Supplementary Table 2. A checklist for determining if environmental spaces are classified as *'indoor'* or *'outdoor'* when using the Team Sport Risk Exposure Framework 2 (TS-REF-2) to support the identification of sport activities or individuals at increased risk of SARS-CoV-2 transmission.

Characteristics	*'Indoor'*	*'Outdoor'*
Volume	Low (e.g. indoor training area; 500 m^3)	High (e.g. indoor stadium; 1,500,000 m^3)
	If the volume of the space is greater, the concentration of viral particles accumulating in the air and inhaled over time is likely to be less.	
Roof or ceiling	Low (e.g. indoor warm up room at stadium with same ceiling height as normal room [2.6 m])	No / High (e.g. indoor barn; ceiling height 10 m)
	Many aerosol particles that are exhaled become entrained into thermal plumes that rise vertically above the heads of individuals. With (low) ceilings, aerosols tend to accumulate under the ceiling before slowly descending through the breathing zone due to gravitational deposition. Outdoors aerosols would be dispersed upward into the atmosphere.	
Air Velocity at Low Level	Low (e.g. windows / doors shut and no mechanical ventilation within indoor building)	High (e.g. windows, doors or side of marque open on multiple sides, creating high velocity airflow)
	Greater air velocities result in exhaled aerosol particles being dispersed more rapidly.	
Density of people (in enclosed) space	High (e.g. indoor training barn, with high number of people)	Low (e.g. indoor training barn, with low number of people)
	Large indoor sporting facilities (e.g. arenas) containing a high number of people, should be treated as being indoor spaces for COVID-19 risk assessment purposes. Leaving the building empty for a period of time to allow complete air-exchange may be advantageous. The specific risk based on room dimension, duration, ventilation and occupancy can be calculated (https://airborne.cam/).	
Carbon dioxide (CO_2)	High (>1000 ppm)	Low (<1000 ppm)
	It is not always easy to determine room ventilation rates, particularly where natural ventilation is employed. CO_2 monitoring can be used as a surrogate measure for ventilation. This can be done by ensuring that CO_2 levels are maintained below 1000 ppm.[1] If room CO_2 levels exceed this threshold, strategies to increase the ventilation rate should be adopted, thus any airborne viral particles are flushed from the room space.	
Environmental Conditions*	Warm and humid (e.g. > 18°C and >40% relative humidity; heated)	Cold and dry (e.g. < 18°C and <40% relative humidity; not heated)
	The SARS-CoV-2 virus remains viable in aerosols for longer when the air is cool and dry.[2,3] Under such circumstances, even though a room space may be heated, the air can be very dry <40% relative humidity, with the result that the viral load in any droplets inhaled may be greater than when humidity is greater.[3]	

Checklist for determining *'indoor'* and *'outdoor'* environmental spaces presented in grey shaded cells (volume, roof or ceiling, air velocity at low level) when using the TS-REF-2 to identify increased SARS-CoV-2 transmission risk sporting activities and contacts. *Classification of environmental conditions on virus transmission is challenging. During the winter months the virus will persist for longer in aerosols outdoors than indoors (when the air is heated).

1 Burridge HC, Bhagat RK, Stettler MEJ, *et al.* The ventilation of buildings and other mitigating measures for COVID-19: a focus on wintertime. *Proc R Soc Math Phys Eng Sci* 2021;477:20200855. doi:10.1098/rspa.2020.0855
2 Dabisch P, Schuit M, Herzog A, et al. The influence of temperature, humidity, and simulated sunlight on the infectivity of SARS-CoV-2 in aerosols. Aerosol Sci Technol 2021;55:142–53. doi:10.1080/02786826.2020.1829536.
3 Beggs CB, Avital EJ. A psychrometric model to assess the biological decay of the SARS-CoV-2 virus in aerosols. *PeerJ* 2021;9:e11024. doi:10.7717/peerj.11024