

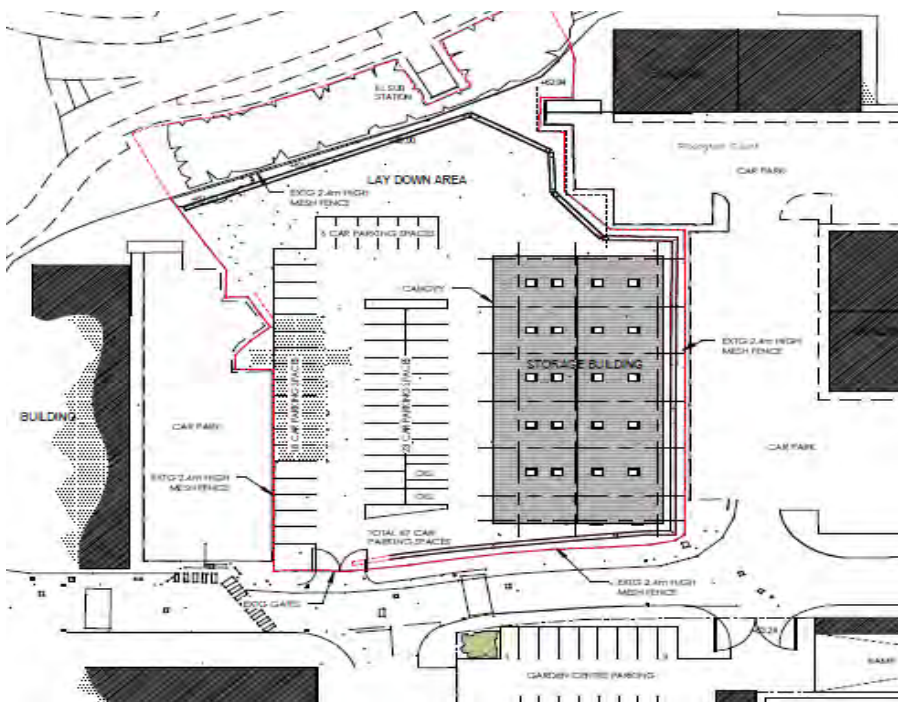
DRAINAGE STRATEGY

for

Development of Storage / Warehouse Building and Associated Car Park

at

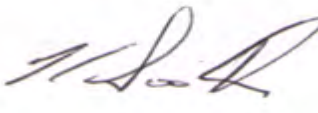
Pilkington Court, Sinclair Way, Prescot Business Park, Knowsley, L34 1QG



For

Andrew Banks (Agent)
Life Architecture Ltd
4 Grafton Walk
West Kirby
Wirral
CH48 7EJ

Contract No: LV1546
Dated: September 2025

Prepared by	Signature	Date
Ijaz Akram BEng Hons, Dip Surv		29/09/2025
Approved		
Ian Booth BEng Hons, CEng MStructE		29/09/2025

Issue	Description	Date	Originator	Approved
01	First Issue	29/09/2025	IA	IJB

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Whilst every effort has been made to fully inspect those parts of the building requested of us, no permanent or secured fixtures and fittings will have been removed. We will not have inspected woodwork or other parts of the structure which were covered, unexposed or inaccessible, and we are therefore unable to report that any such part of the property is free from defect.

Thomason Partnership Limited certify that they have carried out the work contained herein with due care and diligence to their best belief and knowledge based on the time and information available.

This report is made on behalf of Thomason Partnership Limited. By receiving it and acting on it, the client – or any third party relying on it – accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence).

THOMASONS

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1.0 **Executive Summary**

- 1.1 Thomasons have been commissioned to produce a Drainage Strategy in support of a commercial planning application on behalf of Life Architecture Ltd for land at Pilkington Court, Prescott Business Park, Prescott, Knowsley, L34 1QG. The existing site is designated as “brownfield” and is currently vacant land within a commercial business park.
- 1.2 The site has planning permission granted, Application Number 2400554FUL-DN, subject to conditions. Refer to **Appendix A** for details of the decision notice.
- 1.3 In accordance with the NPPG, a drainage strategy for the site has been developed that follows the hierarchy of discharge and it has been demonstrated that the most suitable option for treatment of the surface water generated from the development is for it to be captured and released from the site at a controlled rate of no greater than 10l/s via an existing 150mm diameter stub connection from the site to the existing private business park sewer system. **Appendix B**
- 1.4 As the site was deemed to be brownfield, the rationale method was used to obtain an existing discharge rate for the site of 50l/s, however, this was discounted by 80% to provide overall betterment. The resulting design discharge rate used was 10l/s.
- 1.5 The foul connection from the site is to discharge, separately, via an existing 150mm stub connection from the site to the existing private business park sewer system. Refer to Drainage Strategy Drawing in **Appendix B**
- 1.6 The restricted surface water generated from the new impermeable areas within the site have been modelled for the 1 in 1, 1 in 30 and the 1 in 100 +40% CC for a range of storm durations. Inundation resulted from the 1 in 100-year storm and was captured and routed to low lying areas within the car park away from neighbouring infrastructure. Hydraulic model summary results are provided in **Appendix C** along with a surface water catchment plan and flood routing plan provided within **Appendix B**.
- 1.7 SuDS was considered and incorporated into the surface water management for the site in the form of rainwater harvesting. All surface water generated from the roof area is captured and stored within an above ground harvesting system.

2.0 Introduction

- 2.1 Thomasons have been commissioned to produce a Drainage Strategy in support of a commercial planning application on behalf of Life Architecture Ltd for land at Pilkington Court, Prescott Business Park, Prescott, Knowsley, L34 1QG. The existing site is designated as “brownfield” and is currently vacant land within a commercial business park.
- 2.2 The site is in Flood Zone 1 (low risk) and is less than 1 ha, therefore a site-specific Flood Risk Assessment is not required. However, the principles of NPPF will still be applied within the drainage strategy to ensure that the site does not increase flood risk to downstream properties
- 2.3 The site is currently vacant and has access via a private road off Sinclair Way. The development site has both surface water and foul stub connections installed for future development. Refer to Architects’ drawings with **Appendix A** for details of the proposed works and location
- 2.4 The topographical survey, provided for reference within **Appendix A** shows that the site is fairly flat and is overlain with compacted stone surface. The site is bound to the North, East and South by a retaining wall and building to the west. Access is via a private road to the South of the site.

3.0 Legislative Context

- 3.1 The site is located within Flood Zone 1 and is less than 1ha. Therefore, a site-specific FRA is not required. The proposals outlined in this report will still comply with NPPF and LLFA guidance. Where adoptable sewers are to be proposed, sewers for adoption (SfA) standards apply, otherwise the latest Building Regulations apply.
- 3.2 Although SuDS is a material consideration as part of the guidance of Ciria C753 (2015). The site is restricted in terms of levels, layout and underlying formation. However, SuDS will be considered and other options developed in the absence of SuDS based features.
- 3.3 In accordance with the drainage hierarchy as set out in the NPPF, priority should be given to the method of surface water disposal in the following order: re-use (rainwater harvesting), infiltration, outfall to watercourse, and finally, discharge to sewer.

4.0 Proposed Drainage Strategy

4.1 Surface Water

- 4.1.1 As per the NPPF the hierarchy for the treatment of surface water on the site has been followed.
- 4.1.2 Infiltration has been discounted due to the poor infiltration properties found on site due to the rock strata below ground. Bore holes were undertaken which show the rock depths and details can be found in **Appendix A**.
- 4.1.3 In addition to the bore holes, site trial pits were undertaken to confirm the levels at which rock was found on site. Photos have been provided within **Appendix A** for reference.
- 4.1.4 For the findings provided in 4.1.2 and 4.1.3, a SuDS based infiltration system has been discounted.
- 4.1.5 There are no surface water bodies conveniently located near the proposed development for connection therefore connection to a surface water body has also been discounted.
- 4.1.6 There are existing foul and surface water stub connections ready to serve the site which connect into the private business park sewers network. These private sewers discharge to adopted sewers within Sinclair Way. Refer to sewer map provided in **Appendix A**.
- 4.1.7 It is proposed to control the surface water discharge from the site using a Hydrobrake vortex control unit, see **Appendix A** for details, set to a maximum forward flow rate of 10l/s
- 4.1.8 It was agreed in a prior meeting with the LLFA that the site would be designated a Brownfield site. Based on brownfield and using the Rationale Method, an existing run off rate of approximately 53l/s based on an area of 0.383ha and a rainfall intensity of 50mm/h
- 4.1.9 To provide a level of betterment for the site it is proposed to reduce the existing run off rate by 80% the design forward flow rate would be 10l/s. This rate will allow for self-cleansing of the pipework. Any storage requirements due to the limit on discharge of surface water is to be stored upstream of the vortex control unit within oversized manholes and sewer pipes.
- 4.1.10 As previously mentioned, SuDS is a material consideration and as explained, due to the depths of low-lying rock, poor infiltration due to mud stone and the existing outfall stub levels, SuDS based system would not be possible on this site.

- 4.1.11 In addition to the comments in 4.1.12, the site is restricted in incorporating ponds, swales, rain gardens etc as SuDS surface features due to the car parking and storage / laydown requirements for the site leaving no room for infiltration type features.
- 4.1.12 The NPPF hierarchy of surface water treatment has recently been upgraded and now prioritises the re use of rainwater as the first priority on the hierarchy of surface water treatment and management. In line with this it is proposed to install a rainwater harvesting system that will cater entirely for the roof water runoff.
- 4.1.13 The rainwater harvesting system proposed will retain all surface water generated for all storm periods and durations. The collected surface water will be re used within the building welfare facilities and for irrigation use on the adjacent garden centre site.
- 4.1.14 The installed harvesting system will be linked to the met office weather warning system and will automatically drain down, through building usage, to prepare for storm storage requirements. For details of the harvesting system, see **Appendix A** for details of the Solo System provided by Stormsaver.
- 4.1.15 As the roof water does not enter the surface water sewer system it is not included within the surface water hydraulic calculations for the site.
- 4.1.16 The site has been developed using a separate foul and surface water sewer system with the surface water being attenuated at a forward flow rate of 10l/s. Both the foul and surface have their own separate system through to the adopted drains within Sinclair Way.
- 4.1.17 The proposed drainage strategy has been modelled for several storm return periods and for various durations for the 1 in 1 year, 1 in 30 year and the 1 in 100 year + 40% CC. refer to **Appendix C** for the hydraulic summary results and **Appendix B** for the drainage strategy drawings.
- 4.1.18 The storm-water storage volumes generated have been contained within the pipe and manhole system with no flooding for all storm periods up to the 30-year storm.
- 4.1.19 The 100-year storm event plus a 40% for climate change, for which the hydraulic calculations are provided for in **Appendix C**, resulted in some out of chamber flooding from SMH5 in the order of approximately 15.6 cubic metres.

4.1.20 SMH5 is at the highest point on the network and located at the lowest level within the car park area.

To mitigate any flooding to surrounding areas levels have been sympathetically designed to provide a low point in the car park area where any inundation will be directed and stored until storm conditions recede and water eventually dissipates to the onsite sewer network.

4.1.21 A flood routing plan, showing overland flows in relation to indicative site levels, is provided within **Appendix B**.

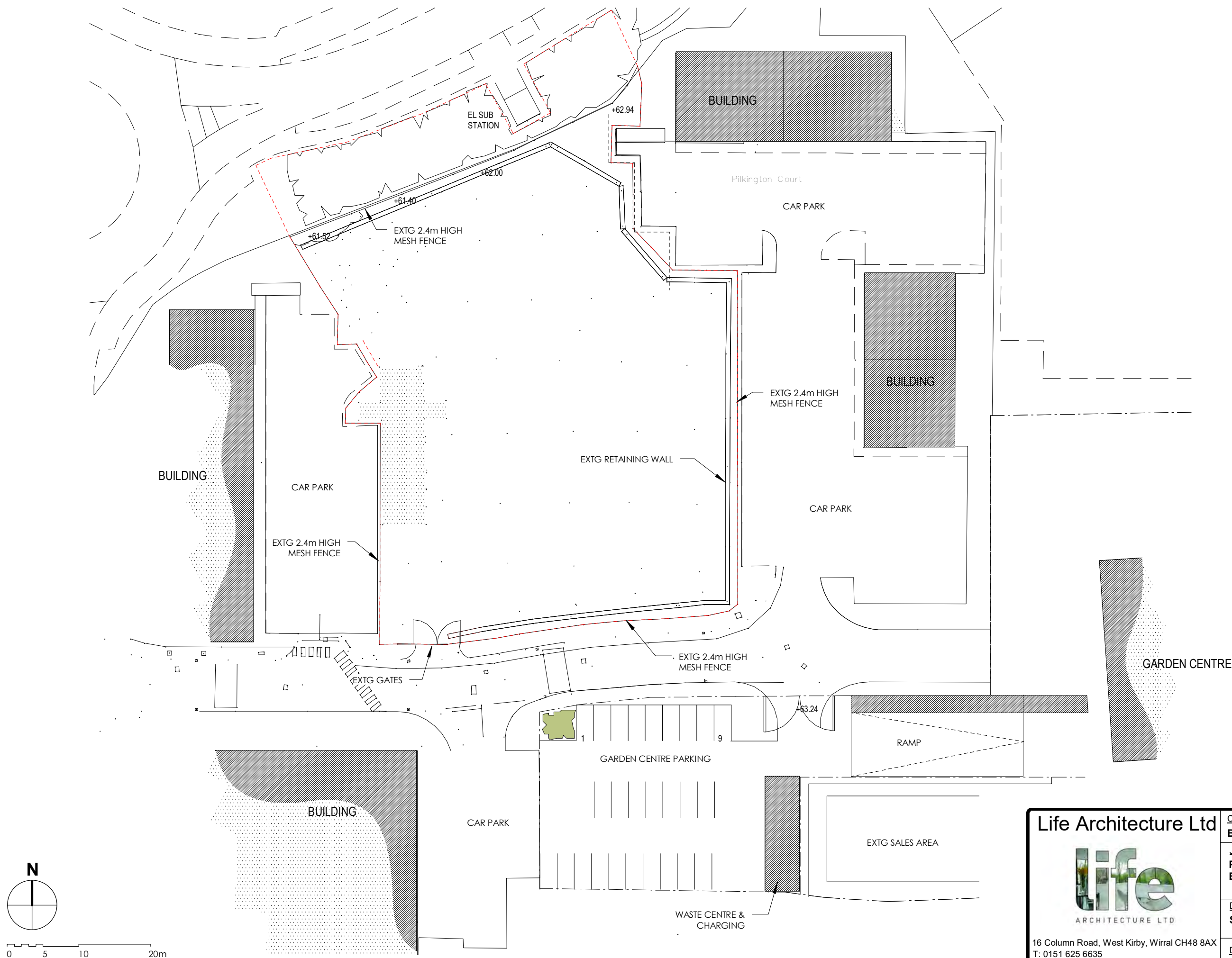
4.2 Foul Water

4.2.1 The foul is to discharge from the development via the existing on-site stub connection to the existing private sewer system to the south of the site. Refer to drainage strategy plan within **Appendix B**.

APPENDIX A – Site Plans and Documents

SITE LOCATION PLAN
AREA 5 HA
SCALE 1:1250 on A4
CENTRE COORDINATES: 346585, 392198





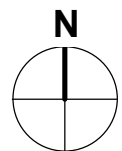
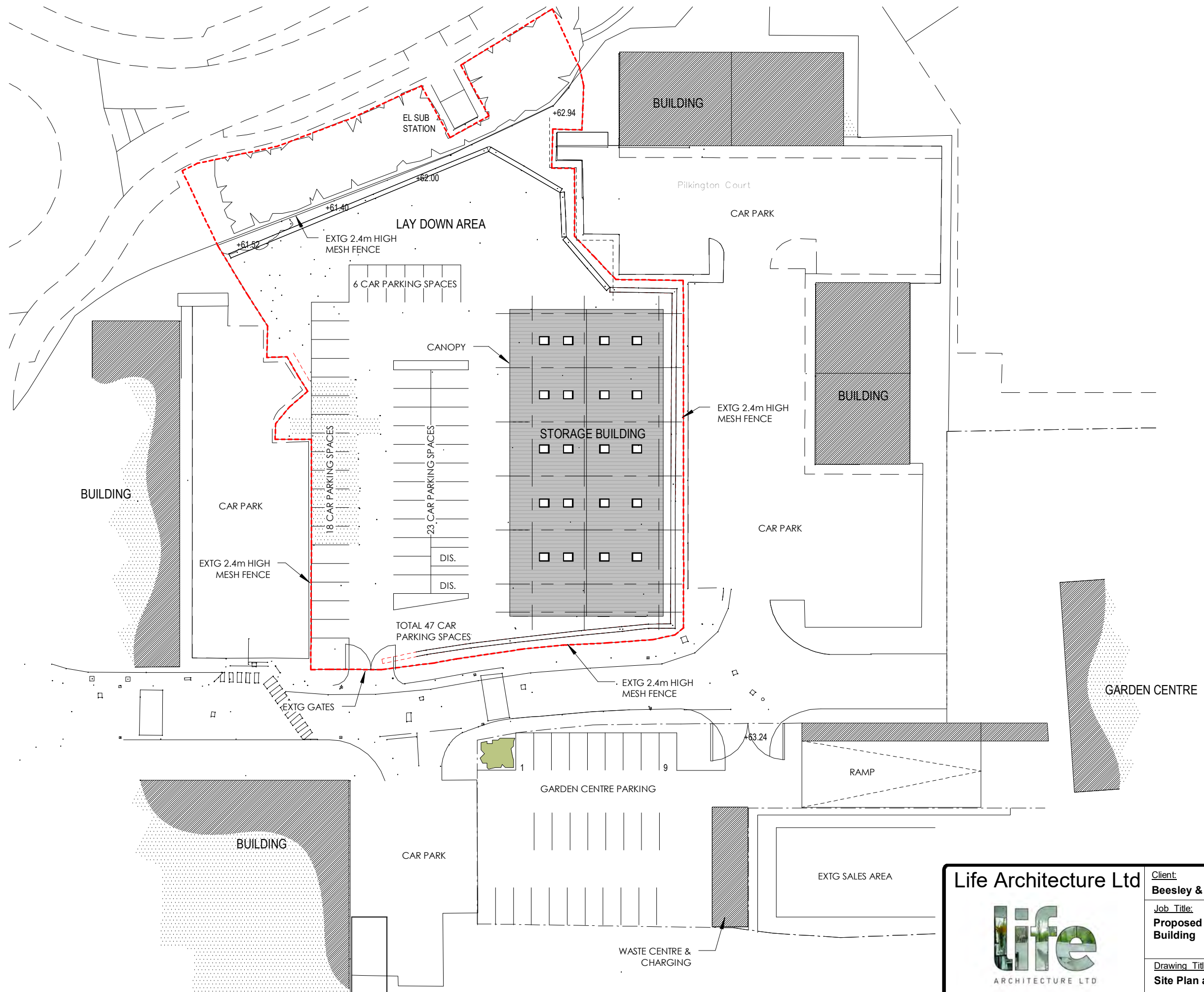
Life Architecture Ltd



ARCHITECTURE LTD

16 Column Road, West Kirby, Wirral CH48 8AX
T: 0151 625 6635
M: 07885 518 154
E: andrew@lifearchitecture.co.uk

Client: Beesley & Fildes			
Job Title: Proposed Offices & Storage Building			
Drawing Title: Site Plan as Existing			
Date: Apr 2024	Scale: 1 : 500	Rev:	Dwg No: PL02



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M: 07885 518 154
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Client: Beesley & Fildes			
Job Title: Proposed Offices & Storage Building			
Drawing Title: Site Plan as Proposed			
Date:	Scale:	Rev:	Dwg No:
Apr 2024	1 : 500		PL03



Knowsley Council

**REGENERATION AND ECONOMIC DEVELOPMENT
DEPARTMENT**

TOWN AND COUNTRY PLANNING ACT 1990

PLANNING PERMISSION

Application No: 24/00554/FUL

Name and address of applicant

Whitakers Garden Centre
James Whitaker & Sons (Nurserymen)
Ltd
Liverpool Road
Prescot
Merseyside
L34 5UD

Name and address of agent

Life Architecture Ltd
4 Grafton Walk
West Kirby
Wirral
CH48 7EJ

Date of Receipt: 14 October 2024

Date Valid: 10 December 2024

Address/Location Of Development:

**Pilkington Court
Sinclair Way
Prescot Business Park
Prescot
Knowsley
L34 1QG**

Description of Development:

**ERECTION OF A STORAGE/WAREHOUSE BUILDING (USE CLASS B8) AND
ASSOCIATED CAR PARKING**

The Council of the Metropolitan Borough of Knowsley hereby give notice in pursuance of the above Act(s) that Planning Permission has been **granted** for the carrying out of the development referred to above in accordance with the application and plans submitted subject to the following condition(s):

1. The development must be begun not later than the expiration of three years beginning with the date of this permission.

Reason: In order to comply with the requirements of Section 91 of the Town and Country Planning Act 1990 (as amended).

2. The development hereby permitted shall be carried out in accordance with the approved plans and documents listed in Schedule 1.

Reason: For the avoidance of doubt.

3. Notwithstanding any description of materials in the application, no above ground construction works shall take place until full specification of materials to be used externally on the building has been submitted to and approved in writing by the Local Planning Authority. Such details shall include the type, colour and texture of the materials and should be reflective of those within the surrounding area, unless otherwise agreed in writing by the Local Planning Authority. The development shall be carried out only in accordance with the agreed schedule of materials.

Reason: To preserve the character and appearance of the local area and in the interests of visual amenity and to comply with Policy CS19 of the Knowsley Local Plan Core Strategy, adopted January 2016, and the National Planning Policy Framework.

4. Prior to the commencement of development, details of a sustainable surface water drainage scheme and a foul water drainage scheme shall be submitted to and approved in writing by the Local Planning Authority. The drainage schemes must include:
 - (i) An investigation of the hierarchy of drainage options in the National Planning Practice Guidance (or any subsequent amendment thereof). This investigation shall include evidence of an assessment of ground conditions and the potential for infiltration of surface water in accordance with BRE365 (the LLFA will be expecting above ground and green SuDS as a source control to be prioritised to promote water quality, amenity and biodiversity);
 - (ii) Drainage drawings, summary calculations and results of all investigations detailing the surface water drainage works as appropriate;
 - (iii) Should the surface water from the proposal is to connect to the public sewer system, provision of evidence that the site has an agreed discharge point and rate for post-development situation from responsible authorities will be required.
 - (iv) A restricted rate of discharge of surface water agreed with the local planning authority (if it is agreed that infiltration is discounted by the investigations);
 - (v) Should the proposals include works to an ordinary watercourse, under the Land drainage Act 1991, as amended by the Flood and Water Management Act 2010, a prior consent of the Lead Local Flood Authority will be required for this work. This consent will be required as a separate permission to planning.
 - (vi) Model Information (Micro Drainage or similar approved) to include a plan showing pipework model numbering and network details.
 - (vii) Results showing all the modelling criteria and summary network results for critical 1 in 2 year, 1 in 30 year and 1 in 100 year plus 40% CC storm events showing maximum water level, flow and velocity and details of any surface flooding anticipated will be required.
 - (viii) A drawing showing the proposed impermeable and permeable areas, suitably annotated will be required.
 - (ix) Drainage Plan, including levels of the proposed drainage systems including proposed ground and finished floor levels in AOD, showing drainage layout, manholes including cover and invert levels, pipe sizes and gradients, all on -line controls, on and off line storage structures and outfall details will be required.
 - (x) Plan showing overland exceedance routes in the event of a failure of the drainage system or storm event in excess of the 1 in 100 + 40% CC storm event will be required.
 - (xi) Summarised drainage report setting out the proposed drainage strategy, design criteria, and results of the calculations/modelling demonstrating compliance with the above will be required.

- (xii) Where third party agreements to construct sewers and to discharge flows are required, then written evidence of these two agreements shall be provided.
- (xiii) A timetable for implementation of the drainage works including an assessment of any phasing of the development shall be expected.
- (xiv) Demonstration of adequate water quality of the off-site surface water flows (draining into a sewer, watercourse and ground) in accordance with the Simplified Index Approach as set out within Section 26 of the SUDS Manual (C753) can be achieved during all phases of the development will be required.
- (xv) In designing the drainage strategy, it must demonstrate the surface water runoff up to 1 in 100 year plus 40% CC event will be retained within the site with no negative impact on surrounding areas. At the same time, an assessment will be required to demonstrate that the site will not be impacted by off site surface water runoff in post development situation.
- (xvi) Where SuDS are only proposed in part or not at all, then a full justification statement shall be provided to demonstrate why it is not considered appropriate or reasonable.
- (xvii) Incorporate mitigation measures to manage the risk of sewer surcharge where applicable; and
- (xviii) Foul and surface water shall drain on separate systems.

The approved schemes shall also be in accordance with the Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) or any subsequent replacement national standards.

Prior to occupation of the proposed development, the drainage schemes shall be completed in accordance with the approved details and retained thereafter for the lifetime of the development.

Reason: To ensure a satisfactory drainage system is provided to serve the site in accordance with Paragraph 163 of the National Planning Policy Framework, House of Commons Written Statement 161 for Sustainable Drainage Systems, Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) and Policies CS2 and CS24 of the Knowsley Local Plan: Core Strategy (January 2016).

5. Prior to occupation of the development a sustainable drainage management and maintenance plan for the lifetime of the development shall be submitted to the local planning authority and agreed in writing. The sustainable drainage management and maintenance plan shall include as a minimum:
 - (i) Arrangements for adoption by an appropriate public body or statutory undertaker, or, management and maintenance by a resident's management company;
 - (ii) Arrangements for inspection and ongoing maintenance of all elements of the sustainable drainage system to secure the operation of the surface water drainage scheme throughout its lifetime;
 - (iii) Details for planned maintenance and a mechanism for remedial and urgent repair works and
 - (iv) Means of access for inspection and maintenance purposes.
 The development shall subsequently be completed, maintained and managed in accordance with the approved plan.

Reason: To ensure that management arrangements are in place for the sustainable drainage system in order to manage the risk of flooding and pollution during the lifetime of the development

6. No above ground works shall take place until a plan showing details of the areas for cycle parking, motorcycle parking and electric vehicle charging has been submitted

to and approved in writing by the local planning authority, and the development shall not be brought into use until such areas have been provided, constructed and surfaced in complete accordance with the approved plans. These areas shall be retained at all times thereafter.

Reason: To ensure that adequate on site vehicle parking/manoeuvring facilities are provided in the interests of highway safety and amenity, and to comply with Policies CS2, CS7 and CS19 of the Knowsley Local Plan Core Strategy, adopted January 2016.

7. Development shall not commence until a scheme has been submitted to and approved in writing by the local planning authority which specifies the provisions to be made for the control of noise emanating from the site. The scheme shall be based on the results of a noise assessment which suitably characterises the noise climate at nearby residential dwellings (Tenlands Drive) both prior to and following the operation of the development permitted.

The following noise levels shall be met after implementation of the scheme; Fixed plant and machinery associated with the development shall be designed to a level that is at least 5dB(A) below the existing LA90 background noise level as measured during the relevant time period. Any tonal, impulsive and/or irregular noise would be addressed by imposing a penalty as per the methodology set out in BS 4142:2014+A1:2019, Methods for rating and assessing industrial and commercial sound. Noise limits for fixed plant are to apply at a position 1 metre from the closest affected window of the nearest noise sensitive property.

All works which form part of the scheme shall be implemented in full in accordance with the scheme as agreed. Documentary evidence of the works shall be submitted to and approved in writing by the Local Planning Authority prior to first use of the development.

Reason: To ensure the satisfactory development of the site and in the interests of protecting the amenity of neighbouring occupiers and to comply with saved Policies H5, and ENV2 of the Knowsley Replacement Unitary Development Plan, adopted June 2006 and Policy CS2 of the Core Strategy, adopted January 2016.

8. Contaminated Land

A. Risk Assessment

No development shall take place until an assessment of the risks posed by any contamination has been submitted to and approved in writing by the Local Planning Authority. This assessment must be undertaken by a suitably qualified contaminated land practitioner, in accordance with authoritative guidance (CLR 11), and shall assess any contamination on the site, whether or not it originates on the site.

Moreover, it must include (were relevant):

- (i) a survey of the extent, scale and nature of contamination;
- (ii) an assessment of the potential risks to:
 - human health,
 - property (existing or proposed) including buildings, crops, livestock, pets, woodland and
 - service lines and pipes,
 - adjoining land,
 - groundwaters and surface waters,
 - ecological systems,
 - archaeological sites and ancient monuments.

B. Submission of Remediation Scheme

Where land affected by contamination is found which poses unacceptable risks, no development shall take place until a detailed remediation scheme has been submitted to and approved in writing by the Local Planning Authority. The scheme must include an appraisal of remediation options, identification of the preferred option(s), the proposed remediation objectives and remediation criteria, and a description and programme of the works to be undertaken including the verification plan. As a minimum, the scheme must ensure that the site will not qualify as contaminated land under Part 2A of the Environmental Protection Act 1990 in relation to its intended use.

C. Implementation of Approved Remediation Scheme

The approved remediation scheme shall be implemented and a verification report submitted to and approved in writing by the Local Planning Authority, prior to the development (or relevant phase of development) being brought into use.

D. Reporting of Unexpected Contamination

In the event that contamination is found at any time when carrying out the approved development that was not previously identified it must be reported immediately to the Local Planning Authority. Development on the part of the site affected must be halted and a risk assessment carried out and submitted to and approved in writing by the Local Planning Authority. Where unacceptable risks are found remediation and verification schemes shall be submitted to and approved in writing by the Local Planning Authority. These shall be implemented prior to the development (or relevant phase of development) being brought into use.

E. Materials Management Plan

Prior to the reuse of site won materials ('waste' and non-waste) a Materials Management Plan, signed off by a Qualified Person, shall be submitted to and agreed in writing with the local planning authority. The MMP shall demonstrate that any reuse of contaminated materials does not result in increased risk to the environment or human health.

F. Importation of Soil/Material

No soil (topsoil and subsoil) is to be imported to the site until it has been tested for contamination and assessed for its suitability for the proposed development; a suitable methodology for testing this material should be submitted to and agreed by the Local Planning Authority prior to the soils being imported onto site. The methodology should include the sampling frequency, testing schedules, criteria against which the analytical results will be assessed (as determined by the risk assessment) and source material information. The analysis shall then be carried out and evidence submitted to and approved in writing to by the Local Planning Authority.

Reason: In the interests of safety, to prevent pollution of the environment and to comply with Saved Policy ENV5 of the Knowsley Replacement Unitary Development Plan, adopted June 2006.

9. No part of the development hereby permitted shall be commenced until a Construction Management Plan has been submitted to and agreed in writing by the Local Planning Authority that details the means of mitigation of construction effects. This shall include but not be limited to the following: -

- oMethods for the mitigation of noise and vibration from building works, including any piling works, and also from the operation of any temporary power generation or pumping plant which will operate overnight.
- oMethods for dust control and suppression.

- oDetails of wheel washing facilities including location and type direction of vehicles to and from the site and process of accessing facilities.
- oThe areas for the storage of plant and materials.
- oLocation of site compound.
- oDetails of relevant pest control measures
- oDetails of hours of construction - No works shall take place outside the hours of:
 - a. 0800 to 1800 Monday to Friday (excluding Public Holidays)
 - b. 0800 to 1300 Saturday

All site works shall then proceed only in accordance with the approved management plan unless otherwise agreed in writing beforehand with the Local Planning Authority.

Reason: To ensure the satisfactory development of the site and in the interests of protecting the amenity of neighbouring occupiers and to comply with Policy CS2 in the Knowsley Local Plan Core Strategy January 2016 and saved Policy ENV2 of the Knowsley Replacement Unitary Development Plan, adopted June 2006.

10. Prior to the commencement of development, a lighting scheme, which includes the steps necessary to minimise light intrusion to the surrounding residential properties, shall be submitted for the written approval of the local planning authority. The scheme shall include an isolux plot to demonstrate that the obtrusive light limitations suggested in the relevant guidance are met.

All works which form part of the scheme shall be completed prior to operation and shall be maintained thereafter in accordance with the agreed scheme.

Reason: To ensure the satisfactory development of the site and in the interests of protecting the amenity of neighbouring occupiers and to comply with saved Policies H5, and ENV2 of the Knowsley Replacement Unitary Development Plan, adopted June 2006 and Policy CS2 of the Core Strategy, adopted January 2016.

11. Prior to the commencement of development, a biodiversity gain plan must be submitted to the local planning authority. The plan must include the following:
 - (a) information about the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat,
 - (b) the pre-development biodiversity value of the onsite habitat,
 - (c) the post-development biodiversity value of the onsite habitat,
 - (d) any registered offsite biodiversity gain allocated to the development and the biodiversity value of that gain in relation to the development,
 - (e) any biodiversity credits purchased for the development, and
 - (f) such other matters as the Secretary of State may by regulations specify.
 The plan will be informed by a landscaping scheme (see condition 12). Development cannot commence until the biodiversity net gain plan has been approved by the local planning authority.

Reason: To comply with the Environment Act 2021.

12. Notwithstanding the details shown on the approved drawings, no part of the development shall be occupied until full details of both hard and soft landscaping works have been submitted to and approved in writing by the Local Planning Authority.

The details shall relate to all land surfaces not built upon and shall include:

- a) Land-levels and gradients resulting in the formation of any banks, terraces or other earthworks
- b) hard surfaced areas and materials,

- c) planting plans, specifications and schedules, planting size, species and numbers/densities, trees to be retained and a scheme for the timing / phasing of work.
- d) existing plants / trees to be retained
- e) A detailed regime for the ongoing and longer term maintenance of all soft landscaping is also required to be submitted for approval.

The approved landscaping works shall be implemented and completed prior to the occupation of the dwelling to which it relates unless otherwise agreed in writing by the Local Planning Authority.

Any trees or shrubs planted or retained in accordance with this condition which are removed, uprooted, destroyed, die or become severely damaged or become seriously diseased within 5 years of planting shall be replaced within the next planting season by trees or shrubs of similar size and species to those originally required to be planted.

Reason: To ensure that the site is satisfactorily landscaped having regard to its location and the nature of the proposed development and to comply with Saved Policy H5 of the Knowsley Replacement Unitary Development Plan, adopted June 2006, Policy CS19 of the Knowsley Local Plan Core Strategy, adopted January 2016, and the National Planning Policy Framework.

13. An undeveloped buffer (no hardstanding) of three metres in width must be retained at the northern boundary to protect the existing trees and landscaping.

Reason: To ensure that the proper protection of trees in the interests of visual amenity and to comply with Policies CS2 and CS19 of the Knowsley Local Plan Core Strategy, adopted January 2016 and saved Policy DQ4 of the Knowsley Replacement Unitary Development Plan, adopted June 2006.

SCHEDULE 1

Date Received	Ref. No	Version	Drawing/Document Title
14/10/2024	-	-	Location Plan
14/10/2024	PL02	-	Site Plan as Existing
14/10/2024	PL03	-	Site Plan as Proposed
14/10/2024	PL04	-	Plan as Proposed (Floor Plan)
14/10/2024	PL05	-	Elevations as Proposed Sheet 1
14/10/2024	PL06	-	Elevations as Proposed Sheet 2
14/10/2024	Sept 2024	-	Design and Access Statement

REASON(S) FOR THE GRANTING OF PLANNING PERMISSION

The decision to grant planning permission has also been taken having regard to the policies and proposals as set out below, and to all relevant material considerations including supplementary planning guidance:-

This informative is only intended as a summary of the reason(s) for the granting of planning permission. Should you require any further details relating to the decision please contact the relevant case officer (Jo Sheridan on 0151 443 2376)

ARTICLE 35 STATEMENT

The Local Planning Authority has acted positively and proactively in determining this application by identifying matters of concern within the application (as originally submitted) and negotiating with the applicant, acceptable amendments to the proposal to address those concerns. As a result, the Local Planning Authority has been able to grant planning permission for an acceptable proposal, in accordance with the presumption in favour of sustainable development, as set out within the National Planning Policy Framework.

NOTE FOR APPLICANT:

IMPORTANT - PLEASE READ CAREFULLY THE NOTES BELOW AS FAILURE TO COMPLY COULD MAKE THE DEVELOPMENT HEREBY PERMITTED UNAUTHORISED

- 1) This planning permission is granted in strict accordance with the approved plans. It should be noted however that:
 - a) Any variation from the approved plans following commencement of the development, irrespective of the degree of variation, will constitute unauthorised development and may be liable to enforcement action.
 - b) You or your agent or any other person responsible for implementing this permission should inform Planning Services immediately of any proposed variation from the approved plans and ask to be advised as to the best method to resolve the matter. Most proposals for variation to the approved plans will require the submission of a new planning application.
- 2) This permission is granted subject to conditions and it is the owner of the property and the person responsible for the implementation of the development who will be fully responsible for their compliance throughout the development and beyond.
- 3) If there is a condition that requires work to be carried out or details to be approved prior to the commencement of the development this is called a "condition precedent". The following should be noted with regards to conditions precedent.
 - a) If a condition precedent is not complied with prior to the start of development, the whole of the development will be unauthorised and you may be liable to enforcement action.
 - b) In addition, if the requirements of a condition precedent are subsequently not complied with, the development is unauthorised and the only way to rectify the development is the submission of a new application.

If any other type of condition is breached then you will be liable to a breach of condition notice.

- 2 Please refer to United Utilities letter dated 10th January 2025.
- 3 Please refer to Merseyside Fire & Rescue Service dated 7th January 2025.
- 4 4. The proposed development lies within an area that has been defined by the Mining Remediation Authority as containing coal mining features at surface or shallow depth. These features may include: mine entries (shafts and adits); shallow coal workings; geological features (fissures and break lines); mine gas and former surface mining sites. Although such features are seldom readily visible, they can often be present and problems can occur, particularly as a result of new development taking place.

Any form of development over or within the influencing distance of a mine entry can be dangerous and raises significant land stability and public safety risks. As a general

precautionary principle, the Mining Remediation Authority considers that the building over or within the influencing distance of a mine entry should be avoided. In exceptional circumstance where this is unavoidable, expert advice must be sought to ensure a suitable engineering design which takes account of all relevant safety and environmental risk factors, including mine gas and mine-water. Your attention is drawn to the Mining Remediation Authority Policy in relation to new development and mine entries available at:

Building on or within the influencing distance of mine entries - GOV.UK

Any intrusive activities which disturb or enter any coal seams, coal mine workings or coal mine entries (shafts and adits) requires a Mining Remediation Authority Permit. Such activities could include site investigation boreholes, excavations for foundations, piling activities, other ground works and any subsequent treatment of coal mine workings and coal mine entries for ground stability purposes. Application forms for Mining Remediation Authority permission and further guidance can be obtained from The Mining Remediation Authority's website at: www.gov.uk/get-a-permit-to-deal-with-a-coal-mine-on-your-property

What is a permit and how to get one? - GOV.UK (www.gov.uk)

In areas where shallow coal seams are present caution should be taken when carrying out any on site burning or heat focused activities.

If any future development has the potential to encounter coal seams which require excavating, for example excavation of building foundations, service trenches, development platforms, earthworks, non-coal mineral operations, an Incidental Coal Agreement will be required. Further information regarding Incidental Coal Agreements can be found here - <https://www.gov.uk/government/publications/incidental-coal-agreement/guidance-notes-for-applicants-for-incidental-coal-agreements>

If any coal mining feature is encountered during development, this should be reported immediately to the Mining Remediation Authority on 0345 762 6846 or if a hazard is encountered on site call the emergency line 0800 288 4242. Further information is available on the Mining Remediation Authority website at: Mining Remediation Authority - GOV.UK

Informative Note valid from 1st January 2025 until 31st December 2026



Executive Director - Regeneration and Economic Development

Date: 31 January 2025

IMPORTANT NOTES FOR YOUR ATTENTION:

- 1. This permission refers only to that required under the Town and Country Planning Acts and does not include any consent or approval under any other enactment, bylaw, order or regulation.**
- 2. This permission refers only to those plans submitted as part of the Planning Application a copy of which is retained by the Local Planning Authority. The Local Planning Authority should be contacted in writing if it is proposed to amend these plans in any way as a further permission, may be required.**
- 3. You should ensure that you understand the requirements of all planning conditions and that you fully comply with their requirements. If you are in any doubt about what a condition requires of you, please ask us for assistance. Planning conditions may require you to submit further information to us and await our approval before you can start your development. A failure to do so could result in your development being unlawful and necessitate the submission of a further planning application. A failure to comply with the conditions of the permission/consent may result in the taking of enforcement and potentially legal action, against you to remedy the breach of planning control.**
- 4. A fee is normally payable to discharge planning conditions in accordance with government regulations.**
- 5. This permission does not convey any rights or approval to build on, or develop, any land that is not fully owned or controlled by you, including on party boundaries. You should satisfy yourself that the agreement of any adjoining landowners has been given prior to commencing any building works.**
- 6. If a Building Regulations Consent is required for these works it is your responsibility to ensure that the plans submitted for both the Building Regulations Consent and Planning Permission are the same in all respects. Should the plans relating to one consent vary from the other, it will be necessary for you to submit amended plans to this Department and obtain the relevant approval(s) prior to commencing any works. Knowsley Council's Building Control team are contactable on (0151)-443 2342 and they would be pleased to assist you.**

Appeals to the Secretary of State

- If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990.
- As this is a decision for a minor commercial application, if you want to appeal against your local planning authority's decision then you must do so within 12 weeks of the date of this notice.
- Appeals can be made online at: <https://www.gov.uk/planning-inspectorate>.
If you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on tel: 0303 444 5000.
- The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.
- The Secretary of State need not consider an appeal if it seems to the Secretary of State that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

Knowsley Council
By email

Your ref: 24/00554/FUL
Our ref: DC/25/67
Date: 10-JAN-25

Dear Planning Team

Location : Pilkington Court Sinclair Way Prescott Business Park Prescott Knowsley L34 1QG
Proposal : ERECTION OF A STORAGE/WAREHOUSE BUILDING (USE CLASS B8) AND ASSOCIATED CAR PARKING

United Utilities provides the following comments to support the Local Planning Authority in their determination of the planning application detailed above, and to direct the applicant to further sources of support and guidance on matters that might impact their proposal.

The letter and Appendix should be read in their entirety to support the determination, the design, and should the scheme be approved, the subsequent delivery of the proposal.

DRAINAGE

We request the following drainage condition is attached to any subsequent approval:

CONDITION

Prior to the commencement of development, details of a sustainable surface water drainage scheme and a foul water drainage scheme shall be submitted to and approved in writing by the Local Planning Authority. The drainage schemes must include:

- (i) An investigation of the hierarchy of drainage options in the National Planning Practice Guidance (or any subsequent amendment thereof). This investigation shall include evidence of an assessment of ground conditions and the potential for infiltration of surface water in accordance with BRE365;***
- (ii) A restricted rate of discharge of surface water agreed with the local planning authority (if it is agreed that infiltration is discounted by the investigations);***
- (iii) Levels of the proposed drainage systems including proposed ground and finished floor levels in AOD;***
- (iv) Incorporate mitigation measures to manage the risk of sewer surcharge where applicable; and***
- (v) Foul and surface water shall drain on separate systems.***

The approved schemes shall also be in accordance with the Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) or any subsequent replacement national standards.

Prior to occupation of the proposed development, the drainage schemes shall be completed in accordance with the approved details and retained thereafter for the lifetime of the development.

Reason: To promote sustainable development, secure proper drainage and to manage the risk of flooding and pollution.

Please note, United Utilities is not responsible for advising on rates of discharge to the local watercourse system. This is a matter for discussion with the Lead Local Flood Authority and / or the Environment Agency (if the watercourse is classified as a main river).

To discuss their drainage proposals the applicant should contact our **Developer Services** team by email at SewerAdoptions@uuplc.co.uk. Alternative ways to contact the team are detailed in the Appendix, Section 4.0 'Contacts'.

When considering their drainage proposal, the applicant should investigate the existence of any pipelines and/or apparatus that might impact their detailed design (see Section 'UNITED UTILITIES' PROPERTY, ASSETS AND INFRASTRUCTURE').

United Utilities will not carry out an assessment on the acceptability of submitted drainage proposals in relation to our water pipelines when responding to a planning application. It is the applicant's responsibility to ensure that any detailed drainage plans comply with our 'Standard Conditions for Works Adjacent to Pipelines' which can be found on our website: [Working near our pipes - United Utilities](#). Failure to consider existing pipelines when designing a drainage proposal may result in the applicant having to redesign proposals at a later date.

Management and maintenance of Sustainable Drainage Systems (SuDS)

Without effective management and maintenance SuDS can fail or become ineffective which may have a detrimental impact on the surrounding area. There is also a risk ineffective SuDS could impact the performance of the public sewer network where the two systems interact. Therefore, when SuDS is included in a proposed development, we recommend the Local Authority include a condition relating to SuDS management and maintenance in any subsequent Decision Notice. We provide an example condition below that may be suitable in many circumstances.

Prior to occupation of the development a sustainable drainage management and maintenance plan for the lifetime of the development shall be submitted to the local planning authority and agreed in writing. The sustainable drainage management and maintenance plan shall include as a minimum:

- (i) Arrangements for adoption by an appropriate public body or statutory undertaker, or, management and maintenance by a resident's management company; and***

- (ii) *Arrangements for inspection and ongoing maintenance of all elements of the sustainable drainage system to secure the operation of the surface water drainage scheme throughout its lifetime.*

The development shall subsequently be completed, maintained and managed in accordance with the approved plan.

Reason: To ensure that management arrangements are in place for the sustainable drainage system in order to manage the risk of flooding and pollution during the lifetime of the development.

Please note United Utilities cannot provide comment on an asset that is owned by a third-party management and maintenance company. Therefore, whilst we recommend the inclusion of a management and maintenance condition, United Utilities would not be involved in its discharge.

UNITED UTILITIES' PROPERTY, ASSETS AND INFRASTRUCTURE

It is the applicant's responsibility to investigate the existence of any pipelines that might cross or impact their proposed site and also to demonstrate the exact relationship between United Utilities' assets and the proposed development. The applicant should not rely solely on the detail contained within asset maps when considering a proposed layout.

It is important that the supporting information contained in the Appendix, Section 2.0 'United Utilities' Property, Assets and Infrastructure', is read in conjunction with this letter. This provides information that might impact a proposed layout and additional guidance that an applicant or developer must consider when United Utilities assets are located in, or in the locality of, the proposed site.

Where United Utilities' assets exist, it is essential that the applicant, or any subsequent developer, contacts our Developer Services team prior to commencing any works on site, including trial holes, groundworks or demolition. See Appendix, Section 4.0 'Contacts'

WATER EFFICIENCY IN NEW DEVELOPMENT

Local planning authorities have the option to set additional technical requirements in respect of water use for the construction of new build dwellings, exceeding the minimum standards required by Building Regulations. All new homes are required to meet the mandatory national standard of 125 litres of water used per person per day as set out in Building Regulations Approved Document G. Where there is a clear local need, a local planning authority's development plan policies can require new-build dwellings to meet the tighter Building Regulations optional requirement of 110 litres of water used per person per day. If your adopted development plan includes a policy that implements the tighter water efficiency standard for new-build dwellings in Part 3 of Building Regulations, you should ensure that this is a condition of any planning permission you may grant. You should also consider whether there is any adopted development plan policy relating to a water efficiency in the construction of non-residential development. As this is a matter for the local planning authority / building control

body, United Utilities would not be involved in the discharge of conditions relating to water efficiency.

We request that a copy of this letter and the Appendix is made available to the applicant.

Yours faithfully

The Planning, Landscape and Ecology Team

APPENDIX:

Supporting information for the decision maker, applicant, developers and any other interested party

Whilst we provide the following information to support the design and delivery of the proposed scheme, we strongly recommend that the applicant, or any subsequent developer, contacts our Developer Services team at the earliest opportunity, using our **free pre-development enquiry service**, to ensure they have fully considered all aspects of development and to avoid any potential issues or unexpected costs at a later date.

Full details of the services offered to developers, guidance and application forms are available on our website: www.unitedutilities.com/builders-developers/

1.0 DRAINAGE DESIGN

1.1 The importance of sustainable drainage systems

We strongly encourage all developments to include sustainable drainage systems to help manage surface water and to offer new opportunities for wildlife to flourish. We request that Local Planning Authorities and applicants do all they can to avoid surface water entering the public sewer. The flows that come from this surface water are very large when compared with the foul water that comes from toilets, showers, baths, washing machines, etc. It is the surface water that uses up a lot of capacity in our sewers and results in the unnecessary pumping and treatment of surface water at our pumping stations and treatment works. If new developments can manage flows through sustainable drainage systems that discharge to an alternative to the public sewer, it will help to minimise the likelihood of sewers spilling into watercourses and the flooding of homes and businesses.

1.2 Adoption and construction of drainage systems

If the applicant intends to offer wastewater assets forward for adoption by United Utilities, their proposed detailed design will be subject to a technical appraisal by our Developer Services team and must meet the requirements outlined in 'Sewerage Sector Guidance Appendix C – Design and Construction Guidance v2-2' dated 29 June 2022 or any subsequent iteration. This is important as drainage design can be a key determining factor of site levels and layout.

If the proposal incorporates a SuDS component(s) which interacts with a sewer network that may be offered for adoption by United Utilities we recommend the applicant seeks further advice regarding the SuDS design; detailed information is available on our website.

Our acceptance of any drainage strategy submitted by an applicant to the Local Planning Authority for approval does not infer that a detailed drainage design will meet the requirements for a successful adoption application. **We strongly recommend that no construction commences until the detailed drainage design has been submitted directly to United Utilities, assessed and accepted in writing. Any work carried out prior to the technical assessment being approved is done entirely at the developer's own risk and could be subject to change.**

2.0 UNITED UTILITIES' PROPERTY, ASSETS AND INFRASTRUCTURE

2.1 Water pipelines

United Utilities will not allow building over or in close proximity to a water main.

For any works in the vicinity of water pipelines, the applicant must comply with our 'Standard Conditions for Works Adjacent to Pipelines', which can be found on our website: <https://www.unitedutilities.com/builders-developers/your-development/planning/building-over-or-working-near-our-assets/working-near-our-pipes/>

2.2 Wastewater pipelines

United Utilities will not allow a new building to be erected over or in close proximity to a public sewer or any other wastewater pipeline. This will only be reviewed in exceptional circumstances.

Nb. Proposals to extend domestic properties either above, or in close proximity to a public sewer will be reviewed on a case by case basis by either by a building control professional or following a direct application to United Utilities (see our website for further details).

2.3 Water and wastewater pipelines and apparatus

A number of providers offer a paid for mapping service, including United Utilities (see Section 4.0 'Contacts' (below)). The position of the underground apparatus shown on water and wastewater asset maps is approximate only and is given in accordance with the best information currently available. Therefore, we strongly recommend the applicant, or any future developer, does not rely solely on the asset maps to inform decisions relating to the detail of their site and instead investigates the precise location of any underground pipelines and apparatus. Where additional information is requested to enable an assessment of the proximity of proposed development features to United Utilities assets, the proven location of pipelines should be confirmed by site survey; an extract of asset maps will not suffice. The applicant should seek advice from our Developer Services team on this matter. See Section 4.0. 'Contacts' (below). United Utilities Water will not accept liability for any loss or damage caused by the actual position of our assets and infrastructure being different from those shown on asset maps.

Developers should investigate the existence and the precise location of water and wastewater pipelines as soon as possible as this could significantly impact the preferred site layout and/or diversion of the asset(s) may be required. Unless there is specific provision within the title of the property or an associated easement, any necessary disconnection or diversion of assets to accommodate development, will be at the applicant/developer's expense. In some circumstances, usually related to the size and nature of the assets impacted by proposals, developers may discover the cost of diversion is prohibitive in the context of their development scheme.

Any agreement to divert our underground assets will be subject to a diversion application, made directly to United Utilities. This is a separate matter to the determination of a planning application. We will not guarantee, or infer acceptance of, a proposed diversion through the planning process (where diversion is indicated on submitted plans). In the event that an application to divert or abandon underground assets is submitted to United Utilities and

subsequently rejected (either before or after the determination of a planning application), applicants should be aware that they may need to amend their proposed layout to accommodate United Utilities' assets.

Where United Utilities' assets exist, the level of cover to United Utilities pipelines and apparatus must not be compromised either during or after construction and there should be no additional load bearing capacity on pipelines without prior agreement from United Utilities. This would include sustainable drainage features, earth movement and the transport and position of construction equipment and vehicles.

Any construction activities in the vicinity of United Utilities' assets, including any assets or infrastructure that may be located outside the applicant's red line boundary, must comply with national building and construction standards and where applicable, our 'Standard Conditions for Works Adjacent to Pipelines', which can be found on our website: <https://www.unitedutilities.com/builders-developers/your-development/planning/building-over-or-working-near-our-assets/working-near-our-pipes/>.

The applicant, and/or any subsequent developer should note that our 'Standard Conditions' guidance applies to any design and construction activities in close proximity to water pipelines and apparatus that are no longer in service, as well as pipelines and apparatus that are currently in operation.

It is the applicant's responsibility to ensure that United Utilities' required access is provided within any proposed layout and that our infrastructure is appropriately protected. The developer would be liable for the cost of any damage to United Utilities' assets resulting from their activity.

3.0 WATER AND WASTEWATER SERVICES, METERING AND CHARGES

If the applicant intends to receive water and/or wastewater services from United Utilities they should visit our website or contact the Developer Services team for advice at the earliest opportunity. This includes seeking confirmation of the required metering arrangements for the proposed development. See Section 4.0 'Contacts' (below).

If the proposed development site benefits from existing water and wastewater connections, the applicant should not assume that the connection(s) will be suitable for the new proposal or that any existing metering arrangements will suffice. In addition, if reinforcement of the water network is required to meet potential demand, this could be a significant project and the design and construction period should be accounted for.

In some circumstances a water meter must be installed to premises. Detailed guidance on whether the development will require a compulsory meter is available on our website within our published Charges Schemes; [Our charges 2024/25 | United Utilities](#) (Section 8.7) or [Our charges 2023/24 | United Utilities](#) (Section 7.7).

To promote sustainable development United Utilities offers a reduction in infrastructure charges to applicant's delivering water efficient homes and draining surface water sustainably (criteria applies). For further information, we strongly recommend the applicant visits our website when

considering any water or wastewater design <https://www.unitedutilities.com/builders-developers/your-development/planning/building-sustainable-homes/>

Business customers can find additional information on our sustainable drainage incentive scheme at <https://www.unitedutilities.com/Business-services/retailers/incentive-schemes/>

To avoid any unnecessary costs and delays being incurred by the applicant or any subsequent developer, we strongly recommend the applicant seeks advice regarding water and wastewater services and metering arrangements, at the earliest opportunity. See Section 4.0 'Contacts' (below).

4.0 CONTACTS

For advice on your development contact our **DEVELOPER SERVICES** team as follows:

Website (including 'Live Chat'): <http://www.unitedutilities.com/builders-developers.aspx>

Email:

WATER (water mains, supply and metering): DeveloperServicesWater@uuplc.co.uk

WASTEWATER (public sewers and drainage): SewerAdoptions@uuplc.co.uk

SLUDGE PIPELINES: DeveloperServicesWater@uuplc.co.uk

Telephone (Monday-Friday, 8am-6pm): **0345 072 6067**

PROPERTY SEARCHES (FOR ASSET MAPS):

A number of providers offer a paid for mapping service including United Utilities. For more information, or to purchase a sewer and water plan from United Utilities, please visit <https://www.unitedutilities.com/property-searches/>

Water and sewer records can be viewed for free at our Warrington Head Office by calling 0370 751 0101. Appointments must be made in advance. Public sewer records can be viewed at local authority offices. Arrangements should be made directly with the local authority.

UNITED UTILITIES LEGAL SERVICES (FOR EASEMENT DOCUMENTS):

Copies of relevant deeds may be purchased from United Utilities Legal Services. This information is also available from Land Registry.

To purchase a copy of easement documents from United Utilities, please email: LegalServices@uuplc.co.uk

Knowsley MBC
Planning Department
Municipal Buildings
Archway Road
Huyton
L36 9YU

Email:
dcconsultations@knowsley.gov.uk

**Merseyside Fire & Rescue Authority
Community Fire Protection**

Fire Engineering Team
Service Headquarters
Bridle Road
Bootle
Merseyside
L30 4YD

Telephone: 0151 296 6590 (Calls may be recorded)
Inspecting Officer: Rachel Holland
Email: fireengineeringteam@merseyfire.gov.uk
web Site: www.merseyfire.gov.uk

Your ref: 24/00554/FUL

Our ref:00499295/1254623/RH/LD

Date:7th January 2025

Dear Sir/Madam,

THE TOWN AND COUNTRY PLANNING ACT 1990
PLANNING APPLICATION NUMBER REF: 24/00554/FUL
PROPOSAL: ERECTION OF A STORAGE/WAREHOUSE BUILDING (USE CLASS B8)
AND ASSOCIATED CAR PARKING
ADDRESS: Pilkington Court Sinclair Way Prescott Business Park

The Fire Authority requests that any decision notice includes the following information:

The plans relating to the above application have been examined and below are the Fire Authority's observations:

Access for Fire Fighting

- Access for fire appliances should comply with the requirements of Section B5, Schedule 1 of the Building Regulations. Provisions for access will depend on the size and use of the building. The design of the access route, for example minimum road widths and maximum reversing distances, should also be considered (Appendix A, attached).
- In accordance with Section 55 of the County of Merseyside Act 1980, the position of the premises should not compromise or impede existing means of fire service access to a neighbouring building.

Water Provision

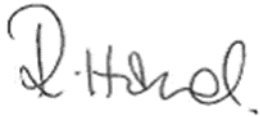
- Water supplies for firefighting purposes should be risk assessed in accordance with the undermentioned guidance in liaison with the water undertakers (United Utilities - 0161 907 7351) with suitable and sufficient fire hydrants supplied.
- Consideration should be given to the recommendations within the 'National guidance document on the provision of water for firefighting', produced by the Local Government Association and Water UK, available for free download via: <https://www.water.org.uk/wp-content/uploads/2018/11/national-guidance-document-on-water-for-ffg-final.pdf>

Further information regarding access requirements can be found in the current version of Approved Document B, which is available for free download via:

<https://www.gov.uk/government/publications/fire-safety-approved-document-b>

Should you require any further information in respect of this correspondence please contact the Officer named above.

Yours faithfully

A handwritten signature in black ink, appearing to read 'R. Holland'.

Rachel Holland

Authorised Fire Safety Inspecting Officer
And on behalf of Merseyside Fire and Rescue Authority

Appendix A - Access and Facilities for the Fire Service as given in Section B5 of Approved Document B

Domestic Dwellings

For dwelling houses, access for a pumping appliance should be provided to within 45m of all points inside the dwelling house.

For flats, either: access for a pumping appliance should be provided to within 45m of all points inside each flat of a block, measured along the route of the hose; or fire mains should be provided.

Commercial Buildings

Small buildings (up to 2000m², with a top occupied storey a maximum of 11m above ground level), require access for a pump appliance to 15% of the perimeter, or within 45m of every point of the footprint of the building, whichever is the less onerous.

Larger buildings will require access to a percentage of the perimeter that increases incrementally with size of the total floor area and height of building – please see details in Approved Document B Volume 2 Section 15.

Elevations to which vehicle access is provided will require a door, to give access into the building. The maximum distance between doors, or between a door and the end of the elevation, is 60m (i.e. a 150m elevation would need a minimum of two doors).

All Buildings

Access routes and hardstanding should comply with Table 13.1 ADB Volume 1 / Table 15.2 ADB Volume 2. Please note: MFRS appliances are 17 tonnes (pump) and 26 tonnes (high reach).

Dead-end access routes longer than 20m require turning facilities (e.g. a turning circle or hammer head, or other turning point).

Where fire mains are fitted, access should be provided for a pumping appliance to within 18m of each fire main inlet connection point. Inlets should be on the face of the building and visible from the parking position of the appliance. The run of horizontal internal connecting pipe should be a maximum of 18m in length.

Buildings with a storey more than 18m above the fire service vehicle access level, or a basement more than 10m below, should have one or more firefighting shafts containing fire-fighting lifts and fire mains (a minimum of two fire-fighting shafts will be required for buildings with a floor area of 900 m² or more).

Buildings in the 'shop and commercial', 'assembly and recreation' or 'industrial' purpose groups (Groups 4, 5, or 6), with a storey area of 900m² or more and a storey height of 7.5m or more above fire service vehicle access level will require at least two firefighting shafts (firefighting lifts may not be needed).

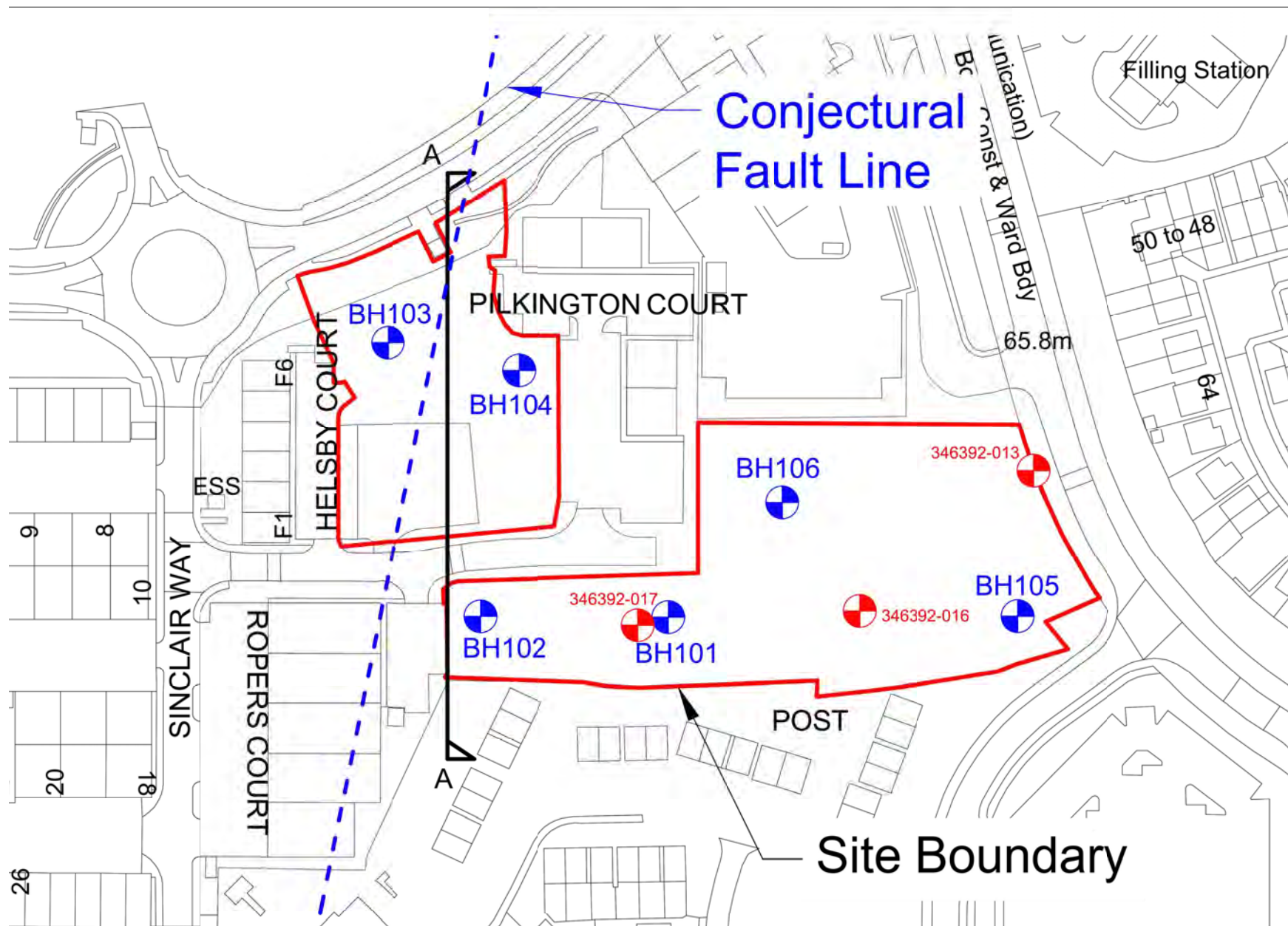
Entry to a firefighting shaft at fire service access level should be available either directly from the open air or by way of a protected corridor not exceeding 18m in length. The corridor is deemed to be part of the firefighting shaft, and any access to it from the accommodation should be by way of protected lobbies.

Hydrants

Where a building has a compartment with an area of more than 280m² and is being erected more than 100m from an existing fire hydrant, additional hydrants are required as follows:

Buildings with fire main – hydrant within 90m of dry fire main inlet;

Buildings without fire main – hydrant within 90m of an entrance to the building; and a maximum of 90m apart.

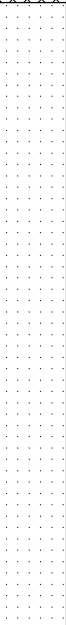


SCALE 1:1000 @ A3

Figure Title
Location of Boreholes
and Mine Shafts

DRILLHOLE LOG

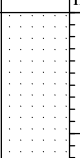
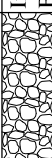
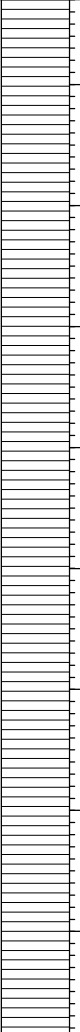
Project Prescot AB				DRILLHOLE No 103	
Job No 2373	Date 17-06-20 17-06-20	Ground Level (m) 60.00	Co-Ordinates () E 346,507.0 N 392,231.0		
Contractor CC Geotechnical				Sheet 1 of 3	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill
Depth	TCR (SCR) RQD	(SPT)	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION			
Date						Discontinuities	Detail		
			59.90		0.10		TOPSOIL		
					(1.10)		Very dense brown slightly sandy slightly gravelly CLAY. Gravel is sub-angular to angular fine of concrete and brick (MADE GROUND).		
			58.80		1.20		SANDSTONE		
					(10.10)				

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
17-06-20	09.00	0.00					0	20.90	Air	100	No groundwater encountered Inspection Pit to 1.2m
All dimensions in metres Scale 1:62.5			Client Beesley and Fildes Ltd			Method/ Plant Used				Logged By ES	

DRILLHOLE LOG

Project Prescot AB				DRILLHOLE No 103	
Job No 2373	Date 17-06-20 17-06-20	Ground Level (m) 60.00	Co-Ordinates () E 346,507.0 N 392,231.0		
Contractor CC Geotechnical				Sheet 2 of 3	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT)	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
								SANDSTONE <i>(continued)</i>		
			48.70		11.30					
					(9.60)			Grey MUDSTONE.		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											No groundwater encountered Inspection Pit to 1.2m
All dimensions in metres Scale 1:62.5			Client Beesley and Fildes Ltd			Method/ Plant Used				Logged By ES	

DRILLHOLE LOG

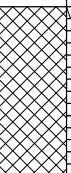
Project Prescot AB				DRILLHOLE No 103	
Job No 2373	Date 17-06-20 17-06-20	Ground Level (m) 60.00	Co-Ordinates () E 346,507.0 N 392,231.0		
Contractor CC Geotechnical				Sheet 3 of 3	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill					
Depth Date	TCR (SCR) RQD	(SPT)	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION									
						Discontinuities	Detail	Main							
			39.10		20.90			Grey MUDSTONE. <i>(continued)</i>							
								36.30			23.70			Loose broken ground.	

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
17-06-20	12.00	23.70					20.9	23.7	Air	10	No groundwater encountered Inspection Pit to 1.2m
All dimensions in metres Scale 1:62.5			Client Beesley and Fildes Ltd			Method/ Plant Used				Logged By ES	

DRILLHOLE LOG

Project Prescot AB				DRILLHOLE No 104	
Job No 2373	Date 17-06-20 17-06-20	Ground Level (m) 62.00	Co-Ordinates () E 346,526.0 N 392,244.0		
Contractor CC Geotechnical				Sheet 1 of 3	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill		
Depth Date	TCR (SCR) RQD	(SPT)	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION						
						Discontinuities	Detail	Main				
			61.90		0.10			TOPSOIL				
					(1.40)			MADE GROUND. Stiff brown slightly sandy slightly gravelly CLAY. Gravel is sub-angular to angular fine of concrete and brick (MADE GROUND).				
			60.50		1.50			Brown MUDSTONE				
					(2.80)							
			57.70		4.30							
					(1.20)						Grey MUDSTONE	
			56.50		5.50						Brown MUDSTONE	
					(6.00)							

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
17-06-20	13.00	0.00					0	30	Mist	100	Hole terminated at 23.70m, unable to progress due to flush loss. No groundwater encountered. Inspection pit to 1.2m
All dimensions in metres Scale 1:62.5			Client Beesley and Fildes Ltd			Method/ Plant Used				Logged By ES	

DRILLHOLE LOG

Project Prescot AB				DRILLHOLE No 104	
Job No 2373	Date 17-06-20 17-06-20	Ground Level (m) 62.00	Co-Ordinates () E 346,526.0 N 392,244.0		
Contractor CC Geotechnical				Sheet 2 of 3	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth	TCR (SCR) RQD	(SPT)	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
Date						Discontinuities	Detail	Main		
								Brown MUDSTONE <i>(continued)</i>		
			50.50		11.50					

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											Hole terminated at 23.70m, unable to progress due to flush loss. No groundwater encountered. Inspection pit to 1.2m
All dimensions in metres Scale 1:62.5			Client Beesley and Fildes Ltd			Method/ Plant Used				Logged By ES	

DRILLHOLE LOG

Project Prescot AB				DRILLHOLE No 104	
Job No 2373	Date 17-06-20 17-06-20	Ground Level (m) 62.00	Co-Ordinates () E 346,526.0 N 392,244.0		
Contractor CC Geotechnical				Sheet 3 of 3	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth	TCR (SCR) RQD	(SPT)	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
Date						Discontinuities	Detail	Main		
					(10.10)			Grey MUDSTONE <i>(continued)</i>		
			37.00		25.00					
					(1.10)			COAL		
			35.90		26.10					
								Dark grey MUDSTONE		
			34.70		27.30					
								Grey MUDSTONE		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
17-06-20	16.00	30.00									Hole terminated at 23.70m, unable to progress due to flush loss. No groundwater encountered. Inspection pit to 1.2m
All dimensions in metres Scale 1:62.5			Client Beesley and Fildes Ltd			Method/ Plant Used				Logged By ES	

Taken by: Ian Booth

Date: 03/09/2025

LOCATION: Sinclair Way, Prescott. L34 1QG

SITE PHOTOGRAPHS

Photo 1: Trial hole showing mudstone at high level. 300 to 400mm below existing surface



Photo 2: Trial hole showing mudstone at high level. 300 to 400mm below existing surface



Photo 3: Trial hole showing mudstone at high level. 300 to 400mm below existing surface



Photo 4: Exposed surface water pipe stub into site.



Photo 5: Trial pit showing mud stone to high level.





Topographical Survey Legend

[illegible]

BENCH MARK INFORMATION

All levels relate to O.S. (Newlyn) Datum, Established using network RTK. Survey plotted on a plane in grid, orientated to National Grid.

NOTES

ONLY MANHOLES AND SERVICES VISIBLE AT TIME OF SURVEY SHOWN

DRAINAGE INFORMATION MUST BE CHECKED AND VERIFIED WITH LOCAL AUTHORITY RECORDS PRIOR TO WORK COMMENCING

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

TREE SPREADS ARE SYMBOLIC ONLY AND ARE REPRESENTATIVE OF THE AVERAGE SPREAD

THE DRIP LINE LAYER DENOTES THE TREES EXTREME

SURVEY STATIONS

STN1	346530.839	392229.709	61.
STN2	346506.800	392183.304	61.
STN3	346548.241	392180.945	62.
STN4	346469.382	392175.661	61.

REVISIONS

DESCRIPTION	SURVEYED	DRAW

JLP Surveying

Surveying Consultants Ltd,
c 45 Redway House,
g Street,
an
il 1BT
- 01942 243313
- 01942 492230
ile - 07710 428498
All:- peterhouston@jpsurvey.co.uk

JECT
Manchester Road
rescott

Topographical Land Survey

FILE NO.	SHEET SIZE	No. of SHEETS	DATE	PR
200	A0	1	25.11.2022	

22-1194

Stormsaver: Solo Rainwater Harvesting System Schematic

1. Rainwater is collected from roof area
2. Rainwater passes through pre-tank filter
3. Above-ground rainwater storage tank
4. Inlet calmer
5. Overflow from rainwater storage tank with NRV
6. Suction filter
7. 50mm Black & Green MDPE piped supply to building
8. Stormsaver Mains cold water control panel
9. Mains cold water supply (top up)
10. Rainwater external booster set
11. Local power supply
12. Optional BMS (by others)
13. Optional micron filtration
14. Optional UV disinfection unit
15. Boosted rainwater supply
16. Optional monitoring unit supplied with Rainwater & Mainswater meters
17. Points of use

Disclaimer

This schematic is to be used as a general overview of a typical Stormsaver Water Reuse System layout. It is not site specific and should not be relied upon for technical submittal or installation guidance.



Water Reuse Specialists

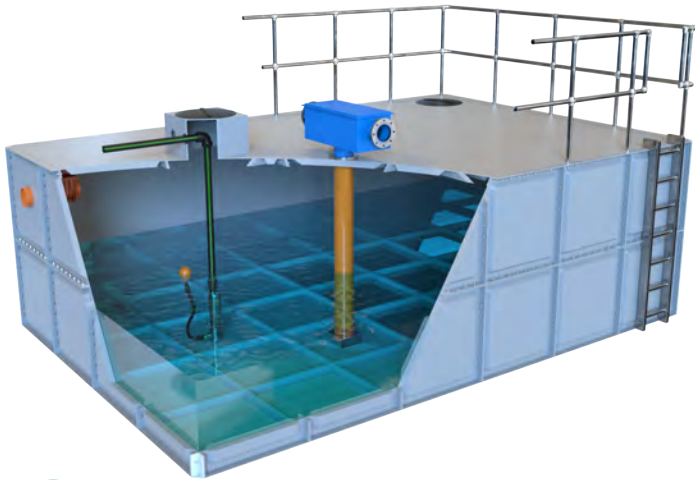
T: 01636 815 254

W: www.stormsaver.com

The system design rights and copyright remains the property of Stormsaver Ltd.
 Contact us on 01636 815 254 for more details www.stormsaver.com

Product Data Sheet

Above Ground Sectional Storage Tank



**Proud UK
Manufacturer**

Product Description

The Stormsaver sectional tank enables sites to install bespoke size tanks into areas where a one piece or below ground tank would be unsuitable.

All tanks are made up of GRP sections that are externally braced to protect water quality and ease maintenance. Tanks are internally flanged on the base, and can be internally flanged on the sides by request.

All sectional tanks are installed and water tested by Stormsaver accredited engineers. A full certification is given on completion for warranty purposes.

The panels come in either 2000mm x 1000mm, 1500mm x 1000mm or 1000mm x 1000mm, and any tank size can be configured using these panels.

All tanks are manufactured to Standard BS13280:2001, European Standard EN.13280:2001 and Singapore Standard 245:1995. The tank surface is top grade orthophthalic BS3532 and BS2782 resin, creating a smooth gel coat finish. This reduces the risk of bacteria and algae forming and multiplying on the internal wall of the tank.

Technical Information

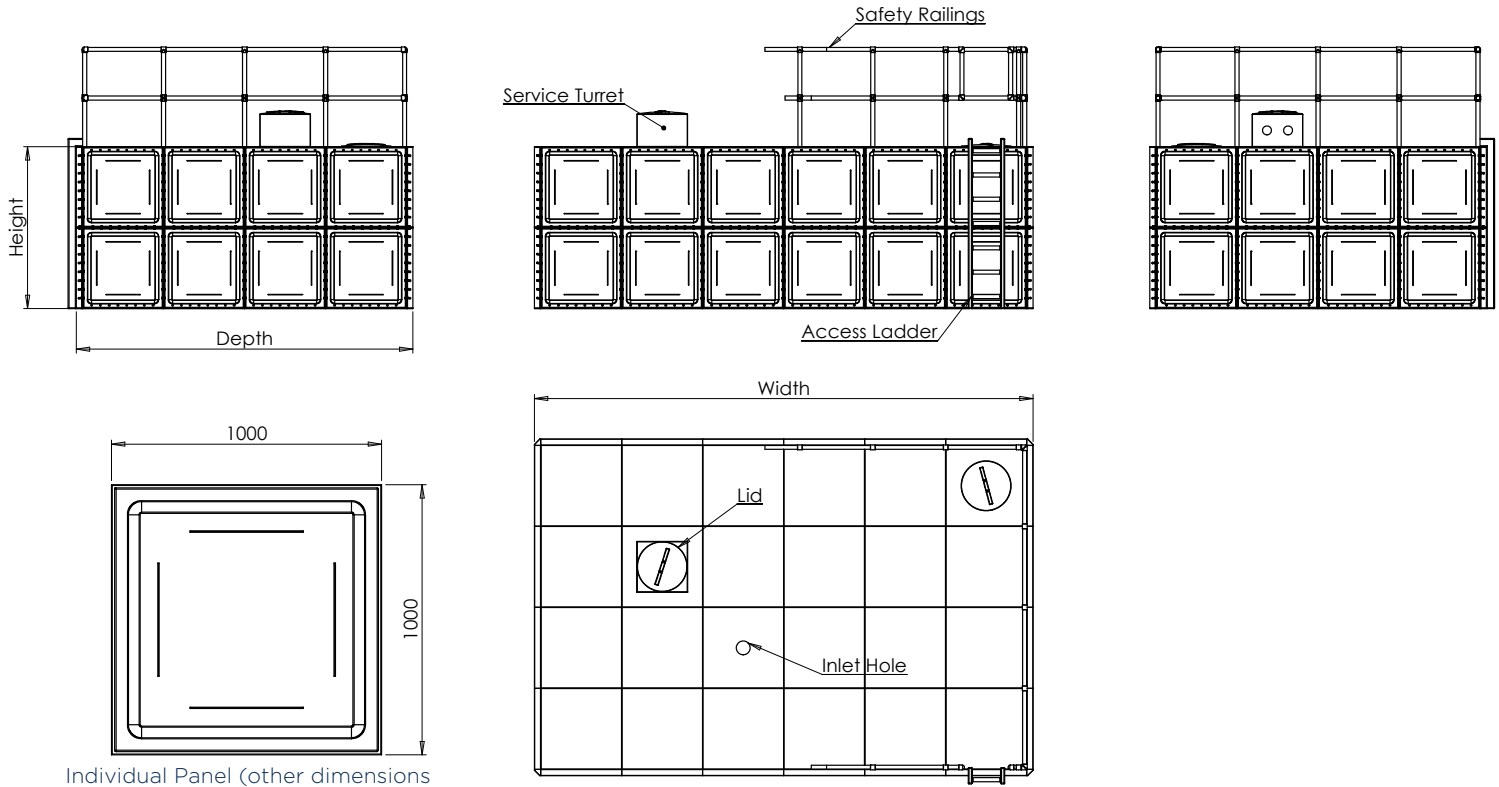
- All tanks need to be installed on to a level and flat base that does not deviate by more than 2mm under a 1000mm nominally plane straight edge.
- A screed or levelling steels are recommended for bases over 4m.
- A minimum working access of 450mm around the tank is required.
- Tank shells are engineered with the parameter and principles of BS4994.
- All tanks are hot press moulded and the materials are WRc & WRAS approved.
- Panels are either 2000mm x 1000mm, 1500mm x 1000mm or 1000mm x 1000mm.
- Internal fixings are stainless steel construction to BS970 and external fixings are galvanised.
- All joints and bolts are sealed with WRc & WRAS approved materials
- All tanks are made of high quality glass reinforced plastic (GRP) incorporating a Lloyds approved resin system that meets BS EN 14118-1:200 and ISO2599-1980-GLASS.
- Tanks must be in a bunded or watertight area (provided by others). Stormsaver will not be responsible for stored water or interconnecting pipework outside of our scope of works.

Optional Extras

Option	Details
Access Ladders	External access ladders with or without rings can be added to gain access to the top of the tank for maintenance
Inlets & Overflows	Our range is from 100mm up to 375mm, and can be supplied to suit site requirements. At the point of manufacture they can also be moved and rotated from the standard location to suit site. Push fit connections are standard but can be upgraded to flanged as an option.
Pre-Tank Filter*	To meet with BS EN 16941-1:2018 all rain-water harvesting tanks require a pre tank filter. Sectional tanks can be used with either our M range or shallow invert filters. *Please see separate data sheet for more information on the filter.
Handrails	Either part or full peripheral handrails can be added around the top of the tank

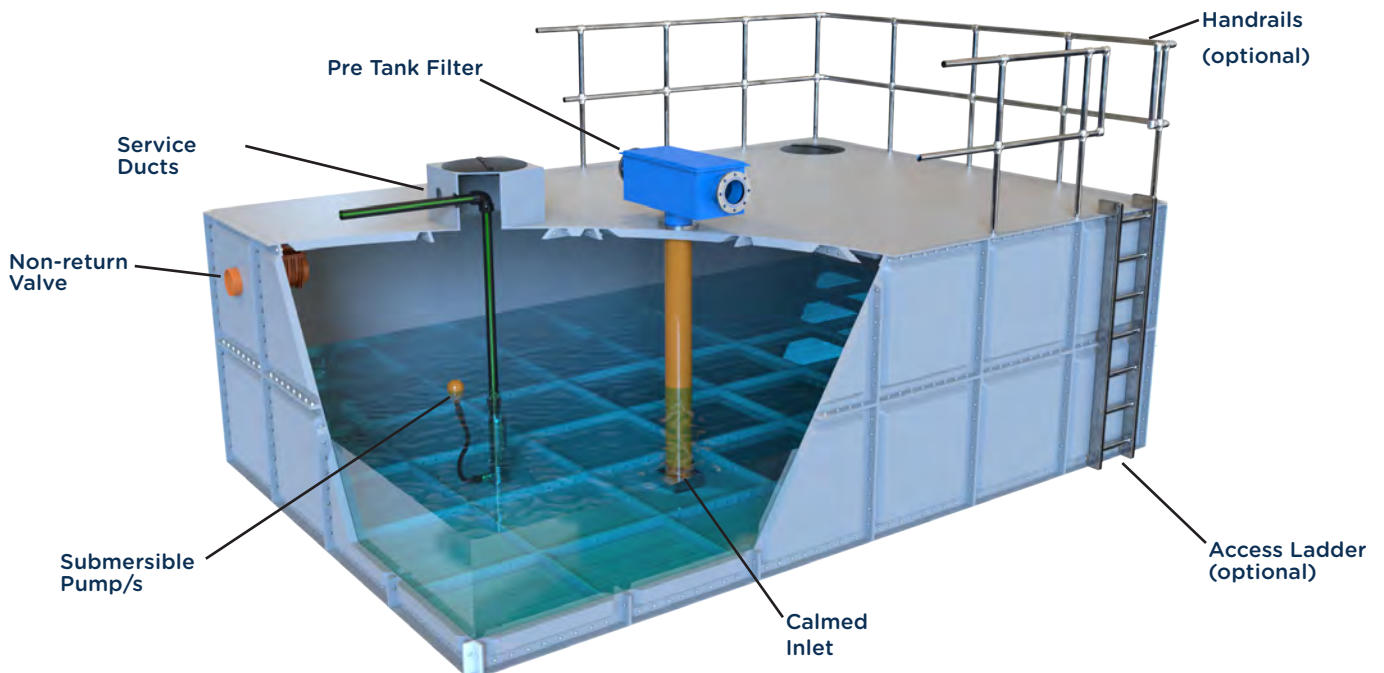
All optional extras are available at the relevant price.

Technical Drawing

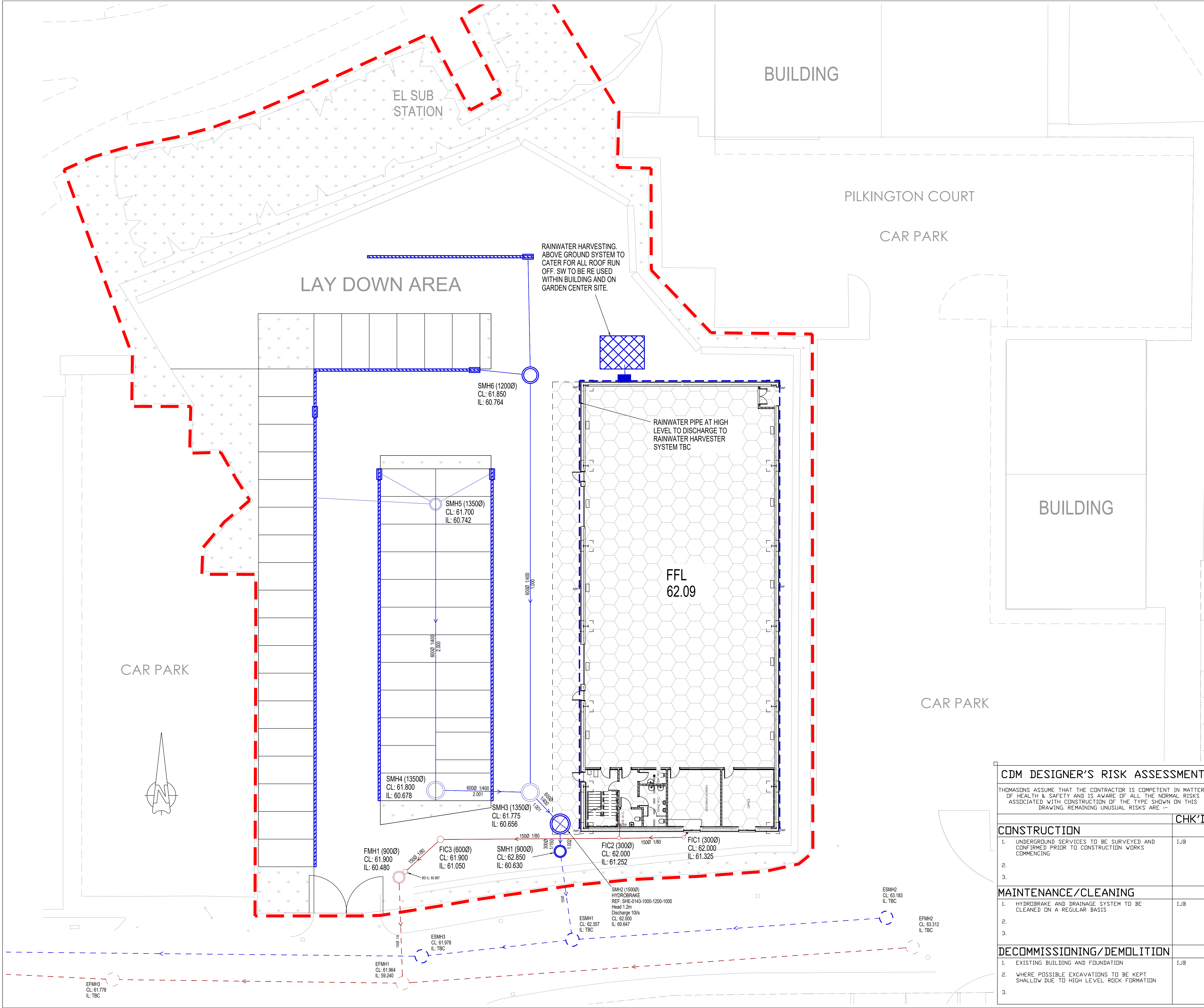


Drawing not to scale

Drawing Section



APPENDIX B – Drainage Strategy Drawings



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- ### GENERAL NOTES
- DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS, ENGINEERS, ARCHITECTS & SERVICES DRAWINGS, INCLUDING APPROVED BUILDERS WORK DRAWINGS. CONTRACTOR TO NOTIFY ENGINEER OF DISCREPANCIES BETWEEN STRUCTURAL DRAWINGS AND SPECIFICATIONS OR OTHER DRAWINGS.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
 - DO NOT SCALE FROM THE DRAWINGS OR THE COMPUTER DIGITAL DATA, ONLY FIGURED DIMENSIONS ARE TO BE USED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL TEMPORARY WORKS AND SHALL PROVIDE ALL TEMPORARY BRACING AS NECESSARY TO MAINTAIN STRUCTURAL STABILITY DURING CONSTRUCTION.
 - IF THE CONTRACTOR CONSIDERS THAT HE DOES NOT HAVE SUFFICIENT INFORMATION TO SAFELY COMPLETE THE WORKS DETAILED ON THIS DRAWING, HE SHOULD CONTACT THE ENGINEER.

- ### DRAINAGE NOTES
- ALL PRIVATE DRAINAGE WITHIN THE SITE IS TO COMPLY WITH THE REQUIREMENTS OF BS EN 752 AND BUILDING REGULATIONS PART H.
 - DETAILS OF EXISTING SEWERS SHALL BE CONFIRMED BY THE CONTRACTOR ON SITE PRIOR TO THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHOULD CHECK THE LEVELS OF ALL NEW OUT FALLS IN RELATION TO EXISTING SEWERS PRIOR TO ANY CONSTRUCTION TO ENSURE THE PROPOSED DESIGN CAN BE ACHIEVED.
 - THE CONTRACTOR SHALL ASCERTAIN THE DEPTHS, SIZES AND LOCATIONS OF ALL SERVICES TO BE CROSSED BEFORE EXCAVATION COMMENCES. ANY CONFLICT IN LEVELS BETWEEN NEW AND EXISTING SEWERS TO BE NOTIFIED TO THE ENGINEER.
 - ALL PIPES, CONNECTIONS, GULLIES, ACCESS FITTINGS, INSPECTION CHAMBERS, AND MANHOLES ARE TO COMPLY WITH THE BUILDING REGULATIONS. WHERE DRAINAGE IS TO BE ADOPTED THE FOREGOING ARE ALSO TO COMPLY WITH THE LATEST EDITION OF SEWERS FOR ADOPTION AND ANY ADDITIONAL REQUIREMENTS SPECIFIED BY THE UNDERTAKER.
 - REFER TO ARCHITECTS DRAWINGS FOR POSITIONS OF SOIL VENT PIPES, STUB STACKS AND RAINWATER PIPES.
 - UPON COMPLETION OF THE WORKS THE CONTRACTOR SHALL CLEAN ALL DRAINAGE BY JETTING, REMOVING ALL DEBRIS FROM SITE. NO DEBRIS SHALL BE PERMITTED TO ENTER THE EXISTING DRAINAGE SYSTEM.
 - ALL WPC, IG, BIG AND RWP CONNECTIONS TO BE 100mm DIAMETER UND. LAID TO A FALL NO FLATTER THAN 1:40.
 - FOR EXTERNAL LEVEL INFORMATION REFER TO ARCHITECTS DRAWINGS
 - ALL PIPE MATERIALS TO BE KITE MARKED TO RELEVANT APPROVED STANDARDS. ACCEPTABLE MATERIALS FOR DRAINAGE SYSTEM CAN BE PLASTIC, CLAY AND CONCRETE.

- ### KEY
- SITE BOUNDARY
 - PROPOSED SURFACE WATER DRAINAGE
 - PROPOSED FOUL DRAIN
 - EXISTING FOUL DRAINAGE
 - EXISTING SURFACE WATER DRAINAGE
 - HIGH LEVEL RAINWATER PIPE ROUTING ROOF WATER TO RAINWATER HARVESTER
 - CHANNEL DRAIN WITH CATCHPIT ACCESS CHAMBER
 - SURFACE WATER HYDROBRAKE
REF: REF: SHE-0143-1000-1200-1000
DESIGN HEAD 1.2M
MANHOLE DISCHARGE LIMITED TO 10 L/S.
 - ABOVE GROUND RAINWATER HARVESTER.
MODEL SOLO RAINWATER HARVESTING SYSTEM BY STORMSAVER OR SIMILAR APPROVED. TO CATER FOR ALL STORMS. APPROXIMATE STORAGE VOLUME 25,000 LITRES.
 - RWP RAIN WATER PIPE LOCATION.
 - SVP SOIL VENT PIPE.
 - NEW ROOF AREA. SW RUNOFF FROM ROOF TO BE CAPTURED BY RAINWATER HARVESTER AND RE USED WITHIN BUILDING AND ON ADJACENT CLIENTS SITE.
 - PROPOSED VERGE AREAS

FOR INFORMATION PURPOSES ONLY, NOT FOR CONSTRUCTION

CDM DESIGNER'S RISK ASSESSMENT					
THOMASONS ASSUME THAT THE CONTRACTOR IS COMPETENT IN MATTERS OF HEALTH & SAFETY AND IS AWARE OF ALL THE NORMAL RISKS ASSOCIATED WITH CONSTRUCTION OF THE TYPE SHOWN ON THIS DRAWING. REMAINING UNUSUAL RISKS ARE :-			CHK'D		
CONSTRUCTION			1JB		
1. UNDERGROUND SERVICES TO BE SURVEYED AND CONFIRMED PRIOR TO CONSTRUCTION WORKS COMMENCING					
2.					
3.					
MAINTENANCE/CLEANING			1JB		
1. HYDROBRAKE AND DRAINAGE SYSTEM TO BE CLEANED ON A REGULAR BASIS					
2.					
3.					
DECOMMISSIONING/DEMOLITION			1JB		
1. EXISTING BUILDING AND FOUNDATION					
2. WHERE POSSIBLE EXCAVATIONS TO BE KEPT SHALLOW DUE TO HIGH LEVEL ROCK FORMATION					
3.					



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STORAGE / WAREHOUSE
PRESCOT BUSINESS PARK

DRAINAGE LAYOUT

Status

PRELIMINARY

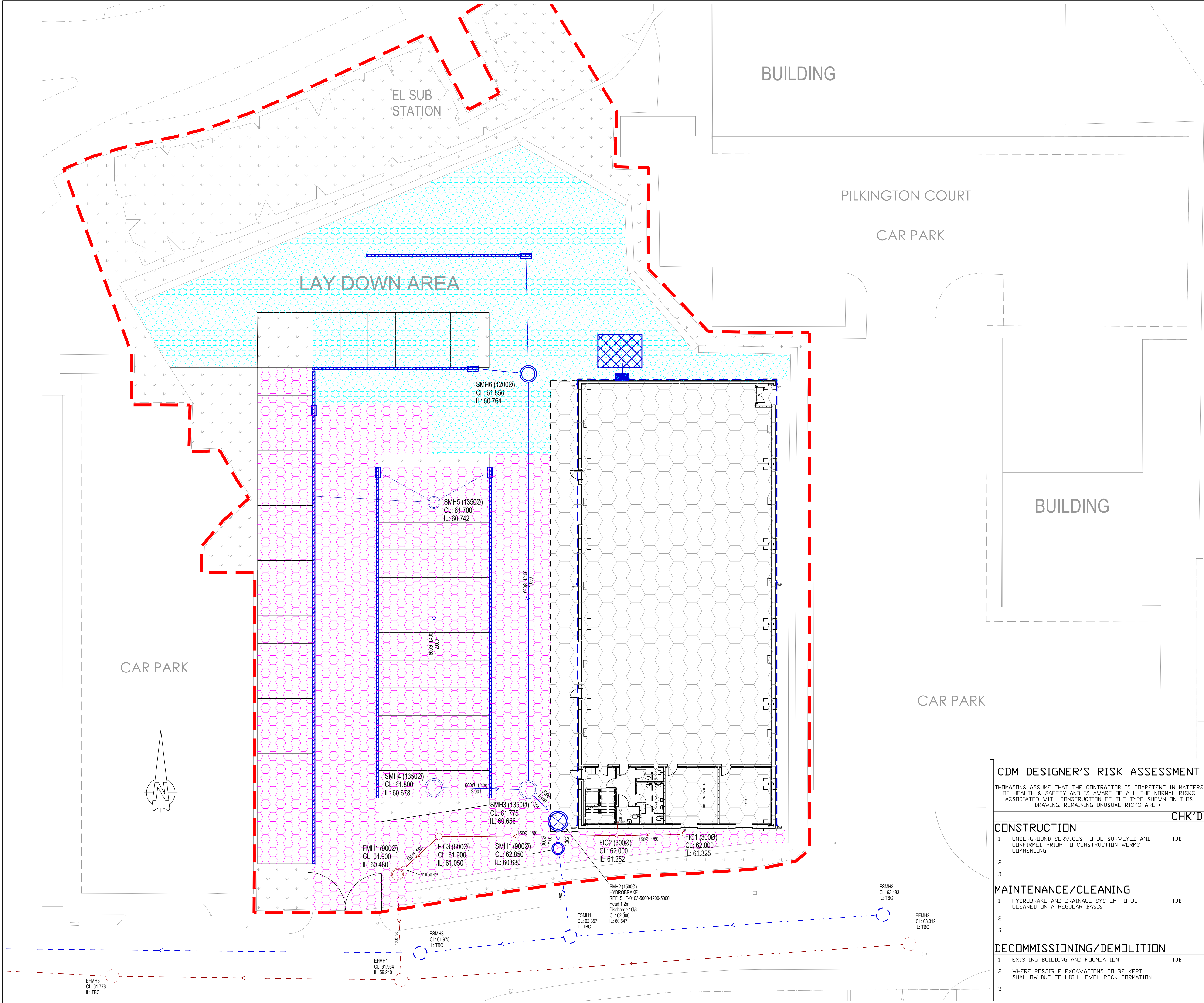
Drawing No.

LV1546-CIV-500

Revision

A

Scale	Size	Drawn	Date	Chkd	Passed
1:100	A1	IA	SEP 25	IA	IJB



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CONTRIBUTING AREA TABLE

Pipe No.	IMP AREA (m ²)	Colour Key
1.000	767.636	
1.001	0.000	
1.002	0.000	
2.000	1139.818	
2.001	0.000	
Totals:	1907.454	

PERMEABLE AREAS (0.08ha)

ROOF AREA (0.085ha)

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CDM DESIGNER'S RISK ASSESSMENT

THOMASONS ASSUME THAT THE CONTRACTOR IS COMPETENT IN MATTERS OF HEALTH & SAFETY AND IS AWARE OF ALL THE NORMAL RISKS ASSOCIATED WITH CONSTRUCTION OF THE TYPE SHOWN ON THIS DRAWING. REMAINING UNUSUAL RISKS ARE :-

Rev	Description	By	Date	Chkd
A	FOR COMMENT	IA	26/09/25	IA

CONSTRUCTION

- UNDERGROUND SERVICES TO BE SURVEYED AND CONFIRMED PRIOR TO CONSTRUCTION WORKS COMMENCING
-
-

MAINTENANCE/CLEANING

- HYDROBRAKE AND DRAINAGE SYSTEM TO BE CLEANED ON A REGULAR BASIS
-
-

DECOMMISSIONING/DEMOLITION

- EXISTING BUILDING AND FOUNDATION
- WHERE POSSIBLE EXCAVATIONS TO BE KEPT SHALLOW DUE TO HIGH LEVEL ROCK FORMATION
-

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STORAGE / WAREHOUSE PRESCOT BUSINESS PARK

SURFACE WATER CATCHMENT PLAN

Status

PRELIMINARY

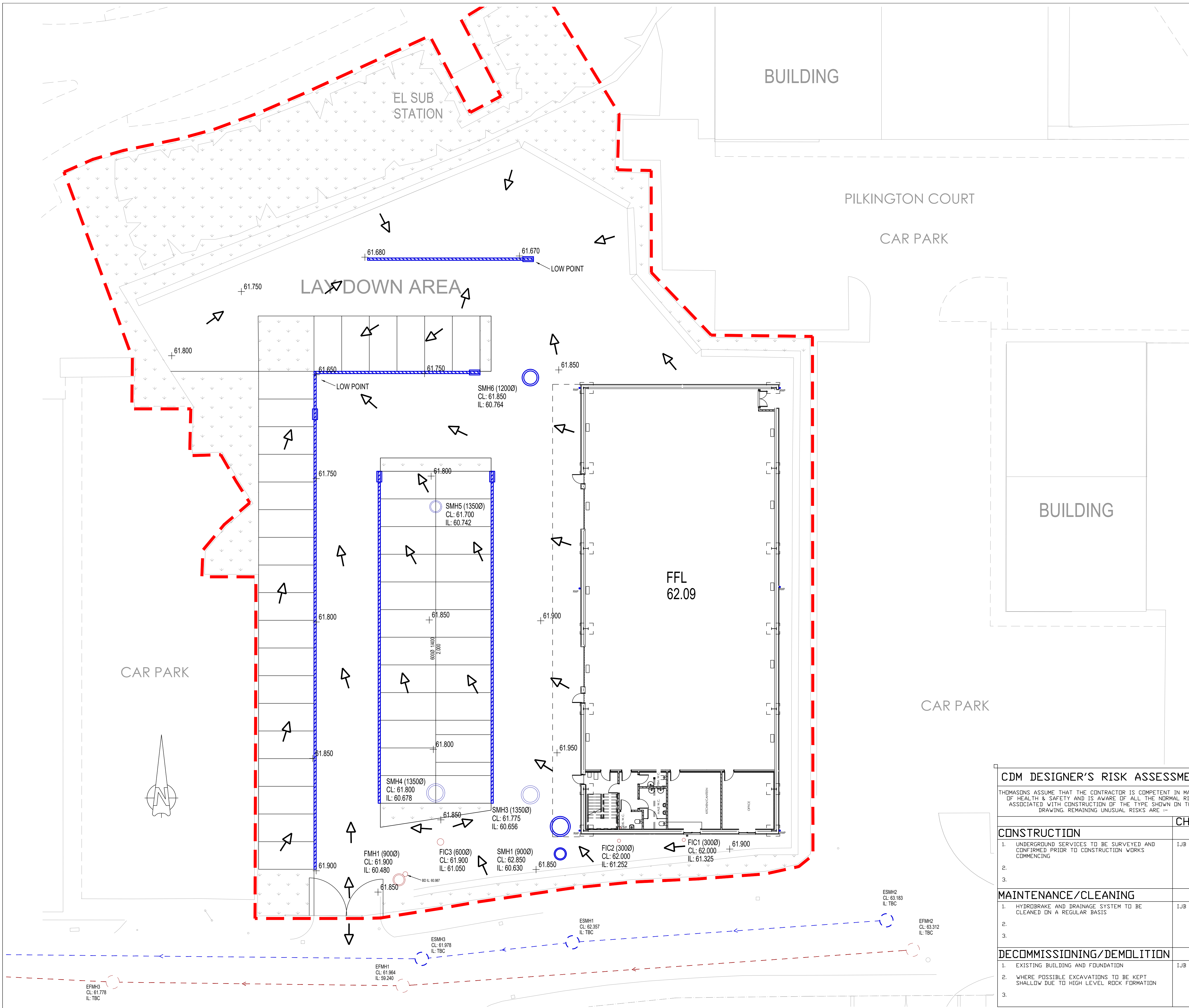
Drawing No.

LV1546-CIV-501

Revision

A

Scale	Size	Drawn	Date	Chkd	Passed
1:100	A1	IA	SEP 25	IA	IJB



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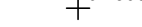
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5. IF THE CONTRACTOR CONSIDERS THAT HE DOES NOT HAVE SUFFICIENT INFORMATION TO SAFELY COMPLETE THE WORKS DETAILED ON THIS DRAWING, HE SHOULD CONTACT THE ENGINEER.

DRAINAGE NOTES

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3. THE CONTRACTOR SHALL ASCERTAIN THE DEPTHS, SIZES AND LOCATIONS OF ALL SERVICES TO BE CROSSED BEFORE EXCAVATION COMMENCES. ANY CONFLICT IN LEVELS BETWEEN NEW AND EXISTING SEWERS TO BE NOTIFIED TO THE ENGINEER.
4. ALL PIPES, CONNECTIONS, GULLIES, ACCESS FITTINGS, INSPECTION CHAMBERS, AND MANHOLES ARE TO COMPLY WITH THE BUILDING REGULATIONS. WHERE DRAINAGE IS TO BE ADOPTED THE FOREGOING ARE ALSO TO COMPLY WITH THE LATEST EDITION OF SEWERS FOR ADOPTION AND ANY ADDITIONAL REQUIREMENTS SPECIFIED BY THE UNDERTAKER.
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7. ALL WPC, IG, BIG AND RWP CONNECTIONS TO BE 100mm DIAMETER U.N.D. LAID TO A FALL NO FLATTER THAN 1:40.
8. FOR EXTERNAL LEVEL INFORMATION REFER TO ARCHITECTS DRAWINGS
9. ALL PIPE MATERIALS TO BE KITE MARKED TO RELEVANT APPROVED STANDARDS, ACCEPTABLE MATERIALS FOR DRAINAGE SYSTEM CAN BE PLASTIC, CLAY AND CONCRETE.

KEY

- | | |
|--|---|
|  | SITE BOUNDARY |
|  | PROPOSED SURFACE WATER DRAINAGE |
|  | PROPOSED FOUL DRAIN |
|  | EXISTING FOUL DRAINAGE |
|  | EXISTING SURFACE WATER DRAINAGE |
|  | OVERLAND FLOOD ROUTE DIRECTION
ARROWS |
|  61.800 | INDICATIVE PROPOSED LEVELS |
|  | SURFACE WATER HYDROBRAKE
REF. SEE: SHE-0103-5000-1200-5000
DESIGN HEAD 1.2M
MANHOLE DISCHARGE LIMITED TO 10 L/S. |
|  RWP | RAIN WATER PIPE LOCATION. |
|  SVP | SOIL VENT PIPE. |
|  | PROPOSED VERGE AREAS |

FOR INFORMATION PURPOSES
ONLY, NOT FOR CONSTRUCTION

CDM DESIGNER'S RISK ASSESSMENT

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CONSTRUCTION

1. UNDERGROUND SERVICES TO BE SURVEYED AND
CONFIRMED PRIOR TO CONSTRUCTION WORKS
COMMENCING
- 2.
- 3.

MAINTENANCE/CLEANING	
----------------------	--

1. HYDROBRAKE AND DRAINAGE SYSTEM TO BE CLEANED ON A REGULAR BASIS
- 2.

DECOMMISSIONING/DEMOLITION	
----------------------------	--

1. EXISTING BUILDING AND FOUNDATION
2. WHERE POSSIBLE EXCAVATIONS TO BE KEPT SHALLOW DUE TO HIGH LEVEL ROCK FORMATION
- 3.

CHK'D

A	FOR COMMENT	IA	26/09/25	IA
Rev	Description	By	Date	Chkd



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STORAGE / WAREHOUSE
PRESCOT BUSINESS PARK

FLOOD ROUTING PLAN

	Status
--	--------

PRELIMINARY

Revision

A

Scale

Size

Drawn

Date _____

Chkd

Passed

APPENDIX C – Hydraulic Calculations

Technical Specification

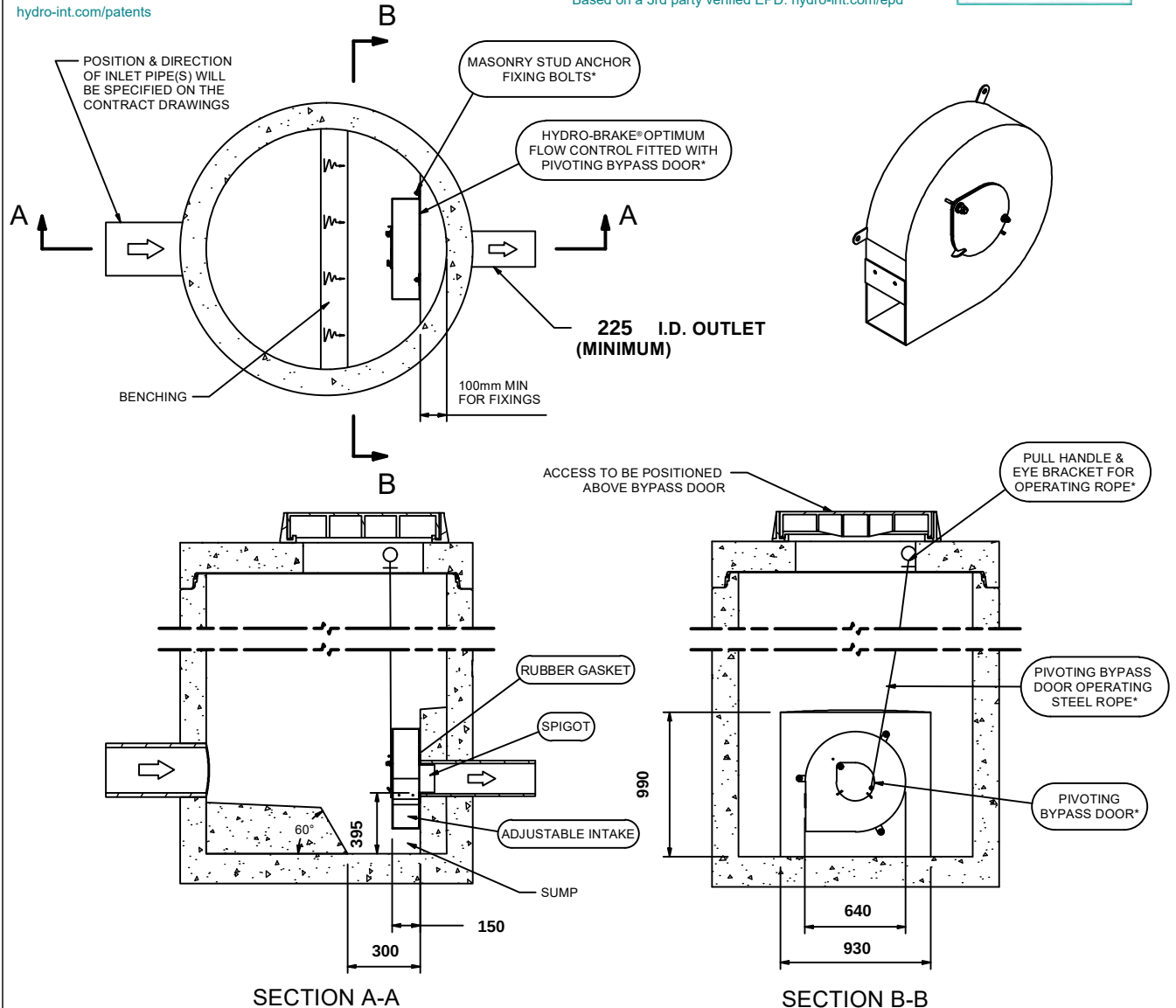
Control Point	Head (m)	Flow (l/s)
Primary Design	1.200	10.000
Flush-Flo™	0.357	9.991
Kick-Flo®	0.778	8.160
Mean Flow		8.656

hydro-int.com/patents

This Hydro-Brake® Optimum includes:

- All in 3 mm Grade 304L stainless steel
- Integral pivoting by-pass door allowing clear line of sight through to outlet, c/w operating rope
- Media blasted for corrosion resistance
- Variable flow rate post installation via adjustable inlet (if necessary)
- Indicative Weight: 25 kg
- Product Carbon Footprint: 101.29 kgCO2e

Based on a 3rd party verified EPD: hydro-int.com/epd



IMPORTANT: ○ LIMIT OF HYDRO INTERNATIONAL SUPPLY
THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS
FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL
ALL CIVIL AND INSTALLATION WORK BY OTHERS
* WHERE SUPPLIED
HYDRO-BRAKE® IS A REGISTERED TRADEMARK FOR FLOW CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY
HYDRO INTERNATIONAL

THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.

DESIGN ADVICE



The head/flow characteristics of this SHE-0143-1000-1200-1000 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.
The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

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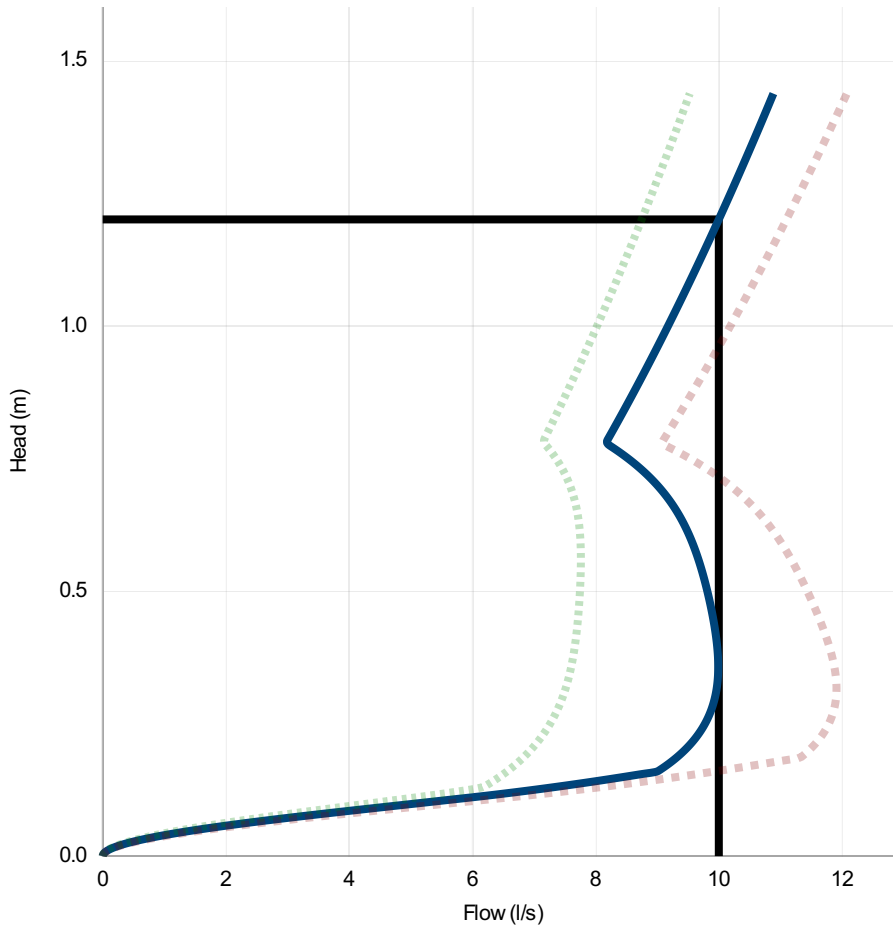
DATE	26/09/2025 11:29	SHE-0143-1000-1200-1000 Hydro-Brake® Optimum
SITE	Sinclair Way	
DESIGNER	Ijaz Akram	
REF	LV1546	

Technical Specification

	Original Setting		Minimum Setting		Maximum Setting	
Control Point	Head (m)	Flow (l/s)	Head (m)	Flow (l/s)	Head (m)	Flow (l/s)
Primary Design	1.200	10.000	1.200	8.749	1.200	11.098
Flush-Flo™	0.357	9.991	0.559	7.761	0.316	11.910
Kick-Flo®	0.778	8.160	0.780	7.140	0.777	9.060
Mean Flow		8.656		7.112		9.891



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Head (m)	Flow (l/s)
0.000	0.000
0.041	1.092
0.083	3.802
0.124	6.946
0.166	9.083
0.207	9.507
0.248	9.770
0.290	9.917
0.331	9.981
0.372	9.988
0.414	9.955
0.455	9.896
0.497	9.819
0.538	9.725
0.579	9.608
0.621	9.456
0.662	9.250
0.703	8.966
0.745	8.578
0.786	8.202
0.828	8.401
0.869	8.595
0.910	8.784
0.952	8.969
0.993	9.150
1.034	9.326
1.076	9.500
1.117	9.670
1.159	9.836
1.200	10.000

DESIGN ADVICE



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DATE 26/09/2025 11:29

Site Sinclair Way

DESIGNER Ijaz Akram

Ref LV1546

SHE-0143-1000-1200-1000

Hydro-Brake® Optimum

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
SMH6	0.077	1.200	Unknown	61.850	60.764	0.486	346527.571	392234.515
SMH5	0.114	1.200	Unknown	61.700	60.742	0.358	346519.052	392222.863
SMH4	0.000	1.350	Unknown	61.900	60.678	0.622	346519.008	392197.017
SMH3	0.000	1.350	Unknown	61.775	60.656	0.519	346527.566	392196.814
SMH2	0.000	1.500	Unknown	62.000	60.647	1.053	346530.270	392193.957
SMH1	0.000	0.900	Unknown	61.784	60.630	0.854	346530.268	392191.472

Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)	DS Depth To Soffit (m)
1.000	SMH6	60.764	SMH3	60.670	Circ	0.6mØ	37.701	400.0	0.600	0.486	0.505
2.000	SMH5	60.742	SMH4	60.678	Circ	0.6mØ	25.846	400.0	0.600	0.358	0.622
2.001	SMH4	60.678	SMH3	60.656	Circ	0.6mØ	8.561	400.0	0.600	0.622	0.519
1.001	SMH3	60.656	SMH2	60.647	Circ	0.6mØ	3.933	400.0	0.600	0.519	0.753
1.002	SMH2	60.647	SMH1	60.630	Circ	0.3mØ	2.485	150.0	0.600	1.053	0.854

Outfall Details

Outfall Manhole SMH1 : Free Discharge

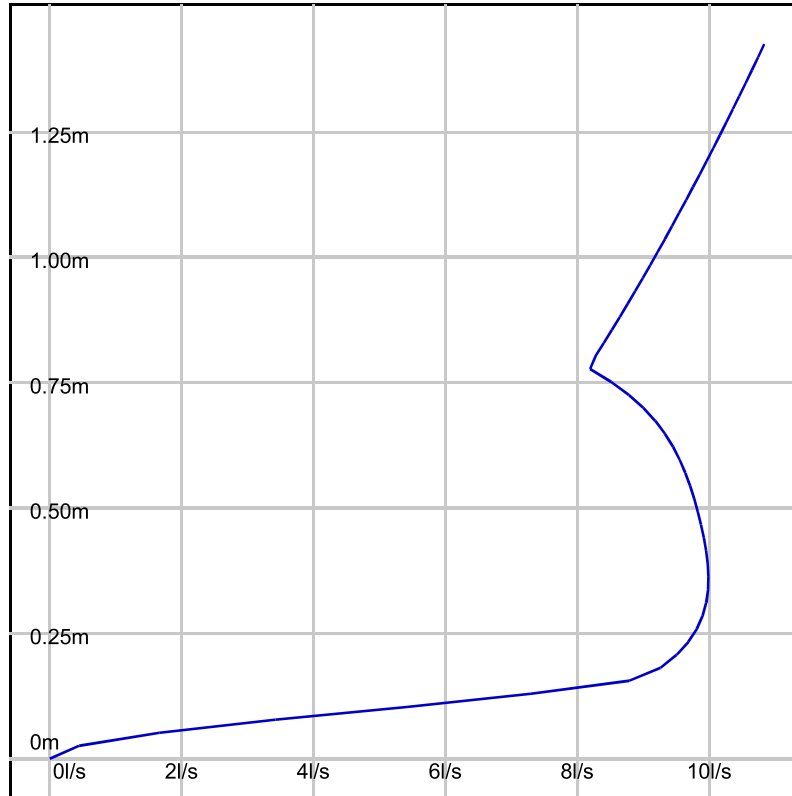
Flow Control Details

Controls within Manhole SMH2

Hydro-Brake® Optimum Control at Manhole SMH2

Model Ref	Design Depth (m)	Design Flow (l/s)	Depth Above Invert (m)	FF Head (m)	FF Flow (l/s)	KF Head (m)	KF Flow (l/s)
SHE-0143-1000-1200-1000	1.200	10.000	0.000	0.358	9.990	0.779	8.160

Hydro-Brake® Optimum Control at SMH2



Simulation Settings

FSR: M5-60=19.40, R=0.37, Locale=England and Wales
Summer (Cv: 0.75)

Global Time of Entry: 5.0 mins

Durations (mins): 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080

Return Periods (yrs) + Climate Change: (2, +0%), (30, +0%), (100, +40%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
2Yr 15Min Summer	40.080	0.00	0.00	30Yr 960Min Summer	3.828	0.00	0.00
2Yr 30Min Summer	25.892	0.00	0.00	30Yr 1440Min Summer	2.805	0.00	0.00
2Yr 60Min Summer	16.153	0.00	0.00	30Yr 2160Min Summer	2.052	0.00	0.00
2Yr 120Min Summer	9.899	0.00	0.00	30Yr 2880Min Summer	1.643	0.00	0.00
2Yr 180Min Summer	7.408	0.00	0.00	30Yr 4320Min Summer	1.200	0.00	0.00
2Yr 240Min Summer	6.028	0.00	0.00	30Yr 5760Min Summer	0.959	0.00	0.00
2Yr 360Min Summer	4.503	0.00	0.00	30Yr 7200Min Summer	0.806	0.00	0.00
2Yr 480Min Summer	3.657	0.00	0.00	30Yr 8640Min Summer	0.699	0.00	0.00
2Yr 600Min Summer	3.112	0.00	0.00	30Yr 10080Min Summer	0.620	0.00	0.00
2Yr 720Min Summer	2.727	0.00	0.00	100Yr+40% 15Min Summer	130.021	0.00	-0.16
2Yr 960Min Summer	2.213	0.00	0.00	100Yr+40% 30Min Summer	86.560	0.00	-0.16
2Yr 1440Min Summer	1.650	0.00	0.00	100Yr+40% 60Min Summer	54.957	0.00	-0.12
2Yr 2160Min Summer	1.229	0.00	0.00	100Yr+40% 120Min Summer	33.697	0.00	0.00
2Yr 2880Min Summer	0.998	0.00	0.00	100Yr+40% 180Min Summer	24.952	0.00	0.00
2Yr 4320Min Summer	0.744	0.00	0.00	100Yr+40% 240Min Summer	20.028	0.00	0.00
2Yr 5760Min Summer	0.604	0.00	0.00	100Yr+40% 360Min Summer	14.649	0.00	0.00
2Yr 7200Min Summer	0.514	0.00	0.00	100Yr+40% 480Min Summer	11.731	0.00	0.00
2Yr 8640Min Summer	0.451	0.00	0.00	100Yr+40% 600Min Summer	9.866	0.00	0.00
2Yr 10080Min Summer	0.403	0.00	0.00	100Yr+40% 720Min Summer	8.561	0.00	0.00
30Yr 15Min Summer	71.707	0.00	0.00	100Yr+40% 960Min Summer	6.837	0.00	0.00
30Yr 30Min Summer	47.299	0.00	0.00	100Yr+40% 1440Min Summer	4.972	0.00	0.00
30Yr 60Min Summer	29.868	0.00	0.00	100Yr+40% 2160Min Summer	3.608	0.00	0.00
30Yr 120Min Summer	18.311	0.00	0.00	100Yr+40% 2880Min Summer	2.871	0.00	0.00
30Yr 180Min Summer	13.603	0.00	0.00	100Yr+40% 4320Min Summer	2.076	0.00	0.00
30Yr 240Min Summer	10.965	0.00	0.00	100Yr+40% 5760Min Summer	1.648	0.00	0.00
30Yr 360Min Summer	8.072	0.00	0.00	100Yr+40% 7200Min Summer	1.377	0.00	0.00
30Yr 480Min Summer	6.492	0.00	0.00	100Yr+40% 8640Min Summer	1.189	0.00	0.00
30Yr 600Min Summer	5.480	0.00	0.00	100Yr+40% 10080Min Summer	1.050	0.00	0.00
30Yr 720Min Summer	4.769	0.00	0.00				

Simulation Results

Return Period Yrs: 2.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
SMH6	30 min Summer	20	60.948	0.184	4.619		OK
SMH5	30 min Summer	21	60.948	0.206	5.142		OK
SMH4	30 min Summer	21	60.947	0.269	5.310		OK
SMH3	30 min Summer	21	60.947	0.290	10.601		OK
SMH2	30 min Summer	21	60.947	0.300	9.970		Surcharged
SMH1	30 min Summer	21	60.695	0.065	9.692		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	30 min Summer	20	SMH6	SMH3	0.230	0.323	8.387	0.025	OK
2.000	30 min Summer	21	SMH5	SMH4	0.237	0.375	15.467	0.045	OK
2.001	30 min Summer	21	SMH4	SMH3	0.280	0.292	11.388	0.033	OK
1.001	30 min Summer	21	SMH3	SMH2	0.295	0.430	10.482	0.031	OK
1.002	30 min Summer	21	SMH2	SMH1	0.065	0.852	9.692	0.107	OK

Return Period Yrs: 30.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
SMH6	60 min Summer	41	61.185	0.420	3.848		OK
SMH5	60 min Summer	41	61.185	0.443	5.714		OK
SMH4	60 min Summer	41	61.185	0.507	5.544		OK
SMH3	60 min Summer	41	61.185	0.529	9.525		OK
SMH2	60 min Summer	41	61.185	0.539	9.798		Surcharged
SMH1	120 min Summer	85	60.696	0.066	9.989		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	60 min Summer	41	SMH6	SMH3	0.468	0.324	9.157	0.027	OK
2.000	60 min Summer	41	SMH5	SMH4	0.475	0.385	18.915	0.055	OK
2.001	60 min Summer	41	SMH4	SMH3	0.518	0.301	12.211	0.036	OK
1.001	60 min Summer	41	SMH3	SMH2	0.534	0.446	11.722	0.034	OK
1.002	60 min Summer	60	SMH2	SMH1	0.066	0.860	9.989	0.110	OK

Return Period Yrs: 100.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
SMH6	30 min Summer	18	61.745	0.981	28.807		Flood Risk
SMH5	60 min Summer	35	61.700	0.958	65.785	15.599	Flood
SMH4	30 min Summer	18	61.728	1.050	4.899		Flood Risk
SMH3	30 min Summer	18	61.742	1.086	19.655		Flood Risk
SMH2	30 min Summer	18	61.744	1.097	10.533		Surcharged
SMH1	600 min Summer	320	60.696	0.066	9.989		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	60 min Summer	35	SMH6	SMH3	0.600	0.328	29.657	0.087	Surcharged
2.000	30 min Summer	16	SMH5	SMH4	0.600	0.499	42.181	0.123	Surcharged
2.001	30 min Summer	16	SMH4	SMH3	0.600	0.385	30.508	0.089	Surcharged
1.001	30 min Summer	16	SMH3	SMH2	0.600	0.550	19.679	0.058	Surcharged
1.002	600 min Summer	320	SMH2	SMH1	0.066	0.860	9.989	0.110	OK