



*Made in  
Netball.*

# Court Maintenance *fact sheet*



*A well-maintained court is free of obstruction, clean, safe and playable for both netball training and competition. In order to be compliant, it should have a suitable slip resistance (average BPN of 75) and be devoid of trip hazards.*

If maintained well, the useful life of netball court surfaces can be extended and relieve council's and landowners of increased resurfacing costs.

The amount of court maintenance required depends on court usage and the local physical and environmental factors.

Environments subject to heavy airborne pollution such as dust, leaves and traffic fumes are classified as high maintenance areas. Low maintenance areas have lower levels of pollution and debris, such as indoor stadiums.

**NOTE:** Infrastructure maintenance programs should always be developed with Council / landowner / site manager.

Manual handling of supplies and equipment should be managed in conjunction with Worksafe practices. Risk and safety assessment should always be conducted during maintenance programming. Risk mitigation actions will be necessary during some cleaning and surfacing processes.



## Acrylic surfaced/asphalt hardcourts (outdoor)

Asphalt base and acrylic coated netball court surfaces are popular in Australia and are known as hardcourts. The acrylic surface is basically 3-4 layers of acrylic resin/paint, made up of a filler/sealer coat and two topcoats, that are installed to either an asphalt or concrete base. It can be either non-cushioned or cushioned which are well suited for training and competition use.

Every court surface requires regular maintenance. Not maintaining courts properly or regularly leads to a dramatically reduced lifespan resulting in ongoing costly repairs & premature reconstruction.

Court owners need to be aware that hard court surfaces such as asphalt and acrylic, as with any surface, do not last forever. Maintenance can be minimal for hard courts, however, the amount and type of usage, age and quality of the court build, and surrounding environment will influence the amount of maintenance required. i.e.: if the court is constructed in a damp environment, with poor drainage and large trees positioned close to the court, it will require more frequent maintenance due to the likelihood of increased algae removal, tree limb lopping, leaf removal and additional crack repairs. Asset owners/users need to make provision for the future expenses including ongoing maintenance and the ultimate re-coating of their surface to renew and keep the courts playing at their best.

Recommend requesting and following the court construction contractor and/or acrylic manufacturer's maintenance guidelines, using the products and methodology they recommend. The contractor should be able to supply this information upon request.

## Planning

**Inspect and schedule maintenance for your courts every off season, or between seasons where clubs/associations play all year round. Ideally, the courts should be scheduled for maintenance well before each season, providing ample time to have the cleaning, repair works and/or resurfacing completed before the next season starts.**

The process can take time. As a guide, the following is to be expected:

- Inspect the courts and identify the issues, such as slippery areas, cracks, bulging or split filler in the pavement joins, trip hazards, faint line marking, weed growth, drainage issues, trees overhanging the courts or lights etc.
- Write a thorough works brief for the purpose of seeking quotations for the works.
- Seek quotations from 2-3 experienced and reputable netball court specific contractors. Ensure an itemized quotation is provided, outlining exactly what the works will entail and to the standard required.
- Engage the successful contractor to complete the works taking into account their experience, time taken to complete the works and price.
- Allow adequate time and access for the contractor to complete the works. The contractor should outline the time required and how long the courts are not to be used after the works are completed.

**NOTE:** Contact your state member organisation if you need a professional facility assessment and works recommendations and/or a specification for the works required to ensure an accurate project scope, and to enable efficient and accurate price comparisons.

There is a level of quality that would be reasonably expected as part of a court repair/surfacing project. Selecting suitably qualified and reputable contractors will provide greater certainty that a positive outcome will be achieved.





## Maintenance Costs & Timing

**Clubs/Associations and Councils should budget to have the court facility regularly maintained. A sinking fund is recommended to ensure that the works can be completed when they are required. This will allow the asset owner/user to keep the court surface at its optimum playing condition, including slip resistance and maximise the court's lifespan. As a guide, the suggested timing of the maintenance works and the approximate costs are:**

### Weekly (no cost: club volunteers)

**Courts should undergo a weekly maintenance routine to keep them in a safe and playable condition and to maximise their lifespan.**

#### Works include:

- The consistent removal of dirt, silt, stones and leaf litter as it collects by sweeping or using a blower. These items can create abrasive wear, algae growth and delamination of the acrylic, which can greatly shorten the lifespan of the court surface.
- Remove bird and bat droppings. These are highly acidic and can eat away the acrylic surface.
- Ensure all water ponding and silt/slippy areas are removed regularly via a broom or squeegee. This is especially important prior to play commencing.
- Ensure any spills or contaminants, such as drinks are removed immediately.
- Do not place portable shelters, chairs or tables directly on the court surface.
- Protect the pavement perimeter by clearing dirt and leaf litter etc from drainage systems and keeping weeds and grass from growing on to the pavement areas.

**NOTE:** if contaminants are not regularly removed, they will be embedded into the acrylic topcoat and, with prolonged use, will cause staining and premature surface wear. A non-residual liquid organic cleaner can be utilised. The percentage of cleaner to percentage of water will largely depend on the degree of surface contamination and should be used in accordance with the manufacturer's specifications for the particular surface type and cause of the stain. After light scrubbing, hose-off with fresh water to remove any residual cleaning agent. Contact your local authority prior to the commencement of cleaning to ensure the intended works conform to the environmental requirements in your area.

### Every six months or as often as necessary (\$0-\$1,500)

#### Routine Inspection and Cleaning

**Inspect the courts every 6 months or between seasons to identify problems and issues that could be addressed and extend the lifespan of the courts.**

#### Things to look for are:

- slippery areas where dirt/silt sits due to ponding and algae issues
- cracks
- delaminating acrylic
- pitting in the surface and/or pyrite staining
- bulging or split filler in the pavement joins
- trip hazards
- faint line marking
- weed/grass growth
- drainage issues
- trees overhanging the courts or lights etc.

Minor items can be completed by club volunteers, however, engage a professional for any pavement, caulking or surfacing works. See the planning section above for the process.

**NOTE:** Hardcourts can crack as they age. Quick action to seal the cracks as they appear can greatly slow down the deterioration of the pavement by preventing moisture ingress through the open crack and larger issues such as heaving and complete pavement failure. Points to remember are:

- Only use a reputable sports court contractor or acrylic installer to repair the cracks and resurface.
- Clean the cracks and 'v' out the crack to allow the installation of the flexible filler product.
- Only use filling and sealing products that are approved for use on sports courts – never use road base emulsion as it is tacky and can cause slip and trip hazards, especially when poorly installed.
- Ensure the repairs sit as flat as possible and blend with the surrounding court surface. They must be coated with thin layer(s) of non-slip acrylic sports surface so that they do not become slippery.
- Continue to monitor and repair any reopened or new cracks as they appear.
- Many cracks are of a structural nature and likely to reopen and require ongoing repairs. The aim of the continual repairs is to maximise the lifespan of the court and keep the court playable for longer. In this case a full rebuild/reconstruction of the court will be required for a long-term outcome.

### Annually (allow \$600 per court)

#### Weed Control, Caulking and Drainage Clearing

All hardcourt netball courts are non-porous and therefore, it is critical that stormwater run-off is captured from the court surface and the surrounds and directed away from the sports court area efficiently. Water ingress to netball court surrounds and underneath the courts can cause a shrink/swell

reaction in the subgrade soil which can severely damage the pavements. Weeds can also encroach on to the playing surface and grow within cracks. This can quickly damage the court pavement and acrylic surfaces, especially where aggressive grasses are known, such as couch and kikuyu varieties.

#### Works include:

- The clearing/flushing out of all drainage infrastructure – spoon drains, swale drains, agi drains, drainage pits and pipes.
- Debris such as grass clippings, leaves, litter, dirt and stones, etc. must be removed from drainage channels and pits to ensure the drainage system functions efficiently in rain events.
- Clean out surrounding drainage infrastructure such as earthen swales and pits along the high sides of the courts to ensure water does not empty into the court area during rain events.
- Where slotted subsurface (AGI) drains are installed to the court perimeter, inspection / flush out shafts should be visible. The subsurface drains should be flushed to ensure they are working efficiently.
- Treating and removing grass and weeds from cracks and fence lines or pavement edges.
- Strip and re-caulk any concrete joints (construction joints or joins between the court pavement and drainage or paths etc) that have split filler or opened, to seal them from moisture issues. The caulking must be installed while the joint is open and installed with a concave finish so that it doesn't bulge from the joint when in a closed position.



## Maintenance Costs & Timing

### Every 2 Years (allow \$800 per court)

#### General Supporting Infrastructure

It is important that the supporting infrastructure is kept in good working order to minimize deterioration, keeping the courts safe and secure.

##### Items to check:

- Goal posts and nets should always be kept in good working order – the goal posts must be secure within the sleeve socket and unable to rotate, and nets should be free of holes and securely attached to the goal ring.
- Fencing and gates should also be free of holes, curling chainmesh and loose wires. Gate hinges need to be lubricated and free moving.
- Fencing retains its shape and strength when properly fitted with supporting top and bottom rails and the required tensioning wires.

### Every 2-3 Years (allow \$900 per court depending on travel time)

#### Court Cleaning

**Works include:** Engage a professional to high pressure wash the court surface to remove the build-up of dirt, algae and grime and keep the court slip resistant and safe.

##### NOTE:

- Use a reputable professional court cleaner or an experienced volunteer. Inexperienced operators/ volunteers can damage the acrylic surface by using a very high-water pressure or keeping the equipment it on the surface for too long.



- Wet climates, shaded courts, treed or dry surrounds can greatly increase cleaning needs and reduce the time estimates between cleans (ie: well-maintained green grass or paved surrounds and no trees nearby will dramatically decrease maintenance needs).
- Cleaning too often or not often enough can result in premature wear of the acrylic surface. A balance is required.
- Cleaning can greatly reduce the risk of slipping on the courts and extend the life of your acrylic surface.

### Every 4-6 Years (allow \$2000 per court)

#### Lighting Infrastructure Cleaning

Where lighting is installed and reported as providing dull or patchy light, maintenance of the light fittings can greatly improve the lighting output.

##### Works include:

- Engaging a contractor to clean all light fitting lenses to ensure optimum light output. Note: works usually require a travel tower or the like to reach the height of the towers. Access from outside the court pavement is preferred or ensure the machine weight is kept to a minimum and the court pavement is protected at all times and does not turn tightly on the court surface.

- Trimming trees or vegetation away from the towers to prevent shadowing on the courts.
- Ensure all light fittings are working.
- Re-aim the light fittings to ensure uniform lighting across the court.

**NOTE:** The cost for this item will be greater if the court surrounds are heavily treed.

### Every 7-10 Years (allow \$25,000 per court)

#### Acrylic Court Resurfacing

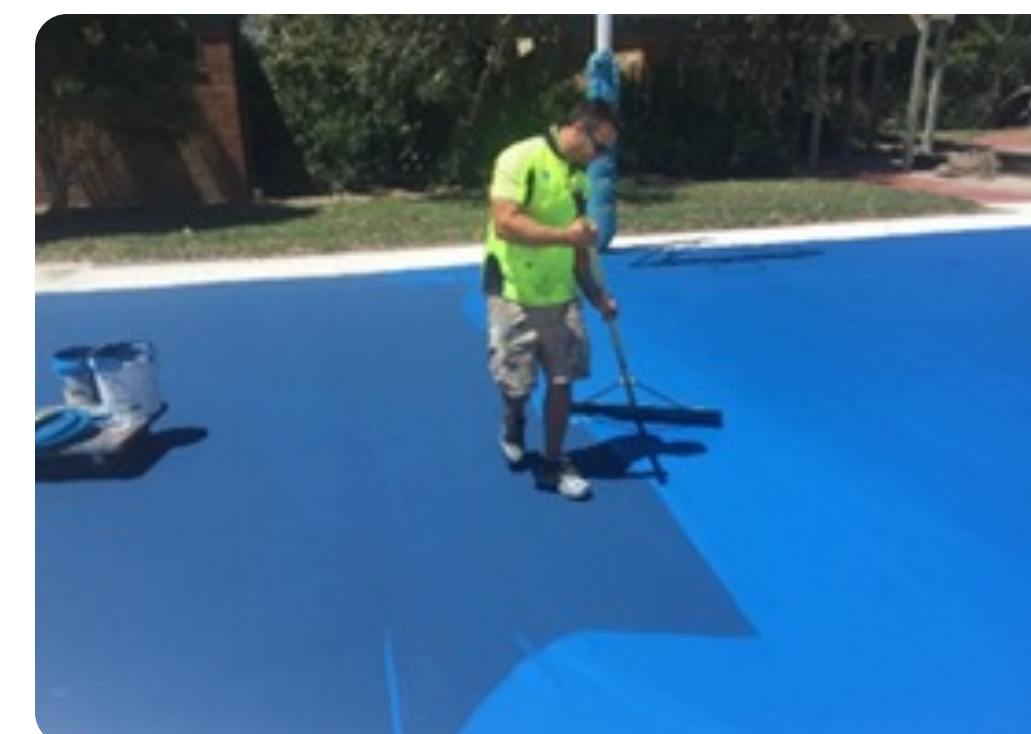
##### Works include:

- High pressure wash the court surface.
- Grind to remove imperfections and a layer or two of the old acrylic surface.
- Minor repairs to fill cracks, ponding and pavement damage.
- 2 topcoats, note that 3 coats may be required if there is extensive pitting or very old surface.
- Re-line mark with a slip resistant textured water based acrylic line marking paint, in 50mm wide thin layers with sharp straight lines.

##### NOTE:

- Only use a reputable sports court contractor or acrylic installer to resurface and line mark.
- Must use a high-quality acrylic sports surface that is fit for purpose and complies with netball slip resistance standards (see Compliance Fact Sheet).
- Use a textured water based acrylic line marking paint that is not slippery and will not crack or curl the pavement.
- Install line marking in thin layers to ensure the lines and playing surface are consistent underfoot.
- On no account should road or oil-based paints be used for line marking.

- All lines should be taped so that they are straight, clean, and sharp.
- All lines must comply to the court dimension standards.
- A set out check is recommended to not only check the court dimensions but also to ensure the run-off dimensions are to standard (if it is possible).
- The time between re-surfacing is approximately 7-10 years depending on the court's usage, maintenance regime, the court surrounds, environment, and climate.
- If a cushioned acrylic has been installed, there is no need to replace the rubber component of a mat lay cushioned system. A basic resurface is all that is needed. If a liquid applied rubber (wet pour) has been installed, there may be a need for additional cushion layers prior to resurfacing with the acrylic coatings. This will be at an additional cost.





## Wet Conditions

*Well-constructed asphalt and acrylic surfaces should be free draining and slip resistant even in wet conditions. If there is ponding identified simply remove any excess water with a wide sponge roller or squeegee and play should be able to recommence immediately.*

Ponding is low areas that hold water for a prolonged time, leading to silt and dirt settling into the low area with the area becoming extremely slippery, especially in wet conditions. These should be addressed when resurfacing the court by installing a self-leveling polyurethane (not cement based) product prior to the acrylic surface. A simple test to identify ponding by carrying out a flood test (thoroughly wetting the court down) should be conducted and all ponding areas marked out with chalk approx. 20 minutes after the wetting down has been completed. Significant ponding will result in higher costs when resurfacing with new acrylic.

## Removal & Replacement of Goal Posts

Netball goal posts should be monitored as part of a regular audit program. The condition of the nets and posts can be improved by their appropriate storage and handling. When moving goal posts, padding and equipment, please ensure that you are following general Worksafe practices.

## Cleaning/Maintenance Equipment & Storage

Appropriate areas should be designated to house the equipment required to service each individual venue. Poles and padding exceed 3200mm in length. Depending on the size and multi-use of courts, if poles need to be housed, they can be supported by fixed dowels/brackets on walls or fencing. In addition, storage racks inside storage sheds or in ground storage sleeves beside a storage shed or players shelter can be installed to accommodate goal posts. This prevents the poles being stored on the ground and having heavy equipment and supplies placed on top. Additional weight on poles, if not supported correctly, can cause poles to bend or nets break under excessive weight.

### Examples of cleaning and equipment items requiring storage at a competition or training venue:

- Goal post trolleys
- Goal posts (spare or interchangeable)
- NetSetGO posts
- Post Padding
- Cleaning equipment, squeegees, brooms, hose etc
- Cleaning supplies and solutions (stored as per risk management or Council policy)
- Indoor courts will require additional storage for cleaning equipment.

- Netball equipment and supplies (balls, bibs, portable first aid equipment etc)
- Program equipment (cones, hoops, ladders and other conditioning equipment)
- Marquees and weights

*\* These examples do not incorporate other supplies usually stored at netball and training venues, and venues supporting other sports.*

| Outdoor Courts             |                                                                                                                                                                                                                                                                |                          |                                                        |                       |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------|-----------------------|
| ACTION                     |                                                                                                                                                                                                                                                                | REGULARITY               | ENGAGE A CLUB/ ASSOCIATION VOLUNTEER OR LOCAL SUPPLIER | ENGAGE A PROFESSIONAL |
| AIR BLOWER / BROOM         | Courts should be kept clean of debris, either with an air blower or broom – if time is critical and air blower is more efficient.                                                                                                                              | Daily (before use)       | ✓                                                      |                       |
| HOSING DOWN                | Courts (clean water only – not pressure washed) – depending on number of courts, this takes time to wash down and then squeegee to remove excess water. Squeegee's can be used post a rainfall to remove surface dirt and contamination.                       | Quarterly or as required | ✓                                                      |                       |
| PROFESSIONAL COURT CLEAN   | Specialised equipment is used to ensure the is gently cleaned without removing essential slip resistance. It is more cost effective to train staff and buy equipment depending on the number of courts and level of difficulty.                                | 2–3 years                | (Optional with training)                               | ✓                     |
| SQUEEGEE / OTHER EQUIPMENT | Inspect and replace as required. A squeegee to remove excess water from the surface, especially when there are ponding areas. This is a must prior to competition play commencing to reduce slipping risk and will increase the lifespan of the court surface. | Regularly                | ✓                                                      |                       |
| METAL OR PLASTIC SPATULA   | Safely remove chewing gum and bird/animal droppings as they occur and hose off.                                                                                                                                                                                | As they occur            | ✓                                                      |                       |

*Program frequency will need to reflect local environments. Types of trees and surrounding landscape will influence the amount of leaf litter and other green maintenance. Pollution and other site activation will vary from site to site.*





## Multilined Courts

*Where netball courts are also supporting other sports, the additional use, equipment and ways in which the courts are used can reduce the lifespan of the surface. Maintenance programs will be required to reflect the additional use.*

If the courts are open to the public and also attract passive use, equipment such as roller blades and bikes will cause additional stress to the surface of the courts and require alternative programming, care and maintenance. In some cases the use of such equipment will void surface provider warranties.

## Mould Growth & Tree / Plant Contamination

**It is recommended that overhanging trees/plants and surrounding areas are maintained to protect the court asset. Some species can contaminate the surface, and the risk of mould contamination is particularly high where pooling of water and deposits of plant debris, silt and dirt settle after rain.**

These areas should be cleaned on a regular basis, using the following method:

1. Hose-off foreign deposits with water.  
If foreign deposit is stubborn, use the aid of a stiff bristle broom.
2. Saturate the surface with clean tap water.
3. Use a dilute solution of sodium hypochlorite (liquid pool chlorine) dilution rate is dependent on severity of mould growth\*.
4. Broom solution over the mould area and soak for 10-15 minutes. Do not allow to dry.

5. Hose-off the surface thoroughly with clean tap water to remove all the residue solution. Keep away from plants/animals/children and wear protective clothing, as the solution is a strong bleach (it is a stronger solution than domestic bleach products e.g. Snow White, etc).

More heavily contaminated surfaces may require additional treatments or in severe cases, high pressure water blasting and sodium hypochlorite treatment. Algaecides are commercially available to prevent algae regrow.

**IMPORTANT NOTE:** \*Safety to public/dogs – A maintenance solution will be required for areas that are not fenced off from the public and where pets/dogs may access.

**Test First** – Testing of all cleaning methods and their effect on Surface systems is recommended before any general use.

**NOTE:** Do not use powdered Calcium Hypochlorite solution as this will leave a white deposit on the surface after drying.

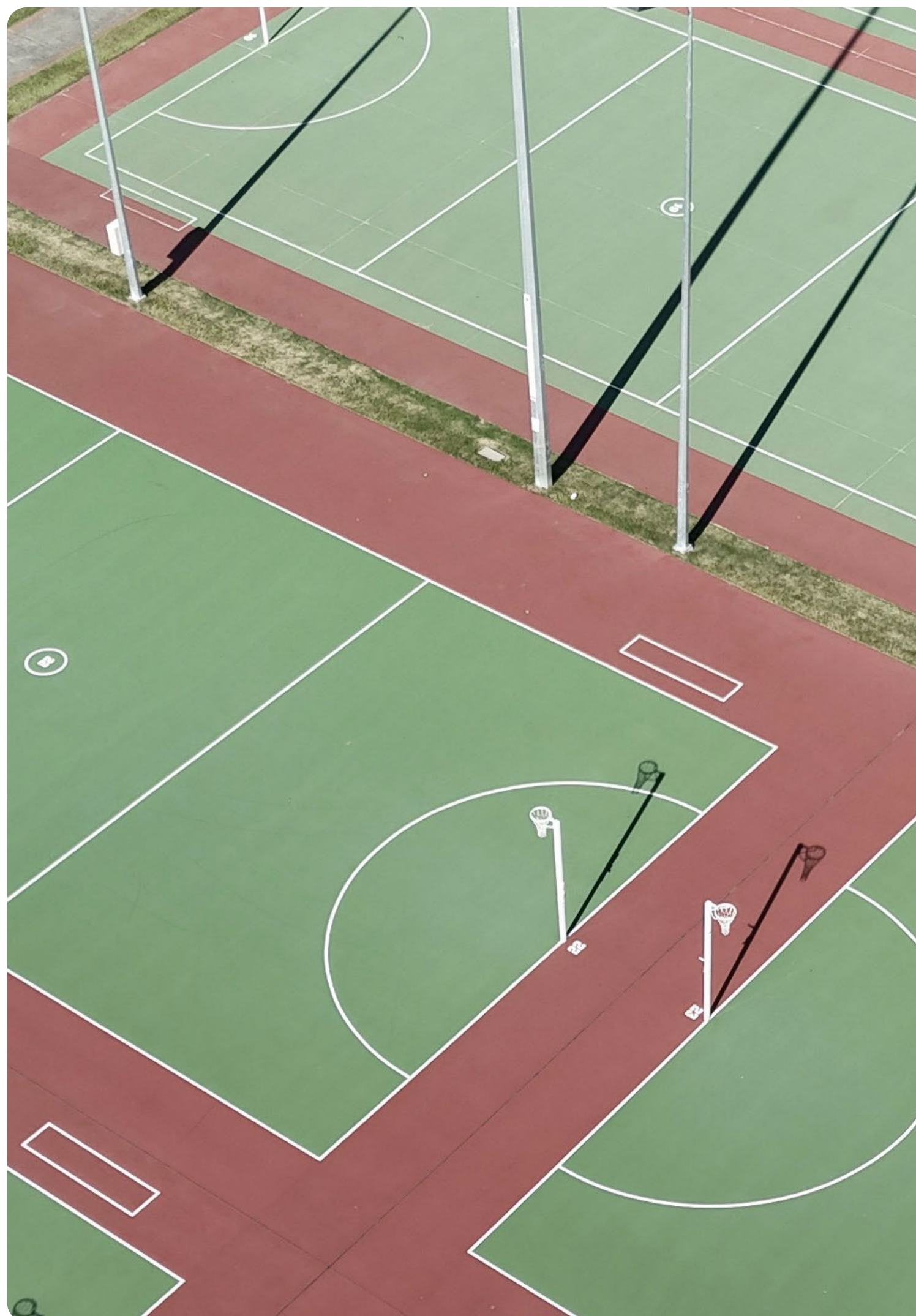
## Food / Drink Contamination

Immediate washing (water and pressure) of the surface is recommended. If staining has occurred, then the same cleaning methods suggested for dirt or mould/plant/tree/bird/wildlife contamination would be recommended.

**NOTE:** Solvent based products; solvent thinners or similar products are not to be used on acrylic sports surfaces. Scouring type products (Ajax powder/liquid cleaners or similar) are not recommended for use.

| Indoor Courts                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                    |                                                                 |                          |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------|
| ACTION                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REGULARITY                                                                                                                                                         | ENGAGE A CLUB/<br>ASSOCIATION<br>VOLUNTEER OR<br>LOCAL SUPPLIER | ENGAGE A<br>PROFESSIONAL |
| SCISSOR MOP                                                                        | Regularly remove dust and dirt.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Daily (before use)                                                                                                                                                 | ✓                                                               |                          |
| BROOM &<br>TOWEL                                                                   | Wash Courts with “Gymclean” or similar solution (vinegar solution is sometimes used). Spot clean spills, perspiration daily with broom and towel.                                                                                                                                                                                                                                                                                                                                                        | Monthly                                                                                                                                                            | ✓                                                               |                          |
| WET SCRUBBER<br>VACUUM<br>MACHINE WITH<br>A SOFT BRUSH<br>ATTACHMENT<br>(OPTIONAL) | A proprietary non-residual liquid organic cleaner, should also be utilised for the job. The percentage of cleaner to percentage of water will largely depend on the degree of surface contamination, and should be used in accordance with the manufacturer’s specifications for the particular surface type and stain. After light scrubbing, hose-off with fresh water to remove any residual cleaning agent in outdoor environment, or wet scrub/vacuum with clean fresh water in indoor environment. | Regularly (optional)                                                                                                                                               | (Optional<br>with training)                                     | ✓                        |
| SANDING &<br>POLISHING                                                             | The floors receive a very light buff, which takes off the gloss without impacting too much on the timber itself. It is then re-varnished. A full court sand is undertaken as per warranty. Most sprung timber systems will only have 1-3 sanding lives, depending on the thickness of the timber and it’s remaining useful life.                                                                                                                                                                         | A full floor light sanding is done once a year. Full floor sanding is done as per warranty at approx 7-20 year intervals depending on the condition of the floor). |                                                                 | ✓                        |
| PRE-RECOAT<br>CLEANING                                                             | All shoe marks removed with white spirit and cloth. All blood, chewing gum, spills and perspiration removed with water and cloth.                                                                                                                                                                                                                                                                                                                                                                        | As required                                                                                                                                                        | ✓                                                               |                          |
| EQUIPMENT                                                                          | Inspect, repair/replace as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Regularly                                                                                                                                                          |                                                                 |                          |





## How to Reduce your Maintenance Needs

*The surrounding environment and conditions can greatly influence the extent and the cost of hard-court maintenance. There are many things an asset owner/user can do to reduce maintenance needs:*

- Minimise the dirt and dust on the court surface by landscaping the surrounding grounds and keeping them green and well-tended.
- Do not plant trees within approximately 30 metres of the courts and never plant large or invasive species.
- Ensure tree root barriers are installed to protect the court pavement from tree root invasion and moisture changes around and under the pavement which can significantly damage the court pavement/surface. An arborist should be engaged to provide advice for existing large or mature trees.
- Construct paths or concrete entry points at the main gate entries and wipe shoes before entering the court to prevent stones, dirt, twigs and sharp objects being ground into the surface.
- Erect signs at the court entry points, listing the most important do's and don'ts.
- Courts subject to moist environments, heavy air-borne pollution such as dust, tree leaf litter and traffic fumes are classified as high maintenance areas and will require more regular maintenance.

**NOTE:** A regular maintenance program will greatly improve the playability and lifespan of the court surface.

### High Surface Impact Environment

- Heavy airborne pollution such as dust, leaves and vehicle fumes, have a tendency to settle rapidly into the court surface. If these contaminants are not regularly removed, they will be ground into the topcoat and, with prolonged use, will cause staining and unnecessarily premature surface wear.
- In a heavy maintenance environment, we recommend that foreign deposits be cleaned at least once a week to minimise build-up of pollutants.
- Use a blower daily/before use. Only hose off area if considered a danger (e.g. spill) as reducing slipping on court improves player experience.

## Facility Condition And Compliance Audit

**If you have identified issues with your court/s it may be wise to get an expert to complete a court inspection and provide a Facility Condition and Compliance Report.**

This inspection and report can provide you with comprehensive information on the courts condition and identified issues, reasons for court failures where relevant, court and run-off measurements and short and long-term works recommendations.

This information will enable you to understand the issues, seek quotes, prioritise and undertake any short-term work. It will also assist in planning and budgeting if major works are required.

**Please contact your State/Territory Member Organisation or 2MH Consulting for more information.**

## For more information & advice, contact

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