

LFC Academy

Flood Risk Assessment

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1.0 Introduction

1.1 Project Background

- 1.1.1 Curtins have been appointed by Rider Levett Bucknall on behalf of Liverpool Football Club to prepare a Flood Risk Assessment (FRA) to accompany an application for the extension and refurbishment of an existing sports training facility. The project includes creating a new indoor pitch, a new show pitch with 499-seat spectator stand and new changing rooms, refurbishment of the current academy building as well as a link building connecting the new indoor facility and some additional car parking facilities around the site. The latest site layout, provided by KSS Architects is included within Appendix A.
- 1.1.2 The FRA provides information on the nature of flood risk at the site and has been prepared in accordance with National Planning Policy Framework (NPPF), the accompanying Planning Practice Guidance (PPG) on Flood Risk and Coastal Change containing the 'Site Specific Flood Risk Assessment Checklist' and local planning policy with regards to development and flood risk.
- 1.1.3 The proposals for the surface water flood risk management strategy are based on the requirements of the Knowsley Metropolitan Borough Council and their role as Lead Local Flood Authority (LLFA).
- 1.1.4 Proposals contained or forming part of this report represent the design intent and may be subject to alteration or adjustment in completing the detailed design of this project. Where such adjustments are undertaken as part of further design and are deemed a material deviation from the content contained in this document, prior approval shall be obtained from the relevant authority in advance of commencing such works.

1.2 Scope of the Flood Risk Assessment

This assessment has been undertaken in accordance with the standing advice and requirements of the Environment Agency (EA) for Flood Risk Assessments. The LLFA have also been consulted on surface water flood risk. No prior consultation has taken place with the EA to determine the parameters of the assessment.

- 1.2.1 The site studied within this document is approximately 5.97ha in size.
- 1.2.2 An initial assessment of the EA's Flood Map for Planning suggests that the site is located within Flood Zone 1. This is defined as locations which are determined to have a 'Low' probability of flooding – less than a 0.1% (1 in 1000-year) annual probability of river or sea flooding.
- 1.2.3 The data used in the EA flood maps is based on LiDAR data and has been validated by detailed topographical survey conducted as part of the site investigations.

1.2.4 This FRA will:

- Investigate all potential risks of flooding to the site.
- Summarise the requirements of the FRA for the overall development.
- Consider the impact the development may have elsewhere with regards to flooding.
- Consider proposals to mitigate any potential risk of flooding determined to be present.
- Consider the requirements of the DEFRA Non-Statutory Technical Standards for Sustainable Drainage Systems and the Lead Local Flood Authority (LLFA) guidance.
- Consider the impacts of climate change.
- Consider the requirements for the sequential or exception tests.
- Consider the receiving public sewer capacity issues.

1.2.5 This FRA has been based on the following information:

- The online EA Flood Maps (NaFRA2).
- Liverpool City Region Combined Authority Strategic Flood Risk Assessment (SFRA), 2023.
- Knowsley Metropolitan Borough Council's Local Flood Risk Management Strategy (LFRMS), 2017.
- Knowsley Metropolitan Borough Council's Preliminary Flood Risk Assessment 2011.
- Knowsley Metropolitan Borough Council's Strategic Flood Risk Assessment 2012.
- Knowsley Metropolitan Borough Council's Local Plan Adopted Core Strategy, January 2016
- United Utilities (UU) public sewer records.

2.0 Development and Flood Risk

This FRA has been prepared in accordance with the relevant national, regional, and local planning policy and statutory authority guidance as follows.

2.1 National Planning Policy Framework

- 2.1.1 The Department of Communities and Local Government updated the National Planning Policy Framework (NPPF) in December 2024. The accompanying Planning Practice Guidance (PPG) on Flood Risk and Coastal Change was published in March 2014, most recently updated in December 2024, provides guidance on how flood risk should be assessed during the planning and development process.
- 2.1.2 Climate change specific guidance 'Flood Risk Assessments: Climate Change Allowances' released in December 2019 and last updated in May 2022 updates previous climate change allowances in support of the NPPF.

2.2 Local Policy

- 2.2.1 Planning policy is contained within the Local Plan for Knowsley and the various Supplementary Plan Documents (SPDs). The below policies are applicable to this proposed development.
- CS2 – Development Principles
 - CS8 - Green Infrastructure
 - CS11 – Principal Regeneration Area – Knowsley Industrial and Business Parks
 - CS19 – Design Quality and Accessibility in New Development
 - CS22 – Sustainable and Low Carbon Development
 - CS24 – Managing Flood Risk

2.3 Proposed Development

- 2.3.1 Full planning application includes a new indoor pitch, a new show pitch with 499-seat spectator stand and new changing rooms, refurbishment of the current main building as well as a link building connecting the new indoor facility and some additional car parking facilities around the site. The latest site layout is included within Appendix A.

2.4 Flood Risk Vulnerability

2.4.1 The NPPF follows a risk-based approach in determining the suitability of land for development in areas at risk of flooding, with the intention of steering all new development to areas of lowest flood risk.

2.4.2 NPPF Annex 3 confirms the 'Flood risk vulnerability classification' of a site, depending on the proposed usage. The classification is subsequently applied to PPG Table 2 to determine:

- Whether the proposed development is appropriate for the Flood Zone in which it is located; and,
- Whether an Exception Test is required for the proposed development.

As the proposed works consists of the erection of a new frame and extension to a sports educational and leisure facility, including some minor car park reconfigurations, the development's highest risk vulnerability is classified as '**More Vulnerable**'.

2.4.3 The Flood Zones shown on the Environment Agency's Flood Map for Planning (FMfP) – Rivers and Sea do not take account all the possible impacts of climate change and consequent changes in the future probability of flooding. Reference should therefore also be made to the Strategic Flood Risk Assessment (SFRA) when considering location and potential future flood risks to developments and land uses.

2.4.4 Paragraph 175 (NPPF) allows for a site-specific FRA to prove that no development is in an area of flood risk from any source now or into the future. The sequential test aims to locate development in areas of little or no risk of flooding, this includes locating the most vulnerable development within the boundary to the areas of lowest flood risk.

2.4.5 Paragraph 027 (PPG) confirms that a proportionate approach is to be taken, and where the FRA can show that though the proposed layout, design and mitigation any surface water flood risk can be managed to ensure the users and occupiers of the scheme are safe now and into the future, the sequential test need not be applied.

2.4.6 This FRA will show that no other flood risk exists to the site, other than some localised areas of surface water. This existing risk can be safely mitigated by the proposed development and therefore the sequential test is not required.

2.4.7 All the site uses are suitable for development within Flood Zone 1, so no exception test would be required.

3.0 Existing Site

3.1 Site Specific NPPF Flood Risk Classification

- 3.1.1 The online EA's Flood Map for Planning indicates that the site is located within Flood Zone 1. This is defined as locations which are determined to have a 'Low' probability of flooding – less than a 0.1% (1 in 1000-year) annual probability of river or sea flooding.

3.2 Site Description

- 3.2.1 The existing site comprises several onsite buildings, artificial and show football pitches, parking areas and other areas of existing hardstanding. The site has the post code L33 7ED and the grid reference SJ 342374 398499. The Academy is accessed from the south via an existing junction at Arbour Lane. East and south of the site are industrial and commercial premises and there are residential properties to the west along Simonswood Lane.
- 3.2.2 The site lies to the north of the A580 (East Lancashire Road) and is located within a permitted urban employment area and principal regeneration area within Kirkby, in line with the Knowsley Local Plan.
- 3.2.3 The site location is provided in Figure 3.2.1 below.



Figure 3.2.1 – Existing Site Plan

3.3 Topography

- 3.3.1 The site's topography is predominantly flat throughout its boundary, except for the existing show pitch, which sits on a lower plateau level. This pitch maintains a fairly uniform elevation, ranging from approximately 36.3 to 36.7m AOD. Surrounding this plateau area, embankments grade to higher ground levels—reaching around 37.3m AOD to the northwest and approximately 38.3m AOD to the northeast.
- 3.3.2 It should be noted that the majority of the site is elevated above the adjacent northern highway, Simonwoods Lane, which has a lowest recorded level of 33.3m AOD. In contrast, the southern highway, Arbour Lane, sits higher than most of the site, with an elevation of approximately 38.0m AOD.
- 3.3.3 The topographical survey has been included in Appendix B for reference.

3.4 Hydrological Setting

- 3.4.1 Within the site boundary there are no watercourses, however the Kirkby Brook is located approximately 700m north from the site. The Kirkby Brook is a tributary of the River Alt, which is classified as a main river by the Environment Agency.

3.5 Geological Setting

- 3.5.1 Site investigations have indicated most of the site is underlain with substantial depths of made ground – ranging from 1m to 2m. Mapping indicates that the development boundary is underlain by Shirdley Hill Sand superficial deposits and Chester Formation Sandstone bedrock.
- 3.5.2 Soakaway testing conducted during the most recent site investigation has shown no evidence of infiltration, and as such, this method will be excluded as a viable option for surface water discharge.

3.6 Hydrogeological Setting

- 3.6.1 It should be noted that the development boundary has superficial deposits classified as a Secondary A aquifer. The bedrock deposits are classified as a Principal Aquifer. This is defined as an aquifer which provides significant quantities of drinking water, and water for business needs.
- 3.6.2 It should be noted the site is in Zone III of the groundwater Source Protection Zone. This means that the area of land around a groundwater source from which all the groundwater flows to that source.
- 3.6.3 The Groundwater Vulnerability Zone map identifies the proposed site is located on an Aquifer that has a high to medium vulnerability of pollution.
- 3.6.4 The most recent site investigation revealed that groundwater was encountered at a depth of 3.2 metres below ground level (bgl).

3.7 Existing Drainage

3.7.1 Public Drainage

- 3.7.1.1 According to United Utilities' (UU) public sewer records, there appears to be two adopted manholes on the northern boundary: one for foul and surface water – refer to Appendix C for reference.
- 3.7.1.2 The foul and surface water manholes, identified in the UU Records as 2402 and 2041 respectively, discharge in a north-westerly direction and connect to separate drainage networks along Simonswood Lane. The foul water (FW) system links via a 225mm sewer between manholes 2503 and 1402, flowing south-east. Similarly, the surface water (SW) system connects through a 375mm sewer between manholes 2504 and 1401, also flowing in a south-easterly direction.
- 3.7.1.3 Sewers confirmed to be United Utilities assets will likely have a legal easement. At the time of reporting writing, the full extent of sewer easements is not confirmed. Assuming no wayleave is defined within land registry plans then statutory guidance will be applicable.

3.7.2 Private Drainage

- 3.7.2.1 The site is currently served by a network of private combined, foul, and surface water drainage systems. The existing academy building is connected to CW and FW systems, which flow southeast and discharge into UU manhole 2402.
- 3.7.2.2 SW drainage across the site is split between two systems, each discharging to separate outfalls. Runoff from the academy building, internal roads, and car parking areas is directed to an onsite attenuation and rainwater harvesting tank located in the southeastern corner of the site, which then discharges into UU manhole 2401. In contrast, surface water from the existing show pitch is conveyed to a non-operational adjacent partial infiltration system, which ultimately connects to UU manhole 1404 situated beyond the southeastern site boundary.
- 3.7.2.3 The site currently operates an irrigation system that is intended to be retained as part of the proposed development. However, due to the scope and layout of the new works, some existing private drainage infrastructure may need to be removed or diverted.
- 3.7.2.4 The GPR survey has been included in Appendix D for reference. It is recommended a drainage investigation (CCTV) survey is undertaken at a later design stage to assess and confirm the condition the drainage systems proposed for retention.
- 3.7.2.5 The existing drainage and catchments are presented in Appendix E.

4.0 Assessment of Flood Risk

4.1.1 This study assesses the risk from different types of flooding to the development and the risk of flooding from the development, taking climate change into consideration, as well as how flood risk should be managed. The approach to the assessment of flood risk at the development site has been informed by the requirements of NPPF in conjunction with the client and EA/LLFA requirements.

- Fluvial (River) and Tidal Flooding
- Reservoir Flooding
- Pluvial (Surface Water) Flooding
- Public Sewers & Water Mains
- Canals, Ponds & Artificial Watercourses
- Groundwater Flooding

4.2 Fluvial (River) and Tidal Flooding

The Environment Agency Flood Map for Planning (FMfP), Figure 4.2.1 below, shows the site not to be at risk of flooding from Rivers and Sea, lying in Flood Zone 1.

- Zone 1 Very Low Probability: Land having a less than 0.1% (1 in 1,000) annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)

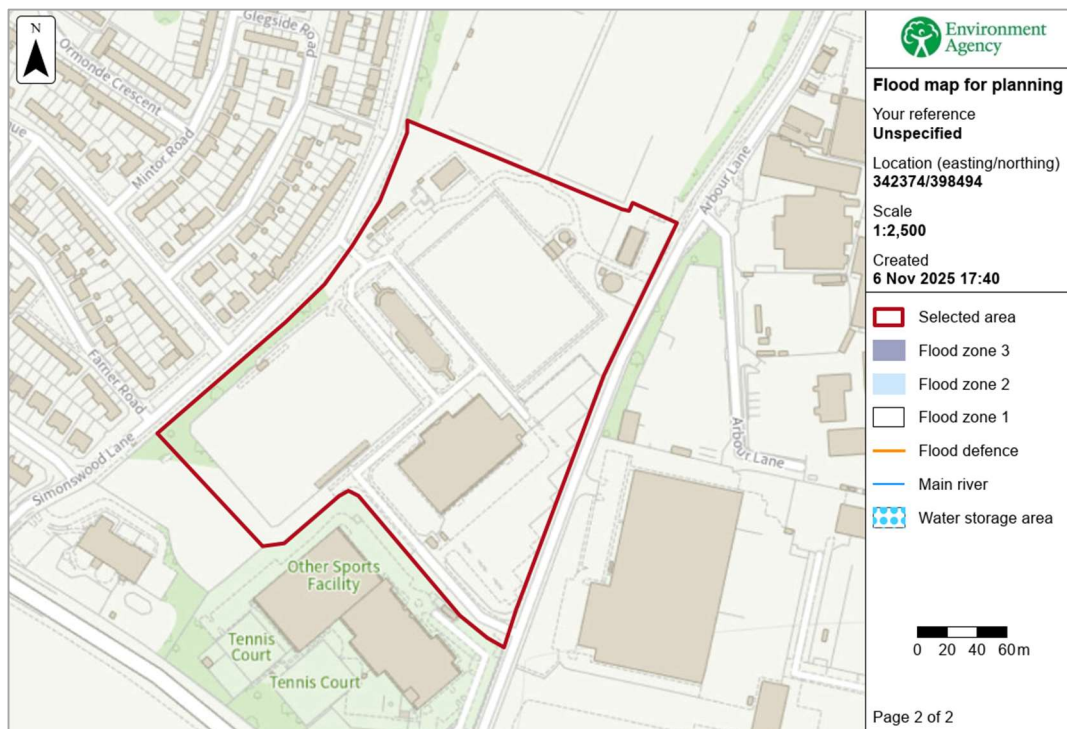


Figure 4.2.1 - EA Long Term Flood Risk from Rivers and Tidal

4.2.1 The FMfP does include the potential impact of climate change, however this may not define flood zones. The risk of flooding increases into the future as climate change takes hold, resulting in a potential reclassification of the flood zone across the site within the proposed development lifetime. Based on the highest flood risk vulnerability classification of the development proposed, climate change should therefore, based on current EA guidance, be assessed to a minimum of 100 years to at least 2125 for more vulnerable uses.

4.2.2 The extent of the fluvial flood risk due to climate change as taken from the SFRA maps never breaches the site. This data considers all climate change scenarios for the next 100 years. There is no increased risk of fluvial flooding due to climate change.

4.2.3 The risk of Fluvial Flooding is **very low**.

4.3 Reservoir Flooding

4.3.1 The online Risk of Flooding from Reservoirs Map indicates the risk of flooding in the event of a breach from reservoirs, based only on large reservoirs (over 25,000 cubic metres of water).



Figure 4.3.1 - EA Long Term Flood Risk from Reservoirs

4.3.2 The online Risk of Flooding from Reservoirs map indicates the site is at low risk in the event of reservoir breach (Figure 4.3.1). Therefore, the risk of reservoir flooding is **very low**.

4.4 Pluvial (Surface Water) Flooding to the Site

- 4.4.1 The online Risk of Flooding from Surface Water (RoSWF) map shows where areas could potentially be susceptible to surface water flooding in an extreme rainfall event. Surface water flooding can be caused when rainwater does not drain away through the normal drainage system or soak into the ground with flooding occurring, principally from manholes and gullies. Surcharging sewers can result in overland flows which if originating at a higher elevation than a development site can potentially pose a flood risk. The EA now includes data for climate change in their outputs.
- 4.4.2 The online RoFSW mapping identifies risk between very low, low, medium and high. The probabilities for each level are set out in Table 4.4.1 below.
- 4.4.3 A site of this size and in its current state has a greater chance of been exposed to increased surface water flood risk. This is typically due to inadequate drainage for modern design standards and consideration for climate change. It should be noted that these maps are generated using a relatively coarse methodology whereby rainfall inflows are routed over a ground surface model. The analysis assumes a suitable 'typical' approach to represent the effects of urban drainage infrastructure and highlights low lying areas of topography and preferential flow paths that may be more susceptible to surface water flooding in the event of extreme rainfall.

Surface Water Flood Risk Classifications		
Risk Definition	Storm Event	Probability
Very Low	< 1 in 1,000 year	$X < 0.1\%$
Low	1 in 1,000 to 1 in 100 year	$1.0\% > X > 0.1\%$
Medium	1 in 100 to 1 in 30	$3.3\% > X > 1.0\%$

Table 4.4.1 – RoSWF

- 4.4.4 Figure 4.4.1 shows the extents of surface water flood risk from the EA mapping and Figure 4.4.2 shows the extents of surface water flood risk from the EA mapping when climate change up to 2060. When comparing these figures, it highlights the impact climate change has on the likelihood and severity of flood risk. No further data on climate change impacts on surface water flooding is available. The existing drainage network has been modelled against various return periods to more accurately assess the risk.
- 4.4.5 The EA provides possible flood depths of surface water; this is available via the DEFRA Data Services Platform. This is not available within the SFRA. The risks of each depth band (increments) are extracted within Figure 4.4.3 and Figure 4.4.4. Please note that the boundary lines are drawn approximately on all the below plans as shown in Table 4.4.2.

Figure 4.4.1 – EA Long Term Flood Risk RoSWF	Figure 4.4.2 – EA Long Term Flood Risk RoSWF (with Climate Change)
Figure 4.4.3 – Risk of 200mm Depth Surface Water Flooding (with Climate Change)	Figure 4.4.4 – Risk of 300mm Depth Surface Water Flooding (with Climate Change)

Table 4.4.2 – EA RoSWF Maps

- 4.4.6 A detailed analysis of the risk maps reveals that the southern car park presents the highest flood risk, with water depths reaching at least 200mm (see Figure 4.4.3). In contrast, Figure 4.4.4 shows areas with a greater flood depth of 300mm, the probability of this occurring is less likely. It should be noted that there is an extent of surface water flooding—reaching depths of 600mm— localised within the southern car park and is classified as low-risk occurrence.
- 4.4.7 The extent of surface water flooding in the southern car park is likely due to low-lying topography, poor condition of existing drainage network or insufficient capacity for the current run-off. To improve the network and to provide resilience to future climate change storm events, onsite storage features and other drainage measures will be incorporated as part of the proposed drainage design.
- 4.4.8 In respect to the existing show pitch plateau, Figure 4.4.3 illustrates that most surface water flooding at depths at least 200mm, is assessed as low risk, with a small portion identified as medium risk. Figure 4.4.4 highlights residual areas of surface water flooding with a depth of 300mm, categorized as low risk. To reduce the potential impact of flooding in this area, suitable drainage solutions will be implemented to mitigate this, taking into account future climate change projections.
- 4.4.9 Figure 4.4.2 also demonstrates there is surface water flooding near the existing Academy building. Although the flood risk is high and extensive near the Academy building, the depths are less than 200mm as indicated in Figure 4.4.3. Appropriate measures will be incorporated into the proposed drainage strategy to effectively manage and drain any localised flooding.
- 4.4.10 Furthermore, Figure 4.4.2 highlights an area of surface water flooding classified as high flood risk adjacent to the proposed spectator stand near the northern boundary. However, as shown in Figure 4.4.4, the flood water depth in this location is less than 300mm. This surface water flooding is likely due to low-lying topography, but it will be effectively addressed through the proposed drainage strategy.
- 4.4.11 At a depth of 300mm, emergency vehicles can safely enter and access the site in the event of an emergency. While the EA flood maps indicate that the southern car park will be subject to surface water depths up to 600mm, this is isolated to that specific area and will not affect surrounding access roads or emergency routes. There is an alternative route to the south which indicates surface water flooding less than 200mm depth as shown in Figure 4.4.2, therefore access can maintained in the event of a road closure. There is also an alternative pedestrian route meandering around the site, providing safe emergency access.
- 4.4.12 In accordance with the DEFRA Flood Risks to People (PHASE 2 FD2321/TR2) (Figure 4.4.5), depths of up to 600mm with the low velocities associated with surface water flooding are considered a safety concern for some.

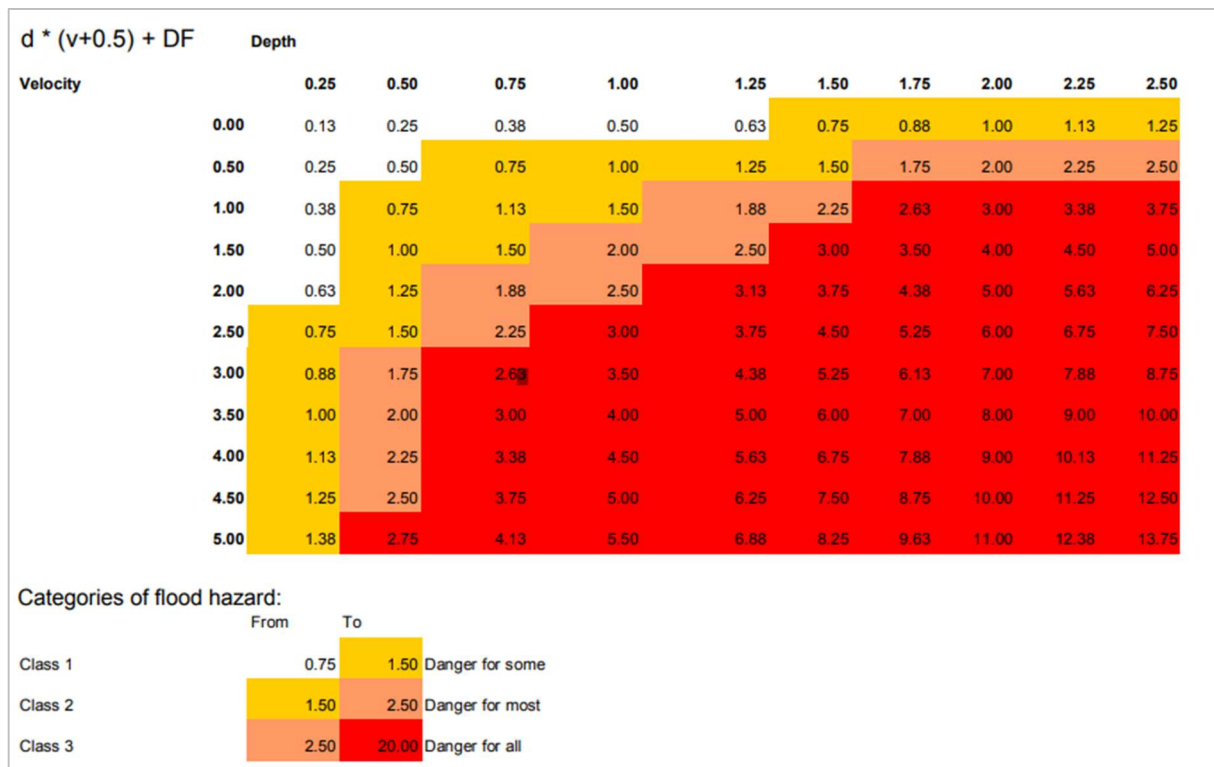


Figure 4.4.5 - DEFRA Flood Risks to People (PHASE 2 FD2321/TR2)

4.4.13 Based on Figure 4.4.5, the surface water flooding within the southern car park renders the area inaccessible to pedestrians and vehicles, therefore the area should be closed during such incident. However, Figure 4.4.2 shows the onsite surface water flooding is entirely localised and will not affect the surrounding access road or emergency routes.

4.4.14 The risk of surface water flooding (pluvial) to the site is **medium** without mitigation.

4.5 Pluvial (Surface Water) Flooding from the Site

- 4.5.1 Developers are responsible for ensuring that new development does not increase flood risk elsewhere. The proposed surface water drainage network shall be designed to not flood in the critical 1 in 30 (3.3%) Annual Probability storm event. Flood water generated up to the critical 1 in 100 (1%) Annual Probability plus climate change event shall be constrained within areas on site to not cause damage to buildings, essential services or adjoining developments.
- 4.5.2 All surface water generated within the red line boundary is to be managed on site and discharged using the most sustainable method in accordance with the hierarchy of drainage. In consultation with UU and the LLFA, a suitable discharge rate to any sewer (or watercourse) is to be pre-agreed. At the time of writing, the LLFA advised the site can be considered brownfield, and a maximum discharge rate should achieve a 50% betterment to the existing discharge rate based on the current impermeable areas.
- 4.5.3 It should be noted these drainage principles remain ongoing with other statutory bodies.
- 4.5.4 The drainage strategy (see Appendix E) shows that the overall discharge into the wider public sewer network is reduced from 318.5l/s (1 in 100 storm) to 145.9l/s (1 in 100 + 45% CC).
- 4.5.5 There will be an increase in impermeable areas through the new building connection and the pitch roof which will be considered in the proposed drainage strategy. However, the remaining development areas will remain unaffected, meaning the existing catchments remain the same. The design of the drainage network will not be permitted to increase flood risk elsewhere through the introduction of new attenuation devices. The discharge location will remain unchanged, and the proposed discharge rate will be reduced by 50% as outlined in section 4.5.4. Refer to Appendix F for the outline drainage strategy for planning.
- 4.5.6 The risk of pluvial flooding (surface water) from the site is **low**.

4.6 Public Sewers & Watermains

- 4.6.1 There are no recorded public sewers that could adversely affect the site as validated by the SFRA. The adjacent highways are outside of the boundary.
- 4.6.2 Although there are small watermains and hydrants serving the site identified on the GPR survey, it is unlikely these will impact on the site. Therefore, the risk is **low**.

4.7 Canals, Ponds and Artificial Watercourses

- 4.7.1 There are none of these features which could impact the site.

4.8 Groundwater Flooding

- 4.8.1 Groundwater flooding can occur when the water table rises above the ground level. This is most common in areas of low lying land and depressions and can manifest as pond like surface water above ground. Groundwater flooding is difficult to predict based on weather patterns and the impact of climate change is not fully understood.
- 4.8.2 The LCRCA SFRA identifies that the site is within an extent where “groundwater levels are between 0.025m and 0.5m below the ground surface in the 100-year return period flood event. Within this zone there is a risk of groundwater flooding to surface and subsurface assets. There is the possibility of groundwater emerging at the surface locally”. Figure 4.8.1 demonstrates location for reference.
- 4.8.3 Despite Figure 4.8.1, groundwater was encountered during site investigations at circa 3.2m bgl as mentioned in section 3.6.4, therefore the risk of groundwater flooding from the site is **low**.

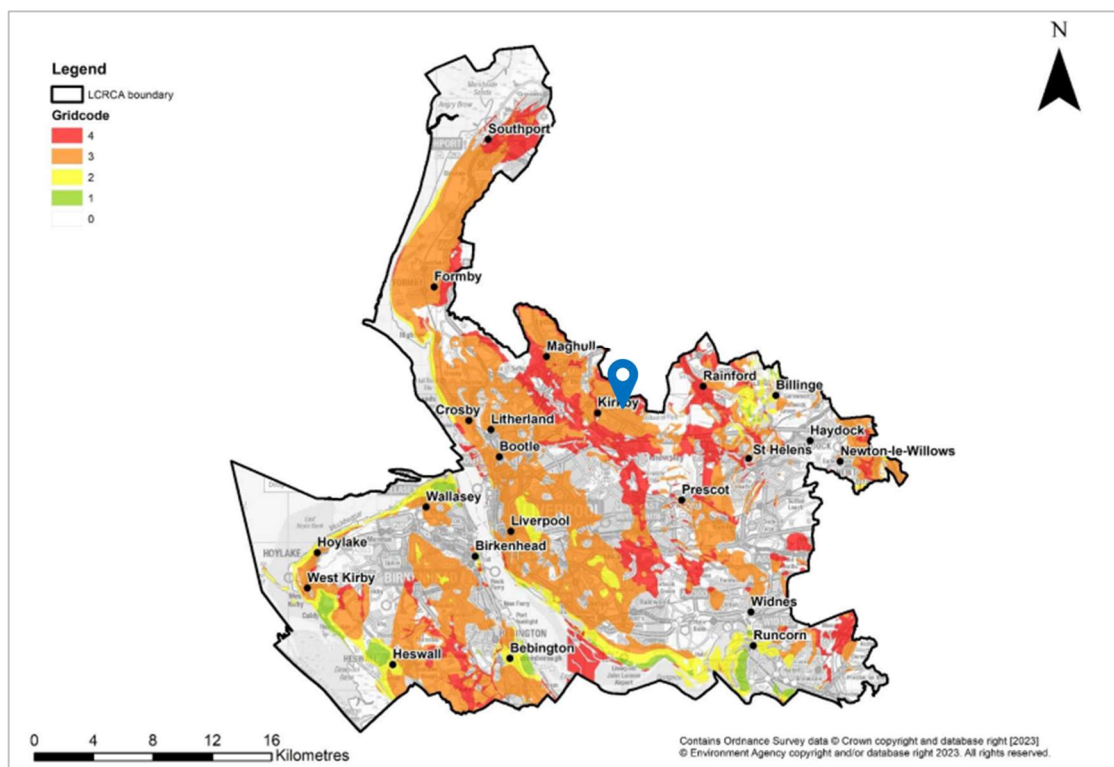


Figure 4.8.1 – LCRCA SFRA Groundwater Flood Risk Map

4.9 Summary

A summary of the risk sources given in Chapters 4.2 to 4.8 is below.

- Fluvial (River) and Tidal Flooding – **VERY LOW**
- Reservoir Flooding – **VERY LOW**
- Pluvial (Surface Water) Flooding to the Site - **MEDIUM**
- Pluvial (Surface Water) Flooding from the Site – **LOW**
- Public Sewers & Water Mains - **LOW**
- Canals, Ponds & Artificial Watercourses – **N/A**
- Groundwater Flooding – **LOW**

5.0 Control and Mitigation

5.1 Control

- 5.1.1 Prior to mitigation in accordance with Paragraph 004 of the PPG, the development must evidence that measures to control the risk of flooding affecting the site have been investigated.
- 5.1.2 Early engagement and ongoing discussions during the determination of the application have been undertaken with the LLFA. From these discussions and research, no proposals have been identified to control surface water flood risk at a strategic area wide level which affect this site.
- 5.1.3 The risk is localised and not because of offsite catchments, thus opportunities for control are limited.
- 5.1.4 Therefore, it is considered that sufficient discussion and investigation has been undertaken to ascertain whether there are measures to control flood risk affecting the site. However, there are currently no programmes or initiatives which could control the risk of flooding affecting the site.

5.2 Surface Water Flood Risk Mitigation

- 5.2.1 As identified above in Section 4.4, there is surface water flood risk to the site without mitigation. The medium risk classification is due to inadequate capacity of the existing drainage system and low-lying site levels. The risk is contained within localised pockets and although flood depth could potentially reach 600mm, the likelihood of this occurring is low as shown in the Table 4.4.2.
- 5.2.2 The typical principles of managing flood risk are as follows.
 - 1. Flood Avoidance = removing the risk through raising floor levels;
 - 2. Flood Resistance = defence measures or keeping the risk away from the site whilst the land lies below a potential flood design level;
 - 3. Flood Resilience (Water Exclusion) = allowing flood waters to reach the site but managed in a way to not cause damage to buildings. Eg flood gates across thresholds etc;
 - 4. Flood Resilience (Water Entry) = allowing flood waters to breach buildings but utilising resilience measures within the design such as quick drying plaster etc.
- 5.2.3 The FFL of the development proposals are constructed above the existing southern car park levels and are located sufficiently far away from any onsite flooding. Therefore, flood avoidance for more vulnerable uses is achieved.

5.2.4 The development will be required to meet modern drainage design standards and use parameters to account for climate change to reduce the risk accordingly and correctly manage any exceedances. Additionally, the following parameters are to be considered as part of the development proposals:

- Utilisation of sustainable drainage systems (SuDS) where feasible;
- Ensure falls to external works are away from thresholds wherever possible.

5.2.5 The drainage strategy reduces flows significantly from current rates into the existing SW connection. Additionally, the development adopts attenuation devices, both natural and manufactured, which are designed to accommodate existing drainage catchments up to the 1 in 100 plus climate change storm event. Therefore, this will reduce the risk of flooding occurring across the development.

5.3 Surface Water Flood Risk Post Mitigation

5.3.1 By implementing the above mitigation, the risk of surface water flooding is **low**.

5.4 Access and Egress

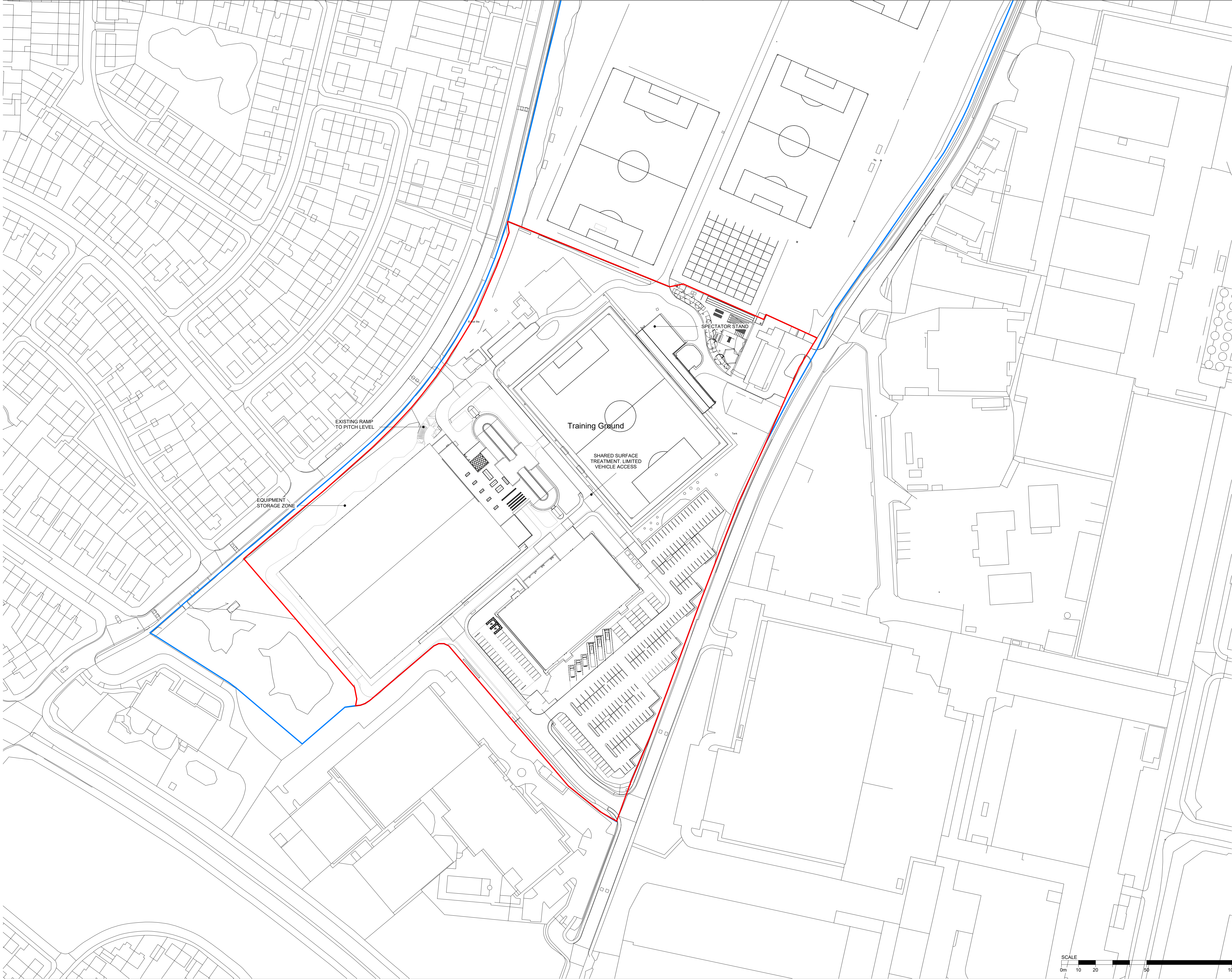
5.4.1 The identified flood risks cause no restriction to the operation of any accesses and egresses from the site. Depths and velocities are low and do not impact on either pedestrians or motorised vehicles (see Figure 4.7).

6.0 Conclusion

- 6.1.1 Curtins have been appointed by Rider Levett Bucknall on behalf of Liverpool Football Club to prepare a Flood Risk Assessment (FRA) to accompany an application for the extension and refurbishment of an existing sports training facility.
- 6.1.2 The FRA provides information on the nature of flood risk at the site and follows government guidance with regards to development and flood risk. The report is based on currently available information and preliminary discussions.
- 6.1.3 The assessment has been undertaken in accordance with the standing advice and requirements of the EA as outlined in the Communities and Local Government's NPPF and accompanying PPG.
- The site is located entirely within Flood Zone 1, defined as having a 'Low' probability with less than a 1 in 1000 (0.1%) Annual Probability of flooding from rivers and the sea.
 - In accordance with PPG Table 2, as the highest level of flood risk educational establishments are classified as a '**More Vulnerable**' development. According to PPG Table 3, this land use is appropriate for Flood Zone 1 without the need to apply the Sequential or Exception Test.
 - Surface water flood risk exists within the site boundary, however analysis of depths has shown that safe access and egress is not impacted by this. Additionally, the development proposals adopt devices and methods which accommodate both the existing and proposed catchments.
 - There will be no increase in onsite or off-site flood risk due to the increase in impermeable area.
 - All flood risks are low to very low and do not require additional mitigations outside of the proposed drainage design.
- 6.1.4 The development is suitable for the proposed location and use with respect to flood risk with for a minimum of 100 years to at least 2125.

Appendices

Appendix A – Site Layout



Do not scale this drawing or associated computer digital data, and use figured dimensions only. All dimensions are in millimetres and levels in metres unless noted otherwise. All dimensions should be checked on site prior to works commencing. Any discrepancies or items where dimensions cannot be determined should be reported to KSS. Revision clouds on drawing refer to changes against previous revision.

REV	DATE	DESCRIPTION	DRWN	CHKD
P01	15.08.25	FOR INFORMATION	SJ	JM
P02	22.08.25	STAGE 2 ISSUE	SJ	JM
P03	10.10.25	FOR INFORMATION	SJ	EA
P04	21.10.25	STAGE 3 DESIGN FREEZE	SJ	EA

GENERAL NOTES AND LEGEND

1. DRAWING TO BE READ IN CONJUNCTION WITH LATEST REVISIONS OF THE FOLLOWING DRAWINGS AND DOCUMENTS:
- KSS - 100 SERIES - EXISTING LOCATION & SITE PLANS
 - KSS - 101 SERIES - EXISTING PLANS
 - KSS - 102 SERIES - EXISTING SECTIONS
 - KSS - 103 SERIES - EXISTING ELEVATIONS
 - KSS - 120 SERIES - DEMOLITION SITE PLANS
 - KSS - 121 SERIES - DEMOLITION PLANS
 - KSS - 122 SERIES - DEMOLITION SECTIONS
 - KSS - 123 SERIES - DEMOLITION ELEVATIONS
 - KSS - 130 SERIES - PROPOSED LOCATION & SITE PLANS
 - KSS - 131 SERIES - PROPOSED PLANS
 - KSS - 132 SERIES - PROPOSED SECTIONS
 - KSS - 133 SERIES - PROPOSED ELEVATIONS
2. EXISTING INFORMATION IS BASED ON HISTORIC INFORMATION AND ASSUMPTIONS RELATED TO HEIGHT. THIS INFORMATION SHOULD BE TREATED AS OUTLINE UNTIL THE MEASURED BUILDING SURVEY IS AVAILABLE.

- KEY**
- DEVELOPMENT BOUNDARY
 - SITE OWNERSHIP BOUNDARY
 - - - EXISTING PITCH LINES
 - NOT IN SCOPE
 - PARTIAL SCOPE
 - EXISTING
 - PROPOSED
 - R88-888 Room Name ROOM NUMBER (R LEVEL-NUMBER)
 - ⊕ EXISTING LEVEL (AOD)
 - ⊕ PROPOSED LEVEL (AOD)
 - FFL FINISHED FLOOR LEVEL (AOD) TO TOP OF SCREED
 - SSL STRUCTURAL SLAB LEVEL (AOD)

N 123456000 mm GRIDLINE INTERSECTION COORDINATES
E 987654000 mm (NORTHINGS AND EASTINGS)

■ PROPOSED PARKING SPACES

TOTAL NUMBER OF SPACES:

CARS: 68
ACCESSIBLE SPACES: 2
MINIBUS: 3
COACH: 3

KEY PLAN

KSS London 1 James Street London W1U 1DR
Kent 7 Bighs Walk, Sevenoaks TN13 1DB
KSSGROUP.COM T: +44 (0)20 7907 2222

CLIENT

LIVERPOOL FOOTBALL CLUB

PROJECT

LFC TRAINING CENTRE ACADEMY

TITLE

PROPOSED SITE PLAN

Suitability codes to ISO19650:
S0 WIP, S1 Suitable for Coordination, S2 Suitable for Information, S3 Suitable for Review & Comment, S4 Suitable for Stage Approval, S5 Suitable for BIM Authorisation, S7 Suitable for AIM Authorisation, SB Suitable for Building Control Approval, SP Suitable for Planning Approval, ST Suitable for Costing/Tender.
A1, A2, A3, Approved and accepted as stage complete. B1, B2, B3, Partially Signed Off, CR As Construction Record documentation

MODEL FILE REFERENCE

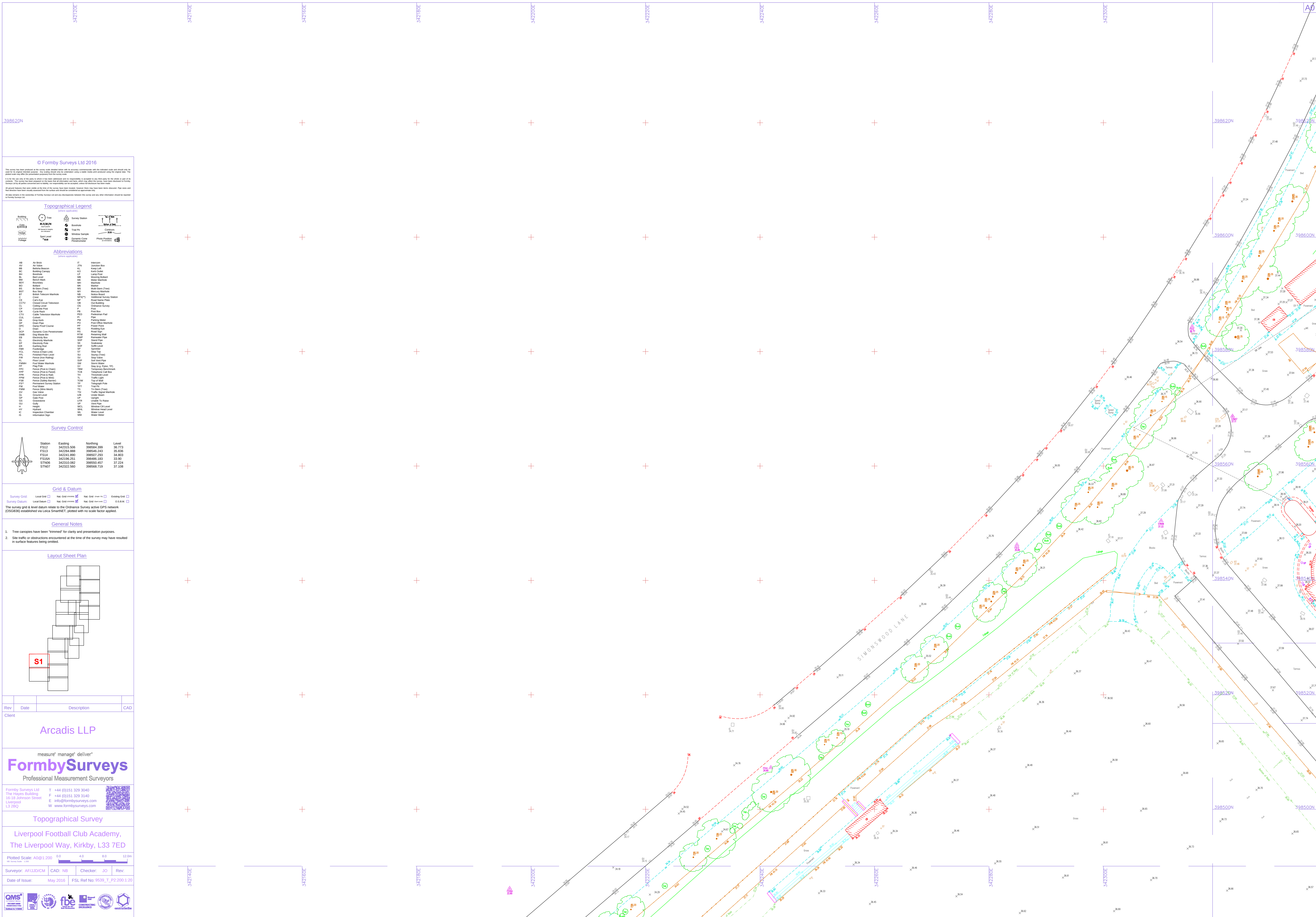
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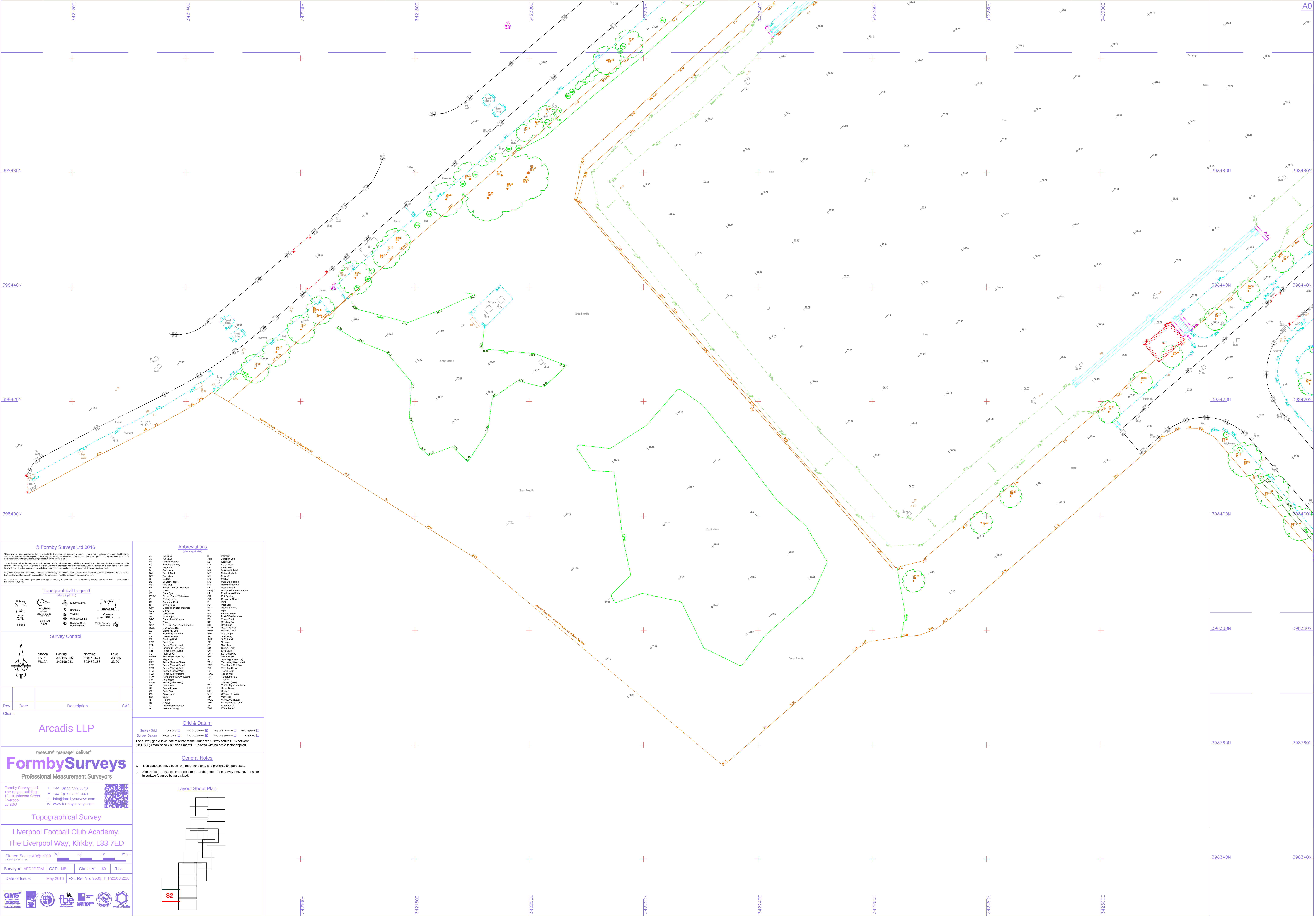
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DRAWING REFERENCE

25009-KSS-ZZ-ZZ-DR-A-13002

Appendix B – Topographical Survey





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This survey has been produced in the normal, open market conditions with the standard codes and should not be used for any other purpose. Any liability shall only be undertaken using a written note prior to publication. The printed notes shall only be published in the normal, open market conditions.

It is for the use only of the party to whom it has been submitted and is not to be used for any other purpose. Any liability shall only be undertaken using a written note prior to publication. The printed notes shall only be published in the normal, open market conditions.

All ground features that were visible at the time of the survey have been located. However, there may have been some obscured. Please note and the client should be aware that the survey is not a guarantee of accuracy. The survey is not a guarantee of accuracy. The survey is not a guarantee of accuracy.

All data remains in the ownership of Formby Surveys Ltd and any discrepancies between this survey and any other information should be reported to Formby Surveys Ltd.

Topographical Legend

Building
Tree
Survey Station
Boundary
Spot Level
Photo Position

Building
Tree
Survey Station
Boundary
Spot Level
Photo Position

Survey Control

Station	Eastings	Northings	Level
FS16	342165.915	398440.571	33.585
FS16A	342196.251	398466.183	33.90

Abbreviations

AB	Art Brick	IT	Ironwork
AD	Art Duct	JN	Joint
BC	Brickwork	KC	Keel
BD	Brickwork	LC	Lead
BE	Brickwork	MC	Masonry
BF	Brickwork	NC	Natural
BG	Brickwork	OC	Onion
BH	Brickwork	PC	Paving
BI	Brickwork	QC	Quarry
BJ	Brickwork	RC	Reinforced
BK	Brickwork	SC	Shed
BL	Brickwork	TC	Tarmac
BM	Brickwork	UC	Under
BN	Brickwork	VC	Vertical
BO	Brickwork	WC	Water
BP	Brickwork	XC	Excavation
BQ	Brickwork	YC	Yard
BR	Brickwork	ZC	Zone
BS	Brickwork	AC	Access
BT	Brickwork	BC	Boundary
BU	Brickwork	CC	Concrete
BV	Brickwork	DC	Ditch
BW	Brickwork	EC	Electric
BX	Brickwork	FC	Fence
BY	Brickwork	GC	Grass
BZ	Brickwork	HC	Highway
CA	Brickwork	IC	Iron
CB	Brickwork	JC	Joint
CC	Brickwork	KC	Keel
CD	Brickwork	LC	Lead
CE	Brickwork	MC	Masonry
CF	Brickwork	NC	Natural
CG	Brickwork	OC	Onion
CH	Brickwork	PC	Paving
CI	Brickwork	QC	Quarry
CJ	Brickwork	RC	Reinforced
CK	Brickwork	SC	Shed
CL	Brickwork	TC	Tarmac
CM	Brickwork	UC	Under
CN	Brickwork	VC	Vertical
CO	Brickwork	WC	Water
CP	Brickwork	XC	Excavation
CQ	Brickwork	YC	Yard
CR	Brickwork	ZC	Zone
CS	Brickwork	AC	Access
CT	Brickwork	BC	Boundary
CU	Brickwork	CC	Concrete
CV	Brickwork	DC	Ditch
CW	Brickwork	EC	Electric
CX	Brickwork	FC	Fence
CY	Brickwork	GC	Grass
CZ	Brickwork	HC	Highway
DA	Brickwork	IC	Iron
DB	Brickwork	JC	Joint
DC	Brickwork	KC	Keel
DD	Brickwork	LC	Lead
DE	Brickwork	MC	Masonry
DF	Brickwork	NC	Natural
DG	Brickwork	OC	Onion
DH	Brickwork	PC	Paving
DI	Brickwork	QC	Quarry
DJ	Brickwork	RC	Reinforced
DK	Brickwork	SC	Shed
DL	Brickwork	TC	Tarmac
DM	Brickwork	UC	Under
DN	Brickwork	VC	Vertical
DO	Brickwork	WC	Water
DP	Brickwork	XC	Excavation
DQ	Brickwork	YC	Yard
DR	Brickwork	ZC	Zone
DS	Brickwork	AC	Access
DT	Brickwork	BC	Boundary
DU	Brickwork	CC	Concrete
DV	Brickwork	DC	Ditch
DW	Brickwork	EC	Electric
DX	Brickwork	FC	Fence
DY	Brickwork	GC	Grass
DZ	Brickwork	HC	Highway
EA	Brickwork	IC	Iron
EB	Brickwork	JC	Joint
EC	Brickwork	KC	Keel
ED	Brickwork	LC	Lead
EE	Brickwork	MC	Masonry
EF	Brickwork	NC	Natural
EG	Brickwork	OC	Onion
EH	Brickwork	PC	Paving
EI	Brickwork	QC	Quarry
EJ	Brickwork	RC	Reinforced
EK	Brickwork	SC	Shed
EL	Brickwork	TC	Tarmac
EM	Brickwork	UC	Under
EN	Brickwork	VC	Vertical
EO	Brickwork	WC	Water
EP	Brickwork	XC	Excavation
EQ	Brickwork	YC	Yard
ER	Brickwork	ZC	Zone
ES	Brickwork	AC	Access
ET	Brickwork	BC	Boundary
EU	Brickwork	CC	Concrete
EV	Brickwork	DC	Ditch
EW	Brickwork	EC	Electric
EX	Brickwork	FC	Fence
EY	Brickwork	GC	Grass
EZ	Brickwork	HC	Highway
FA	Brickwork	IC	Iron
FB	Brickwork	JC	Joint
FC	Brickwork	KC	Keel
FD	Brickwork	LC	Lead
FE	Brickwork	MC	Masonry
FF	Brickwork	NC	Natural
FG	Brickwork	OC	Onion
FH	Brickwork	PC	Paving
FI	Brickwork	QC	Quarry
FJ	Brickwork	RC	Reinforced
FK	Brickwork	SC	Shed
FL	Brickwork	TC	Tarmac
FM	Brickwork	UC	Under
FN	Brickwork	VC	Vertical
FO	Brickwork	WC	Water
FP	Brickwork	XC	Excavation
FQ	Brickwork	YC	Yard
FR	Brickwork	ZC	Zone
FS	Brickwork	AC	Access
FT	Brickwork	BC	Boundary
FU	Brickwork	CC	Concrete
FV	Brickwork	DC	Ditch
FW	Brickwork	EC	Electric
FX	Brickwork	FC	Fence
FY	Brickwork	GC	Grass
FZ	Brickwork	HC	Highway
GA	Brickwork	IC	Iron
GB	Brickwork	JC	Joint
GC	Brickwork	KC	Keel
GD	Brickwork	LC	Lead
GE	Brickwork	MC	Masonry
GF	Brickwork	NC	Natural
GG	Brickwork	OC	Onion
GH	Brickwork	PC	Paving
GI	Brickwork	QC	Quarry
GJ	Brickwork	RC	Reinforced
GK	Brickwork	SC	Shed
GL	Brickwork	TC	Tarmac
GM	Brickwork	UC	Under
GN	Brickwork	VC	Vertical
GO	Brickwork	WC	Water
GP	Brickwork	XC	Excavation
GQ	Brickwork	YC	Yard
GR	Brickwork	ZC	Zone
GS	Brickwork	AC	Access
GT	Brickwork	BC	Boundary
GU	Brickwork	CC	Concrete
GV	Brickwork	DC	Ditch
GW	Brickwork	EC	Electric
GX	Brickwork	FC	Fence
GY	Brickwork	GC	Grass
GZ	Brickwork	HC	Highway
HA	Brickwork	IC	Iron
HB	Brickwork	JC	Joint
HC	Brickwork	KC	Keel
HD	Brickwork	LC	Lead
HE	Brickwork	MC	Masonry
HF	Brickwork	NC	Natural
HG	Brickwork	OC	Onion
HH	Brickwork	PC	Paving
HI	Brickwork	QC	Quarry
HJ	Brickwork	RC	Reinforced
HK	Brickwork	SC	Shed
HL	Brickwork	TC	Tarmac
HM	Brickwork	UC	Under
HN	Brickwork	VC	Vertical
HO	Brickwork	WC	Water
HP	Brickwork	XC	Excavation
HQ	Brickwork	YC	Yard
HR	Brickwork	ZC	Zone
HS	Brickwork	AC	Access
HT	Brickwork	BC	Boundary
HU	Brickwork	CC	Concrete
HV	Brickwork	DC	Ditch
HW	Brickwork	EC	Electric
HX	Brickwork	FC	Fence
HY	Brickwork	GC	Grass
HZ	Brickwork	HC	Highway
IA	Brickwork	IC	Iron
IB	Brickwork	JC	Joint
IC	Brickwork	KC	Keel
ID	Brickwork	LC	Lead
IE	Brickwork	MC	Masonry
IF	Brickwork	NC	Natural
IG	Brickwork	OC	Onion
IH	Brickwork	PC	Paving
II	Brickwork	QC	Quarry
IJ	Brickwork	RC	Reinforced
IK	Brickwork	SC	Shed
IL	Brickwork	TC	Tarmac
IM	Brickwork	UC	Under
IN	Brickwork	VC	Vertical
IO	Brickwork	WC	Water
IP	Brickwork	XC	Excavation
IQ	Brickwork	YC	Yard
IR	Brickwork	ZC	Zone
IS	Brickwork	AC	Access
IT	Brickwork	BC	Boundary
IU	Brickwork	CC	Concrete
IV	Brickwork	DC	Ditch
IW	Brickwork	EC	Electric
IX	Brickwork	FC	Fence
IY	Brickwork	GC	Grass
IZ	Brickwork	HC	Highway
JA	Brickwork	IC	Iron
JB	Brickwork	JC	Joint
JC	Brickwork	KC	Keel
JD	Brickwork	LC	Lead
JE	Brickwork	MC	Masonry
JF	Brickwork	NC	Natural
JG	Brickwork	OC	Onion
JH	Brickwork	PC	Paving
JI	Brickwork	QC	Quarry
JJ	Brickwork	RC	Reinforced
JK	Brickwork	SC	Shed
JL	Brickwork	TC	Tarmac
JM	Brickwork	UC	Under
JN	Brickwork	VC	Vertical
JO	Brickwork	WC	Water
JP	Brickwork	XC	Excavation
JQ	Brickwork	YC	Yard
JR	Brickwork	ZC	Zone
JS	Brickwork	AC	Access
JT	Brickwork	BC	Boundary
JU	Brickwork	CC	Concrete
JV	Brickwork	DC	Ditch
JW	Brickwork	EC	Electric
JX	Brickwork	FC	Fence
JY	Brickwork	GC	Grass
JZ	Brickwork	HC	Highway
KA	Brickwork	IC	Iron
KB	Brickwork	JC	Joint
KC	Brickwork	KC	Keel
KD	Brickwork	LC	Lead
KE	Brickwork	MC	Masonry
KF	Brickwork	NC	Natural
KG	Brickwork	OC	Onion
KH	Brickwork	PC	Paving
KI	Brickwork	QC	Quarry
KJ	Brickwork	RC	Reinforced
KK	Brickwork	SC	Shed
KL	Brickwork	TC	Tarmac
KM	Brickwork	UC	Under
KN	Brickwork	VC	Vertical
KO	Brickwork	WC	Water
KP	Brickwork	XC	Excavation
KQ	Brickwork	YC	Yard
KR	Brickwork	ZC	Zone
KS	Brickwork	AC	Access
KT	Brickwork	BC	Boundary
KU	Brickwork	CC	Concrete
KV	Brickwork	DC	Ditch
KW	Brickwork	EC	Electric
KX	Brickwork	FC	Fence
KY	Brickwork	GC	Grass
KZ	Brickwork	HC	Highway
LA	Brickwork	IC	Iron
LB	Brickwork	JC	Joint
LC	Brickwork	KC	Keel
LD	Brickwork	LC	Lead
LE	Brickwork	MC	Masonry
LF	Brickwork	NC	Natural
LG	Brickwork	OC	Onion
LH	Brickwork	PC	Paving
LI	Brickwork	QC	Quarry
LJ	Brickwork	RC	Reinforced
LK	Brickwork	SC	Shed
LL	Brickwork	TC	Tarmac
LM	Brickwork	UC	Under
LN	Brickwork	VC	Vertical
LO	Brickwork	WC	Water
LP	Brickwork	XC	Excavation
LQ	Brickwork	YC	Yard
LR	Brickwork	ZC	Zone
LS	Brickwork	AC	Access
LT	Brickwork	BC	Boundary
LU	Brickwork	CC	Concrete
LV	Brickwork	DC	Ditch
LW	Brickwork	EC	Electric
LX	Brickwork	FC	Fence
LY	Brickwork	GC	Grass
LZ	Brickwork	HC	Highway
MA	Brickwork	IC	Iron
MB	Brickwork	JC	Joint
MC	Brickwork	KC	Keel
MD	Brickwork	LC	Lead
ME	Brickwork	MC	Masonry
MF	Brickwork	NC	Natural
MG	Brickwork	OC	Onion
MH	Brickwork	PC	Paving
MI	Brickwork	QC	Quarry
MJ	Brickwork	RC	Reinforced
MK	Brickwork	SC	Shed
ML	Brickwork	TC	Tarmac
MM	Brickwork	UC	Under
MN	Brickwork	VC	Vertical
MO	Brickwork	WC	Water
MP	Brickwork	XC	Excavation
MQ	Brickwork	YC	Yard
MR	Brickwork	ZC	Zone
MS	Brickwork	AC	Access
MT	Brickwork	BC	Boundary
MU	Brickwork	CC	Concrete
MV	Brickwork	DC	Ditch
MW	Brickwork	EC	Electric
MX	Brickwork	FC	Fence
MY	Brickwork	GC	Grass
MZ	Brickwork	HC	Highway
NA	Brickwork	IC	Iron
NB	Brickwork	JC	Joint
NC	Brickwork	KC	Keel
ND	Brickwork	LC	Lead
NE	Brickwork	MC	Masonry
NF	Brickwork	NC	Natural
NG	Brickwork	OC	Onion
NH	Brickwork	PC	Paving
NI	Brickwork	QC	Quarry
NJ	Brickwork	RC	Reinforced
NK	Brickwork	SC	Shed
NL	Brickwork	TC	Tarmac
NM	Brickwork	UC	Under
NN	Brickwork	VC	Vertical
NO	Brickwork	WC	Water
NP	Brickwork	XC	Excavation
NQ	Brickwork	YC	Yard
NR	Brickwork	ZC	Zone
NS	Brickwork	AC	Access
NT	Brickwork	BC	Boundary
NU	Brickwork	CC	Concrete
NV	Brickwork	DC	Ditch
NW	Brickwork	EC	Electric
NX	Brickwork	FC	Fence
NY	Brickwork	GC	Grass
NZ	Brickwork	HC	Highway
OA	Brickwork	IC	Iron
OB	Brickwork	JC	Joint
OC	Brickwork	KC	Keel
OD	Brickwork	LC	Lead
OE	Brickwork	MC	Masonry
OF	Brickwork	NC	Natural
OG	Brickwork	OC	Onion
OH	Brickwork	PC	Paving
OI	Brickwork	QC	Quarry
OJ	Brickwork	RC	Reinforced
OK	Brickwork	SC	Shed
OL	Brickwork	TC	Tarmac
OM	Brickwork	UC	Under
ON	Brickwork	VC	Vertical
OO	Brickwork	WC	Water
OP	Brickwork	XC	Excavation
OQ	Brickwork	YC	Yard
OR	Brickwork	ZC	Zone
OS	Brickwork	AC	Access
OT	Brickwork	BC	Boundary
OU	Brickwork	CC	Concrete
OV	Brickwork	DC	Ditch
OW	Brickwork	EC	Electric
OX	Brickwork	FC	Fence
OY	Brickwork	GC	Grass
OZ	Brickwork	HC	Highway
PA	Brickwork	IC	Iron
PB	Brickwork	JC	Joint
PC	Brickwork	KC	Keel
PD	Brickwork	LC	Lead
PE	Brickwork	MC	Masonry
PF	Brickwork	NC	Natural
PG	Brickwork	OC	Onion
PH	Brickwork	PC	Paving
PI	Brickwork	QC	Quarry
PJ	Brickwork	RC	Reinforced
PK	Brickwork	SC	Shed
PL	Brickwork	TC	Tarmac
PM	Brickwork	UC	Under
PN	Brickwork	VC	Vertical
PO	Brickwork	WC	Water
PP	Brickwork	XC	Excavation
PQ	Brickwork	YC	Yard
PR	Brickwork	ZC	Zone
PS	Brickwork	AC	Access
PT	Brickwork	BC	Boundary
PV	Brickwork	CC	Concrete
PW	Brickwork	DC	

All ground features that were visible at the time the survey have been located, however there may have been items obscured. Page sizes and flow direction have been visually assessed from the surface and should be considered as approximate only.

(where applicable)



(where applicable)

A



Net. Grd. volume

(USGB36) established via Leica SmartNE1, plotted with no scale factor applied.

1. Tree canopies have been "trimmed" for clarity and presentation purposes.
2. Site traffic or obstructions encountered at the time of the survey may have resulted in surface features being omitted.



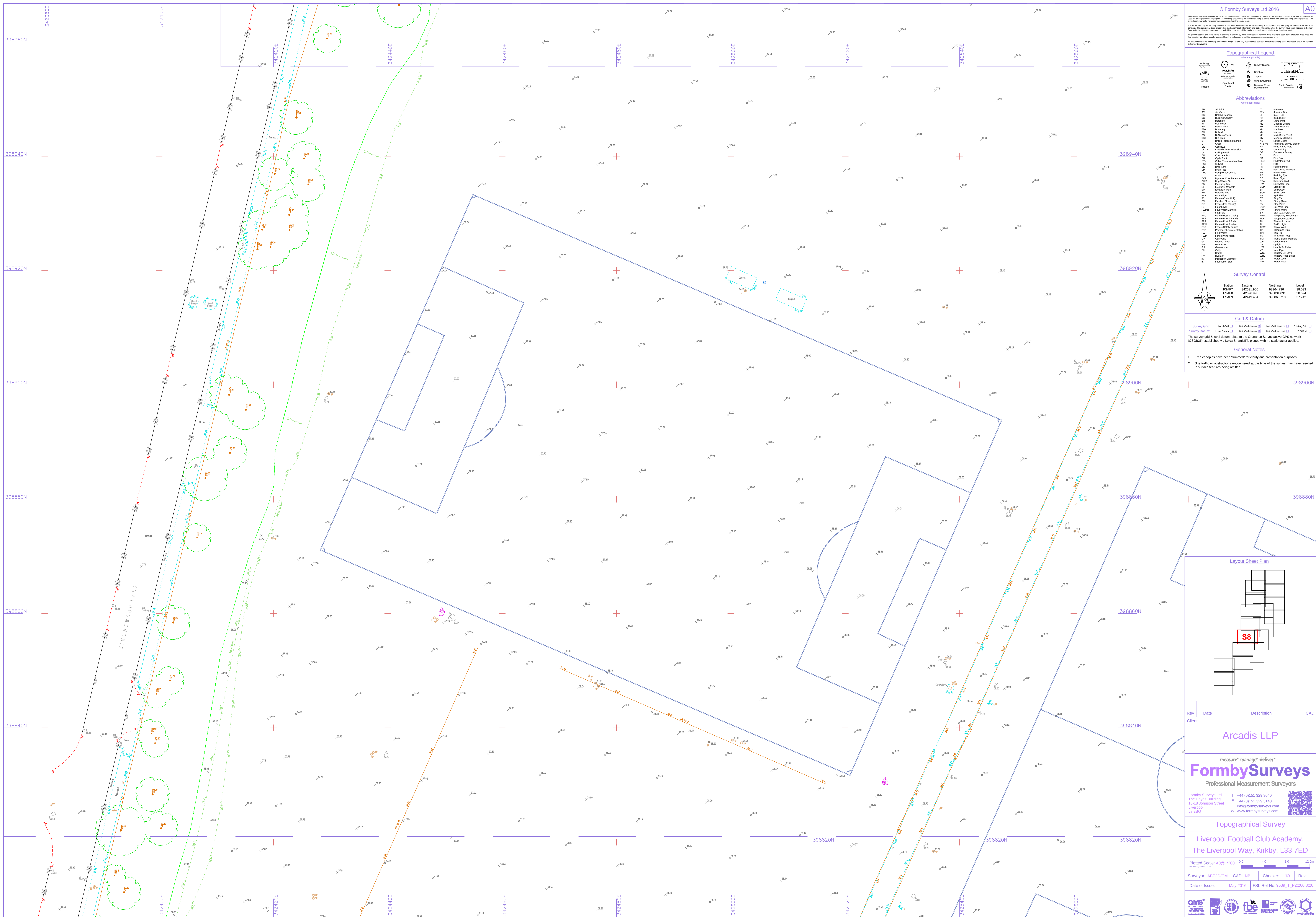
EmbrySur

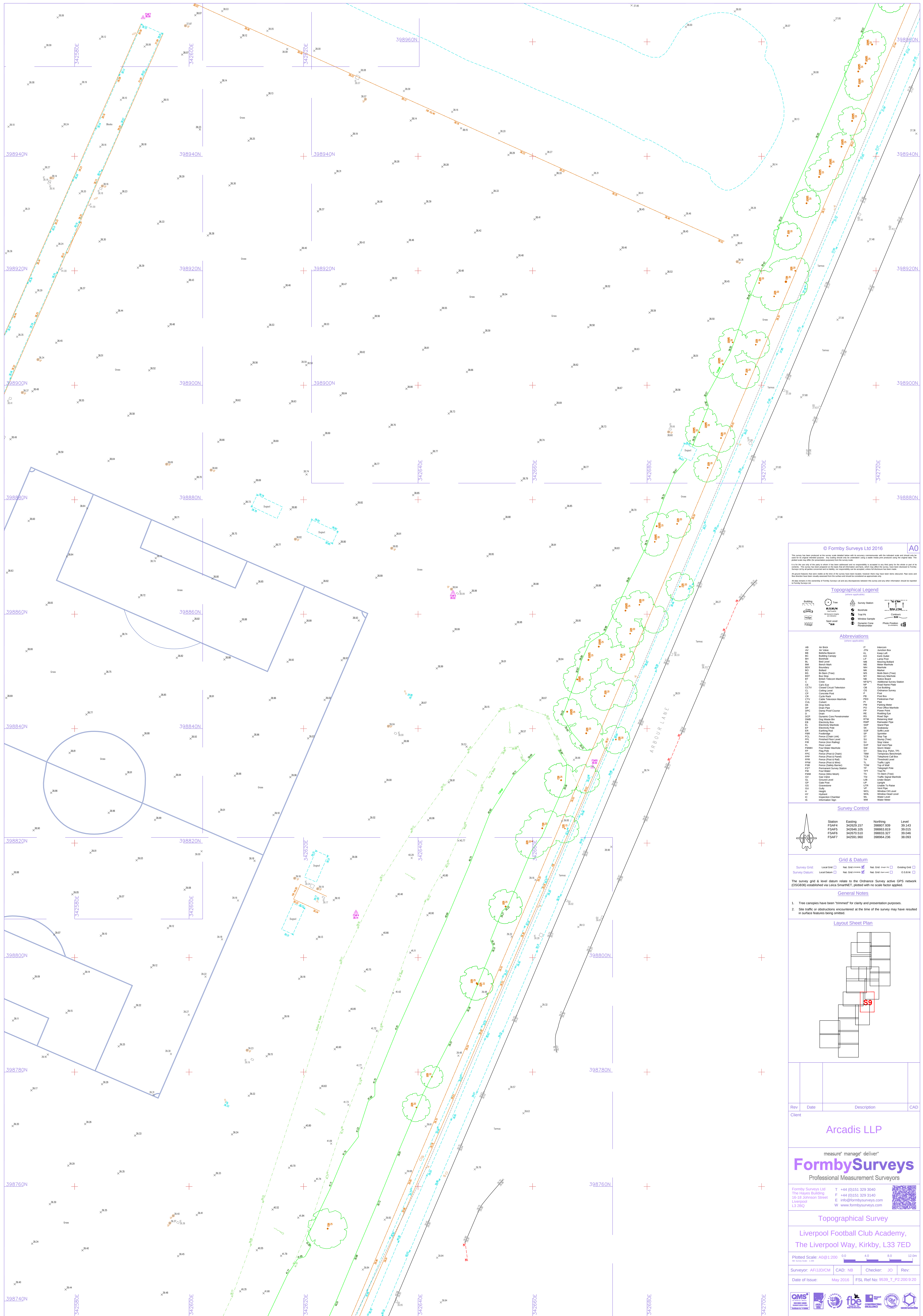
Copyright © 2014 John Wiley & Sons, Ltd. *J. Clin. Invest.* 124: 1001–1010 (2014) | doi:10.1111/jci.12531

[illegible]

Plotted Scale: A0@1:200 0.0 4.0 8.0 12.0

Surveyor: AF/11D/GM	CAD: NB	Checker: JO	Rev:
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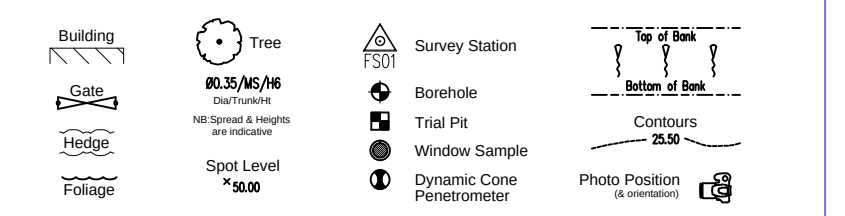
This survey has been produced at survey scale described below with all accuracy considerations with the indicated scale and should only be used for its original intended purpose. Any scaling should only be undertaken using a stable media print produced using the original Data. The printed scale may differ (for presentation purposes) from the survey scale.

It is to be used only for the purpose to whom it has been addressed and its responsibility is accepted by any third party for any error or part of its use. It is not to be used for any other purpose than that for which it was prepared and the user must be aware of the fact that any change in the survey has been discussed in *Forney* Survey Ltd by its perfect condition and no liability, nor responsibility can be accepted, unless there has been a need.

© Ground Images: These will reside at the time of the survey have been located, however their details have been obtained. Their scales and flow directions have been visually assessed from the surface and should be considered as approximate only.

© Data remains in the ownership of *Forney* Survey Ltd and any discrepancies between this survey and any other information should be reported to *Forney* Survey Ltd.

Topographical Legend



Abbreviations

AB	As Book	IT	ITronics
AC	Acoustic	ITW	Inter-Tech World
AD	Adams Beach	JP	Joint Park
AE	Adams Beach	JP	Joint Park
AF	Affairs	JP	Joint Park
AG	Ag	JP	Joint Park
AI	AI	JP	Joint Park
AL	Al	JP	Joint Park
AM	Am	JP	Joint Park
AN	And	JP	Joint Park
AO	As	JP	Joint Park
AP	As	JP	Joint Park
AQ	As	JP	Joint Park
AR	As	JP	Joint Park
AS	As	JP	Joint Park
AT	As	JP	Joint Park
AV	As	JP	Joint Park
AW	As	JP	Joint Park
AX	As	JP	Joint Park
AY	As	JP	Joint Park
AZ	As	JP	Joint Park
BA	As	JP	Joint Park
BB	As	JP	Joint Park
BC	As	JP	Joint Park
BD	As	JP	Joint Park
BE	As	JP	Joint Park
BF	As	JP	Joint Park
BG	As	JP	Joint Park
BH	As	JP	Joint Park
BI	As	JP	Joint Park
BJ	As	JP	Joint Park
BK	As	JP	Joint Park
BL	As	JP	Joint Park
BM	As	JP	Joint Park
BN	As	JP	Joint Park
BO	As	JP	Joint Park
BP	As	JP	Joint Park
BQ	As	JP	Joint Park
BR	As	JP	Joint Park
BS	As	JP	Joint Park
BT	As	JP	Joint Park
BU	As	JP	Joint Park
BV	As	JP	Joint Park
BW	As	JP	Joint Park
BX	As	JP	Joint Park
BY	As	JP	Joint Park
BZ	As	JP	Joint Park
CA	As	JP	Joint Park
CB	As	JP	Joint Park
CC	As	JP	Joint Park
CD	As	JP	Joint Park
CE	As	JP	Joint Park
CF	As	JP	Joint Park
CG	As	JP	Joint Park
CH	As	JP	Joint Park
CI	As	JP	Joint Park
CJ	As	JP	Joint Park
CK	As	JP	Joint Park
CL	As	JP	Joint Park
CM	As	JP	Joint Park
CN	As	JP	Joint Park
CO	As	JP	Joint Park
CP	As	JP	Joint Park
CQ	As	JP	Joint Park
CR	As	JP	Joint Park
CS	As	JP	Joint Park
CT	As	JP	Joint Park
CU	As	JP	Joint Park
CV	As	JP	Joint Park
CW	As	JP	Joint Park
CX	As	JP	Joint Park
CY	As	JP	Joint Park
CZ	As	JP	Joint Park
DA	As	JP	Joint Park
DB	As	JP	Joint Park
DC	As	JP	Joint Park
DD	As	JP	Joint Park
DE	As	JP	Joint Park
DF	As	JP	Joint Park
DG	As	JP	Joint Park
DH	As	JP	Joint Park
DI	As	JP	Joint Park
DJ	As	JP	Joint Park
DK	As	JP	Joint Park
DL	As	JP	Joint Park
DM	As	JP	Joint Park
DN	As	JP	Joint Park
DO	As	JP	Joint Park
DP	As	JP	Joint Park
DQ	As	JP	Joint Park
DR	As	JP	Joint Park
DS	As	JP	Joint Park
DT	As	JP	Joint Park
DU	As	JP	Joint Park
DV	As	JP	Joint Park
DW	As	JP	Joint Park
DX	As	JP	Joint Park
DY	As	JP	Joint Park
DZ	As	JP	Joint Park
EA	As	JP	Joint Park
EB	As	JP	Joint Park
EC	As	JP	Joint Park
ED	As	JP	Joint Park
EE	As	JP	Joint Park
EF	As	JP	Joint Park
EG	As	JP	Joint Park
EH	As	JP	Joint Park
EI	As	JP	Joint Park
EJ	As	JP	Joint Park
EK	As	JP	Joint Park
EL	As	JP	Joint Park
EM	As	JP	Joint Park
EN	As	JP	Joint Park
EO	As	JP	Joint Park
EP	As	JP	Joint Park
EQ	As	JP	Joint Park
ER	As	JP	Joint Park
ES	As	JP	Joint Park
ET	As	JP	Joint Park
EU	As	JP	Joint Park
EV	As	JP	Joint Park
EW	As	JP	Joint Park
EX	As	JP	Joint Park
EY	As	JP	Joint Park
EZ	As	JP	Joint Park
FA	As	JP	Joint Park
FB	As	JP	Joint Park
FC	As	JP	Joint Park
FD	As	JP	Joint Park
FE	As	JP	Joint Park
FF	As	JP	Joint Park
FG	As	JP	Joint Park
FH	As	JP	Joint Park
FI	As	JP	Joint Park
FJ	As	JP	Joint Park
FK	As	JP	Joint Park

Survey Control



Station	Easting	Northing	Level
F5AF4	342629.157	398077.939	39.143
F5AF5	342646.105	398663.819	39.015
F5AF6	342670.150	398633.327	39.046
F5AF7	342591.960	398964.236	38.093

Grid & Datum

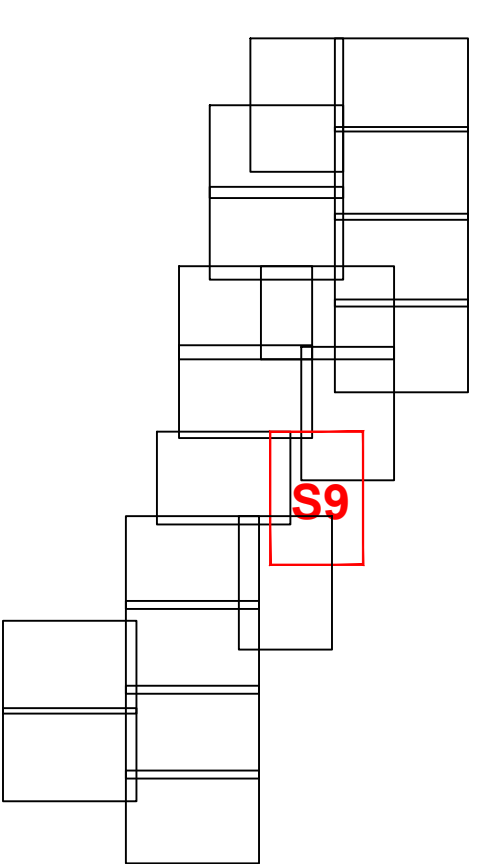
Survey Grid: Local Grid ☐ N.G. Grid (OSGB36) ☒ N.G. Grid (OSGB36) ☐ Existing Grid ☐
 Survey Datum: Local Datum ☐ N.G. Datum (OSGB36) ☒ N.G. Datum (OSGB36) ☐ O.S.B.M. ☐

The survey grid & level datum relate to the Ordnance Survey active GPS network (OSGB36) established via Leica SmartNET, plotted with no scale factor applied.

General Notes

1. Tree canopies have been "trimmed" for clarity and presentation purposes.
2. Site traffic or obstructions encountered at the time of the survey may have resulted in surface features being omitted.

Layout Sheet Plan



Rev	Date	Description	CAD
Client			

Arcadis LLP

measure* manage* deliver*

FormbySurveys

Professional Measurement Surveyors

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Topographical Survey
Liverpool Football Club Academy, The Liverpool Way, Kirkby, L33 7ED

Plotted Scale: A0@1:200
 NB: Survey Scale: 1:200

Surveyor: AF/JJD/CM	CAD: NB	Checker: JO	Rev:
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