

ADEPT

CIVIL AND STRUCTURAL CONSULTING ENGINEERS



Drainage Strategy & Flood Risk Assessment 100.23083 - Sovereign Industrial Estate, Huyton

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Client: Davos Property Developments Ltd
Project Name: Sovereign Industrial Estate, Huyton
Report Title: Drainage Strategy & Flood Risk Assessment
Document ref: 100.23083-ACE-ZZ-ZZ-RP-C-0001
Date: 12/10/23

Revision	Suitability	Date	Author	Checked	Approved	Description
P1	S2	12.10.23	RP	RP	NB	First Issue
P2	S2	01.03.24	RP	RP	NB	Revised to LLFA and UU comments

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1.0 Introduction and brief

Adept Consulting Engineers Ltd was commissioned to provide a Drainage Strategy and Flood Risk Assessment (FRA) for Davos Property Developments Ltd relating to the partial demolition and refurbishment of industrial warehouses and the erection of a retail unit at Sovereign Industrial Estate, Huyton.

2.0 Limitations of report

Preliminary calculations and a concept drainage design have been undertaken as part of this study. The preliminary calculations and concept design are based on the information and assumptions covered in this report at the time of preparation and provide a concept design for points of connection and general design parameters only.

The report is based on the interpretation and assessment of data provided by third parties. Adept Consulting Engineers Limited cannot guarantee the reliability of the third-party information obtained. The conclusions and findings of the report may change if the third-party data is subsequently amended or updated.

3.0 Executive Summary

SECTION	SUMMARY
Location	Former Sovereign Distillery, Sovereign Industrial Estate, Wilson Road, Wilson Road, Huyton. The nearest postcode is L36 6AW.
Proposed Development	Partial demolition, reconfiguration and refurbishment of existing employment floorspace to create 2no. industrial warehouse buildings with ancillary offices (Classes E(g)(iii), B2 and B8) with dedicated servicing and car parking arrangements; erection of 1no. retail unit (Class E) with external display area and dedicated car parking and servicing arrangements; retention and amendment of existing site accesses along with internal estate roads; 2no. substations; landscaping; and associated works
Land use	Hardstanding/warehouses Impermeable area = 4.631 ha / Gross site Area = 6.53 ha
Topography	This site is largely made up of 1 building (Units A, B & D), it is a relatively flat site. There is a small brick retaining wall standing about 400mm in height along the Wilson Road boundary.
Sequential and Exception Tests	Development is thought to be within the most sequentially preferable location when considering the area within the site boundary. Exception Test will not be required.
Fluvial (River) flooding	Very low risk – There is a brook 240m East of the site and the River Mersey is 5km South and West of site. This doesn't appear to provide any potential risk of fluvial flooding, hence the very low risk rating.
Pluvial (Surface water) flooding	Low/Medium Risk – The site is mostly shown as very low risk with scattered patches of medium to high risk. Given the proportion of these patches a low/medium risk rating feels appropriate. It is believed a lot of the current risks are due to the lack of maintenance on the current surface water system which will be rectified following the refurbishment.
Flooding from artificial sources	Low risk – The site is not at risk of flooding from artificial sources. UU have highlighted a risk of flooding in the combined sewers crossing the site. Floor levels of new and existing buildings are set above

	existing yard levels. Decrease in drained area to combined sewer will reduce flood risk.
Groundwater Flood Risk	Groundwater is relatively shallow, recorded at 0.6m below site levels. This will affect construction phase only.
Development Impacts on Flood Risk	Whilst the construction of hard standings and buildings without mitigation will theoretically increase flood risk to downstream properties, this risk can be, and will be, safely managed as demonstrated within this report.
Flood Risk Mitigation/management	In accordance with recommendations from the LLFA finished floor levels set generally 150mm above external levels
Surface Water Management	Based on the adjacent site, soakaway/infiltration is not viable due the made ground under the site. Suds proforma (part 1) is attached The proposed surface water strategy leaves as much as possible of the existing in place and any new drainage connects to the existing private networks within the site. There are 3 attenuation tanks to accommodate the proposed storm water system. These are sized to a 1 in 100 year storm plus 40% climate change. There are 3 flow controls discharging the proposed drainage into the existing private network
Foul Water Management	Foul water from the new and refurbished units drains to the existing private drains on site. Existing unused drainage will be abandoned
Residual Risks	None
Recommendations for Further work	None required
Maintenance	Private drainage will be the responsibility of Davos Property Developments Ltd.

4.0 Description of the existing site

The site is located off Wilson Road (adjacent to the A5080) in Huyton. The nearest postcode is L36 6AW and the grid reference is SJ 45686 89518. The site is a brownfield site, with housing to the west, a service station to the south and industrial park to the east.

A site location plan is appended.

Site description	
Total Site Area	Approx. 6.53 Hectares
Existing Impermeable Area	4.631 Hectares
Land use	Former industrial site
Topography	The southern portion of the site is relatively flat around 23-25m AOD
Known Site Constraints	Former brownfield

A topographical survey is appended.

Sequential test

The Sequential Test aims to steer developments and redevelopments to areas of lower flood risk. The test compares the proposed development site with other available sites, in terms of flood risk, to aid the steering process.

The developed parts of the site all lies with in flood zone 1 and is in the most sequentially preferable location.

Exception test

Where the Sequential Test is undertaken and alternative sites of lower flood risk are not available, then the proposed development may require an Exception Test in order to be granted planning permission. Where the exception test is required, it should be applied as soon as possible to all local development document allocations for developments and all planning applications other than for minor developments.

All three elements of the exception test have to be passed before development is allocated or permitted. For the exception test to be passed:

1. It must demonstrate that the development provides wider sustainability benefits to the community that outweigh the flood risk, informed by an SFRA, where one has been prepared;
2. The development should be on developed land or on previously developed land;
3. A flood risk assessment must demonstrate that the development will be safe without increasing flood risk elsewhere, and where possible will reduce the overall flood risk.

As the development passes the sequential test the exception test is not required.

5.0 Hydrology, hydrogeology and geology

Watercourses and waterbodies

Chapel Brook is located due Northeast of the site. Stadt Moers Park is also located due Northeast of the site contains a substantial pond/lake.

Sewerage

Public sewerage is located on the site and is indicated on the appended United Utilities asset plans. Further detailed assessment of this sewer is programmed.

Geology

An extract of the geological investigation is appended. Due to the made ground underneath the site, soakaways are not considered a viable solution.

6.0 Proposed Development

Development Outline

The proposed development involves partial demolition, reconfiguration and refurbishment of existing employment floorspace to create 2no. industrial warehouse buildings with ancillary offices (Classes E(g)(iii), B2 and B8) with dedicated servicing and car parking arrangements; erection of 1no. retail unit (Class E) with external display area and dedicated car parking and servicing arrangements; retention and amendment of existing site accesses along with internal estate roads; 2no. substations; landscaping; and associated works

Architectural plans are appended.

Proposed Surface Water Drainage Strategy

In accordance with the building regulations hierarchical approach discharge via infiltration has been considered but is unsuitable due to the made ground under the site.

A discharge to a watercourse has not been considered due to the distance to the watercourse.

Due to the above, and in accordance with building regulations hierarchical approach, it is proposed to drain surface water run-off from the site to the existing drainage on site. The discharge rate for redeveloped parts of the site has been based on brownfield calculations following Knowsley Councils Proforma One and Knowsley Council's Strategic Flood Risk Assessment.

It is proposed that the existing buildings on site along with the service yard to Warehouse A which remain in place will continue to drain to existing outfalls and will not drain through the new system. There are some diversions to existing drainage required between Warehouse B and Warehouse C.

All new surface water run off will be collected by a traditional piped sewerage system and attenuated within storage tanks. Attenuated surface water will discharge from the tanks to receiving surface water drainage on site.

The design has put together following the guidance in the Ciria Suds Guide and Knowsley Councils Strategic Flood Risk Assessment. A 40% allowance has been made in calculations.

Below is a summary of the internal catchments within the site and should be read in accordance with our impermeable area plans appended to this report.

TIA (Ex) = Total Existing Impermeable Area

TIA (New) = Total New Impermeable Area

Q (Ex) = Existing discharge from site

Q (New) = Proposed discharge from site – 50% reduction on redeveloped parts of the site.

Vol = Maximum attenuation volume required to accommodate the peak 1 in 100 year + 40% CC storm

Catchment	TIA (Ex) m ²	Q (Ex) l/s	TIA (New) m ²	Q (New) l/s	Vol m ³
Area 1	5,480	76.2	5,290	38.086	183
Area 2	10,100	140.4	11,050	70.195	418
Area 3	13,370	185.8	13,370	185.80	0
Area 4	8,300	115.37	10,680	57.68	429.3
Area 5	5,900	82	5,900	82	0
Area 6	3,180	44.2	3,160	44.2	0

Existing redundant drainage will be abandoned, and grout filled.

A drainage strategy drawing is appended, based upon these figures.

Foul Drainage

Foul water discharges will be made to the existing foul drainage on site.

Outline drainage is indicated on the appended drainage strategy plan.

Existing redundant drainage will be abandoned and grubbed up where required or be grout filled.

SuDS Assessment and Water Quality

The surface water discharge train has been assessed in line with the SuDS manual. The provisions are detailed below:

Silt trapping chambers and appropriately specified petrol interceptors will provide water quality treatment.

SuDS Operation and Maintenance

A SuDS operation and maintenance schedule specific to the site is appended to this report.

7.0 Flood risk sources and extents

Summary

A summary of the sources and level of flood risk (negligible, low, medium or high) is given in Table 6.1 below.

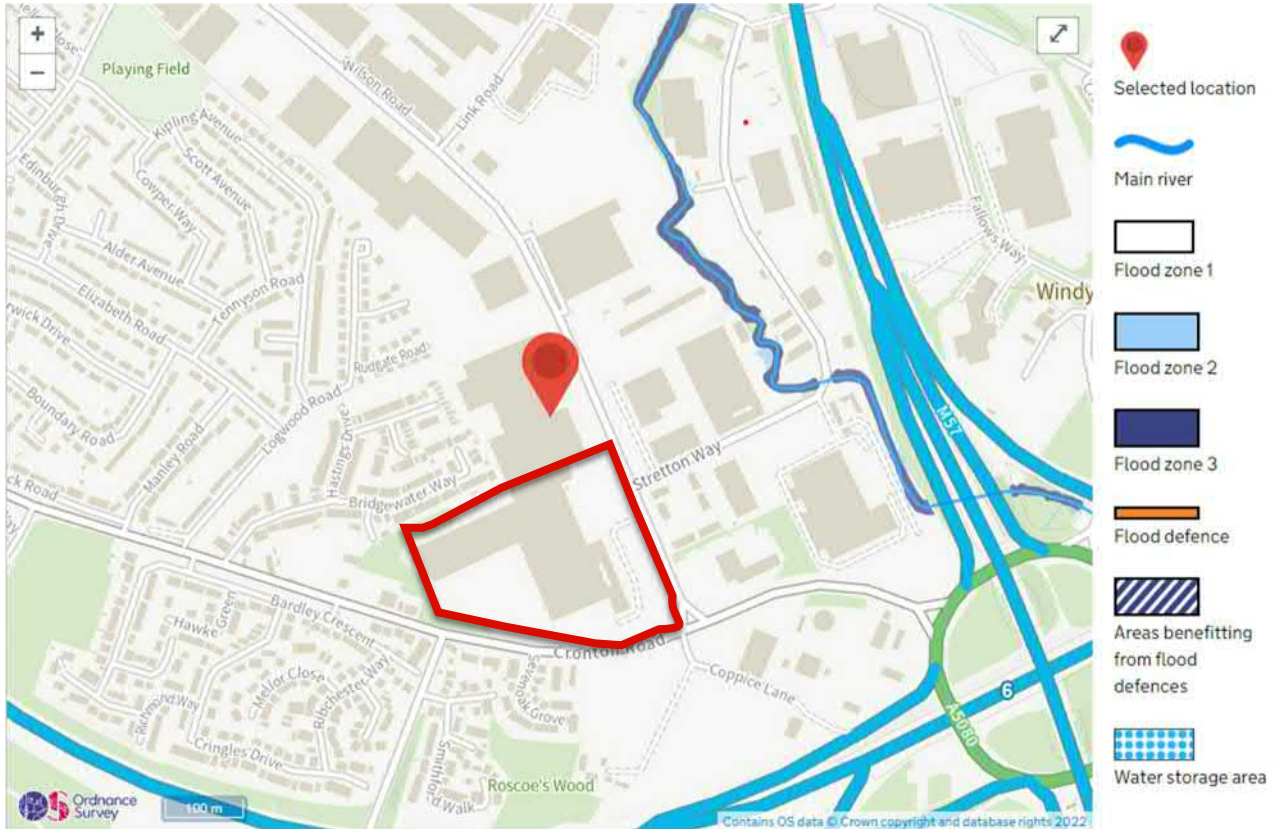
Table 6.1 Summary of the sources and level of Flood Risk	
Source	Risk Level
Fluvial	Very Low
Tidal - Coastal	Very Low
Surface Water / Pluvial	Low
Groundwater	Low
Surcharged Sewers	Low
Other Man Made Sources	Very ow

The sources and level of flood risk are demonstrated below.

Fluvial

Shown to be in Flood Zone 1 no further discussion required.

An extract from the gov.uk website is shown below,



Tidal

The site is not at risk of tidal flooding.

Surface Water / Pluvial

Surface water flood risk mapping from the gov.uk website shows that the site is in general at low risk of flooding. There is evidence of flooding to the eastern portion of the site, this is shown to be below 300mm depth and of low velocity risk. The new retail store will be set at a level above existing levels to ensure the building is not at risk of flooding.

An extract from the gov.uk website is shown below.

Learn more about this area's flood risk

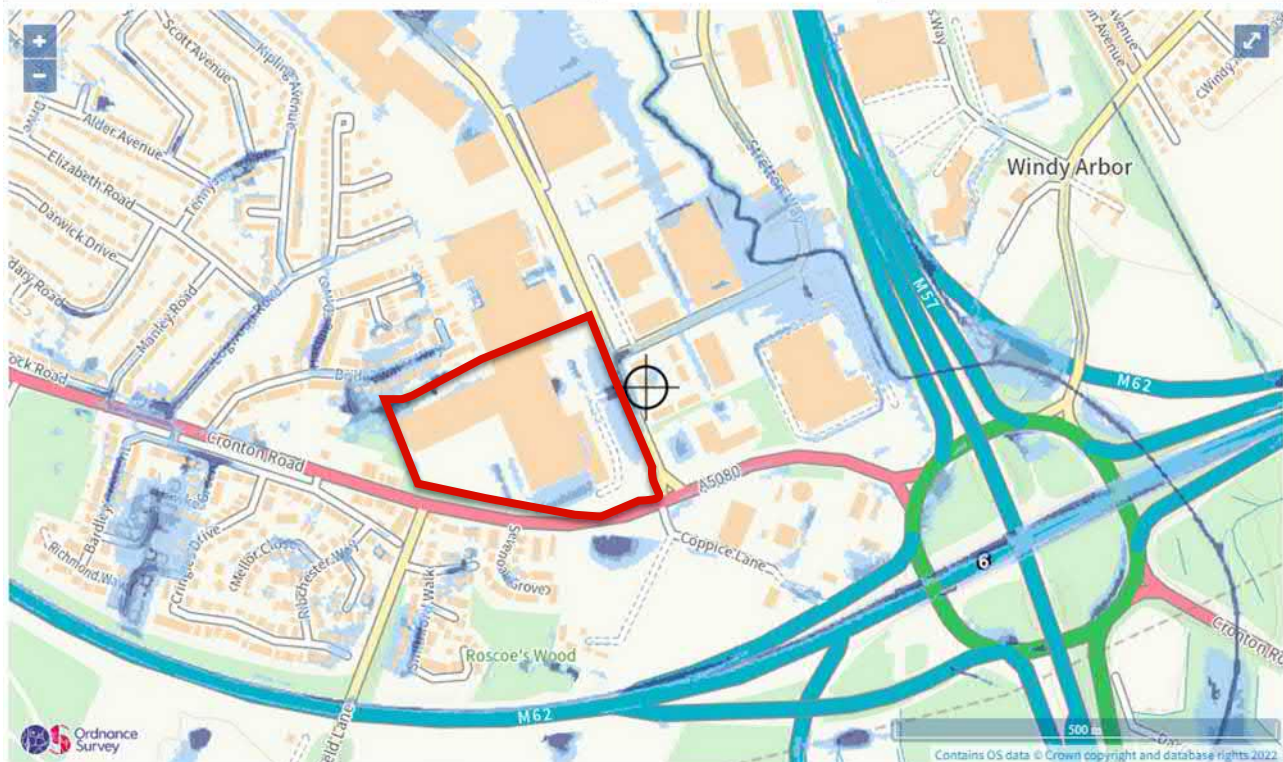
Select the type of flood risk information you're interested in. The map will then update.

Flood risk

Extent of flooding

Location

Enter a place or postcode



Extent of flooding from surface water

● High ● Medium ● Low ○ Very low ⊕ Location you selected

Groundwater Flooding

The land falling toward the northwest of the site suggests ground water would emanate downslope from the site.

Surcharged Sewers

Existing sewerage is located on site and remains the responsibility of the statutory undertaker. Normal threshold elevations to surrounding ground, 150mm would offer suitable protection.

Other Man Made Sources

The site is not at risk of reservoir or canal flooding.

Climate Change

Adept Consulting Engineers have applied a climate change factor of 40% to proposed calculations.

Design Consideration and Flood Mitigation

Ground levels are to be set to ensure surface water flooding does not impact proposed buildings.

8.0 Communications

Discussions with Environment Agency: No consultation required.

Discussions with the Lead Local Flood Authority: The principals of the Phase 1 development have been followed along with Knowsley Council guidance.

The Knowsley Suds proforma, part 1, is attached to this report.

Finished floor levels and initial proposed ground levels have been shown on the drawings.

The drainage outfalls that are being re-used have been checked and are adequate for re-use. The drainage survey is appended.

Discussions with Sewerage Undertaker: A pre-development enquiry has not been sent to United Utilities as we are connecting to existing drainage within the development site and not directly to the sewer.

United Utilities have asked for more information through planning. Concerns were raised over the existing flooding in the combined system. We have proven that load to the combined sewer will decrease post development. UU acknowledgment is attached.

9.0 Conclusions

Proposed Drainage Strategy

The flows from redeveloped parts of the site will be restricted to brownfield run-off rates with surface water storage provided for the 100 year event + 40%.

Foul flows will connect to the existing drains on site and into the public combined water sewer system.

The site will drain by gravity.

A SuDS maintenance schedule is appended.

Flood Risk

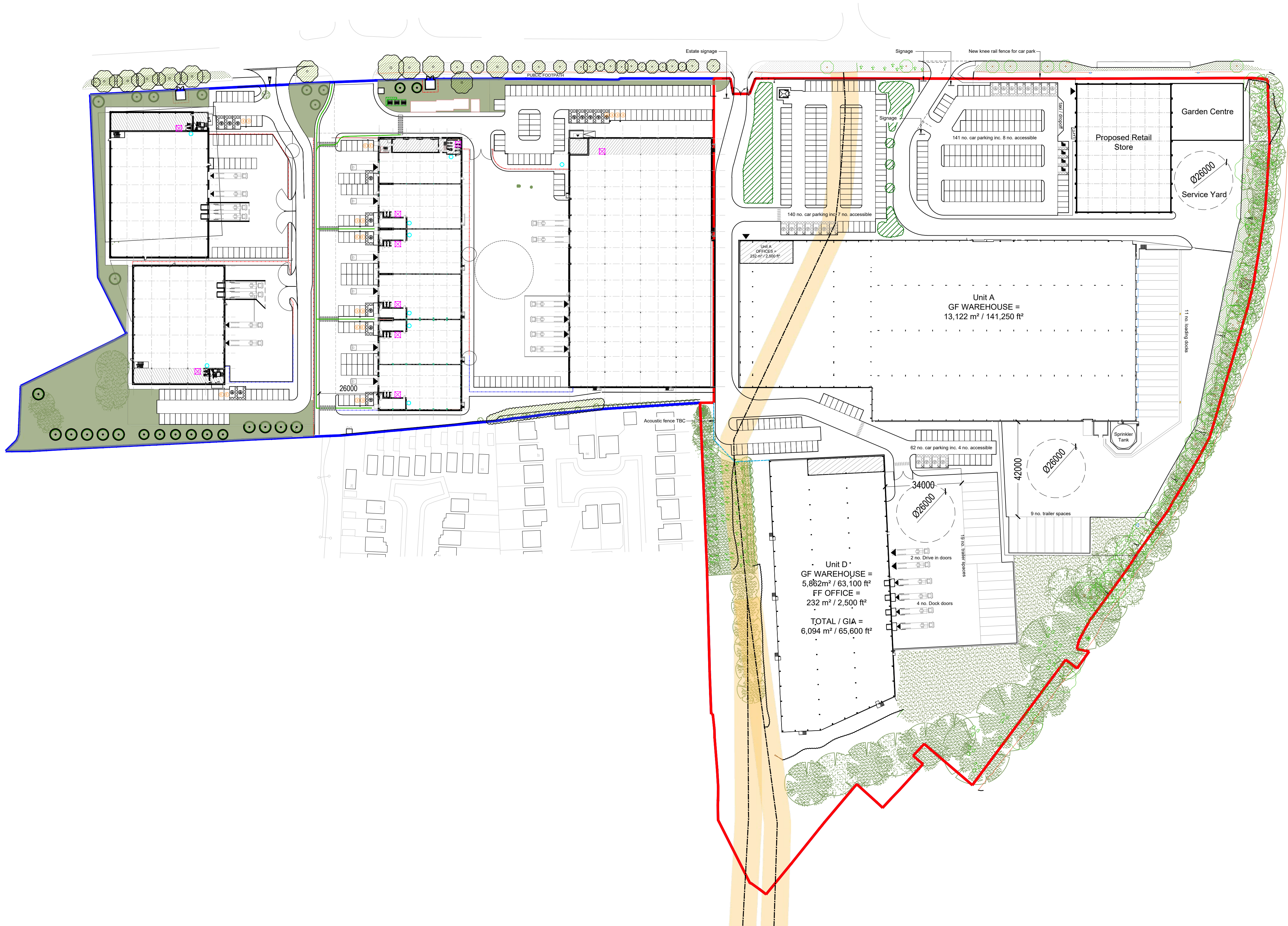
The site has a "low" flood risk classification from all sources.

Appendix A

- Location Plan (Aerial Photograph)



- Architectural Plans



Schedule of Accommodation				
Unit	Ground Floor GIA	First Floor / Office GIA	TOTAL UNIT GIA	Car Parking (Accessible)
Unit A & B	13,122 m² / 141,250 ft²	232 m² / 2,500 ft²	13,354 m² / 143,750 ft²	191 (8)
Unit D	5,862 m² / 63,100 ft²	232 m² / 2,500 ft²	6,094 m² / 65,600 ft²	62 (4)
TOTAL SITE GIA			19,448 m² / 209,350 ft²	253(12)
Proposed Retail Store			2,272 m² / 24,455 ft²	105 (6)

- NOTES
- AEWTP026C
- All dimensions and levels are to be checked on site.
 - Any discrepancies are to be reported to the architect before any work commences
 - This drawing shall not be scaled to ascertain any dimensions. Work to figured dimensions only.
 - This drawing shall not be reproduced without express written permission from AEW.
 - Title overlay drawings and ownership boundaries are produced using all reasonable endeavors. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
 - All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
 - All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

CDM 2015

Client notified of duties: 27/11/20

Principal Designer: Client

Unless noted below, all known hazards have been highlighted on the drawing:

0 10 20 30 40 50m

Scale 1:1000 @ A3

Key:

Red line site boundary (TBC): 16.32acres / 6.60ha

Existing sewer and easment

P03	22/08/23	SG	DRS
Layout updated. Acoustic fence and existing sewer added.			
P02	22/08/23	SG	DRS
Retail Store service yard kerb revised			
P01	17/08/23	SG	DRS
Initial Issue			
REV	Date	Drawn by: -	Checked by: -
Status	Purpose of Issue		
S3	For Review & Comment		
drawing stage	Feasibility		
client			

Davos Industrial Ltd.

project

Sovereign Distillery
Huyton

drawing title

Proposed Site Plan Option 2A

date 17/08/23 drawn SG

scale@A1 1:1000 checked DRS

Appendix B

- Knowsley Suds Proforma
- Drainage Strategy
- Existing Drainage
- Existing Drainage Impermeable Areas
- Drainage Summary and Calculations
- Existing Sewer Records
- UU acceptance
- SuDs Maintenance Schedule

PRO-FORMA 1: Sustainable Drainage System: Planning Permission

This pro-forma is a requirement of the Planning Validation Checklist. You **must complete all white boxes in full** and submit this pro-forma along with your supporting evidence to the Local Planning Authority for any application which seeks planning permission for major development (as defined in section 2 of [Statutory Instrument 2015 No. 595](#)).

This pro-forma supports developers and regulators in **summarising and confirming** how surface water from a development will be managed sustainably under current and future conditions. It should be completed in conjunction with the Council's 'Completing your Pro Forma' document and your sustainable drainage system should be designed in accordance with [CIRIA The SuDS Manual C753](#).

The pro-forma follows Policy CS24 of [Knowsley MBC's Local Plan](#), [National Planning Policy Framework](#), [House of Commons Written Statement \(HWSW 161\) on SuDS](#), [Planning Practice Guidance](#) and [Defra's Non-Statutory Technical Standards for Sustainable Drainage Systems](#). It is supported by the [Defra/EA Guidance on Rainfall Runoff Management](#) and can be completed using freely available tools such as [Tools for Sustainable Drainage Systems](#) or approved Industry Standard surface water management design software. The Council's [Sustainable Drainage & Surface Water Management Technical Guidance document](#) also provides further information.

Section 1: Development Details					
Development Name		The Sovereign Distillery (Phase 2)			
Development Address (including postcode)		The Sovereign Distillery, Wilson Road, Huyton Business Park, Liverpool, Merseyside, United Kingdom, L36 6AD		Planning Application Reference (if available)	23/02782/FUL
Development Grid Reference	Northings	389515		Expected lifetime of development (years)	30
	Eastings	345701		Have you submitted a Flood Risk Assessment?	Yes ☒ No ☐
Total Development Site Area (Ha)		6.59		Type of Planning Application (✓)	Outline ☐
Site area served by proposed drainage system (excluding open space) (Ha)*		4.63			Full ☒
Is your surface water drainage system designed to a (tick all that apply):					Hybrid ☐
Greenfield Standard		- Site is undeveloped and a new drainage system will be installed; OR - Site is already developed and a new surface water drainage system will be installed to serve the new development. ☐			Reserved Matters ☐
Previously Developed Standard		Site is already developed and the <u>entirety</u> of the existing surface water drainage system will be used to serve the new development. ☒			

PRO-FORMA 1: Sustainable Drainage System: Planning Permission

Section 2: Impermeable Area and Existing Drainage For outline or reserved matters applications, go to Section 3

	Existing (E)	Proposed (P)	Difference (P – E)	Evidence Checklist	
Impermeable Area (Ha)	4.631	4.945	0.314	☒	Plans showing development layout of site with existing and proposed impermeable areas.
State Drainage Method	piped	piped	N/A	☒	Plans showing current and proposed locations of sustainable drainage system.
Are there existing sewers, watercourses, water bodies, highway drains, soakaways or filter drains on the site?			Yes ☐ No ☐	☒	Plans showing existing layout to include: • Watercourses, open or culverted • Water bodies – ponds, swales etc. • Sewers, including manholes • Highway drains, include manholes • Soakaways, filter drains

Section 3: Surface Water Discharge Hierarchy – Planning Practice Guidance

Surface Water Discharge Method	Proposed?	If YES - Evidence Checklist		If NO - Evidence Checklist	
1. Infiltration to ground	Yes ☐ No ☒	☐	Completed Infiltration Checklist from CIRIA The SuDS Manual C753 Appendix B <i>An editable version of this form is available on SusDrain website.</i>	☒	Geotechnical Survey, including Soil Permeability Testing stating Percolation Coefficient, in accordance with BRE 365 AND Statement providing justification in your Sustainable Drainage Strategy
2. Discharge to watercourse or surface water body (Main River or Ordinary)	Yes ☐ No ☒	☐	Watercourse and/or Water Body Survey Report	☐	Plan showing nearby watercourses and water bodies AND Statement providing justification in your Sustainable Drainage Strategy
3. Discharge to surface water sewer	Yes ☒ No ☐	☐	Water and Sewerage Company written agreement for the Right to Connect.	☐	Plan showing nearby sewers AND Statement providing justification in your Sustainable Drainage Strategy
4. Discharge to combined sewer	Yes ☐ No ☐				

PRO-FORMA 1: Sustainable Drainage System: Planning Permission

Section 4: Calculate Peak Discharge Rates – Technical Standards S2 and S3 (unless S1 applies)

Rainfall Event	Existing Rate (l/s)	Greenfield Rate (l/s)	Proposed Rate (l/s) <i>Brownfield sites must reduce discharge rates by 50%</i>	Evidence Checklist	
Qbar				☒	MicroDrainage (or equivalent) calculations
1:1 Year Event					
1:30 Year Event					
1:100 Year Event					

Section 5: Calculate Discharge Volume – Technical Standards S4 and S6 (unless S1 applies)

Rainfall Event	Existing Volume (m ³)	Greenfield Volume (m ³)	Proposed Volume (m ³)	Evidence Checklist	
1:100 Year 6 Hour Event				☒	MicroDrainage (or equivalent) calculations

Section 6: Infiltration

Site Information	✓	Evidence Checklist	
Do your sustainable drainage proposals include any infiltration?	Yes ☐ No ☒ <i>If NO, please move on to Section 7</i>	☐	Proposed sustainable drainage plans
You should submit an alternative 'Plan B' sustainable drainage design utilising an alternative discharge method if site specific ground conditions are unknown at this stage. This will become the default design in the event infiltration proposals are not feasible upon site specific ground investigation. Have you submitted an alternative 'Plan B' sustainable drainage design?	Yes ☐ No ☐	☐	'Plan B' conceptual sustainable drainage plans and statement of approach

PRO-FORMA 1: Sustainable Drainage System: Planning Permission

Section 7: Storage – Technical Standards S7, S8 and S9

Storage Details	Details	Evidence Checklist	
State climate change allowance used (%)	40	☒	State / use in MicroDrainage
State storage volume provided (m ³) (excluding non-void spaces) <i>Must include an allowance for climate change and urban creep.</i>	Tank 1 - 439.3 Tank 2 - 181 Tank 3 - 427.5	☒	Drainage plans showing location of attenuation and all flow control devices and any supporting calculations
Summarise how storage will be provided for 1:30 year event on site. <i>Storage must be designed to ensure that at no flooding occurs onsite in a 1 in 30 year event except in designed areas and no flooding occurs offsite in a 1 in 100 year (+ climate change allowance) event.</i>	Underground attenuation crates.	☒	Plans showing size and location of storage and supporting calculations
Summarise how storage will be provided for 1:100 year (+ climate change) 6 hour event on site. <i>Where storage above the 1:30 year rainfall event is provided in designated areas designed to accommodate excess surface water volumes, plans showing storage locations and surface water depths and supported by MicroDrainage (or equivalent) calculations.</i>	Underground attenuation crates.	☒	Plans showing size and location of storage and supporting calculations

Section 8: Operation and Maintenance – Technical Standard S12 and HCWS161

Consideration	Select <u>ALL</u> that apply (✓)		Evidence Checklist
State how <u>ALL</u> components of the sustainable drainage system will be maintained for the design life of the development.	Sustainable drainage features are at property level	☒	☒ Statement provided within your Sustainable Drainage Strategy
	Sustainable drainage system to be adopted by Water and Sewerage Company through a Section 104 agreement (<i>Water Industry Act 1991</i>)	☐	
	Applicant to secure maintenance of sustainable drainage features by entering into a Section 106 agreement (<i>Town and Country Planning Act 1990</i>)	☒	

PRO-FORMA 1: Sustainable Drainage System: Planning Permission

Declaration and Submission

This pro-forma has been completed using evidence from information which has been submitted with my planning application.

The information submitted in the Sustainable Drainage Strategy and site-specific Flood Risk Assessment (FRA), where submitted, is proportionate to the site conditions, flood risks and magnitude of development and I agree that this information can be used as evidence to this sustainable drainage approach.

Submitter Details

Form <u>completed</u> by	Aleks Jencu	Email Address	aleks.jencu@adeptcsce.com
		Daytime Telephone	0161 249 7989
Form <u>signed off</u> by	Richard Parker	Accreditation(s) and/or Qualification(s) of Signatory	Director - B.Eng
Date (dd/mm/yyyy)	01/03/2024	Company	Adept Consulting Engineers

Client Details

Name	Dave Little	Company	TJ Morris
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Do Not Scale

DESIGN REVIEW

Design review by: ** Checked by: **

Residual hazards:

Health, Safety & Environmental Notes

NOTES

Key

Red line site boundary

Proposed Surface Water Pipe Network

Proposed Foul Water Pipe Network

Existing Adopted Combined Water Pipe Network

Existing Adopted Surface Water Pipe Network

Existing Private Surface Water Pipe Network

Existing Culvert

Existing Channel Drain

Existing Channel Drain

Drainage to be abandoned

Concrete Slab Protection

Easement

Gully

Preliminary Proposed Ground Level

Existing Ground Level

01.03.24 Levels added

06.10.23 First Issue

Date

Description

AJ

RP

P2

By

Chk

Rev

ADEPT

CIVIL AND STRUCTURAL CONSULTING ENGINEERS

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Originating Office: Manchester 7 St James Square, 4th Floor, Manchester, M2 6DN Tel: 0161 974 1620

Project

Sovereign Distillery Phase 2

Title

Proposed Drainage Layout Sheet 2 of 2

Client

DAVOS Property Developments Ltd

Scale of Plot

1:250

Initial author

AJ

Initial checker

GT

Approved

NB

Initial Date

Sep '23

Status

S3

Purpose

Preliminary

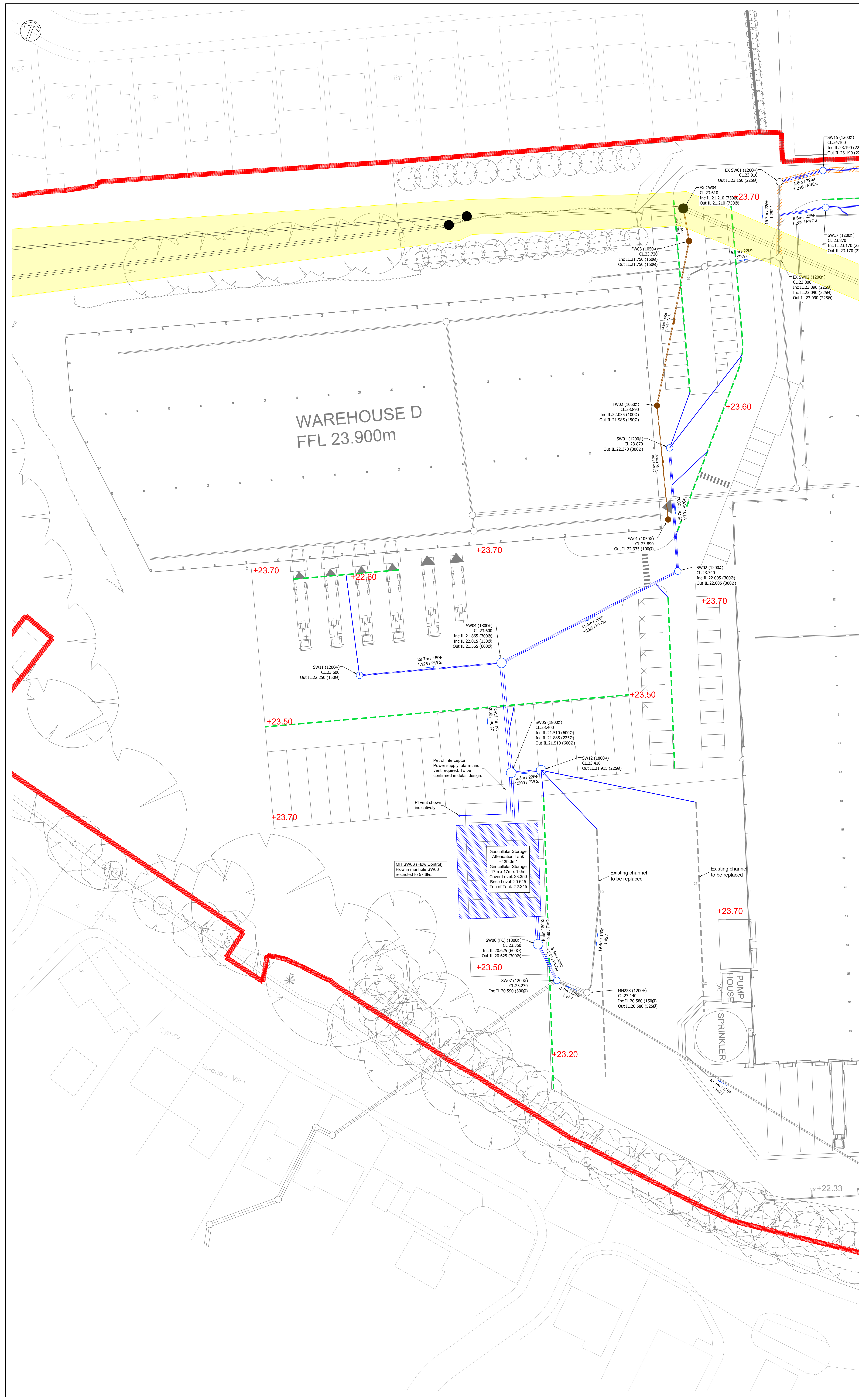
100.23083

Project Number

100.23083-ACE-00-ZZ-DR-C-1002

Rev

P2



Do Not Scale

DESIGN REVIEW

Design review by: ** Checked by: **

Residual hazards:

Health, Safety & Environmental Notes

NOTES

Key

Red line site boundary

Proposed Surface Water Pipe Network

Proposed Foul Water Pipe Network

Existing Adopted Combined Water Pipe Network

Existing Adopted Surface Water Pipe Network

Existing Private Surface Water Pipe Network

Existing Culvert

Proposed Channel Drain

Existing Channel Drain

Drainage to be abandoned

Concrete Slab Protection

Easement

Gully

Preliminary Proposed Ground Level

Existing Ground Level

01.03.24 Levels added

09.10.23 First Issue

Date

Description

AJ

RP

GT

P1

By

Chk

Rev

ADEPT

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Project

Sovereign Distillery

Phase 2

Title

Proposed Drainage Layout

Sheet 1 of 2

Client

DAVOS Property

Developments Ltd

Status

S3

Purpose

Preliminary

100.23083

Project Number

100.23083-ACE-00-ZZ-DR-C-1001

Originator

DAVOS

Version

1.0

Drawn By

GT

Checked By

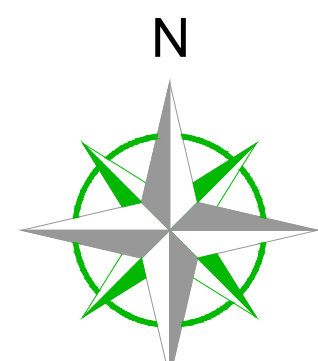
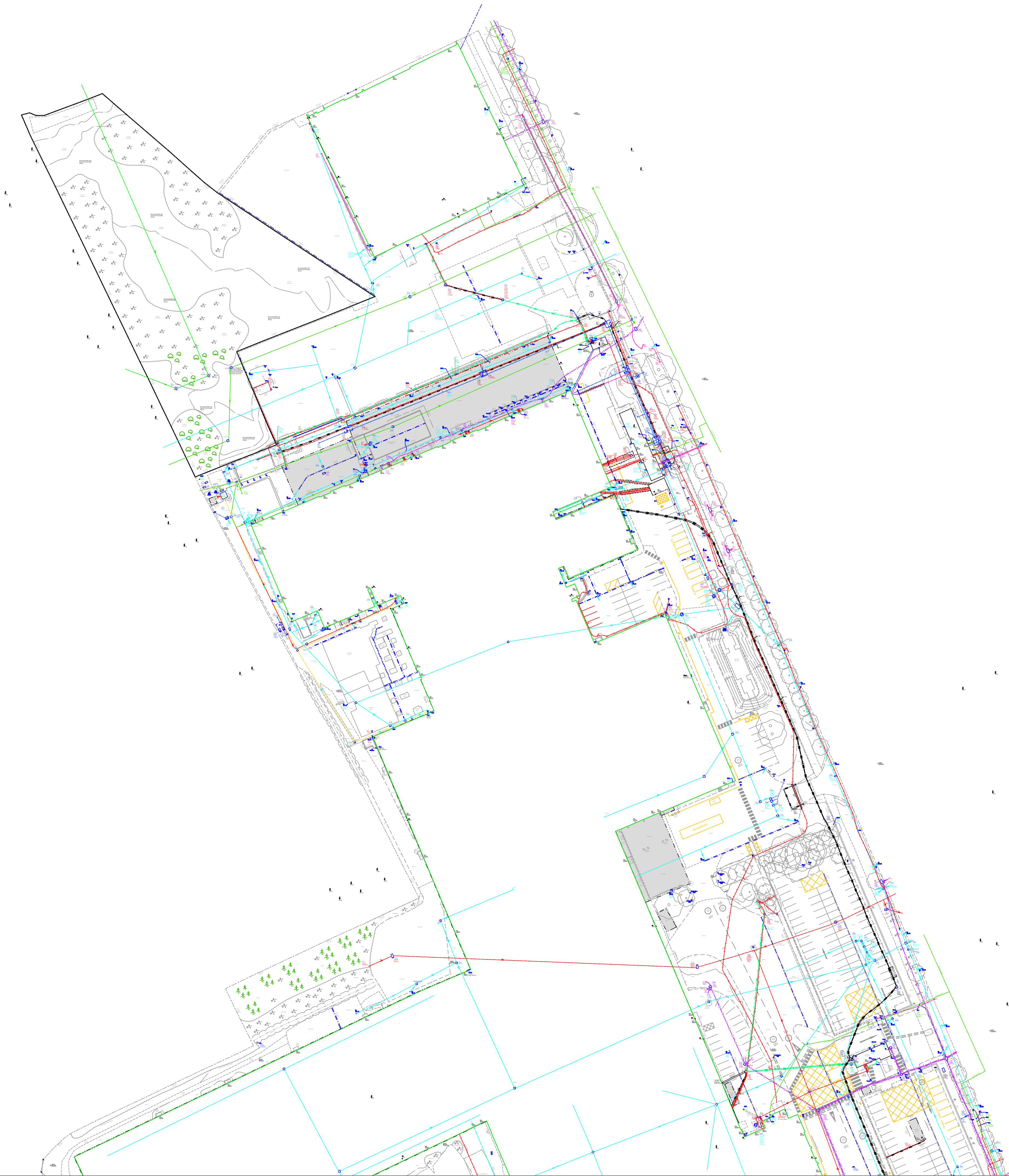
RP

Approved By

NB

Issue Date

Sep '23



NOTES:
Only BT & Cad records available at time of survey.
Unable to locate all Water supplies within the survey area, limited signals gained on site.
Some of the drainage routes cannot be fully surveyed on site due to limited access. We would recommend CCTV Camera Survey to be carried out to prove the route of any drainage which cannot be safely surveyed at present.

UTILITY KEY	
	ELECTRIC CABLE
	ELECTRIC & COMS CABLE
	TELECOMS CABLE
	CABLE TELEVISION
	COMMUNICATION CABLE
	WATER PIPE
	GAS PIPE
	FOUL DRAINAGE
	SURFACE DRAINAGE
	COMBINED DRAINAGE
	FUEL PIPE
	VENT PIPE
	OFFSET FILL PIPE
	GAUGE LINE
	VAPOUR RECOVERY
	SERVICE DUCTS
	UNIDENTIFIED
	END OF TRACE

ABBREVIATIONS	
AR ASSUMED ROUTE	NL NOT LOCATED
BD BACKDROP	OSA OFF SURVEY AREA
CP CATCHPIT	PR PIPE RISER
CL COVER LEVEL	RE RISING EYE
CR CABLE RISER	RWP RAINWATER PIPE
DP DOWN PIPE	SA SAGGAWAY
EP ELECTRICITY POLE	SV STOP VALVE
EDC EDGE OF CANOPY	SUP SOIL VENT PIPE
EOT END OF TRACE	TE TRAPPED EXIT
PH FIRE HYDRANT	TF FIRE RISER PIPE
G GULLY	TFR TAKEN FROM RECORDS
GV GAS VALVE	UTF UNABLE TO FIND
HL HIGH LEVEL	UTL UNABLE TO LEFT
IC INSPECTION CHAMBER	UTS UNABLE TO SURVEY
I INVERT LEVEL	VP VENT PIPE
LH LAMP HOLE	VR VAPOUR RECOVERY
LP LAMP POST	WLS WATER LEVEL
MH MANHOLE	WM WATER METER
NEV NO EXIT VISIBLE	WO WASH OUT VALVE
	WP WASTE PIPE
SWS SURFACE WATER SEWER	
FWS FOUL WATER SEWER	
CWS COMBINED WATER SEWER	

DISCLAIMER
ELECTRO-MAGNETIC TECHNIQUES AND/OR GROUND PENETRATING RADAR HAVE BEEN USED IN THE LOCATION OF UNDERGROUND SERVICES. THE RESULTS ARE NOT INFALLIBLE AND THEIR ACCURACY SHOULD BE CARRIED OUT TO CONFIRM SERVICE IDENTIFICATION, POSITIONS AND PARTICULARS. DEPTHS WHERE THESE ARE CRITICAL, ALL INDICES ARE REASONABLE EFFORT HAS BEEN MADE IN SEARCHING AVAILABLE RECORD DRAWINGS. THE COMPLETENESS OF THE UNDERGROUND SERVICES INFORMATION CANNOT BE GUARANTEED. THE METHOD OF SURVEY DOES NOT DIFFERENTIATE BETWEEN LIVE AND DEAD SERVICES AND AS SUCH ALL SERVICES SHOULD BE TREATED AS LIVE.
WHERE SERVICES ARE NON-METALLIC POSITIONS MAY BE TAKEN FROM RECORDS, PHOTOGRAPHS & SURFACE DETAIL.
WHERE QUOTED, DEPTH ESTIMATIONS ARE GENERALLY TO THE CENTRE OF THE SERVICE. DEPTHS TO GROUND SURFACE AND DRAWING ARE GENERALLY TO INVERT LEVELS UNLESS OTHERWISE STATED.
PIPE SIZES WHICH CANNOT BE OBTAINED BY VISUAL SURVEY ARE TAKEN FROM RECORD DRAWINGS OR MANHOLE PLATES WHERE AVAILABLE.
WHERE GROUND PENETRATING RADAR HAS BEEN USED IT WILL, PROBABLY HAVE BEEN TO IDENTIFY UNDERGROUND UTILITIES. IT IS POSSIBLE WE MAY ALSO IDENTIFY UNDERGROUND UTILITIES, TANKS ETC. BUT CANNOT GUARANTEE TO HAVE LOCATED ALL SUCH ITEMS. THE USE OF RADAR CAN BE LIMITED BY SURFACE CONDITIONS AND ALSO BY SOIL TYPE. DEPTH ESTIMATES WOULD NOT NORMALLY BE PROVIDED FOR SERVICES LOCATED WITH GPR.

Rev	Date	Description	Drawn	C. Ref
-----	------	-------------	-------	--------

greenhatch group

Topographical Surveys Measured Building Surveys
Site Engineering 3D Laser Scanning
Utility / CCTV Surveys Route & BIM Models

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--	--	--

CLIENT
AEW Architects

PROJECT
**Sovereign Distillery
Huyton Business Park
Liverpool**

TITLE
**Underground Utility
Survey**

SCALE A0@ 1: 500	DATE 14-25/06/21
DRAWN SL/D.O.T	QUALITY REF 14396

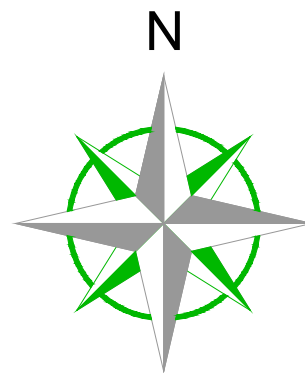
Level datum Grid orientation See OS Note	See OS Note
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Job number 40493	
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Drawing No. 40493_UG_1	Rev. 0
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Comments
This plan should only be used for its original purposes. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.
All dimensions should be checked on site prior to design and construction.
Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Notes:



NOTES:
Only BT & Gas records available at time of survey.
Unable to locate all Water supplies within the survey area, limited signals gained on site.
Some of the drainage routes cannot be fully surveyed on site due to limited access. We would recommend CCTV Camera Survey is carried out to prove the route of any drainage which cannot be safely surveyed at present.

UTILITY KEY

	ELECTRIC CABLE
	ELECTRIC & COMB CABLE
	TRAFFIC SIGNALS
	TELECOMS CABLE
	CABLE TELEVISION
	COMMUNICATION CABLE
	WATER PIPE
	GAS PIPE
	FOUL DRAINAGE
	SURFACE DRAINAGE
	COMBINED DRAINAGE
	FUEL PIPE
	VENT PIPE
	OFFSET FILL PIPE
	GAUGE LINE
	VAPOR RECOVERY
	SERVICE DUCTS
	UNIDENTIFIED
	END OF TRACE

ABBREVIATIONS

AR	ASSUMED ROUTE	NL	NOT LOCATED
BD	BACKDROP	OSA	OFF SURVEY AREA
CP	CATCHPIT	PS	PIPE RISER
CL	COVER LEVEL	RE	RODDING EYE
CR	CABLE RISER	RWP	RAINWATER PIPE
DP	DOWN PIPE	SA	SOAKAWAY
EP	ELECTRICITY POLE	SV	STOP VALVE
EC	EDGE OF CANOPY	SVP	SOIL VENT PIPE
END	END OF TRACE	TE	TRAPPED EXIT
FH	FIRE HYDRANT	TP	TELEGRAPH POLE
G	GULLY	TYPE	TAKEN FROM RECORDS
GV	GAS VALVE	UTL	UNABLE TO FIND
HL	HIGH LEVEL	UTL	UNABLE TO LIFT
IC	INSPECTION CHAMBER	UTL	UNABLE TO SURVEY
IL	INVERT LEVEL	VP	VENT PIPE
LH	LAMP HANDLE	VR	VAPOR RECOVERY
LP	LAMP POST	WL	WATER LEVEL
MH	MANHOLE	WM	WATER METER
NEV	NO EXIT VISIBLE	WO	WASH OUT VALVE
		WP	WASTE PIPE
SWS	SURFACE WATER SEWER		
FWS	FOUL WATER SEWER		
CWS	COMBINED WATER SEWER		

DISCLAIMER

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WHERE QUOTED DEPTH ESTIMATIONS ARE GENERALLY TO THE CENTRE OF THE SERVICE, OFFSETS TO SURFACES, SEWERS AND DRAINAGE ARE GENERALLY STATED.
PIPE SIZES WHICH CANNOT BE OBTAINED BY VISUAL SURVEY ARE TAKEN FROM RECORD DRAWINGS OR MARKER PLATES WHERE AVAILABLE.
WHERE GROUND PENETRATING RADAR HAS BEEN USED IT WILL PROVIDE A RANGE OF DATA TO IDENTIFY UNDERGROUND UTILITIES. IF POSSIBLE WE WILL ALSO IDENTIFY UNDERGROUND STRUCTURES (TANKS ETC.) BUT CANNOT GUARANTEE TO HAVE LOCATED ALL SUCH ITEMS. THE USE OF RADAR CAN BE LIMITED BOTH BY SURFACE CONDITIONS AND ALSO BY SOIL TYPE. DEPTH ESTIMATES WOULD NOT NORMALLY BE PROVIDED FOR SERVICES LOCATED WITH GPR.

Rev	Date	Description	Drawn	C. Ref
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		group	
☐ Topographical Surveys		☐ Measured Building Surveys	
☐ Site Engineering		☐ 3D Laser Scanning	
☐ Utility / CCTV Surveys		☐ Revit & BIM Models	
Rowan House Duffield Road Little Eaton Derby DE21 5DR			
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www.greenhatch-group.co.uk			
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CLIENT
AEW Architects

PROJECT
Sovereign Distillery
Huyton Business Park
Liverpool

TITLE
Underground Utility
Survey

SCALE
A0@ 1: 500

DATE
14-25/06/21

DRAWN
SLD.O.T

QUALITY REF
14396

Level datum
See OS Note

Grid orientation
See OS Note

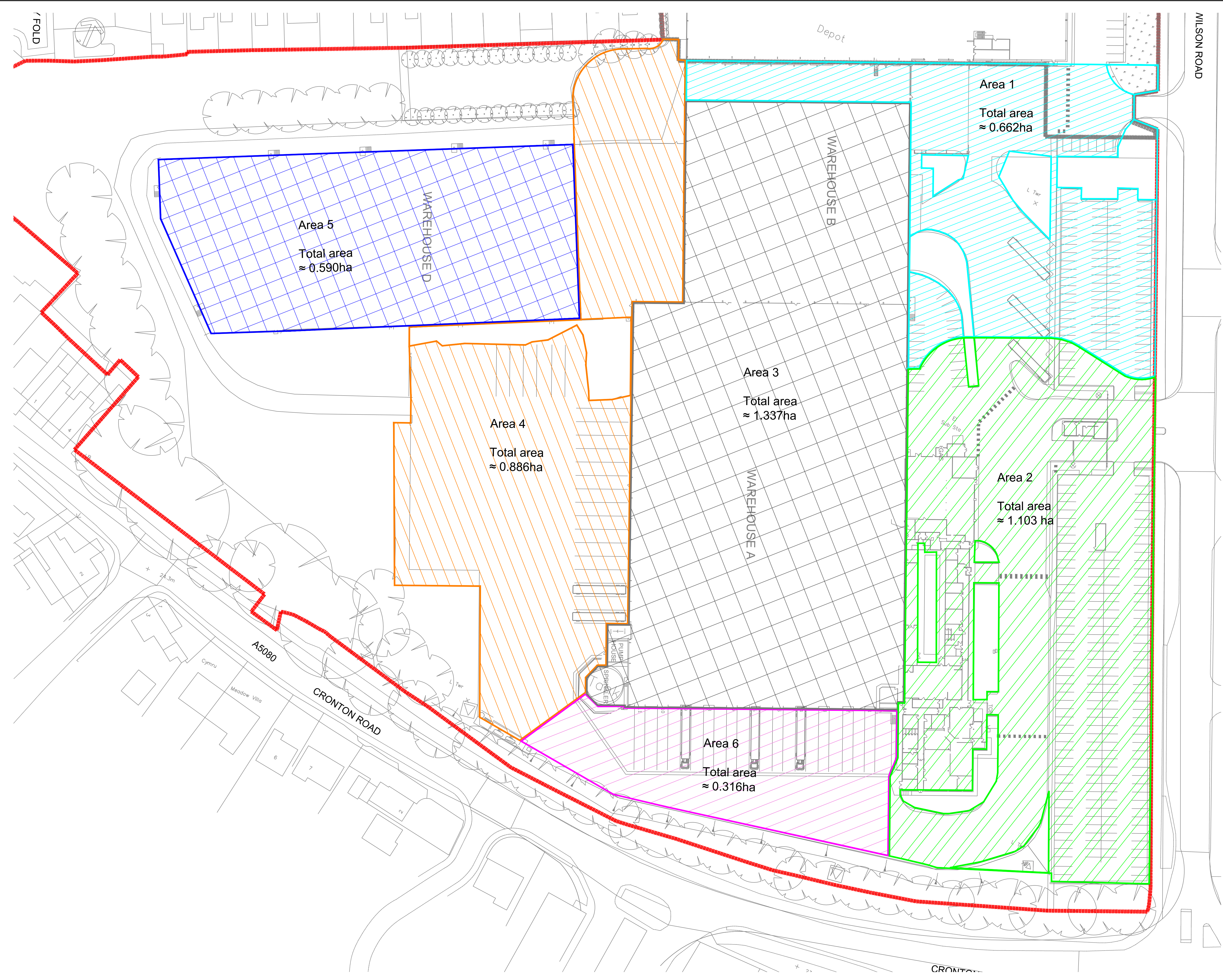
Job number
40493

Drawing No.
40493_UG_2

Rev.
0

Comments
This plan should only be used for its original purpose. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.
All dimensions should be checked on site prior to design and construction.
Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Notes
Greenhatch Group 00000



Do Not Scale

DESIGN REVIEW

Design review by: **Checked by: **

Residual hazards:

Health, Safety & Environmental Notes

NOTES

Key

Area 1

Existing Impermeable ≈ 0.548ha

Area 2

Existing Impermeable ≈ 1.010ha

Area 3

Existing Impermeable ≈ 1.337ha

Area 4

Existing Impermeable ≈ 0.830ha

Area 5

Existing Impermeable ≈ 0.590ha

Area 6

Existing Impermeable ≈ 0.316ha

Total Existing Impermeable Area ≈ 4.631ha

05.10.23

First Issue

AJ

GT

P1

Date

Description

By

Chk

Rev

ADEPT

CIVIL AND STRUCTURAL CONSULTING ENGINEERS

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Originating Office: Manchester

7 St James Square, 4th Floor,

Manchester, M2 6DN

Tel: 0161 974 3620

Project

Sovereign Distillery Phase 2, Huyton

Title

Existing Impermeable Area Layout

Client

DAVOS Property Developments Ltd

Scale @ A1

Initial author

Initial checker

Approver

Initial Date

1:500

AJ

GT

NB

Sep '23

Status

Purpose

Adept Ref

S3

Preliminary

100.23083

Project Number

Originator

Volume

Level

Type

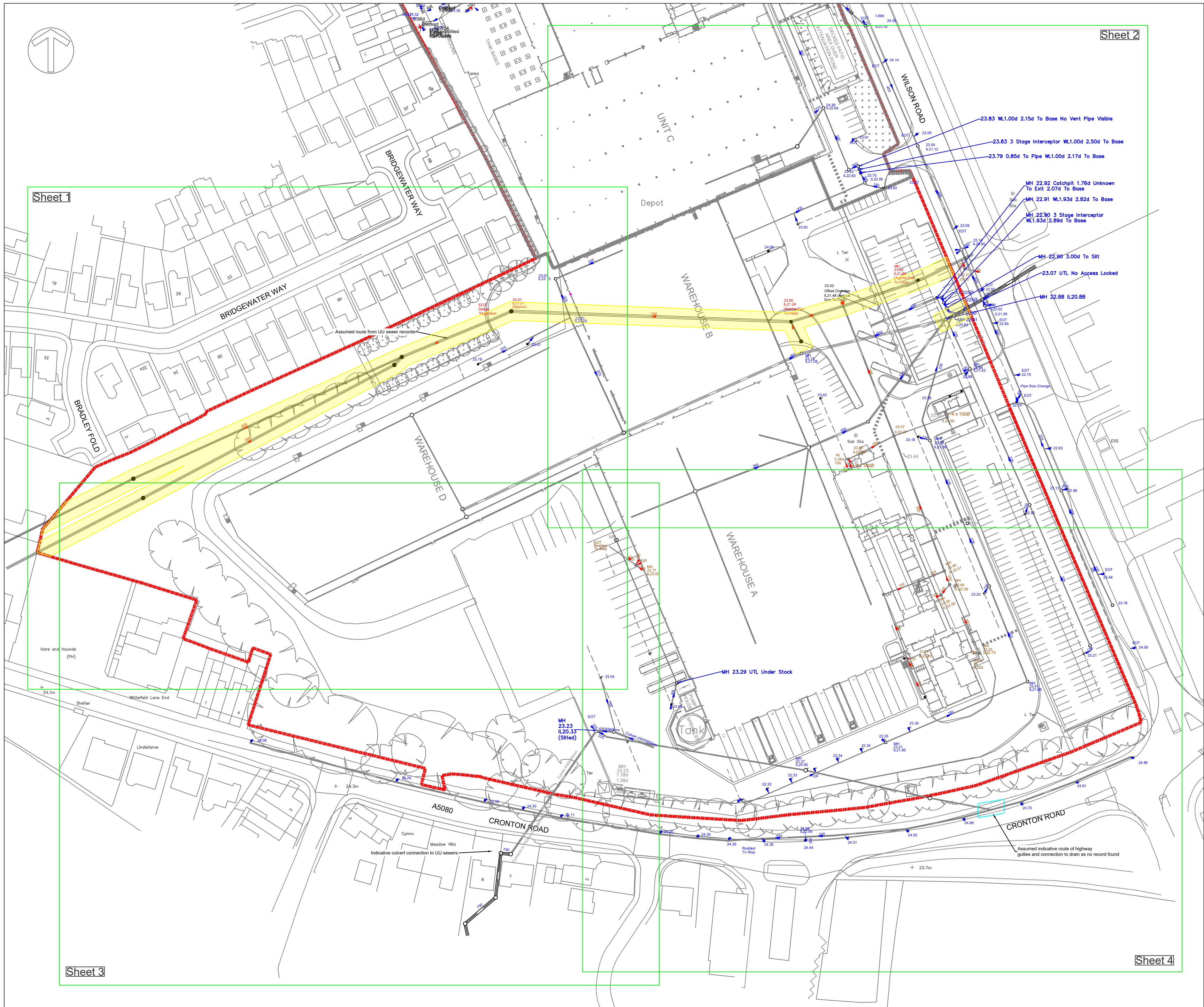
Role

Orig. No.

Rev.

100.23083-ACE-00-ZZ-DR-C-1010

P1



Do Not Scale

DESIGN REVIEW

Design review by: ** Checked by: **

Residual hazards:

Health, Safety & Environmental Notes

NOTES

Key

- Red line site boundary
- Existing Adopted Combined Water Pipe Network
- Existing Adopted Surface Water Pipe Network
- Existing Private Surface Water Pipe Network
- Existing Culvert
- Existing Channel Drain
- Easement
- Gully

Refer to HUYTON 40493_T_UG_REV0 SUB GROUP PHASE 1 Underground Utility Survey drawing no. 40493_UG_1 & 40493_UG_2

Refer to Ref no. B029681-Sewer Plans Issued on 15/06/2021

06.10.23	First Issue	AJ	GT	P1
Date	Description	By	Chk	Rev

ADEPT

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Project
Sovereign Distillery Phase 2, Huyton

Title
Existing Drainage Layout Plan

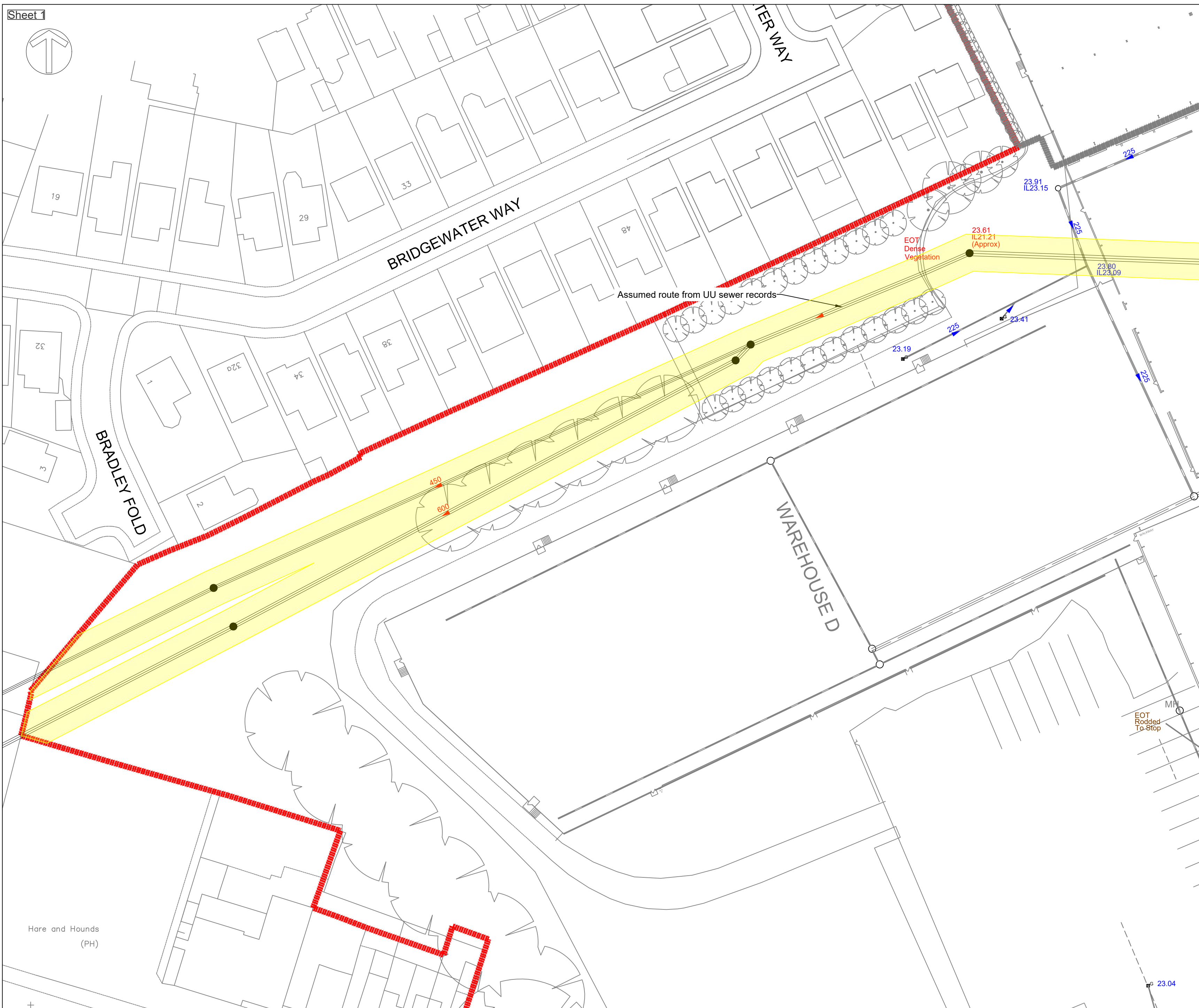
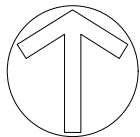
Client
DAVOS Property Developments Ltd

Scale @ A2	Initial author	Initial checker	Approver	Initial Date
1:1000	AJ	JBW	NB	Sep '23

Status	Purpose	Adept Ref
S1	Preliminary	100.23083

Project Number	Originator	Volume	Level	Type	Role	Drg. No.	Rev.
100.23083-ACE-00-ZZ-SK-C-0002							P1

Sheet 1



Do Not Scale

DESIGN REVIEW

Design review by: ** Checked by: **

Residual hazards:



Health, Safety &
Environmental Notes



NOTES

Key

- Red line site boundary
- Existing Adopted Combined Water Pipe Network
- Existing Adopted Surface Water Pipe Network
- Existing Private Surface Water Pipe Network
- Existing Culvert
- Existing Channel Drain
- Easement
- Gulley

Refer to HUYTON 40493_T_UG_REV0 SUB GROUP
PHASE 1 Underground Utility Survey drawing no.
40493_UG_1 & 40493_UG_2

Refer to Ref no. B029681-Sewer Plans Issued on
15/06/2021

06.10.23	First Issue	AJ	GT	P1
Date	Description	By	Chk	Rev

ADEPT
CIVIL AND STRUCTURAL CONSULTING ENGINEERS

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Manchester, M2 6DN
Tel: 0161 974 3620

Project

**Sovereign Distillery Phase 2,
Huyton**

Title

**Existing Drainage
Layout Sheet 1 of 4**

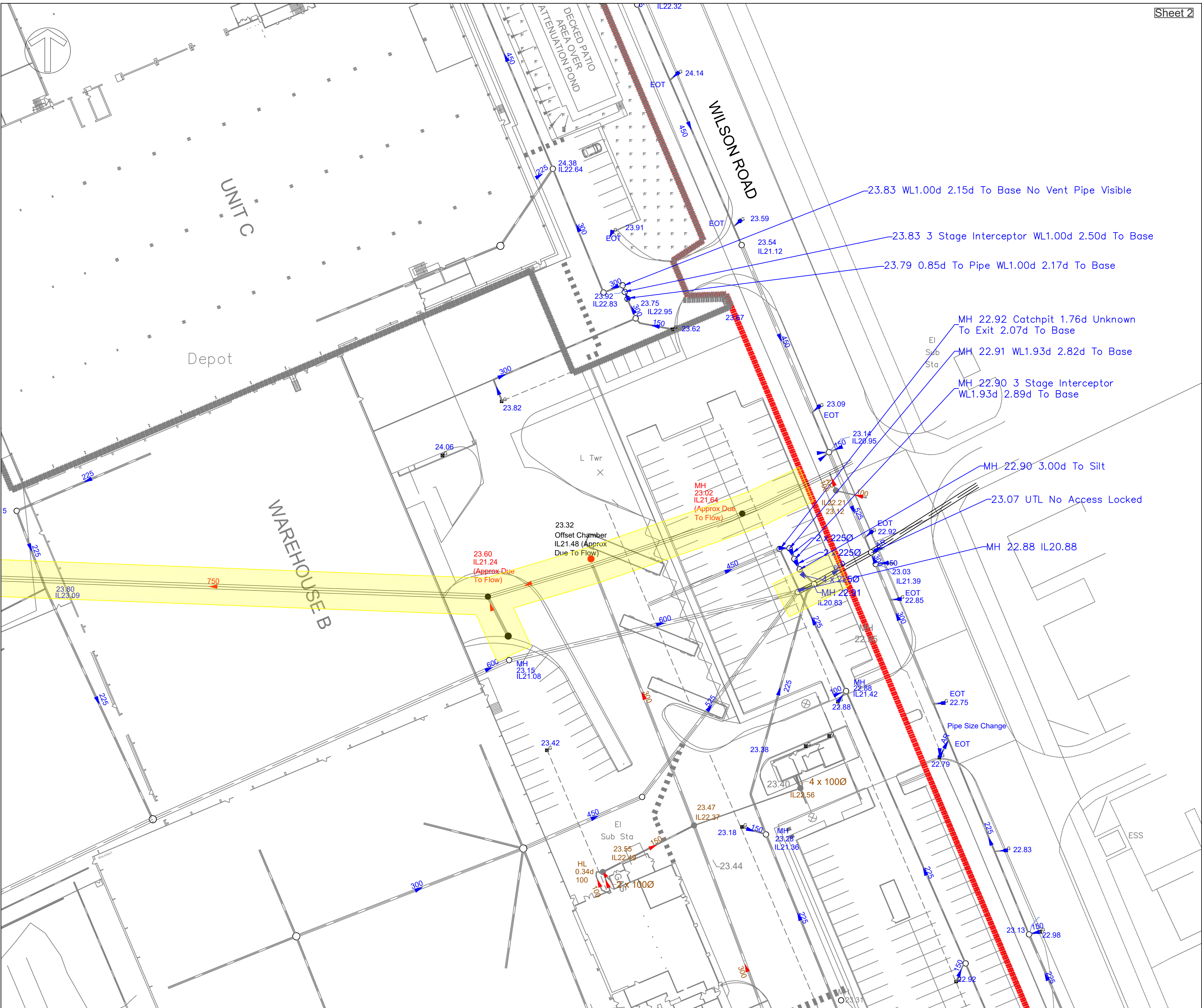
Client

**DAVOS Property
Developments Ltd**

Scale @ A2 1:500	Initial author AJ	Initial checker JBW	Approver NB	Initial Date Sep '23
---------------------	----------------------	------------------------	----------------	-------------------------

Status S1	Purpose Preliminary	Adept Ref 100.23083
--------------	------------------------	------------------------

Project Number 100.23083-ACE-00-ZZ-SK-C-0003	Originator Volume Level Type Role Drg. No. P1
---	--



Do Not Scale

DESIGN REVIEW

Design review by:

**

Checked by:

**

Residual hazards:

Health, Safety & Environmental Notes

NOTES

Key

Red line site boundary

Existing Adopted Combined Water Pipe Network

Existing Adopted Surface Water Pipe Network

Existing Private Surface Water Pipe Network

Existing Culvert

Existing Channel Drain

Easement

Gully

Refer to HUYTON 40493_T_UG_REV0 SUB GROUP PHASE 1 Underground Utility Survey drawing no. 40493_UG_1 & 40493_UG_2

Refer to Ref no. B029681-Sewer Plans Issued on 15/06/2021

06.10.23	First Issue	AJ	GT	P1
Date	Description	By	Chk	Rev

ADEPT

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Originating Office: Manchester

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Manchester, M2 6DN

Tel: 0161 974 3620

Project

Sovereign Distillery Phase 2, Huyton

Title

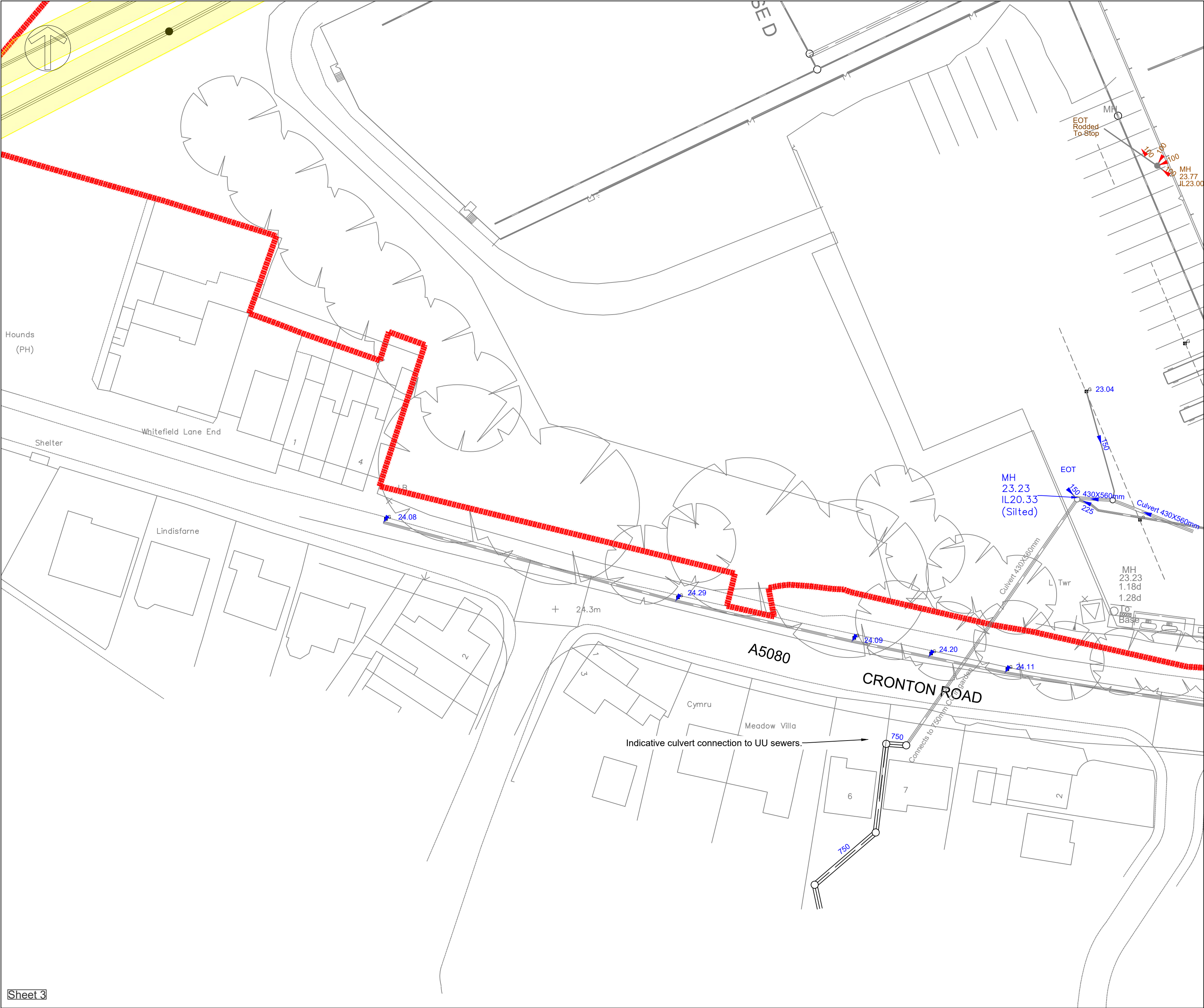
Existing Drainage Layout Sheet 2 of 4

Client

DAVOS Property Developments Ltd

Scale @ A2	Initial author	Initial checker	Approver	Initial Date
1:500	AJ	JBW	NB	Sep '23
Status	Purpose	Adept Ref		
S1	Preliminary	100.23083		

Project Number	Originator	Volume	Level	Type	Role	Drg. No.	Rev.
100.23083-ACE-00-ZZ-SK-C-0004							P1



Sheet 3

Do Not Scale

DESIGN REVIEW

Design review by: ** Checked by: **

Residual hazards:

Health, Safety & Environmental Notes

NOTES

- Key
- Red line site boundary
 - Existing Adopted Combined Water Pipe Network
 - Existing Adopted Surface Water Pipe Network
 - Existing Private Surface Water Pipe Network
 - Existing Culvert
 - Existing Channel Drain
 - Easement
 - Gully

Refer to HUYTON 40493_T_UG_REV0 SUB GROUP PHASE 1 Underground Utility Survey drawing no. 40493_UG_1 & 40493_UG_2

Refer to Ref no. B029681-Sewer Plans Issued on 15/06/2021

06.10.23	First Issue	AJ	GT	P1
Date	Description	By	Chk	Rev

ADEPT

CIVIL AND STRUCTURAL CONSULTING ENGINEERS

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Originating Office: Manchester
7 St James Square, 4th Floor,
Manchester, M2 6DN
Tel: 0161 974 3620

Project
Sovereign Distillery Phase 2, Huyton

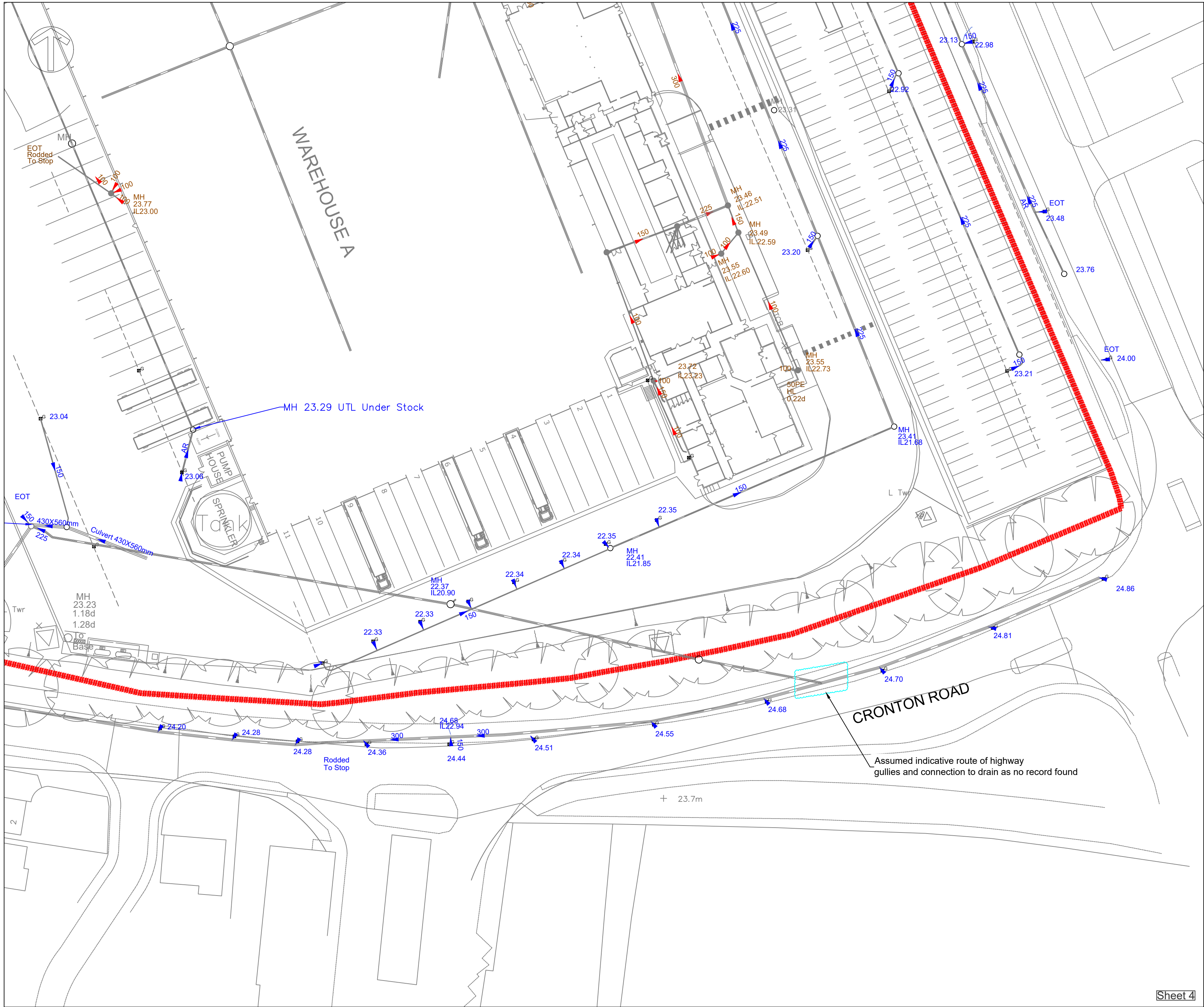
Title
Existing Drainage Layout Sheet 3 of 4

Client
DAVOS Property Developments Ltd

Scale @ A2 1:500	Initial author AJ	Initial checker JBW	Approver NB	Initial Date Sep '23
---------------------	----------------------	------------------------	----------------	-------------------------

Status S1	Purpose Preliminary	Adept Ref 100.23083
--------------	------------------------	------------------------

Project Number 100.23083-ACE-00-ZZ-SK-C-0005	Originator Volume Level Type Role Drg. No. P1
---	--



Do Not Scale

DESIGN REVIEW

Design review by: **

Checked by: **

Residual hazards:

Health, Safety & Environmental Notes

NOTES

Key

Red line site boundary

Existing Adopted Combined Water Pipe Network

Existing Adopted Surface Water Pipe Network

Existing Private Surface Water Pipe Network

Existing Culvert

Existing Channel Drain

Easement

Gully

Refer to HUYTON 40493_T_UG_REV0 SUB GROUP PHASE 1 Underground Utility Survey drawing no. 40493_UG_1 & 40493_UG_2

Refer to Ref no. B029681-Sewer Plans Issued on 15/06/2021

06.10.23	First Issue	AJ	GT	P1
Date	Description	By	Chk	Rev

ADEPT

CIVIL AND STRUCTURAL CONSULTING ENGINEERS

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Email: inbox@adeptcsce.com

Tel: 0113 239 4518 (Head Office)

Originating Office: Manchester

7 St James Square, 4th Floor,

Manchester, M2 6DN

Tel: 0161 974 3620

Project

Sovereign Distillery Phase 2, Huyton

Title

Existing Drainage Layout Sheet 4 of 4

Client

DAVOS Property Developments Ltd

Scale @ A2	Initial author	Initial checker	Approver	Initial Date
1:500	AJ	JBW	NB	Sep '23
Status	Purpose	Adept Ref		
S1	Preliminary	100.23083		

Project Number	Originator	Volume	Level	Type	Role	Drg. No.	Rev.
100.23083-ACE-00-ZZ-SK-C-0006							P1

Sheet 4

By	AJ	Date	04/10/23
Checked	GT	Date	

Brownfield Run-off Calculation Statement

Area 1

Existing input to the existing adopted sewerage system has been calculated to be 0.548 ha of existing building and highway.

Utilising the Rational Method

50mm x 0.548 ha x 2.78 = 76.172 L/s⁻¹

With a 50% reduction this equates to 38.086 L/s⁻¹

Applying a total discharge of 38.086 L/s⁻² to a new impermeable area of 0.529 ha requires a storage volume of 183 m³ to be provided in M100 year + 40% CC factor.

By	AJ	Date	04/10/23
Checked	GT	Date	

Brownfield Run-off Calculation Statement

Area 2 (Retail Store)

Existing input to the existing adopted sewerage system has been calculated to be 1.010 ha of existing building and highway.

Utilising the Rational Method

50mm x 1.010 ha x 2.78 = 140.390 L/s⁻¹

With a 50% reduction this equates to 70.195 L/s⁻¹

Applying a total discharge of 70.195 L/s⁻² to a new impermeable area of 1.105 ha requires a storage volume of 418 m³ to be provided in M100 year + 40% CC factor.

By	AJ	Date	06/10/23
Checked	GT	Date	

Brownfield Run-off Calculation Statement

Area 4 (Unit D)

Existing input to the existing adopted sewerage system has been calculated to be 0.830 ha of existing building and highway.

Utilising the Rational Method

50mm x 0.830 ha x 2.78 = 115.37 L/s⁻¹

With a 50% reduction this equates to 57.68 L/s⁻¹

Applying a total discharge of 57.68 L/s⁻² to a new impermeable area of 1.068 ha requires a storage volume of 429.3 m³ to be provided in M100 year + 40% CC factor.



Do Not Scale

DESIGN REVIEW

Design review by: **Checked by: **

Residual hazards:

Health, Safety & Environmental Notes

NOTES

Key

Area 1

Proposed Impermeable ≈ 0.529ha

Area 2

Proposed Impermeable ≈ 1.105ha

Area 3

Proposed Impermeable ≈ 1.337ha

Area 4

Proposed Impermeable ≈ 1.068ha

Area 5

Proposed Impermeable ≈ 0.590ha

Area 6

Proposed Impermeable ≈ 0.316ha

Total Proposed Impermeable Area ≈ 4.945ha

05.10.23First Issue

AJJBWP1

DateDescription

ByChkRev

ADEPT

CIVIL AND STRUCTURAL CONSULTING ENGINEERS

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Tel: 0113 239 4518 (Head Office)

Originating Office: Manchester
7 St James Square, 4th Floor,
Manchester, M2 6DN
Tel: 0161 974 3620

Project

Sovereign Distillery Phase 2,
Huyton

Title

Proposed Impermeable
Area Layout

Client

DAVOS Property
Developments Ltd

Scale @ A1

1:500

Initial author

AJ

Initial checker

JBW

Approver

NB

Initial Date

Sep '23

Status

S3

Purpose

Preliminary

Adept Ref

100.23083

Project Number

100.23083-ACE-00-ZZ-DR-C-1011

Originator

Volume

Level

Type

Role

Orig. No.

Rev.

P1

Graham Mawdsley

**Quay West at Media City Uk
Trafford Wharf Road,
Manchester,
M17 1HH**

FAO:

How to contact us:

**United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP**

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

**Your Ref: B029681-Sewer Plans
Our Ref: UUPS-ORD-298068
Date: 15/06/2021**

Dear Sirs

Location: Sovereign Distillery Sovereign Distillery Wilson Road, Huyton, L36 6AD

I acknowledge with thanks your request dated 15/06/2021 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. <http://www.unitedutilities.com/work-near-asset.aspx>.

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please [contact us](#).

Yours Faithfully,



Karen McCormack
Property Searches Manager

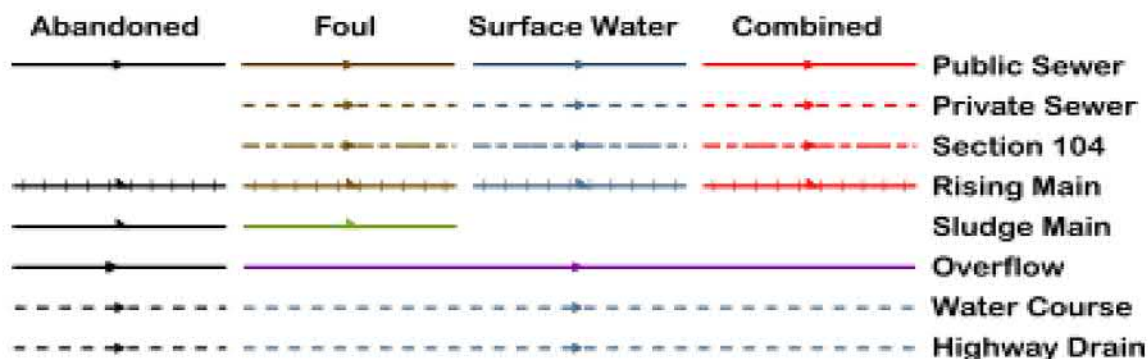
TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

Wastewater Symbolology



All point assets follow the standard colour convention: **red** – combined **brown** - foul
blue – surface water **purple** - overflow

Manhole	Side Entry Manhole
Head of System	Outfall
Extent of Survey	Screen Chamber
Rodding Eye	Inspection Chamber
Inlet	Bifurcation Chamber
Discharge Point	Lamp Hole
Vortex	T Junction / Saddle
Penstock	Catchpit
Washout Chamber	Valve Chamber
Valve	Vent Column
Air Valve	Vortex Chamber
Non Return Valve	Penstock Chamber
Soakaway	Network Storage Tank
Gully	Sewer Overflow
Cascade	Ww Treatment Works
Flow Meter	Ww Pumping Station
Hatch Box	Septic Tank
Oil Interceptor	Control Kiosk
Summit	
Drop Shaft	Change of Characteristic
Orifice Plate	



SEWER RECORDS

Address or Site Reference

Sovereign Distillery Sovereign
Distillery Wilson Road,
Huyton,
L36 6AD

Scale: 1:2500
Date: 15/06/2021

Printed by: Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Richard Parker

From: wastewaterdeveloperservices@uuplc.co.uk
Sent: 21 February 2024 09:42
To: Richard Parker
Cc: James Walsh; Neil Brown
Subject: RE: DC/23/4123 and 23/02782/FUL - Sovereign Industrial Park, Wilson Road, Huyton, Knowsley.

Hi Richard

Thanks for your email and explanation, I will ask our planning department to remove this objection.

Kind regards



Nicola Pilkington
Developer Engineer
Developer Services & Metering
Customer Services
M: 07795851180
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----- Original Message -----

From: Richard Parker [richard.parker@adeptcsce.com]
Sent: 19/02/2024 12:44
To: wastewaterdeveloperservices@uuplc.co.uk
Cc: nicola.pilkington@uuplc.co.uk; james.walsh@adeptcsce.com; neil.brown@adeptcsce.com
Subject: RE: DC/23/4123 and 23/02782/FUL - Sovereign Industrial Park, Wilson Road, Huyton, Knowsley.

Hi Nicola

Thanks for your email. I understand what your issues might be here and have made some comments below;

With regards to manhole 7501 – this has a cover level of 23.02. Existing warehouse A is set at 23.90m and the new store is at 23.70 so provides some freeboard from any flooding. Overland flooding from this chamber would head east to Wilson Road away from the site.

The 150mm sewer in Cronton Road, you suggest connecting to, is some distance from the site and access is through a mature wooded area which wouldn't be viable. Also, pumping is likely to be required. The 150 also connects into the same combined sewer as noted above.

With regards to anticipated foul drainage.

Although we are adding retail space there is a notable reduction in industrial space by 1,813 sqm, the majority of which is office space serving the old distillery. The proposed retail gross floor area is 2,323 sqm and the new store only has 5 single wc's (with basins) and a small canteen so would balance out the number of appliances removed as part of the demolition of the existing offices.

We are also connecting on to the sewer network downstream of manhole 7501 at manhole 7502.

Lastly, we believe that the roof drainage from the office being demolished as part of the redevelopment drained to the combined system and measured just under 2,000m². New drainage in this area is being directed into the surface water storage system on site and to the surface water sewer. This reduces the flow to the combined sewer.

Overall, taking into consideration all of the above, I would say that we are not increasing the foul flows from the redeveloped site taking into account the demolition of the existing buildings and their current routes to outfall. The most suitable point of connection remains as manhole 7502.

Would you be able to confirm if this is acceptable to United Utilities. I'm happy to have a chat to talk over if needed?

Kind Regards,

Richard Parker

Director

Adept Civil and Structural Consulting Engineers

T: 0113 239 4518

M: 07951 824366

W: www.adeptcsce.com



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Registered Office: 1912 Mill, Sunny Bank Mills, Farsley, LS28 5UJ

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From: wastewaterdeveloperservices@uuplc.co.uk <wastewaterdeveloperservices@uuplc.co.uk>
Sent: Friday, February 9, 2024 8:18 AM
To: Richard Parker <richard.parker@adeptcsce.com>
Cc: nicola.pilkington@uuplc.co.uk; James Walsh <james.walsh@adeptcsce.com>; Neil Brown <neil.brown@adeptcsce.com>
Subject: RE: DC/23/4123 and 23/02782/FUL - Sovereign Industrial Park, Wilson Road, Huyton, Knowsley.

Hi Richard

Thanks for your email, the issue we have is that MH 7501 is showing that it will flood in the 1 year event. Adding any more foul flow to this is going to increase the flood risk.

Do you have some calculation on what you expect the flows to be from the retail unit so I can look into this further.

There is a 150mm Foul sewer in cronton road, have you explored the option of connection to this?

Kind regards



Nicola Pilkington
Developer Engineer
Developer Services & Metering
Customer Services
M: 07795851180
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----- Original Message -----

From: Richard Parker [richard.parker@adeptcsce.com]

Sent: 05/02/2024 11:12

To: wastewaterdeveloperservices@uuplc.co.uk

Cc: nicola.pilkington@uuplc.co.uk; neil.brown@adeptcsce.com; james.walsh@adeptcsce.com

Subject: DC/23/4123 and 23/02782/FUL - Sovereign Industrial Park, Wilson Road, Huyton, Knowsley.

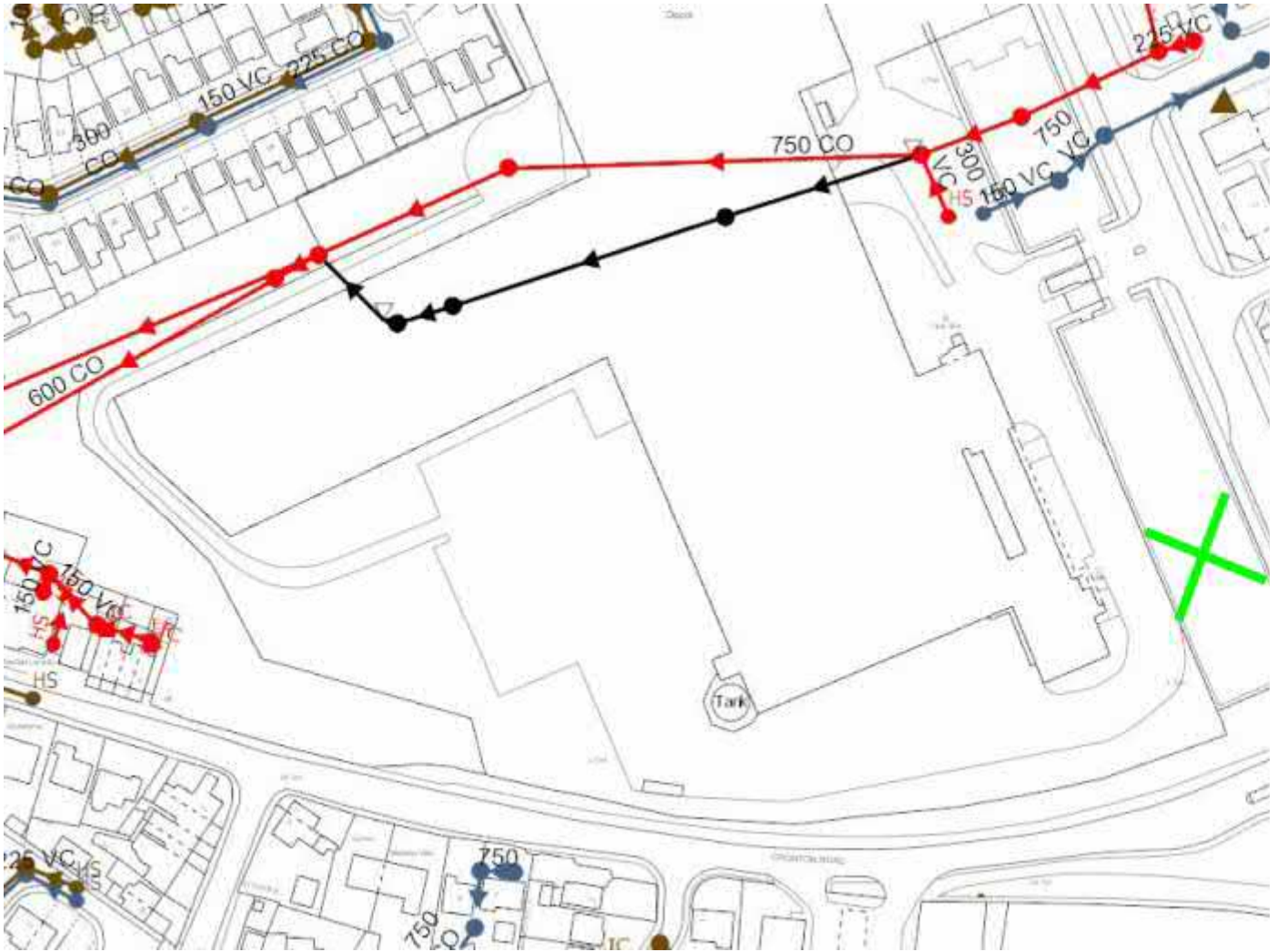
Good morning Nicola

We have been asked to contact you via your planning team due to the attached consultation response to our planning application, reference 23/02782 for development at the above site.

You will note the extract below from the consultation response.

“Existing public sewers pass through and near to this site which modelling data identifies as being at risk of sewer flooding. We request that the applicant liaises with United Utilities to understand the nature of this flood risk and the impact upon the proposed site layout. The risk of sewer flooding needs to be assessed further as this could affect the developable area of the site and the detail of the design”

Our proposals involve the modification of existing warehouse buildings that are currently built over your 750mm dia combined sewer along with the construction of a new retail store in the location marked with a green X below



The internal refurbishments include separating the existing building to create two individual buildings with relocated offices.

The new retail store will be located in the car park to the existing warehouse, approximately 100m to the south of your sewers and will set at a level 700mm above the ground level in the area of where the sewer crosses the site.

As requested in the consultation response are you able to advise on the nature of the sewer flood risk on the site and any potential impact upon the proposed site layout. We can then assess any exceedance flow paths. There is nothing we can with regards to the refurbishment of the existing buildings and we think the new retail store would be set sufficiently high enough so as not to be at risk of sewer flooding and will not increase flood risk elsewhere

I look forward to hearing from you but please let me know if you have any queries. I will probably give a call to discuss also in the next couple of days

Kind Regards,

Richard Parker

Director

Adept Civil and Structural Consulting Engineers

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Sovereign Distillery Redevelopment Drainage Asset Maintenance Schedule

■ Surface ■ Foul

Maintenance Activity	Drainage Component	Required Action	Typical Frequency
Visual Inspection	Gully Sump unit Catch pit / silt trap Attenuation structures Channel drain Outlet chamber Flow control chamber	Inspect for sediment and debris Inspect inlets and outlets for blockage (where applicable)	Monthly for first year and twice yearly thereafter, after severe storm
	Pipework		Twice yearly
	Full retention interceptor / Bypass interceptor		Twice yearly or after severe storm as a minimum, refer to manufacturer guidance. Forecourt interceptor requires emptying after fuel spillage
Monitoring	Attenuation structures	Check attenuation inspection points to ensure emptying is occurring (little to no water should be present after consecutive days of dry weather)	Twice yearly, once after heavy rainfall and once after consecutive dry weather
Litter and Debris Removal	Manhole Pervious paving All sump units (gullies, channel drains and catch pits)	Remove all litter and debris	Twice yearly or after severe storm
Litter and Debris Removal - Continued	Access chambers and pre-treatment devices Flow control chamber Gutters & leaf guards		Twice yearly (spring, start of winter), or as required
Jet Wash	Pipework	High pressure jet-wash any pipe work which has silt accumulation. Care must be taken that any silts within	Twice yearly, or as required

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		the pipework are not unnecessarily flushed into the attenuation structures (use of bungs and jet-vac of chamber prior to removal of bungs)	
	Attenuation structures	High pressure jet-wash all perforated pipework and or access points. All water to be jet vac to remove any suspended silts within the water	Five yearly, or as required
Sediment Management and Removal	ALL SUDS	Sediment accumulation should be monitored as part of the inspection regime, rate of sediment accumulation noted	Appropriate frequencies determined upon inspection
Inspection	Pipework Manhole	Check if functioning correctly	Once site is fully operational: twice yearly for 1 st year, annually after
Sediment Removal	Washdown separator	Inspect for build up of sediment and remove as required. Refer to manufacturer guidance	Quarterly for 1 st year, twice yearly after. Refer to manufacturer guidance

Additional notes:

- Any defects (broken/misaligned pipes, root infestation, damage to soakaways, missing parts, etc.) that are identified during inspections/maintenance should be reported back to the property/site owner so that remedial actions can be undertaken promptly to repair these defects.
- SuDS maintenance based on CIRIA 2015 chapter 32 where further information can also be found.
- Refer to manufacturer guidance for maintenance schedules of all proprietary treatment systems.