



**Proposed Artificial Grass Pitch
Dragon Park
Velodrome Way
Newport**

Flood Consequences Assessment

R - 00364 – 001 – FCA – A
July 2026

Report Originator(s)

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Revision Record

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0	13.05.26	First Issue	WRA	WRA
A	17.07.26	Updated to suit NRW comments	WRA	WRA
B	18.08.26	Updated to suit NRW comments	WRA	WRA



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Project

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Title

Flood Consequences Assessment – Rev B

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1.0 Definitions and Abbreviations

TAN15: Technical Advice Note 15: Development, Flooding, and Coastal Erosion (2025):

An updated version of the Welsh Government guidance document published on 31 March 2025. The new TAN15 and the Flood Map for Planning supersede TAN14 and TAN15 (2004) along with accompanying Development Advice Map.

NRW: Natural Resources Wales. The governing body responsible for environmental regulation in Wales.

DAM: Development Advice Map. Now superseded by Flood Map for Planning.

FMfP: Flood Map for Planning. A map produced by NRW as part of TAN15 guidance, outlining flood zones across Wales to accompany TAN15. The Flood Map for Planning includes climate change information to show how this will affect flood risk extents for rivers, the sea and surface water and small watercourses over the next century. It shows the potential extent of flooding assuming no defences are in place.

AEP: Annual Exceedance Probability. The probability of a flood of a certain size or larger occurring in any given year.

FFL: Finished Floor Level.

CC: Climate Change. Used in the context of assessing the impact of climate change on flood risk models.

Flood Zone 3 (FMfP): displays the extent of flooding from:

Rivers with a 1% (1 in 100) chance or greater of happening in any given year, including an allowance for climate change.

The sea with a 0.5% (1 in 200) chance or greater of happening in any given year, including an allowance for climate change.

Surface water & small watercourses with a 1% (1 in 100) chance or greater of happening in any given year, including an allowance for climate change.

Flood Zone 2 (FMfP): displays the extent of flooding from:

Rivers with less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance of happening in any given year, including an allowance for climate change.

the Sea with less than 0.5% (1 in 200) but greater than or equal to 0.1% (1 in 1,000) chance of flooding in any given year, including an allowance for climate change

Surface water & small watercourses with less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance of happening in any given year, including an allowance for climate change.

Flood Zone 1 (FMfP): Less than 0.1% chance of flooding in a given year plus climate change.

TAN15 Defended Zones (FMfP): shows areas that benefit from risk management authority owned flood defence infrastructure, that have a minimum, Present Day level of protection of:

1% AEP for rivers, or 0.5% AEP for the sea.



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2.0 Introduction

2.1 Design Brief

- 2.1.1 The client, SportsLabs, requires a flood consequences assessment to assist a planning application for the installation of a new artificial grass pitch (AGP) at Dragon Park, Newport
- 2.1.2 The FCA is compliant with Technical Advice Note 15 Development, flooding and coastal erosion, last updated on 31 March 2025. The Flood Map for Planning has been assessed and, due to the positioning of the site within TAN15 Defended Zones,
- 2.1.3 This report has been prepared by SEA Consulting Engineers Ltd. The benefit is limited to our instructing Client. Sportslabs

2.2 Site Location

- 2.2.1 The application site is located within the grounds of Dragon Park and Newport. The site is currently a 108m x 69m in-use grass football pitch enclosed by black 5m-high fencing. Surrounding the pitch, a pathway runs from Velodrome Way to a currently out-of-use road lay-by, which connects to Nash Road. A site location plan is presented in Appendix A.

2.3 Proposed Development

- 2.3.1 The proposed development will comprise the construction of an artificial sports pitch within the vicinity of the existing grass pitch, along with new parking and changing facilities. A proposed site plan is presented in Appendix B.



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3.0 Flood Consequences Assessment

3.1 Introduction

- 3.1.1 This assessment has been prepared to examine potential sources of flooding pertaining to the site and the immediate vicinity, determine the likelihood (flood frequency) and the impact (flood consequences) of flooding. In Wales, planning policy relating to flooding is governed by Technical Advice Note (TAN) 15: Development, Flooding and Coastal Erosion. This assessment has been prepared in accordance with the latest version of TAN15 published on 31 March 2025, which replaces Technical Advice Note 14, published in 1998 and Technical Advice Note 15, published in 2004.

3.2 Development Category – Flood Zone Compatibility to Flood Map for Planning.

- 3.2.1 Although an outdoor sports facility is not a development listed with TAN15 we have determined that, based on the inclusion of a car park and changing facilities, the development site is classified as a less vulnerable development. The Flood Map for Planning (FMfP) maps have been included in the assessment.
- 3.2.2 In accordance with Figure 5 of TAN15, a less vulnerable development should aim to be flood-free for 1% + CC for Rivers and 0.5% +CC for Sea.
- 3.2.3 In accordance with Figure 6 of TAN15, a less vulnerable development should aim to have a maximum depth of flooding of 600mm in the 0.1%+CC event for sea.

3.3 Flood Map for Planning - Rivers

- 3.3.1 The likelihood of river flooding is defined on the NRW 'Flood Map for Planning'. This flood map is published on their website.
- 3.3.2 An extract of this flood map is provided below in Figure 2.1. The approximate site boundary is shown in red.

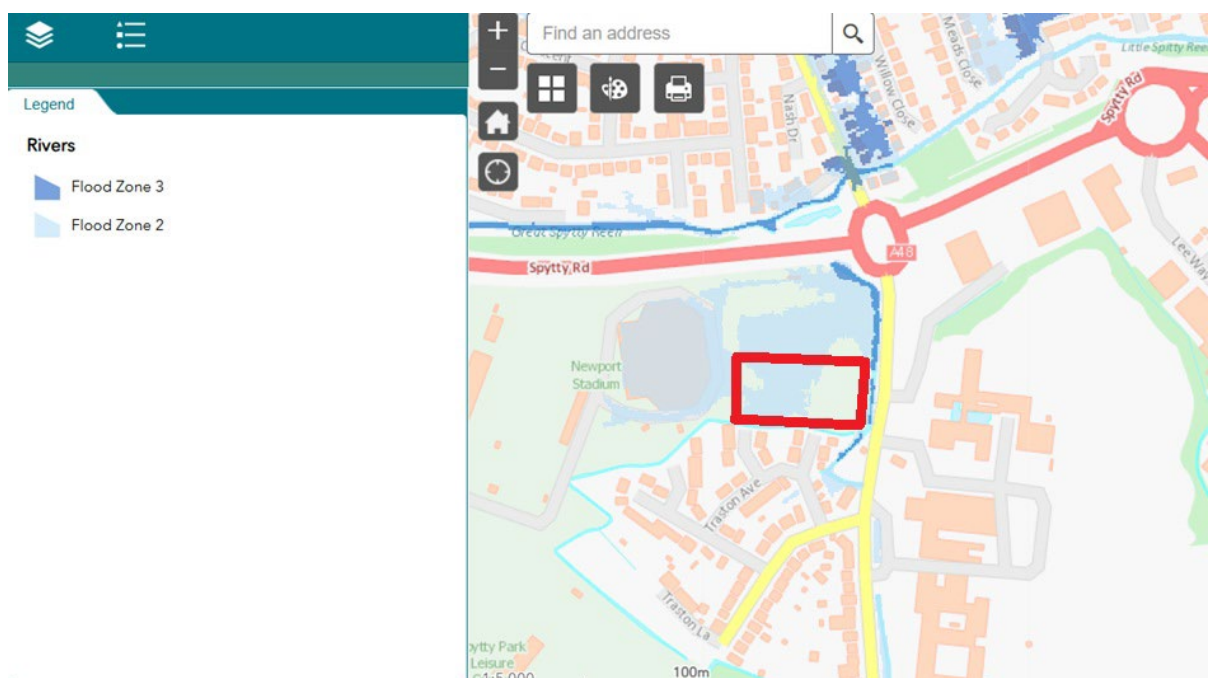


Figure 2.1 – FMfP – Rivers Extract – NRW website – 13.05.2026

- 3.3.3 The FMfP shows that the site is within flood zone 2 and flood zone 1 for rivers; therefore, is in an area with a 0.1% to 1% (1 in 1000 to 1 in 100) chance of flooding from rivers in a given year, including the effects of climate change.
- 3.3.4 The area within the site extent that is shown to be within flood zone 2 is the new AGP only, as the changing facilities and car park are located on the east side of the development and are outside of this flood zone.
- 3.3.5 Given the nature of the development, a sports facility replacing an existing natural turf pitch, it is not possible to lift the site outside of flood zone 3. During an extreme event, the facility is unlikely to be occupied and as such the impact of river flooding is considered low.
- 3.3.6 As described below, the site is also shown to be within flood zone 3 for the sea, and the mitigation measure proposed to deal with this flood risk will also apply to the risk of flood from Rivers. Refer to section 3.8 of this report for details.

3.4 Flood Map for Planning - Sea

- 3.4.1 The likelihood of Sea flooding is defined on the NRW 'Flood Map for Planning'. This flood map is published on their website.
- 3.4.2 An extract of this flood map is provided below in Figure 2.2. The approximate site boundary is shown in red.

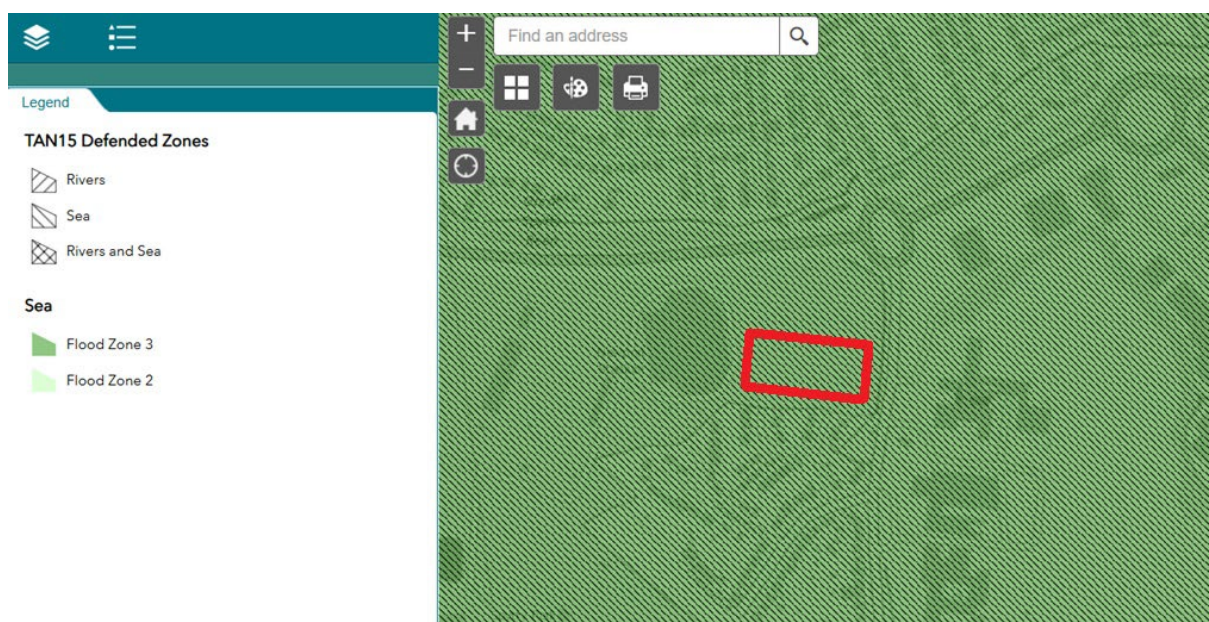


Figure 2.2 – FMfP – SEA Extract – NRW website – 13.05.2026

- 3.4.3 The FMfP shows that the site is within flood zone 3 and in TAN15 Defended Zone from Sea. In line with paragraph 10.24 of the new TAN15, TAN 15 defended zone developers must undertake a flood consequences assessment proportionate to the nature and scale of the proposal.

3.5 Flood Map for Planning – Surface Water and Small Watercourses

- 3.5.1 The likelihood of surface water and small watercourses flooding is defined on the NRW 'Flood Map for Planning'. This flood map is published on their website.
- 3.5.2 An extract of this flood map is provided below in Figure 2.3. The approximate site boundary is shown in red.

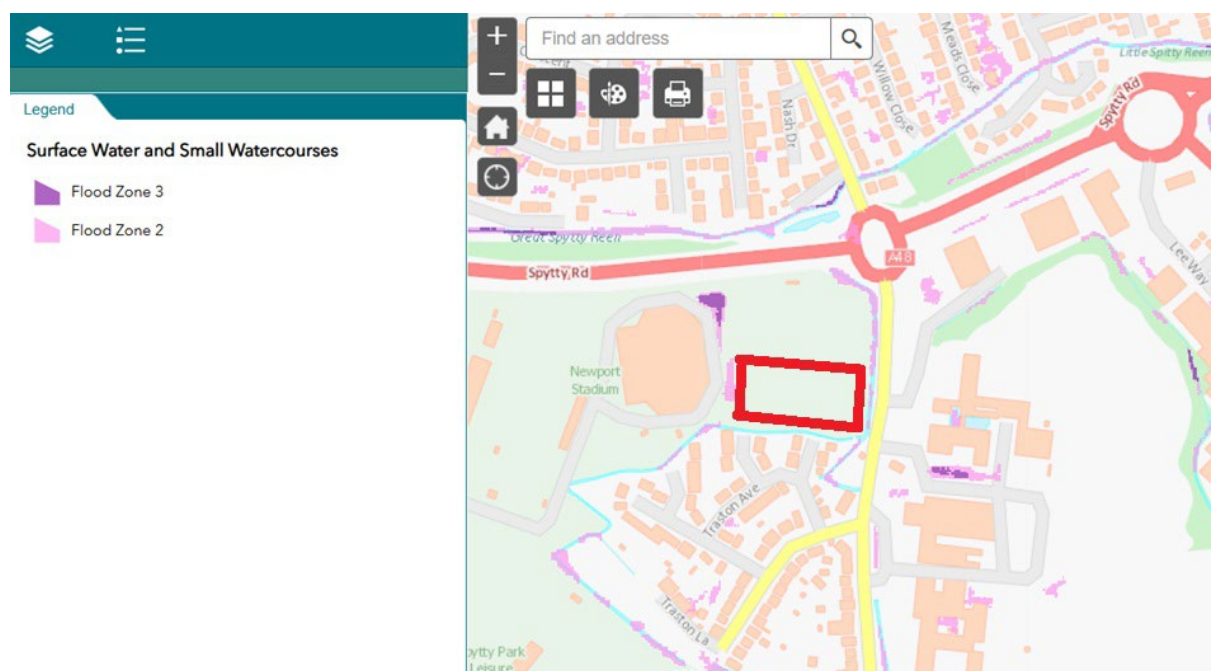


Figure 2.3 – FMfP – Surface Water and Small Watercourse Extract – NRW website – 13.05.2026

- 3.5.3 The FMfP shows that the site is within flood zone 1 for surface water and small watercourses.

3.6 National Resources Wales Model Outputs

- 3.6.1 The Flood Map for Planning has been used to evaluate potential flood risk, in accordance with Planning Policy Wales and the current effective Technical Advice Note (TAN15) published on 31 March 2025. The site is located within TAN15 Defended Zones from the sea.
- 3.6.2 Flood depths, extents, and risk hazard should be examined based on detailed hydraulic model output data, as provided by NRW. At the time of writing, these model outputs have been requested but not issued. The model name CaldicotAndWentlooge_5_V1.0_2016 is shown to be the most up-to-date on the NRW Local Model manager tab.
- 3.6.3 Inspection of a nearby application (NCC application **25/0220**) that had access to this model data shows that no flooding occurs in the 0.5% event, but flood levels of 7.430 could be reached in the 0.5% +CC event, and a level of 9.760 could be reached in the 0.1% + CC event
- 3.6.4 A topographical survey drawing is presented in Appendix C and indicates existing ground levels of between 6.1 and 6.45
- 3.6.5 Based on the above during a 0.5%+CC event, flood depths would be between 1.33m and 0.98m. During the 0.1%+CC event, flood depths would be between 3.66m and 3.31m.
- 3.6.6 Due to the type of development and the fact that we are replacing an existing grass pitch with artificial, it is not possible to lift the site outside of the 0.5%+CC event or the 0.1%+CC event. During an extreme event and if flood warnings are in place, it is highly unlikely that the development will be occupied, and restrictions could be put in place to achieve this. It is not possible to lift the changing facilities FFL outside of 0.5% and 0.1% +CC events due to the existing ground level and providing level access.

3.7 Impact on flooding elsewhere

- 3.7.1 In line with TAN15, the development must ensure no increase in flooding elsewhere.
- 3.7.2 Given the tidal nature of the flooding event and that the development will not be looking to change existing ground levels drastically, the displaced volume of flooding and the impact of displaced water are expected to be minimal.
- 3.7.3 Therefore, it is considered that in the event of flooding, the development will not result in an increase of flooding elsewhere.

3.8 Mitigation measures

- 3.8.1 The following mitigation measures are proposed
- NRW Flood Warning Service can be used by end users to receive warnings regarding flood risk at the site, and if deemed necessary, use of the site can be prohibited until warnings are removed.
 - Changing facilities shall be built with flood-resilient measures, i.e., raised electrics and hard-surfaced flooring.

- Whilst access to the site should be prohibited during a flood warning. A flood emergency plan should be prepared. Below in Figure 3.1 is the quickest evacuation route possible



Figure 3.1 – Possible Evacuation Route

3.9 Acceptability of flood consequences

3.9.1 In accordance with TAN15 section 11.4, developers and planning authorities should ensure the following conditions are met

- **No Increase in flooding elsewhere** - refer to section 3.7 of this report. There will be no increase in flood risk elsewhere due to the development.
- **Occupiers aware of flood risk** – NRW warning service to be used. Flood plan to be prepared
- **Escape/Evacuation plan present** – An escape route is shown in Figure 3.1 above.
- **Flood emergency plans and procedures agreed and in place** – A flood emergency plan is recommended, and an escape route has been suggested.
- **Flood-resistant and resilient design** – Resilience measures for the changing facility are recommended. It is not possible to lift the changing facilities FFL outside of 0.5% and 0.1% +CC events due to the existing ground level and the need to provide level access.
- **Acceptable consequences for type of use** – The development is an outdoor sports facility and is therefore flood compatible. Use of the site is deemed very unlikely during any extreme flood event. Therefore, the consequences are deemed acceptable.



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4.0 Conclusion

- 4.1.1 Based on the above, and providing the above strategies are adopted, the developed site will not contribute further to flood risk and therefore satisfying the requirements of the Planning Policy Wales (PPW)



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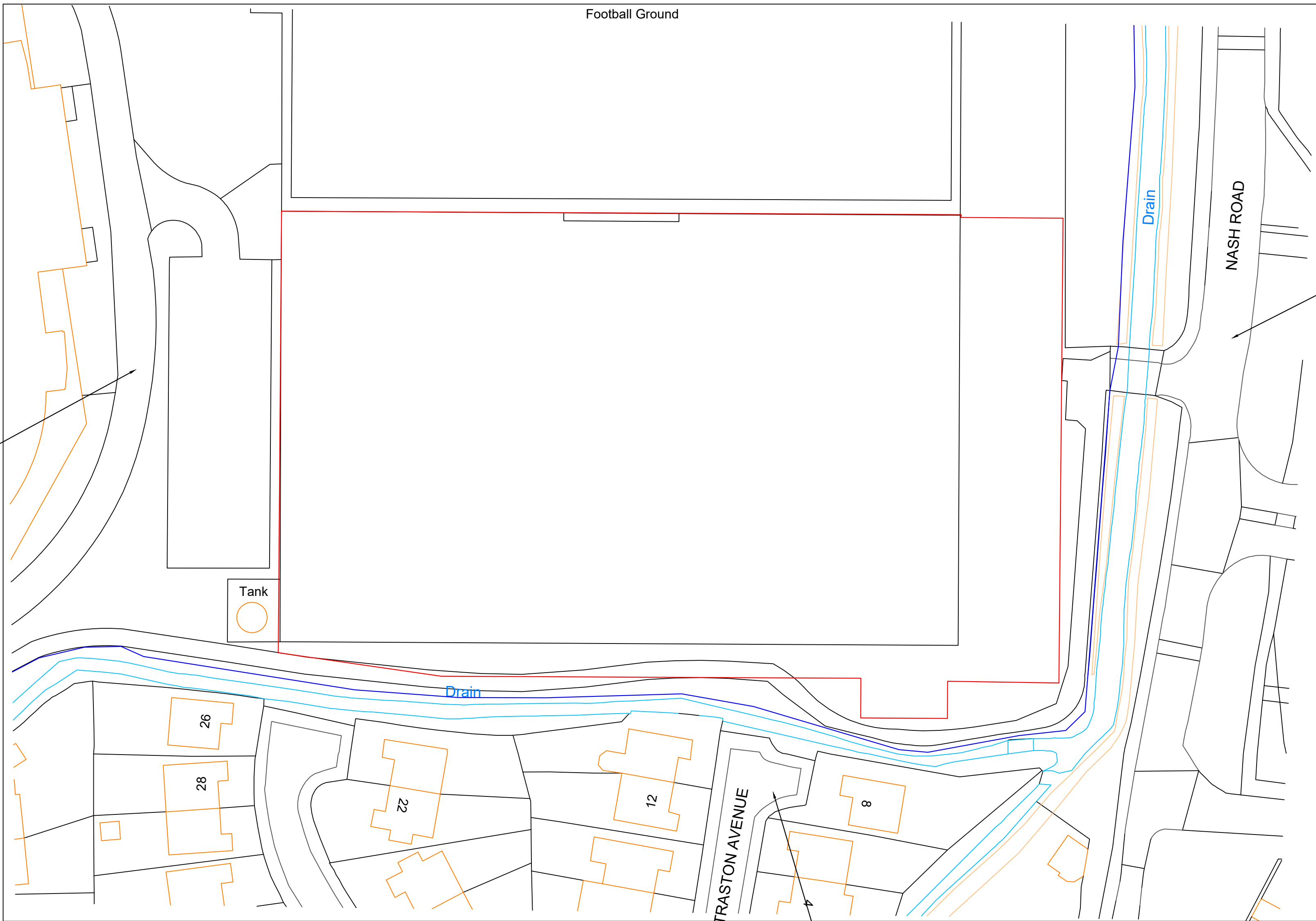
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Appendix A

Site Location Plan



Velodrome Way

Tank

Drain

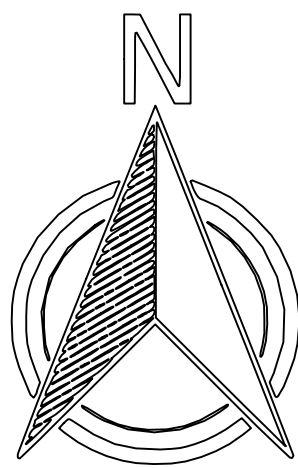
Drain

NASH ROAD

Nash Road

TRASTON AVENUE

Traston Avenue



Notes

It is the contractors responsibility to check design levels and sizes for compliance. Any discrepancies or errors to be identified to the design team.



Key

- Development Area
- Ownership Boundary

Nearby Roads

- Nash Road
- Velodrome Way
- Traston Avenue

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Revision	Date	Description	By

Status

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1 Adam Square
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Livingston
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Client
FOOTBALL ASSOCIATION OF WALES

Site
DRAGON PARK

Drawing Title
LOCATION PLAN

Drawing No.
3475-SL-DR-010-LP-R00

Scale @ A1 1:500	Date 02/2026	Drawn By FS	Checked By GS
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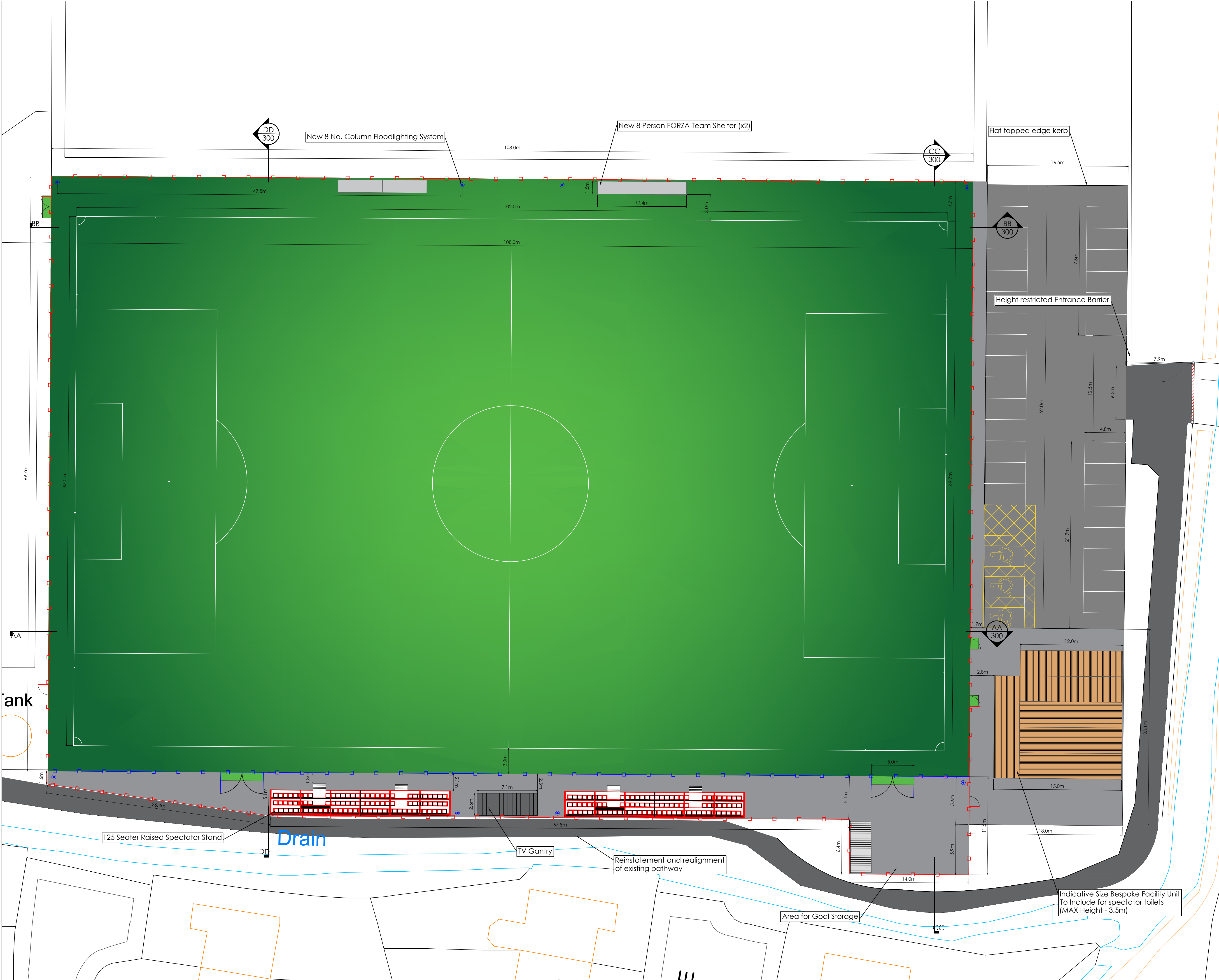
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Appendix B

Proposed Site Plan



NOTES
It is the contractors responsibility to check design levels and sizes for compliance. Any discrepancies or errors to be identified to the design team.

Pitch Dimensions
Full Size (FIFA)
Playing Dimension - 102m x 62m = 6,324m²
Total Synthetic Area
- 108m x 69.7m = 7,528m²

- Key**
- New 5m perimeter fencing
 - New 1.2m spectator rail
 - Double Gate
 - Single Gate
 - New 50 mm 3G Synthetic Turf
 - New Floodlighting System
 - 8 Person Team shelter
 - Detox Grid
 - 20ft Storage Container
 - TV Gantry

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Revision	Date	Description	By

Status

Sports Labs
1 Adam Square
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Client
FOOTBALL ASSOCIATION OF WALES

Site
DRAGON PARK

Drawing Title
GENERAL ARRANGEMENT
Drawing No.
3475-SL-DR-100-GA-R00
Scale @ A1
1:200
Date
03/2026
Drawn By
FS
Checked By
GS
Scale Bar (metres)
0 1 2 3 4 5 10
Scale bar (100 printed)



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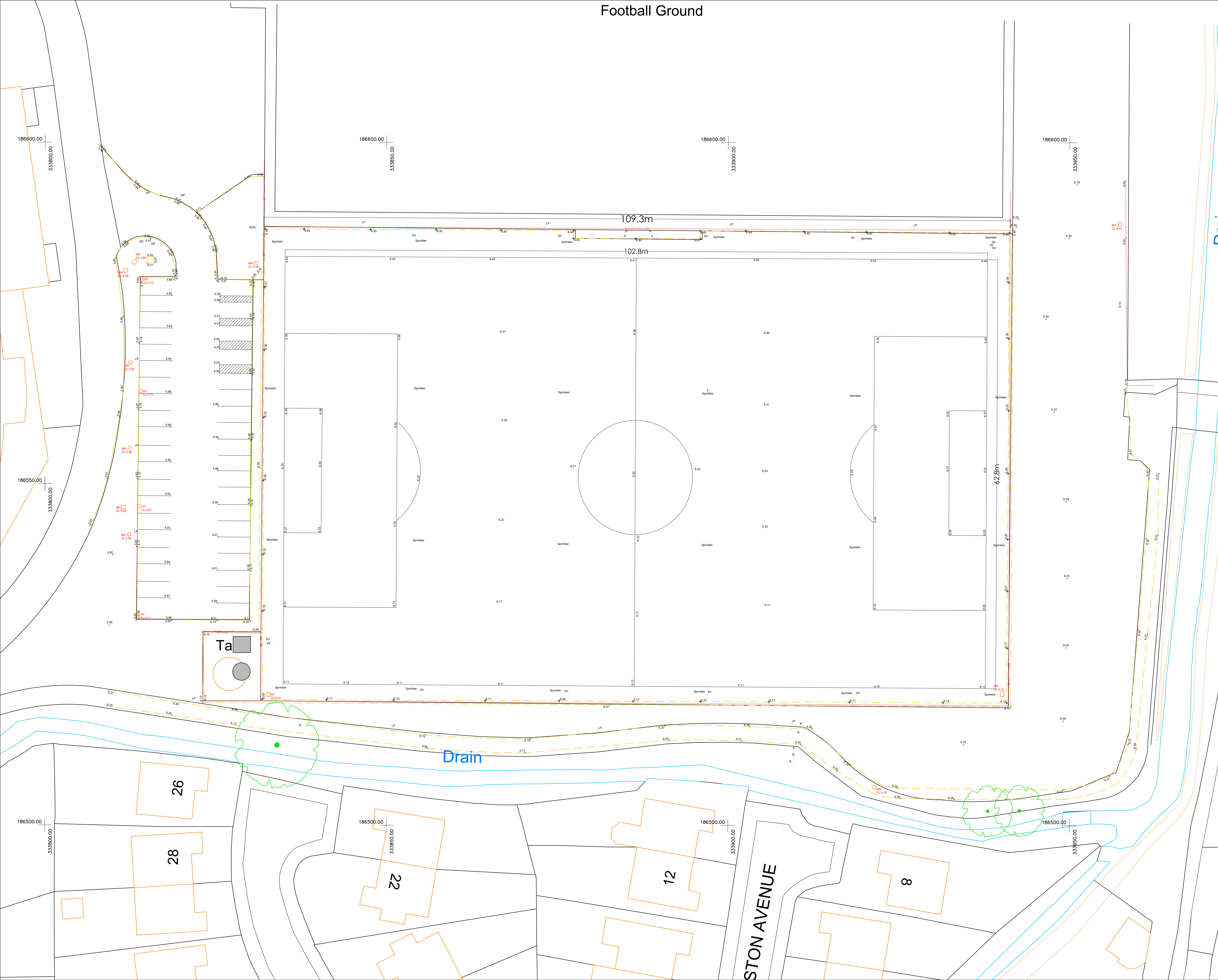
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Appendix C

Topographical Survey



Football Ground

NOTES
It is the contractors responsibility to check design levels and sizes for compliance. Any discrepancies or errors to be identified to the design team.

Topographical Survey Undertaken to obtain existing levels and dimensions of the site

Pitch Dimensions

Total Pitch Area - 109.3m x 69.6m = 7,608m²

Playing Area - 102.8m x 62.8 = 6,456m²

Key

- Contours
- Gate
- Tree
- Building
- Fence

Code

- MH - Manhole
- GY - Gully
- GP - Gate Post
- LP - Lamp Post
- SV - Stop Value
- P - Post
- S - Spot Level
- B - Bollard
- DOG - Drop of Ground

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Revision	Date	Description	By
Status			
Sports Labs 1 Adam Square Brucefield Industrial Estate Livingston info@sportslabs.co.uk			
Client Football Association of Wales			
Site Dragon Park			
Drawing Title Topographical Survey			
Drawing No. 3475-SL-DR-050-TS-R00			
Scale @ A1 1:250	Date 01/2026	Drawn By FS	Checked By GS
Scale Bar (metres) 0 5 10			