8m tape measure and a long piece of string (6m +)*

**Table 2.0 – Cage Type**

	<p><b>STEP ONE</b></p> <p>Tie the piece of string between the two main cage posts (as shown below) and measure its length (i.e. the cage opening gap). Half the distance and mark with a pen / piece of tape (this is the cage centreline).</p>
	<p><b>STEP TWO</b></p> <p>Locate the centre of the throws circle and take a measurement from here to the point at which the tape intersects the centreline of the string.</p> <p><i>Note: For cages with two circles the measurement must be taken from the centre of the smaller of the two circles (hammer circle) – which has a diameter of 2.135m.</i></p>
	<p><b>STEP THREE</b></p> <p>Compare the measurement that you have taken to <a href="#">Table 3.0</a> (next page), to establish your cage specification.</p> <p><i>Note: Some cage side lengths will vary slightly from the measurements shown <a href="#">Table 3.0</a> and you should allow a tolerance of +/- 0.50metres. If your measurements fall outside the tolerance levels please email <a href="#">UKA</a> for guidance.</i></p>

**Table 3.0 – Hammer cage specification**

Cage specification	Distance from centre of hammer circle to cage opening	Circle configuration	Typical Danger Zone	Action required
<p><b>UKA Single Circle cage</b></p> 	<p><b>4.20m</b></p>	<p>Single circle (discus) with concentric fitting for hammer throw</p>	<p><b>83°</b></p>	<p><b>This cage requires modification to achieve the new UKA specification</b></p>
<p><b>World Athletics Single circle cage</b></p> 	<p><b>7.00m</b></p>	<p>Single circle (discus) with concentric fitting for hammer throw</p>	<p><b>53°</b></p>	<p><b>Your cage is World Athletics compliant</b></p>
<p><b>UKA two circle cage</b></p> 	<p><b>4.20m</b></p>	<p>Two circles (Hammer and discus), with larger circle (discus) at the rear</p>	<p><b>83°</b></p>	<p><b>This cage requires modification to achieve the new UKA specification</b></p>
<p><b>World Athletics Two circle cage</b></p> 	<p><b>7.00m</b></p>	<p>Two circles (Hammer and discus), with larger circle (discus) at the front</p>	<p><b>53°</b></p>	<p><b>Your cage is World Athletics compliant</b></p>



# DISCUS ONLY CAGES





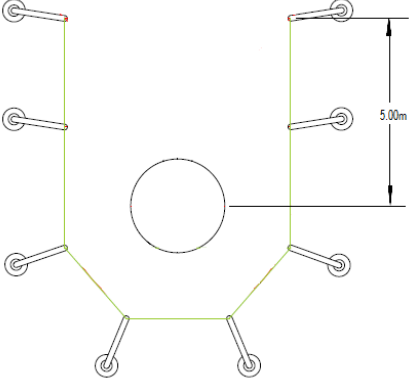
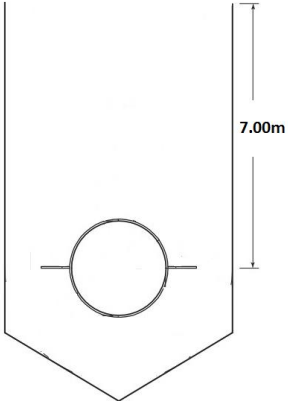
## IDENTIFYING YOUR DISCUS CAGE SPECIFICATION

To establish whether your cage is a UKA or a World Athletics specification discus cage follow the simple steps below.

*Note: You will need an 8m tape measure and a long piece of string (6m +)*

1. Tie the piece of string between the two main cage posts at the front of the cage and measure its length (i.e. the cage opening gap). Mark the halfway point with a pen / piece of tape (this is the cage centreline).
2. Next, locate the centre of the throws circle and take a measurement from this here to the point at which the tape intersects the centreline of the string.
3. Compare the measurement that you have taken to Table 4.0 below. *Note: Some cage lengths will vary slightly but if the length measured is <6.50m your cage is classed as a UKA specification discus cage.*

**Table 4.0 – Discus cage specification**

Cage specification	Distance from centre of discus circle to cage opening	Typical Danger Zone	Action required
<p><b>UKA Discus Only cage</b></p>  <p>The diagram shows a circular throwing area with a central circle. A cage is formed by two vertical posts connected at the top and bottom by a horizontal bar. A string is stretched between the two top posts, and a vertical line is drawn from the center of the circle to the midpoint of this string. A dimension line indicates a distance of 5.00m from the center of the circle to the string.</p>	<p><b>5.00m</b></p>	<p><b>92°</b></p>	<p><b>This cage requires modification to achieve the new UKA specification</b></p>
<p><b>World Athletics Discus Only cage</b></p>  <p>The diagram shows a circular throwing area with a central circle. The cage is a simple U-shaped structure with two vertical posts and a horizontal bar at the bottom. A dimension line indicates a distance of 7.00m from the center of the circle to the inner edge of the cage opening.</p>	<p><b>7.00m</b></p>	<p><b>69°</b></p>	<p><b>Your cage is World Athletics compliant</b></p>

**APPENDIX 2**

**PRE-CAGE MODIFICATION/REPLACEMENT**

**INTERIM GUIDANCE**

## Hammer Throw Interim Safety Guidance- Applies to training and level 1 competition

Type of cage	Single circle UKA combined hammer/discus cage <i>(Hammer danger zone greater than 56°)</i>	Two circle UKA combined hammer/discus cage <i>(Hammer danger zone greater than 56°)</i>	Single circle WA combined hammer/discus cage OR <b>Modified</b> UKA combined hammer/discus cage <i>(Hammer danger zone less than 57°)</i>	Two circle WA combined hammer/discus cage WA OR <b>Modified</b> UKA combined hammer/discus cage <i>(Hammer danger zone less than 57°)</i>
<b>Cage location</b>				
<a href="#">Finish Line</a>	† No throws unless external cage survey drawing indicates that there is no danger of a hammer striking the track at <50m	† No throws unless external cage survey drawing indicates that there is no danger of an implement striking the track at <50m	✓	✓
<a href="#">D#1 (Central: between finish line and 1500m start)</a>	* Subject to risk assessment	* Subject to risk assessment	✓	✓
<a href="#">1500m start</a>	* Subject to risk assessment	* Subject to risk assessment	✓	✓
<a href="#">200m start</a>	† No throws unless external cage survey drawing indicates that there is no danger of a hammer striking the track at <50m	† No throws unless external cage survey drawing indicates that there is no danger of an implement striking the track at <50m	✓	✓
<a href="#">D#2 (Central: between 200m and 100m start)</a>	® Subject to risk assessment	® Subject to risk assessment	✓	✓
<a href="#">100m start</a>	* Subject to risk assessment	* Subject to risk assessment	✓	✓
Cages located external to the track	® Subject to risk assessment			

### Notes

† UKA specification cages located at 200m / Finish Line: UKA recommends that no throws take place from cages located in these positions unless an independent cage alignment / hammer danger zone survey carried out by a UKA approved surveyor clearly shows that there is no danger of an implement hitting the track at less than 50metres.

® UKA recommends that hammer/weight throws are only permitted following a risk assessment that considers both the calibre of thrower(s) and other users of the facility.

## Discus Throw Interim Safety Guidance- Applies to both training and Level 1 competition

Type of cage	Single circle UKA combined hammer/discus cage <i>(Discus danger zone greater than 69°)</i>	Two circle UKA combined hammer/discus cage <i>(Discus danger zone less than 76°)</i>	Single circle WA combined hammer/discus cage OR <b>Modified</b> UKA combined hammer/discus cage <i>(Discus danger zone less than 70°)</i>	Two circle WA combined hammer/discus cage, WA Athletics OR <b>Modified</b> UKA combined hammer/discus cage <i>(Discus danger zone less than 76°)</i>	UKA Discus Only cage <i>(Discus danger zone greater than 75°)</i>	WA Discus Only cage <i>(Discus danger zone less than 70°)</i>
Cage location						
<a href="#">Finish Line</a>	† No throws unless external <a href="#">cage survey drawing</a> indicates that there is no danger of a hammer striking the track at <50m	✓	✓	✓	† No throws unless external <a href="#">cage survey drawing</a> indicates that there is no danger of a discus striking the track at <50m	✓
<a href="#">D#1 (Central: between finish line and 1500m start)</a>	* Subject to risk assessment	✓	✓	✓	* Subject to risk assessment	✓
<a href="#">1500m start</a>	* Subject to risk assessment	✓	✓	✓	* Subject to risk assessment	✓
<a href="#">200m start</a>	† No throws unless external <a href="#">cage survey drawing</a> indicates that there is no danger of a hammer striking the track at <50m	✓	✓	✓	† No throws unless external <a href="#">cage survey drawing</a> indicates that there is no danger of a discus striking the track at <50m	✓
<a href="#">D#2 (Central: between 200m and 100m start)</a>	* Subject to risk assessment	✓	✓	✓	* Subject to risk assessment	✓
<a href="#">100m start</a>	* Subject to risk assessment	✓	✓	✓	* Subject to risk assessment	✓
External	* Subject to risk assessment					

### Notes

† UKA specification cages located at 200m / Finish Line: UKA recommends that no discus throws take place from cages located in these positions unless an [independent cage alignment / discus danger zone survey](#) carried out by a UKA approved surveyor clearly shows that there is no danger of an implement hitting the track at less than 50metres.

\* UKA recommends that discus/club throws are only permitted following a risk assessment that considers both the calibre of thrower(s) and other users of the facility.

Cage position: Finish Line (*UKA specification cage*)

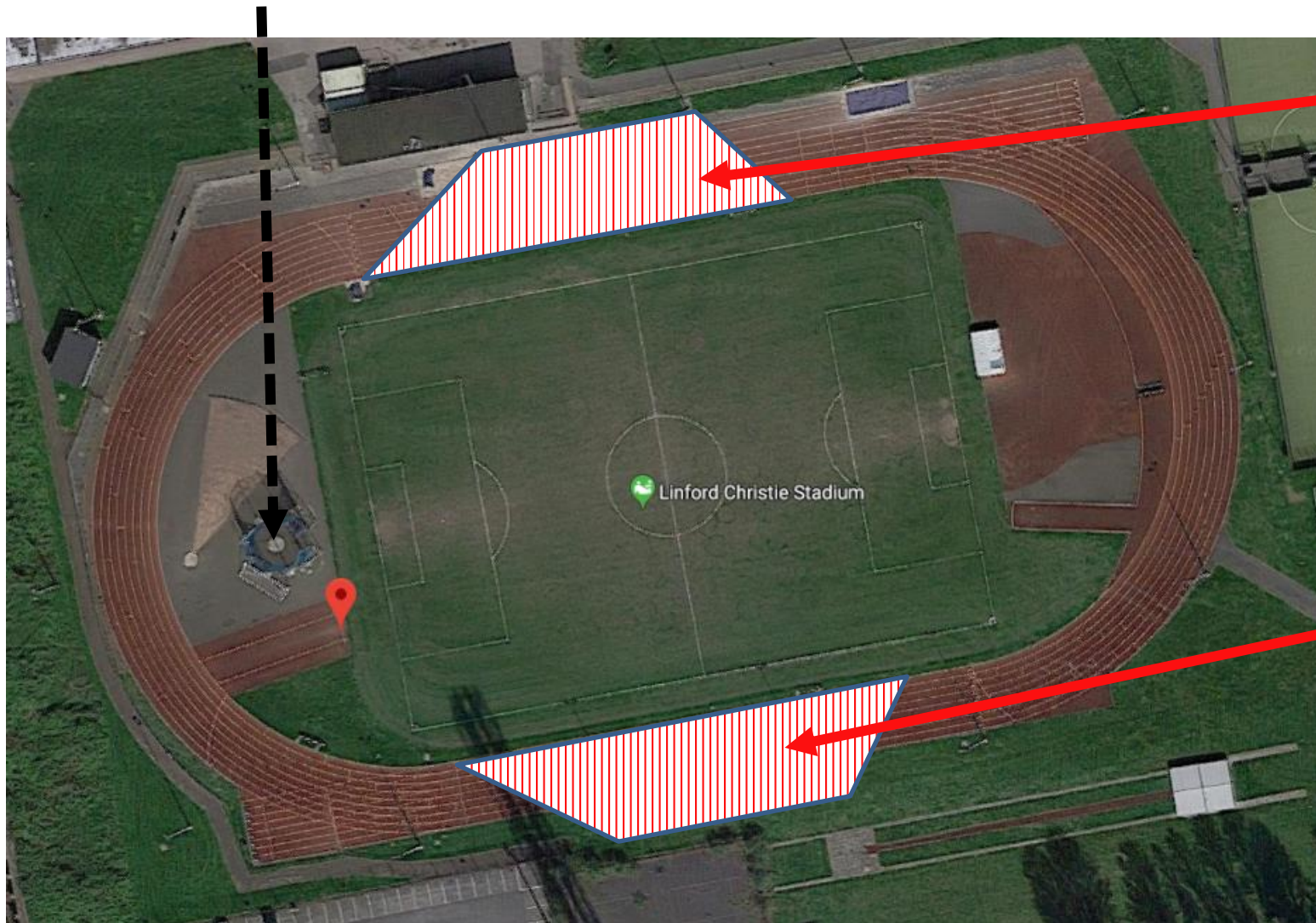


Risk Area (Right handed throwers)

**CAGE DANGER ZONE**  
**SURVEY REQUIRED**



Cage position: D#1 (Central: Between the finish line and 1500m start) (*UKA specification cage*)



Risk Area (Right handed throwers)

Risk Area (Left handed throwers)

Cage position: 1500m start (Recommended) (*UKA specification cage*)



Risk Area (Left handed throwers)



Cage position: 200m start (UKA specification cage)

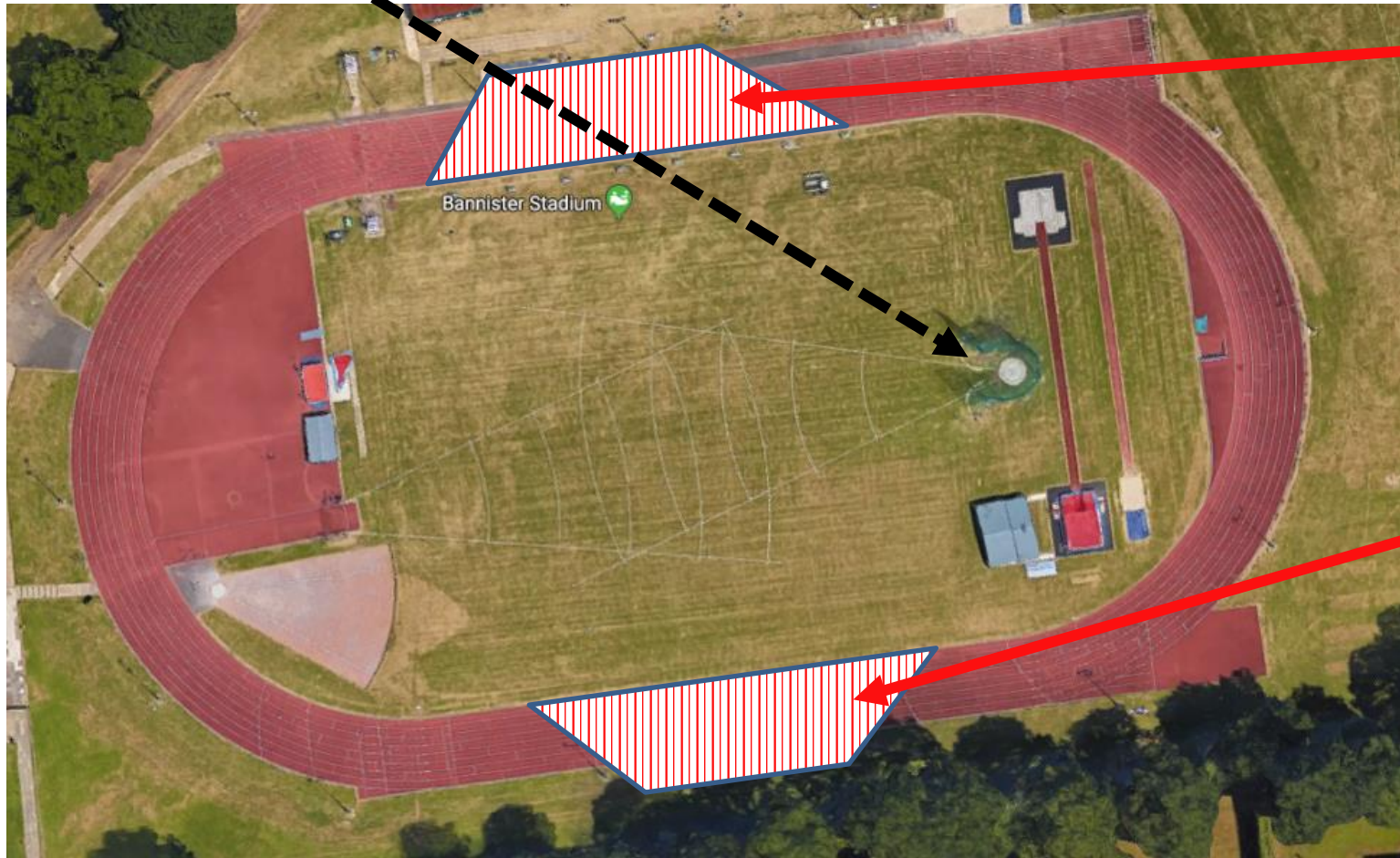


Risk Area (Right handed throwers)

**CAGE DANGER ZONE**  
**SURVEY REQUIRED**



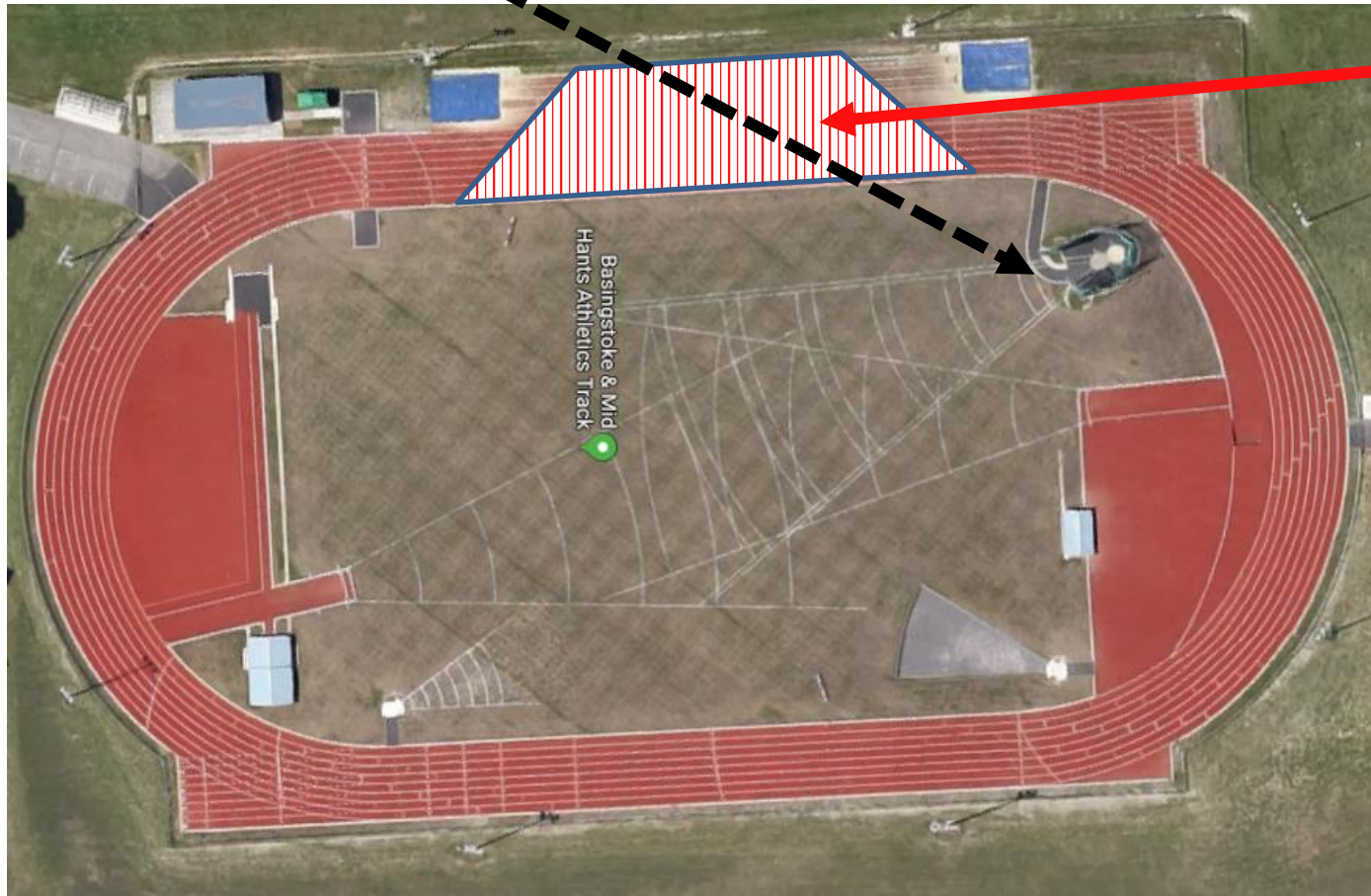
Cage position: D#2 (Central: Between 200m and 100m start) (*UKA specification cage*)



Risk Area (Left handed throwers)

Risk Area Right handed throwers

Cage position: 100m start (UKA specification cage)



Risk Area (Left handed throwers)

# NOTES