soiltechnics
environmental ▪ geotechnical ▪ building fabric

Analysis of test data in relation to concentrations of organic chemical contaminants

Adopted model: Residential without
Receptor: Proposed site user

Test procedure			Summary of test data					Initial Screening	Outlier test				Normality test			UCL	
Contaminant	Guideline source	Guideline value* mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Acenaphthene	S4UL	4700	7	0.1	1.3	0.5	0	Mean value below guideline	y	0				not normal	not normal	n	1.4	**Acenaphthene**
Acenaphthylene	S4UL	4600	7	0.1	1.0	0.3	0	Mean value below guideline	n	0				not normal	not normal	n	0.8	**Acenaphthylene**
Anthracene	S4UL	35000	7	0.1	2.8	0.9	0	Mean value below guideline	y	0				not normal	not normal	n	2.8	**Anthracene**
Benzo(a)anthracene	S4UL	14	7	0.1	7.5	2.6	0	Mean value below guideline	y	0				not normal	not normal	n	7.7	**Benzo(a)anthracene**
Benzo(a)pyrene	S4UL	3.2	7	0.1	7.4	2.6	3	Mean value below guideline	y	0				not normal		n	7.8	**Benzo(a)pyrene**
Benzo(b)fluoranthene	S4UL	4	7	0.1	8.4	2.9	3	Mean value below guideline	y	0				not normal		n	8.7	**Benzo(b)fluoranthene**
Benzo(g,h,i)perylene	S4UL	360	7	0.1	4.2	1.4	0	Mean value below guideline	y	0				not normal	not normal	n	4.4	**Benzo(g,h,i)perylene**
Benzo(k)fluoranthene	S4UL	110	7	0.1	3.1	1.1	0	Mean value below guideline	y	0				not normal	not normal	n	3.1	**Benzo(k)fluoranthene**
Chrysene	S4UL	31	7	0.1	8.2	2.7	0	Mean value below guideline	y	0				not normal	not normal	n	8.3	**Chrysene**
Dibenzo(a,h)anthracene	S4UL	0.32	7	0.1	1.1	0.4	3	Mean value above guideline		0						n	1.1	**Dibenzo(a,h)anthracene**
Fluoranthene	S4UL	1600	7	0.1	17.0	5.6	0	Mean value below guideline	y	0				not normal	not normal	n	17.0	**Fluoranthene**
Fluorene	S4UL	3800	7	0.1	1.2	0.4	0	Mean value below guideline	y	0				not normal	not normal	n	1.1	**Fluorene**
Indeno(1,2,3-cd)pyrene	S4UL	46	7	0.1	4.3	1.4	0	Mean value below guideline	y	0				not normal	not normal	n	4.3	**Indeno(1,2,3-cd)pyrene**
Naphthalene	S4UL	5.6	7	0.1	0.7	0.3	0	Mean value below guideline	y	0				not normal	not normal	n	0.7	**Naphthalene**
Phenanthrene	S4UL	1500	7	0.1	12.0	4.0	0	Mean value below guideline	y	0				normal	not normal	n	12.0	**Phenanthrene**
Phenols	S4UL	1300	7	0.1	2.0	1.5	0	Mean value below guideline	y	0				not normal	not normal	n	3.0	**Phenols**
Pyrene	S4UL	3800	7	0.1	17.0	5.7	0	Mean value below guideline	y	0				not normal	not normal	n	17.1	**Pyrene**

Notes

S4UL	Suitable for Use Level as published by LQM/CIEH
C4SL	Category 4 Screening Level
SGV	Soil Guideline Value as published by the Environment Agency 2009
SSV	Soil Screening Value as derived by Soiltechnics
ATK	Soil Screening Value derived by Atkins
*	Assuming a SOM of 2.5%

Title
Analysis of test data in relation to concentrations of organic chemical contaminants.

Table number
3

soiltechnics
environmental ▪ geotechnical ▪ building fabric

Analysis of test data in relation to concentrations of organic chemical contaminants

Adopted model: Industrial/Commercia
Receptor: Construction operative and vegetation

Test procedure			Summary of test data					Initial Screening	Outlier test				Normality test			UCL	
Contaminant	Guideline source	Guideline value* mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth / Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Acenaphthene	S4UL	97000	8	0.1	2.3	0.7	0	Mean value below guideline	y	0			not normal	not normal	n	2.0	**Acenaphthene**
Acenaphthylene	S4UL	97000	8	0.1	1.0	0.3	0	Mean value below guideline	n	0			not normal	not normal	n	0.8	**Acenaphthylene**
Anthracene	S4UL	540000	8	0.1	2.8	1.2	0	Mean value below guideline	y	0			not normal	not normal	n	3.0	**Anthracene**
Benzo(a)anthracene	S4UL	170	8	0.1	8.6	3.3	0	Mean value below guideline	y	0			normal	not normal	n	8.9	**Benzo(a)anthracene**
Benzo(a)pyrene	S4UL	35	8	0.1	7.7	3.2	0	Mean value below guideline	y	0			not normal		n	8.5	**Benzo(a)pyrene**
Benzo(b)fluoranthene	S4UL	44	8	0.1	10.0	3.8	0	Mean value below guideline	y	0			normal		n	10.1	**Benzo(b)fluoranthene**
Benzo(g,h,i)perylene	S4UL	4000	8	0.1	4.6	1.8	0	Mean value below guideline	y	0			not normal	not normal	n	4.9	**Benzo(g,h,i)perylene**
Benzo(k)fluoranthene	S4UL	1200	8	0.1	3.4	1.3	0	Mean value below guideline	y	0			not normal	not normal	n	3.5	**Benzo(k)fluoranthene**
Chrysene	S4UL	350	8	0.1	9.3	3.6	0	Mean value below guideline	y	0			normal	not normal	n	9.6	**Chrysene**
Dibenzo(a,h)anthracene	S4UL	3.6	8	0.1	1.1	0.4	0	Mean value below guideline	y	0			normal		n	1.0	**Dibenzo(a,h)anthracene**
Fluoranthene	S4UL	23000	8	0.1	17.0	7.0	0	Mean value below guideline	y	0			not normal	not normal	n	18.7	**Fluoranthene**
Fluorene	S4UL	68000	8	0.1	2.2	0.6	0	Mean value below guideline	n	0			not normal	not normal	n	1.8	**Fluorene**
Indeno(1,2,3-cd)pyrene	S4UL	510	8	0.1	4.7	1.8	0	Mean value below guideline	y	0			not normal	not normal	n	4.9	**Indeno(1,2,3-cd)pyrene**
Naphthalene	S4UL	460	8	0.1	1.1	0.4	0	Mean value below guideline	y	0			not normal	not normal	n	1.0	**Naphthalene**
Phenanthrene	S4UL	22000	8	0.1	13.0	5.1	0	Mean value below guideline	y	0			normal	not normal	n	13.6	**Phenanthrene**
Phenols	S4UL	1500	8	0.1	2.0	1.3	0	Mean value below guideline	y	0			not normal	not normal	n	2.8	**Phenols**
Pyrene	S4UL	54000	8	0.1	17.0	6.9	0	Mean value below guideline	y	0			not normal	not normal	n	18.0	**Pyrene**

Notes

S4UL	Suitable for Use Level as published by LQM/CIEH
C4SL	Category 4 Screening Level
SGV	Soil Guideline Value as published by the Environment Agency 2009
SSV	Soil Screening Value as derived by Soiltechnics
ATK	Soil Screening Value derived by Atkins
*	Assuming a SOM of 2.5%

Title: Analysis of test data in relation to concentrations of organic chemical contaminants.
Table number: 4

soiltechnics
environmental ▪ geotechnical ▪ building fabric

Summary of petroleum hydrocarbon test results

Model: **Residential without plant uptake**

BTEX (Red highlights indicate exceedance of guideline value)

Indicator	unit	S4UL (mg/kg)	Concentration TP01 0.60	TP05 0.30	TP105 0.30	TP105 0.70	TP106 0.40
Benzene	mg/kg	0.7	< 0.002	< 0.002			
Toluene	mg/kg	1900	< 0.005	< 0.005			
Ethylbenzene	mg/kg	190	< 0.002	< 0.002			
o-Xylene	mg/kg	210	< 0.002	< 0.002			
m,p-Xylene	mg/kg	180	< 0.002	< 0.002			

Hydrocarbon banding (Red highlights indicate exceedance of guideline value)

Fraction	unit	S4UL (mg/kg)	Concentration TP01 0.60	TP05 0.30	TP105 0.30	TP105 0.70	TP106 0.40
Aliphatic							
EC 5 - 6	mg/kg	78	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0
EC >6 - 8	mg/kg	230	< 0.05	< 0.05	< 2.0	2.3	< 2.0
EC >8 - 10	mg/kg	65	< 2	< 2	< 1.0	130	< 1.0
EC >10 - 12	mg/kg	330	3	< 2	< 1.0	250	< 1.0
EC >12 - 16	mg/kg	2400	8	< 3	< 1.0	190	< 1.0
EC >16 - 35	mg/kg	92000	98	151	< 1.0	1.6	< 1.0
Aromatic							
EC 5 - 7 (benzene)	mg/kg	690	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0
EC >7 - 8 (toluene)	mg/kg	1800	< 0.05	< 0.05	< 2.0	2.3	< 2.0
EC >8 - 10	mg/kg	110	< 2	< 2	< 1.0	130	< 1.0
EC >10 - 12	mg/kg	590	< 2	< 2	< 1.0	250	< 1.0
EC >12 - 16	mg/kg	2300	8	< 2	< 1.0	190	< 1.0
EC >16 - 21	mg/kg	1900	25	< 3	< 1.0	1.6	< 1.0
EC >21 - 35	mg/kg	1900	47	90			
Total petroleum hydrocarbons			189	240	<10	570	1.1

Title	Table number
Comparison of measured concentrations of petroleum hydrocarbons with guideline values.	5

soiltechnics
environmental ▪ geotechnical ▪ building fabric

Summary of petroleum hydrocarbon test results

Model: **Construction operatives**

BTEX (Red highlights indicate exceedance of guideline value)

Indicator	unit	S4UL (mg/kg)	Concentration TP01 0.60	TP05 0.30	TP105 0.30	TP105 0.70	TP106 0.40
Benzene	mg/kg	47	< 0.002	< 0.002			
Toluene	mg/kg	110000	< 0.005	< 0.005			
Ethylbenzene	mg/kg	13000	< 0.002	< 0.002			
o-Xylene	mg/kg	15000	< 0.002	< 0.002			
m,p-Xylene	mg/kg	14000	< 0.002	< 0.002			

Hydrocarbon banding (Red highlights indicate exceedance of guideline value)

Fraction	unit	S4UL (mg/kg)	Concentration TP01 0.60	TP05 0.30	TP105 0.30	TP105 0.70	TP106 0.40
Aliphatic							
EC 5 - 6	mg/kg	5900	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0
EC >6 - 8	mg/kg	17000	< 0.05	< 0.05	< 2.0	2.3	< 2.0
EC >8 - 10	mg/kg	4800	< 2	< 2	< 1.0	130	< 1.0
EC >10 - 12	mg/kg	23000	3	< 2	< 1.0	250	< 1.0
EC >12 - 16	mg/kg	82000	8	< 3	< 1.0	190	< 1.0
EC >16 - 35	mg/kg	1700000	98	151	< 1.0	1.6	< 1.0
Aromatic							
EC 5 - 7 (benzene)	mg/kg	46000	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0
EC >7 - 8 (toluene)	mg/kg	110000	< 0.05	< 0.05	< 2.0	2.3	< 2.0
EC >8 - 10	mg/kg	8100	< 2	< 2	< 1.0	130	< 1.0
EC >10 - 12	mg/kg	28000	< 2	< 2	< 1.0	250	< 1.0
EC >12 - 16	mg/kg	37000	8	< 2	< 1.0	190	< 1.0
EC >16 - 21	mg/kg	28000	25	< 3	< 1.0	1.6	< 1.0
EC >21 - 35	mg/kg	28000	47	90			
Total petroleum hydrocarbons			189	240	<10	570	1.1

Title	Table number
Comparison of measured concentrations of petroleum hydrocarbons with guideline values.	6

soiltechnics
environmental ▪ geotechnical ▪ building fabric

Asbestos results

Count		
Green	Orange	None
5	0	0

Location	Depth Top - Depth Base (m)	Sample Type	Date Sampled	Containers	Asbestos Test Type	Unit	Result
TP01	0.60	ES	16/04/2021	TJ	Asbestos Screen	N/a	**Not Detected**
TP02	0.20	ES	16/04/2021	TJ	Asbestos Screen	N/a	**Not Detected**
TP04	0.20	ES	16/04/2021	TJ	Asbestos Screen	N/a	**Not Detected**
TP04	0.50	ES	16/04/2021	TJ	Asbestos Screen	N/a	**Not Detected**
TP05	0.30	ES	16/04/2021	TJ	Asbestos Screen	N/a	**Not Detected**
TP105	0.30	ES	07/10/2022	TJ	Asbestos Screen	N/a	**Not Detected**
TP105	0.70	ES	07/10/2022	TJ	Asbestos Screen	N/a	**Not Detected**
TP106	0.40	ES	07/10/2022	TJ	Asbestos Screen	N/a	**Not Detected**

soiltechnics
environmental • geotechnical • building fabric

Controlled water screening sheet

Scenario

Receptor	Drinking water
Surface water type	N/A
	N/A

Contaminant	Guideline source	Guideline value (µg/l)	Maximum recorded value (µg/l)	Location	TP05
				Depth (m)	0.5
				Sample Type	D
				Type	Leachate
Inorganics - Metals					
Arsenic	UK DWS	10	*<LoD*		*< 5*
Boron	UK DWS	1000	*<LoD*		*< 5*
Cadmium	UK DWS	5	*<LoD*		*< 0.4*
Chromium (total)	UK DWS	50	*<LoD*		*<LoD*
Chromium (III)	N/A	N/A	*<LoD*		*< 5*
Chromium (VI)	N/A	N/A	*<LoD*		*< 20*
Copper	UK DWS	2000	*<LoD*		*< 5*
Iron	UK DWS	200	57		57
Lead	UK DWS	10	*<LoD*		*< 5*
Mercury	UK DWS	1	*<LoD*		*< 0.05*
Nickel	UK DWS	20	*<LoD*		*< 5*
Selenium	UK DWS	10	*<LoD*		*< 5*
Zinc	Int. DWS	3000	*<LoD*		*< 2*
Inorganics - Miscellaneous					
pH	N/A	N/A	9.1		9.1
Cyanide - Total	UK DWS	50	*<LoD*		*< 5*
Cyanide - Free	N/A	N/A	*<LoD*		*< 5*
Ammonia (as N)	N/A	N/A	94		94
Nitrate (as NO3)	UK DWS	50000	*<LoD*		*< 500*
Sulphate	UK DWS	250000	*<LoD*		*< 1000*
Organics - PAH & Phenol					
Naphthalene	N/A	N/A	0.09		0.09
Acenaphthylene	N/A	N/A	*<LoD*		*< 0.01*
Acenaphthene	N/A	N/A	0.06		0.06
Fluorene	N/A	N/A	0.13		0.13
Phenanthrene	N/A	N/A	0.36		0.36
Anthracene	N/A	N/A	0.06		0.06
Fluoranthene	N/A	N/A	0.13		0.13
Pyrene	N/A	N/A	0.08		0.08
Benzo(a)anthracene	N/A	N/A	*<LoD*		*< 0.01*
Chrysene	N/A	N/A	*<LoD*		*< 0.01*
Benzo(b)fluoranthene	N/A	N/A	*<LoD*		*< 0.01*
Benzo(k)fluoranthene	N/A	N/A	*<LoD*		*< 0.01*
Benzo(a)pyrene	UK DWS	0.01	*<LoD*		*< 0.01*
Indeno(1,2,3-cd)pyrene	N/A	N/A	*<LoD*		*< 0.01*
Dibenz(a,h)anthracene	N/A	N/A	*<LoD*		*< 0.01*
Benzo(ghi)perylene	N/A	N/A	*<LoD*		*< 0.008*
PAH (sum of 4)	UK DWS	0.1	*<LoD*		*<LoD*
Phenol	N/A	N/A	*<LoD*		*< 10*

Key
EQS = Environmental Quality Standards, from "*The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015*", supplemented by operational values from the Environment Agency, updated online 2017. **AA** = Annual average, **MAC** = Maximum allowable concentration.
PNEC = Predicted no effect concentration. Obtained using the UKTAG Metals Bioavaibiltiy Assessment Tools (M-BAT), 2013 (Cu, No, Mn, Zn) & 2015 (Pb).
EA = "*Petroleum Hydrocarbons in Groundwater: Supplementary Guidance for Hydrogeological Risk Assessment*", Environment Agency, 2009.
USEPA = "*Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites*". USEPA, 2015.

UK DWS = UK drinking water standards, from "*The Water Supply (Water Quality) Regulations 2018*".
Int. DWS = International "*Guidelines for drinking water quality*", World Health Organisation, 2017.
WHO = "*Petroleum products in drinking-water*", World Health Organisation, 2008.
ST = Soiltechnics value based on 80% of aqueous solubility limit, to a minimum of 10µg/l.
EA, USEPA and **ST** values are indicative values only and not harm related.

soiltechnics
environmental and geotechnical consultants

Initial Conceptual Model

Proposed site use residential

Source	Pathway										Receptor		Risk assessment to CIRIA C552	
	Humans						Vegetation	Water					Consequence of risk occurring via most likely pathway	Risk
	Ingestion of air-borne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of air-borne dusts	Inhalation of vapours	Dermal contact with soil and dust	Root uptake, deposition to shoots and foliage contact	Percolation of water through contaminated soils	Near-surface water run-off through contaminated	Saturation of contaminated soils by flood waters				
On site - within subsurface soils/groundwater														
Inorganic and low volatility organic contaminants	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Proposed site users	Child	Medium	Low/moderate
	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Medium	Low/moderate
	-	-	-	-	-	-	-	Low likelihood	Unlikely	Low likelihood	Water (proposed)	-	Medium	Low/moderate
Volatile organic contaminants	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Proposed site users	Child	Minor	Low
	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Low
	-	-	-	-	-	-	-	Low likelihood	Unlikely	Low likelihood	Water (proposed)	-	Minor	Low
Asbestos	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Proposed site users	Child	Medium	Low/moderate
	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate
Dissolved phase contaminants in groundwater							-	Low likelihood	Unlikely	Low likelihood	Water (proposed)	-	Medium	Low/moderate
Off site - within subsurface soils/groundwater														
Town Yard/Corparation yard - adj. north west (1893-1993)	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Unlikely	Low likelihood	-	-	-	-	Proposed site users	Child	Medium	Low/moderate
	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Medium	Low/moderate
	-	-	-	-	-	-	-	Low likelihood	Unlikely	Low likelihood	Water (proposed)	-	Medium	Low/moderate
Railway line - adj. east	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Proposed site users	Child	Medium	Low
	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Construction operatives	Adult	Medium	Low
	-	-	-	-	-	-	Unlikely	-	-	-	Vegetation (proposed)	-	Medium	Low
	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (proposed)	-	Medium	Low
Garage - c.135m north east (1958-1992)	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Proposed site users	Child	Medium	Low
	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Construction operatives	Adult	Medium	Low
	-	-	-	-	-	-	Unlikely	-	-	-	Vegetation (proposed)	-	Medium	Low
	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (proposed)	-	Medium	Low
Electricity sub station - c.10m north (1974 - present)	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Proposed site users	Child	Medium	Low
	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Construction operatives	Adult	Medium	Low
	-	-	-	-	-	-	Unlikely	-	-	-	Vegetation (proposed)	-	Medium	Low
	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (proposed)	-	Medium	Low

Note

Conceptual model replicated from GeoSmart Information Contamination Land Assessment Report Ref: 74223R1 dated January 2021

Vegetation included within Conceptual Model as part of Soiltechnics risk assessment.

Title	Table number
Initial Conceptual Site Model	1

soiltechnics
environmental and geotechnical consultants

Updated Conceptual Model

Proposed site use residential

Source	Pathway										Receptor		Risk assessment to CIRIA C552	
	Humans						Vegetation	Water					Consequence of risk occurring via most likely pathway	Risk
	Ingestion of air-borne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of air-borne dusts	Inhalation of vapours	Dermal contact with soil and dust	Root uptake, deposition to shoots and foliage contact	Percolation of water through contaminated soils	Near-surface water run-off through contaminated	Saturation of contaminated soils by flood waters				
On site - within subsurface soils/groundwater														
Inorganic and low volatility organic contaminants	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Proposed site users	Child	Minor	Low
	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Low
	-	-	-	-	-	-	-	Low likelihood	Unlikely	Low likelihood	Water (proposed)	-	Minor	Low
Volatile organic contaminants	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Proposed site users	Child	Minor	Low
	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Low
	-	-	-	-	-	-	-	Low likelihood	Unlikely	Low likelihood	Water (proposed)	-	Minor	Low
Asbestos	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Proposed site users	Child	Minor	Low
	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Construction operatives	Adult	Minor	Low
Dissolved phase contaminants in groundwater							-	Low likelihood	Unlikely	Low likelihood	Water (proposed)	-	Minor	Low
Off site - within subsurface soils/groundwater														
Town Yard/Corparation yard - adj. north west (1893-1993)	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Unlikely	Low likelihood	-	-	-	-	Proposed site users	Child	Minor	Low
	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	Low likelihood	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Low
	-	-	-	-	-	-	-	Low likelihood	Unlikely	Low likelihood	Water (proposed)	-	Minor	Low
Railway line - adj. east	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Proposed site users	Child	Minor	Low
	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Unlikely	-	-	-	Vegetation (proposed)	-	Minor	Low
	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (proposed)	-	Minor	Low
Garage - c.135m north east (1958-1992)	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Proposed site users	Child	Minor	Low
	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Unlikely	-	-	-	Vegetation (proposed)	-	Minor	Low
	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (proposed)	-	Minor	Low
Electricity sub station - c.10m north (1974 - present)	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Proposed site users	Child	Minor	Low
	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Unlikely	-	-	-	Vegetation (proposed)	-	Minor	Low
	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (proposed)	-	Minor	Low

Note

Conceptual model updated from initial conceptual model within GeoSmart Information Contamination Land Assessmnet Report Ref: 74223R1 dated January 2021

Vegetation included within Conceptual Model as part of Soiltechnics risk assessment.

Title	Table number
Updated Conceptual Site Model	2

soiltechnics
environmental ▪ geotechnical ▪ building fabric

Waste classification assessment summary

Waste population	Light grey to brown sandy gravels of limestone and brick
Hazard assessment	Non-hazardous waste
List of waste code	17-05-04
List of waste description	Soil and stones other than those mentioned in 17-05-03

Hazard property	Assessment
HP1 - Explosive	Not hazardous by HP1
HP2 - Oxidising	Not hazardous by HP2
HP3 - Flammable	Not hazardous by HP3
HP4 - Irritant	Not hazardous by HP4
HP5 - STOT & aspiration toxicity	Not hazardous by HP5
HP6 - Acute toxicity	Not hazardous by HP6
HP7 - Carcinogenic	Not hazardous by HP7
HP8 - Corrosive	Not hazardous by HP8
HP9 - Infectious	Not hazardous by HP9
HP10 - Toxic for reproduction	Not hazardous by HP10
HP11 - Mutagenic	Not hazardous by HP11
HP12 - Release of an acute toxic gas	Not hazardous by HP12
HP13 - Sensitising	Not hazardous by HP13
HP14 - Ecotoxic	Not hazardous by HP14

soiltechnics
environmental • geotechnical • building fabric

Qualitative and group assessments

Overall assessment	
Waste population	Light grey to brown sandy gravels of limestone and brick
Hazard assessment	Non-hazardous waste
List of waste code	17-05-04
List of waste description	Soil and stones other than those mentioned in 17-05-03
Non-parametric method adopted	No

Asbestos assessment		
Query	Value	Assessment
Are bulk ACMs visually identifiable?	No	Non-hazardous
Have free fibres been detected?	No	Non-hazardous
What is the free fibre concentration (%)?	N/A	Non-hazardous

Flammability assessment	
Comment	Assessment
The waste is not considered flammable as it is a solid waste without a free draining liquid phase, and the TPH concentration and composition is not considered to present a likely flammable hazard.	Non-hazardous

Hydrocarbon assessment	
Query	Assessment
Is the origin of the oil contamination known?	Unknown oil
B(a)P : TPH ratio (%)	Not required
B(a)P marker assessment	Not required

pH assessment		
Query	Value	Assessment
Are all substances present in the waste known?	Yes	No further assessment required
pH - Min	N/A	Not required
pH - Max	N/A	Not required

Oxidising assessment	
Comment	Assessment
Cr (VI) is the only compound with an oxidising hazard statement (H271). On review, the concentration is considered too low to present a viable oxidising hazard in a waste soil	Non-hazardous

Ecotoxic assessment			
Equation	Sum	Criteria	Assessment
WM3. Eq. 2	0.00%	25%	Non-hazardous
WM3 Eq. 3	0.00%	25%	Non-hazardous
WM3 Eq. 4	0.00%	25%	Non-hazardous

Compound hazard assessments

| | | |

soiltechnics
environmental ▪ geotechnical ▪ building fabric

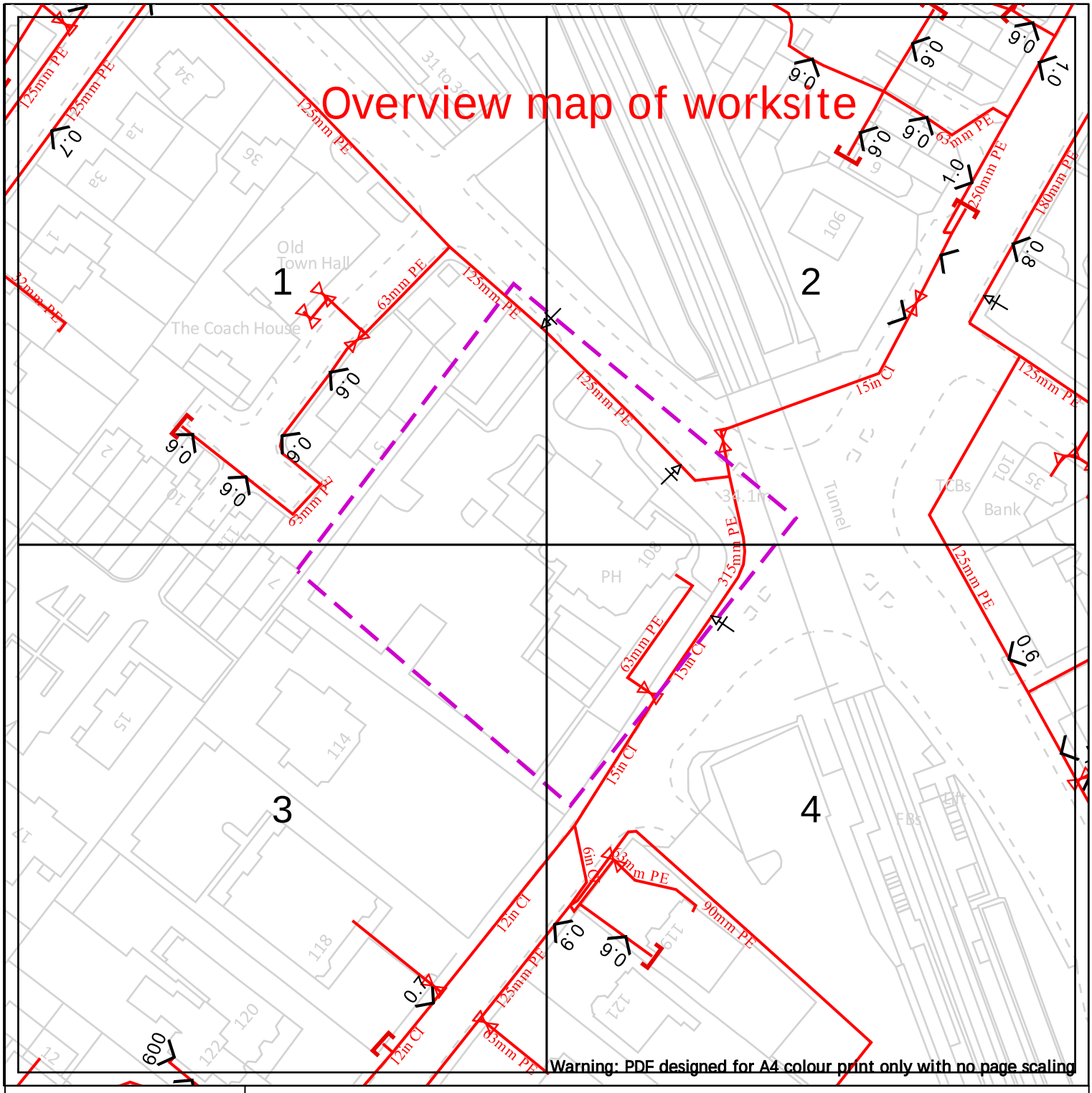
Waste acceptance

* Either TOC (%) or LOI (%) must be used for hazardous waste.

SNRHW Stable non-reactive hazardous waste in non-hazardous landfill.

Parameter	Inert waste landfill	SNRHW	Hazardous waste landfill	Location	WAC01
				Depth (m)	0
				Type	ES
				Date	16/04/2021
Parameters determined on the waste					
Total organic carbon	3	5	6*		< 0.1
Loss on ignition			10*		0.9
BTEX	6				< 0.05
PCBs (7 congeners)	1				< 0.1
Mineral oil	500				841
PAH (17 congeners)	100				16.2
pH		6			8.7
Acid neutralisation capacity (pH 6)		To be evaluated	To be evaluated		2.3
Acid neutralisation capacity (pH 4)		To be evaluated	To be evaluated		2.3
Limit values (mg kg^{-1}) for compliance test using BN 12457-3 at L/S 10 l					
Arsenic	0.5	2	25		< 0.2
Barium	20	100	300		0.5
Cadmium	0.04	1	5		< 0.02
Chromium (III)	0.5	10	70		< 0.20
Copper	2	50	100		< 0.5
Mercury	0.01	0.2	2		< 0.005
Molybdenum	0.5	10	30		< 0.1
Nickel	0.4	10	40		< 0.2
Lead	0.5	10	50		< 0.2
Antimony	0.06	0.7	5		< 0.05
Selenium	0.1	0.5	7		< 0.05
Zinc	4	50	200		< 0.2
Chloride	800	15,000	25,000		203
Fluoride	10	150	500		< 1
Sulphate	1,000	20,000	50,000		123
Total dissolved solids	4,000	60,000	100,000		586
Phenol	1				< 0.5
Dissolved organic carbon	500	800	1000		208
Classifications					
Waste classification					**Non-hazardous**
Landfill type					**Non-hazardous**

Overview map of worksite



Warning: PDF designed for A4 colour print only with no page scaling

Dig Sites Area: Line:

LP Mains
MP Mains
IP Mains
LHP Mains

Valve
Depth of cover
Syphon
Diameter Change
Material Change
Out of Standard Service

Cadent
Your Gas Network

Date Requested: 29/09/2022
Job Reference: 27083288
Site Location: 384333 392033
Requested by: Miss Lauren Wenham

Your Scheme/Reference: STT5335

View extent: 100m, 100m

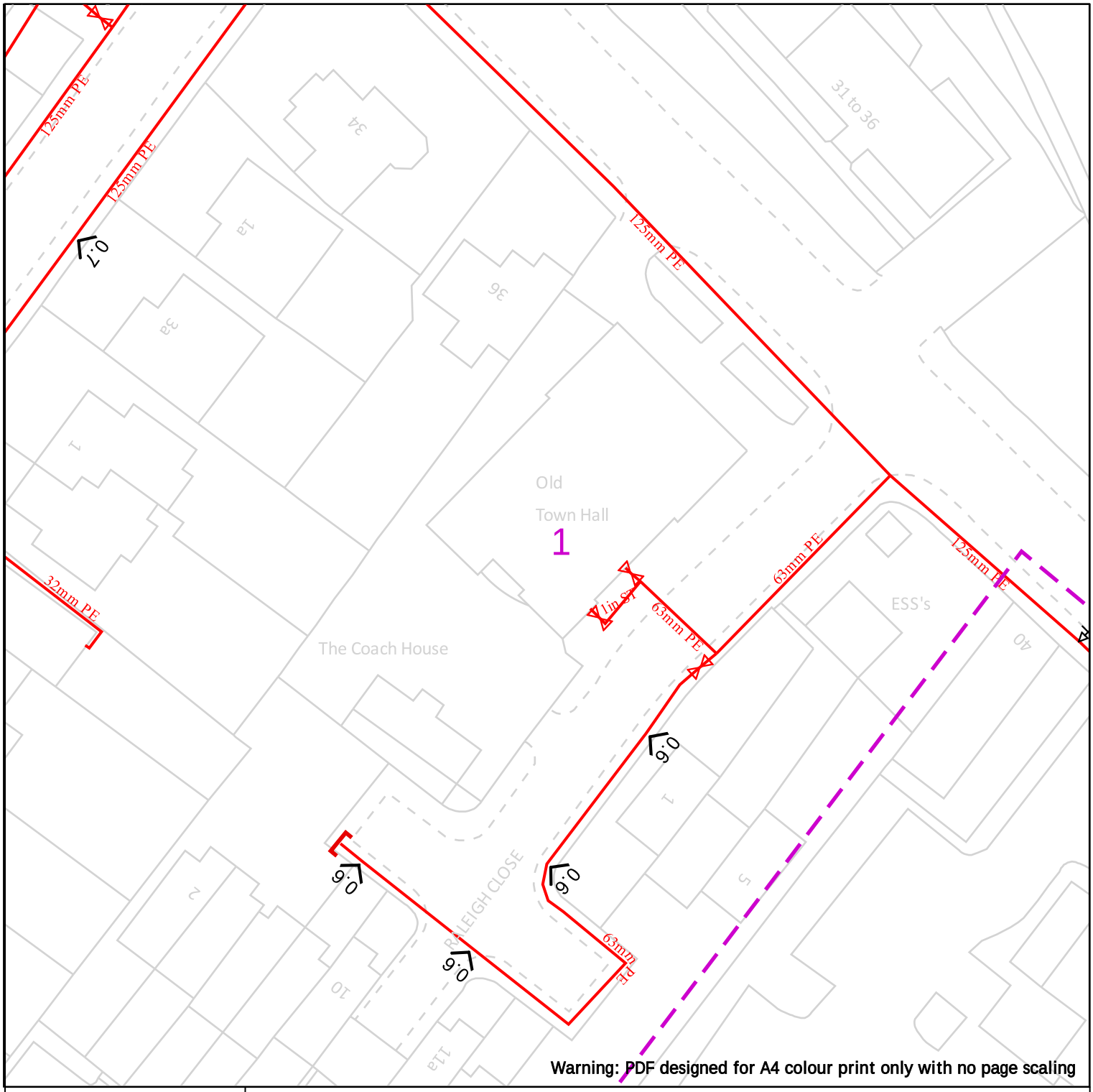
Scale: 1:1025 (When plotted at A4)

IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886



Warning: PDF designed for A4 colour print only with no page scaling

25m

Dig Sites | Area: | Line:

- LP Mains
- MP Mains
- IP Mains
- LHP Mains

- Valve
- Depth of cover
- Syphon
- Diameter Change
- Material Change
- Out of Standard Service

Cadent
Your Gas Network

Date Requested: 29/09/2022
Job Reference: 27083288
Site Location: 384333 392033
Requested by: Miss Lauren Wenham

Your Scheme/Reference: STT5335

View extent: 100m, 100m

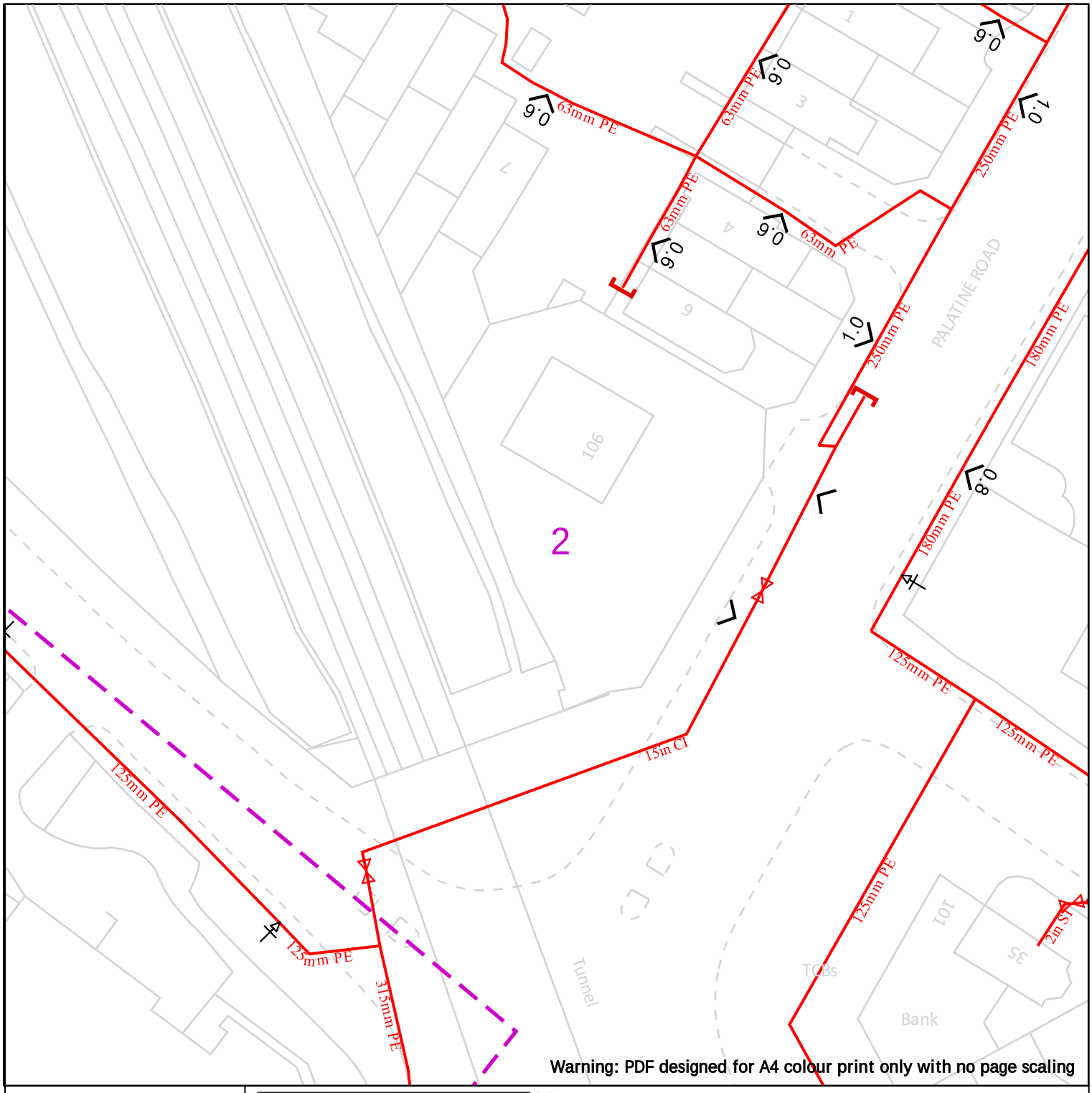
Scale: 1:500 (When plotted at A4)

IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886



Warning: PDF designed for A4 colour print only with no page scaling

25m

Dig Sites Area: Line:

LP Mains
MP Mains
IP Mains
LHP Mains

Valve
Depth of cover
Syphon
Diameter Change
Material Change
Out of Standard Service

Cadent
Your Gas Network

Date Requested: 29/09/2022
Job Reference: 27083288
Site Location: 384333 392033
Requested by: Miss Lauren Wenham

Your Scheme/Reference: STT5335

View extent: 100m, 100m

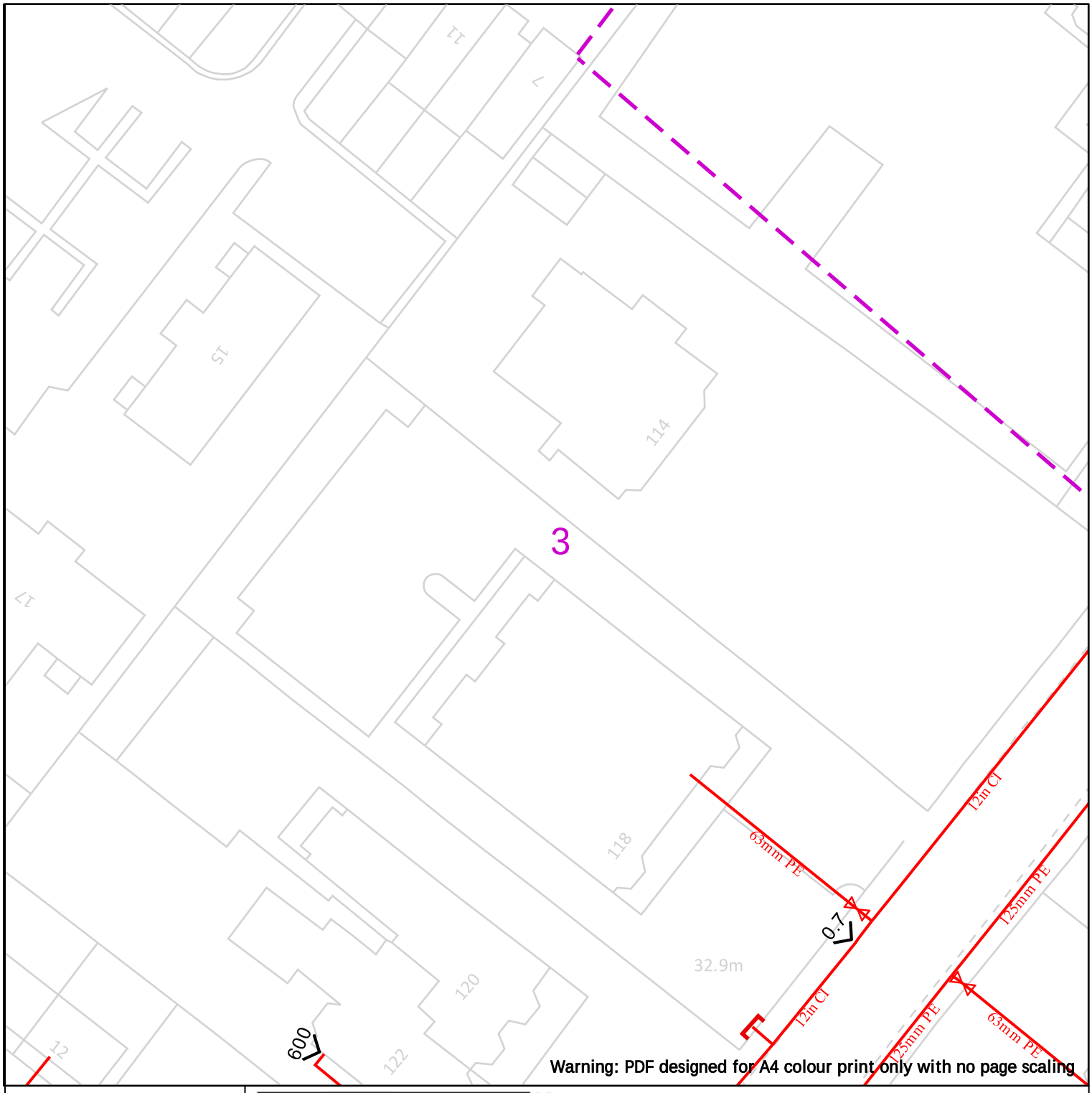
Scale: 1:500 (When plotted at A4)

IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886



Warning: PDF designed for A4 colour print only with no page scaling

25m

Dig Sites Area: Line:

LP Mains
MP Mains
IP Mains
LHP Mains

Valve
Depth of cover
Syphon
Diameter Change
Material Change
Out of Standard Service

Cadent
Your Gas Network

Date Requested: 29/09/2022
Job Reference: 27083288
Site Location: 384333 392033
Requested by: Miss Lauren Wenham

Your Scheme/Reference: STT5335

View extent: 100m, 100m

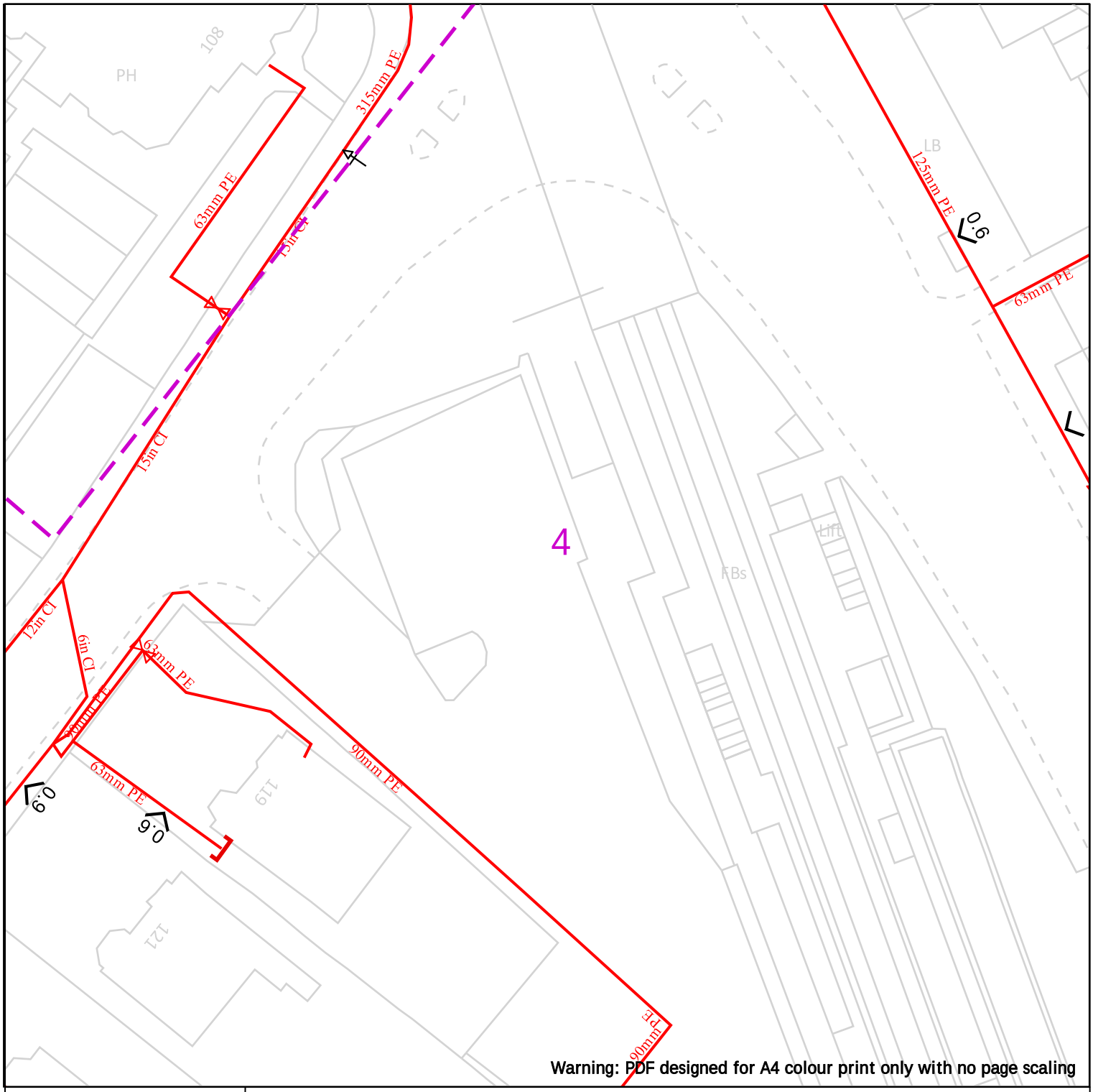
Scale: 1:500 (When plotted at A4)

IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886



25m

Dig Sites Area: Line:

LP Mains
MP Mains
IP Mains
LHP Mains

Valve
Depth of cover
Syphon

Diameter Change
Material Change
Out of Standard Service

Cadent
Your Gas Network

Date Requested: 29/09/2022
Job Reference: 27083288
Site Location: 384333 392033
Requested by: Miss Lauren Wenham

Your Scheme/Reference: STT5335

View extent: 100m, 100m

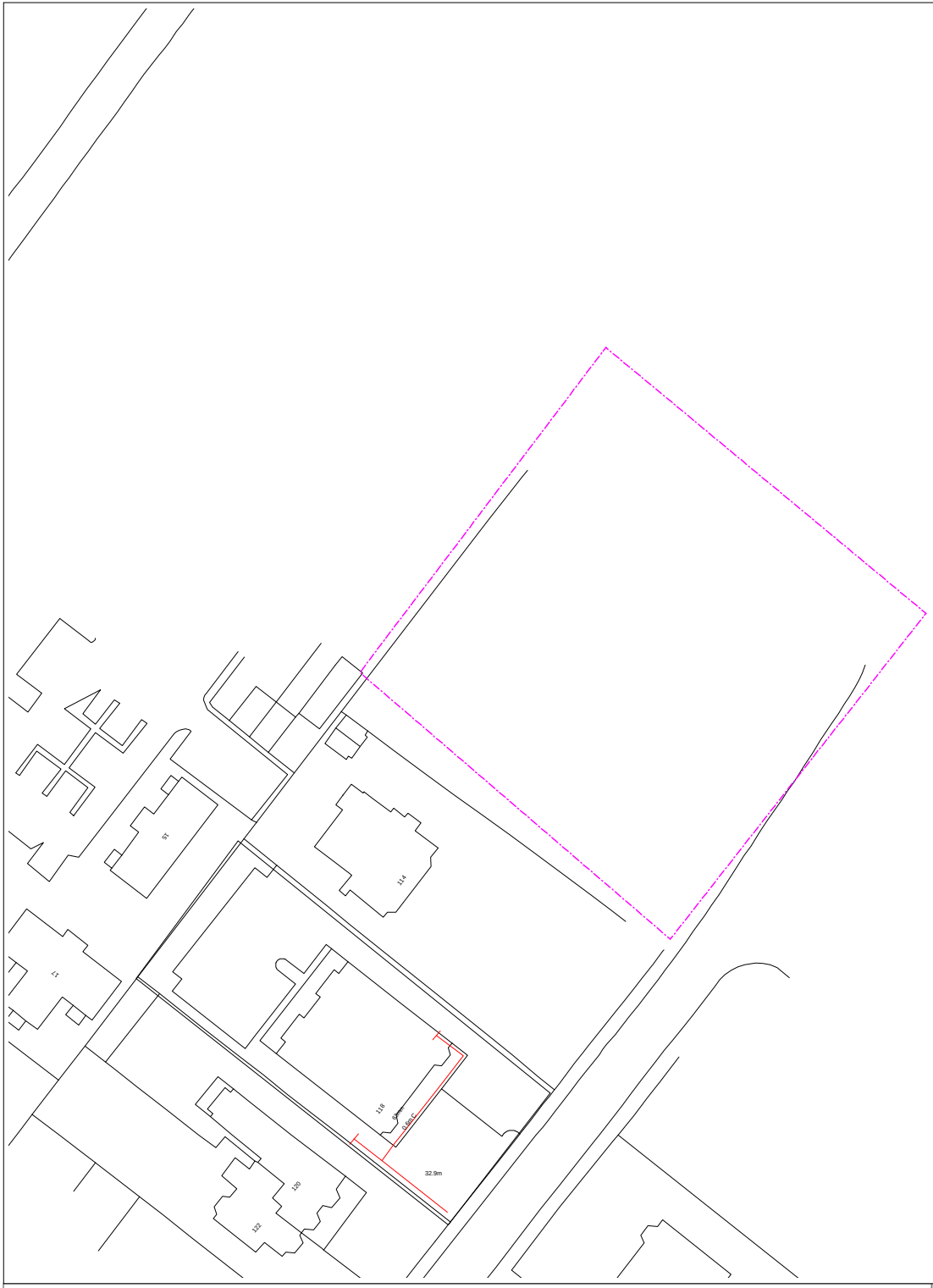
Scale: 1:500 (When plotted at A4)

IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

In case of emergency call - 0800 111 999

Crown Copyright © - This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationary Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886



Date Requested: 29/09/2022

Requested by: Lauren Wenham

Job Reference: 27083288

Company: Soiltechnics Ltd

Your Scheme/Reference: STT5335

Key for Mains & Service Pipework

Existing LP mains or services operating up to 75 millibar gauge

Existing MP mains or services operating between 75 millibar and 2 bar gauge

Existing IP mains or services operating between 2 bar and 7 bar gauge

Whilst ESP Utilities Group Ltd (ESP) try to ensure the asset information we provide is accurate, the information is provided Without Prejudice and ESP accept no liability for claims arising from any inaccuracy, omissions or errors contained in this response. The actual position of underground services must be verified and established on site before any mechanical plant is used. Authorities and contractors will be held liable for the full cost of repairs to ESP apparatus and all claims made against them by Third parties as a result of any interference or damage.

REPRODUCED FROM THE ORDNANCE SURVEY MAP WITH THE SANCTION OF THE CONTROLLER OF HER MAJESTY'S STATIONARY OFFICE © CROWN COPYRIGHT RESERVED.

THIS DRAWING IS THE COPYRIGHT OF ES PIPELINES LIMITED AND MAY NOT BE REPRODUCED WITHOUT WRITTEN CONSENT ©

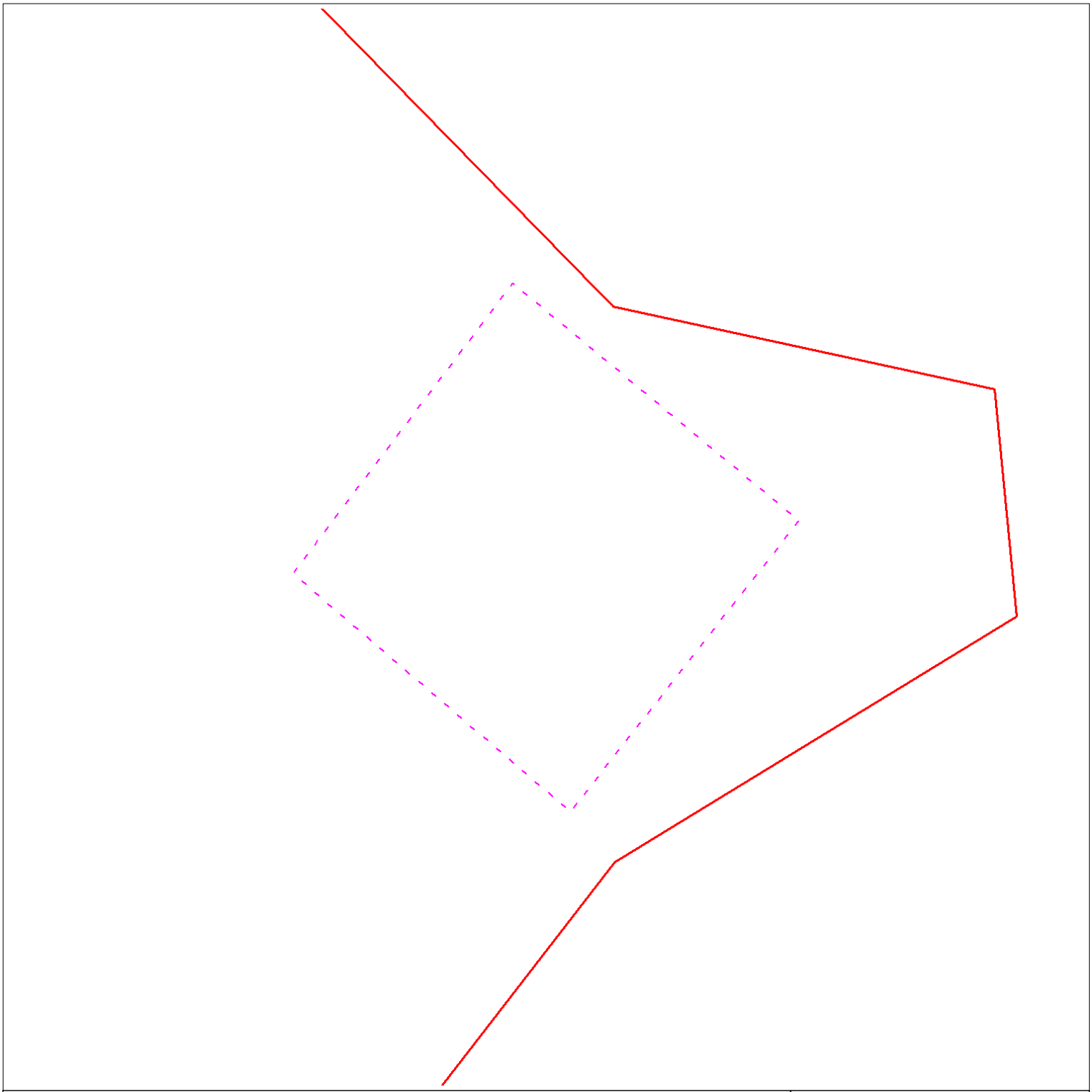
ESP UTILITIES GROUP

ESP Utilities Group Ltd
Bluebird House
Mole Business Park
Leatherhead
Surrey
KT22 7BA
Phone: 01372 587500
Email: PlantResponses@espug.com

Dig Sites:

Area Line

Approx scale on A4 paper: 1:1000
(excluding Overview map)



Date Requested: 29/09/2022

Requested by: Lauren Wenham

Company: Soiltechnics Ltd

Job Reference: 27083288

Your Scheme/Reference: STT5335

ZAYO DUCT

or ZAYO CHAMBER

Dig Sites: Line Area

Scale on A4 paper: 1:1000

The information on this document is proprietary and shall not be used, copied, reproduced or disclosed in whole or in part without written consent of Zayo Group UK Ltd. Approximate location only is shown. To determine exact location a trial hole must be dug with a Zayo Group UK Ltd Supervisor present. Zayo Group UK Ltd and JSM Construction Ltd accept no liability for errors or omissions.

Linesearch before dig

Protecting Lives, Cables & Pipes

Warning: PDF designed for colour print only with no page scaling. This Information is given as a guide only and its accuracy cannot be guaranteed

N

In Emergency Only and if Zayo Plant or Cables damaged call: 0800 169 1646

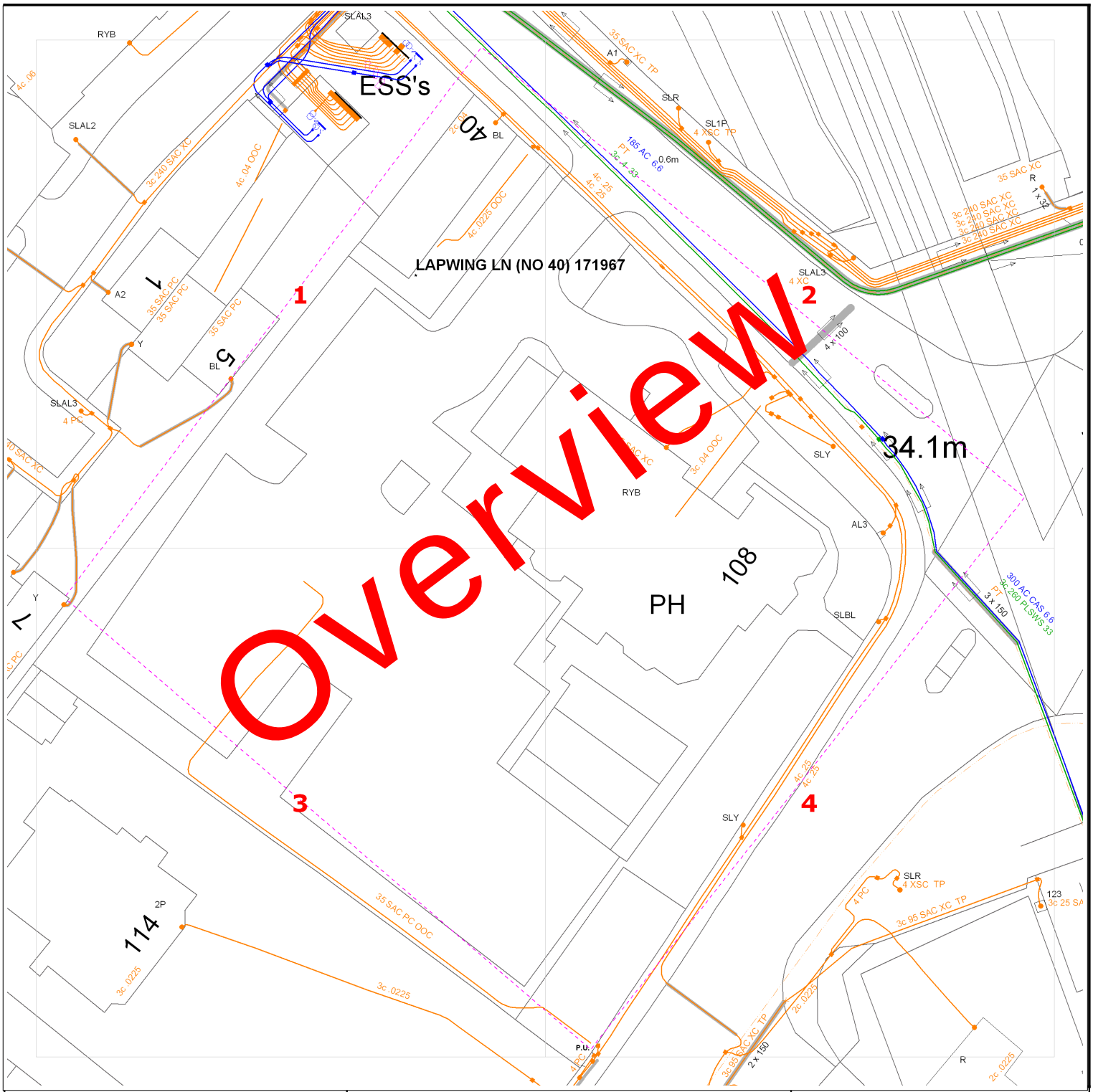
CROWN COPYRIGHT © All Rights Reserved. Ordnance Survey Licence number: 100040487

zayo GROUP

4th Floor Harmsworth House
13-15 Bouverie Street
London EC4Y 8DP

JSM

JSM Group Ltd
Sterling House
Mutton Lane, Potters Bar
Hertfordshire, EN6 3AR
T: 01992 788 019
zayoplantenquiries@jsmgroup.com



Requested by: Lauren Wenham
Company: Soiltechnics Ltd
Date Requested: 29/09/2022
Job Reference: 27083288
Your Scheme/Reference: STT5335

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

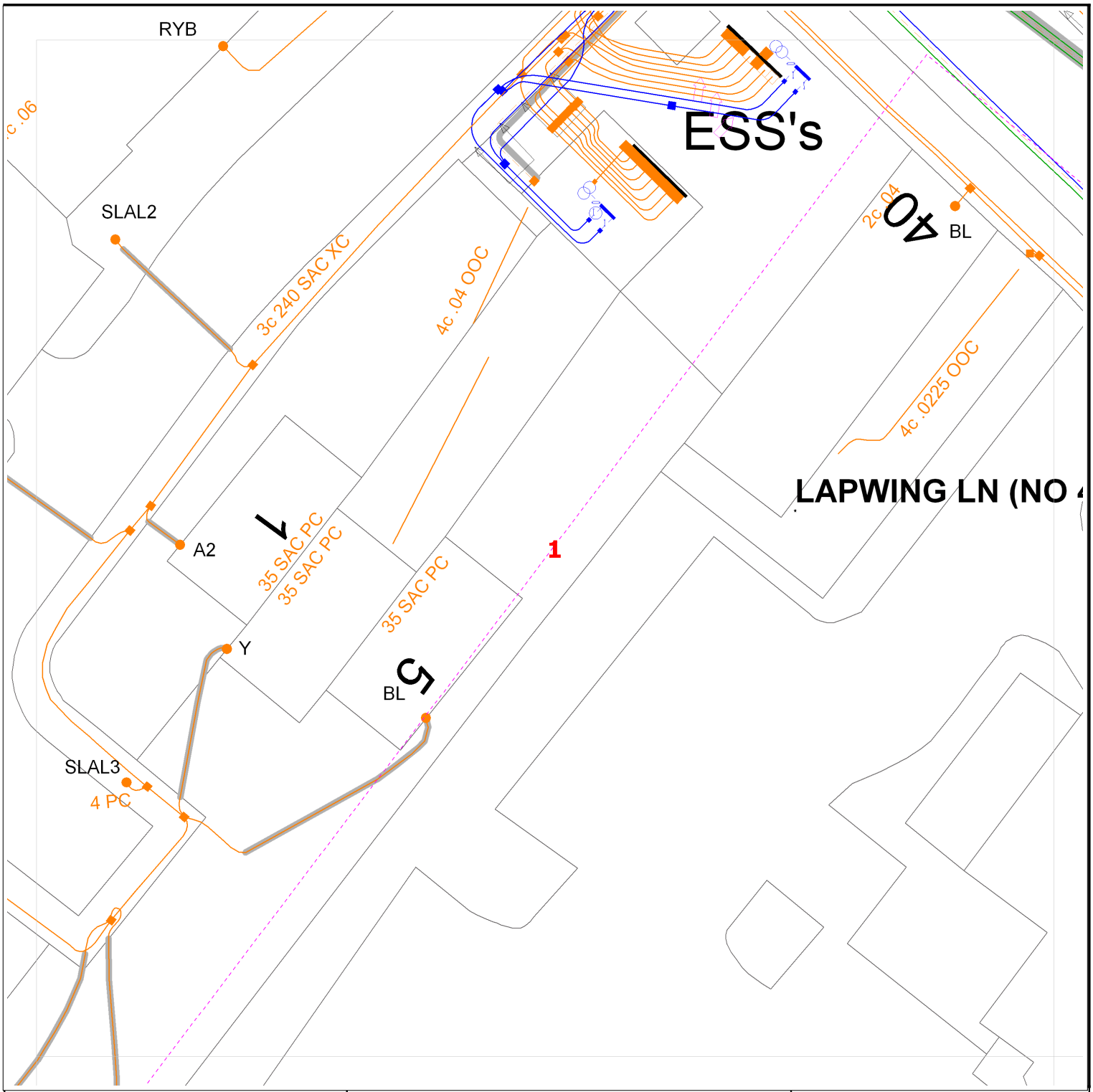
Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

Reproduced from or based upon Ordnance Survey's map with the permission of Her Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.

Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines".

Electricity North West Limited 304 Bridgewater Place, Birchwood Park, Warrington WA3 6XG. Registered in England and Wales. Registered No 02366949



Requested by: Lauren Wenham
Company: Soiltechnics Ltd
Date Requested: 29/09/2022
Job Reference: 27083288
Your Scheme/Reference: STT5335

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

electricity north west

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

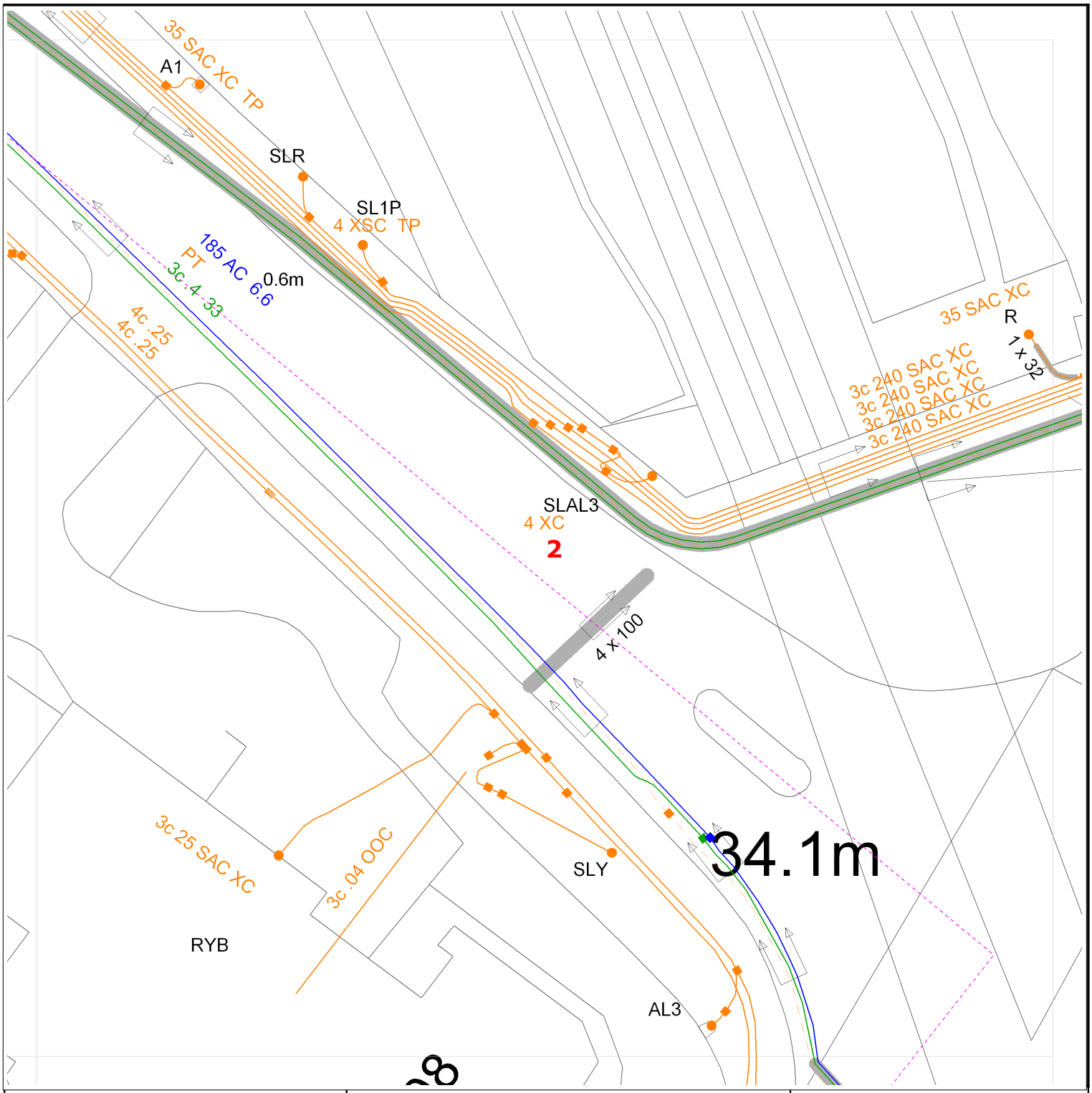
Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

Reproduced from or based upon Ordnance Survey's map with the permission of Her Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.

Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines".

Electricity North West Limited 304 Bridgewater Place, Birchwood Park, Warrington WA3 6XG. Registered in England and Wales. Registered No 02366949



Requested by: Lauren Wenham
Company: Soiltechnics Ltd
Date Requested: 29/09/2022
Job Reference: 27083288
Your Scheme/Reference: STT5335

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

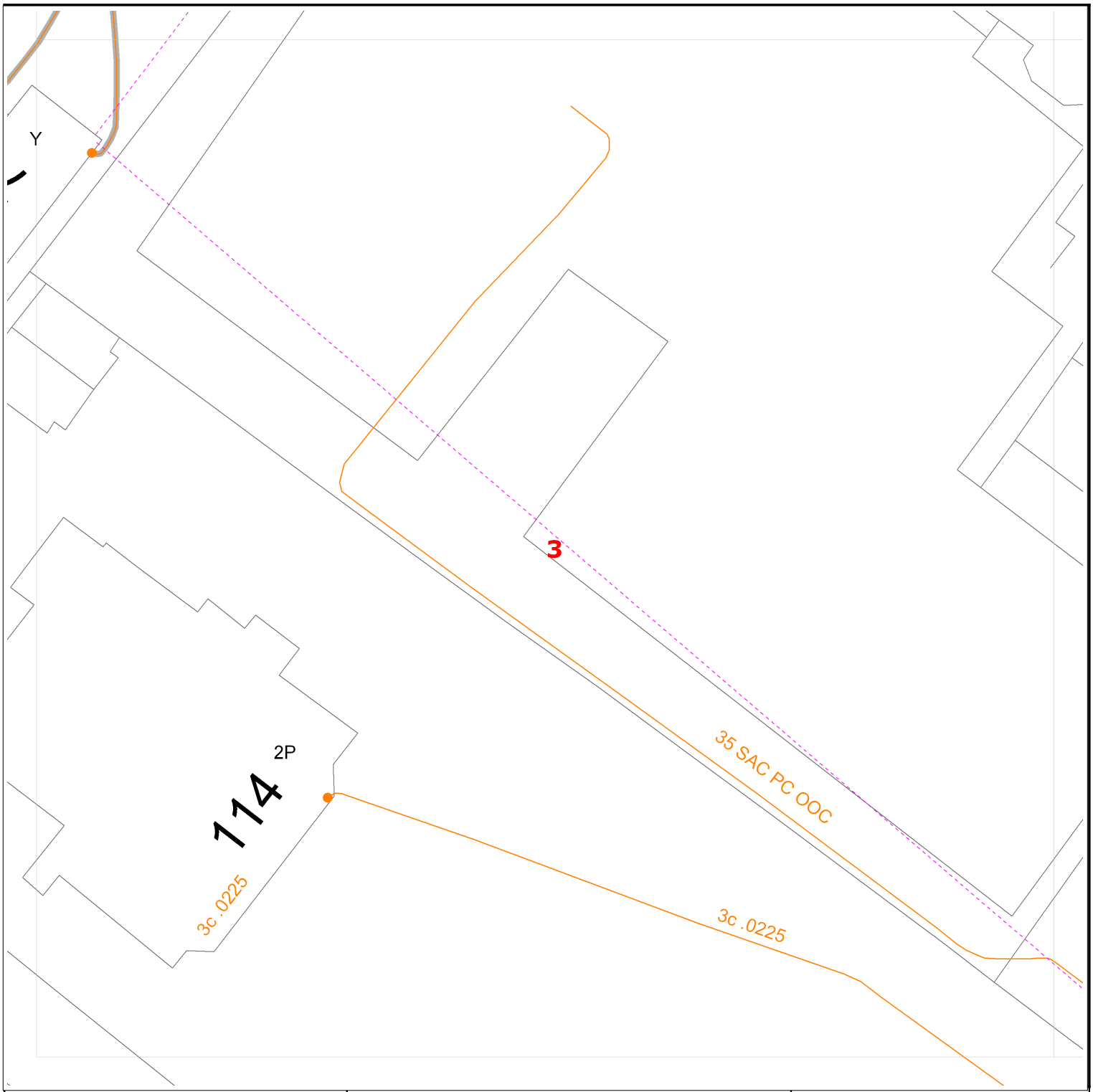
Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

Reproduced from or based upon Ordnance Survey's map with the permission of Her Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.

Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines".

Electricity North West Limited 304 Bridgewater Place, Birchwood Park, Warrington WA3 6XG. Registered in England and Wales. Registered No 02366949



Requested by: Lauren Wenham
Company: Soiltechnics Ltd
Date Requested: 29/09/2022
Job Reference: 27083288
Your Scheme/Reference: STT5335

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

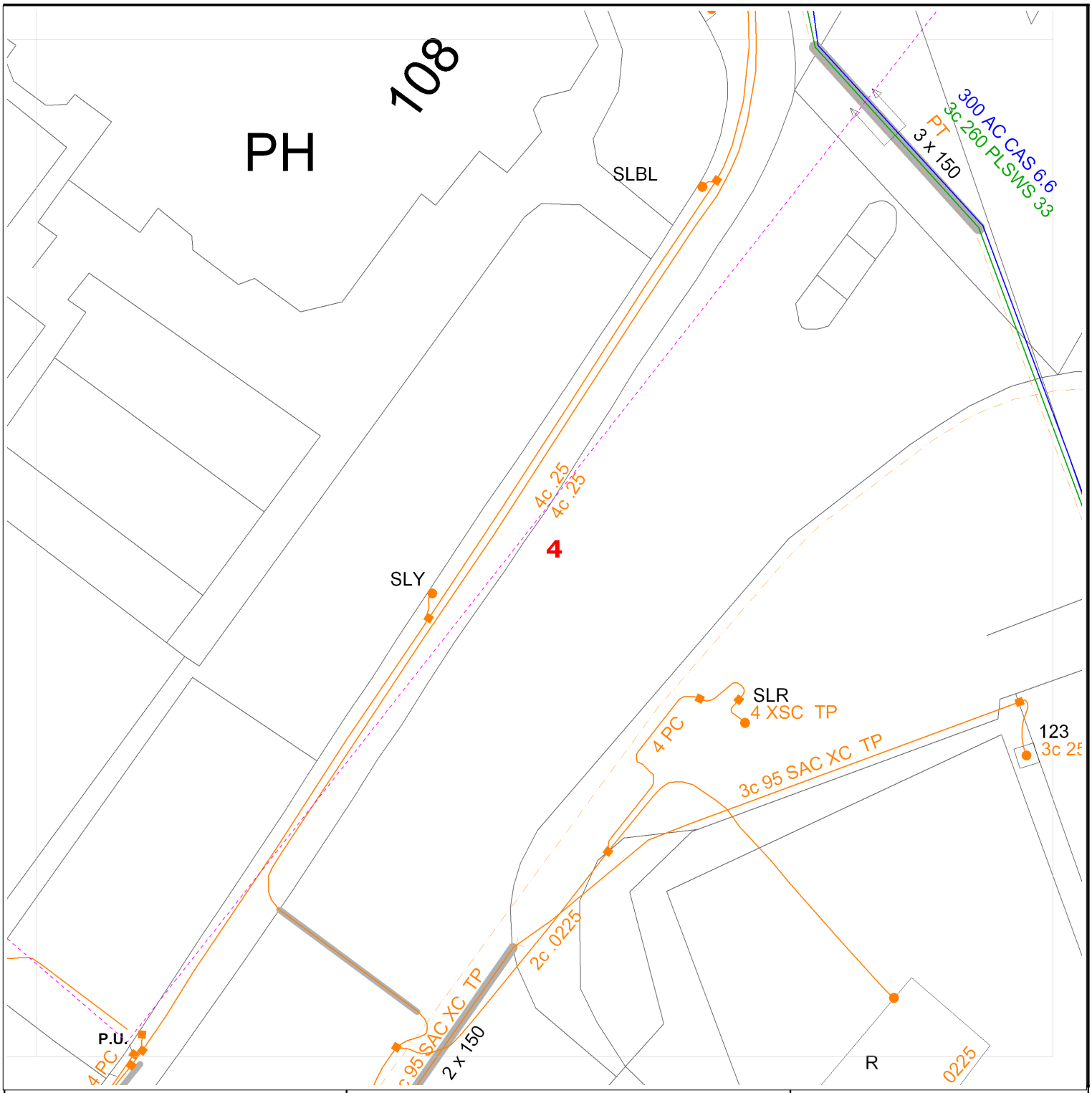
Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

Reproduced from or based upon Ordnance Survey's map with the permission of Her Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.

Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines".

Electricity North West Limited 304 Bridgewater Place, Birchwood Park, Warrington WA3 6XG. Registered in England and Wales. Registered No 02366949



Requested by: Lauren Wenham
Company: Soiltechnics Ltd
Date Requested: 29/09/2022
Job Reference: 27083288
Your Scheme/Reference: STT5335

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

Reproduced from or based upon Ordnance Survey's map with the permission of Her Majesty's Stationary Office. Crown Copyright Reserved. LICENCE No. 100017892. Unauthorised reproduction may lead to Prosecution or Civil Proceedings.

Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines".

Electricity North West Limited 304 Bridgewater Place, Birchwood Park, Warrington WA3 6XG. Registered in England and Wales. Registered No 02366949

United Utilities
Water for the North West

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: STT5335
Our Ref: UUPS-ORD-435870
Date: 21/10/2022

Soiltechnics

Soiltechnics
Cedar Barn,
Walgrave,
NN6 9PY

FAO:

Dear Sirs

Location: Greenfinch and Summerhill

I acknowledge with thanks your request dated 29/09/2022 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

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

Water for the North West

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)".

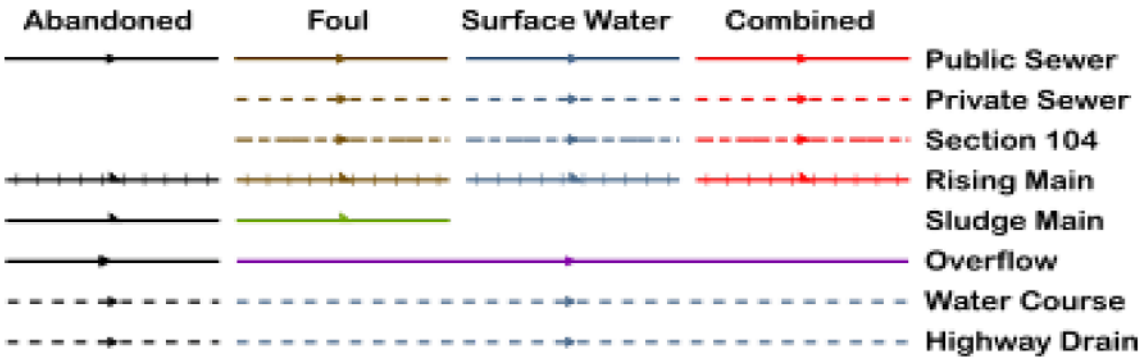
TERMS AND CONDITIONS:

- 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.

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

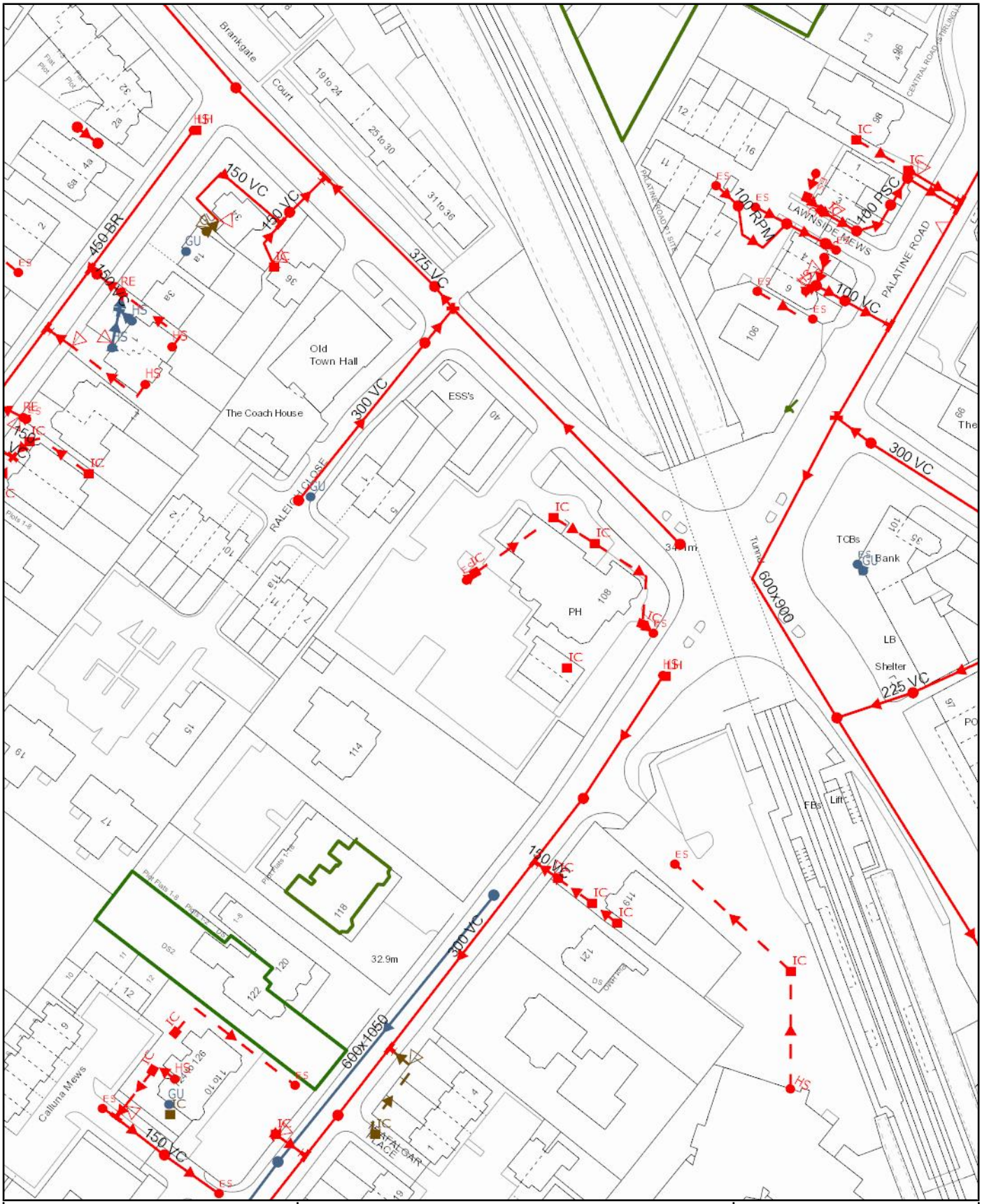
United Utilities
Water for the North West

Wastewater Symbology



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

- Manhole
- HS Head of System
- ES Extent of Survey
- RE Rodding Eye
- IN Inlet
- DP Discharge Point
- HY Vortex
- PE Penstock
- WO Washout Chamber
- VA Valve
- AV Air Valve
- NRV Non Return Valve
- SO Soakaway
- GU Gully
- CA Cascade
- FM Flow Meter
- HA Hatch Box
- OI Oil Interceptor
- SM Summit
- DS Drop Shaft
- OP Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- IC Inspection Chamber
- Bifurcation Chamber
- LH Lamp Hole
- T Junction / Saddle
- CA Catchpit
- VC Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- T Network Storage Tank
- V Sewer Overflow
- WwTW Ww Treatment Works
- Ww Pumping Station
- ST Septic Tank
- CK Control Kiosk
- Change of Characteristic



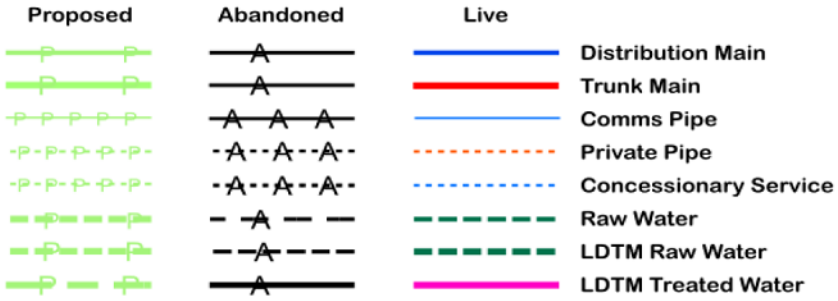
Scale:	1:1250	**SEWER RECORDS**	United Utilities Water for the North West
Date:	21/10/2022		
Address or Site Reference:	Greenfinch and Summerhill		
Printed by:	Property Searches		

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.

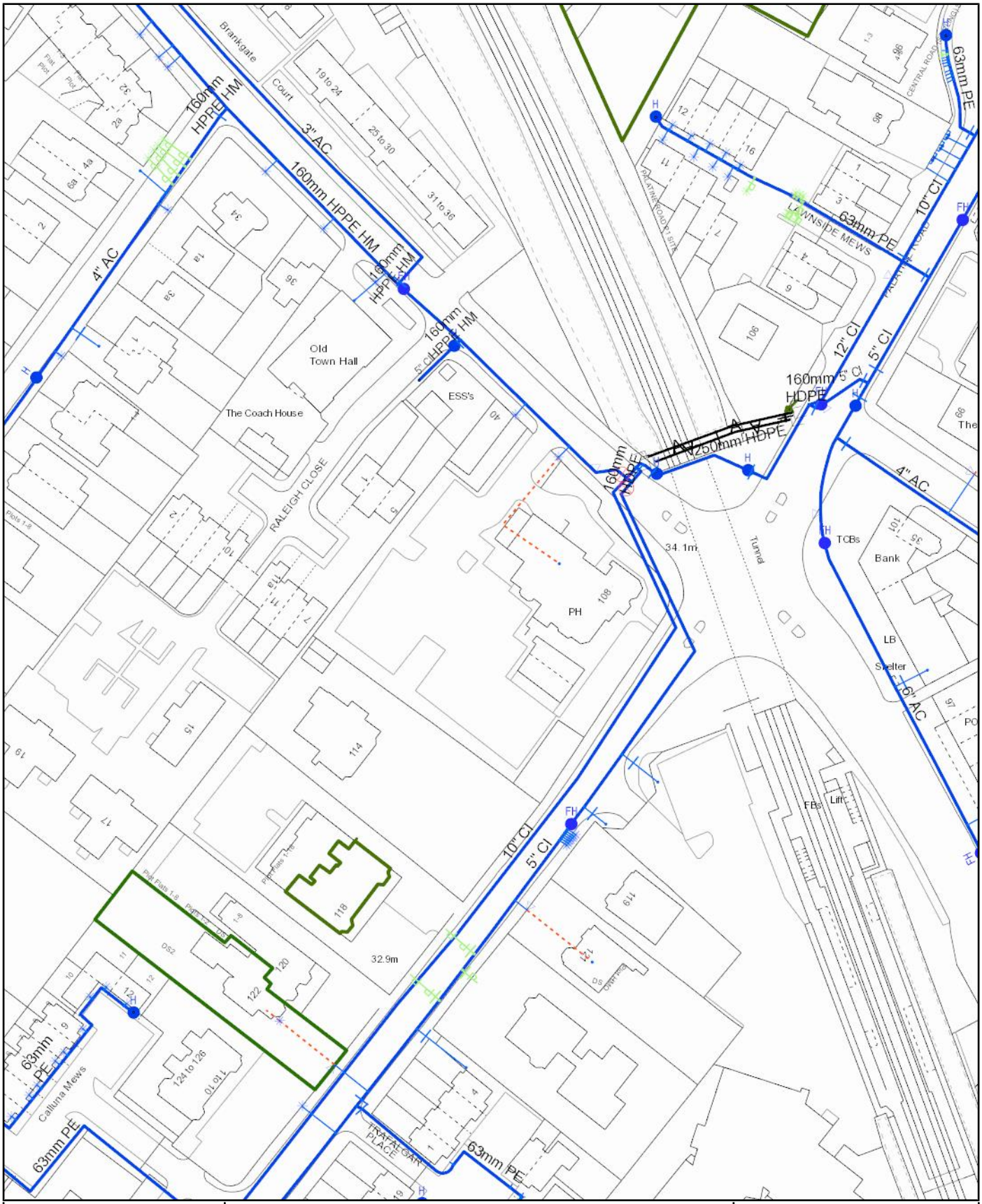
Crown copyright and database rights 2017 Ordnance Survey 100022432. Unauthorised reproduction will infringe these copyrights.

United Utilities
Water for the North West

Clean Water Symbology



Symbology for proposed assets is the same as above, but shown in green
Symbology for abandoned assets is the same as above, but shown in black



Scale:	1:1250	**WATER MAINS RECORDS**	United Utilities Water for the North West
Date:	21/10/2022		
Address or Site Reference:	Greenfinch and Summerhill		
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.

Crown copyright and database rights 2017 Ordnance Survey 100022432. Unauthorised reproduction will infringe these copyrights.

Maps by email Plant Information Reply

IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

openreach

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08.00 to 17.00)
www.openreach.co.uk/cbyd

Accidents happen

If you do damage any Openreach equipment please let us know by calling 0800 023 2023 (opt 1 + opt 1) and we can get it fixed ASAP

Reproduced from the Ordnance Survey map by BT
by permission of Ordnance Survey on behalf of the
Controller of Her Majesty's Stationary Office
(C) Crown Copyright British Telecommunications plc 100028040

KEY TO BT SYMBOLS

	Planned	Live
PCP		
Pole		
Box		
Manhole		
Cabinet		

Change Of State	+	Hatchings	
Split Coupling	×	Built	
Duct Tee	▲	Planned	
Building		Inferred	
Kiosk	K	Duct	

Other proposed plant is shown using dashed lines.
BT Symbols not listed above may be disregarded.
Existing BT Plant may not be recorded.
Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.

	Pending Add	In Place	Pending Remove	Not In Use
Power Cable				
Power Duct				N/A

BT Ref : KDG10569M
Map Reference : (centre) SJ8432992087
Easting/Northing : (centre) 384329,392087
Issued : 29/09/2022 10:56:37

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

Enquiry Confirmation

LSBUD Ref: 27083288

Date of enquiry: 29/09/2022
Time of enquiry: 10:47

Enquirer

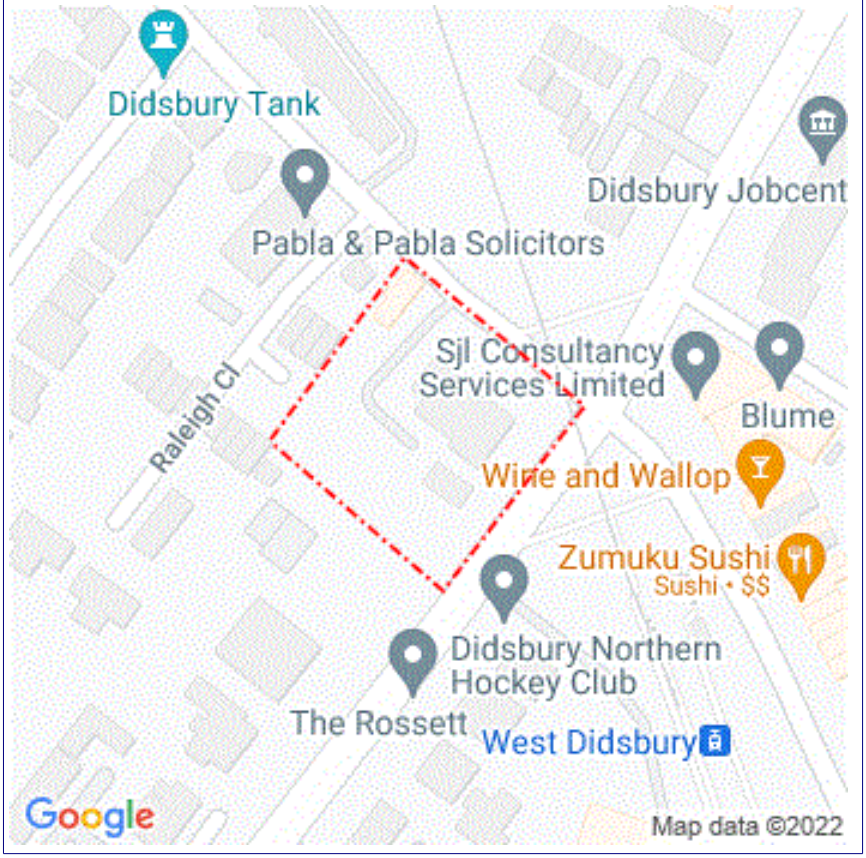
Name	Miss Lauren Wenham	Phone	01604 781877
Company	Soiltechnics Ltd	Mobile	Not Supplied
Address	Cedar Barn White Lodge Walgrave Northamptonshire NN6 9PY		
Email	admin@soiltechnics.net		

Enquiry Details

Scheme/Reference	STT5335		
Enquiry type	Planned Works	Work category	Development Projects
Start date	03/10/2022	Work type	Commercial/industrial
End date	03/10/2022	Site size	0 metres square
Searched location	XY= 384329, 392087	Work type buffer*	75 metres
Confirmed location	-02 53		
Site Contact Name	Not Supplied	Site Phone No	Not Supplied
Description of Works			

* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen.

Site Map



Enquiry Confirmation

LSBUD Ref: 27083288

Date of enquiry: 29/09/2022
Time of enquiry: 10:47

Asset Owners

Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.linesearchbeforeudig.co.uk ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

Notes. Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.

Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LinesearchbeforeUdig accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.

Asset Owners & Responses. Please note the enquiry results include the following:

1. "LSBUD Members" who are asset owners who have registered their assets on the LSBUD service.
2. "Non LSBUD Members" are asset owners who have not registered their assets on the LSBUD service but LSBUD is aware of their existence. Please note that there could be other asset owners within your search area.

Below are three lists of asset owners:

1. LSBUD Members who have assets registered within your search area. ("Affected")
   a. These LSBUD Members will either:
      i. Ask for further information ("Email Additional Info" noted in status). The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.

      ii. Respond directly to you ("Await Response"). In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.

2. LSBUD Members who do not have assets registered within your search area. ("Not Affected")

3. Non LSBUD Members who may have assets within your search area. Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

Enquiry Confirmation

LSBUD Ref: 27083288

Date of enquiry: 29/09/2022
Time of enquiry: 10:47

LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.

List of affected LSBUD members			
Asset Owner	**Phone/Email**	**Emergency Only**	**Status**
Cadent Gas	0800688588	0800111999	Await response
Electricity North West Limited	08001954141	08001954141	Await response
ESP Utilities Group	01372227560	01372227560	Await response
Zayo Group UK Ltd c/o JSM Group Ltd	01992 655 919	0800 169 1646	Await response

LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD Members make regular changes to their assets and this list may vary for new enquiries in the same area.

List of not affected LSBUD members		
Angus Energy	AWE Pipeline	B & D Energy Limited
Balfour Beatty Investments Limited	BOC Limited (A Member of the Linde Group)	Box Broadband
BP Exploration Operating Company Limited	BPA	Carrington Gas Pipeline
CATS Pipeline c/o Wood Group PSN	Cemex	Centrica Storage Ltd
CNG Services Ltd	Concept Solutions People Ltd	ConocoPhillips (UK) Teesside Operator Ltd
D.S.Smith	Diamond Transmission Corporation	DIO (MOD Abandoned Pipelines)
DIO (MOD Live Pipelines)	E.ON UK CHP Limited	EirGrid
Eleclink Limited	Energy Assets Networks	ENI & Himor c/o Penspen Ltd
EnQuest NNS Limited	EP Langage Limited	ESSAR
Esso Petroleum Company Limited	euNetworks Fiber UK Ltd	EXA Infrastructure
Exolum Pipeline System	Fulcrum Electricity Assets Limited	Fulcrum Pipelines Limited
Gamma	Gas Networks Ireland (UK)	Gateshead Energy Company
Gigaclear Ltd	Harbour Energy	Heathrow Airport LTD
Humbly Grove Energy	IGas Energy	INEOS FPS Pipelines
INEOS Manufacturing (Scotland and TSEP)	INOVYN ChlorVinyls Limited	INOVYN Enterprises Limited
Intergen (Coryton Energy or Spalding Energy)	Jurassic Fibre Ltd	Last Mile
Mainline Pipelines Limited	Manchester Jetline Limited	Manx Cable Company
Marchwood Power Ltd (Gas Pipeline)	Melbourn Solar Limited	Moray East Offshore Windfarm
Murphy Utility Assets	National Grid Electricity Distribution	National Grid Electricity Transmission
National Grid Gas Transmission	Neos Networks	Northumbrian Water Group
NPower CHP Pipelines	NTT Global Data Centers EMEA UK Ltd	NYnet Ltd
Ogi	Oikos Storage Limited	Ørsted
Palm Paper Ltd	Perenco UK Limited (Purbeck Southampton Pipeline)	Petroineos
Phillips 66	Portsmouth Water	Premier Transmission Ltd (SNIP)
Redundant Pipelines - LPDA	RWE - Great Yarmouth Pipeline (Bacton to Great Yarmouth Power Station)	RWEnpower (Little Barford and South Haven)
SABIC UK Petrochemicals	SAS Utility Services Ltd	Scottish and Southern Electricity Networks
Scottish Power Generation	Seabank Power Ltd	SES Water

SGN	Shell	Shell NOP
SP Energy Networks	Squire Energy Networks	SSE Generation Ltd
SSE Transmission	SSE Utility Solutions Limited	Tata Communications (c/o JSM Construction Ltd)
Total Colnbrook Pipelines	Total Finaline Pipelines	Transmission Capital
UK Power Networks	Uniper UK Ltd	University of Cambridge Granta Backbone Network
Vattenfall	Veolia ES SELCHP Limited	Veolia ES Sheffield Ltd
Voneus Limited	VPI Power Limited	Wales and West Utilities
West of Duddon Sands Transmission Ltd	Westminster City Council	

Enquiry Confirmation

LSBUD Ref: 27083288

Date of enquiry: 29/09/2022
Time of enquiry: 10:47

The following Non-LSBUD Members may have assets in your search area. It is YOUR RESPONSIBILITY to contact them before proceeding. Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.

Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	**Preferred contact method**	**Phone**	**Status**
BT	https://www.swns.bt.com/pls/mbe/welcome.home	08000232023	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
ENGIE	nrswa.uk@equans.com	0800 130 3600	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
Lumen Technologies	plantenquiries@instalcom.co.uk	02087314613	Not Notified
Manchester City Council	https://www.manchester.gov.uk		Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquiries@turntown.com	01212 621 100	Not Notified
Sky UK Limited	nrswa@sky.uk	02070323234	Not Notified
Sota	SOTA.plantenquiries@instalcom.co.uk		Not Notified
Teliasonera	check-network@arelion.com	0800526015	Not Notified
United Utilities	WastewaterDeveloperServices@uuplc.co.uk	08707510101	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified

Disclaimer

Please refer to LinesearchbeforeUdig's Terms of Use for full terms of use available at www.linesearchbeforeudig.co.uk

The results of this Enquiry are personal to the Enquirer and shall not be shared with or relied upon by any other party. The asset information on which the Enquiry results are based has been provided by LSBUD Members, therefore LinesearchbeforeUdig will provide no guarantee that such information is accurate or reliable nor does it monitor such asset information for accuracy and reliability going forward. There may also be asset owners which do not participate in the enquiry service operated by LinesearchbeforeUdig, including but not exclusively those set out above. Therefore, LinesearchbeforeUdig cannot make any representation or give any guarantee or warranty as to the completeness of the information contained in the enquiry results or accept any responsibility for the accuracy of the mapping images used. LinesearchbeforeUdig and its employees, agents and consultants accept no liability (save that nothing in this Enquiry Confirmation excludes or limits our liability for death or personal injury arising from our negligence, or our fraud or fraudulent misrepresentation, or any other liability that cannot be excluded or limited by English law) arising in respect thereof or in any other way for errors or omissions including responsibility to any person by reason of negligence.

GeoSmart Information

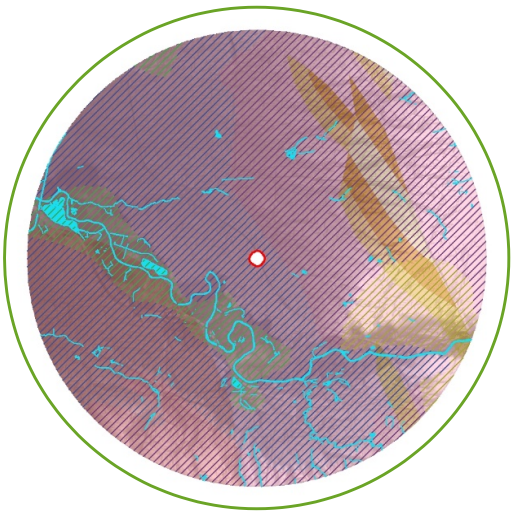
EnviroSmart

Phase 1 Contaminated Land Assessment

Site address
Summerhill
The Greenfinch
Lapwing Lane
Manchester
M20 3ZA

Date issued
January 2021

Report status
Final



Grid Reference
384320, 392080

Site Area
0.4 ha

Report prepared for
Anchor Bridge Developments Ltd
696 Wilmslow Road
Manchester
M20 2DN

Report reference
74223R1

Risk – Moderate/low

Given the multiple phases of construction and demolition on-Site over time and the presence of the town/corporation yard adjacent to the north west between 1893 and 1993 there is therefore the potential for contamination to be present at the Site. It is recommended that a proportionate programme of site investigation and monitoring works be undertaken in order to establish the presence or absence of contamination and to enable a quantitative assessment of the associated environmental risks.

Report author
Jessica Bayliff
Project Consultant

Report check & review
Alan White
Principal Consultant

GeoSmart Information Ltd
Suite 9-11, 1st Floor
Old Bank Buildings
Bellstone, Shrewsbury
SY1 1HU
+44(0)1743 298 100
info@geosmartinfo.co.uk
www.geosmartinfo.co.uk

The Property Ombudsman Consumer Redress
COPSO ASSOCIATE MEMBER
SearchCode™
RIBA CPD PROVIDERS NETWORK