

Appendix 1

National Audit Data Base

Accessing the Data

National Audit Data Base: Accessing the Database

- 1 The National Audit database has been designed so that it is easy to use. The following shows how to interrogate the system.
- 2 Upon opening the National Audit of Outdoor Sports Facilities database the user will see the opening menu as shown below in *Screen 1*.

Screen 1: National Audit Database Opening Menu



To access the records click on the button to the left of Add / Edit Records.


This also enables you to view the data in the database.

- 3 In order to view the records, use the *Page Up* and *Page Down* to move back and forth through the records as shown in *Screen 2*.

Screen 2: Viewing Records

The screenshot shows the 'sportscotland' PSD interface. At the top, there are search filters for PSD Ref (1608), Facility Type (Secondary), and School/Other (School/Other). Below these are fields for Facility (Dalziel Park), Address (Hagen Drive), Town (Motherwell), and Operator (Dalziel High School War Memorial Trust). A table of records is displayed below the form, with columns for Length/M, Width/M, Sport, Surface, Type, Drainage, Irrig., Goals, Gradient, Surf Even, Gras Co, Drainage, and Equip. The table contains 8 rows of data, with the first row highlighted. At the bottom, there is a 'Record: 1 of 8' indicator.

Length / M:	Width / M:	Sport:	Surface:	Type:	Drainage:	Irrig.:	Goals:	Gradient:	Surf Even:	Gras Co:	Drainage:	Equip:
100	60	4ball/Hoc	Synthetic	Sand Filled Gras		No	Fixed/Portable	1	1		1	1
100	60	4ball/Hoc	Synthetic	Sand Filled Gras		No	Fixed/Portable	1	1		1	2
116	62	Rugby	Grass	Topsoil	Sand Silt	Yes	Fixed	1	1	1	2	1
116	65	Rugby	Grass	Topsoil	Sand Silt	Yes	Fixed	1	1	1	2	1
120	70	Rugby	Grass	Topsoil	Sand Silt	Yes	Fixed	1	1	1	1	1
100	60	Football	Grass	Topsoil	Sand Silt	Yes	Portable	1	1	1	2	2
100	60	Football	Grass	Topsoil	Sand Silt	Yes	Portable	1	1	1	1	2
100	60	Football	Grass	Topsoil	Sand Silt	Yes	Portable	1	1	1	1	2
*								0	0	0	0	0

- 4 To *Find*  a record using *criteria*, click the cursor in the appropriate field and then click again on the *Find* button as shown in *Screen 2* above. Enter the test to which *Access* is required to and click on *Find Next*.

Screen 3: National Audit Data Base – Finding Records

The screenshot shows a 'Find and Replace' dialog box. The 'Find' tab is selected. The 'Find What:' field contains the text '1608'. The 'Look In:' dropdown menu is set to 'PSD Ref'. The 'Match:' dropdown menu is set to 'Whole Field'. There are buttons for 'Find Next', 'Cancel', and 'More >>'.

It should be noted that, if the full contents of a field is shown, it will be necessary to change the *Match* option to *Any Part of Field*.

- 5 Within the record, the data is divided up into sections known as Tab Controls i.e. *Pitches*, *Pitch Costs* etc. The purpose of this is to make the data easier to read. To move from section to section, simply click on the tab.



- 6 To close the form, click on the **Close** button.

Appendix 2

Outline Design Specification & Indicative Construction Costs for Grades 3, 4 and 5 Natural Grass Pitches

Outline Design Specification and Indicative Construction Costs for Grades 3, 4 and 5 Natural Grass Pitches

Part 3 of the Audit - Audit Findings and Upgrading Proposals contains schedules and indicative costs for the upgrading of various natural grass winter sports pitches. The following explains the model standards which have been set and the assumptions made in establishing models for the construction of Grades 3, 4 and 5 natural grass pitches and the indicative unit costs which have been used in the Audit.

Grade 3 Natural Grass Pitch Model

A model Grade 3 natural grass pitch has been assumed to be a piped drained pitch with a sand amended topsoil and secondary drainage system of sand/gravel slits on a reasonably level undeveloped site. It has been assumed that the indigenous topsoil has been evaluated and is suitable for the purpose.

In an effort to clarify the process the works are detailed in as close to the order in which they would be carried out on site and the cost basis is that which has been used in the report.

It has been assumed that the design of the pitch is based on a full topographical survey and appropriate site investigation and takes account of planning and statutory requirements, the desired use of the facility and the proposed management arrangements. It has been assumed that the design will form the basis of a Contract Document which is issued for tender by specialist contractors.

It has been assumed that the Schedule of Works to which an appointed contractor will have to work will be as follows:

1. Cut the vegetation back to approximately 25 mm and remove debris. This will allow the existing sward to be easier dealt with when rotovating prior to topsoil strip and will reduce the amount of organic material incorporated.
2. Spray the area with a systemic herbicide, e.g. Glyphosate; this will kill of broad leaf weeds and the existing sward. The site, dependent on the time of year should be left for approximately two weeks after spraying.
3. Chop the existing sward by shallow rotovating at high rotovator speed and low forward speed. This action will make the topsoil easier to deal with when it is lifted for respreading. The shallow depth and fast rotovator speed allied to the crawl forward speed will maximise the break up of the existing sward.

4. Strip the existing topsoil and store for re-use. The size of the topsoil storage bund has to be carefully considered – a long, wide low bund will minimise the degradation of the topsoil.
5. Adjust the subsoil levels the design levels by cut and fill. The method of work will to a large extent depend entirely on how much material has to be moved. Greater depths on larger area, say in excess of say 500 mm, may make the use of excavators and dumpers more efficient than a dozer and box. Shallower depths and limited distances may make pushing the material with a bladed dozer more efficient. This choice is very site specific.
6. Subsoil cultivate to remove compaction – normally, dependent on subsoil, this would be carried out by a tractor and ‘finned’ subsoiler at 600mm depth and at 900mm centres.
7. Trim and grade the formation, regulate the surface by back blading with a Low Ground Pressure dozer.
8. Lift from store and respread topsoil to required depth. This operation is again dependent on how far the store is from the pitch area. It can be carried out either by box scraper or again by excavator and dumper.
9. Cultivate, trim and grade the surface – once spread the topsoil should be cultivated by tractor and power harrows, or equivalent, stone picked and trimmed to the finished grade.
10. Amend the topsoil by ameliorating with carefully selected sand. The choice of sand and the quantity will depend to a large extent on the mechanical analysis of the topsoil. In general terms however approximately 50 – 70 mm depth of a carefully selected even graded sand is applied to the surface of the topsoil and incorporated by power harrowing into the top 30 – 50 mm exact figures depend on analysis.
11. Set out and install piped drainage system. The timing of this operation is very dependent on site conditions and it is possible that the drainage would be installed into the formation prior to importation of topsoil.
12. Subsoil cultivate once more to relieve compaction and trim and grade the surface – this is designed to remove disruption caused during the drainage works and care must be taken not to disturb the installed drains.
13. Prepare seed bed, achieved by a final shallow cultivation, trimming to final grade and raking.

14. Apply pre-seed fertilisers and any other additives that are required following study of chemical analysis of topsoil.
15. Sow the selected seed mixture in several passes – normally 1 pass broadcast and 3 by approved mechanical means, total application of 35 g/m².
16. Maintain moisture levels – this can only really be effective where there is an installed irrigation system as bowser applications have little impact.
17. After germination and when grass has reached 50 mm in height stone pick the surface and lightly roll – this a manual exercise to remove the stones etc. which may have come to the surface, the pitch is then rolled using a flat agricultural roller in suitable conditions to regulate the surface and encourage the grass plants to ‘tiller’.
18. Start a regular grass cutting regime and never remove more than 30% of the foliage of the plants at a single cut – this should involve regular mowing keeping the height of sward between 40 –60 mm in the first 8 weeks or so which will assist in developing the sward. After this period the height of cut can be reduced if the sward is growing strongly it may require cutting on a 4 day cycle.
19. Dependent on the time of year apply a granular fertiliser and any liquid requirements determined after studying the topsoil analysis and growing conditions. The granular fertiliser will be designed to optimise the growing conditions and very high nitrogen applications should be avoided in this initial period.
20. Once sward has established sufficiently – in normal conditions this should be approximately 12-14 weeks after seeding – the pitch can be sand/gravel slit at 1 metre centres or to suit the design requirements. This establishment period is very season dependent for example slits installed in September may not establish fully until June the following year.
21. Apply a sand top dressing allow 12 kg/m² this sand topdressing is designed to start the build up of a sandy layer on the surface which will prevent the eroding of the topsoil under play and maintenance. The sand should be carefully selected and be part of a regular maintenance regime to ensure that slits are not capped by an impervious topsoil layer.
22. Vertidrain or Terraspikes the pitch to remove compaction. This operation is designed to remove much of the compaction caused by the machinery installing the slits. The operation should be carried

on a drying pitch and not in wet conditions the machinery should be set to penetrate to the full depth of topsoil if possible.

23. Drag brush the surface – once the vertidrain is complete the site should be brushed to move the sand application into the sward and holes created by the vertidrain. This operation should be carried out by a light tractor with low ground pressure grassland tyres to avoid consolidating the surface.
24. The items 21, 22 and 23 above should be repeated twice at say 6 week intervals during the first growing season with the sand application rate being reduced to 10 g/m² for each application.
25. Apply a further application of fertilisers again taking into account the chemical analysis of the topsoil, condition of sward and the growing conditions at that time.
26. Maintain sward by regular cutting weekly or more if conditions require it and by irrigating when required a cylinder mower will produce a better quality sward and clippings should be removed while establishing the sward over the slits.
27. Once sward has re-established over the slits – this period depends on time of season if works carried out in good growing conditions anticipate some 10 –12 weeks the pitch should be ready for play.
28. Install equipment – goals etc.
29. Commission pitch for use by walking the surface and making sure there are no hazards and that the sward is well enough established to sustain play.
30. White line the pitch and take bookings.

The costs for the above programme of works are set out in the report in table form applying the costs which take account of ancillary items such as contractor's costs, management charges, professional fees etc. A simplistic breakdown of costs under more easily recognisable headings would be as follows:

Bulk Earthworks to formation level	14,200
Drainage Installation	15,000
Pitch Construction	40,800
Establishment of sward	7,860
Sand/Gravel slits, topdress, vertidrain etc.	11,820
Establishment of sward over slits	11,640
Commission for play includes posts, lining etc.	<u>2,400</u>

£ 103,720

Grade 4 Natural Grass Pitch Model

A Grade 4 Pitch model has been identified as one which is built to a higher specification than a Grade 3 pitch using a manufactured screened rootzone rather than indigenous or imported loams. The rootzone construction specified and costed for the Audit is based on a system with a gravel raft over the installed drainage.

These types of construction have a much better performance in terms of surface water drainage though a consequence is that the maintenance associated with them is more complex and expensive. The pitches will sustain more play though this is only true if the sward is maintained.

The works as detailed previously for a Grade 3 model pitch construction would be common through items 1 – 7 in a Grade 4 model pitch but, as the topsoil would be stripped and not stored for re-use, it would not be sprayed with herbicide or rotovated. The stripped topsoil would most likely be used on site or delivered elsewhere for landscape purposes but, for the purposes of this model, it has been assumed that the stripped material cannot be reused and that there will be a cost associated with removal from site which has been added to the total cost of the project.

1. Strip the existing topsoil and remove from site.
2. Adjust the subsoil levels to the design levels by cut and fill. The method of work will to a large extent depend entirely on how much material has to be moved. Greater depths on larger area, say in excess of say 500 mm, may make the use of excavators and dumpers more efficient than a dozer and box. Shallower depths and limited distances may make pushing the material with a bladed dozer more efficient. This choice is very site specific.
3. Subsoil cultivate to remove compaction – normally, dependent on subsoil, this would be carried out by a tractor and ‘finned’ subsoiler at 600mm depth and at 900mm centres.
4. Trim and grade the formation, regulate the surface by back blading with a Low Ground Pressure dozer.
5. Install a new drainage system with gravel backfill to the surface of the formation. The drainage tracks should lined with Geotextile and the backfill can be a 10 – 20 mm clean crushed stone.
6. The surface of the formation should be covered by a layer of Geotextile to assist in retaining the integrity of the gravel raft.

7. Install a perimeter kerb or timber edge to retain the construction profile.
8. Spread a gravel raft over the Geotextile 100 mm deep of a carefully selected grit or crushed stone. The material must be selected after laboratory tests to prove that the layer above will 'bridge' on the raft and not integrate. This material should be trimmed and graded carefully.
9. Spread a base sand layer of a laboratory tested and approved sand 200 mm deep over the grit layer and evenly consolidate and trim.
10. Apply chemical additives to the sand layer to provide optimum conditions for grass establishment. These additives will be designed to meet the requirements of each individual circumstance in the case of this model we have allowed a basal fertiliser to promote rooting and a water retention agent.
11. Spread an approved sand based rootzone material over the base sand layer. The rootzone will laboratory test and approved prior to importation and will be compatible with the sand in the base layer. The rootzone depth will be 100 mm evenly consolidated and trimmed to the designed grade.
12. Apply the same chemicals as described in 10 above and carefully cultivate to a depth of 125 mm thereby integrating the rootzone with the top 25 mm of the base sand layer.
13. Install an automatic irrigation system incorporating storage tank, pump, perimeter sprinklers and manual take off points to allow portable sprinklers to be used in the centre of the pitch. The system will require portable sprinklers on stands, hoses and reels for ease of use. It is essential that an automatic irrigation system is used for these types of construction.
14. Apply pre-seed fertiliser and lightly rake the surface.
15. Seed the pitch using a carefully selected seed mixture to meet the high wear and performance requirements of such a construction. The seed should be applied in four passes the first broadcast and the following three by approved mechanical seeded.
16. The moisture levels must be maintained at optimum levels after seeding and several light applications of water per day should be applied. It is essential however that once the sward is growing that the pitch is not over watered.
17. Once the sward reaches 40 mm lightly roll the surface – this can be achieved by using a mower with the cylinder not operating.

18. When the sward reaches 50 mm and in suitable conditions it should lightly clipped the first 2 cuts should be carried out with a well serviced and sharp rotary mower and the clippings should be removed.
19. Approximately 4 weeks after seeding or earlier if conditions demand it apply a granular fertiliser from a carefully calculated fertiliser programme.
20. The sward should be cut as required to maintain it at 40 mm allowing a minimum of 2 cuts per week and allowing for additional should they be required to prevent the need to remove any more than 30% of foliage on a single cut. The clippings should all be collected.
21. Apply fertiliser at 6 week intervals though after established this could amended to 3 – 4 week intervals with the application rate halved.
22. Install equipment – portable equipment should be considered.
23. The pitch could be commissioned for play given optimum growing conditions 14 weeks after seeding.

The costs for the works involved in constructing such a Grade 4 Pitch would be as follows and these costs are based on a 105 x 68 m or 7,140 m² pitch which reflects the UEFA standard.

Bulk Earthworks to formation level	16,900
Drainage Installation	17,850
Pitch Construction	119,880
Automatic Irrigation System	29,600
Establishment of sward	4,000
Commission for play includes posts, lining etc.	<u>3,600</u>

£ 191,830

Grade 5 Natural Grass Pitch Model

If the purpose of the construction is to provide a Grade 5 Pitch where the playing surface is reinforced with artificial fibres to provide a more resilient playing surface, there are a number of different constructions which can be considered. These range from the cheaper option of merely incorporating a fibre reinforced sand such as Fibresand or Locsand into the surface of the rootzone to a system such as DESSO Grassmaster where polypropylene fibres are tufted into the rootzone. There are other systems which, in terms of cost, lie between these options including that where an artificial carpet woven on a degradable backing is laid on the rootzone, more rootzone is then worked into the carpet pile and then seeded. This system has also been adapted so that the reinforced surface is imported as a turf.

The construction of a Grade 5 model pitch will be as described for a Grade 4 in all aspects, although it may be necessary to reduce the depth of rootzone applied over the sand layer if a 25 mm layer of fibre reinforced sand is to be incorporated.

The costs for this type of construction would be as follows:

A Fibresand or Locsand incorporated into the top 25 mm of the rootzone

Bulk Earthworks to formation level	16,900
Drainage Installation	17,850
Pitch Construction	119,880
Fibre reinforcement extra over cost	23,600
Automatic Irrigation System	29,600
Establishment of sward	4,000
Commission for play includes posts, lining etc.	<u>3,600</u>

£ 215,430

B Polypropylene fibres woven into top 200 mm of rootzone construction – DESSO Grassmaster added after the establishment of the sward.

Bulk Earthworks to formation level	16,900
Drainage Installation	17,850
Pitch Construction	119,880
Grassmaster system	199,950
Automatic Irrigation System	29,600
Establishment of sward	4,000
Commission for play includes posts, lining etc.	<u>3,600</u>

£ 391,780

Appendix 3

Recommended 25 Year Life Cycle Maintenance Schedules & Costs for Floodlight Installations

25 Year Life Cycle for 100 LUX MUGA (60x40m)

	Maintenance Clean	*Periodic Inspection	*Electrical Test	Structural Inspection	Replace Lamps	Cost per Year
Cost per operation	£650.00	£250.00	£350.00	£250.00	£2,160.00	
Years						
1	£650.00	£257.50				£907.50
2	£669.50	£265.23				£934.73
3	£689.59	£273.18	£382.55			£1,345.32
4	£710.27	£281.38				£991.65
5	£731.58	£289.82		£279.85	£2,417.90	£3,719.15
6	£753.53	£298.51	£418.13			£1,470.17
7	£776.13	£307.47				£1,083.60
8	£799.42	£316.69				£1,116.11
9	£823.40	£326.19	£457.01			£1,606.61
10	£848.10	£335.98		£313.26	£2,706.60	£4,203.95
11	£873.55	£346.06				£1,219.60
12	£899.75	£356.44	£499.52			£1,755.71
13	£926.74	£367.13				£1,293.88
14	£954.55	£378.15				£1,332.69
15	£983.18	£389.49	£545.97	£350.67	£3,029.77	£5,299.08
16	£1,012.68	£401.18				£1,413.86
17	£1,043.06	£413.21				£1,456.27
18	£1,074.35	£425.61	£596.75			£2,096.70
19	£1,106.58	£438.38				£1,544.96
20	£1,139.78	£451.53		£392.54	£3,391.52	£5,375.37
21	£1,173.97	£465.07	£652.24			£2,291.29
22	£1,209.19	£479.03				£1,688.22
23	£1,245.47	£493.40				£1,738.86
24	£1,282.83	£508.20	£712.90			£2,503.93
25	£1,321.32	£523.44		£439.41	£3,796.47	£6,080.64
Total cost of Maintenance (base on 3% inflation)	£23,698.52	£9,388.26	£4,265.06	£1,775.73	£15,342.27	£54,469.85
			* = Testing and Inspection in accordance with IEE Guidance Note 3 Table 3.2			

Appendix 4

Multi-use Games Areas: Suitability of Surface Types for Different Sports

Sourced from

**A Guide to the Design, Specification and Construction of Multi Use
Games Areas (MUGAs) including Multi-Sport Synthetic Turf Pitches
(STPs). Part 1**

Multi Use Games Areas: Suitability of Surface Types for Different Sports.

The table identifies the general suitability of main types of playing surface discussed in these guidelines for a range of sports, although this will also depend on the standard of play that is intended. **Please note that these descriptions are provided as a general guide only** and are not necessarily indicative of the views or requirements of individual National Governing Bodies of sport.

Sports Surface/ MUGA Type	5-a-side Football	Tennis	Mini Tennis	Netball	Basketball	Hockey	Rugby Training	Athletics Training	Football Training
Macadam (Type 1)	4	1	1	2	1	4	4	4	4
Macadam (Type 2)	4	2	2	1	2	4	4	4	4
Polymeric (Type 3)	3	2	2	1	2	3	4	3	3
Polymeric (Type 4)	2	3	3	3	2	3	3	1	2
Sand filled synthetic turf (Type 5a)	1	4	4	4	4	1	2	3 (excluding spikes)	1
Sand dressed synthetic turf (Type 5b)	2	3	3	4	3	1	3	3 (excluding spikes)	2
Needle- punch synthetic turf (Type 5c)	2	3	3	4	3	2	3	3 (excluding spikes)	2

Key **1** = Preferred surface
 2 = Suitable surface
 3 = Possible surface though less suitable
 4 = Unsuitable surface

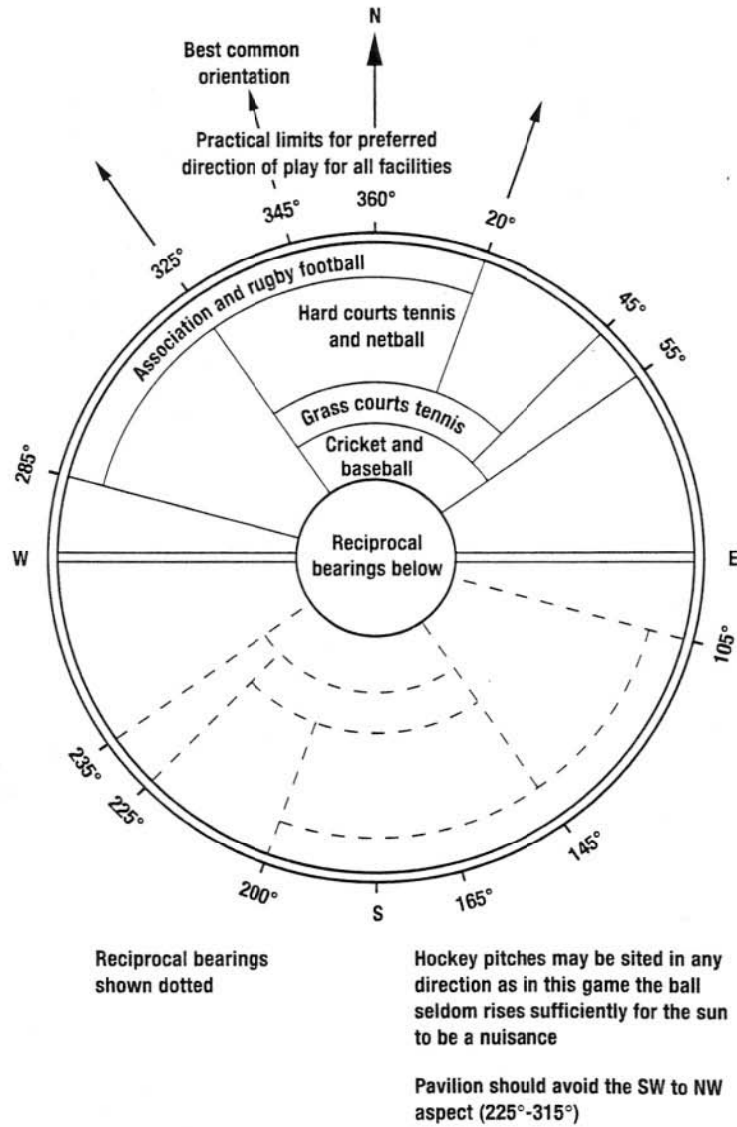
Source: *A Guide to the Design, Specification and Construction of Multi Use games Areas (MUGAs) including Multi-Sport Synthetic Turf Pitches (STPs).*

Appendix 5

Outdoor Pitches, Courts & Greens

Ideal Aspect Orientation Diagram

Source: National Playing Fields Association



Source: National Playing Fields Association

Appendix 6

Artificial Grass Pitch Costed Indicative Annual Maintenance Schedule

Artificial Grass Pitch Indicative Costed Indicative Maintenance Schedule

1 POWER GROOMING

Using Power Grooming machinery undertake the following operations:

- Sweep the pitch surface with rotating brush
- Remove debris and leaves
- Remove fine contaminants and dusts from the surface

Frequency : Quarterly

2 CONTRA BRUSHING

Utilising a patented Contra Brush undertake the following operations:

- Penetrate the top 2 - 3 mm of sand infill
- Break up the formed crust of contaminant and compacted silica sand
- Drag brush the surface to provide even coverage

Frequency : Annually

3 MOSS AND WEED TREATMENT

Utilising an approved moss and weed killer to a 3m band on the pitch perimeter apply regulation dosages in accordance with manufacturer's instructions and current Health and Safety Legislation. The application will generally be carried out using tractor mounted applicators

Dependent on the severity of infestation more than one application may be required

Also dependent on the severity of infestation the treated area may be restricted to the perimeter margin or a full application across the total playing surface may be required.

Frequency : Twice per year

4 ANNUAL COST £2,606.00

Appendix 7

Example of a Local Authority Pitch Categorisation & Maintenance Schedule:

Glasgow City Council

Glasgow City Council: Pitch Categorisation & Maintenance Specification

Pitch Categorisation: Definitions of Construction

- Type 1** **Natural soil with no known construction. Grass areas which may have been converted to pitches without any major works**
- These pitches, even with adequate maintenance, are only likely to sustain low frequencies of use.
- Type 2** **Purpose built soil based pitches of known construction. Field drainage installed as a minimum.**
- These pitches, if maintained adequately will sustain a medium frequency of use. However, the current maintenance regime needs to be improved if the pitches are to meet their potential. In the long term, improvement works can also be identified to upgrade pitches, e.g. sand slitting, gravel banding to improve drainage and increase their playing capacity.
- Type 3** **Purpose built soil based pitches of known construction, which include sand amelioration. Field drainage supplemented by the use of gravel rafts and/or sand slits.**
- These pitches, if maintained adequately will sustain medium frequencies of use over the longer term.
- Type 4** **Re-inforced sand rootzones**
- These pitches are intended to sustain high frequencies of use but a high intensity maintenance regime is required which will vary considerably from soil based rootzones.

Pitch Categorisation: Grass Football Pitches Proposed Maintenance Specification

Action	Profile 1 Frequency	Profile 2 Frequency	Profile 3 Frequency	Profile 4 Frequency
Grass cutting	24 per year	24 per year	30 per year	30 per year
Gras cut to lines	0	0	0	0
Scarify	1	1	1	1
Drag brush	0	0	0	1
Rake, tractor mounted				13
Herbicide	1	1	1	1
Fertilizer	3	3	4	4
Pesticide	0	0	1	1
Outfield spike	10	10	13	13
Roll	2	2	0	0
Solid tine	0	10	13	13
Hollow tine	0	0	0	1
Top dress	1	1	1	0
Verti drain	0	1	1	0
Overseed	1	1	1	2
Measure & mark	2	2	2	2
Overmark	2 pw – 36 weeks	2 pw – 36 weeks	3 pw – 36 weeks	3 pw – 36 weeks
Pre match inspection	2 pw – 22 weeks	2 pw – 22 weeks	2 pw – 22 weeks	2 pw – 22 weeks
weeks	3 pw – 14 weeks	3 pw – 14 weeks	3 pw – 14 weeks	3 pw – 14 weeks
Post maych inspection	2 pw – 22 weeks	2 pw – 22 weeks	2 pw – 22 weeks	2 pw – 22 weeks
weeks	3 pw – 14 weeks	3 pw – 14 weeks	3 pw – 14 weeks	3 pw – 14 weeks
Maintain goalposts	1	1	0	0
De litter	3 pw	3 pw	3 pw	3 pw

Appendix 8

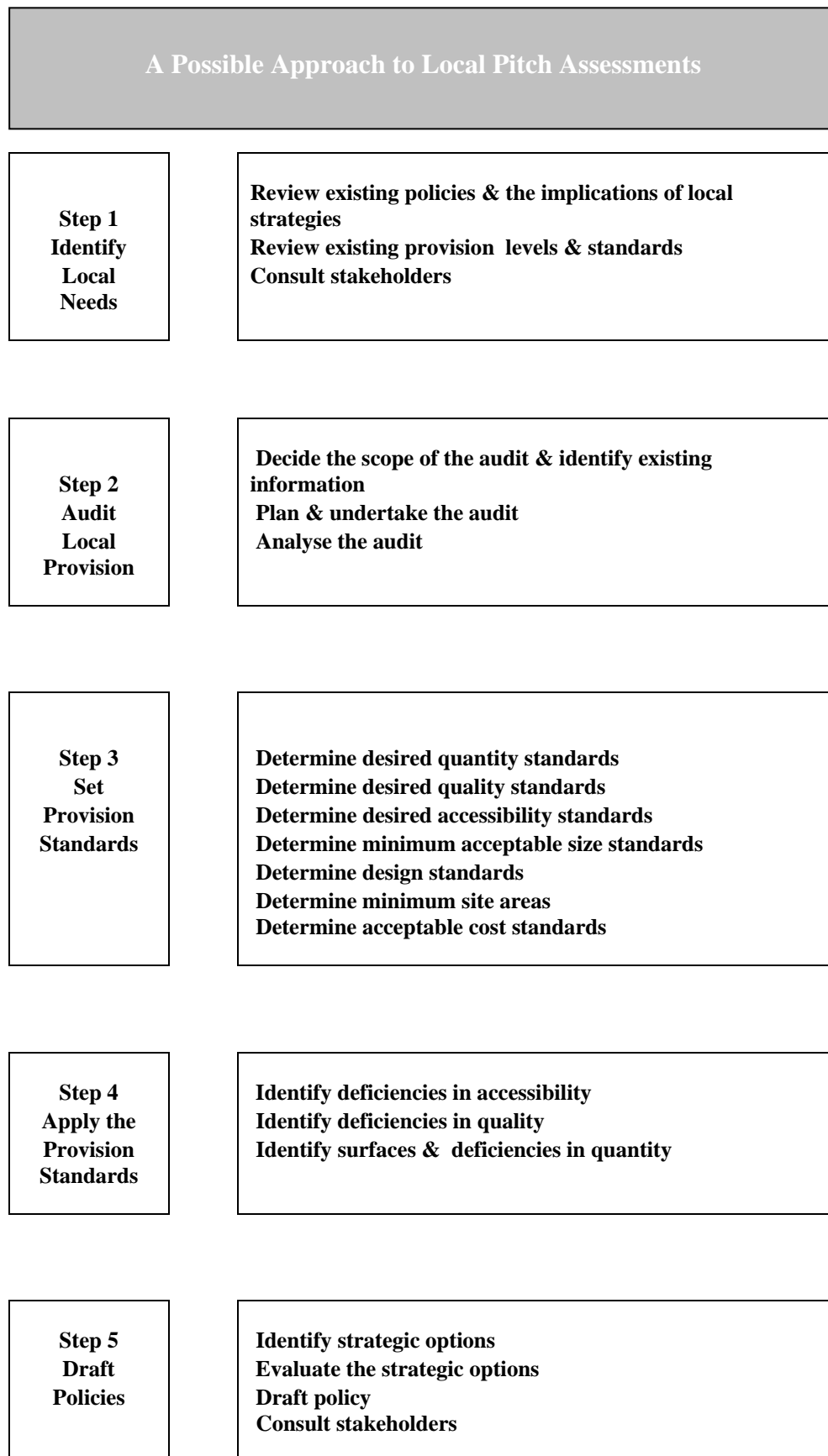
A Possible Approach to Local Pitch Assessments and the Redevelopment of Existing Sports Facilities

Sourced from

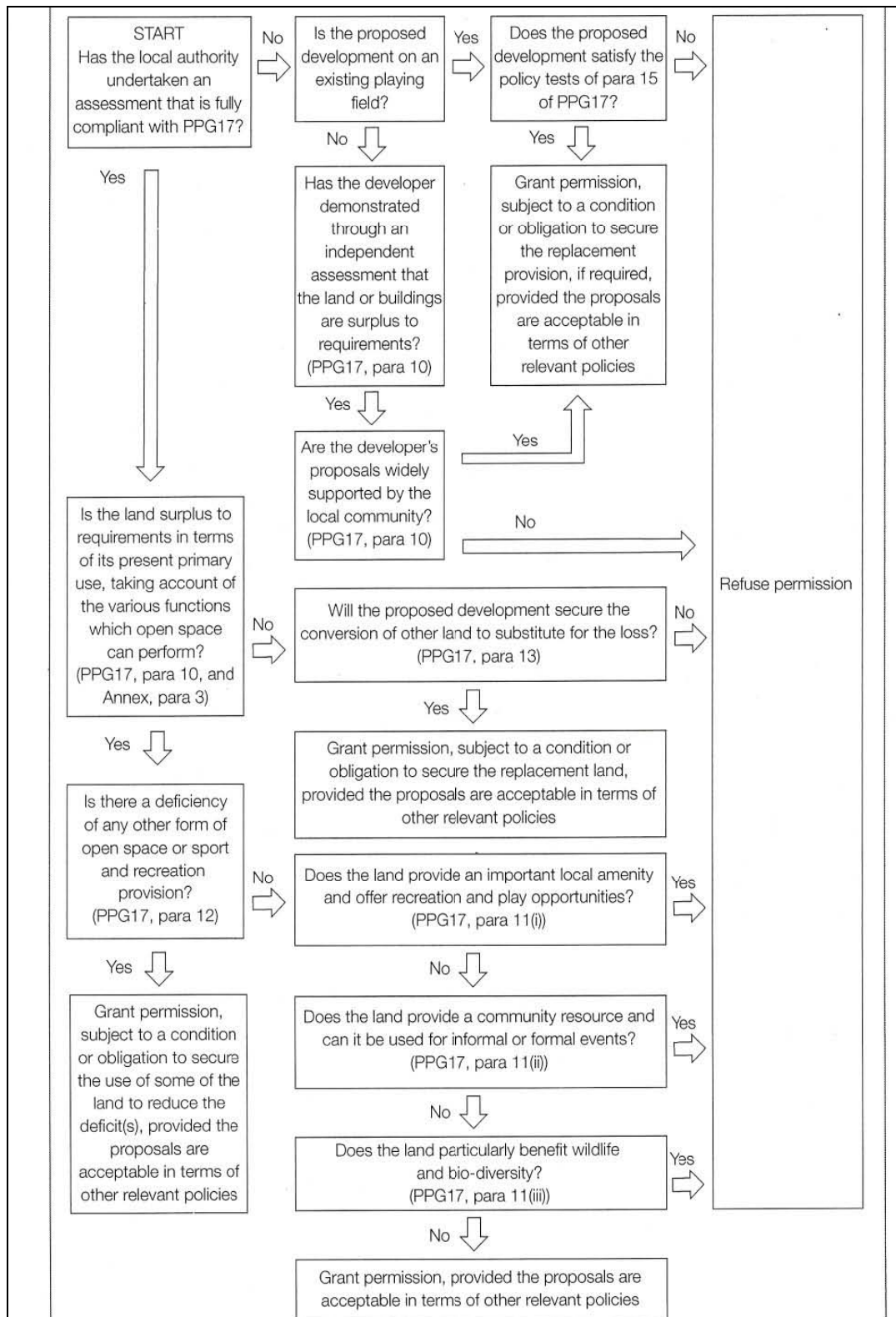
**Assessing Needs and Opportunities
Planning Policy Guidance 17
Companion Guide**

Produced by

The Office of the Deputy Prime Minister



Methodology for Considering the Redevelopment of a Sports Facility



Appendix 9

Pavilions & Outdoor Sports Changing Rooms: Detailed Site Survey Findings

Pavilions and Outdoor Sports Changing Rooms Detailed Site Survey Findings

Table 1

	Name	Council Area/ Private	Type	Condition
1.	Anchor Bowling Club	Renfrewshire	Bowling Clubhouse	Replacement
2.	Seedhill Pavilion	Renfrewshire	Football	Major Refurbishment
3.	Greenfield	Glasgow	Football	Replacement
4.	Toryglen Pavilion	Glasgow	Football	Major Refurbishment
5.	St James Playing fields	Renfrewshire	Football	Replacement
6.	Victoria Park	Glasgow	Bowling Tennis	Moderate Refurbishment
7.	Lanark Bowling Club	S Lanarkshire	Bowling Locker/ changing	Moderate Refurbishment
8.	Linefield Park	West Lothian	Football	Moderate Refurbishment
9.	Peter Brownlie Field	S Lanarkshire	Football	Minor Refurbishment
10.	St Leonard's	Fife	Football	Minor Refurbishment
11.	Peffermill Clubhouse	University of Edinburgh	Multi sports	Minor Refurbishment
12.	Peffermill East	University of Edinburgh	Multi sports	Major Refurbishment
13.	Ballerup	S Lanarkshire	Multi sports	Minor Refurbishment
14.	Altonhill	East Ayrshire	Football	As New
15.	Ashfield Juniors	Private Glasgow	Football	Replacement
16.	Strandhead	East Ayrshire	Football	Moderate Refurbishment
17.	Fintry Sports & Rec, Club	Private Stirling	Rugby	As New
18.	Oakley United	Fife	Football	Moderate Refurbishment
19.	Arrochar Pavilion	Argyll	Unknown	Moderate Refurbishment
20.	Savoy Park	Fife	Multi-Sports	Moderate Refurbishment
21.	Deans South	West Lothian	Football	Moderate Refurbishment
22.	Stewartry Rugby Club	Private Dumfries & Gall	Rugby	
23.	Everholm Pavilion	Dumfries & Gall	Multi-sports	
24.	Whitehill Welfare	Private Mid-Lothian	Football	As New
25.	Auchinleck Talbot	Private Ayrshire	Football	Moderate Refurbishment
26.	Dunfermline Tennis & bridge Club	Private Fife	Tennis	Moderate Refurbishment
27.				

National Audit of Scotland's Sports Facilities:
Outdoor Pitches, Courts, Greens, Tracks & Associated Changing Facilities

Table 2

Name	Variations	Comments
Anchor Bowling Club	No Variations	
Seedhill Pavilion	No Variations	
Greenfield	No Variations	
St Leonard's	No Variations	
Deans South	No Variations	
Whitehill Welfare	No Variations	
Peffermill Clubhouse	1/ Roof reported as good surveyed as VG	Metal profile undamaged 1 leak at gable wall
Peffermill East	1/ Roof is indicated as Flat But roof is pitched over first floor house (room below)	Lounge and kitchen below greenkeepers house
Altonhill	<u>All sections reported as good but surveyed as VG</u>	Building completely refurbished 4 years ago
Ballerup	1/ External walls marked as VG surveyed as Good	Some minor damage at corners and around doors
	2/ Internal walls marked as VG surveyed as Good	Damage/ cracks at some lintels
Toryglen Pavilion	1/ Floor condition given as good surveyed as poor	Poor in some areas repairable
	2/ Extraction indicated but only Louvers	Natural ventilation
St James Playing fields	1/ Internal walls marked as requiring replacement surveyed as poor	Some cracking evident
	2/ Floor is marked for replacement surveyed as poor	Tiled throughout no major damage
	3/ roof marked as pitched but 5% is flat	Link corridor
Victoria Park	1/ Roof requires replacement	Due for completion 16 th July 03
	2/ Floor reported as good surveyed as poor	Small areas
	3/ Heating and ventilation reported as poor surveyed as replacement	No extraction heating inadequate
	4/ Lighting reported as poor surveyed as good	Does require cleaning
Lanark Bowling Club	1/ Internal walls are mixture of masonry and plasterboard	Omission
	2/ External walls are roughcast and timber cladding to Porch area	Omission
	3/ Heating and vent reported as good surveyed as replacement	1 storage radiator 1 old roof fan
	4/ Emergency lighting not listed	New, to current requirements
Linefield Park	1/ Roof reported as flat, is pitched and flat	15 deg slope 50%
	2/ Internal walls Marked as plasterboard but are masonry.	Plaster on masonry Tiled in shower
	3/ Roof marked as poor surveyed as good	Recent major repairs
	4/ Floor marked as poor surveyed as good	Requires painting
	5/ H& V marked as poor surveyed as requiring replacement	Some heaters damaged
	6/ Overall assessment given as major surveyed as moderate	new extension ready to open
Peter Brownlie Field	1/ External walls reported as V G surveyed as good	All damaged due to misuse/ vandalism
	2/ Internal walls reported as V G surveyed as good	
	3/ Floor Condition reported as V G surveyed as good	
	4/ H & V reported as good ventilation requires replacement	Wall ventilation removed due to vandalism no supply air no louvers
	5/ Heating marked as electrical, has gas boiler	

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Ashfield Juniors	1/ Roof was marked as poor surveyed as requiring replacement	Stand floor forms roof for changing rooms
	2/ Interior walls marked as good, surveyed as poor	Timber cladding aged
	3/ Floor marked as good, surveyed as poor	
	4/ Overall assessment marked as major surveyed as requiring replacement.	
Strandhead	1/ External walls marked as good, surveyed as poor	Water damage & vandalism
	2/ Interior walls marked as good, surveyed as poor	Water / dampness
	3/ H & V marked as good surveyed as requiring replacement	Ventilation not working
Fintry Sports & Rec, Club	1/ Major variations	Return covers indoor & outdoor facilities
	2/ Outdoor Facility extended since survey	
Oakley United	1/ External walls reported as good surveyed as poor	Some weather damage
	2/ Floor reported as good surveyed as poor	Floor requires replacement in one area
	3/ Overall assessment reported as minor surveyed as Major	
Arrochar Pavilion	1/ External walls reported as good surveyed as poor	Lack of maintenance
	2/ Floor reported as good surveyed as poor	Meeting room only
Savoy Park	1/ Floor marked as poor assessed as good	Requires painting
Stewartry Rugby Club	1/ Roof marked as "As New" surveyed as VG	Club house is 11 years old, well maintained
	2/ External walls marked as "As New" surveyed as VG	
	3/ Internal walls marked as "As New" surveyed as VG	
	4/ Floor marked as "As New" surveyed as VG	
	5/ H & V marked as "As New" surveyed as VG	
	6/ Lighting marked as "As New" surveyed as VG	
Everholm Pavilion	The returned form bears very little resemblance to the survey carried out by W S Millar (see forms and photographs)	
Auchinleck Talbot	1/ Roof marked as good surveyed as poor	Some signs of water damage on ceilings
	2/ External walls marked as "As New" surveyed as good	Over 12 years old
	3/ H & V marked as good surveyed as poor	Poor ventilation no insulation on heating
	4/ Lighting marked as good surveyed as poor	Requires rewiring
	5/ Overall assessment given as Minor but surveyed as moderate.	
Dunfermline Tennis & BC.	1/ Roof marked as replace assessed as poor	Some water damage on ceiling
	2/ Floor marked as poor assessed as good	Changing rooms in good condition Tiled
	3/ Lighting marked as good surveyed as poor	Various additions and alterations to electrical system

Appendix 10

Outdoor Sports Changing Facilities: Self Completion Site Survey Record

NATIONAL AUDIT OF SCOTLAND'S OUTDOOR SPORTS FACILITIES		PAVILION	sportscotland Ref:
Name of Facility:	Pavilion Facilities	Building Fabric:	Condition Assessment
Address:	Ground Floor Area (m ²)	Roof Profile Flat	Roof
	Changing Facilities No.	Pitched	1 - As New
Postcode:	Team Rooms (No. of rooms)	Roof Material Felt	2 - Very Good
	General Changing (No. of persons)	Slate	3 - Good
	Male	Roof Tiles	4 - Poor
	Female	Profiled Metal	5 - Needs Replacement
Council Area:	Disabled	Other	Ext. Walls
	Toilets:	Ex. Walls Timber	1 - As New
	Male	Facing Brick	2 - Very Good
	Female	Concrete Block	3 - Good
Operator:	Disabled	Roughcast Masonry	4 - Poor
	Showers:	Steel Cladding	5 - Needs Replacement
	Male	Other	Int. Walls
	Female	Int. Walls Masonry	1 - As New
Do you own or lease the facility?	Meeting Rooms	Plasterboard	2 - Very Good
Own	Bar/Lounge	Other	3 - Good
Lease	Offices	Floors Timber	4 - Poor
Part-own / Part-lease	Stores	Concrete	5 - Needs Replacement
Outstanding Lease (yrs.)	Plant Rooms	Other	Floor
When was the facility first built?	Others (specify)	Heating & Ventilating	1 - As New
1990 - 2002	Others (specify)	Type Gas	2 - Very Good
1970 - 1989	Lighting, Etc.	Electricity	3 - Good
1945 - 1969	Interior lighting	LPG	4 - Poor
1919 - 1944	Exterior lighting	Other	5 - Needs Replacement
Pre 1918	Emergency lighting	Are all public rooms heated?	Heating & Ventilation
Parking Provision	Security alarm	Extractors to all changing rooms?	1 - As New
Approx. no. of parking spaces	Fire alarm		2 - Very Good
Parking shared with other sports? Y/N	CCTV		3 - Good
Indicate facilities for disabled users:	P.A. System		4 - Poor
Designated Parking	Overall Assessment of Condition/Suitability of the Building		5 - Needs Replacement
Ramped or At-level Access	1 - No work required (As new)		Lighting/Electrics
Disabled Toilets	2 - Needs minor refurbishment (Decroation, etc.)		1 - As New
Disabled Changing Facilities	3 - Needs moderate refurbishment (renew wiring, heating, etc.)		2 - Very Good
			3 - Good
			4 - Poor

Form Completed by (initials):		4 - Needs major refurbishment (structural repairs, re-roof, extend, etc.)		5 - Needs Replacement
		5 - Needs replacement		

Appendix 11

An Overview of Micro Generation Renewable Energy Systems & SUDS Schemes

Renewable Energy

Renewable energy is derived from inexhaustible sources such as the sun, wind, and water and plant material. Using renewable energy reduces dependence on energy sources that contribute to climate change and can help make a big difference to the energy efficiency of housing and buildings.

There are a wide range of renewable energy technologies to consider:

- Solar photovoltaic panels (PV) convert sunlight into electricity and are suitable for urban and rural environments.
- Wind turbines can, depending on their size, power a single dwelling, a business or community building, or even a whole community. There are examples of stand-alone turbines for schools and sports centres.
- Solar water heating is currently the most cost-effective, affordable renewable technology for housing and is suitable for urban and rural environments.
- Ground source heat pumps take heat from under the ground using liquid (water and antifreeze) circulating in horizontal pipes or a vertical borehole. The heat extracted is generally used to warm water for space and under floor heating and reduce the costs of heating domestic hot water.
- Small scale hydro-power systems convert potential energy stored in water held at height to kinetic energy (or the energy used in movement) to turn a turbine to produce electricity.
- Biomass is organic matter of recent origin. It doesn't include fossil fuels, which have taken millions of years to evolve. Biomass is a carbon neutral process because the CO₂ released when energy is generated from biomass is balanced by that absorbed during the fuel's production.

Mini wind turbines, solar panels and other small scale technologies could provide a substantial portion of the UK's energy needs by 2050, according to a report entitled *The Potential for Microgeneration* commissioned by the DTI and produced by the Energy Saving Trust. The report finds that microgeneration technologies could deliver significant carbon reductions in future with the right circumstances in place. However, the report warns that not all systems are cost effective at present although this position could change with technological developments, reduced costs arising from increased volume production and increases in energy costs. Biomass and ground source heat pumps are considered to be the most cost effective at present when compared with electric heating systems. Small scale wind turbine technology is also developing rapidly and, given the Scottish climate, is worth considering

Local authorities are urged to consider the energy efficiency of their buildings as a matter of course. When refurbishment or new build projects are contemplated, the potential for including renewable energy systems

should also be considered. It is not possible to provide definitive guidance on costs for the various systems available; each would need to be the subject of a detailed study specific to particular buildings and sites. However, indicative costs for ground source heat recovery and small scale wind power systems are provided for information:

Ground Source Heat Pumps

Building area	Approximate Cost
50m ² building	£6,500
300m ² building	£9,000
3,000m ² building	£200,000

Small Scale Wind Turbines

Grants are currently available for the installation of wind turbines which can reduce the net costs as detailed below.

Unit Size	Cost	Grant	Net Cost
600W	£8,000	£3,000	£5,000
2.5KW	£17,000	£6,000	£11,000
6.0KW	£24,000	£9,000	£15,000
15KW	£52,000	£9,000	£43,000

Depending upon the energy requirements of particular buildings and the size of the wind turbine, it is possible to sell surplus power to the national grid and receive an income to help offset costs. This might be particularly attractive in the sports pavilion context given that there are likely to be long periods of operation when power requirements are minimal.

Given that many sports pavilions are in isolated locations and can be subject to vandalism and abuse, careful consideration should be given to the form of renewable energy systems which might be introduced and their susceptibility to misuse.

Storm and Waste Water Preservation

In most pavilion sites waste and foul water is discharged to the sewage system and storm water to local water courses. Sustainable drainage systems (SUDS) and rainwater and grey water systems can form a key role in sustainable development initiatives by reducing the impacts of surface water runoff and by conserving water resources. Savings in energy can also arise by diverting water from treatment plants.

SUDS are made up of one or more structures built to manage surface water runoff. They are used in conjunction with good management of the site, to prevent flooding and pollution.

There are four general methods of control:

- Prevention
- Filter strips and swales
- Permeable surfaces and filter drains
- Infiltration devices
- Basins and ponds

These methods provide varying degrees of treatment for surface water, using the natural processes of sedimentation, filtration, adsorption and biological degradation.

SUDS can be designed to function in most urban settings, from hard-surfaced areas to soft landscaped features. The variety of design options available allows designers and planners to consider local land use, land take, future management and the needs of local people when undertaking the drainage design, going beyond simple drainage and flood control.

Given the large land areas which sports ground sites occupy, there are likely to be opportunities in many locations to introduce SUDS schemes to the benefit of the environment. Local authorities and other site managers are urged to consider the potential for the introduction of SUDS schemes in sites under their control.