



Priya, Shubha

From: Plantenquiries <Plantenquiries@instalcom.co.uk>
Sent: 03 March 2017 16:43
To: Statutory Enquiries
Subject: RE: E03-17-0722 Plant Enquiry - 52948 - Site off Watling Street, St Albans - Please respond by 16/03/2017

Dear Sir or Madam,

Thank you for your plant enquiry below.

We can confirm that Level 3 does not have any apparatus within the indicated works area.

Instalcom responds to plant enquiries for LEVEL 3, GLOBAL CROSSING (UK) LTD, GLOBAL CROSSING PEC and FIBERNET UK LTD and FIBRESPAN LTD simultaneously and therefore you only need send one copy of a plant enquiry to cover all of these companies.

Please note that this response is only valid for 3 months. If your works do not commence within this time period, please resubmit your plant enquiry for assessment before any works commence.

Regards

Plant Enquiries Dept
Instalcom Limited
Borehamwood Ind. Park
Rowley Lane
Borehamwood
WD6 5PZ

Office: +44 (0)208 731 4613
Fax: +44 (0)208 731 4601
Email: plantenquiries@instalcom.co.uk
Web: <http://www.instalcom.co.uk>



-----Original Message-----

From: atkinsstatutory.enquiries@atkinsglobal.com
[<mailto:atkinsstatutory.enquiries@atkinsglobal.com>]
Sent: 24 February 2017 06:28
To: plantenquiries@catelecomuk.com; plantenquiries@energetics-uk.com;
enquiries@environment-agency.gov.uk; Plantenquiries; plantenquiries@mcnicholas.co.uk;
plantenquiries@mcnicholas.co.uk; opburiedservicesenquiries@networkrail.co.uk;
interoute.enquiries@plancast.co.uk; nrswa@sky.uk; osp-team@uk.verizon.com; osp-team@uk.verizonbusiness.com; osm.enquiries@atkinsglobal.com
Cc: atkinsstatutory.enquiries@atkinsglobal.com
Subject: Plant Enquiry - 52948 - Site off Watling Street, St Albans - Please respond by 16/03/2017



On 01/03/2017 Interoute Vtesse's plant information system was checked to ascertain if your area of interest is affected by Interoute Vtesse plant. In this instance your area of interest was shown to be 'not affected' by Interoute Vtesse plant.

No liability of any kind whatsoever is accepted by Landmark Information Group, its servants or agents, for any error or omission in respect of information contained in this report. The underground services must be verified and established on site before any excavation is carried out.

Priya, Shubha

From: Sandra Lakin <Sandra.Lakin@mcnicholas.co.uk>
Sent: 15 March 2017 14:21
To: Statutory Enquiries
Subject: PLANT ENQUIRY RESPONSES - NOT AFFECTED - TATA and KPN

The locations below are NOT AFFECTED by TATA and KPN apparatus.

52961	Atkins Global	Site off Pembroke Road, Haverfordwest
52959	Atkins Global	Site surrounding Hen Lon Dyfina, Lon Refail and A55, Llanfairpwllgwyngyll
52947	Atkins Global	Site off Cumnor Hill, Oxford
52948	Atkins Global	Site off Watling Street, St Albans
52949	Atkins Global	Site off Hartfield Road, Wimbledon, London
52940	Atkins Global	Site surrounding Nant Road, Granville Road and Crewys Road, Barnet
52952	Atkins Global	Site off Denmark Street, Maidenhead, SL6 7BN
52962	Atkins Global	Site off University Gardens, Hillhead

Please quote these references on any correspondence.

Please note:

McNicholas, on behalf of our client, accept no liability for claims arising from inaccuracies, omissions or errors contained within your plant enquiry request.

If you require further information please do not hesitate to contact us.

Kind Regards,



McNicholas Plant Enquiry Team

Telephone – 0330 055 8466/8469

Facsimile – 01923 802704

Website - www.mcnicholas.co.uk

Our team. Your solution.



Sandra Lakin

Planning, Design & Maintenance Office

Manager

t: 0330 055 8463

m: +44 781 030 5179

www.mcnicholas.co.uk

Registered Address: Lismirrane Ind Park | Elstree Road | Elstree | Hertfordshire | WD6 3EA | England

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**Construction
Enquirer Awards**

WINNER 2016

Best Main Contractor to Work For
£50m-£250m turnover

Priya, Shubha

From: Purser Richard <Richard.Purser@networkrail.co.uk> on behalf of OP Buried Services Enquiries <OPBuriedSE@networkrail.co.uk>
Sent: 24 February 2017 14:27
To: Statutory Enquiries
Subject: RE: Plant Enquiry - 52948 - Site off Watling Street, St Albans - Please respond by 16/03/2017

Dear Sir/Madam,

With regards to your enquiry, Network Rail does not believe there is any Network Rail owned apparatus or underground services within the area you have defined. As there is always the possibility that new works could be planned and undertaken in this area by Network Rail this information is valid as at today's date and is supplied for general guidance only.

Please be aware that this response is based on Network Rail's records and knowledge and no guarantee can be given regarding accuracy or completeness. CAT scans, safe digging practices (as contained in HSE publications) and other appropriate investigative techniques should always be carried out.

There may be other apparatus or underground services owned or operated by Utility Companies and accordingly you should contact individual utilities for information.

If, in connection with your investigations and/or work, you become aware of Network Rail apparatus or underground services within your area of work, please ensure these are notified to our Asset Protection team via the following link as a matter of urgency so that appropriate measures for avoidance of risk and damage can be put in place.

https://urldefense.proofpoint.com/v2/url?u=http-3A__www.networkrail.co.uk_aspx_1758.aspx-3Fcd-3D1&d=DwIFAw&c=cUkzcZGZt-E3UgRE832-4A&r=cWjpnr1Nvb5GpbBsY43xvGOqQ_3PdNa9KLbP1Zgk_oio_5IXI2DtWBcADHfise3Q&m=KAh8SAj_yCQ3zLh6Kjl_7UpQW7MyJKSsFE-NrPWtoHc&s=4FfSV5yVbUGe417Q2wxvMBTFINHidd1BVGxBZ1eTpSY&e=

If you require any further clarification on any of the information please contact opburiedservicesenquiries@networkrail.co.uk.

Regards,

Richard Purser
Distribution Administrator (Underground Services), Asset Information Services

Asset Information Services: to inspire & enable through the power of data National Records Group, Audax Road, Clifton Moor York YO30 4US

T: 01904 386 388
E: richard.purser@networkrail.co.uk

-----Original Message-----

From: atkinsstatutory.enquiries@atkinsglobal.com [mailto:atkinsstatutory.enquiries@atkinsglobal.com]

Sent: 24 February 2017 06:28

To: plantenquiries@catelecomuk.com; plantenquiries@energetics-uk.com; enquiries@environment-agency.gov.uk; plantenquiries@instalcom.co.uk; plantenquiries@mcnicholas.co.uk; plantenquiries@mcnicholas.co.uk; OP Buried

Priya, Shubha

From: Interoute Enquiries <interoute.enquiries@plancast.co.uk>
Sent: 24 February 2017 15:26
To: Statutory Enquiries
Subject: RE: Plant Enquiry - 52948 - Site off Watling Street, St Albans - Please respond by 16/03/2017

This response does not include Vtesse plant, please continue to use Vtesse details for their enquiries

To whom it may concern

Thank you for your enquiry regarding the above proposals at the above location

We would advise that we are unaware of any Interoute plant or services in this Location as indicated in your enquiry.

We bring to your attention the fact that whilst we try to ensure the information we provide is accurate, the information is provided Without Prejudice and Interoute and its Agents accept no liability for claims arising from any inaccuracy, omissions or errors contained in this response.

All responses are only valid for 28 days

Yours faithfully

PLANCAST Plant Enquiry Department

The Old Haybarn
Rosebery Mews, Mentmore
Bedfordshire LU7 0UE

T: 01296 662647
www.plancast.co.uk

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Registered office: 1st Floor, The Old Haybarn, Rosebery Mews, Mentmore LU7 0UE. Registered in England and Wales with number 4455025 VAT No. 8567 195 80

-----Original Message-----

From: atkinsstatutory.enquiries@atkinsglobal.com [mailto:atkinsstatutory.enquiries@atkinsglobal.com]

Sent: 24 February 2017 06:28

To: plantenquiries@catelecomuk.com; plantenquiries@energetics-uk.com; enquiries@environment-agency.gov.uk; plantenquiries@instalcom.co.uk; plantenquiries@mcnicholas.co.uk; plantenquiries@mcnicholas.co.uk;

Priya, Shubha

From: NRSWA <NRSWA@sky.uk>
Sent: 27 February 2017 22:17
To: Statutory Enquiries
Subject: Sky Telecommunications Services Ltd Plant Enquiry - PEN-17-02-3163 : ATKINS - 52948

Attention: Ready to Dig - ATKINS

Dear Sir/Madam,

RE: Site off Watling Street, St Albans

Thank you for your enquiry.

Please be advised that Sky Telecommunications Services Ltd will not be affected by these works.

Best endeavours have been made to ensure accuracy, however if you require further information, please contact us.

If you would like to submit your plant enquiries electronically, please send them to nrswa@sky.uk

Please be advised that our fax number has changed to 0207 032 3252.

Regards

NRSWA Department

Network Infrastructure and Planning
SKY Telecommunications Services Ltd
70 Buckingham Avenue
SLOUGH
SL1 4PN

T +44 (0) 207 032 3234/250
F +44 (0) 207 032 3252
E nrswa@sky.uk

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We have checked SSE's website and in this instance your area is not affected.



We have checked Trafficmaster's website and in this instance your area is not affected.

Priya, Shubha

From: UK OSP-Team <osp-team@uk.verizon.com>
Sent: 24 February 2017 13:43
To: Statutory Enquiries
Cc: UK OSP-Team
Subject: RE: Plant Enquiry - 52948 - Site off Watling Street, St Albans - Please respond by 16/03/2017

Dear Sir/Madam

Verizon is a licensed Statutory Undertaker.

We have reviewed your plans and have determined that Verizon (Formally known as MCI WorldCom, MFS) has no apparatus in the areas concerned.

If you have any further queries please do not hesitate to get in touch.

Yours faithfully

Plant Protection Officer (GB) Email osp-team@uk.verizon.com

-----Original Message-----

From: atkinsstatutory.enquiries@atkinsglobal.com [mailto:atkinsstatutory.enquiries@atkinsglobal.com]
Sent: 24 February 2017 06:28
To: plantenquiries@catelecomuk.com; plantenquiries@energetics-uk.com; enquiries@environment-agency.gov.uk; plantenquiries@instalcom.co.uk; plantenquiries@mcnicholas.co.uk; plantenquiries@mcnicholas.co.uk; opburiedservicesenquiries@networkrail.co.uk; interoute.enquiries@plancast.co.uk; nrswa@sky.uk; UK OSP-Team; UK OSP-Team; osm.enquiries@atkinsglobal.com
Cc: atkinsstatutory.enquiries@atkinsglobal.com
Subject: Plant Enquiry - 52948 - Site off Watling Street, St Albans - Please respond by 16/03/2017

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Verizon UK Limited - registered in England & Wales - registered number 2776038 - registered office at Reading International Business Park, Basingstoke Road, Reading, Berkshire, UK RG2 6DA - VAT number 823 8170 33

Priya, Shubha

From: Kumar, Krishnaraj
Sent: 01 March 2017 11:14
To: Statutory Enquiries
Subject: RE: Plant Enquiry - 52948 - Site off Watling Street, St Albans - Please respond by 16/03/2017

Please accept this email as confirmation that Vodafone: Fixed **does not** have apparatus within the vicinity of your proposed works detailed below.

Many thanks.

Plant Enquiries Team
T: 01454 662881
E: osm.enquiries@atkinsglobal.com

ATKINS working on behalf of Vodafone: Fixed



This response is made only in respect to electronic communications apparatus forming part of the Vodafone: Fixed electronic communications network formerly being part of the electronic communications networks of Cable & Wireless UK, Energis Communications Limited, Thus Group Holdings Plc and Your Communications Limited.

PLEASE NOTE:

The information given is indicative only. No warranty is made as to its accuracy. This information must not be solely relied upon in the event of excavation or other works carried out in the vicinity of Vodafone plant. No liability of any kind whatsoever is accepted by Vodafone, its servants, or agents, for any error or omission in respect of information contained on this information. 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 Vodafone's apparatus and all claims made against them by Third parties as a result of any interference or damage.

IMPORTANT - PLEASE READ:

Diversions works may be necessary if the existing line of the highway/railway or its levels are altered, where apparatus is affected. Where apparatus is affected and requires diversion, you must submit draft details of the proposed scheme with a request for a 'C3 Budget Estimate' to c3requests@vodafone.com. These estimates should be provided by Vodafone normally within 20 working days from receipt of your request. Please include proof of this C2 response when requesting a C3 (using the 'forward' option).



Please consider the environment before printing this e-mail

From: atkinsstatutory.enquiries@atkinsglobal.com [mailto:atkinsstatutory.enquiries@atkinsglobal.com]
Sent: 24 February 2017 11:58
To: plantenquiries@catelecomuk.com; plantenquiries@energetics-uk.com; enquiries@environment-agency.gov.uk; plantenquiries@instalcom.co.uk; plantenquiries@mcnicholas.co.uk; plantenquiries@mcnicholas.co.uk; opburiedservicesenquiries@networkrail.co.uk; interoute.enquiries@plancast.co.uk; nrswa@sky.uk; osp-team@uk.verizon.com; osp-team@uk.verizonbusiness.com; National Plant Enquiry's <OSM.enquiries@atkinsglobal.com>
Cc: Statutory Enquiries <AtkinsStatutory.Enquiries@atkinsglobal.com>
Subject: Plant Enquiry - 52948 - Site off Watling Street, St Albans - Please respond by 16/03/2017

Our Reference: 52948
Site Name: Site off Watling Street, St Albans

Important Consumer Protection Information

This search has been produced by Landmark Information Group Ltd, Imperium, Imperial Way, Reading, Berkshire, RG2 0TD.

Tel: 0844 844 9966
Fax: 0844 844 9980
Email: helpdesk@landmark.co.uk

Landmark Information Group Ltd is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. The PCCB independently monitors how registered search firms maintain compliance with the Code.

The Search Code:

- Provides protection for homebuyers, sellers, estate agents, conveyancers and mortgage lenders who rely on the information included in property search reports undertaken by subscribers on residential and commercial property within the United Kingdom.
- Sets out minimum standards which firms compiling and selling search reports have to meet.
- Promotes the best practice and quality standards within the industry for the benefit of consumers and property professionals.
- Enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.

By giving you this information, the search firm is confirming that they keep to the principles of the Code. This provides important protection for you.

The Code's core principles

Firms which subscribe to the Search Code will:

- Display the Search Code logo prominently on their search reports.
- Act with integrity and carry out work with due skill, care and diligence.
- At all times maintain adequate and appropriate insurance to protect consumers.
- Conduct business in an honest, fair and professional manner.
- Handle complaints speedily and fairly.
- Ensure that products and services comply with industry registration rules and standards and relevant laws.
- Monitor their compliance with the Code.

Complaints

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Code.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs or to the PCCB.

TPOs Contact Details:

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP

Tel: 01722 333306
Fax: 01722 332296
Web site: www.tpos.co.uk
Email: admin@tpos.co.uk

You can get more information about the PCCB from www.propertycodes.org.uk.
PLEASE ASK YOUR SEARCH PROVIDER IF YOU WOULD LIKE A COPY OF THE SEARCH CODE

Complaints Procedure

If you want to make a complaint, we will:

- Acknowledge it within 5 working days of receipt.
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt.
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time.
- Provide a final response, in writing, at the latest within 40 working days of receipt.
- Liaise, at your request, with anyone acting formally on your behalf.

Complaints should be sent to:

Landmark Information Group Ltd
Landmark UK Property
Imperium
Imperial Way
Reading
RG2 0TD

Tel: 0844 844 9966
Email: helpdesk@landmark.co.uk
Fax: 0844 844 9980

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman Scheme (TPOS):

Tel: 01722 333306
Email: admin@tpos.co.uk

We will co-operate fully with the Ombudsman during an investigation and comply with his final decision.

Appendix E Hydrock Methodologies

This report uses Hydrock Desk Study and Ground Investigation template V47.1.

This appendix provides additional background information on certain approaches and methods used by Hydrock Consultants Limited in the preparation of this report.

The following Hydrock Methodologies apply to this report. These are not included, but are available on request by quoting the methodology reference, revision and date.

Reference	Name	Revision	Date
001	Desk Study	001	30/07/2018

Appendix F Preliminary Geotechnical Risk Register

Geotechnical Hazard Identification – Desk Study Stage

Potential geotechnical hazards have been assessed in accordance with the general requirements of ICE/DETR Document ‘Managing Geotechnical Risk’ and the HE documents HD 41/15 and CD 622. The following pages set out the identified geotechnical risks and hazards which are associated with the proposed development and establish the approach which is to be taken to manage the risks including the geotechnical input and analysis.

Table J.1 is a preliminary assessment of possible geotechnical hazards at the site at Desk Study stage. This information is used to assist with ground investigation design.

Table F.1: Possible geotechnical hazards

Hazard	Comment	Hazard status based on desk study	
		Could be present and / or affect site (i.e. Plausible)	Unlikely to be present and/or affect site
Uncontrolled Made Ground (variable strength and compressibility).	Site has an unknown quantity of Made Ground.	✓	-
Soft / loose compressible ground (low strength and high settlement potential).	Made ground on site has potential to present low ground strength.	✓	
Shrink swell of the clay fraction of soils under the influence of vegetation.	The site is highly vegetated and could present shrink/swell behaviour.	✓	
Variable lateral and vertical changes in ground conditions.	The extent of the Made Ground is currently unknown.	✓	
High sulfates present in the soils.	Sulfates may be present in the soils at site.	✓	
Adverse chemical ground conditions, (e.g. expansive slag).	The nature of the Made Ground is unknown.	✓	
Obstructions.	Obstructions may be present in the made ground.	✓	
Existing below ground structures to remain (on or off-site tunnels, foundations, basements, and adjacent sub-structures).	It is known that existing sewage and electricity services run under the site.	✓	
Shallow groundwater.	The site is recorded to be at low risk of groundwater flooding.		✓
Changing groundwater conditions.	Seasonal fluctuations in groundwater are expected on site.	✓	
Risk from erosion.	A risk of erosion is unlikely at site		✓
Risk from flooding.	A risk of flooding is likely at site.	✓	
Running sands and / or loose Made Ground, leading to difficulty with excavation and collapse of side walls.	Running sands are plausible on site depending on the	✓	

Hazard	Comment	Hazard status based on desk study	
		Could be present and / or affect site (i.e. Plausible)	Unlikely to be present and/or affect site
	constituents of the river terrace deposits.		
Slope stability issues – general slopes.	There is possibility of slope instability dependant on ground conditions.	✓	
Slope stability issues – retaining walls.	Retaining walls may be considered in the proposed development.	✓	
Earthworks – settlement (due to placement of fill on soft / loose ground).	The need for significant earthworks may be present on site.	✓	
Earthworks – poor bearing capacity of new fill.		✓	
Earthworks – unsuitability of site won material to be reused as fill.		✓	
Solution features in Chalk.	Chalk geology is recorded under the site, as such solution, cavities and dissolution features may be present.	✓	
Cavities in the Superficial Deposits due to solution features.		✓	
Dissolution (associated with “wet rock head”).			✓
Brine extraction.	Brine extraction is not recorded in the vicinity of the site		✓
Mining.	The extent and process of mineral extraction around the site is presently unclear, but it is possible unrecorded workings extend under the surface of the site.	✓	
Cambered ground with gulls possibly present.	Local strata is not susceptible to cambering		✓
Relict Slip Surfaces.	Though there is a slope on site, it is not significant enough to be susceptible to this hazard.		✓
Solifluction.	Though there is a slope on site, it is not significant enough to be susceptible to this hazard.		✓
Problematic soils (silts and rewetting etc.).	The nature of the soils on site is currently unknown.	✓	

Appendix G Plausible Source-Pathway-Receptor Contaminant Linkages

Summary of Potential Contaminant Linkages

Table G.2 lists the plausible contaminant linkages which have been identified. These are considered as potentially unacceptable risks in line with guidelines published in LCRM (2019) and additional risk assessment is required.

Source – Pathway – Receptor Linkages have been assessed in general accordance with guidance in CIRIA Report C552 (Rudland et al 2001) but modified to add a ‘no linkage’ category and to remove low/moderate risk (See Table G.1). Further information is given in the relevant Hydrock methodology, referenced in Appendix E, including descriptions of typical examples of probability and consequences.

It should be noted that whilst the risk assessment process undertaken in this report may identify potential risks to site demolition and redevelopment workers, consideration of occupational health and safety issues is beyond the scope of this report and need to be considered separately in the Construction Phase Health and Safety Plan.

Table G.1: Consequence versus probability assessment.

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Low risk	Very low risk
	Low Likelihood	Moderate risk	Low risk	Low risk	Very low risk
	Unlikely	Low risk	Very low risk	Very low risk	Very low risk
	No Linkage	No risk			

Table G.2: Exposure model – final source-pathway-receptor contaminant linkages

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments
Made Ground, associated with flytipping of material onto the site possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons (S01).	Ingestion, inhalation or direct contact. Surface run-off. (P01, P10)	Site workers Neighbours. Plant life. (R01, R05)	Unlikely	Minor	Very low	Significant fly tipping was present on site. However, once a site perimeter is established and the site secured this risk will fall to negligible. The risk of significant generation of dust is likely only during site development process and can therefore be controlled. Suppression should be included in control measures. If there is ACM present on site, works should be undertaken in accordance with CAR 2012.
Sewerage and effluent including Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) and Antimicrobial resistance (AMR) from the pipeline running across the site, in the case of a break or a leak (S02)	Ingestion, inhalation or direct contact. (P01)	Site users. (R01)	Low likelihood	Mild	Low	A sewerage pipeline runs below the majority of the site. While the risk of interfering with the pipe is low, the consequences of a break or a leak are High.
	Leaching through unsaturated zone and aquifer (P07, P08, P09, P12)	Groundwater and possible abstractors. (R03)	Low likelihood	Mild	Low	There is porous substrate below the entire site, should the pipeline be affected this would have significant negative impacts on the Secondary A and Principal aquifers below the site. Therefore, infiltration and the risk of leaching into the sensitive aquifers below the site is significant, especially considering the hydraulic flow gradient is currently unknown.
	Surface run-off. (P10)	Surface water and possible abstractors. (R04)	Low likelihood	Mild	Low	

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments
Agricultural pesticides and fertilisers containing high concentrations of Nitrogen, Phosphorous and other chemical nutrients. (S03).	Ingestion, inhalation or direct contact. Root uptake. Surface run off (P01, P10, P05)	Site users Landscape planting The River Ver (R01, R04, R05)	Likely	Minor	Very Low	There is Made Ground and ground used for agricultural purposes below the entire site. Whilst root uptake is possible in gardens and areas of Public Open Space (POS) the concentrations of Pesticides and fertilisers. It is important to note construction may lead surface run off of topsoil which may migrate to the River Ver.
Made Ground, potentially containing asbestos fibres and Asbestos Containing Materials from demolition and construction as well as other unconstrained waste from spillover from the landfill directly next to the site boundary. (S04).	Ingestion, inhalation or direct contact. Surface run-off. Vapour ingress (P01, P03, P05)	Site workers Neighbours. Landscape planting. (R01, R05)	Low likelihood	Medium	Low	There is Made Ground across the site that has potentially come from the landfill directly next to the western site boundary as well as imported sources. The extent and the quality of this Made ground is currently unknown and there is possibility ACM and asbestos fibres to be present in the soil. Mitigation measures will be required to break the SPR linkage. The risk of significant generation of dust is likely only during site development process and can therefore be controlled. Suppression should be included in control measures. If there is ACM present on site, works should be undertaken in accordance with CAR 2012.
Cont....						

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments
Leachate from landfilled waste including household, commercial and industrial, asbestos, general wastes located on the western boundary. There is no evidence to suggest that the landfill was lined or capped (S05).	Ingestion, inhalation or direct contact. (P01)	Site users. (R01)	Low likelihood	Mild to Medium	Low to mild	There is porous substrate below the entire site, should there be leachate from the landfill next to the site this would have significant negative impacts on the Secondary A and Principal aquifers below the site. Therefore, infiltration and the risk of leaching into the sensitive aquifers below the site is significant, especially considering the hydraulic flow gradient is currently unknown. There could be unknown concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons in the soils and groundwater in the landfill. Monitoring and analysis of this will be required along with mitigation methods should a risk be found.
	Leaching through unsaturated zone and aquifer, (P07, P08, P09, P12)	Groundwater and possible abstractors. (R03, R04)		Mild to Medium	Low to mild	
	Surface run-off. (P10)	Aquatic ecosystems. Surface water and possible abstractors. (R04, R05)		Mild to Medium	Low to mild	
Ground gases (carbon dioxide and methane) from organic and waste materials in the landfilled Made Ground adjacent to the site (S06).	Migration, build up and asphyxiation. (P02, P06)	Site users. (R01)	Unlikely	Minor to Medium	Moderate to High	Ground gases have not been monitored for the site or the land fill adjacent to the site and significant concentrations of carbon dioxide could be in the Made Ground. Mitigation measures will be required for carbon dioxide in accordance with CS2 conditions if a hazard is found.
		Neighbours. (R01)				
		Buildings on site. (R02)		Medium	Moderate	
		Buildings on adjacent sites. (R01)				
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Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments
Ground gases (carbon dioxide and methane) from organic materials in the Alluvium and River terrace deposits (S07).	Migration, build up and asphyxiation. (P02, P06)	Site users. (R01)	Unlikely	Minor to Medium	Very low	Ground gases have not been monitored for the site and significant concentrations of carbon dioxide could be in the Alluvium and River terrace deposits. Mitigation measures will be required for carbon dioxide in accordance with CS2 conditions if a hazard is found.
		Neighbours. (R01)		Medium	Very low	
		Buildings on site. (R02)				
		Buildings on adjacent sites. (R01)				
Historic septic tanks, unspecified tanks and unspecified heaps on the historic sewage works site including; Sewerage, effluent, Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) and Antimicrobial resistance (AMR) (S08).	Leaching through unsaturated zone and aquifer, (P07, P08, P09, P12)	Groundwater and possible abstractors. (R03, R04)	Low likelihood	Medium	Low	There is porous substrate below the entire site, should there be leachate from Historic septic tanks, unspecified tanks and unspecified heaps on the historic sewage works site next to the site boundary; this would have significant negative impacts on the Secondary A and Principal aquifers below the site. Therefore, infiltration and the risk of leaching into the sensitive aquifers below the site is significant, especially considering the hydraulic flow gradient is currently unknown.
	Surface run-off. (P10)	Aquatic ecosystems. Surface water and possible abstractors. (R04, R05)		Medium	Low	

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Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments
Leaks from Historic and current garages and fuelling stations on Watling Street, north-east of the site boundary including PAH, petroleum hydrocarbons, Volatile Organic Compounds (VOC) and Semi-volatile Organic compounds (SVOC). (S09)	Leaching through unsaturated zone and aquifer, (P07, P08, P09, P12)	Groundwater and possible abstractors. (R03, R04)	Low likelihood	Medium	Low	There is porous substrate below the entire site, should there be run off or a spillage incident from the historic or current garages in the area of the site this would have negative impacts on the Secondary A and Principal aquifers below the site. Therefore, infiltration and the risk of leaching into the aquifers is significant, especially considering the hydraulic flow gradient is currently unknown.
	Surface run-off. (P10)	Aquatic ecosystems. Surface water and possible abstractors. (R04, R05)		Medium	Low	
Surface water with high levels of; Polybrominated diphenyl ethers (PBDE), Perfluorooctane sulphonate (PFOS), Benzo(b)fluoranthene, and Benzo(g-h-i)perylene. (S10)	Surface water via overland flow (P10).	Aquatic ecosystems. Surface water and possible abstractors. (R04, R05)	Low likelihood	Minor to Medium	Very low	The surface water quality is described as 'moderate' due to high levels of Polybrominated diphenyl ethers (PBDE), Perfluorooctane sulphonate (PFOS), Benzo(b)fluoranthene, and Benzo(g-h-i)perylene. As such should there be significant overland flow or groundwater flooding on site a risk of contamination is present.
	Surface water via base flow from groundwater (P12).	Groundwater and possible abstractors. (R03, R04)		Minor to Medium	Very low	