



Implementation of Calculations for Competitions under WHS

Version 1.0
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Implementation of Handicap Calculations for Competitions under WHS

Introduction

This document provides direction on how Course Handicaps, Playing Handicaps and Multi-Tee Adjustments must be calculated to be consistent with the WHS requirements.

Who Should Read This Document

Licensed software providers for clubs in GB&I under the CONGU® jurisdiction. There are minor differences between the requirements for Scotland and the rest of GB&I for the rounding of the Course Handicap. These differences are detailed in the document.

Document Control

Version	Date	Reason for Change	Approved
1.0	10/12/2020	First Issue	CONGU®

Change Descriptions

Version	Item	Description

Handicap Calculations

It is important that these calculations are done in a consistent manner. As well as applying appropriate allowances (which are mandatory in GB&I) the calculation of adjustments for players playing from separate tees needs to be done consistently.

Rounding

When rounding calculations to integer values, standard rounding should be used – i.e. 0.5 is rounded upwards. Care should be taken when calculating +handicap golfers. 0.5 is still rounded upwards – this means that -1.5 is rounded to -1 and -1.6 is rounded to -2. It is not uncommon for software to round incorrectly for negative numbers (i.e. -1.5 is rounded to -2 which is incorrect). Where no rounding is stated, it is expected that machine precision would be used.

Multi Tee Adjustments

It is becoming more prevalent that clubs are allowing play from different tees within the same competition. In such cases additional adjustments to playing handicaps are required to make play equitable. These adjustments are calculated differently depending on whether the format is Medal Strokeplay or Stableford (and Par/Bogey).

18 Hole Medal Strokeplay (Includes Gross, Matchplay & Maximum Score)

The adjustments to apply are based on the difference in the difficulty (represented by the Course Rating) of the tees being used. Regardless of the number of tees being used, the principle is that those playing from the tee with the highest course rating receive additional strokes based on the difference between that Course Rating and the tee with the lowest rating. As an example, consider the situation where three tees are being used, having course ratings of CR_H for the highest Course Rating, CR_M for the next highest Course Rating and CR_L for the tee with the lowest Course Rating

	Tee 1	Tee 2	Tee 3	
<i>Course Rating</i>	CR_L	CR_M	CR_H	
Adjustment	0	$CR_M - CR_L$	$CR_H - CR_L$	To 1 Decimal Place
Example:				
<i>Course Rating</i>	69.3	72.1	74.7	
Adjustment	0	2.8	5.4	

18 Hole Stableford (& Par/Bogey)

This differs from Medal Strokeplay in that the number of stableford points that represents the 'Play to Handicap' (P2H) value is calculated for each of the tees being used. This is calculated as

$$36 - (CR - \text{Par})$$

So if the Course Rating and Par are the same value, the P2H value would be 36 points. If the Course Rating is less than Par (i.e. an under-par score is required to Play to Handicap) then clearly the stableford points required will be higher than 36 points. Similarly the opposite applies. One difference to the Medal Strokeplay approach is that the P2H values must be an integer number of points (i.e. you can't have fractional numbers of points). So if we have a CR of 71.2

and a Par of 74, $CR - Par = -2.8$. Thus the P2H value would be $36 - (-2.8) = 38.8$. Using normal rounding the P2H value is 39 points when rounded for the Adjustment calculation.

Once the P2H value for each tee has been calculated, those playing from the tee with the lowest P2H value receive additional strokes equal to the difference between that P2H value and the highest P2H value.

	Tee 1	Tee 2	Tee 3
Par	Par_1	Par_2	Par_3
Course Rating	CR_1	CR_2	CR_3
P2H	$36 - (CR_1 - Par_1)$	$36 - (CR_2 - Par_2)$	$36 - (CR_3 - Par_3)$
Or	$P2H_L$	$P2H_M$	$P2H_H$
Adjustment	$P2H_H - P2H_L$	$P2H_H - P2H_M$	0
Example			
Par	73	68	72
Course Rating	76.1	69.2	67.1
P2H	32.9 (33)	34.8 (35)	40.9 (41)
Adjustment	8	6	0

9 Hole Medal Strokeplay (Includes Gross, Matchplay & Maximum Score)

The calculation of Course Handicap for 9-hole score submission already contains an adjustment of Course Rating – Par, so the adjustment for 9-hole Medal Strokeplay competitions is simply the difference in the Par for the Tees being played. In such circumstances, those playing the tee with the higher Par figure receive strokes equal to the difference in the Par figures for each tee.

	Tee 1	Tee 2	Tee 3	
Par	Par_L	Par_M	Par_H	
Adjustment	0	$Par_M - Par_L$	$Par_H - Par_L$	Integer
Example:				
Par	33	35	36	
Adjustment	0	2	3	

9 Hole Stableford (& Par/Bogey)

The calculation of Course Handicap for 9-hole score submission already contains an adjustment of Course Rating – Par (see calculation below) and so any further adjustment for multiple tees is not required for this format.

Player Handicap Calculations

Course Handicap

The Course Handicap for a player is calculated:

Course Handicap: 18 Holes	
Handicap Index x Slope Rating / 113	Rounded to an integer for England, Wales and Ireland; Not Rounded for Scotland
Course Handicap: 9 Holes	
(Handicap Index x 0.5 x 9 Hole Course Rating / 113) + (9-Hole CR – 9 Hole Par)	Rounded to an integer for England, Wales and Ireland; Not Rounded for Scotland

Playing Handicap

In general the Playing Handicap takes the Course Handicap calculated as above, then applies any allowance due to the format of play and then any adjustment required due to multiple tees being used.

$$PH = (CH \times \text{Allowance}) + \text{Adjustment}$$

Depending on the format of play, the playing handicap is either rounded to an integer, or rounded to 1 decimal place (see clarification in sections below).

PH_1 : Playing Handicap after the allowance has been applied, but before any adjustment is made for multiple tees

CH_1 & CH_2 : Course Handicap of Players 1 & 2 in Fourball & Foursomes play

CH_L & CH_H : Lowest & Highest Course Handicap in Greensomes play

Note1: The allowances used in the calculations below are mandatory and no further option for these formats can be provided.

Note2: Where Medal Strokeplay is referred to, this includes Scratch (Gross) competitions and Maximum Score competitions.

Individual Competition (9 & 18 Holes): Allowance = 0.95 (Note – no allowance is required for General Play rounds)

1	$PH_1 = CH \times 0.95$	Not Rounded
2	If multiple tees being used, identify the tee being used and use the adjustment calculated for that tee $PH = PH_1 + \text{Adjustment}$ If no adjustment required, $PH = PH_1$	Rounded to an integer value Rounded to an integer value

FourBall Betterball: Allowance = 0.85, 0.90

1	4BBB Stableford/Strokeplay $PH_1 = CH \times 0.85$	Not Rounded
	4BBB Bogey/Par/Matchplay $PH_1 = CH \times 0.90$	Not Rounded
2	If multiple tees being used, identify the tee being used and use the adjustment calculated for that tee $PH = PH_1 + \text{Adjustment}$ If no adjustment required, $PH = PH_1$	Rounded to an integer value Rounded to an integer value

Foursomes: Allowance = 0.5

1	$PH_1 = (CH_1 + CH_2) \times 0.5$	Not Rounded
2	If multiple tees being used, determine the adjustment for each player. $PH = PH_1 + (\text{Sum of Adjustments} / 2)$ If no adjustment required, $PH = PH_1$	For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer. For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer.
3	There must be a facility to direct which tee Par and SI are to be used and the same one is then applied to all scores.	

Greensomes: Allowance = 0.6/0.4

1	$PH_1 = (CH_L \times 0.6) + (CH_H \times 0.4)$	Not Rounded
2	If multiple tees being used, determine the adjustment for each player. $PH = PH_1 + (\text{Sum of Adjustments} / 2)$ If no adjustment required, $PH = PH_1$	For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer. For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer.
3	There must be a facility to direct which tee Par and SI are to be used and the same one is then applied to all scores.	

4 Person Scramble: Allowance = 0.25, 0.20, 0.15, 0.10 applied lowest to highest handicap of each member (assume Low to High is CH_{L1}, CH_{L2}, CH_M, CH_H)

1	$PH_1 = (CH_{L1} \times 0.25) + (CH_{L2} \times 0.20) + (CH_M \times 0.15) + (CH_H \times 0.10)$	Not Rounded
2	<p>If multiple tees being used, determine the adjustment for each player.</p> $PH = PH_1 + (\text{Sum of Adjustments} / 4)$ <p>If no adjustment required, PH=PH₁</p>	<p>For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer.</p> <p>For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer.</p>

3 Person Scramble: Allowance = 0.30, 0.20, 0.10 applied lowest to highest handicap of each member (assume Low to High is CH_L, CH_M, CH_H)

1	$PH_1 = (CH_L \times 0.30) + (CH_M \times 0.20) + (CH_H \times 0.10)$	Not Rounded
2	<p>If multiple tees being used, determine the adjustment for each player.</p> $PH = PH_1 + (\text{Sum of Adjustments} / 3)$ <p>If no adjustment required, PH=PH₁</p>	<p>For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer.</p> <p>For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer.</p>

2 Person Scramble: Allowance = 0.35, 0.15 applied lowest to highest handicap of each member (assume Low to High is CH_L, CH_H)

1	$PH_1 = (CH_L \times 0.35) + (CH_H \times 0.15)$	Not Rounded
2	<p>If multiple tees being used, determine the adjustment for each player.</p> $PH = PH_1 + (\text{Sum of Adjustments} / 2)$ <p>If no adjustment required, PH=PH₁</p>	<p>For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer.</p> <p>For Medal Strokeplay this is rounded to 1 decimal place, otherwise rounded to integer.</p>

Team Competitions: Allowances are detailed below for the various formats

1	<p>Best 1 out of 4 $PH_1 = (CH \times 0.75)$ (all formats)</p> <p>Best 2 out of 4 $PH_1 = CH \times 0.85$ (all except Par/Bogey) $PH_1 = CH \times 0.80$ (Par/Bogey)</p> <p>Best 3 out of 4 $PH_1 = CH \times 1.00$ (all except Par/Bogey) $PH_1 = CH \times 0.90$ (Par/Bogey)</p> <p>All 4 to count $PH_1 = CH \times 1.00$ (all formats)</p> <p>Best 1 out of 3 $PH_1 = (CH \times 0.70)$ (all formats)</p> <p>Best 2 out of 3 $PH_1 = (CH \times 0.85)$ (all formats)</p> <p>All 3 to count $PH_1 = CH \times 1.00$ (all formats)</p>	No Rounding for any of these
2	<p>If multiple tees being used, identify the tee being used and use the adjustment calculated for that tee</p> <p style="text-align: center;">$PH = PH_1 + (\text{Adjustment})$</p> <p>If no adjustment required, $PH=PH_1$</p>	<p>Rounded to an integer value</p> <p>Rounded to an integer value</p>