

Utilities Assessment - Planning
(Stantec)



Silfield Garden Village, Wymondham

Utilities Assessment – Planning

On behalf of **David Lock Associates**

Project Ref: 47753/2502 | Rev: A | Date: March 2020

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For and on behalf of Stantec UK Limited				

Revision	Date	Description	Prepared	Reviewed	Approved
-	04/03/2020	First draft issue with information obtained to date	MH	LA	
A	13/03/2020	Updated to include further responses from UKPN and Openreach	MH	LA	

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1 Introduction

1.1 Foreword

Stantec has been commissioned to undertake a Utilities Assessment for the proposed Silfield Garden Village development on land to the north and south of the A11 to the south of Wymondham (The site). The Site covers an area of circa 418 ha of undeveloped greenfield land, with additional land within the ownership of J Alston and Sons available for off-site green infrastructure, biodiversity net gain and a renewable energy facility, and is located at approximate OS Grid Reference 610984, 299606, as shown on the Site Location Plan included within Appendix A of this report.

Existing utility infrastructure within and adjacent to the proposed development is presented on Stantec's Existing Services and Constraints Drawing number 47753/2502/001 within Appendix B. This information has been taken from existing asset records provided to us by the statutory undertakers operating in this area.

Current development proposals comprise circa 6,500 residential dwellings, 15ha of B1 / B2 business use, a secondary school, three primary schools and 4ha of mixed-use (retail / community/ employment). The Initial Masterplan for the scheme is included within Appendix C.

1.2 Scope of Works

This assessment aims to achieve the following: -

- Liaise with all utility suppliers providing services within the proposed development area.
- Establish the nature, extent and location of any existing utility company distribution infrastructure relating to electricity, gas, water supply and telecommunication.
- Confirm with the utility suppliers the capacity of the existing infrastructure and the requirements for such infrastructure to be diverted, extended, adapted or renewed to cater for the proposed development.

1.3 Basis of Report

This report has been compiled from correspondence received from the incumbent utility providers (electricity, gas, potable water & telecommunications) regarding existing and new utility supplies.

A high-level desk top study and review of existing utility services information has been completed to identify constraints to the proposed development and to establish the need for any diversions and protections to the utility services, to accommodate redevelopment.

1.4 Requested Loads

Capacity checks were requested from the distribution network operators in February 2020 based on the following current development proposals: -

- Circa 6,500 dwellings (no mix currently defined)
- Circa 15ha of B1 / B2 uses (20,000m² B1 – approx. 5ha / 40,000m² of B2 – approx. 10ha)
- Education – 1 secondary and up to 3 primary schools (approx. 20ha)
- Mixed use – circa 4ha for retail / community / employment (approx. 10,000m² split between A1-A5 / D1 + D2 and B1a) – to be accommodated in a number of local centres.

Anticipated loads for this high-level assessment have been calculated as tabled below based upon a building footprint of 40% of the allocated area for business and education uses and 25% for the mixed use.

Table 1: Calculated Utility Loads

Utility	Estimated Demand				
	Residential	Business	Education	Mixed Use	Total
Electricity	10,833.33 kVA	3,532.22 kVA	1,190 kVA	375 kVA	15,931 kVA
Gas	4,3178.8 kWh peak (68,868 MWh AQ)	4,600 kWh peak (5,635 MWh AQ)	2,258 kWh peak (2,360 MWh AQ)	253 kWh peak (451 MWh AQ)	50,290 kWh peak (77,313 MWh AQ)
Potable Water	107.19 l/s peak (2,242.50m ³ /day)	9.72 l/s peak (140m ³ /day)	22 l/s peak (316.8m ³ /day)	1.53 l/s peak (21.96m ³ /day)	140.44 l/s peak (2,721.26m³/day)

It should be noted that these demands are likely to fluctuate as the development schedule progresses.

2 Contacts Directory

Table 2: Statutory Undertakers Contacts Directory

Title	Address	Contact Details
Electricity	UK Power Networks Metropolitan House Potters Bar HERTS EN6 1AG	Tel: 0845 234 0040
Gas	Cadent Gas Block 1; Floor 1 Brick Kiln Street Hinckley LE10 0NA	Tel: 0800 074 5788
Potable Water	Anglian Water PO Box 4994 LANCING BN11 9AL	Tel: 0345 6066 087
Telecommunications	Openreach Repayments (Alterations) PP RH017 Russell House St Andrews Street Norwich NR2 4AE	Tel: 0207 809 5662
Multi-utility	GTC Energy House Woolpit Business Park Woolpit Bury St Edmunds Suffolk IP30 9UP	Tel: 01359 240154

3 Utility Infrastructure

3.1 Electricity

The incumbent electricity provider is UK Power Networks (UKPN).

A summary of the infrastructure likely to be affected by the proposed development is outlined below.

3.1.1 Existing Infrastructure

UK Power Networks (UKPN) records show existing 11kV overhead high voltage (HV) lines within the eastern site boundary running from the north of the site adjacent to Park Lane to Park Farm Cottages within the site to the south of the A11. This connects to a further 11kV overhead HV line that crosses the extent of the site from east to west, exiting the site on Silfield Road to the south of Verdon's Lane.

There is a 33kV overhead HV line crossing the north of the site, entering at the north-west corner, heading south before veering east to cross Park Lane just north of the A11. This continues to run adjacent to the site boundary, crossing over to continue past Silfield Road.

Further south there is an 11kV overhead HV line running within the eastern site boundary off Silfield Road and Wattlefield Road.

There are no undergrounds services shown within the site boundary.

3.1.2 Network Modifications

UKPN has provided budget costs to divert and underground the existing HV apparatus crossing the site.

It is possible that there are no existing easements covering the overhead lines, and if this is the case, then the developer can request UKPN to carry out the diversion at their own cost. However, it should be noted that this approach will incur lengthy time delays and can take anything up to 4-5 years to process.

Further enquiries have been submitted to UKPN to determine the legals covering the existing assets and we will advise upon receipt of their response.

3.1.3 Network Capacity

It is estimated that the whole site electricity demand for the proposed development would be approximately 15,930kVA, comprising 10,833kVA for residential and 5,097kVA for the non-residential use buildings.

UKPN has confirmed that there is insufficient capacity available within the existing network to provide the whole development without the construction of a new primary substation. However, subsequent discussions with UKPN have suggested that a feasibility study for a site to the north of the development area, proposed to comprise 650 residential dwellings and commercial use, has identified spare capacity of circa 5.3MVA within the existing network that could be utilised to serve early phases and therefore delay the need for costly off-site reinforcement.

3.1.4 New Infrastructure

UKPN has provided budget costs to provide new connections to serve the development. This includes the installation of a new primary substation to reinforce the network as noted in 3.1.3 above, the installation of 32 No. 500kVA substations and all on-site mains and residential and commercial services.

3.1.5 Legal Tenure (Wayleaves / Easements)

Where electricity lines are to be installed in private land UKPN will require an easement in perpetuity for its electric lines, and in the case of electrical plant the freehold interest in the substation site, on UK Power Network terms, without charge and before any work commences.

Where a GRP substation is required a footprint area of 4m x 4m (5m x 5m for a brick-built enclosure), will be required which will need provision for 24-hour access directly from the public highway.

3.1.6 Financial Considerations

Procurement Options

The estimated electricity demand proposed for this development is likely to be of sufficient scale to encourage an “out of area” licensed Independent Distribution Network Operator (IDNO) to offer an alternative proposal to establish an embedded system within the incumbent’s licensed area.

Contestable / Non-Contestable Work

All new electricity infrastructure from the point of connection to the existing network to the point of metered supply will generally fall under the “contestable” heading allowing “self-lay” as an optional procurement route.

All modifications and diversions of existing apparatus generally fall under a “non-contestable” banner, which must remain under the direct control of the incumbent provider.

Generally, building and civils work in association is considered to be a contestable element in terms of both new and diversionary work.

A detailed review of the electricity scope of work offered by UK Power Networks should be undertaken once a formal connection offer and quotation has been received.

3.2 Gas Infrastructure

The incumbent gas provider is Cadent Gas.

A summary of the infrastructure likely to be affected by the proposed development is outlined below.

3.2.1 Existing Infrastructure

Cadent Gas records show high pressure (HP) mains crossing the site from the railway line to the west of the site, to Slovenwood Lane at the east. The main connects to a further HP main shown coming into the site from the east of Silfield Road to run within the south-eastern site boundary.

There is a low pressure (LP) network shown within the footways of Park Lane and Silfield Road to the north-east of the site that serves the existing developments.

The HP mains that cross the site are within HSE Consultation Zones, as detailed within our Existing Services and Constraints plan in Appendix B. The HSE have a Decision Matrix based on the proximity and level of sensitivity of the development type, and this matrix can be found on page 10 of the 'Land Use Planning Methodology' document attached within Appendix E. The level of sensitivity is broken down into 4 development types: -

- Level 1 – Based on normal working population
- Level 2 – Based on the general public – at home and involved in normal activities
- Level 3 – Based on vulnerable members of the public (children, those with mobility difficulties or those unable to recognise physical danger) and
- Level 4 – Large examples of Level 3 and very large outdoor developments

These 4 development types are then expanded further into the following 4 categories, and useful Development Type tables can be found within the attached document on Pages 12-23.

- 1 – People at work, Parking
- 2 – Developments for use by the general public
- 3 – Developments for use by vulnerable people
- 4 – Very large and sensitive developments

In summary, the guidelines for development are as follows: -

<u>Sensitivity Level</u>	<u>Acceptable in Consultation Zone</u>
1	Outer, Middle and Inner
2	Outer and Middle
3	Outer
4	None

3.2.2 Network Modifications

Cadent has confirmed a building proximity of 14.3m either side of the HP gas pipeline for residential units, increasing for commercial/public buildings. No piling is allowed within 15m of the pipeline, and all buildings and footings must be outside the building proximity zone.

If permanent crossings are required, i.e. for on-site highways, then a design and surface load calculations will need to be produced, and if calculations fail a protection slab will be required.

If the HP pipeline needs to be diverted this is likely to take 1-2 years. However, the Initial Masterplan has been designed to avoid building units in close proximity to the mains and therefore it is envisaged that diversions will not be required.

3.2.3 Network Capacity

It is estimated that the whole site peak hourly gas demand for the proposed development would be approximately 50,290kW, comprising 43,179kW for residential and 7,111kW for the non-residential use buildings.

Cadent has confirmed that the nearest main with sufficient capacity to serve the development is the HP main located in Silfield Road along the eastern site boundary just south of Bixley

Farm. They advise that the proposed load can be accepted onto the system with a feasibility study being carried out to determine requirements.

3.2.4 New Infrastructure

Cadent will not issue an estimate or quotation without a detailed site layout, and we have therefore approached GTC who are an Independent Gas Transporter (IGT) to provide us with a multi-utility budget estimate (Section 3.6 below).

3.2.5 Financial Considerations

Procurement Options

The estimated gas demand proposed for this development is likely to be of sufficient scale to encourage an “out of area” licensed Independent Gas Transporter (IGT) to offer an alternative proposal to establish an embedded system within the incumbent’s licensed area.

Contestable / Non-Contestable Work

All new gas infrastructure from the pressure reducing station (PRS) (if applicable) or connection point to the metered supply will generally fall under the “contestable” heading allowing self-lay as an optional procurement route.

All modifications and diversions of existing apparatus generally fall under a “non-contestable” banner, which must remain under the direct control of the incumbent provider.

Generally, builder’s work associated with the installation is considered to be a contestable element of both new and diversionary work.

3.3 Potable Water

The incumbent water provider is Anglian Water (AW).

A summary of the infrastructure likely to be affected by the proposed development is outlined below.

3.3.1 Existing Infrastructure

AW records show existing potable water mains running along the western side of Silfield Road and Wattlefield Road to the east of the site. The main is shown running within the eastern site boundary adjacent to Brentwood Farm and Bixley Farm.

There is a 280mm pipe shown crossing the site from east to west, following the existing track from Silfield Road (just south of ‘The Mariners’). It follows the route of the track, heading north to cross Verdons Lane, continuing through the site to Park Lane to the north of the site.

From Park Lane at the junction with Green Lane, a further 10” main crosses the site diagonally in a north-westerly direction to pick up the line of the existing track, exiting the site under the railway, to the north of ‘Railway Cottages’ on the north-west boundary.

3.3.2 Network Modifications

AW’s Pre-Planning Assessment report has identified several assets within or overlapping the site boundary, however, in order to obtain an assessment of diversionary costs and works required a S185 application for a formal quotation will need to be submitted once a detailed site layout becomes available.

3.3.3 Network Capacity

It is estimated that the whole site peak water demand for the proposed development would be approximately 140.44l/s, comprising 107.19l/s for residential and 33.25l/s for the non-residential use buildings.

AW has identified that there is insufficient capacity within the existing network to serve the proposed development, and therefore off-site reinforcement will be required, comprising approximately 4,200m of 400mm HPPE main from High Oak WTW (water treatment works) to the site and a new 120lps pumping station at High Oak WTW.

As a result of changes to charging rules published by OFWAT in 2018 network reinforcement charges are no longer chargeable as a separate item. They are now covered by infrastructure charges applied to each new connection. AW apply a 'zonal charge' per connection which is made up of two elements; a fixed element (the same in nature as the old infrastructure charge) and a variable element which may vary each financial year.

3.3.4 New Infrastructure

AW has provided budget costs within their Pre-Planning Assessment Report for on-site mains and zonal charges to cover the off-site reinforcement works.

A detailed scope of works will be provided on submission of a formal application.

3.3.5 Financial Considerations

Procurement Options

The client (developer) will be required to submit a formal requisition to Anglian Water for potable water supplies, under the terms of Section 41 of the Water Industry Act.

Contestable / Non-Contestable Work

All modifications and diversion of existing apparatus generally fall under a "non-contestable" banner, which must remain under the direct control of the incumbent provider.

Generally, builder's work in association is considered to be a contestable element of both new and diversionary work.

Provision of the offsite works is contestable as a self-lay option.

3.4 Telecommunications Infrastructure

A summary of the Openreach infrastructure likely to be affected by the proposed development is outlined below.

3.4.1 Existing Infrastructure

Openreach records show overhead lines running along Park Lane to the east of the site which cross the A11. Further overhead lines run to the west from Park Lane to run adjacent to the A11 as far as the laybys in the road. At this point there is underground plant present that crosses the carrieway of the A11 and runs within both laybys.

Underground infrastructure is shown within the western verge of Wattlefield Road leading to the junction of Slovenwood Lane. From there overhead lines serve Sallowfield Cottage in Slovenwood Lane and properties south of the junction on Wattlefield Road.

Further underground and overhead infrastructure is located outside of the site boundary to the west and this crosses the railway line at the two level crossings.

3.4.2 Network Modifications

Openreach has provided budget costs to divert their existing underground infrastructure to the north of the A11 at the location of the proposed site access to the northern part of the development.

Service disconnections will be required to any existing properties to be demolished within the site at nil cost to the developer.

3.4.3 Network Capacity

There are no issues with capacity; Openreach has an obligation to serve new developments with both standard telecoms and broadband services. For developments comprising over 30 units they can also provide free of charge fibre to the premise (FTTP).

3.4.4 New Infrastructure

Openreach do not provide design proposals prior to planning; an application can be registered following outline planning consent and once the detailed technical drawings are prepared.

3.5 Comms

3.5.1 Existing Infrastructure

Stantec has consulted with the following telecommunication, data and other services companies who have confirmed in writing that they have no existing infrastructure within the area likely to be affected by the proposed development:

- Colt
- euNetworks
- Instalcom
- KPN International
- Linesearch BeforeUdig
- Sky
- Telenttelia
- Trafficmaster
- Verizon (MCI Worldcom)
- Virgin Media
- Vodafone

3.6 Multi-utility

3.6.1 New Infrastructure

An enquiry has been submitted to GTC for a multi-utility budget estimate and we await their response.

4 Conclusion

This report shows that there is existing electricity, gas, water and telecom infrastructure within the vicinity of the site, as summarised below: -

Electricity

There are 33kV and 11kV overhead HV lines crossing the site that will require diverting. Enquiries have been submitted to UKPN to establish the legals covering the apparatus in order to determine responsibility for costs.

There is currently circa 5.3MVA available capacity within the existing network that could serve initial phases of the development. To supply the overall site demand UKPN has advised of the requirement to reinforcement the network with the installation of a new Primary substation.

Gas

There are existing HP gas pipelines crossing the site that would be costly and could take up to 1-2 years to divert if required. The pipelines have a circa 15m building proximity zone to restrict building within that zone.

There is currently sufficient capacity within the HP network to serve the whole development, with a proposed point of connection to the main in Silfield Road to the east of the Site.

Water

There are existing water mains present within and around the perimeter of the Site that may be affected by the proposed development. This will be determined at detailed design stage, but the current development Masterplan appears to avoid the existing mains.

There is currently insufficient capacity within the existing water network and AW has advised that reinforcement works will be required comprising 4.2km on new off-site 400mm main and a new 120lps pumping station at High Oak WTW. Costs for this work are covered by the zonal/infrastructure charges applied to each new connection.

Comms

Openreach infrastructure to the north of the A11 may require diverting to accommodate the proposed site access to the northern part of the development.

Openreach will serve new developments with both standard telecoms and broadband services and can provide fibre to the premise (FTTP) free of charge to developments comprising over 30 units.

General

The site is also large enough to be of interest to independent network operators who can offer competitive prices for new connections to those quoted by the incumbent statutory undertakers, as provided by GTC.

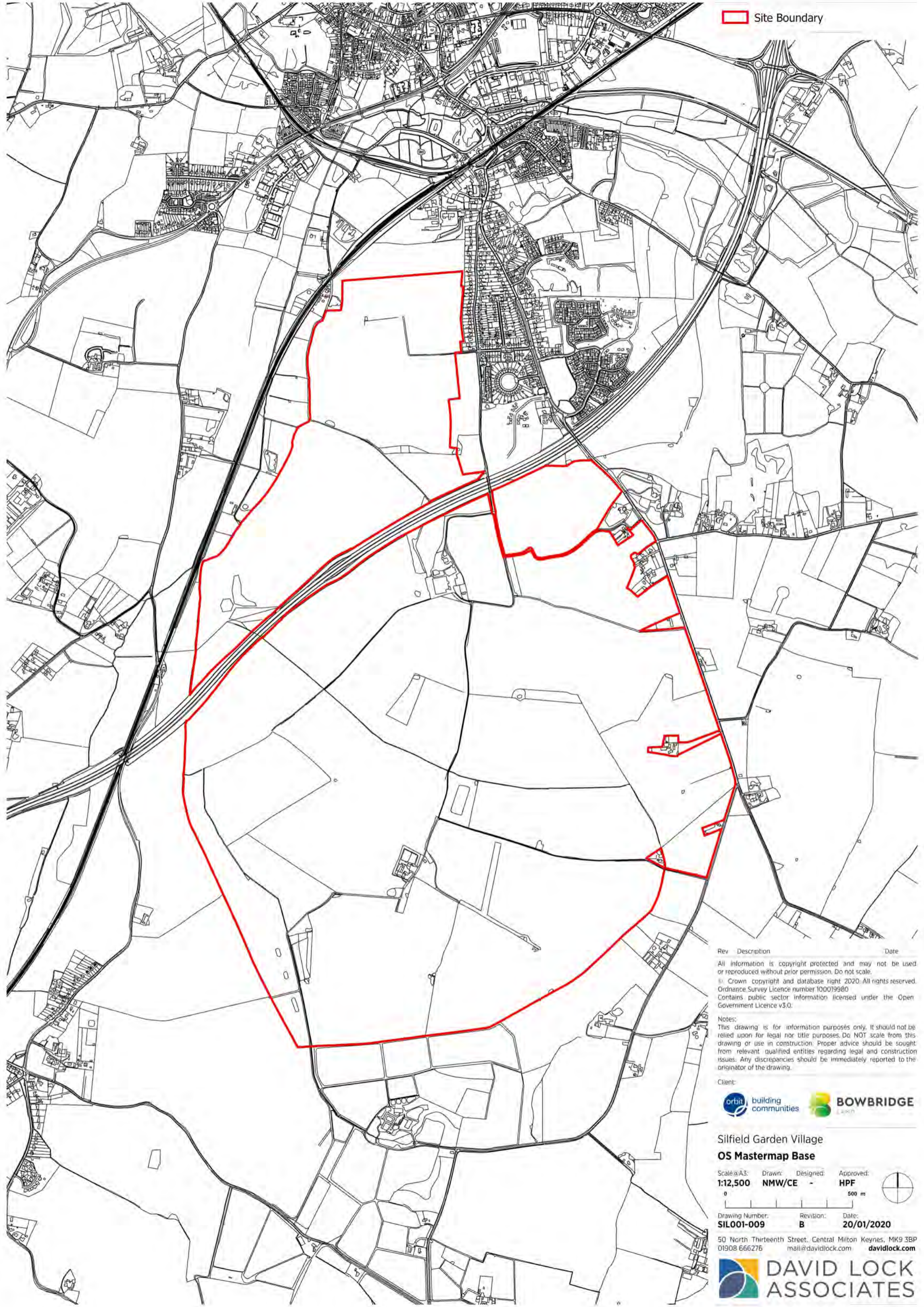
The enquiries to the utility providers to date have been based on direct connection to each unit and will be subject to formal application following planning consent.

New supplies within the site will generally be routed along proposed road corridors. The requirements for easement agreements for supplies located outside of the proposed highway will need to be agreed with the relevant statutory undertaker as part of the design process.

It is recommended that trial holes or a ground radar penetration survey is undertaken to determine the exact location and depth of existing services within the site boundaries and along Silfield Road and the A11 at the proposed site access point, in order to establish any requirements for diversions or easements.



Appendix A Site Location Plan

Site Boundary



Rev Description Date
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Client:
 

Silfield Garden Village
OS Mastermap Base

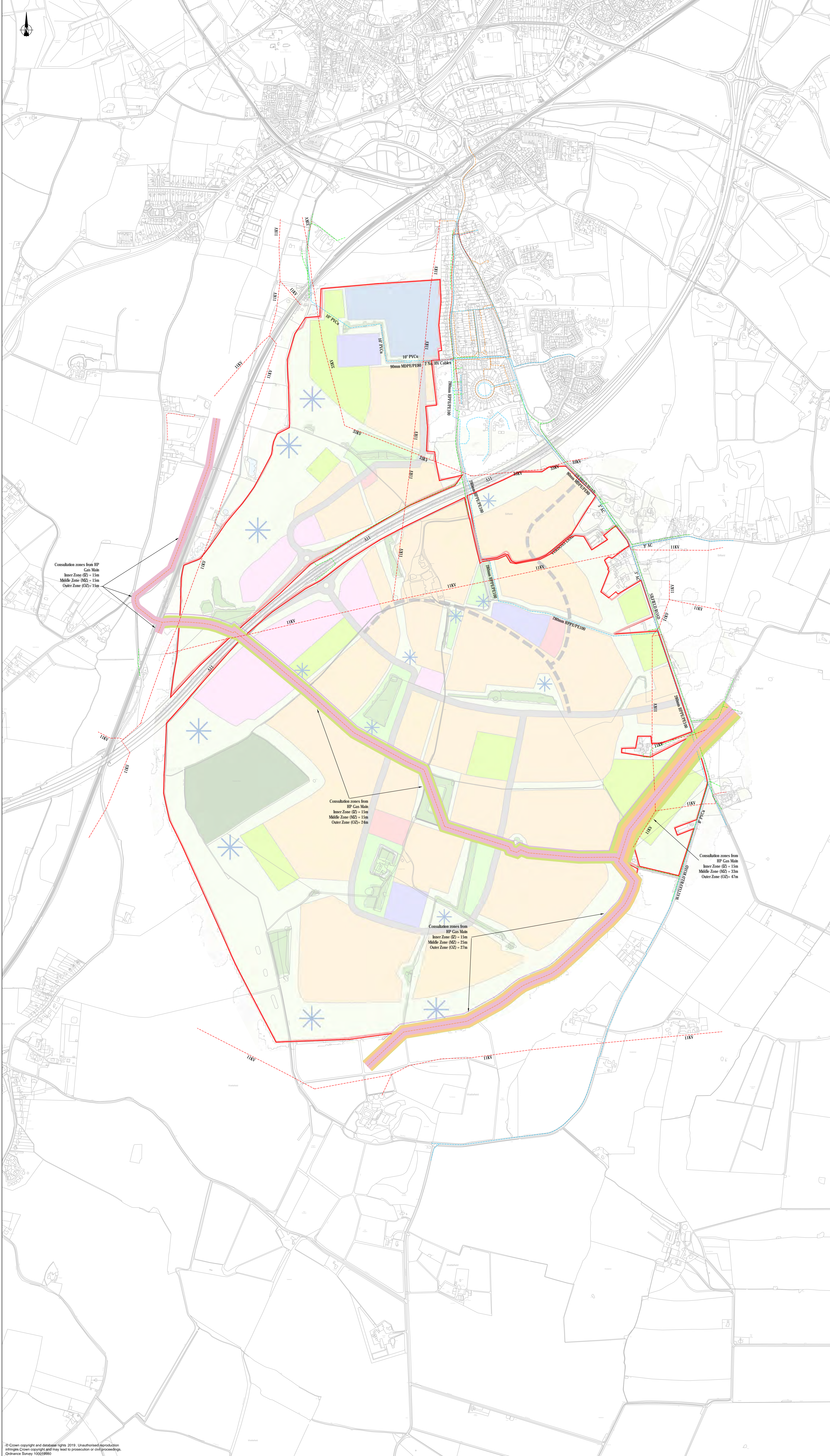
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50 North Thirteenth Street, Central Milton Keynes, MK9 3BP
01908 666276 mail@davidlock.com davidlock.com



Appendix B Existing Services and Constraints



KEY	
[Red line]	SITE BOUNDARY
[Red line with 'EX HV']	EXISTING ELECTRICITY (HV)
[Red line with 'EX LV']	EXISTING ELECTRICITY (LV)
[Red line with 'EX OV']	EXISTING OVERHEAD ELECTRICITY (HV)
[Red line with 'EX HP']	EXISTING GAS (HP)
[Red line with 'EX LP']	EXISTING GAS (LP)
[Blue line with 'EX W']	EXISTING WATER
[Green line with 'EX BT']	EXISTING BT OPENREACH
[Green line with 'EX OT']	EXISTING OVERHEAD BT OPENREACH
[Orange line with 'EX FS']	EXISTING FOUL SEWER
[Dashed line]	ABANDONED SERVICE
[Pink shaded area]	HSE CONSULTATION INNER ZONE
[Orange shaded area]	HSE CONSULTATION MIDDLE ZONE
[Light green shaded area]	HSE CONSULTATION OUTER ZONE

- NOTES:**
- For further details on HSE consultation zones please refer to the HSE's Land Use Planning Methodology document available at www.hse.gov.uk/landuseplanning.

Consultation zones from HP Gas Main
 Inner Zone (IZ) = 15m
 Middle Zone (MZ) = 15m
 Outer Zone (OZ) = 15m

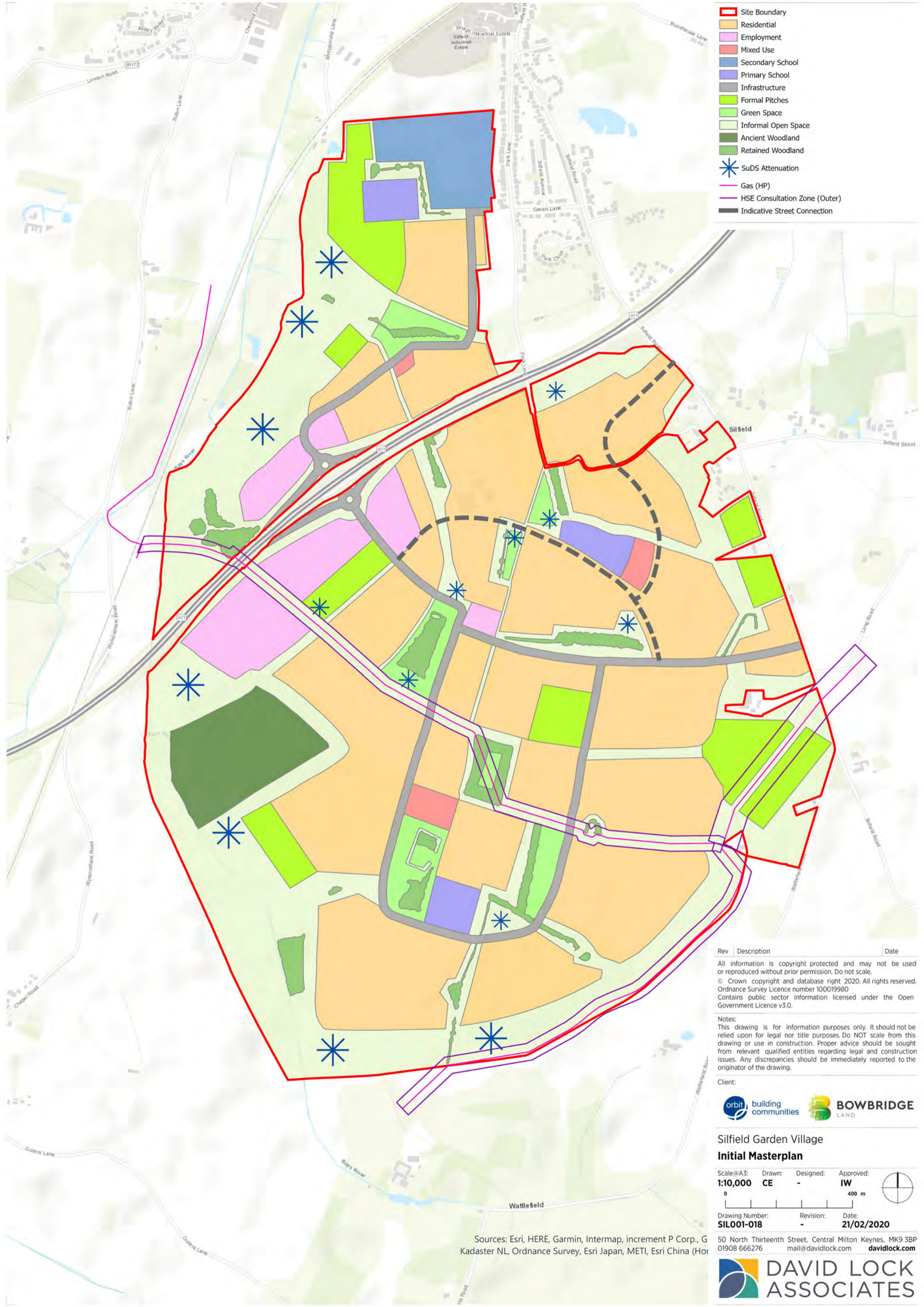
Consultation zones from HP Gas Main
 Inner Zone (IZ) = 15m
 Middle Zone (MZ) = 15m
 Outer Zone (OZ) = 15m

Consultation zones from HP Gas Main
 Inner Zone (IZ) = 15m
 Middle Zone (MZ) = 15m
 Outer Zone (OZ) = 27m

Consultation zones from HP Gas Main
 Inner Zone (IZ) = 15m
 Middle Zone (MZ) = 32m
 Outer Zone (OZ) = 47m

A MASTERPLAN INSERTED		12.03.20	MH	LA	
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<p>EXISTING SERVICES AND CONSTRAINTS</p>					
<p>Client ORBIT HOMES</p>					
Date of 1st Issue 30.01.2020		Designed +	Drawn MH		
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Appendix C Initial Masterplan



- ▬ Site Boundary
- Residential
- Employment
- Mixed Use
- Secondary School
- Primary School
- Infrastructure
- Formal Pitches
- Green Space
- Informal Open Space
- Ancient Woodland
- Retained Woodland
- ✱ SuDS Attenuation
- Gas (HP)
- HSE Consultation Zone (Outer)
- Indicative Street Connection

Rev	Description	Date
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Silfield Garden Village
Initial Masterplan

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50 North Thirteenth Street, Central Milton Keynes, MK9 3BP
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Appendix D Correspondence

Mrs M Hawkett
Stantec
Connect 38
10, Dover Place
ASHFORD
Kent
TN23 1FB

Date: 24 February 2020

Our Ref: 8600018088 / QID 3000025232

Dear Mrs Hawkett,

Site Address: Silfield Garden Village, Wymondham, Norfolk NR18

Thank you for your recent enquiry regarding the above premises. I am writing to you on behalf of Eastern Power Networks plc the licensed distributor of electricity for the above address trading as UK Power Networks.

I am pleased to be able to provide you with a budget estimate for the work.

It is important to note that this budget estimate is intended as a guide only. It may have been prepared without carrying out a site visit or system studies. No enquiry has been made as to the availability of consents or the existence of any ground conditions that may affect the ground works. It is not an offer to provide the connection and nor does it reserve any capacity on UK Power Networks electricity distribution system.

This budget estimate does not include the final connections to circa 4 ha of mixed use retail / community / employment over a number of local centres

Budget estimate: £11,660,000.00

The budget estimation for this work is:

Description

CONTESTABLE WORK	
Work involved	Net price (£)
Domestic Services	
<ul style="list-style-type: none"> 6500 x Standard 1ph service connection on site 	£3,665,000.00
Commercial Services	
<ul style="list-style-type: none"> 4 x Install standard 400amp termination and 185mm² cable jointed off existing waveform cable up to 5m cable in customer's duct on site and up to 2m in public footpath .Includes installation of CT cabinet. 	£15,000.00
LV Underground Mains	
<ul style="list-style-type: none"> 3000m on site 	£540,000.00
HV Plant and Switchgear	

<ul style="list-style-type: none"> 32 x Establish a 500kVA unit substation within a GRP Housing. Includes 500kVA transformer, Ring Main Unit, 5-way LV cabinet, RTU, internal small power/lighting and substation ancillaries. Excludes GRP, earthing, civil works and HV/LV jointing. 64 x 300mm HV indoor end box termination 32 x Supply and fit of a brown GRP substation housing. 32 x Delivery of plant to site in normal weekday working hours 32 x Commissioning of a Remote Terminal Unit (RTU) 32 x 11kV outage associated with the provision of an 11kV substation Inspection of substation civil works Legal fees for a Freehold/Leasehold for the establishment of a substation in a new physical location. 	£1,236,000.00
HV Underground Mains	
<ul style="list-style-type: none"> 3000m 	£780,000.00
TOTAL	£6,236,000.00

NON-CONTESTABLE WORK	
Work involved	Net price (£)
EHV Plant and Switchgear	
<ul style="list-style-type: none"> New Primary substation 	£3,722,000.00
EHV Underground Main	
<ul style="list-style-type: none"> Diversions 	£1,700,000.00
Transactional Charges	
Other charges	
TOTAL	£5,422,000.00

Assumptions

This budget estimate is based on the following assumptions:

- The most appropriate Point of Connection (POC) is as described above.
- A viable cable or overhead line route exists along the route we have assumed between the Point of Connection (POC) and your site.
- In cases where the Point of Connection (POC) is to be at High Voltage, that a substation can be located on your premises at or close to the position we have assumed.
- Where electric lines are to be installed in private land UK Power Networks will require an easement in perpetuity for its electric lines and in the case of electrical plant the freehold interest in the substation site, on UK Power Networks terms, without charge and before any work commences.
- You will carry out, at no charge to UK Power Networks, all the civil works within the site boundary, including substation bases, substation buildings where applicable and the excavation/reinstatement of cable trenches.
- Unless stated in your application, all loads are assumed to be of a resistive nature. Should you intend to install equipment that may cause disturbances on UK Power Networks' electricity distribution system (e.g. motors; welders; etc.) this may affect the estimate considerably.
- All UK Power Networks' work is to be carried out as a continuous programme of work that can be completed substantially within 12 months from the acceptance of the formal offer.

Please note that if any of the assumptions prove to be incorrect, this may have a significant impact on the price in any subsequent quotation. You should note also that UK Power Networks' formal connection offer may vary

considerably from the budget estimate. If you place reliance upon the budget estimate for budgeting or other planning purposes, you do so at your own risk.

If you would like to proceed

If you would like to proceed to a formal offer of connection then you should apply for a quotation. Please refer to our website [click here](#) for 'The connection process' which details our application process.

To help us progress any future enquiry as quickly as possible please quote the UK Power Networks Reference Number from this letter on all correspondence.

If you have any questions about your budget estimate or need more information, please do not hesitate to contact me. The best time to call is between the hours of 9am and 4pm, Monday to Friday. If the person you need to speak to is unavailable or engaged on another call when you ring, you may like to leave a message or call back later.

John Hamling
Project Manger
UKPN
EN61AG

john.hamling@ukpowernetworks.co. uk

Hawkett, Michelle

From: Harty, Robert <Robert.Harty@cadentgas.com>
Sent: 09 March 2020 13:35
To: Hawkett, Michelle
Subject: RE: C3 Enquiry - Silfield Garden Village, Wymondham, Norfolk NR18 9NQ Cadent references: EA_640235 & EA_052267
Attachments: EA_GE4A_3WWX_1091170-2.pdf

Hi Michelle,

The building proximity for i.e houses is 14.3m either side of the gas pipeline, for commercial/public buildings this will increase.

For your design please bear in mind the following:

Cadent Gas must trace and mark up the high pressure gas pipeline
Cadent gas need to be on site for all excavation works within the easement zone,
Trial holes will be required to confirm exact location and depth of the pipeline,
The easement should be fenced off,
No storage in the easement,
No piling allowed within 15m of the gas pipeline,
No plant to cross the gas pipeline in an unprotected area (see section 6 figure 2 of the attached guidance document SSW22)
If permanent crossing(s) are required, then a design is required and surface load calculations, if the calcs fail a protection slab is required. These calc cost £3,500-£5,000, this is further explained below.
No trees in the easement that do not conform with Cadent tree guidelines.
All buildings must be outside the building proximity zone, this includes footings and overhangs.

All works to be in accordance with SSW22, HSG47, and 5028 (where applicable).

If you require permanent crossings you will require a design and surface load calcs. First you will need trial holes on the gas pipeline with a Cadent Plant Protection technician on site to observe the works, you can book the dates and technician via me. These works will be carried out in accordance with SSW22 (attsched) and HSG47.

The surface load calcs are to be carried out by persons with the appropriate knowledge of gas pipelines and the gas pipeline documentation such as GM1.

If the surface load calcs fail then a protection slab will be required. If a protection slab is require this has to be designed in accordance with CE12 and goes through the G17 process which requires appraisers and approvers from a list which I can provide.

In regards to the surface load calcs, the calcs will have to be carried out by a company that is aware of gas pipeline documentation such GM1, GIS/L2 etc etc and how to incorporate the pipeline wall thickness, material grade, stress on the pipeline etc (Plaxis 2D is not sufficient)

They need to look at ring behaviour of the pipe, longitudinal effects – GM/1 takes both into account and I would expect them to produce a report that follows the methodology in it, with the appropriate traffic impact factors, load models and all the acceptance criteria verified: von Mises, membrane stress, longitudinal stress, diametric deflection, fatigue etc.

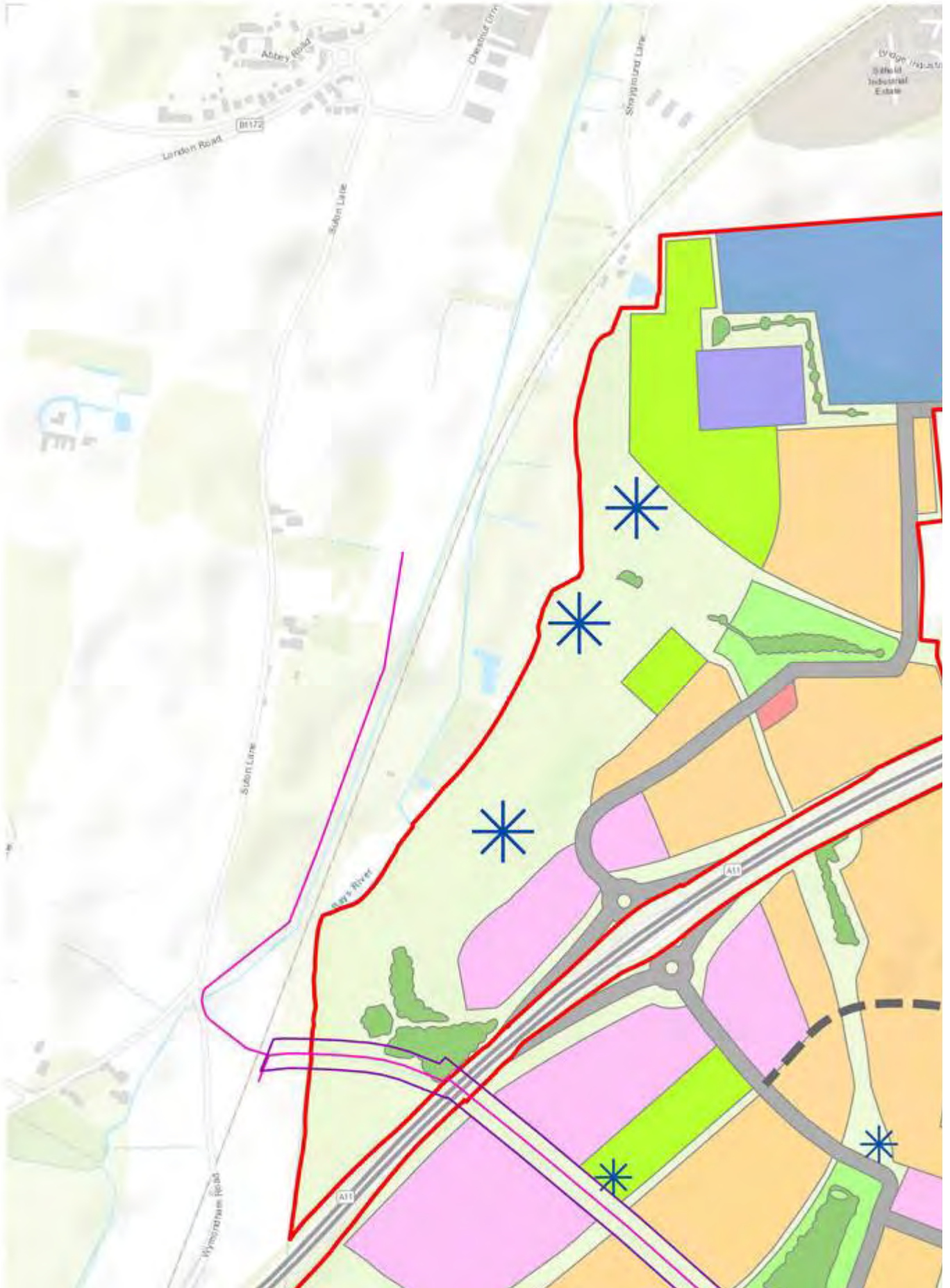
There are various companies that do the load assessments on gas pipelines, their costs range from £3,000 to £5,000 and timescales from 2weeks up to 2 months.

You can do one of the following:

- I can request our integrity team to get one of our specialists to do the surface load calculations (DNVGL) which can take 4-8 weeks at £4,000 to £5,000. I will then have to charge a 10% uplift on top of this.
- You may have your own team that do surface load calcs? They will need understanding of GM1, GIS/L2 etc as highlighted above.
- You can search companies that do the calcs, civils@designandconstructltd.com is the e-mail address of one such company who have a quick to return the calculations (2-3 weeks)cost £3,500. AFEA is another company who have a quick turnaround, I'm currently waiting on their contact details from our integrity team.

Please read the comments on the drawing below:





Regards,

Robert Harty

East Anglia Pipelines (I.P & H.P gas)

Cadent Gas Limited

9 Wharfedale Road Ipswich, IP1 4JP

robert.harty@cadentgas.com

Cadentgas.com

From: Hawkett, Michelle <michelle.hawkett@stantec.com>

Sent: 09 March 2020 12:22

To: Harty, Robert <robert.harty@cadentgas.com>

Subject: RE: C3 Enquiry - Silfield Garden Village, Wymondham, Norfolk NR18 9NQ Cadent references: EA_640235 & EA_052267

Hi Robert,

Thank you for your email. I attach a copy of our email dated 26th February that includes the latest proposed layout for the development. You will see the layout has been revised to avoid conflict with the existing HP mains where possible and it looks as though diversions can be avoided?

Kind regards,

Michelle Hawkett

EngTech MICE

Senior Technician

Connect 38, 1 Dover Place, Ashford, Kent, TN23 1FB, United Kingdom

Direct: +44 1233 527252

michelle.hawkett@stantec.com



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Please be aware that my working hours are Mon-Thurs 08:30-16:30

From: Harty, Robert <Robert.Harty@cadentgas.com>

Sent: 04 March 2020 15:45

To: Hawkett, Michelle <michelle.hawkett@stantec.com>

Subject: C3 Enquiry - Silfield Garden Village, Wymondham, Norfolk NR18 9NQ Cadent references: EA_640235 & EA_052267

Hi Michelle,

A diversion of the high pressure gas pipeline is likely to take 1-2yrs to divert and cost in the region of 1.2million.

The above is very unlikely to be required, protection measures on the gas pipeline should suffice however I will need a copy of the proposed development plan in order to assess in detail.

Regards,

Robert Harty

East Anglia Pipelines (I.P & H.P gas)

Cadent Gas Limited

9 Wharfedale Road Ipswich, IP1 4JP

robert.harty@cadentgas.com

Cadentgas.com

From: Hawkett, Michelle <michelle.hawkett@stantec.com>

Sent: 05 February 2020 16:05

To: .box.plantprotection <plantprotection@cadentgas.com>

Subject: EAGLES ENG ADV AND SENT TO DIVS BK C3 Enquiry - Silfield Garden Village, Wymondham, Norfolk NR18 9NQ

Good afternoon,

Please find attached a C3 diversion enquiry for a budget estimate in relation to existing HP gas mains that cross through the site of the proposed Silfield Garden Village development in Wymondham.

We look forward to receiving your response at your earliest opportunity; however, should you require any further information please do not hesitate to contact me.

Kind regards,

Michelle Hawkett

EngTech MICE

Senior Technician

Connect 38, 1 Dover Place, Ashford, Kent, TN23 1FB, United Kingdom

Direct: +44 1233 527252

michelle.hawkett@stantec.com



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Network Enquiry No : 180012222
Your Reference : NR18 9NQ (REV)

Cadent Gas Limited

National Gas Emergency Service - 0800 111 999* (24hrs)
*calls will be recorded and may be monitored

MICHELLE HAWKETT
STANTEC
UNIT 10, CONNECT 38
1 DOVER PLACE
ASHFORD, KENT
TN23 1FB

Date : 12th February 2020
Contact : Performance and Support
Direct Tel : 0845 3666758
Email : networkdesign@cadentgas.com

www.cadentgas.com

Dear MICHELLE,

Re: Land Enquiry for Proposed Development Site at NEW SUPPLY, LAND OFF, SILFIELD ROAD, WYMONDHAM, NR18 9NQ.

Thank you for your enquiry which we received on 4th February 2020. I enclose details of Cadent Gas plant in the vicinity of your proposed supply.

The nearest main with sufficient capacity is 825 metres from the site boundary and it is a High Pressure main.

This Developer Enquiry response is a reflection of the network at the time delivered and is not a guarantee of gas flow or capacity due to the changing dynamics of the gas distribution network. If you wish to secure capacity and connect to the network please submit quotation Connections Request via the official connections route allowing for further analysis to verify the capability of the network again.

This load can be accepted onto the system with a feasibility study being carried out to determine requirements. The estimated cost of this will be in the region of £20-£50k as it is a complex connection type.

Plans attached: Yes

A copy of the Cadent Connections Charging Statement referenced in this letter can be found on Cadent's website:

<http://cadentgas.com/Get-connected>

If you require a printed version please contact us on the details provided above.

I trust this meets with your requirements at this stage. If you have any queries please do not hesitate to contact Performance and Support on the above number.

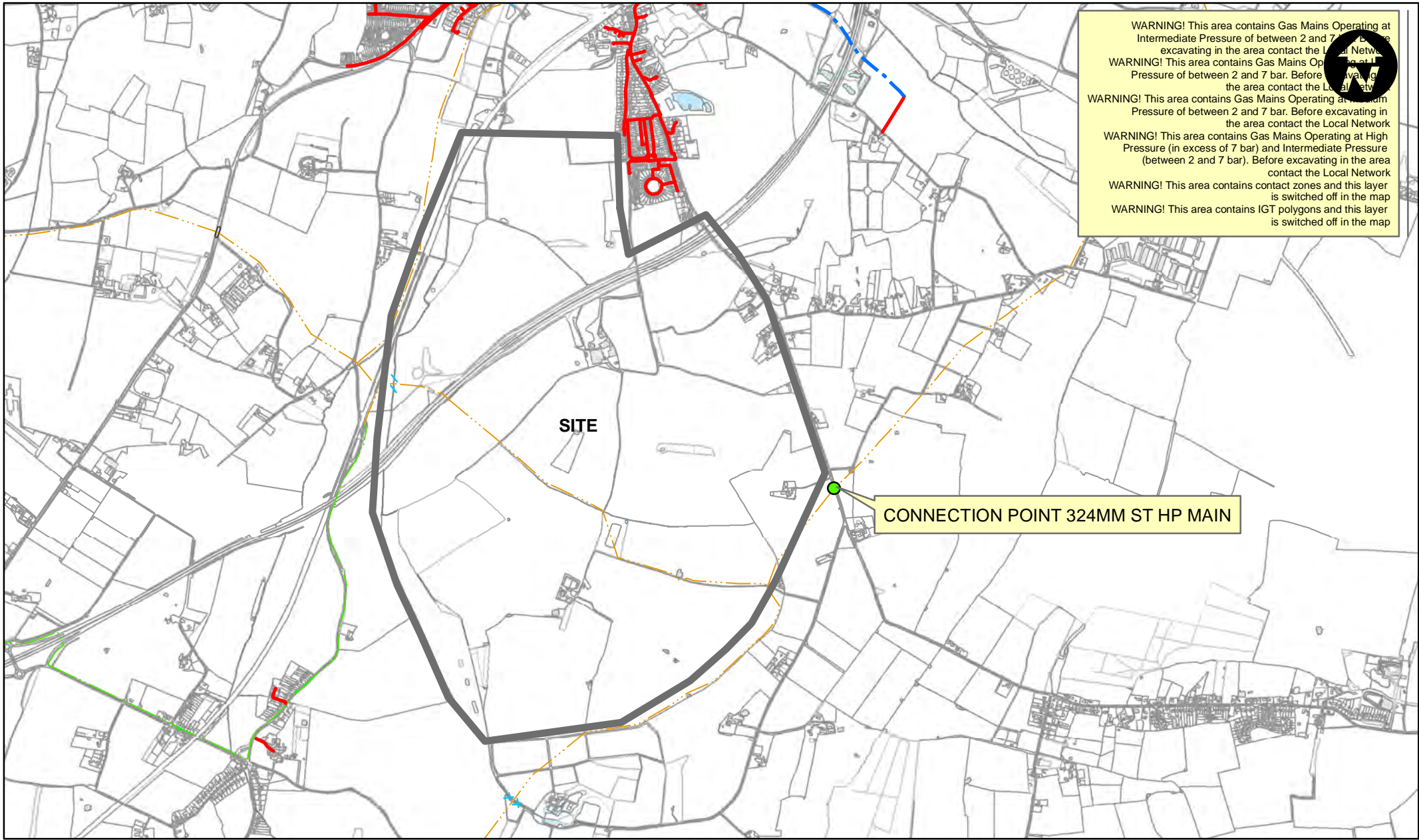
Yours sincerely,

Laura Cheshire



Cadent Gas Limited
Registered No. 10080864
Registered Address Ashbrook Court, Prologis Park, Coventry, CV7 8PE

Letter Id: CRM013
Page 1 of 1



WARNING! This area contains Gas Mains Operating at Intermediate Pressure of between 2 and 7 bar. Before excavating in the area contact the Local Network

WARNING! This area contains Gas Mains Operating at Low Pressure of between 2 and 7 bar. Before excavating in the area contact the Local Network

WARNING! This area contains Gas Mains Operating at Medium Pressure of between 2 and 7 bar. Before excavating in the area contact the Local Network

WARNING! This area contains Gas Mains Operating at High Pressure (in excess of 7 bar) and Intermediate Pressure (between 2 and 7 bar). Before excavating in the area contact the Local Network

WARNING! This area contains contact zones and this layer is switched off in the map

WARNING! This area contains IGT polygons and this layer is switched off in the map

SCALE: 1:500 @ A4
 USER ID:james.mason
 DATE: 12-Feb-2020 09:33:32
 INTERNAL USE ONLY
 OS Ref:611824, 298970
 CENTRE: <Centre>

L/P GAS MAIN	
M/P GAS MAIN	
I/P GAS MAIN	
H/P GAS MAIN	
N/H/P GAS MAIN	
PROPOSED PIPE - LP	
PROPOSED PIPE - MP	
PROPOSED PIPE - IP	
ABANDON - LP	
ABANDON - MP	
Out Of Standard Service	

SCHEME: <NG GDFO Scheme Name>
 DESIGN: <NG GDFO Design Number>
 REVISION: <NG GDFO Revision>

This plan shows those pipes owned by Cadent in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard 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 error 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 any 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.

Some examples of Plant Items:
 Valve Syphon Depth of Cover Change of Dia Change of Material

180012222

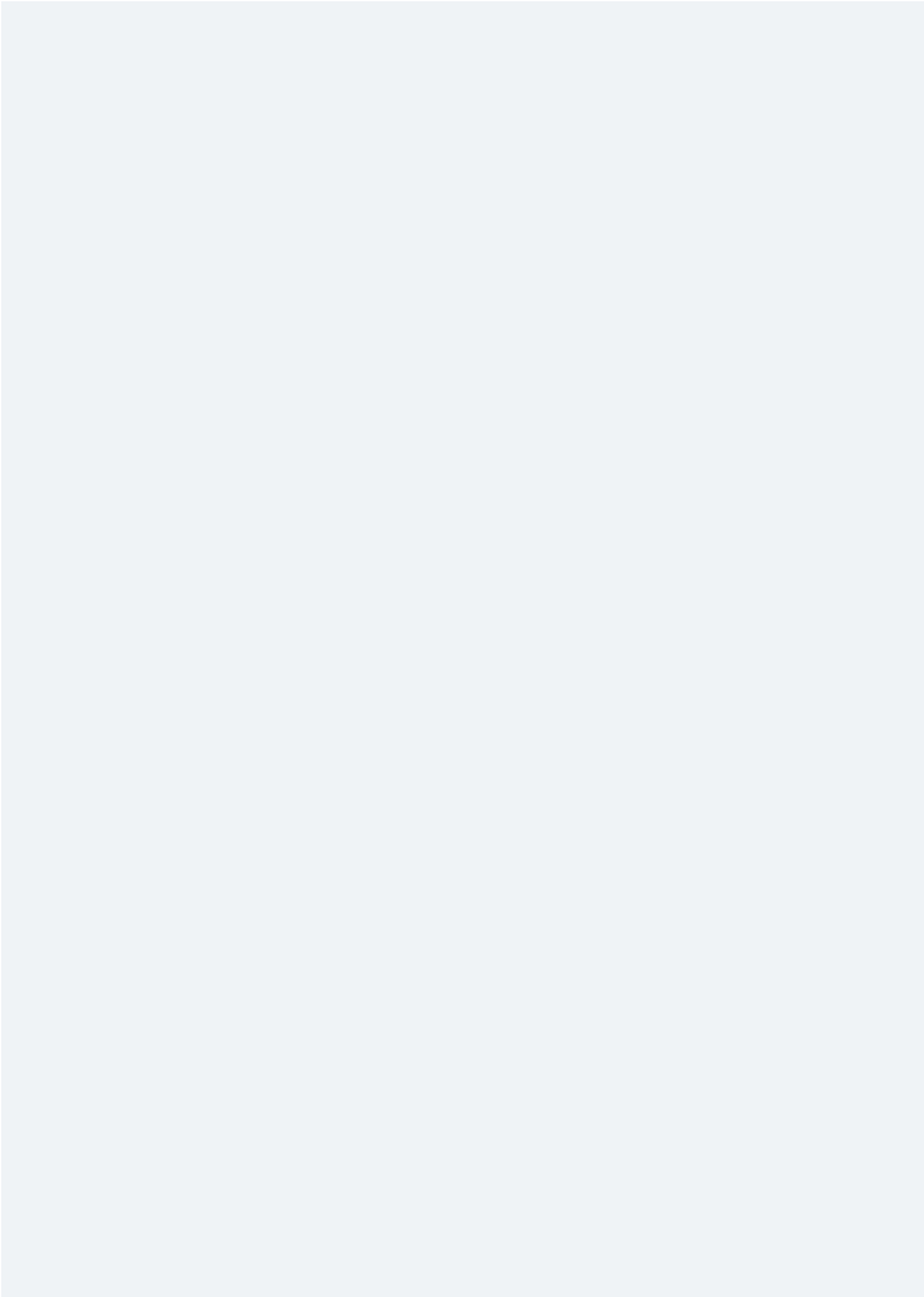


This plan is reproduced from or based on the OS map by Cadent Gas Limited, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved..

Pre-Planning
Assessment Report

SILFIELD GARDEN VILLAGE

155849/904297835/1/0077506



Section 1: Proposed development

Thank you for submitting a pre-planning enquiry. This has been produced for Stantec UK. Your reference number is **155849/904297835/1/0077506**. If you have any questions upon receipt of this report, please contact the Pre-Development team on 03456 066087 or email planningliaison@anglianwater.co.uk.

The response within this report has been based on the following information which was submitted as part of your application:

List of planned developments	
Type of development	No. Of units
Shops	3
Restaurants and cafes	2
Hot food takeaways	2
Business	10
Dwellings	6500
Non-residential	6
Assembly and leisure	1

The anticipated residential build rate is:

Year	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12
Build rate	50	100	250	300	300	300	300	300	300	300	300	3724

Site grid reference no.
TM1135399045

Development type
Greenfield

Planning application status
Unknown

The comments contained within this report relate to the public water mains and sewers indicated on our records. Your attention is drawn to the disclaimer in the useful information section of this report.

Section 2: Assets affected

Our records indicate that we have the following types of assets within or overlapping the boundary of your development site as listed in the table below.

Additionally, it is highly recommended that you carry out a thorough investigation of your proposed working area to establish whether any unmapped public or private sewers and lateral drains are in existence. We are unable to permit development either over or within the easement strip without our prior consent. The extent of the easement is provided in the table below. Please be aware that the existing water mains/public sewers should be located in highway or open space and not in private gardens. This is to ensure available access for any future maintenance and repair and this should be taken into consideration when planning your site layout.

Water and Used water easement information		
Asset type	Pipe size (mm)	Total easement required (m)
Water mains	247	6.00 m either side of the centre line
Water mains	247	6.00 m either side of the centre line
Water mains	72	4.50 m either side of the centre line
Water mains	77	4.50 m either side of the centre line
Water mains	73	4.50 m either side of the centre line
Water mains	247	6.00 m either side of the centre line
Water mains	77	4.50 m either side of the centre line
Water mains	Unknown	3.00 m either side of the centre line
Water mains	109	4.50 m either side of the centre line
Water mains	Unknown	3.00 m either side of the centre line
Water mains	258	6.00 m either side of the centre line
Water mains	258	6.00 m either side of the centre line
Water mains	251	6.00 m either side of the centre line
Water mains	258	6.00 m either side of the centre line
Water mains	77	4.50 m either side of the centre line
Water mains	77	4.50 m either side of the centre line
Water mains	109	4.50 m either side of the centre line
Water mains	258	6.00 m either side of the centre line
Water mains	247	6.00 m either side of the centre line
Water mains	77	4.50 m either side of the centre line
Water mains	77	4.50 m either side of the centre line
Water mains	258	6.00 m either side of the centre line
Water mains	258	6.00 m either side of the centre line
Water mains	247	6.00 m either side of the centre line
Water mains	247	6.00 m either side of the centre line
Water mains	109	4.50 m either side of the centre line
Water mains	77	4.50 m either side of the centre line

Water and Sewer Mains	Number of Mains	Water easement information
Water mains	247	6.00 m either side of the centre line
Water mains	258	6.00 m either side of the centre line
Water mains	Unknown	3.00 m either side of the centre line
Water mains	73	4.50 m either side of the centre line
Water mains	73	4.50 m either side of the centre line
Water mains	81	4.50 m either side of the centre line
Water mains	Unknown	3.00 m either side of the centre line
Water mains	251	6.00 m either side of the centre line
Water mains	247	6.00 m either side of the centre line
Water mains	258	6.00 m either side of the centre line
Sewer mains	150	3.00 m either side of the centre line
Sewer mains	150	3.00 m either side of the centre line

If it is not possible to avoid our assets then these may need to be diverted in accordance with Section 185 of the Water Industry Act (1991). You will need to make a formal application if you would like a diversion to be considered.

Due to the private sewer transfer in October 2011 many newly adopted public used water assets and their history are not indicated on our records. You also need to be aware that your development site may contain private water mains, drains or other assets not shown on our records. These are private assets and not the responsibility of Anglian Water but that of the landowner.

Section 3: Water supply

In examining the available capacity for your development site we assess the capacity and costs for two categories of water main. These are:

Water resource/treatment capacity:

Will require the Little Melton to High Oak transfer scheme.

Strategic:

These are the offsite potable water mains which deliver water within an area to a large number of development sites often across a number of towns. The strategic provision of these water mains enables us to provide of the cheapest solution across a large geographical area.

Local reinforcement:

These are localised reinforcement mains to enable us to provide water to your development site.

On most sites we also have two categories of water mains the Spine Mains and Housing Estate Mains (HEMS). To support your budgeting arrangements we have also examined the estimated cost for delivering the onsite water mains needed for a site of your size.

Water supply network

There is insufficient capacity in the current network to supply this development site and therefore offsite reinforcements are needed. Details of the necessary upgrades can be found in the water infrastructure section of this report and the cost of these works are included in the Zonal charge. If you wish to proceed with the development then you will need to complete an application for a new supply. This is recommended to be done at the earliest opportunity as it could take a minimum of 18 months to install any offsite reinforcement works. The connection point for the site will be from the new water main in the farm track at the site boundary.

Connection point(s)

Connection Point

CP-2273

Address

Farm track

National Grid Reference (NGR)

TM1076999926

Water Infrastructure & Costs

In order to supply your site, the following upgrades are required:

Estimated Local reinforcement Mains	Based on
Silfield new town	Approximately 4200m of 400mm HPPE main from High oak WTW to the site and a new 120 lps (37kW) pumping station at High Oak WTW.

As a result of the recent charging rules published by Ofwat, our charging regime has changed. Your development site will be required to pay a Zonal charge for each new property connecting to our water supply network that benefits from Full planning permission.

Payment of the Zonal charge must be made before premises are connected to our water supply network. More information on the Zonal charge can be found at <http://www.anglianwater.co.uk/developers/charges>

The Zonal charge consists of two elements. The first is called the 'Fixed Element' which is the same in nature to the Infrastructure charge applied prior to April 2018. The second is called the 'Variable Element' which may vary each financial year.

The elements are combined together to create the 2018/19 Zonal charge for Water:

Fixed Element	£ 370
Variable Element	£ 88.50

In most circumstances zonal charges are raised on a standard basis of one charge per new connection (one for water and one for sewerage). However, if the new connection is to non-household premises, the fixed element is calculated according to the number and type of water fittings in the premises. This is called the "relevant multiplier" method of calculating the charge. Details of the relevant multiplier for each fitting can be found at our web-page: <http://www.anglianwater.co.uk/developers/charges/>

The total Zonal charge payable for your site for Water is:

Zonal charge per new connection - Water	No. Of Units	Total amount payable
£ 458.50	6500	£ 2,980,250.00

The estimated* Onsite Water Mains cost for your site is:

Estimated Onsite Water Mains	
Onsite water mains costs	£ 468,000.00

*A detailed cost breakdown will be provided on receipt of a formal application for a new water main.

In addition, you also have the ability to construct the onsite water mains under a self-lay agreement. In such cases, an Asset Payment is made by Anglian Water following commissioning and adoption of the assets. The Asset Payment is calculated as required in the Water Act 2003. For more information on the self-lay of water mains please see <http://www.anglianwater.co.uk/developers/self-lay>.

You will also need to budget for connection costs. Please note that we offer alternative types of connections depending on your needs and these costs are available in our annual charges booklet, which can be downloaded from <http://www.anglianwater.co.uk/developers/charges>

Section 4: Water recycling services

In examining the used water system we assess the ability for your site to connect to the public sewerage network without causing a detriment to the operation of the system. We also assess the receiving water recycling centre and determine whether the water recycling centre can cope with the increased flow and influent quality arising from your development.

Water recycling centre

The foul drainage from this development is in the catchment of Wymondham Water Recycling Centre, which currently does not have capacity to treat the flows from your development site. Anglian Water are obligated to accept the foul flows from your development with the benefit of planning consent and would therefore take the necessary steps to ensure that there is sufficient treatment capacity should the planning authority grant planning permission.

Used water network

There is insufficient capacity within the existing foul water sewerage network serving Wymondham for a development of this size. It is recommended that a foul water drainage strategy for this development considers the option to convey all flows to the Wymondham WRC, which is located on the northwest edge of the town at approx 2.6km from the northern boundary of the development site. As an interim strategy it may be possible to connect initial phases locally. Further analysis will be required in order to evaluate the potential for an interim foul water drainage strategy and enable Anglian Water to provide you with an indicative desktop solution for draining the foul flows from the proposed development. There is no additional charge for this work. Richard Lyon, our Pre-Development Senior Engineer for this area, will be responsible for undertaking this additional work. Richard will contact you shortly to ensure we have sufficient information to evaluate option. For your reference, Richard can be contacted at rlyon@anglianwater.co.uk Please note that Anglian Water will request a suitably worded condition at planning application stage to ensure this strategy is implemented to mitigate the risk of flooding.

It is assumed that the developer will provide the necessary infrastructure to convey flows from the site to the network. Consequently, this report does not include any costs for the conveyance of flows.

Surface water disposal

As you have not requested a connection for surface water flows from the development we assume that your proposed method of surface water management does not relate to Anglian Water operated assets, therefore, we have not assessed the impact of surface water flow. Should the proposed method of surface water management change to include interaction with Anglian Water operated assets, we would wish to be re-consulted to ensure that an effective surface water drainage strategy is prepared and implemented.

As you may be aware, Anglian Water will consider the adoption of SuDs provided that they meet the criteria outline in our SuDs adoption manual. This can be found on our website at <http://www.anglianwater.co.uk/developers/suds.aspx>. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and Lead Local Flood Authority (LLFA), to the criteria within our SuDs adoption manual. Specifically, developers must be able to demonstrate:

1. Effective upstream source control,
2. Effective exceedance design, and
3. Effective maintenance schedule demonstrating that the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDs then an expression of interest form can be found on our website at: <http://www.anglianwater.co.uk/developers/suds.aspx>

The proposed method of surface water disposal is not relevant to Anglian Water; we suggest that you contact the relevant Local Authority, Lead Local Flood Authority, the Environment Agency or the Internal Drainage Board, as appropriate.

Trade Effluent

We note that you do not have any trade effluent requirements. Should this be required in the future you will need our written formal consent. This is in accordance with Section 118 of the Water Industry Act (1991).

Used Water Budget Costs

As a result of the recent charging rules published by Ofwat, our charging regime has changed. Your development site will be required to pay a Zonal charge for each new property connecting to the public sewer that benefits from Full planning permission.

Payment of the Zonal charge must be made before premises are connected to the public sewer. More information on the Zonal charge can be found at <http://www.anglianwater.co.uk/developers/charges>

The Zonal charge consists of two elements. The first is called the 'Fixed Element' which is the same in nature to the Infrastructure charge applied prior to April 2018. The second is called the 'Variable Element' which may vary each financial year.

The elements are combined together to create the 2018/19 Zonal charge for Sewerage:

Fixed Element	£ 370
Variable Element	£ 101

In most circumstances zonal charges are raised on a standard basis of one charge per new connection (one for water and one for sewerage). However, if the new connection is to non-household premises, the fixed element is calculated according to the number and type of water fittings in the premises. This is called the "relevant multiplier" method of calculating the charge. Details of the relevant multiplier for each fitting can be found at our web-page: <http://www.anglianwater.co.uk/developers/charges/>

The total Zonal charge payable for your site for Sewerage is:

Zonal charge per new connection - Sewerage	No. Of Units	Total amount payable
£ 471	6500	£ 3,061,500.00

It has been assumed that the onsite used water network will be provided under a section 104 Water Industry Act application.

It is recommended that you also budget for connection costs. Please note that we offer alternative types of connections depending on your needs and these costs are available at our website.

Section 5: Map of Proposed Connection Points

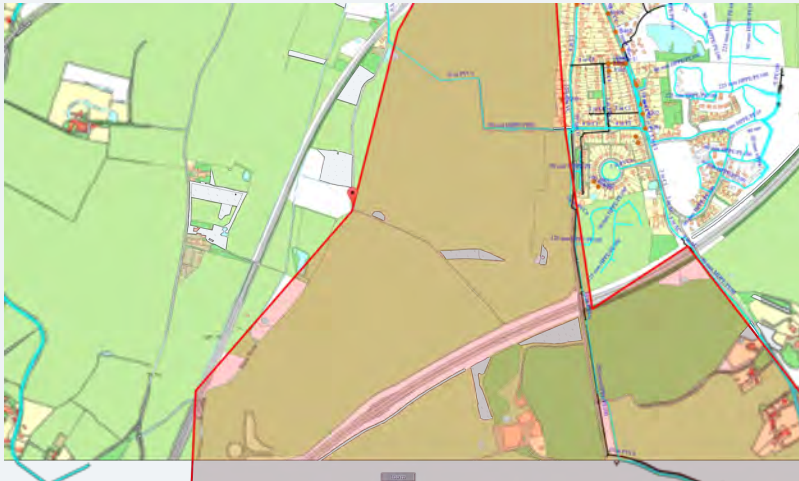


Figure 1: Showing your water point of connection

Section 6: Useful Information

Water

Water Industry Act – Key Water Sections:

Section 41:

This provides you with the right to requisition a new water main for domestic purposes to connect your site to the public water network.

Section 45:

This provides you with the right to have a connection for domestic purposes from a building or part of a building to the public water main.

Section 51A - E

This provides you with the right to provide the water main or service connection yourself and for us to vest them into our company.

Section 55:

This applies where you request a supply of water for non domestic purposes.

Section 185:

This provides you with the right to make a reasonable request to have a public water main, sewer or public lateral drain removed or altered, at your expense. Details on how to make an application and the s185 form is available on our website at <http://www.anglianwater.co.uk/developers> or via our Development Services team on 03456 066087.

Details on how you can make a formal application for a new water main, new connection or diversion are available on from our Development Services team on 03456 066087 or via our website at <http://www.anglianwater.co.uk/developers>

If you have any other queries on the rights to requisition or connect your housing to the public water and sewerage infrastructure then please contact our Development Services team at: Developer Services, Anglian Water, PO Box 495, Huntingdon, PE29 6YY or Telephone: 0345 60 66 087 or Email: developerservices@anglianwater.co.uk

Water pressure and flow rate: The water pressure and consistency that we must meet for your site is laid out in the Water Industry Act(1991). This states that we must supply a flow rate of 9 litres per minute at a pressure of 10 metres of head to the external stop tap. If your water pressure requirements exceed this then you will need to provide and maintain any booster requirements to the development site.

Self Lay of Water Mains: A list of accredited Self Lay Organisations can be found at <https://www.lr.org/en/utilities/water-industry-registration-scheme-wirs-wirsae/search/>

Used water

Water Industry Act – Key Used Water Sections:

Section 98:

This provides you with the right to requisition a new public sewer. The new public sewer can be constructed by Anglian Water on your behalf. Alternatively, you can construct the sewer yourself under section 30 of the Anglian Water Authority Act 1977.

Section 102:

This provides you with the right to have an existing sewerage asset vested by us. It is your responsibility to bring the infrastructure to an adoptable condition ahead of the asset being vested.

Section 104:

This provides you with the right to have a design technically vetted and an agreement reached that will see us adopt your assets following their satisfactory construction and connection to the public sewer.

Section 106:

This provides you with the right to have your constructed sewer connected to the public sewer.

Section 185:

This provides you with the right to have a public sewerage asset diverted.

Details on how to make a formal application for a new sewer, new connection or diversion are available on our website at <http://www.anglianwater.co.uk/developers> or via our Development Services team on 03456 066087.

Sustainable drainage systems:

Many existing urban drainage systems can cause problems of flooding, pollution or damage to the environment and are not resilient to climate change in the long term. Therefore our preferred method of surface water disposal is through the use of Sustainable Drainage Systems (SuDS). SuDS are a range of techniques that aim to mimic the way surface water drains in natural systems within urban areas. For more information on SuDS, please visit our website at <http://www.anglianwater.co.uk/developers/suds.aspx> . We also recommend that you contact the Local Authority and Lead Local Flood Authority (LLFA) for the area to discuss your application.

Private sewer transfers:

Sewers and lateral drains connected to the public sewer on the 1 July 2011 transferred into Water Company ownership on the 1 October 2011. This follows the implementation of the Floods and Water Management Act (FWMA). This included sewers and lateral drains that were subject to an existing Section 104 Adoption Agreement and those that were not. There were exemptions and the main non-transferable assets were as follows:

- Surface water sewers and lateral drains that did not discharge to the public sewer, e.g. those that discharged to a watercourse.
- Foul sewers and lateral drains that discharged to a privately owned sewage treatment/collection facility.
- Pumping stations and rising mains will transfer between 1 October 2011 and 1 October 2016.

The implementation of Section 42 of the FWMA will ensure that future private sewers will not be created. It is anticipated that all new sewer applications will need to have an approved section 104 application ahead of a section 106 connection.

Encroachment:

Anglian Water operates a risk based approach to development encroaching close to our used water infrastructure. We assess the issue of encroachment if you are planning to build within 400 metres of a water recycling centre or, within 15 metres to 100 metres of a pumping station. We have more information available on our website at <http://anglianwater.co.uk/developers/encroachment.aspx>

Locating our assets:

Maps detailing the location of our water and used water infrastructure including both underground assets and above ground assets such as pumping stations and recycling centres are available from . All requests from members of the public or non-statutory bodies for maps showing the location of our assets will be subject to an appropriate administrative charge. We have more information on our website at: <http://www.anglianwater.co.uk/developers/our-assets/>

Summary of charges:

A summary of this year's water and used water connection and infrastructure charges can be found at <http://www.anglianwater.co.uk/developers/charges>

Disclaimer:

The information provided in this report is based on data currently held by Anglian Water Services Limited ('Anglian Water') or provided by a third party. Accordingly, the information in this report is provided with no guarantee of accuracy, timeliness, completeness and is without indemnity or warranty of any kind (express or implied).

This report should not be considered in isolation and does not nullify the need for the enquirer to make additional appropriate searches, inspections and enquiries. Anglian Water supports the plan led approach to sustainable development that is set out in the National Planning Policy Framework ('NPPF') and any infrastructure needs identified in this report must be considered in the context of current, adopted and/or emerging local plans. Where local plans are absent, silent or have expired these needs should be considered against the definition of sustainability holistically as set out in the NPPF.

Whilst the information in this report is based on the presumption that proposed development obtains planning permission, nothing in this report confirms that planning permission will be granted or that Anglian Water will be bound to carry out the works/proposals contained within this report.

No liability whatsoever, including liability for negligence is accepted by Anglian Water, or its partners, employees or agents, for any error or omission, or for the results obtained from the use of this report and/or its content. Furthermore in no event will any of those parties be liable to the applicant or any third party for any decision made or action taken as a result of reliance on this report.

This report is valid for the date printed and the enquirer is advised to resubmit their request for an up to date report should there be a delay in submitting any subsequent application for water supply/sewer connection(s).

Stantec

· Connect 38
1 Dover Place
Ashford
Kent
TN23 1FB

FAO: Michelle Hawkett

Our Ref: BQRA41/833297/JS
Your Ref:

12th March 2020

Dear Madam

**Openreach Alterations Silfield Garden Village
Silfield Road Wymondham
Electronic Communication Code**

Thank you for your Draft Scheme dated 9th March 2020 and copy of your drawing numbered SIL001-018. I enclose plans showing approximate positions of Openreach apparatus.

It would appear, from your proposals, that alterations to existing Openreach apparatus may be necessary.

A budget estimate of the possible cost of diverting Openreach apparatus is £26,371.80 including VAT.

Prior to any works involving Openreach apparatus, we must agree a Specification and provide a Detailed Estimate of costs to the Principal or Promoter of this project. The costs incurred in producing the Specification and Detailed Estimate are chargeable and for this scheme are estimated to be £2,192.83 including VAT. The charge applies whether or not your works proceed to execution. Your payment in advance, for the estimated cost of the design work, will be required before any works proceed on this scheme.

It is stressed that these figures are estimates, intended as a guide, and the actual amount could be significantly different. The actual costs incurred will be charged whether they are more or less than the estimate.

None of the materials required has a lead time of greater than 3 months and therefore advance ordering should not be required.

Repayments (Alterations)

Russell House
St Andrews Steet
Norwich
Norfolk
NR2 4AE

tel 0207 809 5662
fax
mob
Web <http://www.openreach.co.uk>
email jamie.4.smith@openreach.co.uk

Openreach Limited
Registered office:
Kelvin House, 125 Judd Street, London WC1H 9NP
Registered in England no. 10690039

www.openreach.co.uk
rebuild

In order to avoid potential damage to our apparatus, we offer a free site visit service to locate and mark the position of Openreach apparatus within your work area. To arrange a site visit from a Network Protection Team call Fax: Email: cbyd@openreach.co.uk

Please be aware that any duct and poles owned and controlled by Openreach can be used by third party Communications Providers (CP) for the installation of their cables and apparatus if they have a contract with us for our Physical Infrastructure Access (PIA) product. The CP must, however, place an order with us for PIA before they install their cables or apparatus. If such CP cables or apparatus are identified in our network within your area of interest, I will identify a contact for the affected CP and advise them of your proposals. I will pass these contact details on to you and liaise with the CP so that they are aware of any diversionary requirements relating to your proposals. You will be contacted directly by the affected third party CP - they will advise you of any associated chargeable costs relating to their cable and apparatus diversions. If you have any queries or concerns relating to this aspect of the Openreach operated network, please don't hesitate in contacting me. Please note Openreach Limited will not be held liable for any delays, costs, losses or damage caused by the third party CP

Yours faithfully

Jamie Smith
Repayments Project Engineer

Repayments (Alterations)

Russell House
St Andrews Steet
Norwich
Norfolk
NR2 4AE

tel 0207 80 9 5662
fax
mob
Web <http://www.openreach.co.uk>
email Jamie4.sm1th@openreach.co.uk

rebuild



Network Alterations Diversionary Works Payment Details

Please forward your order (free from contractual conditions) and the estimated sum of £2,192.83 (including VAT).

There are two ways to pay:

1. By Cheque

- This is our preferred method of payment
- Please make cheques payable to **British Telecommunications Plc**
- Send your cheque with your order / letter of authorisation to proceed with the works to the Project Engineer shown below (order not to contain contractual conditions)
- Write your cheque number here: _____
- Write the cheque amount here: £ _____

2. Using Bank Automated Clearing Services (BACS)

When your order / letter of authorisation to proceed with the works has been received an invoice for payment will be returned with the necessary BACS payment details.

Please quote the Openreach reference number / invoice number otherwise payment may not be allocated to your job.

N.B. For either method of payment please complete this form and return with your order / letter of authorisation to the Project Engineer, address below. Please remember, however you pay, the works will not commence until this form and your payment have been received.

Title/Location of Work	Openreach Alterations Silfield Garden Village, Silfield Road Wymondham
Project Engineer Name	Jamie Smith
Postal Address	Russell House, St Andrews Steet, Norwich, Norfolk, NR2 4AE
Openreach Reference	BQRA41/833297/JS
Company Name	Stantec
Client Contact	Michelle Hawkett
Client Tel	

For advice or assistance in completing this form please call Jane Goodison No: 0131 345 0016 for all other queries contact Jamie Smith 01603 281394
Our VAT number is 245719348

Repayments (Alterations)

Russell House
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mob
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rebuild

- Site Boundary
- Residential
- Employment
- Mixed Use
- Secondary School
- Primary School
- Infrastructure
- Formal Pitches
- Green Space
- Informal Open Space
- Ancient Woodland
- Retained Woodland
- ✳ SuDS Attenuation
- Gas (HP)
- HSE Consultation Zone (Outer)
- Indicative Street Connection

OPENREACH NETWORK LOCATED NORTH SIDE OF A11 (SEE NETWORK PLAN 1). NETWORK WILL BE AFFECTED BY PROPOSED JUNCTION. SITE SURVEY REQUIRED TO CONFIRM IF ROUTE IS STILL IN USE OR BECOME DUE TO CUSTOMER SCHEME. ESTIMATED COSTS FOR LIKE FOR LIKE DIVERSION AT C3 STAGE.

CUSTOMER PLAN SHOWS RESIDENTIAL AREA OVER EXISTING PROPERTIES SO I PRESUME THESE WILL BE PURCHASED AND DEMOLISHED SO NO ZERO COST AT C3 STAGE AS DIVERSION OF NETWORK WILL NOT BE REQUIRED

OPENREACH NETWORK LOCATED EAST SIDE OF SILFIELD ROAD (SEE NETWORK PLAN 2). IF CONNECTING ROAD TIES IN ON SOUTH SIDE ONLY, THERE WILL BE NO DIVERSIONS REQUIRED. ZERO COST AT C3 STAGE

Rev	Description	Date
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Client:

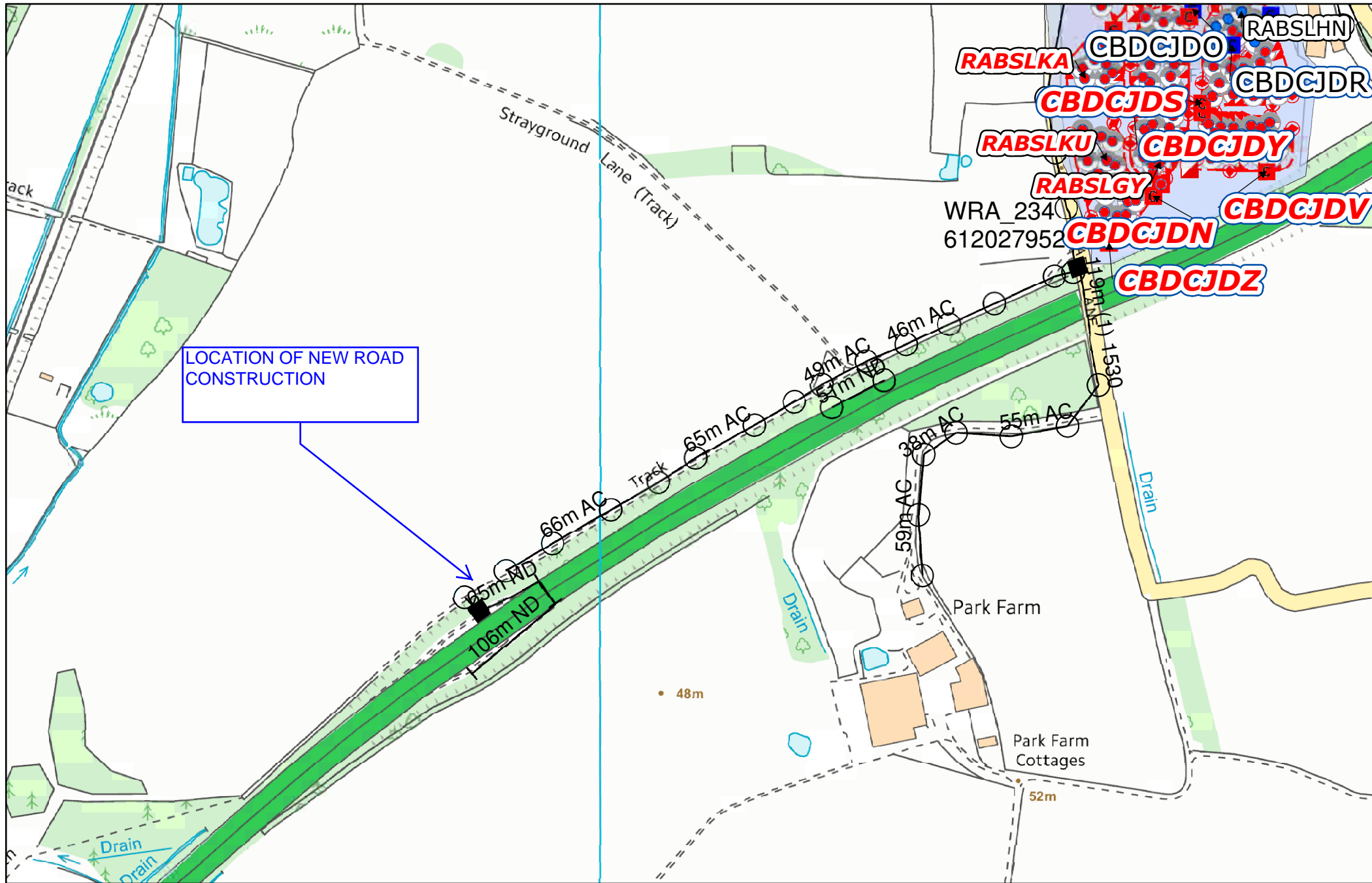
Silfield Garden Village
Initial Masterplan

Scale@A3: **1:10,000** Drawn: **CE** Designed: **-** Approved: **IW**
0 400 m

Drawing Number: **SIL001-018** Revision: **-** Date: **21/02/2020**

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., G Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Ho
50 North Thirteenth Street, Central Milton Keynes, MK9 3BP
01908 666276 mail@davidlock.com davidlock.com





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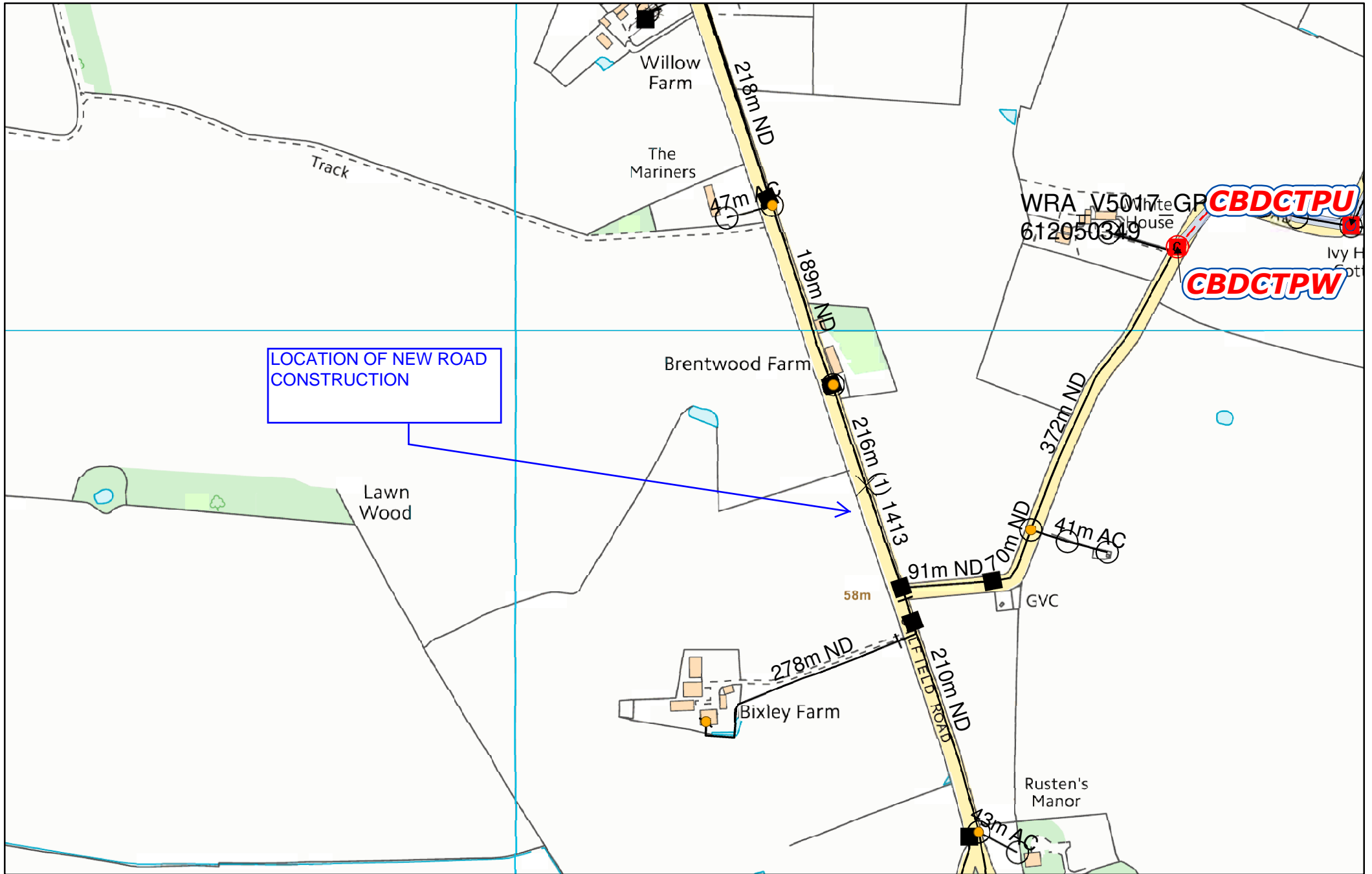
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NETWORK PLAN 1

openreach



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NETWORK PLAN 2

openreach

Appendix E HSE Land Use Planning Methodology

HSE'S LAND USE PLANNING METHODOLOGY

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[The principles behind HSE's land use planning methodology](#)

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- [Rule 1 – straddling developments](#)
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[Annex 2 - Types of development to consult on under the Town and Country Planning \(Development Management Procedure\) \(England\) Order 2015, the Town and Country Planning \(Development](#)

Management Procedure) (Wales) Order 2012 and the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

Annex 3 - HSE'S approach to land use planning

Annex 4 - Contact

Introduction

1. The Health and Safety Executive (HSE) is a statutory consultee on certain developments in the vicinity of major hazard sites and major accident hazard pipelines. HSE's land use planning (LUP) advice is based on the methodology set out in this document, and in the majority of cases HSE's advice is provided through HSE's Planning Advice Web App.

Background to HSE's involvement in land use planning

2. Major accidents at sites storing hazardous substances are rare, but when they do happen the effects on people living nearby can be devastating. This became apparent following the Flixborough incident in the UK in 1974, more recently at Buncefield in 2005 and across Europe for example at Enschede in The Netherlands in 2000. HSE first offered advice to Planning Authorities (PA) in 1972 and this was introduced across the EU by the 1996 Seveso II Directive, which was replaced in 2012 by the Seveso III Directive (See Annex 1). The simple aim is to manage population growth close to such sites to mitigate the consequences of a major accident.

3. HSE sets a consultation distance (CD) around major hazard sites and major accident hazard pipelines after assessing the risks and likely effects of major accidents at the major hazard. Major hazards comprise a wide range of chemical process sites, fuel and chemical storage sites, and pipelines. The CDs are based on available scientific knowledge using hazard /risk assessment models updated as new knowledge comes to light. Major accidents are also closely studied. The PA is notified of this CD and has a statutory duty to consult HSE on certain proposed developments within it (see Annex 2), and this should be done through HSE's Planning Advice Web App. HSE's response will be that HSE either 'advises against' or 'does not advise against' the granting of planning permission on safety grounds that arise from the possible consequences of a major accident at the major hazard. The PA must take this advice into account when they make a decision on the planning application.

4. PAs have consulted HSE for many years on planning applications and proposed developments within the CD of major hazards. In 2006/2007, HSE provided PAs with direct on-line access to a software decision support tool known as PADHI+ (Planning Advice for Developments near Hazardous Installations), based on HSE's methodology, for them to use to consult HSE for advice on the majority of planning applications rather than having to contact HSE directly.

5. In 2015, PADHI+ was replaced by the HSE Planning Advice Web App, which PAs should now use to consult HSE for advice. The Web App is also available to developers to use to identify if a proposed development site lies within the CD of a major hazard; if it does, they can also use the Web App to obtain HSE's pre-application advice on their proposal, although there is a charge for that particular service.

6. For more background information see Annex 1 – HSE's land use planning advice provision.

The principles behind HSE's land use planning methodology

7. HSE's land use planning methodology is based on the following principles:

- The risk considered is the residual risk which remains after all reasonably practicable preventative measures have been taken to ensure compliance with the requirements of the Health and Safety at Work etc. Act 1974 and its relevant statutory provisions.
- Where it is beneficial to do so, advice takes account of risk as well as hazard, that is the likelihood of an accident as well as its consequences.
- Account is taken of the size and nature of the proposed development, the inherent vulnerability of the exposed population and the ease of evacuation or other emergency procedures for the type of development proposed. Some categories of development (e.g. schools and hospitals) are regarded as more sensitive than others (e.g. light industrial) and advice is weighted accordingly.
- Consideration of the risk of serious injury, including that of fatality, attaching weight to the risk where a proposed development might result in a large number of casualties in the event of an accident.

HSE's Planning Advice Web App

8. The HSE Planning Advice Web App is the name given to the software used to provide HSE's LUP advice to PAs on proposed developments near major hazard sites and major accident hazard pipelines. It replaced PADHI+ in 2015, and uses the methodology which HSE has used since 2002, which codified the principles used by HSE in providing LUP advice since the 1970s.

9. HSE's Planning Advice Web App can also be used by PAs and developers to obtain HSE's advice on a pre-planning enquiry (PPE) provided sufficient information is available. Developers will be charged for that service. Any decision on a PPE will be conditional on the assessment of the formal planning application which will be made using the information that is appropriate and relevant when HSE is consulted by the PA.

10. Very exceptionally there may be cases of development where the use of HSE's Planning Advice Web App alone is inappropriate and HSE will take account of wider factors so that the usual criteria can be usefully complemented.

11. There are some types of development on which HSE's Planning Advice Web App is currently unable to provide advice. When such cases are identified during a consultation, the PA or developer will be advised to contact HSE directly for advice. These include:

- developments which involve more than 5 separate development types
- mixed-use developments where two or more development types share the same footprint at different levels
- developments which involve a small extension to an existing facility
- developments on a major hazard site which are under the control of the operator of the major hazard site.

What HSE's methodology does not deal with

12. There are a number of aspects of HSE's land use planning and major hazards work that HSE's methodology and HSE's Planning Advice Web App does not deal with.

Incremental development around major hazard sites and major accident hazard pipelines

13. Where HSE has previously advised against a development (particularly where there is a history of incremental development), or where there has already been a Planning Inquiry into a development, the HSE Planning Advice Web App cannot take account of such matters and it is expected that PAs will take this additional information into account when deciding whether or not to grant planning permission.

14. Para 069 of Planning Practice Guidance 'Hazardous Substances – handling development proposals around hazardous installations' advises planning authorities to be alert to encroachment of development in consultation zones, including where larger developments are divided between smaller applications to fall below consultation thresholds. Planning authorities are advised to consult HSE in such cases.

Developments within the Development Proximity Zone (DPZ) of large-scale petrol storage sites

15. Following the Buncefield incident in 2005, HSE reviewed the CDs of all sites which met the criteria for large-scale petrol storage sites, and an additional zone – a Development Proximity Zone (DPZ) was introduced 150 metres from the boundary of the relevant storage tank bunds. HSE's approach to providing land use planning advice on developments in the vicinity of such sites can be found in SPC/Tech/Gen/49 – 'Land use planning advice around large-scale petrol storage sites'. HSE's Planning Advice Web App cannot be used to determine HSE's advice on developments within the DPZ, and PAs must refer any planning applications or pre-planning enquiries which involve such a development to HSE.

Applications for Hazardous Substances Consent

16. These require the specialist skills and knowledge of HSE risk assessors to determine the potential risks and consequences from the hazardous substances in the Consent application. HSE will advise the Hazardous Substances Authority if they should grant consent and will also set a CD, usually comprising three consultation zones (inner, middle and outer – see Annex 3 for LUP purposes for these sites).

Notification of Major Accident Hazard Pipelines by pipeline operators

17. These require the specialist skills and knowledge of HSE Pipelines Inspectors to determine if the potential consequences of the pipelines being approved are acceptable. HSE will then determine the sizes of the 3 zones to be used for LUP purposes basing their assessment on the pipeline details notified to HSE by the pipeline operator.

Applications for Licensed Explosive Sites

18. These require the specialist skills and knowledge of HSE's Explosives Inspectors to determine if the potential consequences of the explosives site being approved are acceptable. They will also determine the safeguarding zones and then advise on any planning consultations within those zones.

Consultations on applications for developments in the vicinity of Licensed Explosives sites or Licensed Nuclear Installations

19. PAs should forward such consultations to HSE's Explosives Inspectorate or the Office for Nuclear Regulation (ONR) as appropriate.

Developments near Major Accident Hazard Pipelines where the pipelines have sections with additional protection measures

20. HSE's Planning Advice Web App uses the 3 consultation zones set by HSE which are based on the details given in the pipeline notification. This covers the whole length of the pipeline and the Web App is unable to accommodate any isolated local variations. If HSE advises against the granting of planning permission due to the proximity of a proposed development to a pipeline, then the option is given to check with the pipeline operator to see if the pipeline has additional protection (e.g. thicker walled pipe) near the proposed development. If so, then HSE's risk assessors are willing to reconsider the case using the details of the pipeline specification relevant to the pipeline near the development. HSE will charge for this service if it is provided as part of the pre-application advice process.

Retrospective advice on developments when a decision has been made by the planning authority

21. HSE does not give retrospective advice on planning applications where a decision has already been made by the planning authority. However, this does not remove the responsibility on the planning authority to take account of public safety in their planning decisions, which in some cases is required by European Directive. Where a decision should have been made with the benefit of HSE's advice, but was not, then it is for the planning authority to consider whether to take any remedial action, which could include revocation of any permission granted.

When to consult HSE

22. HSE should be consulted on any developments which lie within the CD of a major hazard site or a major accident hazard pipeline and which meet the criteria (see Annex 2 for details) set out in:

- the Town and Country Planning (Development Management Procedure) (England) Order 2015,
- the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 and
- the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013.

How HSE's advice is determined

23. HSE's advice is usually determined by a combination of:

- the consultation zone in which the development is located, of the 3 zones that make up the CD set by HSE around the major hazard (see paragraph 26 and Figures 1 and 2); and
- the 'Sensitivity Level' of the proposed development which is derived from HSE's categorisation system of "Development Types" (see paragraphs 34-38).

24. Additionally there are situations where 'rules' may be applied when dealing with the more complex cases in which any of the following apply:

- the development is located in more than one zone
- more than one major hazard is involved
- the proposal involves more than one Development Type (using HSE's categorisation method)
- the development involves a small extension to an existing facility.

25. A decision matrix (see paragraph 39), using the combination of the consultation zone and sensitivity level will determine HSE's response, which will be that HSE either 'Advise Against' or 'Does Not Advise Against' the granting of planning permission for the proposed development.

26. In some cases, a development may involve several different Development Types. In these situations, the combination of consultation zone and Sensitivity Level is considered for each individual Development Type. If any individual Development Type receives an 'Advise Against' response, **then HSE's response for the whole proposal will be 'Advise Against'**.

HSE Consultation distances and consultation zones

27 The consultation zones are normally determined by a detailed assessment of the risks and/or hazards of the installation or pipeline which takes into account the following factors; the quantity of hazardous substances for which the site has hazardous substances consent and details of the storage and/or processing; the hazard ranges and consequences of major accidents involving the toxic and/or flammable and/or other hazardous substances that could be present. The risks and hazards from the major hazard are greatest in the Inner Zone and hence the restrictions on development are strictest within that zone. The CD comprises the land enclosed by all the zones and the installation itself (See Annex 3 for further information).

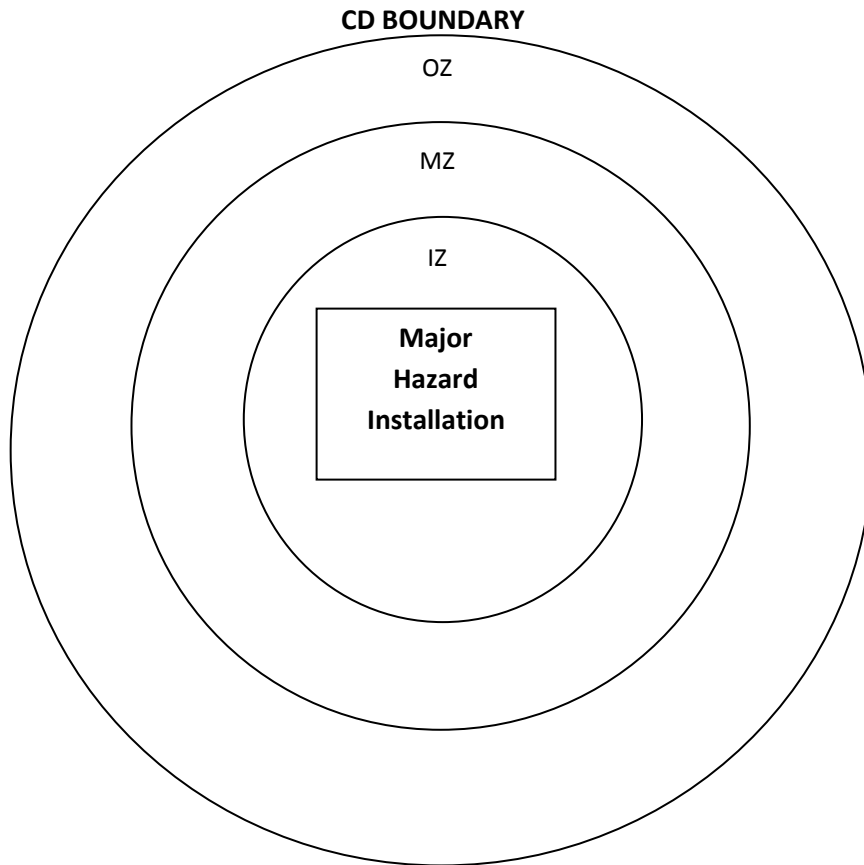


Figure 1 Three zone map

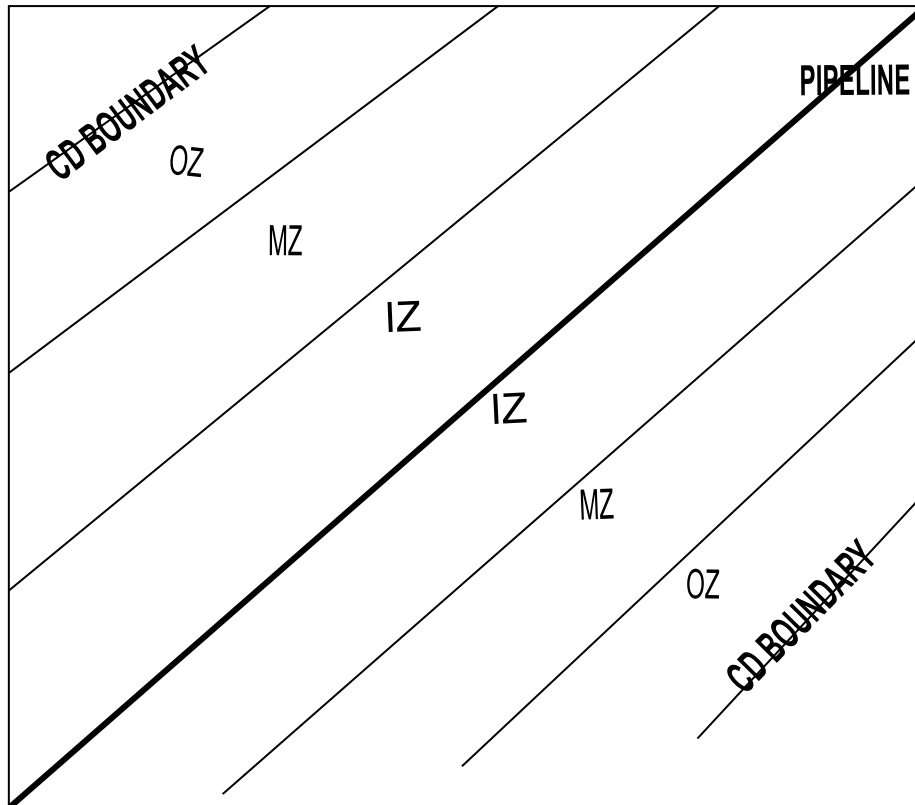


Figure 2 Pipeline zones

Development details

28. The Sensitivity Level of a proposed development will be determined by the Development Type(s) involved and the size and scale of each Development Type (see Tables 1-4).

29. A development proposal may consist of a number of different Development Types and may lie within more than one consultation zone of one or more hazardous installations or pipelines. If a Development Type lies within two or more consultation zones of the CD of a major hazard, including the outer zone and outside the CD, Rule 1 – straddling developments – will be applied to decide the zone in which the whole Development Type is considered to lie when using the decision matrix (see paragraphs 43-45). For a development involving several different Development Types, each combination of consultation zone and Sensitivity Level is considered. If any individual Development Type receives an Advise Against decision **then the overall advice for the whole proposal will be Advise Against.**

30. In certain circumstances where a development is considered to be a small extension to an existing facility, an 'Advise Against' response may be changed to 'Does Not Advise Against'; see Rule 4b (see paragraph 50).

Identifying developments

31. Where a development proposal includes more than one Development Type, all individual Development Types are identified and considered separately. All facilities that involve the same Development Type, but which are physically separated from each other, are aggregated together to determine the Sensitivity Level for that Development Type and subsequently to determine the advice. For example, a development may involve several individual buildings, each of which falls into the category of 'indoor use by the public' such as shops, a cinema and a library; these are all aggregated when determining the sensitivity level of that Development Type. However, any facilities that lie entirely outside the CD are discounted when determining the Sensitivity Level.

32. Developments with a sensitivity level of SL4 (i.e. Institutional accommodation and education and large outdoor use by public developments) are not aggregated with facilities of the same Development Type with a lower sensitivity level.

Assessing developments

33. HSE's advice is assessed for each individual Development Type, taking account of:

- the sensitivity level of the Development Type
- the zone in which the Development Type lies – after applying Rule 1 – 'Straddling developments' and/or Rule 2 - 'Multiple major hazards' if appropriate.

34. This process is repeated for each different Development Type identified. An 'Advise Against' response for any single Development Type will dominate the HSE's advice for the overall consultation and lead to the whole consultation being advised against.

Decision matrix

35. Having determined which consultation zone a Development Type falls into, after applying the straddling rule if necessary, and the Sensitivity Level of the development, the following matrix is used to decide HSE's advice.

Level of Sensitivity	Development in Inner Zone	Development in Middle Zone	Development in Outer Zone
1	DAA	DAA	DAA
2	AA	DAA	DAA
3	AA	AA	DAA
4	AA	AA	AA

DAA = Don't Advise Against development

AA = Advise Against development

36. If all Development Types in a consultation result in a DAA response, then DAA is the final HSE advice.

37. If any individual Development Type gives an AA response, then the result for the consultation is AA. If a development which HSE has advised against involves an extension to an existing facility, HSE will reconsider this advice and may revise the advice if it involves a small extension – see paragraph 50

Introduction to Sensitivity Levels

38. The Sensitivity Levels are based on a clear rationale in order to allow progressively more severe restrictions to be imposed as the sensitivity of the proposed development increases. There are 4 sensitivity levels:

- Level 1 – Based on normal working population
- Level 2 – Based on the general public – at home and involved in normal activities
- Level 3 – Based on vulnerable members of the public (children, those with mobility difficulties or those unable to recognise physical danger) and
- Level 4 – Large examples of Level 3 and very large outdoor developments.

39. Development Types are used as a direct indicator of the Sensitivity Level of the population at the proposed development. Exceptions are made for some very large or very small developments by assigning them a higher or lower Sensitivity Level than normal for that Development Type.

40. The tables below expand on the four basic Development Types:

- 1 – People at work, Parking
- 2 – Developments for use by the general public
- 3 – Developments for use by vulnerable people
- 4 – Very large and sensitive developments

41. The tables show the Development Types (first column) with examples of each type of development given in column 2 (these are only a guide – they are not exhaustive). Fuller details that are needed to determine the Sensitivity Level of any particular development proposal are given in column 3. As a general principle, the Sensitivity Level is decreased by one for small examples of a particular Development Type and increased for large and very large examples, or where particular features of the development increase the risk to the population. These exceptions are identified in the tables under the EXCLUSIONS for each type of development (and identified as x1, x 2 etc.). The Justification column shows the rationale for the allocation of the Sensitivity Level to each Development Type.

42. All facilities of the same Development Type which are completely and/or partly inside the CD are aggregated in determining the Sensitivity Level. Any facilities that are entirely outside the CD are discounted when determining the Sensitivity Level. For example all housing areas within the CD are aggregated to determine the overall Sensitivity Level of a housing development, but any housing area which lies completely outside the CD is not included. The only exception to the aggregation is Sensitivity Level 4 developments involving outdoor use by the public or institutional accommodation and education – see paragraph 47.

Development Type Tables

Table 1 Development type: People at work, Parking

DT1.1 – Workplaces

DT1.2 – Parking Areas

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
DT1.1 – WORKPLACES	Offices, factories, warehouses, haulage depots, farm buildings, non-retail markets, builder’s yards	Workplaces (predominantly non-retail), providing for less than 100 occupants in each building and less than 3 occupied storeys – Level 1	Places where the occupants will be fit and healthy, and could be organised easily for emergency action. Members of the public will not be present or will be present in very small numbers and for a short time
	EXCLUSIONS		
		DT1.1 x1 Workplaces (predominantly non-retail) providing for 100 or more occupants in any building or 3 or more occupied storeys in height – Level 2 (except where the development is at the major hazard site itself, where it remains Level 1)	Substantial increase in numbers at risk with no direct benefit from exposure to the risk

	Sheltered workshops, Remploy	DT1.1 x2 Workplaces (predominantly non-retail) specifically for people with disabilities – Level 3	Those at risk may be especially vulnerable to injury from hazardous events and / or they may not be able to be organised easily for emergency action
DT1.2 – PARKING AREAS	Car parks, truck parks, lock-up garages	Parking areas with no other associated facilities (other than toilets) – Level 1	
	EXCLUSIONS		
	Car parks with picnic areas, or at a retail or leisure development, or serving a park and ride interchange	DT1.2 x1 Where parking areas are associated with other facilities and developments the sensitivity level and the decision will be based on the facility or development	

Table 2 Development type: Developments for use by the general public

DT2.1 – Housing

DT2.2 – Hotel / Hostel / Holiday Accommodation

DT2.3 – Transport Links

DT2.4 – Indoor Use by Public

DT2.5 – Outdoor Use by Public

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
DT2.1 – HOUSING	Houses, flats, retirement flats / bungalows, residential caravans, mobile homes	Developments up to and including 30 dwelling units and at a density of no more than 40 per hectare – Level 2	Development where people live or are temporarily resident. It may be difficult to organise people in the event of an emergency
	Exclusions		
	Very small developments including infill and backland developments	DT2.1 x1 Developments of 1 or 2 dwelling units – Level 1	Minimal increase in numbers at risk
	Larger housing developments	DT2.1 x2 Larger developments for more than 30 dwelling units – Level 3	Substantial increase in numbers at risk
		DT2.1 x3 Any developments (for more than 2 dwelling units) at a density of more than 40 dwelling units per hectare – Level 3	High-density developments
DT2.2 – HOTEL / HOSTEL / HOLIDAY ACCOMMODATION	Hotels, motels, guest houses, hostels, youth hostels, holiday camps, holiday homes, halls of residence, dormitories, accommodation centres, holiday caravan sites, camping sites	Accommodation up to 100 beds or 33 caravan / tent pitches – Level 2	Development where people are temporarily resident. It may be difficult to organise people in the event of an emergency
	Exclusions		
	Smaller – guest houses, hostels, youth	DT2.2 x1 Accommodation of less	Minimal increase in numbers at risk

	hostels, holiday homes, halls of residence, dormitories, holiday caravan sites, camping sites	than 10 beds or 3 caravan / tent pitches – Level 1	
	Larger – hotels, motels, hostels youth hostels, holiday camps, holiday homes, halls of residence, dormitories, holiday caravan sites, camping sites	DT2.2 x2 Accommodation of more than 100 beds or 33 caravan / tent pitches – Level 3	Substantial increase in numbers at risk
DT2.3 – TRANSPORT LINKS	Motorway, dual carriageway	Major transport links in their own right i.e. not as an integral part of other developments – Level 2	Prime purpose is as a transport link. Potentially large numbers exposed to risk, but exposure of an individual is only for a short period
	Exclusions		
	Estate roads, access roads	DT2.3 x1 Single carriageway roads – Level 1	Minimal numbers present and mostly a small period of time exposed to risk. Associated with other development
	Any railway or tram track	DT2.3 x2 Railways – Level 1	Transient population, small period of time exposed to risk. Periods of time with no population present
DT2.4 – INDOOR USE BY PUBLIC	<p>Food & drink:</p> <p>Restaurants, cafes, drive-through fast food, pubs</p> <p>Retail:</p> <p>Shops, petrol filling station (total floor space based on shop area not forecourt), vehicle dealers (total floor space based on showroom/sales building not outside</p>	Developments for use by the general public where total floor space (of all floors) is from 250 m ² up to 5000 m ² – Level 2	Developments where members of the public will be present (but not resident). Emergency action may be difficult to co-ordinate

	<p>display areas), retail warehouses, super-stores, small shopping centres, markets, financial and professional services to the public</p> <p>Community & adult education:</p> <p>Libraries, art galleries, museums, exhibition halls, day surgeries, health centres, religious buildings, community centres. Adult education, 6th-form college, college of FE</p> <p>Assembly & leisure:</p> <p>Coach/bus/railway stations, ferry terminals, airports. Cinemas, concert/bingo/dance halls. Conference centres Sports/leisure centres, sports halls. Facilities associated with golf courses, flying clubs (eg changing rooms, club house), indoor go-kart tracks</p>		
	Exclusions		
		<p>DT2.4 x1 Development with less than 250 m² total floor space (of all floors) – Level 1</p>	<p>Minimal increase in numbers at risk</p>

		DT2.4 x2 Development with more than 5000 m ² total floor space (of all floors)– Level 3	Substantial increase in numbers at risk
DT2.5 – OUTDOOR USE BY PUBLIC	Food & Drink: Food festivals, picnic areas Retail: Outdoor markets, car boot sales, funfairs Community & adult education: Open-air theatres and exhibitions Assembly & leisure: Coach/bus/railway stations, park & ride interchange, ferry terminals. Sports stadia, sports fields/pitches, funfairs, theme parks, viewing stands. Marinas, playing fields, children’s play areas, BMX/go-kart tracks. Country parks, nature reserves, picnic sites, marquees	Principally an outdoor development for use by the general public i.e. developments where people will predominantly be outdoors and not more than 100 people will gather at the facility at any one time – Level 2	Developments where members of the public will be present (but not resident) either indoors or outdoors. Emergency action may be difficult to co-ordinate
	Exclusions		
	Outdoor markets, car boot sales, funfairs. Picnic area, park & ride interchange, viewing stands, marquees	DT2.5 x1 Predominantly open-air developments likely to attract the general public in numbers greater than 100 people but up to 1000 at any one time – Level 3	Substantial increase in numbers at risk and more vulnerable due to being outside
Theme parks, funfairs, large sports stadia and events, open-air markets, outdoor concerts, pop festivals	DT2.5 x2 Predominantly open-air developments likely to attract the general public in numbers greater than 1000 people at any one time – Level 4	Very substantial increase in numbers at risk, more vulnerable due to being outside and emergency action may be difficult to co-ordinate	

Table 3 Development type: Developments for use by vulnerable people

DT3.1 – Institutional Accommodation and Education

DT3.2 - Prisons

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
DT3.1 – INSTITUTIONAL ACCOMMODATION AND EDUCATION	Hospitals, convalescent homes, nursing homes. Old people’s homes with warden on site or ‘on call’, sheltered housing. Nurseries, crèches. Schools and academies for children up to school leaving age	Institutional, educational and special accommodation for vulnerable people, or that provides a protective environment – Level 3	Places providing an element of care or protection. Because of age, infirmity or state of health the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult
	EXCLUSIONS		
	Hospitals, convalescent homes, nursing homes, old people’s homes, sheltered housing	DT3.1 x1 24-hour care where the total site area on the planning application being developed is larger than 0.25 hectare – Level 4	Substantial increase in numbers of vulnerable people at risk
	Schools, nurseries, crèches	DT3.1 x2 Day care where the total site area on the planning application being developed is larger than 1.4 hectare – Level 4	Substantial increase in numbers of vulnerable people at risk
DT3.2 – PRISONS	Prisons, remand centres	Secure accommodation for those sentenced by court, or awaiting trial etc. – Level 3	Places providing detention. Emergency action and evacuation may be very difficult

Table 4 Development type: Very large and sensitive developments

DT4.1 – Institutional Accommodation

DT4.2 – Very large Outdoor Use by Public

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
[Note: All Level 4 developments are by exception from Level 2 or 3. They are reproduced in this table for convenient reference]			
DT4.1 – INSTITUTIONAL ACCOMMODATION	Hospitals, convalescent homes, nursing homes, old people’s homes, sheltered housing, boarding schools	Large developments of institutional and special accommodation for vulnerable people (or that provide a protective environment) where 24-hour care is provided and where the total site area on the planning application being developed is larger than 0.25 hectare – Level 4	Places providing an element of care or protection. Because of age or state of health the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult. The risk to an individual may be small but there is a larger societal concern
	Nurseries, crèches. Schools for children up to school leaving age	Large developments of institutional and special accommodation for vulnerable people (or that provide a protective environment) where day care (not 24-hour care) is provided and where the total site area on the planning application being developed is larger than 1.4 hectare – Level 4	Places providing an element of care or protection. Because of age the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult. The risk to an individual may be small but there is a larger

			societal concern
DT4.2 – VERY LARGE OUTDOOR USE BY PUBLIC	Theme parks, large sports stadia and events, open air markets, outdoor concerts, and pop festivals	Predominantly open air developments where there could be more than 1000 people present at any one time– Level 4	People in the open air may be more exposed to toxic fumes and thermal radiation than if they were in buildings. Large numbers make emergency action and evacuation difficult. The risk to an individual may be small but there is a larger societal concern

Additional rules and how they are applied

43. The following rules have been developed to allow consideration of the more complex planning consultations.

Rule 1 – Straddling developments

44. This rule is applied (Rule 1a, then Rule 1b if applicable) when the site area of a proposed Development Type lies across a zone boundary (e.g. when a development site lies within the inner and middle zones), to decide the zone which will be used in the decision matrix. The CD is considered a zone boundary in this context.

45. **Rule 1a:** Development Types that ‘straddle’ zone boundaries will normally be considered as being in the innermost zone to the major hazard unless either of the two following conditions applies. The Development Type will be considered to be in the OUTERMOST of the zones if:

- less than 10% of the area marked on the application for that particular development type is inside that boundary, OR
- it is only car parking, landscaping (including gardens of housing), parks and open spaces, golf greens and fairways or access roads etc. associated with the development; that are in the inner of the zones.

46. **Rule 1b:** For the special case where a Development Type straddles the CD boundary (i.e. part of the site lies within the CD and part lies outside) Rule 1a is followed, then:

- If, after using the Rule 1a, the Development Type is considered to be outside the CD, then there is no need to categorise further; a 'DAA' response is appropriate.
- If, after using Rule 1a, the Development Type is considered to be within the CD then all of the facilities that make up the proposed Development Type are considered. Any that are **entirely outside** the CD are discounted when determining the Sensitivity Level. All the facilities that are **completely and/or partly inside** the CD are then considered together for the purpose of determining the Sensitivity Level. (If appropriate, the 'Multiple-use developments' rule – Rule 3 should be applied).

(Note: Rules 1a and 1b do not apply where the development type is a Sensitivity Level 2 Transport Link. Even though this type of development is likely to 'straddle' zone boundaries, it will always be considered as being in the innermost of the zones).

Rule 2 – Multiple major hazards

47. Where a proposed development lies within the CD of more than one major hazard site and/or major accident hazard pipeline, the zone within which the development lies is determined for each major hazard (after applying the straddling rule (Rule 1) if necessary). The overall advice is decided on the basis of the most onerous of any of the zones the development is in (i.e. the Inner Zone is more onerous than Middle Zone, the Middle Zone is more onerous than Outer Zone).

Rule 3 – Multiple-use developments

48. This rule is applied when a proposed development involves more than one Development Type (e.g. a mix of housing, indoor use by the public and a workplace).

- All individual Development Types are identified, as in column 1 of Tables 1-4. All facilities involving the same Development Type are aggregated to determine the Sensitivity Level of that Development Type (being aware that any facilities which are completely outside the CD boundary are not considered). **The only exception to this is an SL4 development (outdoor use by public and Institutional accommodation and education) which is not aggregated with facilities of the same development type with a lower sensitivity level.**
- The zone within which each Development Type lies is identified, using the straddling rule (Rule 1) if appropriate.
- The appropriate 'Advise Against' or 'Does Not Advise Against' response is determined for each Development Type using the decision matrix. If each individual Development Type receives a 'Does Not Advise Against' response, then that will be HSE's overall advice. If any individual Development Type receives an 'Advise Against' decision **then HSE's overall advice will be 'Advise Against'**.

- If any individual Development Type receives an ‘Advise Against’ response, then if appropriate, Rule 4b– ‘Developments which involve a small extension to an existing facility’ is applied, to decide if HSE’s ‘Advise Against’ response should be revised.

Rule 4 – Developments which involve a small extension to an existing facility.

49. This rule is concerned with an ‘Advise Against’ response where the proposed development involves a small extension to an existing facility. If the proposed development is a **small** extension to the existing development, then in certain circumstances the ‘Advise Against’ response may be revised to ‘Does Not Advise Against’. This Rule applies only to small extensions to existing facilities, and not to new developments, or to change of use on sites which may have an existing use.

50. **Rule 4a:** First **the proposed development is considered on its own merit** according to the normal procedure and rules. There are two outcome options:

- a ‘Does Not Advise Against’ response, in which case there is no need to apply Rule 4b. (For ‘Multiple-use developments’, if the application of Rule 3 results in **all** outcomes from the matrix being ‘Does Not Advise Against’, then that is the final advice, in which case there is no need to apply Rule 4b) or;
- an ‘Advise Against’ response, in which case Rule 4b is applied if appropriate. (For ‘Multiple-use developments’, if the application of Rule 3 results in one or more ‘Advise Against’ responses from the matrix, then Rule 4b is applied individually to each Development Type which received an ‘Advise Against’ response.)

NB: only the details supplied with the planning application or pre-planning enquiry are used to determine if, and how, Rule 4b applies.

51. **Rule 4b: Extensions (including minor modifications, alterations, or additions)**

If...	Then...
<p>the proposal is for an extension to an existing development, and the proposed extension is of the same Development Type as the existing development that is going to be extended.</p> <p>And the population at the development will not increase by more than 10% (or, if the population data is not readily available, the total floor area will not increase by more than 10%),</p>	<p>the consultation should be treated as though the proposed extension had a Sensitivity Level one less than the Sensitivity Level of the existing (i.e. not that of the proposed) development.</p> <p>If this results in a reduced Sensitivity Level, which combined with the zone that the extension is in, produces a DAA response, then this will replace the initial AA response.</p>
<p>For ‘Multiple-use developments’, if the application of Rule 4b changes ALL of the AA</p>	<p>then this will replace the initial AA response.</p>

outcomes to DAA	If at least one outcome remains AA, then an AA response is the final advice. Any remaining AA responses after applying Rule 4b dominates for 'Multiple-use developments' and an AA response is the final advice for the overall development.
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Rule 5 – Temporary / time limited planning permissions

52. HSE treats proposals for these the same way as any other planning permission consultations; no allowance is given for the time restriction. Existing temporary / time limited permissions are not taken into account when applying Rule 4.

Glossary

Beds – the number of residents/visitors for which sleeping accommodation is provided.

Consultation – an enquiry from a PA or a developer, usually made through the HSE Planning Advice Web App, seeking HSE’s comments on a proposed development within a CD, either on a formal planning application or a pre-planning enquiry. A consultation will involve at least one ‘Development type’.

Development – the proposed use of an area of land (e.g. housing, a school, etc.) for which planning permission is sought, or to which a pre-planning enquiry relates. A proportion of planning proposals will consist of more than one Development Type.

Development type – term used to describe proposed uses (and/or facilities) that are considered to involve a similar type of population (see the first column in the Development Type Tables 1-4).

Dwelling units – the smallest individual unit of accommodation e.g. house, apartment, caravan.

Extension – a development which involves an addition to, or the expansion of, an existing facility. This must be

- of the same Development Type as the existing facility.
- an integral part of the existing facility that is being extended. This will commonly be through physical attachment to an existing structure but, in certain cases, it might qualify by being within the control boundaries of the existing facility of which it will be an extension (e.g. a proposed physically isolated classroom within an existing school confines can be considered an ‘extension’).
- usually under the control of the same owner and have the same operator/tenant as the existing facility that is being extended (the owner and the operator/tenant of the existing facility might be different people/companies).
- unable to function independently of the existing facility that is being extended.

Most developments are expected to be developments in their own right – not extensions to existing facilities. For example, a proposed housing development would not be treated as though it is an extension to an existing area of housing. Similarly, an application for additional residential caravan plots would not be considered an application for an extension to an existing area for such use, because the residential caravan plots are able to function independently.

Major redevelopment which involves demolishing a large existing structure(s)/facility and then replacing it by building a slightly bigger version is not considered to be an extension, because the demolition is seen as providing an opportunity to review the situation. For example, if the existing facility is an ‘incompatible’ one then the proposed replacement could be rebuilt further away from

the hazardous installation. A building/facility such as a school for several hundreds of pupils would be considered a 'large' structure/facility.

Facilities – buildings and other provisions (e.g. picnic area, children's play area, park and ride bus stop) where people may congregate.

Hectare – unit of area equal to 10,000 square metres (m²) in any shape (e.g. rectangles 10m x 1,000m or 25m x 400m; square 100m x 100m; or other regular and irregular shapes)

LUP – land use planning

Multiple use development – see 'development'.

PA – planning authority

Pre-Planning Enquiry (PPE) – an informal, non-statutory LUP consultation made by a developer or a PA to determine what HSE's advice is likely to be before submitting a formal planning permission application to the PA.

Protective environment – there is provision of some element of supervision or care e.g. by a warden being available on-site or on call.

School leaving age – the minimum age at which a young person can leave school – currently 16.

Sensitivity Level – the scale used to define the vulnerability of a development population to major accident hazards. It is based on pragmatic criteria; the type of development, likely numbers present and whether any vulnerable people will be present. The scale ascends from Level 1 to Level 4: the more vulnerable the population, the higher the sensitivity level.

Total floor space – the area of buildings enclosed by the exterior walls multiplied by the number of floors (units are m²).

Vulnerable people – people who by virtue of age (children and elderly) and/or ill health may be particularly susceptible to the effects of a major accident.

Annex 1

HSE's land use planning advice provision

1. HSE's land use planning (LUP) advice is based on the recommendations of the Advisory Committee on Major Hazards (ACMH). The principles behind the recommendations are followed in guidance; see for example 'Planning Practice Guidance: Hazardous Substances – handling development proposals around hazardous installations', which is available through the Planning Portal. The principles and objectives HSE uses in giving its advice received strong support in a public consultation in 2007 (CD211 – Proposals for revised policies for HSE advice on development control around large-scale petrol storage sites). Failure to follow the principles will lead to non-compliance with Article 13 of the Seveso III Directive.

2. HSE's advice is currently delivered through HSE's Planning Advice Web App. This is a codification of the methodology used by HSE over the last 30 years or more and replaced PADHI+ which PAs used between 2006 and 2015.

3. Under Article 18 of the Town and Country Planning (Development Management Procedure) (England) Order 2015, Article 14 of the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 and Regulation 25 of the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013, decision-makers are required to consult HSE on certain planning proposals around major hazard establishments and to take into account the Executive's representations when determining associated applications. This is to ensure that the UK complies with Article 13 of the Seveso III Directive which has the specific objective of controlling specified new development to maintain adequate separation; including residential areas, buildings and areas of public use; around major hazard establishments when the development is such as to increase the risk or consequences of a major accident. In essence decision-makers should ensure that new development does not significantly worsen the situation should a major accident occur.

4. In some instances there may already be existing development which is closer to a potentially hazardous installation. In these cases HSE has recognised the views of the Advisory Committee on Major Hazards as expressed in paragraphs 108 and 109 of their Second Report which reads as follows:

'108.....The HSE is also frequently asked to comment on proposals to develop or to redevelop land in the neighbourhood of an existing hazardous undertaking where there may already be other land users which are closer and possibly incompatible. In these cases, HSE tells us that it takes the view, which we fully endorse, that the existence of intervening developments should not in any way affect the advice that it gives about the possible effects of that activity on proposed developments which may appear to be less at risk than the existing ones'.

'109.....The overall objective should always be to reduce the number of people at risk, and in the case of people who unavoidably remain at risk, to reduce the likelihood and the extent of harm if loss of containment occurs.....

5. HSE's approach balances the principle of stabilising and not increasing the numbers at risk with a pragmatic awareness of the limited land available for development in the UK. An HSE discussion document in 1989 ("Risk criteria for land-use planning in the vicinity of major industrial hazards") sets out the basis of HSE's approach at that time.

6. The Government committee of experts, the Advisory Committee on Major Hazards (ACMH), which originally proposed HSE's role in the LUP system did recognise "*the remote possibility that in some instances a local planning authority may not feel inclined, for a variety of reasons, to follow the advice of the Executive on particular applications for potentially hazardous developments or other developments in their vicinity.*" As a consequence, arrangements were set up so that in this rare circumstance, a planning authority is required by 'Planning Practice Guidance: Hazardous Substances – handling development proposals around hazardous installations', Circular 20/01 (Wales), or Circular 4/1997 (Scotland) to formally notify HSE of its intention to grant against the Executive's advice. This is so that, in England and Wales, HSE can decide whether or not to request the Secretary of State to call-in the application for their own determination. In Scotland, if the planning authority is minded to grant permission they have to notify the Scottish Ministers who can decide to call-in the application.

7. HSE's consideration of call-in should not be confused with its LUP advice delivered through HSE's Planning Advice Web App; it is the latter which is provided to enable LUP decision-makers to comply with the objectives of Seveso III, Article 13. In line with Government policy, HSE normally requests call-in only in cases of exceptional concern. However if HSE decides not to make such a request this does not mean that it has withdrawn its advice against permission, which remains on file and in the future is likely to be published on our website. A decision not to request call-in does not negate HSE's LUP advice.

8. HSE's role in the LUP process is to provide independent advice on the residual risks from major accidents to people at specified proposed new developments. This is delivered through HSE's Planning Advice Web App and hence that is what planning authorities must 'seriously consider' in accordance with 'Planning Practice Guidance: Hazardous Substances – handling development proposals around hazardous installations', which advises decision-makers that:

*"In view of its acknowledged expertise in assessing the off-site risks presented by the use of hazardous substances, any advice from Health and Safety Executive that planning permission should be refused for development for, at or near a hazardous installation or pipeline **should not be overridden without the most careful consideration.**"*

9. Furthermore the Courts (Regina v Tandridge District Council, Ex parte Al Fayed, Times Law Report 28 January 1999) have decided that on technical issues, local authorities, while not bound to follow the advice of statutory bodies such as the HSE, "*should nevertheless give great weight to their advice*" when determining planning applications.

10. A published external review "Analysis of Planning Appeal Decision Reports" (HSE contract research number 262/2000) concluded "*It is clear the HSE's risk policies are largely upheld on appeal.*

It is viewed as a competent and expert body, and its advice provides considerable support to PA decisions."

Annex 2

Types of development to consult on under the Town and Country Planning (Development Management Procedure) (England) Order 2015, the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 and the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

The following guidance and circulars provide further guidance on when HSE is a statutory consultee:

- 'Planning Practice Guidance: Hazardous Substances – handling development proposals around hazardous installations',
- SOEnD Circular 5/1993 (This document is not available on the internet)
- National Assembly for Wales Circular 20/01

They identify the following developments:

1. Within the Consultation Distance (CD) of major hazard installations / complexes and pipelines, HSE should only be consulted for developments involving:

- residential accommodation
- more than 250 square metres of retail floor space
- more than 500 square metres of office floor space
- more than 750 square metres of floor space to be used for an industrial process
- transport links (railways, major roads, etc.)
- a material increase in the number of persons working within, or visiting, a CD

and then only if the development is within the CD.

2. HSE should also be consulted on

- proposed development involving the siting of new establishments where hazardous substances may be present; or
- modifications to existing establishments which could have significant repercussions on major accident hazards; or
- proposed development that is in the vicinity of existing hazardous installations and pipelines where the siting is such as to increase the risk or consequences of a major accident

3. For licensed explosive sites the criteria are the same as above, but only if within the explosive site's Safeguarding Zone.

4. HSE will also advise Hazardous Substances Authorities prior to them determining a consent application. The HSE Planning Advice Web App cannot be used to provide HSE's advice on applications for hazardous substances consent – HSE must be consulted directly on such applications...

5. HSE does not give retrospective advice on planning applications where the decision has already been made by the planning authority.

Annex 3

HSE'S approach to land use planning

Policy & Practice

1. The aim of health and safety advice relating to land use planning is to mitigate the effects of a major accident on the population in the vicinity of hazardous installations, by following a consistent and systematic approach to provide advice on applications for planning permission around such sites.
2. Since the early 1970s, arrangements have existed for local planning authorities (PAs) to obtain advice from HSE about risks from major hazard sites and the potential effect on populations nearby. The Advisory Committee on Major Hazards (ACMH), set up in the aftermath of the Flixborough disaster in 1974, laid down a framework of controls which included a strategy of mitigating the consequences of major accidents by controlling land use developments around major hazard installations
3. Historically, HSE has based its land-use planning advice on the presumption that site operators are in full compliance with the Health & Safety at Work etc. Act 1974 (HSW Act). Section 2 of the Act places a duty on an employer to ensure, so far as is reasonably practicable, the health and safety of his employees. There is a corresponding duty in section 3 to ensure, so far as is reasonably practicable, that others (which includes the public) are not exposed to risks to their health & safety. It was presumed that the safety precautions taken by the employer to comply with Section 2 (risks to his workers) would also ensure compliance with Section 3 of the HSW Act.
4. The main legal driver now is the EU Seveso III Directive, the principal land use planning aspects of which are given effect in the UK by the Planning (Hazardous Substances) Regulations (the PHS Regulations) and associated legislation.

HSE's role

5. HSE's specific role in LUP is **twofold**:
 - i. Under the PHS Regulations, the presence of hazardous chemicals above specified threshold quantities requires consent from the Hazardous Substances Authority (HSA), which is usually also the local planning authority (PA). HSE is a statutory consultee on all hazardous substances consent applications. **Its role is to consider the hazards and risks which would be presented by the hazardous substance(s) to people in the vicinity, and on the basis of this to advise the HSA whether or not consent should be granted.** In advising on consent, HSE may specify conditions that should be imposed by the HSA, over and above compliance with statutory health and safety requirements, to limit risks to the public (e.g. limiting which substances can be stored on site, or requiring tanker delivery rather than on-site storage). HSAs should notify HSE of the outcome of all applications for consent and where consent has been granted should supply copies of the site plans and conditions.

ii. HSE uses the information contained in consent applications to establish a consultation distance (CD) around the installation. This usually comprises three zones or risk contour areas – see paragraph 8. The CD is based on the maximum quantity of hazardous substance(s) that the site is entitled to have under its consent. HSE notifies the PAs of all CDs in their areas. The Development Management Procedure Orders require the PA to consult HSE about certain proposed developments (essentially those that would result in an increase in population) within any CD. HSE **advises the PA on the nature and severity of the risks presented by the installation to people in the surrounding area so that those risks are given due weight by the PA when making its decision. Taking account of the risks, HSE will advise against the proposed development or simply note that it does not advise against it.** This advice balances the ACMH principle of stabilising and not increasing the numbers at risk, with a pragmatic awareness of the limited land available for development in the UK.

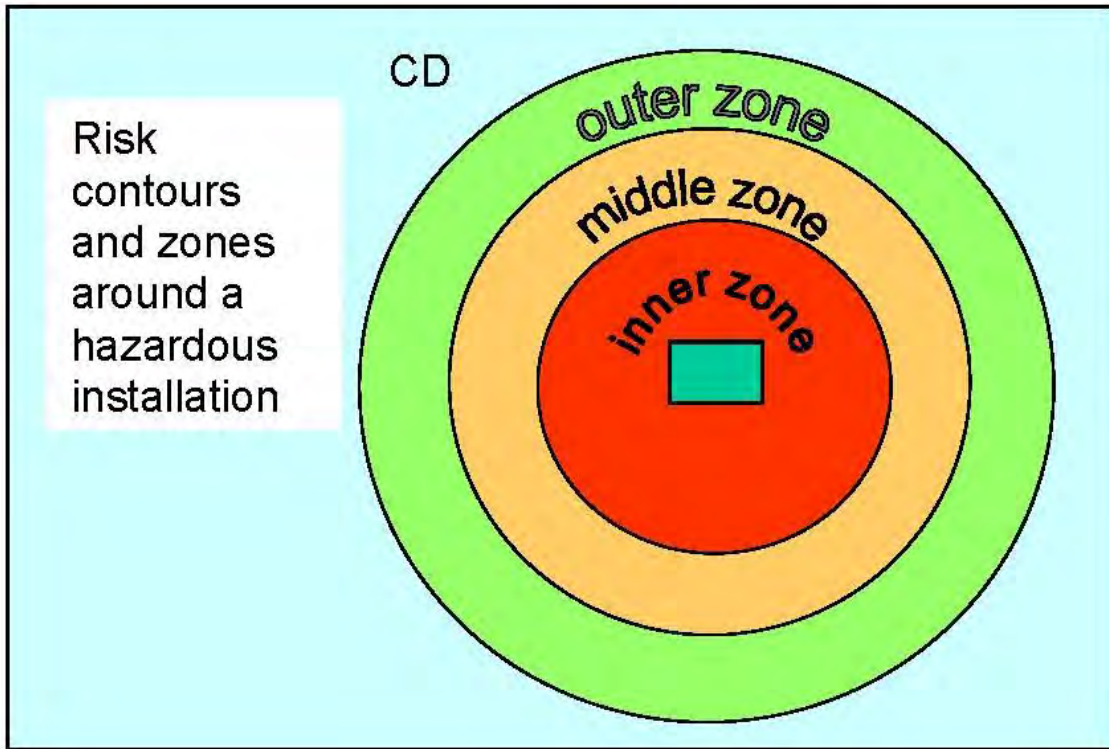
6. Like other statutory consultees, HSE's role in the land use planning system is advisory. It has no power to refuse consent or a planning application. It is the responsibility of the HSA or PA to make the decision, weighing local needs and benefits and other planning considerations alongside HSE advice, in which case they should give HSE advance notice of that intention. PAs may be minded to grant permission against HSE's advice. In such cases HSE will not pursue the matter further as long as the PA understands and has considered the reasons for our advice. However HSE has the option, if it believes for example that the risks are sufficiently high, to request the decision is 'called in' for consideration by the Secretary of State, in England and Wales (a very rare situation). In Scotland, if the planning authority is minded to grant permission they have to notify the Scottish Ministers who can decide to call-in the application.

Consultation distances and risk contours

7. Using hazardous substances consent information, HSE undertakes a detailed assessment of the hazards and risks from the installation and produces a map with three risk contours representing defined levels of risk or harm which any individual at that contour would be subject to. The risk of harm to an individual is greater the closer to the installation. In each case the risk relates to an individual sustaining the so-called 'dangerous dose' or specified level of harm. A 'dangerous dose' is one which would lead to:

- severe distress to all;
- a substantial number requiring medical attention;
- some requiring hospital treatment; and,
- some (about 1%) fatalities.

8. The three contours represent levels of individual risk of 10 chances per million (cpm), 1 cpm and 0.3cpm per year respectively of receiving a dangerous dose or defined level of harm. The contours form three zones (see below), with the outer contour defining the CD around major hazard sites.



The PA consults HSE on relevant proposed developments within this CD though the HSE Planning Advice Web App.

How HSE gives advice

9. When consulted, HSE firstly identifies which of the three defined zones the proposed development is in. Secondly, the proposed development is classified into one of four “Sensitivity Levels”. The main factors that determine these levels are the numbers of persons at the development, their sensitivity (vulnerable populations such as children, old people) and the intensity of the development. With these two factors known, a simple decision matrix is used to give a clear ‘Advise Against’ (AA) or ‘Don’t Advise Against’ (DAA) response to the PA, as shown below:

Level of Sensitivity	Development in Inner Zone	Development in Middle Zone	Development in Outer Zone
1	DAA	DAA	DAA
2	AA	DAA	DAA
3	AA	AA	DAA
4	AA	AA	AA

Sensitivity Level 1 - Example: Factories

Sensitivity Level 2 - Example: Houses

Sensitivity Level 3 - Example: Vulnerable members of society e.g. primary schools, old people's homes

Sensitivity Level 4 - Example: Football ground/Large hospital

DAA means Do not Advise Against the Development

AA means Advise Against the Development

Technical assumptions underpinning HSE methodology for land use planning

10. The installation: The quantities and properties of hazardous substances, and the descriptions of storage and process vessels, are assumed to be in accordance with the 'hazardous substances consent' entitlement for the site since this represents an operator's declaration of their entitlement to store such substances which could be introduced at any time. For each type of development HSE's advice to PAs will take account of the maximum quantity of a hazardous substance permitted by a hazardous substances consent and any conditions attached to it. Best cautious, but not pessimistic, assumptions concerning substances, locations, operating conditions and surroundings are used. For operations not described in the consent (e.g. numbers and sizes of road tanker operations, pipework diameters, pumps and other fittings) site-specific values are obtained as necessary.

11. Hazardous events: All foreseeable major accidents are considered and a representative set of events which describe a set of circumstances which, for that installation, could lead to an accidental release of hazardous substances.

12. Consequences: The previously described 'dangerous dose' concept is generally used to describe the extent of the impact of any hazardous event on the surrounding population. Protection provided to persons by being sheltered within buildings is generally taken into account by the approach, as is the likelihood of persons being outdoors at the time of the incident.

13. Ambient conditions: Local weather data is used to provide wind and stability information around the installation. Further, the surroundings are generally assumed to be flat although ground roughness can be taken into account where circumstances require it.

14. Risk assessment: The calculations produce contours of the frequency that a typical house resident would be exposed to a dangerous dose or worse. This is generally expressed in terms of 'chances per million per annum' or cpm for short, i.e. 10cpm, 3CPM cpm, 0.3cpm.

Annex 4

Contact

Any queries regarding HSE's land use planning methodology, or on how to use or access HSE's Planning Advice Web App to consult HSE in order to obtain advice on planning applications or pre-application enquiries, should be referred to lupenquiries@hsl.gsi.gov.uk or tel: 0203 028 3708.

Any queries relating to hazardous substances consent should be sent to hazsubcon.CEMHD5@hse.gsi.gov.uk