Introduction

Hydrock Consultants have been appointed by SEGRO to carry out a drainage strategy report for the approval of Camden Council Lead Local Flood Authority (LLFA). The proposed drainage strategy will be in accordance with both national guidelines and will incorporate a 'best practise' approach in reducing the impact of the flooding caused by the new development.

The report is based upon sewer asset information provided by the sewerage undertakers Thames Water in relation to assets within the vicinity of the development site. The report highlights the key stakeholders in terms of ownership and maintenance to ensure the drainage system is kept well maintained and reduce the risk of failure. Should the network fail at any point, clearly defined ownership liabilities will ensure that problems can quickly be rectified thereby reducing the impact of potential damage caused by flooding.

The information received is summarised within this report. In the event that the information is relied upon and is subsequently found to be incorrect, Hydrock Consultants Ltd accepts no responsibility for any direct and/or consequential loss that may occur as a result.

0.1 References

Appendix A - Topographical Survey - **SGP_Topographic Survey.**

Appendix B - Architects Layouts - **19-275-SGP-XX-00-DR-A-130100**

Appendix C - Sewer Asset Map - **16304_Spring Place Kentish Town.**

Appendix D - Existing/Proposed Drainage Layout - **16304-HYD-00-ZZ-DR-7000**

0.2 References / Design Codes

- BS EN 752 - Drain and Sewer Systems Outside Buildings.
- Building Regulations Approved Document Part H - Drainage and waste disposals.
- Sewers for Adoption (where applicable).
- Local Water Authority requirements.
- CIRIA C753 - SuDS Manual.
- National Planning Policy Framework (NPPF).
- DEFRA Non-Statutory Technical Standards for Sustainable Drainage.

1. SITE INFORMATION

1.1 Site Referencing Information

Site Address	3-6 Spring Place
	London
	NW5 3BA
	National Grid Reference 528561, 185008

1.2 Existing Situation

The site is located in Kentish Town, North London beneath and beside the London Overground viaduct between Gospel Oak and Kentish Town West. The site comprises light industrial buildings adjacent to the railway line and arches directly beneath and faces onto Spring Place on the East and Grafton Road on the West. Previously the site has been used by Addison Lee for car servicing and repairs and associated staff welfare. To the north and south the site is bounded by a mixture of office and residential spaces and what could be some light industrial units.

1.3 Topography

A detailed topographical survey has been undertaken which shows the site is generally flat and is located at approximately 34.50m Above Ordnance Datum (AOD). The site slopes from the North Eastern corner (34.40m AOD) to the North West corner (35.15m AOD). There appears to be a step level change in the welfare area in the centre of the site where the elevation changes by around 0.20m. The site ties in along both Spring Place and Grafton Road with all entrances providing level access, many of which are vehicular along the Spring Place frontage.

See **Appendix A** for topographical layout.

SEGRO - Aerial Photo (Google maps)

1.4 Development proposals

Refurbishment and redevelopment of the existing buildings and associated structures to provide space for a "last mile depot". This would comprise of one main office and reception area, a staff toilets and kitchen area and the majority of the rest of site as storage and vehicle parking, so would alter use from Class B2 to Class B1c, B2 and B8. There are currently no external areas, nor are there any plans to introduce any in these new proposals.

See Appendix B for architect's layout.

1.5 Ground Conditions

According to BGS Geoindex and Envirocheck Geology Datasheets searches carried out nearby suggest much of the area comprises up to 1.0m Made Ground overlying stiff clay presumably of the London Clay Formation down to at least 10m bgl.

One borehole suggests the presence of ground water at approximately 1.8m bgl.

1.6 Flood Risk

EA data for the area indicates that the entirety of the site is at low risk of flooding from fluvial and tidal sources or from surface water flooding. This corresponds to a Flood Zone 1 - Low Probability in Table 1 of NPPF Planning Practice Guidance. This zone has a less than 1 in 1000-year annual probability of flooding. As the site is less than 1ha, in flood zone 1 and is not affected by sources of flooding other than rivers and the sea (e.g. reservoirs) this concludes a flood risk assessment will not be required.

2. SURFACE WATER MANAGEMENT STRATEGY

2.1 Pre-Development Surface Water Drainage

Public sewer records have been obtained from Thames Water which show that a combined public sewer (450mm diameter) runs within the site boundary. It enters site midway along the western boundary then follows the line of the viaduct south to the main sewer in Grafton Road. A second combined sewer (300mm diameter) begins outside the property in Spring Place and feeds into a larger culvert at the cross roads to the South East

See Appendix C for sewer asset map.

It is assumed that the site is split and run-off from west of the viaduct discharges from the site into the sewer in Grafton Road, while run-off from east of the viaduct goes to the sewer in Spring Place. No alterations to discharge locations are planned and existing drainage is to be utilised where appropriate.

2.2 Post-Development Surface Water Drainage

Surface water run-off will be collected by way of rainwater pipes into the existing below ground surface water drainage system which will discharge to an existing connection points south and east of the site. A portion of roof area will be used for rain water harvesting, to be used in toilet facilities on site.

There is no increase in impermeable area due to this site being a refurbishment of an existing building with no external areas within the site boundary. Existing discharge locations are to be utilised and existing drainage to be utilised or repaired dependent on its suitability.

There being no increase in flow rates from the site it is deemed that this strategy does not adversely impact on flood risk either within the site of beyond the development boundary.

2.3 Run-off Destinations

The discharge of surface water run-off has been considered in accordance with the hierarchical approach:

2.3.1 Interception

There are no areas deemed appropriate for interception, as all areas within the site boundary will be elevated and suitable areas are to be covered by PV panelling. A significant and unfeasibly high cost would be incurred to refurbish the current structure to make it suitable. Additionally it is understood that lengthy works to the roofs of the existing buildings will necessitate the closure of the adjoining railway line.

However as previously stated a portion of rainwater falling on the roof will be harvested for use on site.

2.3.2 Infiltration

The ground conditions are deemed unsuitable for infiltrating to ground and any infiltration feature would need to be within the building footprint, requiring breaking out of the existing floor slab. The introduction of infiltration features would also require excavation beneath the existing building and in close proximity to the existing railway structure.

2.3.3 Surface water body

There are no surface water bodies within the vicinity of the site, the closest one being the Regents Canal approximately 850m to the south, therefore this approach has not been considered.

2.3.4 To dedicated surface water sewer (public, highways or otherwise)

There is no surface water sewer within 500m+ of the site therefore this approach has not been considered.

2.3.5 To a combined sewer

Surface water from the site will follow the current situation of the site and discharge to the existing combined 450mm diameter sewer network running south the Grafton St and the existing combines 300mm diameter sewer in Spring Place.

2.4 Brownfield Discharge Rates

Extract from Camden Planning Guidance - Water and Flooding:

"Brownfield sites should be limited as close to greenfield rates as is reasonably practicable. If greenfield rates cannot be achieved, clear written evidence must be submitted as to why a lower rate cannot be achieved. Information will be considered on a site by site basis. For brownfield sites robust justification could include; analysis of storage requirements required to achieve greenfield runoff rates in comparison to a site area, a cost analysis, spatial or level constraints."

Furthermore

"*The Council would seek a 50% reduction for the whole site rather than greenfield rates.*"

Due to the nature of the existing development and its current arrangement, the peak run-off for this site cannot be designed as close as reasonably practicable to the greenfield runoff rates and the 50% reduction would see disproportionate construction costs for a project of this size. These points are addressed below:

2.4.1 Storage requirements to achieve 50% betterment - Above ground

Any above ground storage is impractical due to the lack of external areas in site refurbishment. The roof areas will require considerable reinforcement in order to achieve load bearing capacity for storage at that level, the cost of which is considered disproportionately high on a project of this kind. Additionally works to the roof areas is to be kept to a minimum as it is advised that in order to be carried out, rail closures of London Overground route would be necessary.

The current scheme includes the wide use of PV panels on the roof that would need to be reduced should rainwater require storage at roof level.

1.1.1 Storage requirements to achieve 50% betterment - Below ground

The current scheme includes the wide use of PV panels on the roof that would need to be reduced should rainwater require storage at roof level.

In order for a below ground attenuation system to be installed the existing internal slab would need breaking out and removal, followed by significant excavation within the footprint of the existing building and in close proximity (<20m) from the existing viaduct. While TFL have been approached concerning refurbishment of the building adjoining the viaduct, it is unknown what constraints exist around excavations.

Additionally to above, given that there is no increase in impermeable area, current plans for refurbishment are not at the detriment of the existing network.

2.5 Selecting SuDS Techniques

Opportunities to implement green/traditional SuDS, have been considered as far as reasonably practicable.

Hierarchy	Description	Setting	Required area	Implemented
Green roofs	A planted soil layer is constructed on the roof of a building to create a living surface. Water is stored in the soil layer and absorbed by vegetation.	Building	Building integrated.	No. Have been considered however use of PV panels and current load capability of roof makes this unfeasible.
Rainwater harvesting	**Rainwater is collected from the roof of a building or from other paved surfaces and stored in an over ground or underground tank for treatment and reuse locally. Water could be used for toilet flushing and irrigation.**	**Building**	**Water storage (underground or above ground).**	**Yes. This will be utilised and forms part of the architects' scheme.**
Soakaway	A soakaway is designed to allow water to quickly soak into permeable layers of soil. Constructed like a dry well, an underground pit is dug filled with gravel or rubble. Water can be piped to a soakaway where it will be stored and allowed to gradually seep into the ground.	Open space	Dependent on runoff volumes, water table and soils.	No. Site deemed unsuitable for infiltrating to ground.
Filter strip	Filter strips are grassed or planted areas that runoff is allowed to run across to promote infiltration and cleansing.	Open space	Minimum length 5m.	No. No external areas.
Permeable paving	Paving which allows water to soak through. Can be in the form of paving blocks with gaps between solid blocks or porous paving where water filters through the block itself. Water can be stored in the sub-base beneath or allowed to infiltrate into ground below.	Street / open space	Can typically drain double its area.	No. No external areas.
Bioretention area	A vegetated area with gravel and sand layers below designated to channel, filter and cleanse water vertically. Water can infiltrate into the ground below or drain to a perforated pipe and be conveyed elsewhere. Bioretention systems can be integrated with tree-pits or gardens.	Street / open space	Typically, surface area is 5-10% of drained area with storage below.	No. No external areas.

Swale	Swales are shallow depressions designed to convoy and filter water. These can be 'wet' where water gathers above the surface, or 'dry' where water gathers in a gravel layer beneath. Can be lined or unlined to allow infiltration.	Street / open space	Account for width to allow safe maintenance typically 2–3 metres wide.	No. No external areas.
Hardscape storage	Hardscape water features can be used to store run-off above ground within a constructed container. Storage features can be integrated into public realm areas with a more urban character.	Street / open space	Could be above or below ground and sized to storage need.	No. No external areas.
Pond / Basin	Ponds can be used to store and treat water. 'Wet' ponds have a constant body of water and run-off is additional, while 'dry' ponds are empty during periods without rainfall. Ponds can be designed to allow infiltration into the ground or to store water for a period of time before discharge.	Open space	Dependent on runoff volumes and soils.	No. No external areas.
Wetland	Wetlands are shallow vegetated water bodies with a varying water level. Specially selected plant species are used to filter water. Water flows horizontally and is gradually treated before being discharged. Wetlands can be integrated with a natural or hardscape environment.	Open space	Typically, 5–15% drainage area to provide good treatment.	No. No external areas.
Underground storage	Water can be stored in tanks, gravel or plastic crates beneath the ground to provide attenuation.	Open space	Dependent on runoff volumes and soils.	No. Has been considered but is deemed unsuitable given there is no external area in which to locate it.

2.6 Exceedance flow management

In the event that flows from rainfall exceed the 1 in 100-year rainfall event, surface water run-off is directed via away from the buildings to neighbouring roads.

2.7 Water quality treatment

The development is considered to be 'low risk' for surface water pollution.

It is anticipated that during construction adequate provisions will be put in place to ensure that any construction silts, spillages will be prevented from the entering the downstream ditch network.

Consideration will be given to both during construction and post-development water quality treatment to ensure that water quality is not impacted during the construction works:

2.7.1 Quality of Surface Water Run-off: During Construction

It is anticipated that during construction adequate provisions will be put in place to ensure the existing drainage is protected to prevent material which could have a negative impact on water quality entering the system.

2.8 Design Standards

All materials and products relating to the below ground drainage system shall be specified in accordance with their intended use and meet all relevant British Standards and BBA accreditations.

In accordance with best practice storm drainage will be designed to the following performance criteria:

Pipes running under full conditions with no surcharge	-	1 in 2-year storm return period
No flooding	-	1 in 30-year storm return period
Extreme flooding to be retained on site	-	1 in 100-year storm return period

2.9 Summary

It is considered that the drainage strategy report has demonstrated that this refurbishment, while aiming to achieve a BREEAM Excellent rating, is unable to comply with the LLFA requirements of a 50% betterment. We believe that sufficient evidence on lack of external and roof areas is given to meet the satisfaction of the LLFA.

3. FOUL WATER MANAGEMENT STRATEGY

3.1 Pre-Development Foul Water Drainage

See Section 2.1 for public sewer information.

Existing private foul water sewers within the site collects flows from existing stack points and conveys through the site via a combined system. It is assumed that the site is split and foul water from west of the viaduct discharges from the site into the sewer in Grafton Road, while foul water from east of the viaduct goes to the sewer in Spring Place.

See Appendix C for sewer asset map.

3.2 Post-Development Foul Water Drainage

Foul drainage for the refurbishment will utilise existing drainage on site with stack points reconfigured to suit the change to internal layout. This will be via conventional gravity pipe system which connects into the existing off-site public network. The site will be spilt into East and West foul catchments, with the Western stacks connecting at the combined 450mm sewer running south to Grafton Road, and the Eastern stacks connecting into the existing 300mm diameter combined sewer in Spring Place.

The foul drainage system will be designed in accordance with Building Regulations Approved Document H and the relevant British Standards.

The foul drainage within the development boundary serves only the development and will be maintained by the owner / management company. A schedule of maintenance activities which ensure the drainage is kept in good working order will be produced and submitted as part of the 'Health & Safety' documentation.

4. MAINTENANCE & OWNERSHIP

The key elements of the foul and surface water drainage system will require periodic maintenance to prevent failure of the system and/or a reduction in capacity of the networks as a whole and the following matrix therefore sets out the various drainage items to be maintained, identifies who is responsible and the frequency of maintenance.

It is anticipated that the drainage within the development will be maintained privately by a management company appointed by the owner / occupier.

4.1 Responsibility Matrix

Ownership & Maintenance Responsibility Matrix			
Responsibility	Feature	Maintenance	Frequency
Owner / Occupier Appointed Management Company	Private Drains	Inspection	CCTV survey every 5-10 years.
		Regular Maintenance	Jet clean system fully every 5-10 years. (Recommend prior to CCTV drainage survey is)
		Remedial / Occasional Maintenance	Carry out remedial works as identified in CCTV survey.
	Gullies / Drainage Channels	Inspection	Quarterly
		Regular Maintenance	Remove silt and debris as necessary to prevent build up.
	Reference should be made to the manufacturer recommendations where applicable		

The following information should be passed to the development operator to ensure that future maintenance is carried out in a safe and proper manner.

A formal review of the risks should be undertaken on an annual basis.

Operation	Risks	Mitigating Measures
Access to manholes for Inspection and Maintenance.	1. Confined spaces	1. Entry to confined space to be minimised and, where unavoidable, to be carried out by appropriately trained personnel
Removal of silt from outfall	1. Risk to members of the public 2. Open Water	1. Access to hazardous areas by members of the public to be prohibited. 2. To be carried out by appropriately trained personnel
Removal of silt from drainage channel	1. Risk to members of the public	1. Access to hazardous areas by members of the public to be prohibited

All inspection and maintenance works should take into consideration the implications of 'lone working'. An assessment should be carried out and the risks mitigated accordingly.

Appendix A

Topographical Survey


SPRING PLACE
SPRING PLACE

Appendix B

Architects Layout

Rev	Date	By	Description
A	24/11/2020	AZ	Parking spaces added;
B	27/11/2020	AZ	Parking spaces arrangement amended; pedestrians walkways added;
C	02/12/2020	AZ	Graphic amendments; van car parking arrangement changed;
D	07/12/2020	AZ	Ground Floor arrangement amended following comments form Client;
E	07/12/2020	AZ	Label amended;

New Proposed Crittal style double door

Office/Reception Area

Crittal style glass wall

railway arches

railway arches

railway arches

railway arches

railway arches

railway arches

WC

Acc WC

WC

WC

WC

AWC

Sh.

Kitchen / Staff

FLEXIBLE OPEN SPACE

FLEXIBLE OPEN SPACE

New opening- reposition existing electrical infrastructure to adjacent warehouse wall. Refer to drawings by Hollis

Reconfiger stair to form straight flight. Additional investigation required

34.50 ramp up to 34.74 at an angle of 2 degrees

34.85 ramp up to 35.16 at an angle of 1 degree

3 LEVEL ACCESS DOOR LOCATIONS RETAINED AND DOORS REPLACED

DOOR 1

DOOR 2

DOOR 3

CORE / CIRCULATION

DOOR 4

1 LEVEL ACCESS DOOR LOCATION RETAINED AND DOOR REPLACED

Cycles

Lockers

Sh.

Sh.

Red broken line indicates existing partitions removed and made good.

Floor removed to accommodate reconfigured stair

up

PROPOSED FIRST FLOOR PLAN
Scale 1:100 @A1

PROPOSED GROUND FLOOR PLAN
Scale 1:100 @A1

0 1 5 10
Metres at scale 1:100

N

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SGP

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Refurbishment
3-6 Spring Place
Kentish Town

Drawing Name:
Proposed Floor Plan

Drawing Stage:	PLANNING
Suitability:	S2 - Information
SGP File Ref:	19-275

SGP Project No:	Date:	Drawn:	Team:	Scale:	Rev:
19-275	30/09/2020	AZ	JN	1:100 @ A1	E

Drawing Number:

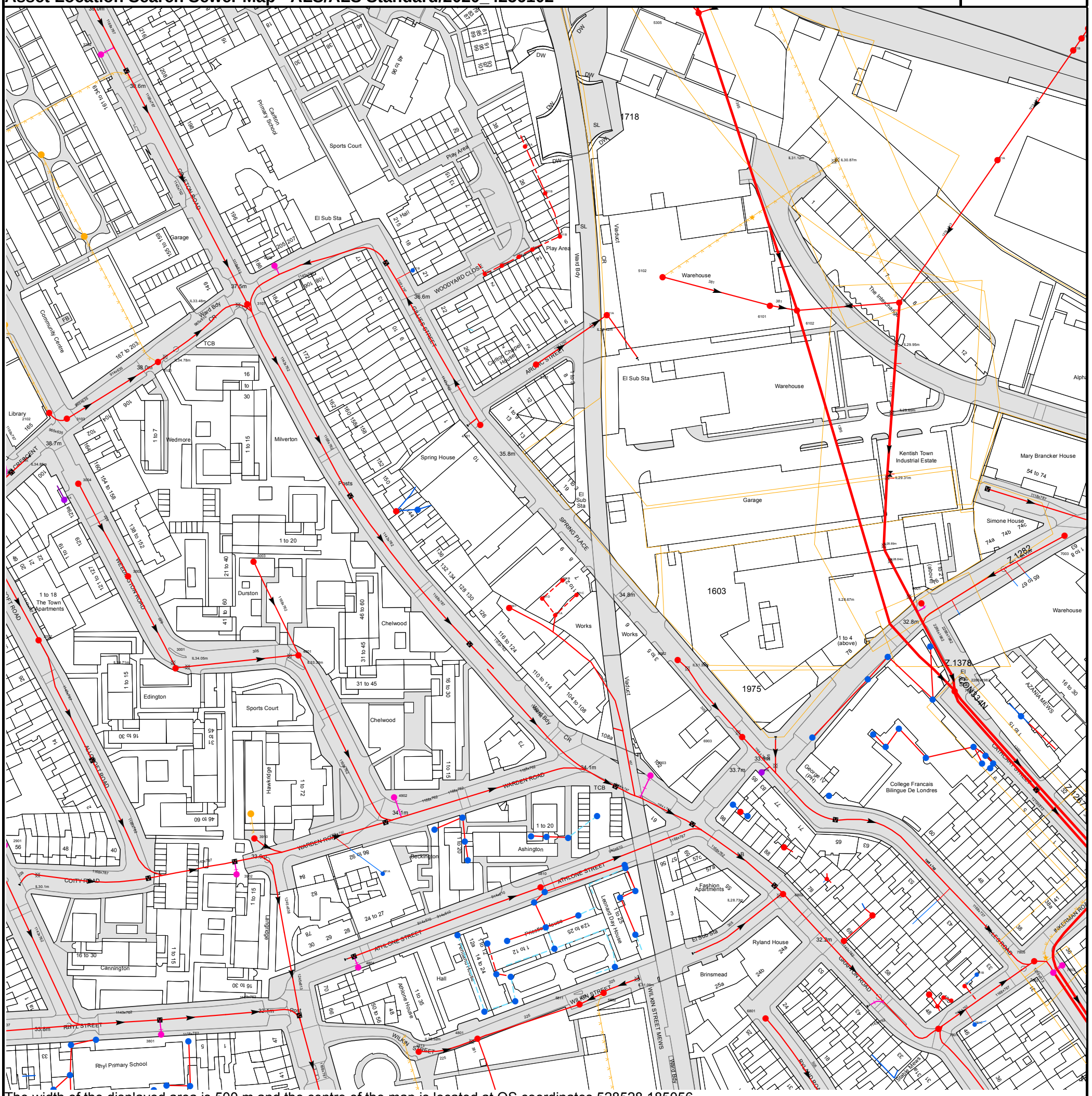
Project Code	Originator	Volume	Level	Type	Role	Number
19-275	- SGP -	XX -	00 -	DR -	A -	130100

Red Line Boundary based on O/S Data and **NOT** confirmed as the Legal Boundary

Appendix C

Sewer Asset Map

Asset Location Search Sewer Map - ALS/ALS Standard/2020_4256102



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 528528,185056

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
40BC	n/a	n/a
4101	35.85	34.31
5101	35.88	32.62
511A	n/a	n/a
6102	35.11	27.66
6101	n/a	n/a
6103	35.77	30.47
5102	n/a	n/a
411A	n/a	n/a
411B	n/a	n/a
511E	n/a	n/a
511D	n/a	n/a
511C	n/a	n/a
511B	n/a	n/a
521B	n/a	n/a
721A	n/a	n/a
521A	n/a	n/a
721B	n/a	n/a
721D	n/a	n/a
721C	n/a	n/a
5305	34.23	28.72
6301	n/a	n/a
58BJ	n/a	n/a
5811	32.82	29.55
59CA	n/a	n/a
5802	32.93	30.82
58BF	n/a	n/a
58CD	n/a	n/a
59BE	n/a	n/a
59BD	n/a	n/a
58CC	n/a	n/a
58CF	n/a	n/a
5903	n/a	n/a
5002	n/a	n/a
69BJ	n/a	n/a
69BI	n/a	n/a
6903	33.75	30.38
69CA	n/a	n/a
691A	n/a	n/a
6801	n/a	30.78
6802	n/a	n/a
69CG	n/a	n/a
69DD	n/a	n/a
69AI	n/a	n/a
69DE	n/a	n/a
68DD	n/a	n/a
69DC	n/a	n/a
68DC	n/a	n/a
69DF	n/a	n/a
69DG	n/a	n/a
60AE	n/a	n/a
69DH	n/a	n/a
6001	32.74	29.19
79CJ	n/a	n/a
78BI	n/a	n/a
70AC	n/a	n/a
79DG	n/a	n/a
78BJ	n/a	n/a
7801	31.19	26.23
78CA	n/a	n/a
78CB	n/a	n/a
7901	31.98	26.21
781A	n/a	n/a
79DA	n/a	n/a
781C	n/a	n/a
781B	n/a	n/a
79DE	n/a	n/a
79DB	n/a	n/a
79DD	n/a	n/a
79DC	n/a	n/a
79AF	n/a	n/a
7805	n/a	n/a
7802	31	25.24
7803	n/a	n/a
7003	n/a	30.55
4902	n/a	n/a
40BD	n/a	n/a
49BE	n/a	n/a
48AC	n/a	n/a
49BD	n/a	n/a
49BF	n/a	n/a
49BC	n/a	n/a
4801	32.3	28.47
48BF	n/a	n/a
48CA	n/a	n/a
58DD	n/a	n/a
58BI	n/a	n/a
5001	n/a	n/a
58DE	n/a	n/a
58DC	n/a	n/a
59CD	n/a	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
58CG	n/a	n/a
5810	33.24	28.55
501D	n/a	n/a
58CH	n/a	n/a
58BH	n/a	n/a
59CC	n/a	n/a
58BC	n/a	n/a
501A	n/a	n/a
501B	n/a	n/a
59CB	n/a	n/a
501C	n/a	n/a
38BC	n/a	n/a
4813	31.76	28.52
3003	38.1	31.44
301A	n/a	n/a
3004	38.6	36.13
3103	n/a	n/a
2102	38.84	36.74
3101	38.03	34.9
3107	37.52	32.95
4102	n/a	n/a
3202	n/a	n/a
38BH	n/a	n/a
38BB	n/a	n/a
38BA	n/a	n/a
3801	n/a	n/a
4804	n/a	n/a
3902	n/a	n/a
491A	n/a	n/a
2901	n/a	n/a
3910	34.05	29.53
3001	37.15	n/a
4001	36.42	30.56
2002	37.14	32.42
3002	38.14	35.07
38BE	n/a	n/a
38BI	n/a	n/a
38BD	n/a	n/a
38BG	n/a	n/a

ALS Sewer Map Key

Public Sewer Types (Operated & Maintained by Thames Water)

Foul: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.

Surface Water: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.

Combined: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.

- Trunk Surface Water
- Trunk Foul
- Storm Relief
- Trunk Combined
- Vent Pipe
- Bio-solids (Sludge)
- Proposed Thames Surface Water Sewer
- Proposed Thames Water Foul Sewer
- Gallery
- Foul Rising Main
- Surface Water Rising Main
- Combined Rising Main
- Sludge Rising Main
- Proposed Thames Water Rising Main
- Vacuum

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

- Air Valve
- Dam Chase
- Fitting
- Meter
- Vent Column

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

- Control Valve
- Drop Pipe
- Ancillary
- Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol, Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

- Outfall
- Undefined End
- Inlet

Other Symbols

Symbols used on maps which do not fall under other general categories

- Public/Private Pumping Station
- Change of characteristic indicator (C.O.C.I.)
- Invert Level
- Summit

Areas

Lines denoting areas of underground surveys, etc.

- Agreement
- Operational Site
- Chamber
- Tunnel
- Conduit Bridge

Other Sewer Types (Not Operated or Maintained by Thames Water)

- Foul Sewer
- Surface Water Sewer
- Combined Sewer
- Gulley
- Culverted Watercourse
- Proposed
- Abandoned Sewer

Notes:

1) All levels associated with the plans are to Ordnance Datum Newlyn.
2) All measurements on the plans are metric.
3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of flow.
4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
5) 'na' or '0' on a manhole level indicates that data is unavailable.
6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in milimetres. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology present on the plan, please contact a member of Property Insight on 0845 070 9148.

Appendix D

Existing/Proposed Drainage Layout

PROPOSED NEW SHOWERS TO CONNECT TO EXISTING DRAINAGE - PUMPING MAY BE REQUIRED

EXISTING INTERNAL DRAINAGE TO BE RECONFIGURED AND EXISTING RUNS TO BE CONFIRMED SUITABLE FOR RE-USE

EXISTING INTERNAL DRAINAGE TO BE RECONFIGURED AND EXISTING RUNS TO BE CONFIRMED SUITABLE FOR RE-USE

EXFW-01
CL: 34.250
IL: 31.40

300Ø

SPRING PLACE

01

01A

SEE INSET 1

INSET 1

KEY PLAN

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
2. The DWG file is issued for the purposes of coordination only and do not represent formal drawing issue and are not to be reprinted in any form. Formal issue of drawings is via DWF, Adobe PDF files and/or hard copies and their associated information issue sheets.
3. Note that all care has been taken with the export of DWG files and their content, but we recommend that you make due dimensional checks before using any DWG file information. Any errors found are to be reported to Hydrock immediately.
4. All levels are shown in metres above Ordnance Datum (m AOD).
5. All private drainage to comply with current Building Regulations, BS EN-752 Drain and Sewer systems outside Buildings and other relevant British Standards and Codes of Practices.
6. Drainage pipework routes under building footprint will require Co-ordination with foundations.
7. Final foul pipe connection routes and manholes are subject to confirmation of above ground drainage design discharge points at ground level by others to allow final pipe sizes, configuration and connections.
8. Door threshold drainage channel requirements to be advised by others.
9. Surface water drainage RWP locations to be confirmed by Architect.
10. External levels shown on this drawing relating to the civils, drainage works etc are to be confirmed on receipt of final external levels drawing (by others).
11. Foul drainage shown indicative subject to detailed design.

REV	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P01	PRELIMINARY ISSUE					
	A.TODD	23/11/20	J.MAGEE	23/11/20	J.MAGEE	23/11/20

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CLIENT
SEGRO

PROJECT
SPRING PLACE
CAMDEN

TITLE
DRAINAGE STRATEGY

HYDROCK PROJECT NO.	SCALE @ A1
C-16304-C	1:125

STATUS DESCRIPTION	STATUS
PLANNING	S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)	REVISION
16304-HYD-00-ZZ-DR-C-7000	P01