

WJ SHIRLEY

DRAINAGE SERVICES for
COMMERCIAL PROPERTY INVESTMENT

85 Great Portland Street
London
W1W 7LT

www.wjshirley.co.uk
Tel. 0207 100 1930



Mon 25th, Tues
26th & Wed 27th
February
2019

DRAINAGE REPORT

**UNIT 6, WILSON ROAD
HUYTON BUSINESS PARK
LIVERPOOL
L36 6JF**



Report prepared for: Woodfellows LLP, South Green Park, Mattishall, Dereham, Norfolk NR20 3JY

OVERALL RATING

MODERATE

Overall, the below-ground drains are in a moderate condition. There is an accumulation of silt and debris, including a green substance in the surface-water system which must be tankered away rather than jetting through and allowed to enter the sewer system. There are several missing rainwater pipes which should be replaced and connected into the below-ground system. One cracked pipe needs repair to prevent further deterioration. There are no oil interceptors serving the surface-water system and consideration should be given to retro-fitting a suitable interceptor.

Total length of below-ground drains

0.25 km

MAIN POINTS

* Foul and surface-water drains are separate.

* On mains drainage.

✓ Most drains in good structural condition.

✓ Drains operating moderately well overall.

✗ De-silting and de-scaling works required.

✗ Rainwater pipes missing.

✗ No oil interceptor.

✗ One cracked pipe needs repair.

£ Budget Costs £29,200

OVERALL MODERATE



Overall assessment of the condition of the drainage assets

STRUCTURAL GOOD



Overall assessment of physical condition of the drainage assets

OPERATIONAL MODERATE



Overall assessment of operational condition of the drainage assets

ENVIRONMENTAL MODERATE



Environmental risk presented via the drainage systems

DRAINAGE COSTS

£29,200

The cost figures should be seen as a guide price or allowance for the recommendations and should not be treated as a quotation. A firm price, however, can be provided for any works on request. These figures exclude any premium for out of hours working, disruption or loss of earnings to tenants, administration costs, local variations in the cost of labour or services, and also exclude any further investigative work which may be required except where stated.

There is a full breakdown of costs later in the report.

COST SUMMARY		COST BREAKDOWN	
		URGENCY	DIVISION
	Retro-fit oil interceptor		
	£20,000		
	De-silting and de-scaling works		
	£3,500		
	Renew and re-connect rainwater pipes		
	£2,400		
	Pipe repair		
	£600		
Total remedial costs			
	£26,500		
	Allowance of approx. 10% professional fees		
	£2,700		
£	TOTAL COSTS		
	£29,200		
		HIGH	STRUCTURAL
		0%	10%
		£0	£3,000
		MODERATE	OPERATIONAL
		100%	12%
		£26,500	£3,500
		LOW	ENVIRONMENTAL
		0%	68%
		£0	£20,000
			
			PROFESSIONAL FEES
			9%
			£2,700

AT A GLANCE

An overview of whether or not key drainage items are present and their consequences from a strategic viewpoint. This is an indication of what is present rather than an assessment of condition.

Item	Present	Status	Notes
Oil Interceptor(s)	NO		Consider retro-fitting an oil interceptor.
Pumped drainage	NO		
Gravity flow drainage	YES		
Discharge from other property(ies)	NO		
Discharge to other property(ies)	NO		
Mains drainage	YES		
Surface-water soakaways	NO		
Septic tank/cesspool	NO		
Environmentally sensitive area	NO		
Combined drainage	NO		
Sustainability measures	NO		
Property next to a watercourse	NO		

GENERAL

The background, scope of engagement and level of inspection.



General

WJ Shirley Ltd were instructed by

on behalf of

Woodfellows LLP
South Green Park, Mattishall, Dereham
Norfolk
NR20 3JY

Strang Investments (2007) Ltd
c/o Peloton Properties Ltd
Ramsbottom, Lancashire
BL0 9BJ

to carry out a drainage inspection at

Unit 6, Wilson Road
Huyton Business Park
Liverpool
L36 6JF

We understand this is in relation to a Schedule of Delapidations.



Authorisation

Job No:	1189
Report Issue Date:	01/03/2019
Report prepared by:	Hayley Reed B.Sc (Hons)
Position	Associate, WJ Shirley Ltd
Report authorised by:	Robert Shirley B.A., Ph.D
Signature:	 
Position	Director, WJ Shirley Ltd



Method of Assessment

Inspection and assessment was carried out by desktop research, a site walkover and a push-rod CCTV inspection along the below-ground drainage pipes where practicable.



Access

We had good general access to the site, however there are three inspection covers beneath shipping containers which we could not access.

DRAINAGE NETWORKS

An overview of whether or not key drainage items are present and their consequences from a strategic viewpoint.



Type

Foul and surface-water drainage systems are separate, running through different pipes and manholes. The drains flow by gravity (are not pumped). Foul and surface-water are believed to both be on mains drainage.



Materials

The below-ground drainage is carried through vitrified clay or plastic pipes ranging from 100mm to 300mm diameter. Access chambers are constructed in brickwork or concrete sections. Inspection covers are mostly cast iron.



Drain Routes

Below-ground drains run according to the plan at the end of this report.



Status

Identification of the status of drains on site is beyond the scope of our inspection, however all drains are likely to be private.

CONDITION

A summary and assessment of the current structural condition and operation of the drains, and an outlook for the future.



Operation

Overall the below-ground drains are operating moderately well. However, we noted the following operational defects:

OCCURANCES	DEFECT
2	Blockage & debris, including ink waste
1	Scale

There is silt and debris in the surface-water system causing blockages and reduced flow. Some of this has probably occurred through a natural build-up and lack of maintenance, but some of this is green, probably from green ink or dye. This has formed hard deposits on the inside of the drain pipes but then dissolves when subject to high pressure jetting. This is in the surface-water drains so has probably been washed down though



surface gullies. This needs to be removed but cannot simply be jetted through as it would leave the site and pass untreated to a river or stream and cause environmental pollution which is a criminal offence. We recommend that de-scaling and de-silting works are carried out with high pressure water jetting and a suction tanker with the surface-water system temporarily sealed off and all wash-waters removed from site and disposed of as Hazardous Waste. We have made a provisional allowance for this in the budget costs but it may be necessary to analyse a sample of the green waste to determine its precise content before it can be disposed of.

There are toilets in Warehouse 4 which probably run to inspection chamber MH4, however both are blocked. We recommend this is cleared out with a lorry-based suction tanker.



Structure

Overall the below ground drains are in good structural condition. However, we noted the following structural defects:

OCCURANCES	DEFECT
3	Rainwater pipes missing
1	Cracked pipe

There are a number of rainwater pipes which are missing and thus do not connect to the below-ground section of the pipe. We recommend these are replaced to ensure the rainwater pipes are connected to the below-ground system. Although strictly outside the scope of our inspection as they are above-ground, we have made an allowance for this in the budget costs.



We noted a crack in a section of below-ground surface-water drain at MH2. We recommend this is repaired to prevent further deterioration and possible collapse. This can currently be repaired in-situ by patch lining.





Environmental Risk

The environmental risk presented by the drainage system is moderate.

We noted the following environmental issues:

OCCURANCES	DEFECT
1	No oil interceptor serving surface-water system.

We found no oil interceptor on site¹ serving the surface-water system². There is no legal requirement to fit an oil interceptor in most cases³, however there is a legal duty of care to not “knowingly permit” polluting discharge to surface-waters (rivers, streams, ponds etc.) or to groundwater (natural water beneath the site).⁴ Fines and clear-up costs can be severe and in

¹ Drainage systems can be one of the primary pathways for causing environmental pollution from a commercial site. With increasing monitoring of the environment, public awareness and the prospect of large fines and remediation costs for environmental damage caused (deliberately, accidentally or via negligence), together with indirect costs of subsequent damage to reputation, raised insurance premiums etc. the potential risks posed by drainage systems should be considered. Surface-water drains usually run either directly to a watercourse, via a public sewer untreated to a watercourse or to groundwater via soakaways and should thus contain only clean uncontaminated water. The risks associated with any particular site can vary greatly depending on pollution sources, any precautionary measures in place, the outfall of the drainage systems and the environmental sensitivity of the site and its surroundings, the probabilities of an initiating event occurring, exposure to the hazard and the receptors being affected by the hazard. There are little or no actual legal requirements in this regard for the layout or installation of precautionary measures on drainage systems such as oil interceptors or shut-off valves (unless they form part of the conditions of an Environmental Permit). However, if pollution does occur (and drainage systems are one of the principle pathways) then prosecutors are likely to take into account the precautionary and preventative measures in place when determining culpability. Reading between the lines, it is our understanding that large companies or institutional owners would be expected to have best available techniques in place regarding pollution prevention on their drainage systems. On a commercial site, especially one that is multi-tenanted, it is a grey area as to whether the landlord or tenant are responsible for implementing pollution prevention measures. There is a principle that the “polluter pays” but if the polluter can’t pay or goes out of business, then costs may fall to the landlord. In addition, it may be argued that the landlord did not provide suitable infrastructure, such as an oil interceptor, which could have prevented a pollution incident. However, for reliable legal advice, a qualified legal advisor should be consulted.

² Oil is one of the principle sources of pollution from industrial and commercial sites in the UK. There are approximately 3,000 oil spills in the UK each year, making up 16% of all pollution incidents. Above-ground oil storage outdoors above 200 litres is governed by the Oil Storage Regulations (not assessed in this report) and covers tank design, siting and secondary containment. A small oil spillage can have large effects: just 2½ litres of oil can cover the area the size of a football pitch when it reaches water.

³ However, may form a legally binding condition of an Environmental Permit or Exemption, or a Trade Effluent Consent if it discharges to the foul drains.

⁴ Environmental Permitting (England and Wales) Regulations 2010

recent years have increasingly included a deterrent factor.⁵ As such, oil interceptors are recommended by the Environment Agency for sites of this type, are a sensible precaution and offer protection against pollution resulting from oil spillages.⁶ We recommend that consideration is given to retro-fitting an oil interceptor downstream of MH5.



Assessment & Outlook

We recommend using a suction tanker to clear silt and debris from the drainage systems which will help prevent blockages and restore the full capacity and efficiency of the system. This needs to be done with care to prevent the green substance leaving the site and causing environmental pollution. The rainwater pipes should be repaired to ensure the surface-water flows correctly back into the below-ground drainage system. The cracked pipe should be repaired to prevent further deterioration and possible collapse. Once our recommendations are carried out we would expect a good outlook for the future.

⁵ The Sentencing Council's Environmental Offences Definitive Guideline were introduced in 2014 and a judgement made in 2015 which said that in order to meet the objectives of "punishment, deterrence and the removal of gain (for example by the decision of the management not to expend sufficient resources in modernisation and improvement)" fines may equal up to 100% of a company's pre-tax net profit for the year in question, even if that resulted in a fine exceeding £100m.

⁶ Oil interceptors require regular maintenance to operate properly: if oil levels build up too much or they become too silted, they can be rendered ineffective. Waste from an oil interceptor is likely to be classed as hazardous waste and must be transferred via a consignment note system.

SUITABILITY

An assessment of the suitability of materialised and opportunity for maintenance access.



Materials

Inspection covers, chambers and drain pipes are in suitable materials.



Access

There is adequate general maintenance access to the surface-water drainage system.

RECOMMENDATIONS

Details of defects and recommendations arranged by urgency. The cost figures should be seen as a guide price or allowance for the recommendations and should not be treated as a quotation. A firm price, however, can be provided for any works on request.

ASSET	DEFECT	RECOMMENDATION	URGENCY	BY	COST	
MH 1	D 1	Rainwater pipe missing	Re-connect pipe to below-ground drain	Moderate	Aug 2020	£800
MH 1	D 2	Rainwater pipe missing	Re-connect pipe to below-ground drain	Moderate	Aug 2020	£800
MH 1	D 5	Debris including ink waste, severe	Clear out chamber with suction tanker	Moderate	Aug 2020	£3,500
MH 2	D 4	Crack, moderate	Repair by patch lining	Moderate	Aug 2020	£600
MH 4	D 7	Blockage, moderate	Clear out chamber with suction tanker	Moderate	Aug 2020	£0
MH 5	D 8	No oil interceptor serving surface-water system	Consider retro-fitting oil interceptor.	Moderate	Aug 2020	£20,000
MH 5	D 6	Scale, moderate	De-scale	Moderate	Aug 2020	£0
MH 6	D 3	Rainwater pipe missing	Re-connect pipe to below-ground drain	Moderate	Aug 2020	£800
			Total remedial works			£26,500
			Allowance of approx. 10% professional fees			£2,700
TOTAL						£29,200

DRAINAGE ASSETS

Details of the drainage infrastructure inspected including, where appropriate, an note and assessment of any defects.

MH 1

Surface-water inspection chamber

Budget Costs £5,100

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4017, -2.8169	860	Brickwork	Close	Good	Good

COVER

Size	Material	Description	Inspection	Structure	Operation
500 x 500	Cast iron heavy duty		Close	Good	Good

PIPE SECTIONS

Section	Diameter mm	Material	Length m	Inspection	Structure	Operation
SW 14	225	Vitrified clay	30.7	CCTV	Good	Good
SW 2	150	Vitrified clay	1.9	CCTV	Good	Good
SW 3	150	Vitrified	11.3	CCTV	Good	Poor

DEFECTS & RECOMMENDATIONS

Asset	Defect	Recommendation	Urgency	Cost
MH 1	Rainwater pipe missing	Re-connect pipe to below-ground drain	Moderate	£800
MH 1	Rainwater pipe missing	Re-connect pipe to below-ground drain	Moderate	£800
MH 1	Debris including ink waste	Clear out chamber with suction tanker	Moderate	£3500

PHOTOS

MH 1 chamber



Defects



Rainwater pipe missing



Rainwater pipe missing

Debris including ink waste
Section SW 14



Section SW 2



Section SW 3



MH 2 Surface-water inspection chamber

Budget Costs £600

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4011, -2.8164	1170	Concrete sections	Close	Good	Good

COVER

Size	Material	Description	Inspection	Structure	Operation
500 x 500	Cast iron heavy duty		Close	Good	Good

PIPE SECTIONS

Section	Diameter mm	Material	Length m	Inspection	Structure	Operation
SW 1	225	Vitrified	37.9	CCTV	Moderate	Moderate
SW 10	225	Vitrified clay	24.9	CCTV	Good	Good
SW 11	150	Vitrified clay	2.1	CCTV	Good	Good

DEFECTS & RECOMMENDATIONS

Asset	Defect	Recommendation	Urgency	Cost
MH 2	Crack	Repair by patch lining	Moderate	£600

PHOTOS

MH 2 chamber



Defects



Crack

Section SW 1



Section SW 10



Section SW 11

MH 3

Surface-water inspection chamber

No Budget Costs

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4018, -2.8165	780	Brickwork	Close	Good	Good

COVER

Size	Material	Description	Inspection	Structure	Operation
600 x 600	Cast iron heavy duty		Close	Good	Good

PIPE SECTIONS

Section	Diameter mm	Material	Length m	Inspection	Structure	Operation
SW 27	150	Vitrified clay	7.3	CCTV	Good	Good

DEFECTS & RECOMMENDATIONS

No defects

PHOTOS

MH 3 chamber
Section SW 27

MH 4

Foul inspection chamber

No Budget Costs

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4014, -2.8158	1800	Brickwork	Close	Good	Moderate

COVER

Size	Material	Description	Inspection	Structure	Operation
600 x 600	Cast iron heavy duty		Close	Good	Good

PIPE SECTIONS

No data

DEFECTS & RECOMMENDATIONS

Asset	Defect	Recommendation	Urgency	Cost
MH 4	Blockage	Clear out chamber with suction tanker	Moderate	£0

PHOTOS

MH 4 chamber

Defects



Blockage

None

MH 5 Surface-water inspection chamber

Budget Costs £20,000

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4012, -2.8161	1800	Concrete sections	Close	Good	Good

COVER

Size	Material	Description	Inspection	Structure	Operation
675 x 675	Cast iron heavy duty		Close	Good	Good

PIPE SECTIONS

Section	Diameter mm	Material	Length m	Inspection	Structure	Operation
SW 10	225	Vitrified clay	24.9	CCTV	Good	Good
SW 15	300	Vitrified clay	17.4	CCTV	Good	Good
SW 16	150	Vitrified	3.9	CCTV	Good	Poor
SW 17	225	Vitrified clay	5.9	CCTV	Good	Good

DEFECTS & RECOMMENDATIONS

Asset	Defect	Recommendation	Urgency	Cost
MH 5	Scale	De-scale	Moderate	£0
MH 5	No oil interceptor serving surface-water system	Consider retro-fitting oil interceptor.	Moderate	£20000

PHOTOS

MH 5 chamber



Section SW 10



Section SW 15



Section SW 16



Section SW 17



MH 6

Surface-water inspection chamber

Budget Costs £800

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4014, -2.8167	0	-None Selected-	Not inspected	N/A	N/A

COVER

Size	Material	Description	Inspection	Structure	Operation
0 x 0	-None Selected-		Not inspected	N/A	N/A

PIPE SECTIONS

Section	Diameter mm	Material	Length m	Inspection	Structure	Operation
SW 1	225	Vitrified	37.9	CCTV	Moderate	Moderate
SW 14	225	Vitrified clay	30.7	CCTV	Good	Good

DEFECTS & RECOMMENDATIONS

Asset	Defect	Recommendation	Urgency	Cost
MH 6	Rainwater pipe missing	Re-connect pipe to below-ground drain	Moderate	£800

PHOTOS

MH 6 chamber



Defects



Rainwater pipe missing
Section SW 1



Section SW 14



MH 7 Surface-water inspection chamber

No Budget Costs

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4012, -2.8160	1630	Concrete sections	Close	Good	Good

COVER

Size	Material	Description	Inspection	Structure	Operation
675 x 675	Cast iron heavy duty		Close	Good	Good

PIPE SECTIONS

Section	Diameter mm	Material	Length m	Inspection	Structure	Operation
SW 17	225	Vitrified clay	5.9	CCTV	Good	Good
SW 18	150	Vitrified clay	65.7	CCTV	Good	Good
SW 23	150	Vitrified clay	1.7	CCTV	Good	Good
SW 24	225	Vitrified clay	22.2	CCTV	Good	Good

DEFECTS & RECOMMENDATIONS

No defects

PHOTOS

MH 7 chamber



Section SW 17



Section SW 18



Section SW 23



Section SW 24



MH 8

Surface-water inspection chamber

No Budget Costs

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4011, -2.8160	0	-None Selected-	Distant/partial	Good	Good

COVER

Size	Material	Description	Inspection	Structure	Operation
0 x 0	-None Selected-		Distant/partial	N/A	N/A

PIPE SECTIONS

Section	Diameter mm	Material	Length m	Inspection	Structure	Operation
SW 15	300	Vitrified clay	17.4	CCTV	Good	Good

DEFECTS & RECOMMENDATIONS

No defects

PHOTOS

MH 8 chamber
Section SW 15



MH 9

Surface-water inspection chamber

No Budget Costs

CHAMBER

Location (Lat,Lon)	Depth mm	Construction	Inspection	Structure	Operation
53.4013, -2.8157	0	-None Selected-	Not inspected	N/A	N/A

COVER

Size	Material	Description	Inspection	Structure	Operation
0 x 0	-None Selected-		Not inspected	N/A	N/A

PIPE SECTIONS

Section	Diameter mm	Material	Length m	Inspection	Structure	Operation
SW 24	225	Vitrified clay	22.2	CCTV	Good	Good

DEFECTS & RECOMMENDATIONS

No defects

PHOTOS

MH 9 chamber



Section SW 24



Drainage Plan

Foul drain (assumed)

Surface-water drain

Defect

