Part C

Equivalent quality assessment (EQA)

This guidance supersedes the former Sport England publication 'Equivalent Quality Assessment of Natural Turf Playing Fields Briefing Note'

Natural Turf for Sport

Updated guidance for 2025

sportengland.org

Sport England's design guidance aims to:

- **Increase awareness of good design;**
- **Help built environment professionals, volunteers, clients, operators, user representatives and stakeholders follow best practice;**
- **Encourage well-designed facilities that meet the needs of sport and physical activity and are a pleasure to use.**

Document accessibility

This document has been designed for comfortable reading at A4 and on a laptop screen, but can also be printed at A3 for large print versions. The pdf is accessible and has been tested to work with text readers.

The guidance is in a new format with separately downloadable Parts A to D - see page 4. They have been developed to enable the information to be digested and processed easily, with illustrations and tables for quick reference.

User guide

Before using this design guidance for any specific projects, all users should refer to the on-line user guide which explains when and how to use the guidance as well as understanding the limitations of use.

Click here for **User guide** and other **Design and cost guidance**

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Foreword

Natural turf for sport

Sport England believes that good facilities are fundamental to developing opportunities for sport and physical activity for everyone, from the youngest beginners to late starters and elite athletes. Sports and leisure facilities, from the smallest to largest, should be designed to be accessible and inclusive with flexibility to provide equitable sport and activity for everyone.

Good design should be based upon:

- Stakeholder engagement putting people at the heart of the whole design process;
- A sound understanding of current trends and practices within individual sports;
- Research and developments in the sport and leisure industry;
- Accounting for a diverse spectrum of user needs;
- Experience gained from previously-built schemes.

These considerations should be embraced within the earliest vision statement and enshrined in the briefing stages through to the final detailed specifications and operational arrangements.

Sport England's design guidance aims to promote a greater understanding of inclusive design principles, technical and other important considerations to arrive at appropriate solutions that meet a wide spectrum of user needs. The guidance also signposts to further information, advice and expertise as well as good practice examples.

"The network of natural turf playing fields and pitches in our sporting landscape is of enduring value. With appropriate design and maintenance, natural turf can provide cost-effective, safe and sustainable playing surfaces in many different settings. Examples range from multi-functional community spaces, school playing fields, parks and local sports grounds to iconic venues for the highest levels of international competition.

Natural turf can offer multiple benefits to users in terms of feel, comfort, and safety during play. These qualities should be optimised through advances in sports turf (agronomic) and smart technologies. Mobile phone apps can help with maintenance and upgrade issues. Performance quality standards (PQS) can be specified for the design, construction types, and drainage solutions for individual sites. Hybrid solutions are also available for pitches with high levels of demand.

This guidance aims to provide sustainable natural turf pitches that support the needs of local communities to improve the health, physical and mental wellbeing of the individual. It is recommended as essential reading for all those involved in the planning and development of new or upgraded natural turf sport facilities."

Lisa Dodd-Mayne, **Executive Director of Place**

How this document relates to other guidance

The Natural turf for sport (NTS) guidance documents should be read alongside the latest version of related Sport England guidance and other key statutory and national governing body of sport (NGB) requirements, and the links highlighted below:

Sport England NTS documents

Part A Essential reading
1: Introduction
2: Project planning
3: General pitch construction

Part B Playing fields
1: Football and Rugby pitches
2: Cricket grounds
3: Playing area layouts

Part C Equivalent quality assessment (EQA)
1: Planning policies and EQAs
2: Preparing an EQA report
3: Construction on brownfield sites

Part D Appendices
1: Project team
2: Environmental considerations
3: Performance quality standards (PQS)
4: Maintenance resource
5: Related organisations
6: Glossary of terms

To download NTS documents Click here

Other Sport England guidance

Strategic Outcomes Planning Guidance (SOPG)	Click here
Playing Fields Policy and Guidance	Click here
Outdoor surfaces guidance	Click here
Comparative sizes of sports pitches and courts	Click here
Accessible and inclusive sports facilities (AISF)	Click here
Clubhouse design guidance	Click here

Other sports guidance and references

Green Space Strategies: A good practice guide	Click here
Grounds Management Framework (GMA)	Click here
SAPCA Codes of Practice	Click here
Cricket: Club and facilities management	Click here
Guidelines for Golf Green Construction in UK	Click here
The European Institute of Golf Course Architects	Click here
The United States Golf Association	Click here
FIFA Turf and pitch design	Click here

Contents

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1 Planning policies and EQAs

This section sets out the Government's and Sport England's planning policies for playing fields, the principles for establishing the quality of existing playing fields to be lost where exceptions apply, and their proposed replacements of 'Equivalent Quality'.

1.1 Planning policies and exceptions

A summary of the Government's and Sport England's planning policies relating to proposed developments on playing fields is provided below in sections 1.1.1 and 1.1.2 respectively.

1.1.1 UK Government

The Government's National Planning Policy Framework (NPPF) [1] paragraph 104 states that existing playing fields should not be built on unless certain criteria can be met. One of these is where:

- **'the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location.'**

The Town and Country Planning (Development Management Procedure) (England) Order 2015 [2] paragraph (z) in Schedule 4, and the paragraph (j) of Interpretation of Table refer to:

- a playing field as **'the whole of a site which encompasses at least one playing pitch',** and;
- a playing pitch as **'a delineated area which, together with any run-off area, is of 0.2 hectares or more, and which is used for association football, American football, rugby, cricket, hockey, lacrosse, rounders, baseball, softball, Australian football, Gaelic football, shinty, hurling, polo or cycle polo.'**

Image credit: The FA / Football Foundation

1.1.2 Sport England

The Sport England (SE) policy to protect playing fields is set out in Playing Fields Policy and Guidance [3]. It is used to determine SE's position on planning applications affecting playing fields including those where SE are a statutory consultee. Essentially, SE will oppose the granting of planning permission for any development which would lead to the loss of, or prejudice the use of, all or part of a playing field(s) unless one of five exceptions (E1 - E5) applies.

[1] See: https://www.gov.uk/government/publications/national-planning-policy-framework--2

[2] See: https://www.legislation.gov.uk/uksi/2015/595/pdfs/uksi_20150595_en.pdf

[3] See: https://www.sportengland.org/guidance-and-support/facilities-and-planning/planning-sport?section=playing_fields_policy

The Sport England exception policy E4 applies where an existing playing field would be replaced by a playing field or playing fields of equivalent or better provision in terms of both quantity and quality. It states that:

> **'The area of playing field to be lost as a result of the proposed development will be replaced, prior to the commencement of the development, by a new area of playing field:**
>
> - **of equivalent or better quality, and;**
> - **of equivalent or greater quantity, and;**
> - **in a suitable location, and;**
> - **subject to equivalent or better accessibility and management arrangements.'**

An essential part of assessing replacement playing field proposals against the NPPF and Exception E4 criteria is demonstrating equivalent (or better) quality, and equivalent or greater useable pitch space. SE will not accept inferior quality replacement playing fields as they are unlikely to be able to meet the current or future needs of the existing playing field users.

The Sport England exception policy E4 applies where an existing playing field would be replaced by a playing field or playing fields of equivalent or better provision in terms of both quantity and quality.

1.2 Purpose of this guidance

In the context of Government and SE planning policies, the purpose of this document is therefore to provide technical guidance on how the quality of playing fields should be assessed. It describes a robust assessment process to determine whether proposals will in practice provide the 'equivalent quality' replacement playing fields that are required that also meet minimum SE Performance Quality Standards (PQS) - see Part D3.

Proposals which follow this guidance and undertake an equivalent quality assessment (EQA) report offer greater potential to accord with the above policies set out in section 1.1 .

1.2.1 Equivalent quality

Sections 58 and 59 of SE's Playing Fields Policy and Guidance document states that 'equivalent quality' is interpreted as:

> **'...being laid out, drained, maintained and provided with the necessary ancillary facilities so as to have the same capability, functionality and flexibility as the existing area of playing field to accommodate playing pitches, matches, training sessions and other sporting activities. The new area of playing field should be capable of providing playing pitches and producing playing characteristics, supported by all necessary ancillary facilities to the relevant standards, to allow the same level of competitive play to take place without requiring any additional maintenance input.'**

2 Preparing an EQA report

This section signposts consultant commissioning guidance within the NTS suite and sets out minimum criteria for three critical stages to be undertaken for an equivalent quality assessment report.

2.1 Commissioning a sports turf agronomist / consultant

Only suitably-qualified, independent and experienced sports turf agronomists / consultants should be commissioned to undertake an EQA report who meet the selection criteria stipulated in the NTS guidance - see Part D1.1.

2.2 Scope of an EQA report

An EQA report needs to cover **three critical stages** to be undertaken by a suitably-qualified professional as described in section 2.1 before making a decision on the overall strategy and the appropriate development specifications:

- **Stage 1** - The performance of the existing playing field(s) based on detailed site analysis;
- **Stage 2** - The proposed performance of the replacement playing field(s) including the impact of any improvement works;
- **Stage 3** - Whether the performance of the proposed replacement playing field(s) will be at least equivalent to, or better than, that of the existing playing field(s) in the short, medium and long term, whilst meeting minimum SE PQS. In addition, ease of maintenance of the proposed replacement playing field provision should be no more arduous than that of the original playing field in the short, medium and long term.

Image credit: ECB

2.3 Minimum criteria

As a minimum, the following criteria as set out in sections 2.3.1-2.3.3 must be included respectively for the three stages.

2.3.1 Stage 1 - Assessment of the existing playing field(s)' performance, based on detailed site analysis

This must include:

- Site location drawing including access information;
- Site layout drawings including the orientation and dimensions of the playing field(s) to ascertain whether they comply with Sport England recommendations;
- Excavation of test pits to characterise the underlying soil profile in terms of soil type, nutrient status, compactive state, rooting depth, stone content, depth to shallow rock and drainage status (including the type and condition of drainage infrastructure and depth to groundwater if encountered);

Ascertain whether the playing field(s) comply with Sport England recommendations.

- Conducting a Performance Quality Standards (PQS) assessment to establish whether the following criteria meet minimum recommended standards:
  - Grass height (if still in use);
  - Ground cover;
  - Presence of weeds;
  - Thatch depth;
  - Rate of water infiltration through the surface [4];
  - Surface evenness;
  - Playing field dimensions;
  - Playing field gradients;
  - Playing field orientation;
  - Soil texture (particle size distribution);
  - Surface hardness;
  - Soil acidity (pH values);
- A summary of the principal factors affecting the condition of the facility including usage that the playing field(s) can support, playing field(s) capacity for adult and junior play, and what works would be required to meet minimum PQS including an indicative cost of conducting the works.

[4] It should be noted that infiltration test results from assessments conducted in dry conditions, particularly on clay-dominated soil, can produce spuriously high results due to the presence of shrinkage cracks. It is essential that test results are interpreted appropriately in the context of likely performance in winter.

2.3.2 Stage 2 - Assessment of the proposed replacement playing field(s)' performance, including the impact of any improvement works

Generally for proposals where either the existing site is to be reused, or the replacement site is accessible:

- For situations where the proposed replacement playing field provision is to be located on land that is accessible, the site assessment should be conducted in conjunction with an assessment of the proposed construction specifications, to enable comparisons to be made between the existing provision (as assessed in Stage 1) and the proposed provision. This assessment should include:
  - All the same assessment criteria as for the existing playing field provision listed for Stage 1;
  - Existing and proposed layouts, including the orientation and dimensions of playing field(s);
  - Proposed land drainage scheme including layout, cross-sections, design drainage rates, proposed outfall arrangements and likely permissions required;
  - Evidence of potential contaminated land and associated remediation work rquirements;
  - Initial 12 months' agronomic maintenance schedule;
  - Ongoing agronomic maintenance schedule;
  - Ensuring that the PQS are at least equivalent to those of the existing playing field(s) provision after remedial works would be undertaken (as established at the end of Stage 1) whilst meeting minimum SE PQS guidance - see Part D3;
  - The ease of maintenance of the proposed replacement playing field provision should be no more arduous than that of the original playing field in the short, medium and long term.

Additional requirements for proposals (all or part of) which involve another site which is inaccessible:

- For situations where the proposed replacement playing field provision is to be located on land that is **not** currently accessible (e.g. beneath the footprint of existing buildings intended for demolition), the assessment should also include:
  - Existing and proposed levels and gradients;
  - Proposed construction specification including the source of subsoil/topsoil for the playing field(s). If onsite material is to be used, the particle size distribution (PSD), acidity (pH) and nutrient status needs to be established.

See section 3 for further guidance and information on constructing playing field(s) over the footprint of former buildings.

See section 3 for further guidance and information on constructing playing field(s) over the footprint of former buildings.

2.3.3 Stage 3 - Assessment of whether the proposed replacement playing field(s)' performance will be at least equivalent to, or better than, the existing playing field(s) in the short, medium and long term

The output of the EQA report must confirm, or otherwise, whether the new replacement playing field provision is likely to perform in the short, medium and long term at least as well as the original playing field(s) provision being lost, with particular reference to:

- PQS requirements across all criteria being at least equal to those of the original playing field(s) whilst meeting minimum Sport England PQS guidance - see Part D3;
- The cost and ease of maintenance of the newly-created playing field provision being no greater than those of the original playing field(s) in the short, medium and long term;
- The playing field(s) capacity for adult and junior play being no less than that for the original playing field(s) provision;
- The orientation and gradient is at least equal to the existing playing field provision in terms of recommended PQS;
- Any significant restrictions to the use of the new playing field provision (e.g. location of pylons or wind turbines which may cause a visual distraction or require the playing field provision to be taken out of use for maintenance of the turbines etc.);
- The location and ease of access to supporting accommodation such as changing rooms, car parks, emergency vehicle access and spectator spaces.

For an existing playing field to be lost, the EQA must conclude that the PQS of the proposed replacement playing field provision will be at least equivalent to those of the original playing field whilst meeting minimum Sport England PQS guidance, and must not cost any more to improve and maintain in the short, medium and long term.

For an existing playing field to be lost, the EQA must conclude that the PQS of the proposed replacement playing field provision will be at least equivalent to those of the original playing field whilst meeting minimum Sport England PQS guidance, and must not cost any more to improve and maintain in the short, medium and long term.

3 Construction on brownfield sites

This section provides some generic guidance, together with associated indicative costs, for the development of good-quality natural turf pitches on brownfield sites.

3.1 Context

In recent years there has been a trend towards developing new schools and academies on existing school sites by constructing the buildings on the existing playing fields, followed by the sports pitches on the footprint of the recently demolished school buildings. Whilst this facilitates the construction programme, as developers can readily commence building works on the open space provided by the former playing fields, this process presents certain challenges with respect to the construction of good-quality pitches on brownfield sites.

In particular, attention is required in order to avoid potential risks such as the presence of contaminated materials/sharps, future settlement/subsidence, susceptibility to drought/increased irrigation requirements, and poor drainage.

Site specific circumstances will dictate the optimum approach to be adopted for a given site. However, the following section 3.2 provides some generic guidance on a potential solution, and its associated cost.

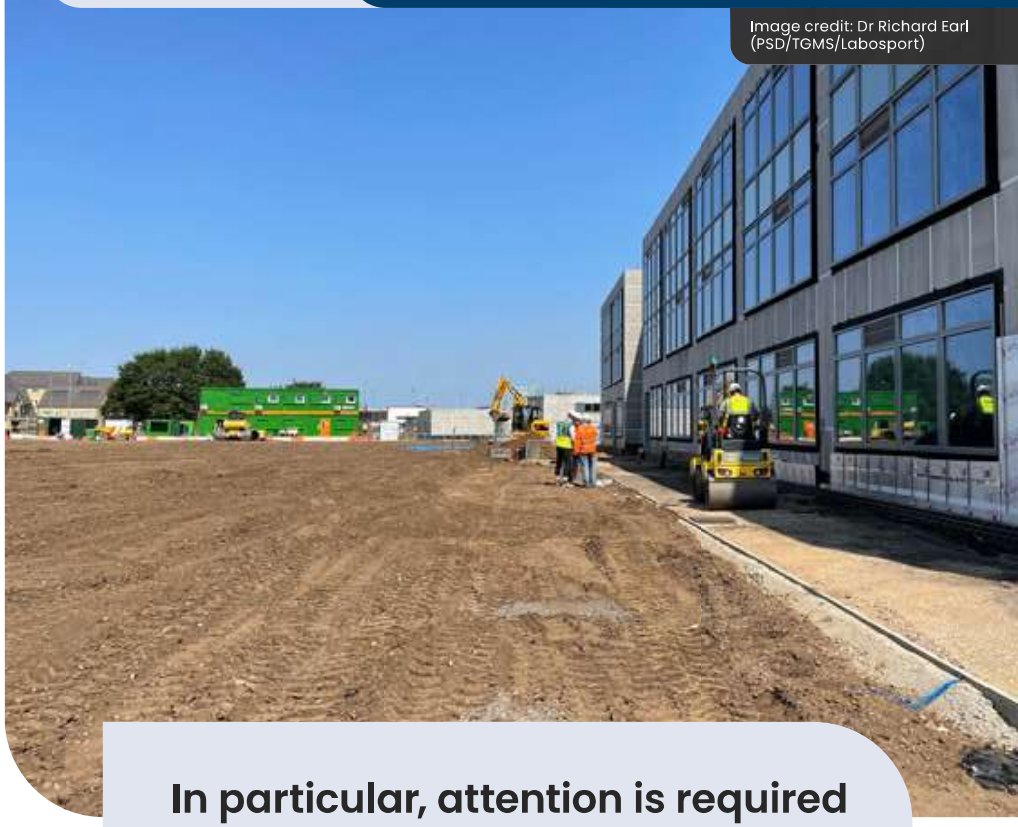


Image credit: Dr Richard Earl (PSD/TGMS/Labosport)

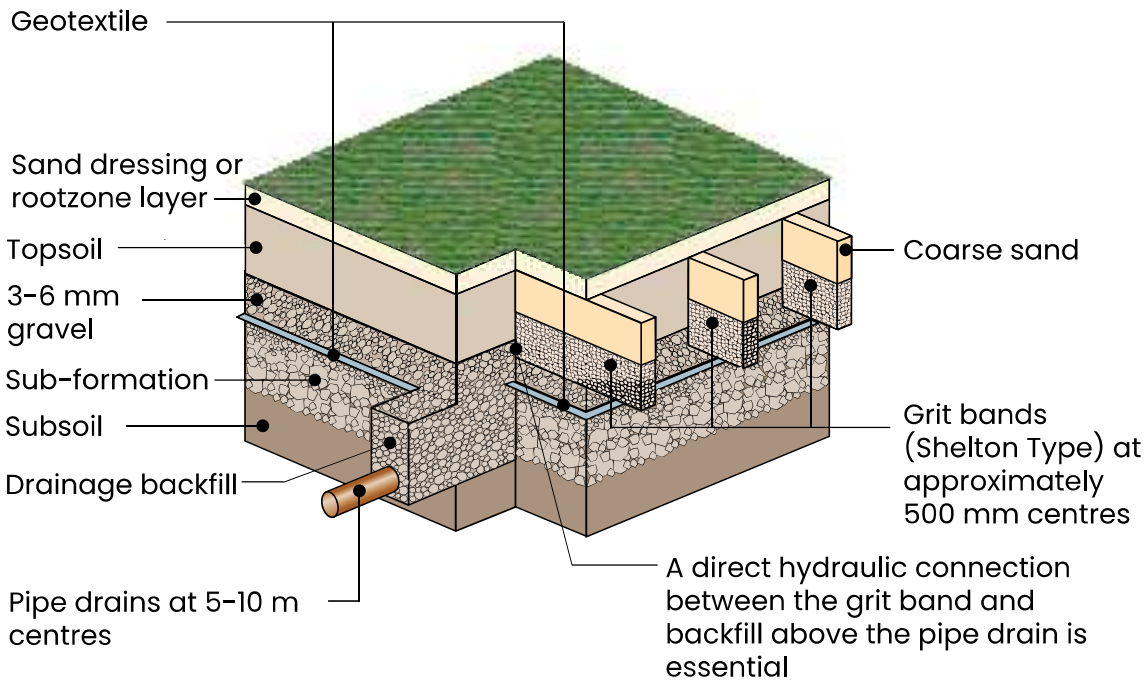
In particular, attention is required in order to avoid potential risks such as the presence of contaminated materials/ sharps, future settlement/ subsidence, susceptibility to drought/increased irrigation requirements, and poor drainage.

3.2 Potential construction solution

3.2.1 Assumptions

- A Youth U15/U16 football pitch (91 x 55 m with 3 m safety margin = 5,917 m^2) is to be constructed on inert crushed concrete rubble from demolished school buildings;
- No topsoil or subsoil is available;
- A means of disposal of water from a land drainage scheme is available.

Figure C1 Pipe drainage and slit drainage construction on gravel raft over sub-formation



3.2.2 Technical details

Figure C1 adjacent provides a potential generic contruction solution for a brownfield site. This is based on a variation of Part B 1.4.7 Figure B6 Type 7 pitch construction with the addition of a sub-formation of crushed concrete such that it readily compacts and interlocks to provide a firm, uniform base upon which to build the pitch.

This type of construction comprises:

- >300 mm-deep sub-formation of well-graded inert crushed concrete, consolidated to prevent future differential settlement;
- Optional geotextile separation membrane over additional blinding layer;
- Piped land drains installed at 5-10 m spacings, backfilled with 3-6 mm gravel or stone chippings;
- A 150 mm-deep gravel raft comprising 3-6 mm gravel or stone chippings;
- 300 mm of specified imported topsoil (or reused topsoil from other areas of the site if available);
- Deep (350 mm) slit drains installed at 0.5-1.0 m spacing such that a direct hydraulic connection between the pitch surface and the gravel raft is achieved;
- Three applications of 8 mm layers of topdressing sand (24 mm in total);
- Final cultivation, fertiliser application and seeding.

3.2.3 Indicative costs

Table C1 below provides indicative costs current at the time of publication based on section 3.2.1 Assumptions and section 3.2.2 Technical details.

Table C1 Indicative costs for a Youth U15/U16 football pitch using Figure C1 construction on a brownfield site

Item	Element	Cost (£) (see Note 1)	Notes
1	Transport and preliminaries	8,000	Note 1: Costs are current for Q1 2025 and exclude VAT. Note 2: Cost excludes a geotextile membrane - if the optional membrane is applied, the additional cost would be approximately £4,600. Note 3: If appropriate quality topsoil is available on site that has been stockpiled for re-use from the new school development, the total cost could be reduced from £266,000 to £161,000. Note 4: The 12 months initial maintenance period will typically involve the following operations: • Mowing (~30 cuts); • Fertiliser (3 applications); • Herbicide (as required); • Aeration (Verti-draining on 2 occasions); • Overseeding (as required); • Sand topdressing (1 application of 6 mm); • Herbicide/fungicide application (if required). Following the initial maintenance period, the pitch will require ongoing agronomic maintenance involving the same operations listed above. Therefore, there will be a need for the Client to either invest in machinery and trained operatives, or sub-contract the work to a specialist, or a combination of both.
2	Preparation of crushed concrete sub-formation	12,000	
3	Drainage and gravel raft (see Note 2)	68,000	
4	Importation, placement, grading and cultivation of specified topsoil (see Note 3)	105,000	
5	Installation of slit drains	28,000	
6	Cultivations, fertiliser, seed, goal sockets and as built survey	6,000	
7	Sand topdressing (24 mm)	7,000	
8	12 months initial maintenance (see Note 4)	10,000	
9	Contingency	22,000	
10	**Total**	266,000	

3.2.4 Programme

The length of the construction phase and growing-in period will depend on factors such as the time of year and weather conditions. However, a typical programme is provided in Table C2 below.

Table C2 Indicative programme for a Youth U15/U16 football pitch using Figure C1 construction on a brownfield site

Item	Activity	Year 1												Year 2											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	Mobilisation of Contractor																								
2	Preparation of sub-base formation																								
3	Placement of topsoil																								
4	Drainage installation																								
5	Cultivations, fertilisation and seeding																								
6	Irrigation																								
7	12-months maintenance																								
8	Pitch ready for use																								

Notes:

The precise date for the return to play is highly dependent on the weather conditions that prevail during the construction works and growing-in period. The pitch shall be inspected regularly and play shall recommence upon approval from the Contract Administrator.

Document accessibility

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Contributors

Sport England, the England and Wales Cricket Board, the Football Foundation, the Rugby Football League, the Rugby Football Union, the Grounds Management Association, Robin Wilson Consulting, Abacus Cost Management Ltd (Design Services), STRI Group and Labosport Group (lead author - Dr Richard Earl).

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Issue tracker

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