FLOOD RISK ASSESSMENT – PENISTONE CHURCH FOOTBALL CLUB

LOCAL PLANNING AUTHORITY	Barnsley Metropolitan Borough Council
SITE ADDRESS	Penistone Church Football Club Church View Rd Penistone Sheffield S36 6AT
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[redacted]	[redacted]	[redacted]

SUMMARY OF REPORT	This report details the assessment of the risk to Flooding in accordance with the National Planning Policy Framework (NPPF) and Article 34 in connection with the proposal to construct a synthetic turf pitch on the site of existing natural turf pitch at Penistone Church FC.

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Section 1 – Introduction

1.0 Introduction

Labosport Ltd have been commissioned by the Football Foundation to undertake a Flood Risk Assessment in support of a planning application for the development of a new floodlit Artificial Grass Pitch (AGP) and parking at Penistone Church Football Club.

This report has been prepared to assess the potential flood risk implications of the proposed development and to demonstrate that the scheme can be delivered without increasing flood risk either on the application site or elsewhere.

The proposed development comprises the construction of a new floodlit 11v11 Artificial Grass Pitch, associated perimeter fencing, and ancillary infrastructure within the existing grounds of Penistone Church Football Club. The development will occupy approximately 7,500m² of land currently used as the grass stadia pitch.

A detailed Surface Water Strategy accompanies the planning application and demonstrates the proposed drainage approach for the development, including discharge of surface water via existing drainage connections.

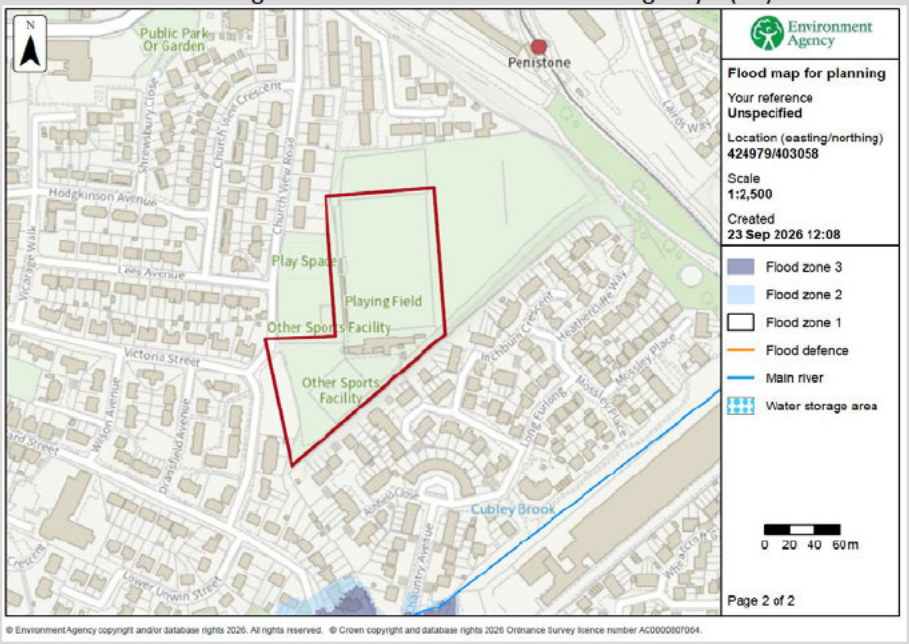
The Environment Agency Flood Map for Planning identifies the site as being located within Flood Zone 1, defined as land having less than a 0.1% annual probability of flooding from rivers or the sea. Flood Zone 1 represents the lowest category of flood risk and is considered suitable for all forms of development under the National Planning Policy Framework (NPPF).

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Section 2 – Flood Risk

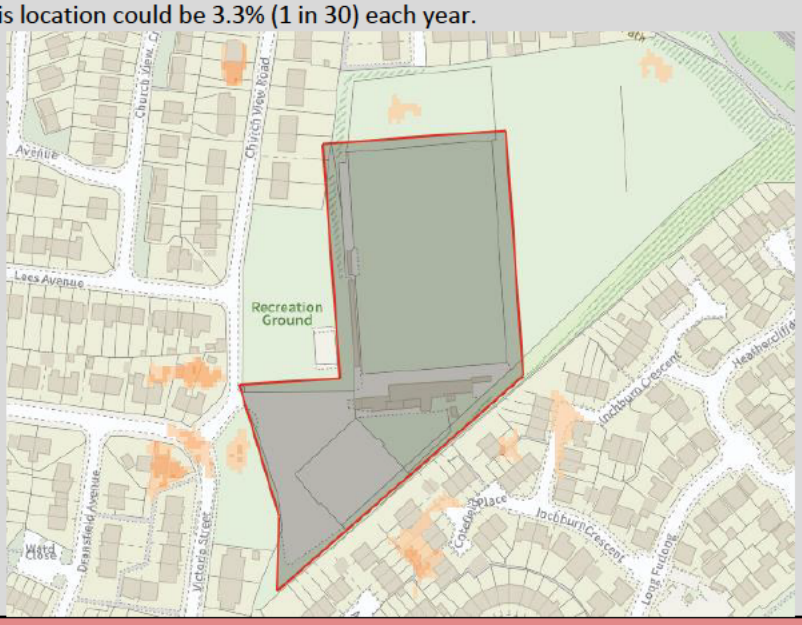
2.1 – Flood Risk from Rivers and Sea

The flood zone map for Rivers and Sea Flooding extracted from the Environment Agency's (EA) website: - Very low risk identified



2.2 – Flood Risk from Surface Water

The flood zone map for Surface Water Flooding extracted from the Environment Agency's (EA) website: - The current chance of surface water flooding at this location could be more than 0.1% (1 in 1000) each year. Between 2061 and 2125 the chance of surface water flooding at this location could be 3.3% (1 in 30) each year.



2.3 – Flood Risk from Reservoirs

Flooding from reservoirs is unlikely in this area.

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Section 3 – Flood Consequences

3.1 – Water Compatible development

The National Planning Policy Framework in Annex 3; Flood Risk Vulnerability Classification, defines in the section that Water-Compatible Development includes: Amenity open space, nature conservation and biodiversity, **outdoor sports and recreation** and essential facilities such as changing rooms.

It has therefore been considered that this proposed development would fall under this classification.

Section 4 – Drainage

4.1 – Drainage Design

The proposed Artificial Grass Pitch has been designed as a fully permeable system, allowing surface water to pass freely through the carpet and engineered construction layers into the underlying drainage network.

Surface water collected within the pitch construction will be conveyed through a network of perforated collector drains located beneath the playing surface. These drains will transfer runoff to a carrier drainage system before discharging to an existing surface water outfall used by the club.

A geotechnical investigation undertaken at the site concluded that infiltration drainage techniques, including soakaways, are not viable due to the underlying ground conditions. Consequently, discharge to existing drainage networks has been identified as the most appropriate solution for the development.

The proposed Artificial Grass Pitch will occupy approximately 7,500m². Whilst this represents a change from the existing natural grass surface, the permeable pitch construction and underlying aggregate layers provide significant storage capacity and ensure that rainfall can be managed in a controlled manner prior to discharge.

A detailed Surface Water Strategy has been prepared and accompanies the planning application. The strategy includes drainage calculations, attenuation proposals and discharge arrangements demonstrating that the development can be drained appropriately without increasing flood risk elsewhere.

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Section 5 – Managing Flood Risk Statement

5.1 - Managing Flood Risk Statement

The proposed development incorporates measures to ensure that surface water runoff is managed appropriately and that flood risk is not increased either within the site or elsewhere.

Surface water arising from the proposed Artificial Grass Pitch will be collected through the permeable pitch construction and conveyed via a purpose-designed drainage network.

The proposed drainage strategy has been developed in accordance with the drainage hierarchy set out within the National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG). Site-specific ground investigation and infiltration testing confirmed that soakaway drainage is not feasible due to the underlying geology and very low infiltration potential.

The proposed Artificial Grass Pitch will comprise a permeable playing surface over engineered aggregate construction layers. These layers provide temporary storage and attenuation of rainfall before discharge to the drainage network, reducing the potential for uncontrolled surface water runoff.

The development will replace an existing natural grass playing field with a modern engineered sports surface incorporating a managed drainage system. Surface water will therefore be collected and conveyed in a controlled manner to a suitable outfall, rather than relying solely on natural overland drainage processes.

The site is located wholly within Flood Zone 1 and is not identified as being at significant risk from surface water flooding. The proposed development is therefore considered to be at low risk from flooding and will not increase flood risk to neighbouring land, property or infrastructure.

It is concluded that the proposed development incorporates appropriate flood risk management measures and accords with national planning policy relating to flood risk and sustainable drainage.

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Section 6 – Conclusion

6.1 - Conclusion

The proposed development is located wholly within Flood Zone 1 and is not identified as being at significant risk from surface water flooding. The development comprises Water-Compatible Development and is therefore appropriate in flood risk terms.

Surface water will be managed through a permeable pitch construction and engineered drainage system. Site investigations have demonstrated that infiltration drainage is not feasible due to the underlying ground conditions.

The proposed development will not increase flood risk on-site or elsewhere and there are no flood risk constraints that should prevent planning permission being granted.

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