

MAINTENANCE OF MUGA FACILITIES (2008)

The two categories which maintenance is carried out are:-

1. **Reactive maintenance** – always occurs after an event that can be described as aggressive usage or wilful damage. This is never predictable and neither is the cost.
2. **Proactive maintenance** – This is carried out before the facility is next required to ensure that it stays in the best condition for as long as possible. This is on a daily, weekly or monthly basis and can be carried out locally by the users and the organiser (Westwood Centre). Yearly or longer routine work is best carried out by approved contractors.

Good maintenance will give maximum performance and longevity to the playing surface and court fittings. Regular inspections are required to spot damage and organise repair. Along with usage, both reactive and proactive maintenance will determine how long the facility will last and when replacement becomes necessary. There are other factors to consider when looking at maintenance of MUGA sports facilities and these will be described in each section below.

Every company who install MUGA facilities provide different guarantees for the various items. For example the steelwork is usually guaranteed 25 years, the paint work is 5 years and all other items a standard 1 year manufacturer's guarantee.

Court Surfaces

Each surface type presents it's own issues that have to be taken into account.

They are 1/. **Tar Macadam**. 2/. **Sand filled Astroturf** and 3/. **Acrylic**.

Based on installation costs, only the first two are being considered.

Tar Macadam		Astroturf	
Daily	Check surface for foreign objects	Daily	Check surface for foreign objects.
Weekly	Clean using a large brush.	Weekly	Clean surface and brush in sand.
Monthly	Check surface for damage	Monthly	Check surface for wear and damage. Add sand if necessary.
Yearly	Check the surface for wear, check drainage and apply moss & algae treatment (£250)	Yearly	Clean surface and decompact sand (contractor), check drainage before applying moss & algae treatment (£1,500)
3 Yearly	Wash (deep clean) the surface, check drainage and apply moss & algae treatment (£750)	3 Yearly	Check surface for wear and estimate time left. Repaint lines. (£600)
6 Yearly	Check condition of painted surface and consider re-painting lines (£2,000)		
10-15 Years	Check condition of tarmac and plan to resurface. (£11,000)	8-10 Years	Consider replacing Astroturf and sand. (£25 per sq mtr / £15,000 for 600sq mtrs)

Note: If coloured Astroturf lines are provided at the start then they will last as long as the playing surface without the need for repainting every 3 years. However, they can cost up to £2,000 to replace.

Court fittings

Maintenance for **fencing** will depend on the type of finish when installed.

Galvanised / painted metal should last many years with little maintenance required.

Powdered coated metal, nice to look at, requires very little maintenance, except when damaged it may require immediate repair or rust may set in.

Floodlighting

This requires the periodic cleaning out of the light boxes (yearly) and the replacement of broken lamps which is best carried out by a qualified electrician. The cost of replacing one lamp will depend on the type used and the accessibility to the light box. Scaffolding may be required which takes time to erect and dismantle. Average cost is about £280, although after a number of years it may be prudent to replace all the lamps in one go.

Location and access

If the MUGA is located at the Westwoods Centre then access is already provided in the form of car parking and pavements. The cost is already covered.

However, if the MUGA is located at the King George V playing field then a new access road and pavement is required to enable access for abled and disabled sports people. This in itself is an extra cost based on cleaning the access road, checking the drainage works and maintaining the street lamps. The responsibility and cost of this needs to be established as the land is in trust to the local community.

The life cycle of each surface is different and difficult to provide like for like comparisons. Therefore the following table gives a typical cost for maintaining 600sq/mtr (30 x 20) sports surfaces at 2008 prices over a period of 18 years.

	Tar Macadam	Astroturf	Lamps
1 st Year	£250	£1,500	£300
2 nd	£250	£1,500	£300
3 rd	£750	£2,100	£300
4 th	£250	£1,500	£300
5 th	£250	£1,500	£300
6 th	£2,750	£2,100	£1,200
7 th	£250	£1,500	£300
8 th	£250	£1,500	£300
9 th	£750	£15,000	£300
10 th	£250	£1,500	£300
11 th	£250	£1,500	£300
12 th	£2,750	£2,100	£1,200
13 th	£250	£1,500	£300
14 th	£250	£1,500	£300
15 th	£11,000	£2,100	£300
16 th	£250	£1,500	£300
17 th	£250	£1,500	£300
18 th	£750	£15,000	£1,200
18 Year Total	£21,750	£56,400	£8,100
Average per year	£1,208	£3,133	£450
Average per week	£23.24	£60.25	£8.65
Avg per day cost	£3.32	£8.61	£1.24

Note:- The typical figures for Astroturf were supplied by Lightmain of Rotherham and could vary according to the size of the playing surface, the location and the amount of usage. The life expectancy of Astroturf is estimated at being between 6 to 10 years according to usage and the amount of proactive maintenance carried out.

The cost per hour to hire the facility

To produce an accurate hourly cost figure to hire the facility, it should be calculated nearer to the time of installation. Until then an estimated hourly hire rate would be based on several factors.

1/. The anticipated number of hours the facility may be used over the week? Organisations / clubs may book for 2 hours while others / individuals only an hour.

2/. The seasonal use of the facility (summer / winter)? Until the facility is established an estimate of use in summer time might be in the order of 6 hours per week while in winter it may only be 4 hours.

3/. A management fee? This would cover administration, issuing of light tokens, time for un-locking and locking up.

4/. Will a discount be offered for block bookings?

5/. The comparative cost offered by other similar facilities.

The cost of electricity and replacement lamps should be included in the charge for flood lighting during the winter months when issuing light tokens.

The estimated proactive weekly cost for a **Tar Macadam MUGA works out at £24** and the **Astroturf MUGA works out at £60** plus any Westwoods management fees or road access costs.

	Tarmac	Astroturf
Yearly Maintenance cost	£1,208	£3,133
Yearly Management cost	£1,300	£1,300
Average Weekly Maintenance	£24.00	£60.00
Average Weekly Management	£25.00	£25.00
Total Weekly cost	£49.00	£85.00
Daily cost	£7.00	£12.14

To work out the hourly hire cost we require:-

$$\frac{\text{Yearly maintenance costs + management fees}}{\text{Number hours hired out}}$$

If the facility can be hired out for 300 hours over the year this will give an hourly figure of

Tarmac

$$\frac{\pounds 1,208 + \pounds 1,300}{300}$$

£8.36

Astroturf

$$\frac{\pounds 3,133 + \pounds 1,300}{300}$$

£14.78

The estimated figures above are very close to the hire costs of other similar sports facilities.

It can therefore be seen that if the facility is hired out for more than 300 hours per year then the return will more than cover the maintenance costs and would produce a profit or offer a greater discount to users with repeat bookings.

The following figure shows the difference between reactive and proactive maintenance and the costs are for a large sports facility (typically a sports centre with several sports pitches). However, it demonstrates that proactive maintenance can extend the life time of sand-filled Astro turf and save money in the long term.

