



Image courtesy of Banyule City Council

# ***GUIDANCE NOTE 03***

## **OUTDOOR TRAINING FACILITIES**



**CRICKET**  
AUSTRALIA



# GUIDANCE NOTE 03

## OUTDOOR TRAINING FACILITIES

### Introduction

Outdoor cricket training facilities are a core component of venues across all levels of community cricket. Training facilities (or “cricket nets or training nets” as they are often referred to) often provide the setting for a young player’s first experience, as well as providing an integral platform for ongoing player skill acquisition and development.

The functionality, purpose and use of cricket training facilities has evolved over time, however the majority of clubs view them as the primary training facility and one of the few facilities that can accommodate multiple players training simultaneously.

This Guidance Note provides information and recommendations regarding the following aspects related to outdoor cricket training facilities:

- Hierarchy
- Configuration
- Orientation
- Dimensions
- Grade
- Structural form
- Pile height
- Multi-use
- Supporting amenities



Throughout this Guidance Note, design and planning tips and references to ESD considerations and maintenance recommendations are also provided.

### Hierarchy

The number of training nets required per venue is dependent on a number of factors, including:


- Level of competition played
- Type of competition — turf or synthetic
- Number of playing fields the training nets service
- Venue hierarchy classification
- Size of tenant club/s and number of teams
- Training schedules and weather impacts
- Cost of provision and maintenance

There is no ‘one-size-fits-all’ approach to training net provision. The following table provides a guide as to a desired level of provision (number of nets/pitches and surface types) for differing levels of competition and club sizes.

These minimums should be designed and developed with the potential to expand net structures and pitches as needs grow.

HIERARCHY LEVEL	NUMBER OF TRAINING PITCHES	
	SYNTHETIC	TURF
PREMIER (TURF)	2–4*	9–12
CLUB HOME (TURF)	3–4*	6–9
CLUB HOME (SYNTHETIC)	3–6*	0
CLUB SATELLITE	2* (desirable)	0

\*Preferably two, but at a minimum, one synthetic training net/pitch should remain publicly accessible at all times (i.e. not enclosed, locked or gated off).



When determining the appropriate number of turf training pitches, take into consideration the need for individual pitch rest and preparation (rotation) periods. It is recommended advice be sought from your State/Territory Cricket Association when planning natural turf training facilities.



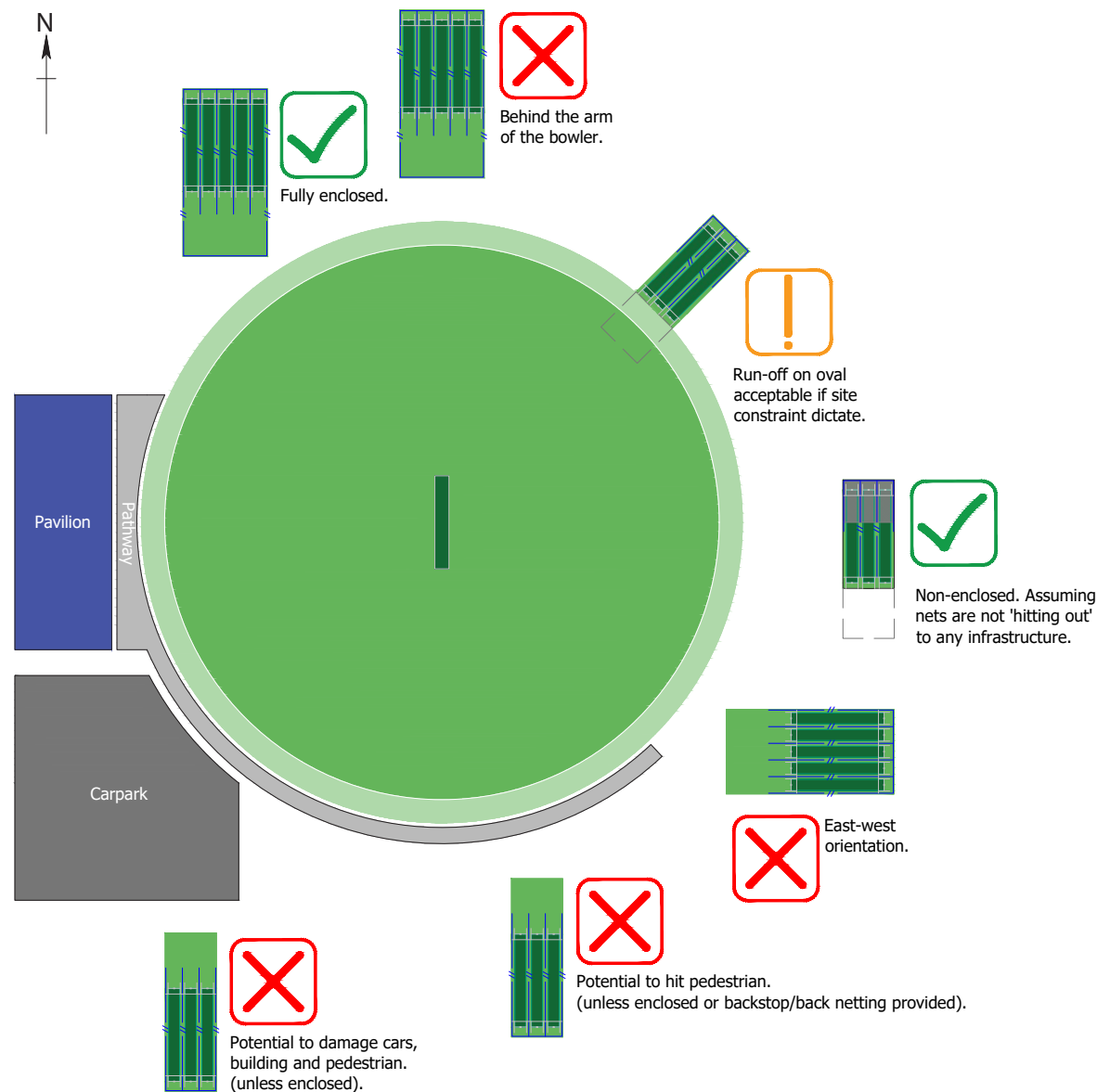
## Location

Dependent on cricket training net design and surrounding infrastructure and open space, the most suitable location for training nets will differ. Enclosed training net facilities (discussed in more detail in the following pages) allow greater flexibility in terms of location as training activities are confined to a specific area. Non-enclosed training facilities, where the ball can be hit beyond the net structure, require more careful placement to minimise the risk of injury to a person or damage to property.

As depicted by the following diagram, the following planning principles should be considered when determining the most suitable location for cricket net development.

Cricket Australia's preference is to locate practice enclosures (including bowler run ups) off the field of play, for the following reasons and benefits:

- Protects the playing field surface from intense levels of use
- Enables the practice facility to be utilised concurrently while the playing field is being used
- From a safety perspective, points of conflicts are removed, particularly with users of the practice nets with their backs turned to the centre wicket
- Greater level of flexibility in the use of the practice nets, especially if fully enclosed



Whilst it is recommended that bowler run up areas be located off the field of play and outside of the minimum run-off distance, site constraints (particularly in inner urban areas) may mean there is a requirement for bowler run up areas/run off areas to slightly encroach onto or near the field of play. If the bowler run ups are a synthetic surface, the synthetic product should meet Australian Football League-Cricket Australia approved synthetic turf product performance and testing standards. Users should also remain vigilant and be made aware of the change of surface type and potential trip/impact risks.



The above image (courtesy of City of Unley) is of the outdoor training facilities at Kingswood Oval in South Australia. The darker green area of the bowler run ups (bottom right hand corner) overlaps with the field of play/run-off area for Cricket and Australian Rules Football. This overlapping area has been covered with an approved AFL/CA approved synthetic turf product.

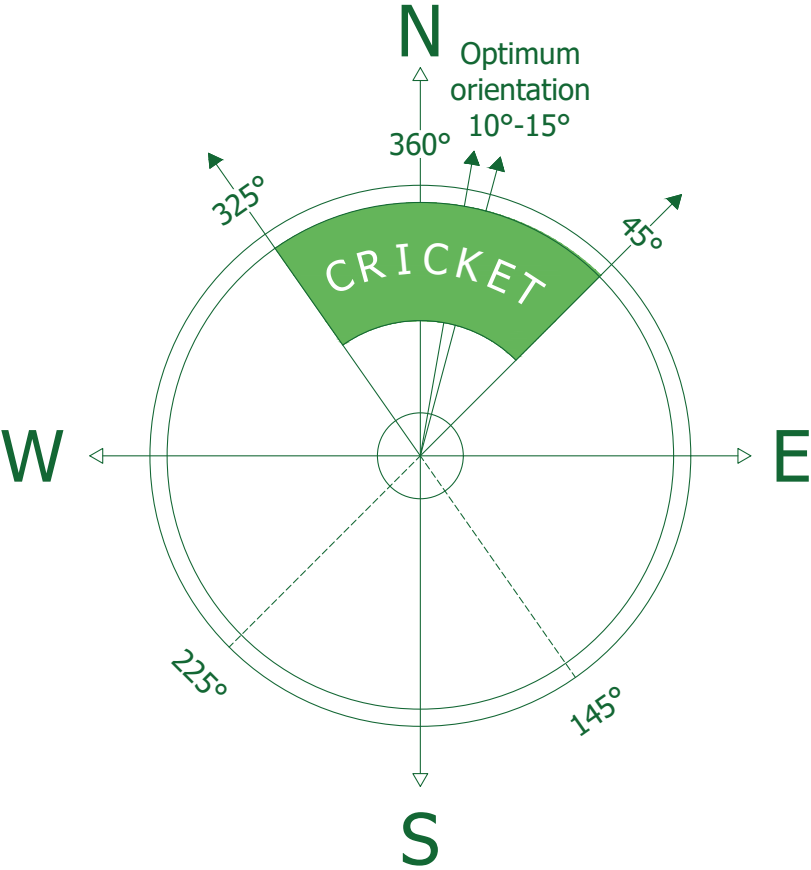
Other considerations when planning locations or designing spaces with cricket training nets include:

- Accessibility and availability for community use
- Proximity to trees that create impacts from leaf debris, root ingress, shadowing causing issues for batter visibility and increasing likelihood of mould build up
- Avoid using mulch (or similar) in garden beds or granitic sand on pathways surrounding training nets, as these materials often impact the pitch area
- Located on 'higher land' to minimise impacts of flooding
- Backdrop or vegetation behind bowler's run-up impacting player visibility
- Proximity to other site infrastructure (e.g. shared pathways).

## Training net orientation

The orientation of cricket training nets is equally as important as the main field of play. The time of day (early morning or late afternoon) and the time of year (winter or summer) has a bearing on optimum orientation.

Cricket training nets should have a north-south orientation with an ideal rotation of 10–15 degrees east of north and a maximum rotation of 45 degrees east of north or 35 degrees west of north. The latter requirement is particularly important for the safety of players as training is usually conducted in the later afternoon or evening when the sun is setting.



It is important to recognise that local conditions may override these recommendations and each site and associated conditions should be treated individually.

## Training pitch dimensions

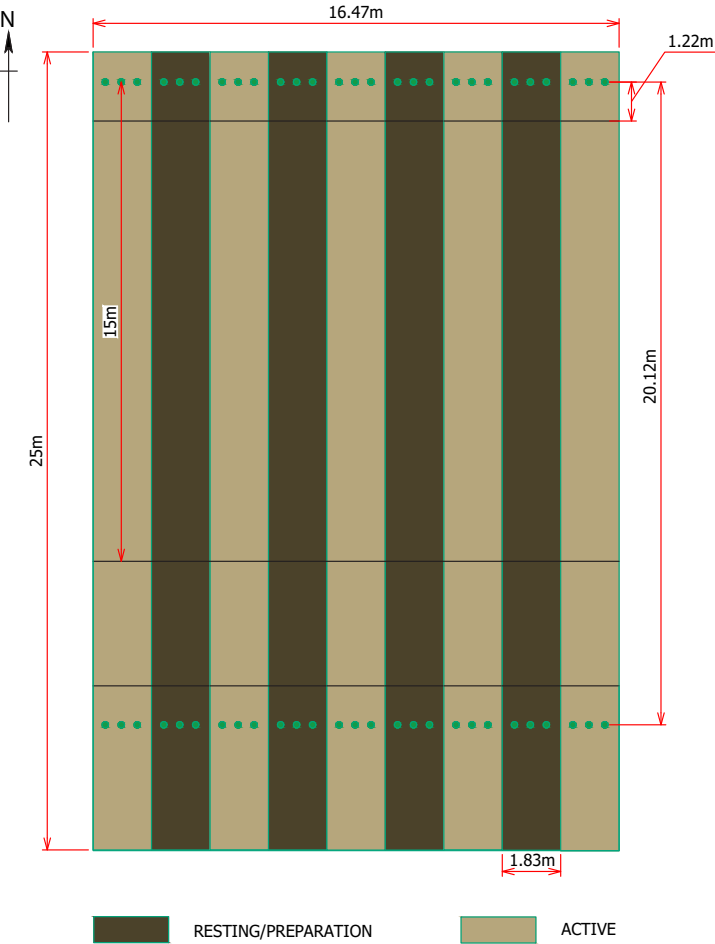
### Natural turf

The following table details the minimum and desired dimensions for natural turf training pitches.

GEOMETRIC ELEMENT	DIMENSIONS	COMMENT
LENGTH	15m (minimum) 25m (optional)	While full length turf training pitches are recommended, a minimum length of 15m (approximately three quarters of a full-length pitch) could be considered to assist clubs in managing the cost of turf pitch development, preparation and ongoing maintenance.  An increased length of 25m allows the bowler to have multiple strides on the same wicket surface prior to delivery.
WIDTH	1.83m (minimum) 2.4m (optional)	2.4m wide pitches will provide a closer 'match simulation' experience however are not essential.

**Note:** Overall footprint of the training pitch table will be dependent of the number of training pitches provided and level of competition being played.

It is recommended that both the rotating and preparation processes related to turf cricket practice nets be managed in consultation with an agronomist





## Synthetic grass

The following table details the minimum and desired dimensions for synthetic grass training nets and pitches. It should be read in conjunction with the designs provided on the following pages and Australian Standards 1725.4 and 1725.1.

ITEM	MEASUREMENT	NOTES
Individual training lane width	3.6m	All training lanes should have a minimum width of 3.6m
Pitch width	2.4m*	A 2.4m pitch width is recommended, in line with the pitch width for centre synthetic pitches. *Covering the full width of the training lane (3.6m) with the same synthetic grass product as the pitch is also a suitable design option.
Pitch length (from stumps at batter end)	22m	A measurement of 22m from stumps at the batter end to the end of the pitch at the bowler's end will ensure the bowler's final delivery strides and ball release are undertaken on the same surface/level (base and synthetic surface).
Roof height(s)	3m 3.6m	AS 1725.4 outlines two industry adopted roof heights of 3m or 3.6m for outdoor training facilities. If opting for a full pitch length roof design (see below), a 3.6m roof height is recommended to enable ball flight opportunities for spin bowling.
Roof length(s)	6m 9m Full pitch length (back net to stumps at bowler's end)	AS 1725.4 outlines two industry adopted roof lengths of 6m or 9m for outdoor training facilities. A shorter 6m roof length will enable greater ball flight for spin bowlers and may limit the number of errant balls landing on the roof, however will increase the likelihood of balls being struck out of the nets, potentially causing injury or damage to nearby property/vehicles. A 9m roof length will still enable adequate ball flight for spin bowling as well as providing some additional protection for neighbouring/nearby infrastructure (e.g. car park, pavilion) and facility users/general public passing by. A full pitch length roof (from back netting to bowler's stumps is considered an appropriate design response in areas with limited space (i.e. eliminates risk of injury and/or damage to neighbouring property/vehicles). It is also an effective design solution should the direction of the nets be 'hitting towards' other infrastructure (i.e. shared pathway, playground, car park). Inclusion of a small drop net/apron at the end of the roofing (above the stumps at the bowler end) can also minimise balls being struck out of the practice facility enclosure.
Netting/fencing length (from back netting/fencing to stumps at bowler end)	21.12–22.12m (minimum) 25m recommended)	The length of dividing netting will be dependent on the 'buffer distance' behind the batter (see below), however it should in all cases extend at a minimum to the stumps at the bowler end (21.12m–22.12m). Extending the length to 25m will further mitigate the risk of injury resulting from balls ricocheting from adjacent lanes and potentially tripping bowler's during their run-up.
Bowler run-up length (taken from popping crease)	12.1m	A 12.1m run-up length is recommended. Space permitting, longer run ups should be considered to facilitate fast/pace bowlers (particularly for higher level training) who generally require a longer run up. Bowler run ups should not extend onto the field of play, and if located within 3m of an AFL boundary line, should be surfaced with the AFL–CA approved synthetic grass product.


ITEM	MEASUREMENT	NOTES
'Buffer distance' behind batter stumps and back netting	1m-2m	A 1m-2m 'buffer distance' between the stumps at the batter end and the back netting is recommended to: Minimise damage to the netting and/or equipment (e.g. bat) as a result of batter striking the net during stroke follow through. Reduce the risk of injury to the batter as a result of the ball ricocheting directly back into them (from a close distance). Provide space behind the batter to enable controlled wicket keeping training activities/drills Promote batting stroke/technique work (e.g. ramp/lap sweep) without the confines of a net directly behind the batter.
Total lane length (including bowler run-up and distance between stumps at batter end and back netting)	32m-33m	The overall length of a training facility will be dependent on the chosen buffer and bowler run-up distances, however should not be less than 32m.
Total lane width will be dependent on the number of training lanes, however should be a multiple of 3.6m	Dependent on number of training lanes	It is recommended Club (home) facilities have a minimum three training lanes which would equate to a 10.8m overall width.
Pitch surrounds and part bowler run up	Pitch surrounds — 0.6m either side of pitch Part bowler run up — 9m (not including pitch)	It is recommended the full width (including bowler run up areas) of an outdoor practice facility be on the same concrete base, however the pitch surrounds and bowler run up area can be of an alternate compacted hard surface. A slightly longer pile synthetic grass may also be used on these areas, however try to avoid any 'step-like' changes to minimise ball deviation and/or inconsistent surface types/levels for bowlers.

## Grade

Outdoor synthetic training facilities should not have a grade (or gradient) steeper than 1% in any direction and should be constructed on a single plane.

DIRECTION	GRADE
Cross-fall	1% (maximum)
Longitudinal fall	Flat

**Note:** Diagonal grades for outdoor training facilities are accepted as long as the resultant gradient is not steeper than 1% in any direction.



For Occupational Health and Safety measures, it is a requirement that both the dividing (centre) and peripheral netting be a minimum length of 21.12m or 22.12m (depending on 'buffer distance' between stumps at batter end at back netting) for the protection of bowlers in adjacent nets. A length of 25m is however recommended to allow for extended bowler run-ups and bowler protection.





Junior pitch markings (at the bowler's end only) should also be provided in synthetic training nets in line with the below table. Refer to Guidance Note 02 Playing Pitches for junior pitch markings measurements

NUMBER OF TRAINING NETS AT FACILITY	MINIMUM NUMBER OF TRAINING NETS REQUIRING JUNIOR PITCH MARKINGS
1	1
2	2
3	2
4-5	3
More than 5 nets	50% of nets



Image courtesy of City of Unley

## Structural form options

Depending on the intended level of use and the training pitch surface, there are a range of different structural forms for training net enclosures:

- Rigid
- Retractable
- Curtains
- Tunnels

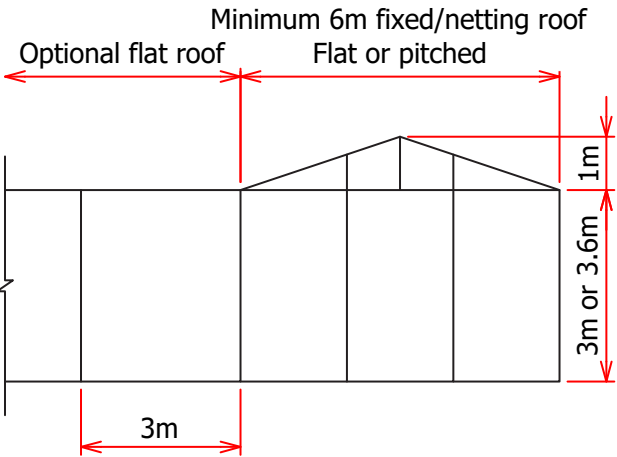
The following pages provide an overview of each option.

### Rigid

Use of chain-link mesh fence to create fixed dividers with chain-link mesh roof.

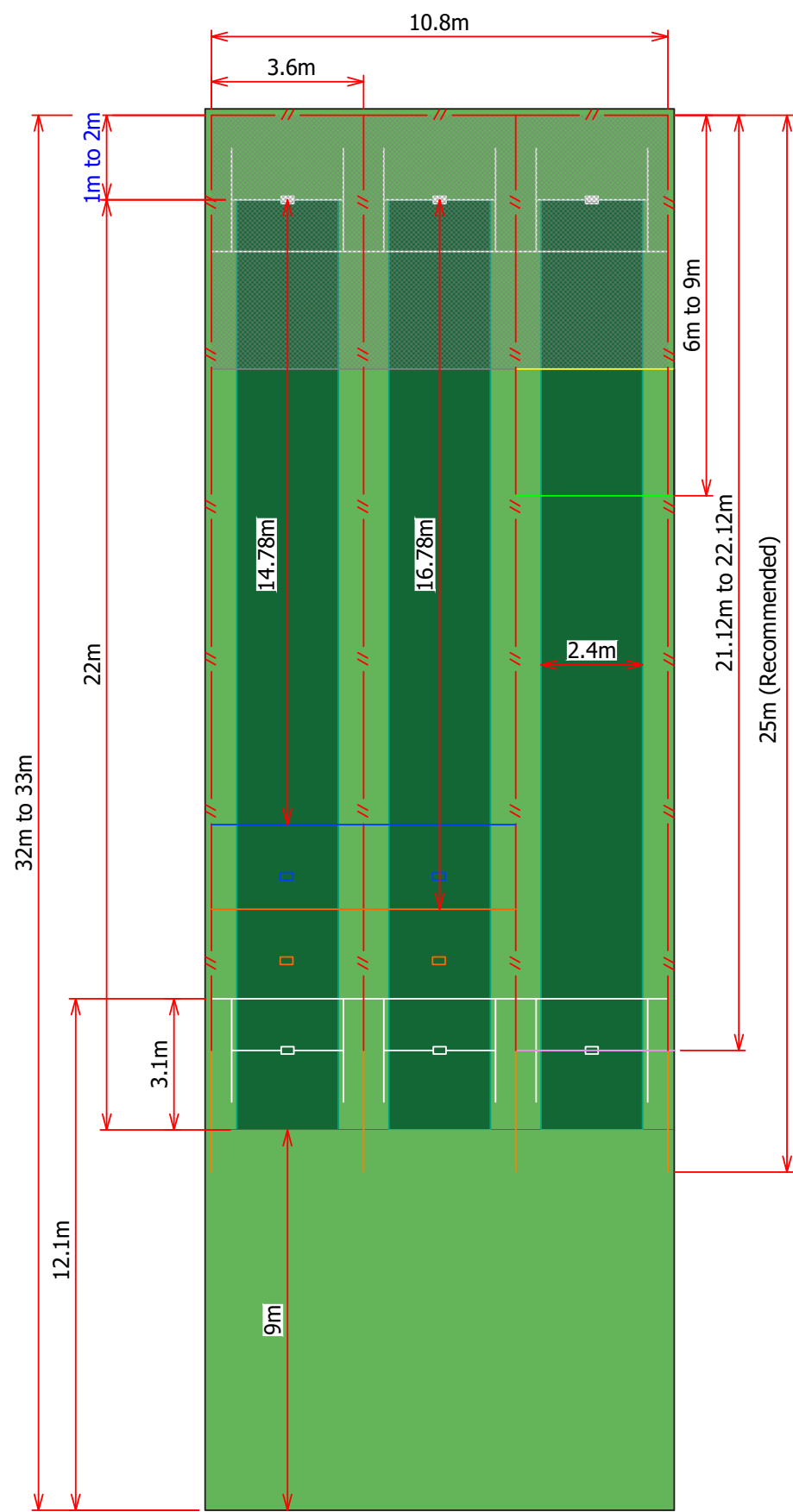


The installation of chain-link mesh to both sides of the internal/dividing fencing/poles will help to minimise balls ricocheting.





Rigid Outdoor Training Facility Design



Retractable

Retractable soft netting lane dividers (provided in the direction of the training pitches) that can be drawn back into storage boxes at one end of enclosure. Requires soft roof netting due to the open span of the facility.

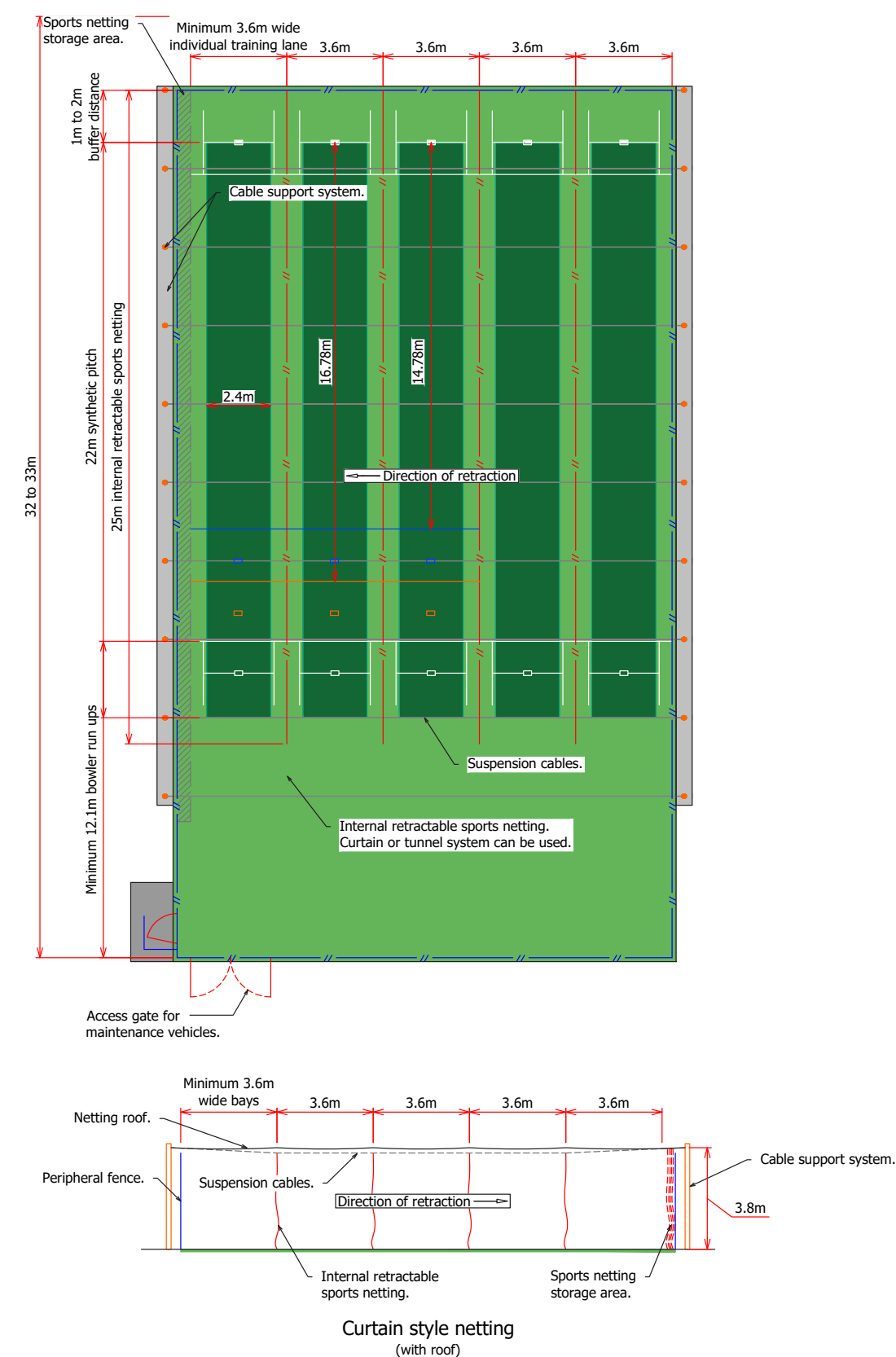


Image courtesy of SportEng



## Curtains

## Curtains Outdoor Training Facility Design

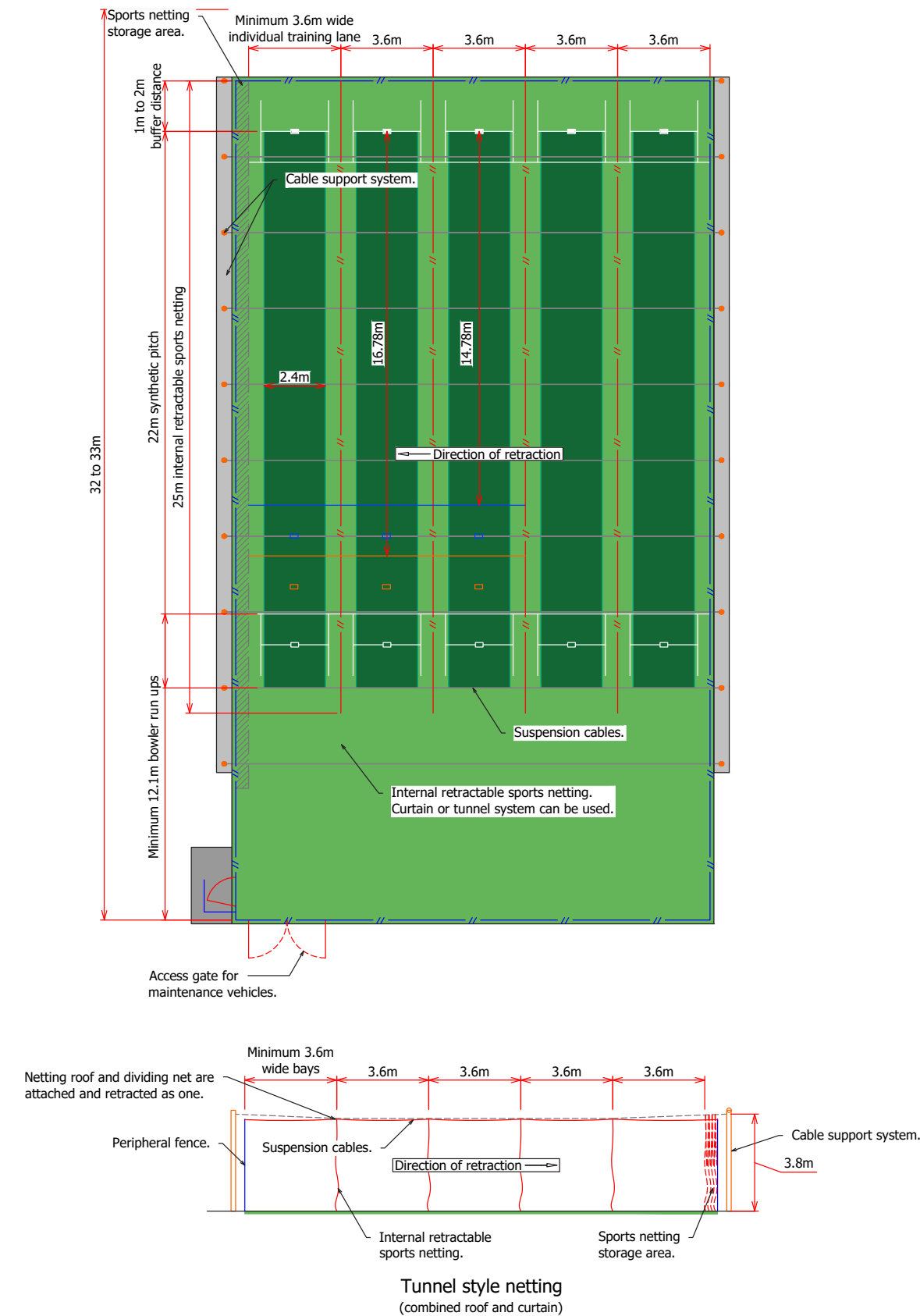




Tunnels

Soft netting tunnels (i.e. lane dividers and roof stitched together) to provide fully enclosed lanes that slide perpendicular to the direction of the pitches.

Tunnels Outdoor Training Facility Design



Advantages and disadvantages

The following table provides a list of advantages and disadvantages for each of the options, as well as an indication of cost compared to other options.

TYPE	ADVANTAGE	DISADVANTAGE	COST RANGE
RETRACTABLE	<ul style="list-style-type: none"><li>Provides a flexible space for multi-use</li><li>Soft netting can be secured in lockable storage boxes</li><li>Suitable for turf practice pitches</li></ul>	<ul style="list-style-type: none"><li>Fixed locations</li><li>Soft netting can sag/billow out in high winds</li><li>Soft netting can readily be vandalised if not locked away in storage boxes</li><li>Large structural elements (i.e. posts) required to operate the system</li><li>Gap between roof netting and retractable lane dividers can result in balls entering into adjacent lanes. Will require baffle/apron off roof to close the gap.</li></ul>	\$ (low-mid)
RIGID	<ul style="list-style-type: none"><li>Use of relevant Australian Standard AS 1725.4-2010.</li><li>Durable</li><li>Fixed chain-link roof structure prevents balls from entering adjacent lanes</li><li>Suitable for open public lane use</li></ul>	<ul style="list-style-type: none"><li>Limited use other than for cricket</li><li>Not suitable for natural turf pitches (i.e. prevents efficient pitch maintenance and preparation)</li><li>Higher level of wear and tear on cricket ball.</li></ul>	\$\$ (mid)
CURTAINS	<ul style="list-style-type: none"><li>Provides a flexible space for multi-use</li><li>No storage boxes</li><li>Greater level of flexibility for lane location set-up</li><li>Suitable for turf practice pitches</li></ul>	<ul style="list-style-type: none"><li>Not suited for open public lane</li><li>Soft netting can sag/billow out in high winds</li><li>Soft netting can readily be vandalised if not in a fully locked enclosure</li><li>Large structural elements (i.e. posts) required to operate the system</li><li>Gap between roof netting and curtain lane dividers can result in balls entering into adjacent lanes. Will require baffle/apron off roof to close the gap.</li></ul>	\$\$\$ (mid-high)
TUNNELS	<ul style="list-style-type: none"><li>Provides a flexible space for multi-use</li><li>Lane dividers and roof stitched together means no gaps for balls to enter adjacent lanes.</li></ul>	<ul style="list-style-type: none"><li>Soft netting can sag/billow out in high winds</li><li>Soft netting can readily be vandalised if not in a fully locked enclosure</li><li>Large structural elements (i.e. posts) required to operate the system.</li></ul>	\$\$\$ (high)





If considering a combined rigid and retractable netting design, ensure the design is developed by a suitably qualified sporting infrastructure design professional.



Images courtesy of PM Sports

## Multi-use training facilities

Multi-use training facilities incorporating cricket practice nets are growing in popularity due to their flexible nature and capacity to accommodate a range of activities and uses. To enable the flexibility of the space, the facility must incorporate nets rather than the rigid fixed chain-mesh fences.

Significant interest has been identified for multi-use training facilities as they also ensure investment into community facilities creates benefits outside of summer cricket training.

A typical range of multi-use training facilities developed to date, include configurations that accommodate training for the following sports (in addition to cricket):

- Netball
- Baseball
- Soccer/futsal
- Lacrosse
- AFL
- Rugby
- Hockey

The principles of cricket net design can be integrated within multi-use facilities including safety, compliance, accessibility and game development. Multi-use innovations are more likely to be supported where they can demonstrate adherence to these principles and still provide fit-for-purpose cricket training nets that are flexible for other activities.

In all multi-use training facility projects, it is difficult to pre-empt all community activity that could be considered compatible with cricket. Final use and design of facilities is often a result of club, community and Council consultation and it is recommended that this process be utilised to ensure maximum benefit can be achieved for all.

Note: While the multi-use cricket facilities space is readily opened up due to the use of retractable, curtain or tunnel nets, there will still be limitations due to the permanent roof net.



Image courtesy of Glen Eira City Council





# Supporting infrastructure

## Power supply

A nearby power supply to outdoor training nets enables the operation of electronic bowling machines. Bowling machines typically operate on 240 volt power requirements, but always check machine requirements with the manufacturer before installing power. Be mindful that electricity cords do not become trip hazards and ensure they avoid contact with water. The recommended location is to install the power supply nearer the bowler's end of training facility.



## Lighting

Refer to Guidance Note 06: Floodlighting for training facility lighting requirements (e.g. pole location, lux levels).

## Drinking fountains

Installation of a drinking fountain can support players and spectators to stay hydrated during training. It can also reduce the impact on the environment by using less single-use plastic.

The location of drinking fountains should be easily accessible by players and spectators. The material of any water fountain should be suitable for outdoor use to prevent damage from the environment. Flow metre gauges can be installed to monitor water usage.



## Drainage infrastructure

Drainage lines should be installed to drain the water that sheets off practice pitches. For a synthetic grass practice enclosure, this would typically consist of a spoon drain on the two low sides of the facility. Alternatively, if there is sufficient space and the adjacent area is grading away from the facility, the run-off could be directed to adjacent landscape areas.

## Irrigation network (natural turf only)

An irrigation network is required for both the natural turf pitches and the natural turf run-ups. There should be a clear delineation in the operation of the two so that neither overspray onto the other, particularly the run-up network onto the turf pitches.

Quick Coupling Valves (QCVs) are required for hand watering of the turf wickets.

## Rubber protective matting

Rubber net edging minimises the damage to cricket balls as a result of impact with the fence. It also increases the longevity of fencing through absorption of ball impact. Ensure fence posts have the capacity to support rubber matting.



## Sight screens

Where applicable, sight screens should be considered at both ends of the nets. If installing a sight screen at the batter's end (to assist the bowler's ability to see a ball struck back in their direction, particularly during power hitting training activities), consider safely erecting/fastening a temporary sight screen. This will enable greater flexibility and clear visibility (if removed) for a coach wishing to stand behind the training lane to conduct batter/bowler performance or technique assessments. It also enables the colour of the sight screen to be changed pending the colour of cricket ball being used. Refer to Guidance Note 01: Playing Fields for more details on sight screens.