

Grass v Artificial Turf Pitch Options Appraisal

| Key Criteria | Artificial Turf Pitch | Grass Pitch | Preference | Other notes |
|---|--|---|-----------------------|---|
| Initial Financial Outlay | Remove and dispose of existing surface lay a sub-base material, lay 3G turf, add sand and rubber infills (approx. £700k) | Any drainage requirements, lay seed/grass turf (approx. £150k) | Grass | |
| Ongoing Maintenance | Light brushing and litter removal (takes no more than 1hr and only required after every 12-15hrs of play). More intensive maintenance required bi-annually or every 500hrs of play which involves more vigorous brushing and top up or replacement of infill material. (Approx £10,000 annually – based on high level maintenance) | Divots and localised damage requires repair after every use. Grass needs regular watering, mowing, aeration, cultivation, application of fertiliser, pesticide, and weed killer. Also requirement to paint pitch lines for matches. (Approx £20,000 annually – based on high level maintenance) | Artificial Turf Pitch | |
| Sinking fund (towards replacement) | £25,000 annually | £7,000 annually | Grass | |
| Revenue | Based on Apr-Dec 2019 stats – 1,440 bookings in total and basing on full pitch juvenile booking income generated would equate to £46,000 | Based on Apr-Dec 2019 stats – 396 bookings in total and basing on full pitch adult booking income generated would equate to £27,000 | Artificial Turf Pitch | Worth noting that the majority of our artificial turf bookings are by juvenile groups and therefore based the income on this rather than adult bookings – if it were based on adult income it |

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| | | | | would be double the income generated |
| Life Expectancy | Typical lifespan between 8-10yrs. Replacing a 3G pitch is significantly cheaper than the initial installation. | Grass can last forever but in reality need to be re-laid due to over usage, wear and tear, impact on weather and if regular usage this would be required within a 10yr timescale. | Artificial Turf Pitch | |
| Frequency of Use | <p>Can withstand far more frequent use than grass. Able to train and play on pitches.</p> <p>Independent statistic on average hours of use per week – 30</p> <p>Independent statistic on average weeks used per year – 48</p> <p>30hrs x 48wks = 1,440hrs per year usage</p> | <p>Grass pitches should only be used for playing matches to preserve their lifespan. Therefore we do not permit training on our football pitches.</p> <p>Independent statistic on average hours of use per week – 8</p> <p>Independent statistic on average weeks used per year – 35</p> <p>8hrs x 35wks = 280hrs per year usage</p> | Artificial Turf Pitch | |
| Climate | Able to train/play on a pitch all year round and only restrictions would be when temperatures are below zero degrees | Unable to play in frost, ice, snow conditions or with incessant rainfall (puddles on pitch). Also climate will depend on growth of grass therefore | Artificial Turf Pitch | |

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| | | if insufficient grass grown on pitch the pitch may be deemed unplayable. | | |
| Carbon footprint | An artificial pitch is more carbon intensive in its production. Artificial pitch maintenance equipment also uses energy. | A grass pitch has more energy-intensive maintenance requirements, namely fertilizing and mowing, but this varies depending on the methods used and quality of the pitch required. | Grass | |
| Injury Prevention | Rubber infill can help cushion impact of falls and tackles. More consistent playing surface than grass pitches therefore less risk to players. | Divots or muddy surfaces can increase likelihood of injuries. | Artificial Turf Pitch | Research has challenged this area however as players returning from injury can experience setbacks from playing on artificial turf pitches. Depends on quality and maintenance of artificial pitch to ensure it maintains its high standard. |
| Performance | With advances in artificial grass technology there is little to separate the 2 surface types. The rubber infill now mimics the roll and bounce of a grass pitch. However as artificial turf is aiming to mimic | | Same | |

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| | grass then it is questionable | | | |
| End of Life | Most current pitch 'recycling' services generally re-sell the plastic carpet in small patches for landscaping. These old plastic carpets don't go away but are likely to crumble in situ, contributing to the microplastic problem, and excess old pitches have led to stockpiling problems. Recycling technology is also being developed that has the potential to recycle 99% of pitch materials. There is therefore ongoing scope to incorporate artificial pitches effectively into a circular economy. | A grass pitch is a self-renewing, growing surface. If well-maintained, a grass pitch is theoretically self-renewing. Even if a surface is replaced (every 10-20 years to maintain a professional pitch), the waste is still biodegradable. While technological developments are also helping grass sports pitches to be fit for the 21st century, becoming more durable with less need for fertilizers and pesticides. | Grass (at this current time) | |

Preference Totals;

Artificial Turf Pitch - 6

Grass Pitch - 4

Same - 1