

Forest Heath Local Plan

Examination of the Site Allocations Local Plan

Written Statement on behalf of R J Upton 1987 Settlement Trust

Matters 1, 2, 3 and 5

Our Reference: 1023

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1.0 Introduction

1.1 This statement has been prepared on behalf the R J Upton 1987 Settlement Trust, who are the single owners of site SA10(a), a proposed allocation in the Site Allocations Local Plan for mixed uses at Red Lodge. It considers issues set out in Matters 1, 2, 3 and 5 and responds to relevant Inspector's questions.

2.0 Matter 1 – Legal Requirements

1.6 Has the formulation of the SALP been based on a sound process of sustainability appraisal and testing of reasonable alternatives, and is the sustainability appraisal adequate? Does the SA consider all likely significant effects on the environment, together with economic and social factors? Is it clear how the SA has influenced the final plan?

- 2.1 We addressed the Sustainability Appraisal (SA) of the Single Issue Review (SIR) (CD:C4) in our statement for the Examination of that document, concluding that the SA had a significant and appropriate influence on that issue, the amount and distribution of housing.
- 2.2 The SA for the Site Allocations Local Plan (SALP) (CD:C9 and 10) makes frequent cross references to its companion for the SIR. The two documents show a clear and appropriate distinction between the matters appraised in each, while the same time demonstrating that the process has been well integrated.
- 2.3 We consider that the SA for the SALP meets all the requirements referred to in Matter 1.6 in a comprehensive and systematic way.
- 2.4 In the paragraphs which follow, specific parts of the SA for the SIR (CD:C4) and SALP (CD:C9 and 10) are referred to where appropriate.

3.0 Matter 2 – Basis for the Plan

2.1 What methodology was used for site selection and are the criteria clear, justified and robust?

3.1 This question appears to be mainly directed at the Council. However, we have no concerns about the process involved, either generally or in particular respect of site SA10(a), which might lead to the conclusion that the SALP is not justified in terms of paragraph 182 of the NPPF and therefore require any remedy through the Examination process.

2.2 Are the locations identified for development the most appropriate locations when considered against all reasonable alternatives?

3.2 Newmarket and Brandon are constrained by a number of factors as discussed by the Council in their Statement responding to Matter 4.4 of the SIR Examination. By comparison Red Lodge is relatively unconstrained. It also has a good range of services and facilities, listed in generic terms in the Settlement Profiles 2016 (CD:B7). Despite comments to the contrary heard at the SIR Hearing on Matter 4, services at Red Lodge have been successfully delivered in line with the masterplan and notably include:

- A village centre with 6 units for uses within Classes A1, A2, A3, A4, A5, B1 and D1. All are occupied. The post office has relocated from Bennett Road to the Nisa and operates longer hours to the benefit of the community. A further 225m² of retail floorspace (3 units) was approved in August 2017;
- ii. 3 grassed football pitches, 1 cricket pitch and a floodlit multicourt and a sports pavilion which is also available for community hire;
- iii. Allotments. Planning permission was granted in June 2017 to further extend by 0.57ha;
- iv. A wildflower meadow located to the east of the sports ground was approved in June 2017 as part of a Site SA9(c) which is under construction; and
- v. A second primary school was approved in March 2017 and is due to open September 2018.
- 3.3 The Proposals Map for Red Lodge in the SALP clearly shows four proposed residential allocations that fall within the existing settlement boundary and one for a mixed used development (SA10(a)) which falls partly within the settlement boundary.
- 3.4 The proposed distribution makes full use of vacant land between Turnpike Road and the A11 in the shape of sites SA9(a) and SA 9(d). The A11 is a strong defensible boundary to the west of these sites and helps to create a compact settlement. To the east, sites SA9(b) and (c) adjoin existing development that lies to the west and north, whilst eastern and southern boundaries are defined by an existing farm track and a byway respectively. This again helps to create a compact settlement. The same can also be said of site SA10(a) whose triangular shape has firm boundaries to the northwest (the A11 again) and the south (existing development). The Estate road leading south east from North Lodge Cottages provides a well defined eastern boundary for this site.
- 3.5 All of the proposed allocations in Red Lodge are relatively unconstrained. In particular, sites SA9(a) and (d) lie outside the 1500m Stone Curlew Constraint Zone, whilst appropriate mitigation has been approved by both the District Council and Natural England in respect of Crest Nicholson's sites SA9(b) and SA9(c), as part of planning application F/2013/0257/HYB for 374 dwellings, 225m² retail floorspace and associated infrastructure on site SA9(c). This development is under construction and the mitigation measures have been completed. Whilst the Stone Curlew Constraint Zone crosses the south eastern tip of site SA10(a) there will be no development within this area and this can be secured by the required masterplan.
- 3.6 We conclude that these sites at Red Lodge are indeed the most appropriate locations when considered against all reasonable alternatives.

2.3 Are the suggested rates of planned housing development realistic and achievable when considered in the context of the previous rates of development and economic position?

3.7 Paragraph 6.2.2 of the SIR SA (CD:C4) refers to three scenarios identified at an early (2012) stage of the review process for housing growth. One of these was described as *the "current build scenario"* based on rates of housing provision in the recent past. This proposed a total

for the plan period of 7,220 dwellings, or 380 a year. This is 40 dwellings a year more than now provided for in the SIR. Despite the financial difficulties beginning in 2008, housing delivery in the district and particularly at Red Lodge has continued, so in the slightly more favourable economic conditions now prevailing and expected in the foreseeable future, the suggested rates of planned housing development do appear to be realistic and achievable.

2.4 How have the transportation and infrastructure requirements of the site allocations been taken into account? Has it been demonstrated that there is a reasonable prospect that planned infrastructure will be delivered within the timeframe envisaged? Will this delivery of infrastructure be sufficient to support the anticipated rate of development?

- 3.8 We comment on other aspects of the deliverability of site SA10(a) below under Matters 3 and 5.
- 3.9 Site SA10(a) has no additional transport requirements. It is located close to the dual carriageway A11 and comprises land that has an extant consent for employment use. It is served by access roads which meet all current standards for heavy goods vehicles. Indeed, the warehouse occupying a central location within the proposed allocation (SA16(n)) has been successfully operating since mid 2008.
- 3.10 In respect of infrastructure requirements to deliver growth at Red Lodge the Draft Infrastructure Delivery Plan (CD:C19) concludes that there are no capacity issues or improvements required in respect of transport, energy, water and drainage services. Specifically, Anglian Water has advised that there is sufficient capacity at Tuddenham Water Recycling Centre to accommodate the growth proposed up to 2029/2030.
- A need for a new primary school and early years provision has been identified in Red Lodge and the Trust has worked with Suffolk County Council to deliver this within their site S10(a).
 A 420 placement school and a 30 place pre-school has planning permission, is under construction and will be open for September 2018.
- 3.12 Appropriate health, library and recreational facilities can be secured through developer contributions, whilst green infrastructure provision will be a detailed design matter.
- 3.13 As part of an outline planning application submitted by the Trust in October 2016 and since withdrawn, for the construction of up to 46 dwellings and 8ha of employment land (Class B1, B2 and B8) on land that forms part of Site SA10(a) (reference DC/16/2364/OUT), a report on services and utilities was prepared by SLR and is attached at **Appendix 1**. It concludes that strategic studies undertaken as part of the SIR and SALP review, in particular the Draft Infrastructure Delivery Plan (CD:C19) clearly indicates that infrastructure demands to facilitate growth at Red Lodge can be met and pose no constraint upon future development. No significant constraints to making connections to other existing utility infrastructure or significant impacts on local off-site utility networks, watercourses or water resources were identified by SLR.
- 3.14 Overall, we consider that all relevant transportation and infrastructure requirements for site SA10(a) have either been met or could easily be satisfied by the extension of existing

services, not only for the employment elements of the development but also all other proposed uses.

2.5 How have issues concerning viability been addressed, in order to ensure that there is a reasonable prospect that the sites identified will come forward for development during the plan period? Please provide a clear explanation as to what methodology has been used to assess viability.

3.15 Our comments in respect of Matter 2.1 also apply here. The affordable housing requirement for site SA10(a) will be met in full onsite.

4.0 Matter 3 – Employment

3.1 Are the site allocations proposed by the SALP clearly justified and appropriately defined?

- 4.1 The SALP SA provides a clear justification for the selection of the allocations. The boundaries of site SA10(a) are, as already indicated, well defined and are appropriately depicted on the Proposals Map.
- 4.2 Policy SA10 gives a clear indication in words of the balance of uses expected on this site and the Trust is committed to the preparation of a suitable masterplan as required by draft Policy SA10.

3.2 Is the overall amount of employment provision and its proposed distribution consistent with the CS? Are the proposed locations which have been identified the most appropriate when considered against all other reasonable alternatives?

- 4.3 We consider that the overall amount of employment provision and its proposed distribution is clearly consistent with the Core Strategy and also with the amount and distribution of housing set out in the SIR. Paragraph 10.22.5 of the SIR SA (CD:C4) states that *"the broad strategy of employment land allocation is suitable in that there is a focus close to the A11 corridor"*. It also refers to the disadvantages of employment sites located away from the A11. A consideration of the A11 corridor as it passes through Forest Heath District indicates that Red Lodge has a strategic locational advantage to help meet the wider business needs arising along the A11, notwithstanding what paragraph 10.22.8 then says about the current level of employment activity at Red Lodge.
- 4.4 Site SA10(a) includes land that has an extant permission for employment use; that is land to the west and south west of the existing warehouse. As a consequence, the 8ha of employment land proposed as part of Policy SA10 is not new employment land. This policy would however allow the replacement of employment land lost as part of the new primary school approved to the south of the existing warehouse and flexibility to review, through the masterplanning process, the optimum location of the employment land in the context of both the existing development and future growth at Red Lodge to the benefit of the community.

3.3 Has sufficient land been identified to meet the short and long term employment needs of the district?

4.5 Given the findings of the Employment Land Review, highlighted at paragraph 10.22.8 (bullet point 2) and 10.22.9 (bullet point 3) of the SALP SA (CD:C9), the amount of employment provision identified at Red Lodge is considered sufficient to meet the short to medium term employment needs of the District. We wish however to draw the Inspector's attention to paragraph 10.22.10 of the SIR SA (CD:C4), which quotes the SALP, and refers to the work on a joint West Suffolk Local Plan which will consider the longer term needs in more detail. As the principal landowner at Red Lodge, the Trust is committed to working with the Council to assist in delivering the employment needs of the District.

3.4 Are all the allocated sites deliverable?

4.6 Site SA10(a) is a proposed allocation for mixed uses, including housing and employment in single ownership and is available, suitable and achievable. We comment on its general deliverability below under Matter 5.1. Here it is sufficient to note that a substantial warehouse (see Matter 5.3) has been built and in use in the centre of the proposed allocation for some years. There is no reason relating to infrastructure why the other parcels of land intended for employment uses on the draft Masterplan could not be developed in the short and medium term. The site benefits from easy access the A11 which is now of dual carriageway standard all the way from the outskirts of Cambridge to the edge of Norwich, runs directly into the M11 to the south at junction 9A, and has access to the A14 at junction 36.

5.0 Matter 5 – Housing in the Key Service Centres – Lakenheath and Red Lodge

5.1 In relation to all of the proposed sites in the key service centres:

- Are the criteria in the allocations policies necessary, relevant and deliverable?
- Is the extent of each site correctly identified?
- Are the detailed requirements for each of the sites clear and justified?
- Are all the allocated sites deliverable?
- 5.1 We again confine our comments on this matter to site SA10(a) at Red Lodge. We consider the criteria in the allocation policy to be necessary, relevant and deliverable.
- 5.2 The extent of site SA10(a) is correctly identified.
- 5.3 We consider the detailed requirements for site SA10(a) to be clear and justified.
- 5.4 In respect of the last bullet point, regard has been had to NPPF Footnote 11 relating to paragraph 47 on the provision of housing. Site SA10(a) is in single ownership and is available for development. As discussed in our response to Matters 2.2 and 3.2, site SA10(a) is a suitable location for development.
- 5.5 With regards to whether the site is achievable the following is relevant. The Trust is the principal landowner at Red Lodge and has a successful record of facilitating development over the last 15 years. It originally owned the land identified in the previous local plan for

planned growth (1250 homes, village centre, primary school and recreational facilities), and land to the east of Red Lodge (sites SA9(b) and (c). It has a long-standing and proven working relationship with a national housebuilder, the lead developer at Red Lodge. The Trust was also the original land owner of the second primary school site and has worked closely with Suffolk County Council to facilitate the delivery of this new school to the benefit of Red Lodge.

- 5.6 The Trust is in advanced discussions with a national house builder to deliver site SA10(a) and it and its development partners are fully committed to working with the Council. To assist the Inspector an indicative phasing and implementation plan for the delivery of site SA10(a) is attached at **Appendix 2** and demonstrates that housing can be delivered on the site within five years.
- 5.7 In preparation for the masterplan required by policy SA10, ecological and geophysical survey work for site SA10(a) has been completed. Land contamination, noise, transport, landscape and visual impact assessments for that part of the site included within the 2016 planning application (referred to in our response to Matter 2.4) have been prepared. There are no constraints that cannot be addressed or mitigated.
- 5.8 In particular, a National Grid high pressure gas pipeline crosses the north west corner of site SA10(a). Associated easement distances, access for pipeline maintenance and repair and Health and Safety Executive (HSE) consultation zones and land use planning criteria will be complied with as identified in the appended SLR report. Attached at **Appendix 3** is an indicative landuse masterplan, dated 19.09.2017, that illustrates how the requirements of draft Policy SA10 could be accommodated on site SA10(a), taking account of HSE's Land Use Planning Methodology and other known constraints. It shows:
 - the required Inner/Middle Consultation Zones standoff distances from either side of the gas pipeline (80m);
 - a 3ha site the primary school located outside the HSE Outer Zone. The 2.2ha school site has already received planning permission for a new 420 place Primary School and 30 place Pre-School, is under construction and will be open September 2018. The remaining 0.8ha has been confirmed by Suffolk County Council Education Department as the land needed to increase the school to 630 places to serve the proposed growth at Red Lodge;
 - residential development can be located outside the HSE Inner Zone at an average density of 33dph;
 - 8 ha of employment land. Each employment building located within the HSE Inner Zone would provide for less than 100 occupants and be less than 3 storeys. This will be secured by design in agreement with the Council and HSE;
 - No development is shown within the 1500m Stone Curlew constraint zone across the south eastern tip of the site;
 - No uses with a HSE level 4 rating of sensitivity are proposed in any of the HSE consultation zones;
 - Existing treebelts would be retained;
 - New cycle and pedestrian links would be created within the site and linking to the existing wider network;

- A landscape buffer and noise attenuation measures would be provided along the A11; and
- The potential pub site sits outside the proposed site boundary for SA10(a), however it is owned by the Trust and is shown for information.
- 5.9 Whilst the HSE consultation zones impose some limitations on the disposition of development across site SA10(a), the SLR report emphasises that the extent and nature of development is controlled rather than prevented altogether. This constraint does not therefore affect the deliverability of the site.

Red Lodge

5.3 Proposed allocation SA10 (a) – is the existing warehouse occupied?

5.10 The existing warehouse, identified as SA16(n), is occupied by Hamelin Brands, whose website describes the company as a *"leading manufacturer of stationery products in Europe"*.

5.4 Would sites SA9 and SA10 be dependent upon primary school provision through the new school at site SA10? If so is there a phasing requirement necessary between the two sites?

- 5.11 Paragraph 10.4.2 of the SA summarises the position in the context of the Single Issue Review.
- 5.12 The four sites covered by Policy SA9 have a combined capacity of 779 dwellings. The residential element of SA10(a) involves 350 dwellings, making an additional 1129 dwellings altogether. The SA9 sites are all residential rather than mixed use; none of them makes provision for education.
- 5.13 The existing primary school at Red Lodge is St Christopher's CEVC, located in Bellflower Crescent. It is a two-form entry school that opened in 2012 and is, as paragraph 5.8.2 of the SALP (third bullet point) puts it, "at or near capacity".
- 5.14 The proposed site allocations in policies SA9 and SA10 will therefore depend on primary school provision through the new school at site SA10(a). The number of new dwellings (1,129) is sufficient to warrant the provision of another two-form entry primary school based on the ratios of pupil yield of new developments used by Suffolk County Council as education authority. The amount of land allocated on site SA10(a) for the school (2.2 hectares) is adequate for the provision of such a school including playing fields, and the 0.8 hectare held in reserve would allow for expansion to three forms of entry if required.
- 5.15 As previously stated, the second primary school now has planning permission and is under construction. We consider that the County Council has legal duties to ensure the provision of school places and that no phasing requirement between the two sites is necessary; indeed, phasing would constitute a constraint which would be inimical to the successful establishment of a new school and more broadly to the creation of a genuinely sustainable community in Red Lodge.

Appendix 1

SLR Services and Utilities Assessment, 2016



Land North of Red Lodge

Services & Utilities Assessment

RJ Upton 1987 Settlement

SLR Ref: 408.05739.00002 October 2016 Version: 4

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RJ Upton 1987 Settlement

Land North of Red Lodge: S&UA

1.0 INTRODUCTION

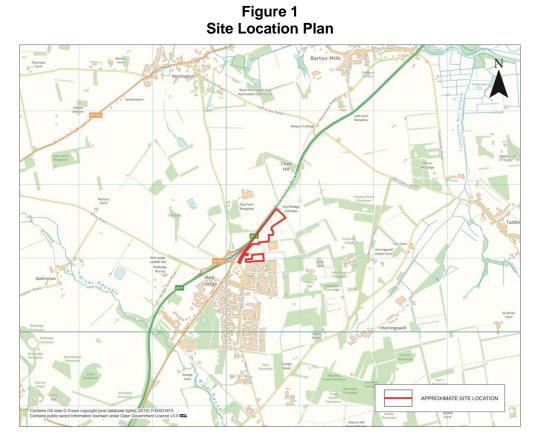
1.1 Context

SLR Consulting Limited has been commissioned by Eclipse Planning Services on behalf of RJ Upton 1987 Settlement to prepare a Services & Utilities Assessment (S&UA) to support an outline planning application for development of land north of Red Lodge, Suffolk ("the Site").

This S&UA has been prepared under the direction of a Technical Director of SLR who specialises in civil engineering, utilities infrastructure, and associated planning matters.

1.2 Site Location and Features

The Site is located on land to the west of Hardwick Road, centred at National Grid Reference (NGR) 570520, 271330. The nearest postcode is IP28 8WG. Site location plans are presented as Figure 1 and in Appendix A.



The Site occupies a total area of around 9.2 hectares (ha) and comprises predominantly undeveloped land.

Newmarket Road (A11) abuts the north western boundary of the Site. The northern limit of the Site extends to Park Farm Drive. The northern portion of the Site will be accessed from the south via an existing access road off the northern arm of a roundabout on Warren Road (refer to Figure 2).

SLR

Figure 2 View North Towards Northern Site Area Beyond Existing Access Spur

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The southern boundary of the Site is formed by a footpath and cycleway and existing residential properties along Elderberry Road and Acorn Way. The southern portion of the Site (refer to Figure 3) will be accessed from the south via Elderberry Road.

Figure 3 View South East Across Southern Site Area (Acorn Way in Distance)



1.3 Topography

Ordnance Survey mapping and site observations indicate that Site elevations generally fall from north (circa 27m AOD) to south (circa 18m AOD).

2.0 DEVELOPMENT PROPOSALS

2.1 Planning Context

As part of the Forest Heath District Council (FHDC) Local Plan Review, FHDC has published its Single Issue Review and Site Allocations Local Plan (SALP) Preferred Options for consultation. The SALP document sets out the proposed growth strategy for the respective settlements within the District.

Site RL2(a) *Red Lodge North* is included within the SALP document, comprising 27.4 ha of land identified for a mixed use development, including 300 dwellings, 8 ha of employment, 2 ha for a new primary school, gypsy and traveller site and other appropriate uses. *Red Lodge North* comprises the existing business park and land beyond to the north and east, and includes the Site.

2.2 Illustrative Masterplan

The description of the proposed development is as follows:

"Outline planning application for the construction of up to 46 dwellings and buildings for employment use (Class B1, B2 and B8) and associated access, parking, landscaping, open space and infrastructure works. All matters reserved except access"

An illustrative masterplan has been submitted with the application. Refer to Appendix B.

Class B1 land uses comprise Business / Research & Development, i.e. offices.

Class B2 land uses comprise General Industrial development.

Class B8 land uses comprise Storage and Distribution facilities.

2.3 Basis of Assessment

For the purposes of this assessment, the following development scenarios were considered:

Residential Area	46 standard dwellings; and
Employment Area	25,000m ² Gross Internal Area (GIA):
	50% B1 (12,500m ²) & 50% B2 (12,500m ²); or
	55% B1 (13,750m ²) & 45% B2 (11,250m ²); or
	25% B1 (6,250m ²) & 25% B2 (6,250m ²) & 50% B8 (12,500m ²)

The higher utility loading figures estimated for each development scenario was deemed to represent the "worst case scenario" for the purposes of ensuring a robust assessment of offsite impact upon sewerage and utility networks.

2.4 Loadings and Assumptions

Where appropriate, the following utility loadings were used in discussions with utility service providers and to establish potential impact upon the utility networks. Refer to Loadings Calculations in Appendix C.

2.4.1 Foul Sewage

Based upon Part H of the Building Regulations¹ for the residential area, and Surveyor² for the employment area, average foul flow generated by the proposed development has been estimated to be 5.8 l/s. Peak flows are estimated to be 17.5 l/s.

2.4.2 Potable Water

Based upon Part G of the Building Regulations³, the maximum potable water consumption in new dwellings has been limited to 125 litres/person/day. Potable water demand generated by the proposed development has been estimated to be 0.165 Ml/day, which equates to a daily average flow rate of 5.7 l/s.

2.4.3 Electricity

Based upon BSRIA Rules of Thumb⁴, the peak electrical demand generated by the proposed development has been estimated to be 2547 kVA.

2.4.4 Gas

Based upon BSRIA Rules of Thumb⁴, the peak gas load generated by the proposed development has been estimated to be 3103 kW.

Annual gas load for the proposed development has been estimated to be 5,319,319 kWh per annum, i.e. 5.32 GWh per annum.

¹ The Building Regulations 2010 : Drainage and Waste Disposal : Approved Part H (H1) : DCLG : Paragraph 2.39

² Foul Sewer Design Flows : Surveyor Datafile : January 1992 : Peter M Jones

³ The Building Regulations 2010 : Sanitation, Hot Water Safety and Water Efficiency : Approved Part G (G2)

⁴ BSRIA Rules of Thumb : Guidelines for Building Services 5th Edition : 2011

3.0 FOUL WATER DISPOSAL

3.1 Existing

Anglian Water (AW) is the incumbent sewerage undertaker for the Red Lodge area. Asset plans indicate that the majority of the Site does not currently benefit from a direct connection to the public foul sewers in the area. No public sewers traverse the Site, although private or un-adopted sewers serve the existing business park. Refer to Appendix D.

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AW asset plans confirm that public foul sewers are located adjacent to southern boundary of the Site.

A 375mmØ foul sewer, of concrete construction, is routed beneath Elderberry Road, with Manhole 2901 located approximately 30m to the south of the proposed residential development area.

The 375mmØ foul sewer continues in a westerly direction to the inlet chamber (Manhole 1901) upstream of King's Warren Sewage Pumping Station (SPS) immediately to the east of the existing access road at the southernmost section of the Site. Records indicate that the foul sewer is routed at a depth of circa 6m in this location.

Foul flows are pumped from King's Warren SPS (refer to Figure 4), via a 315mmØ HPPE/PE100 rising main to Herringswell Terminal Pumping Station, where they are lifted to Tuddenham Water Recycling Centre (WRC) for treatment.



Figure 4 View East Across King's Warren SPS Compound

3.2 Proposed

Review of AW sewer record plans indicates that there is no requirement to divert or build over any existing foul sewers to facilitate the development, and there are no existing public sewer easements to be accommodated within the illustrative masterplan.

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The proposed development areas lie well outside of the 15m *cordon sanitaire* standoff distance typically applied to habitable development, measured from the perimeter of King's Warren SPS to avoid issues relating to odour.

Based on the topography of the Site, and the significant depth of local public sewers, the proposed employment development is expected to be able to drain to Manhole 1900 upstream of King's Warren SPS via a gravity drainage connection. Furthermore, the proposed residential development is expected to be able to drain, via a gravity drainage connection, to Manhole 2901 adjacent to the south western boundary of the proposed residential area.

FHDC's Infrastructure Delivery Plan⁵ sets out that "Sewerage capacity is sufficient to accommodate proposed development at Red Lodge". This view is based upon the much larger development area referred to as *RL2(a)* Red Lodge North. Refer to extracts provided in Appendix E.

FHDC's Water Cycle Strategy⁶ (WCS) [5.3.5] sets out that "Anglian Water have confirmed that there is adequate treatment and process capacity at Tuddenham WRC to cater for the proposed growth". This view is based upon the much larger development area referred to as RL2(a) Red Lodge North. Refer to extracts provided in Appendix F.

Forest Heath WCS⁶ [8.3 - 8.4] confirms that the existing consent at Tuddenham WRC can be exceeded to accommodate future development growth without negative effects upon water quality or flood risk associated with the receiving Tuddenham Stream or River Lark.

Forest Heath WCS⁶ [7.1.1] also confirms that even given the scale of proposed growth at Red Lodge, there are no immediate concerns at King's Warren SPS or Herringswell TPS. The sewerage network is *"not considered to present a constraint to proposed development"*.

3.3 Summary

It is clear and consistent from the key information sources referenced above that adequate treatment capacity is expected to be available at Tuddenham WRC to accommodate foul flows from the quantum of development proposed at the Site.

Due to the very close physical proximity of the future proposed connection point(s) to the existing sewerage network, and a long-standing plan to accommodate future flows from *RL2(a) Red Lodge North* at King's Warren SPS, the need for significant reinforcement works to the local sewerage network (to accommodate flows from the Site) is considered unlikely.

As set out within Section 98 of the Water Industry Act 1991, sewerage undertakers are obligated to provide the necessary infrastructure required to serve a permitted development. Upon the grant of planning permission, AW will be required to agree a solution for draining foul effluent from the Site and provide the necessary infrastructure to implement the agreed solution.

⁵ Forest Heath District Council : Draft Infrastructure Delivery Plan to 2031 : Consultation Draft : April 2016

⁶ Forest Heath Water Cycle Strategy Update : Stage 3 Interim Report : Arcadis March 2016

4.0 SURFACE WATER DISPOSAL

Surface water management and disposal falls outside the remit of SLR's appointment.

Details on the baseline hydrological regime and proposed indicative surface water drainage strategy for the Site are provided within the Flood Risk Assessment that accompanies this planning submission.

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5.0 WATER SUPPLY

5.1 Existing

Anglian Water (AW) is the incumbent supplier of potable water to the local area. The Site falls within the Newmarket Resource Zone (RZ).

Asset plans indicate that no public water mains traverse the northern Site extents.

Asset plans show that an 180mmØ water main, of plastic (HDPE/PE100) construction, is routed beneath the eastern verge of the existing access road at the south western extent of the Site before being routed eastwards beneath the footpath of the access road serving the existing business park. Refer to Appendix G.

Two distribution main connections, with hydrants, are shown to be located just inside the northern boundary of the proposed residential development area.

The business park is currently fed by a 180mmØ water main, of plastic (MDPE/PE80) construction, routed beneath the A11 Newmarket Road along Warren Road beneath the roundabout adjacent to the south western extent of the Site, approximately 30m to the south of the proposed access.

The Warren Road main has fittings which feed a 180mmØ water main, of plastic (MDPE/PE80) construction, which serves Hundred Acre Way estate and Elderberry Road, approximately 50m to the south of the proposed residential development area.

No Cambridge Water supply mains are present within the locale, therefore, there are no associated easements or wayleaves affecting the Site.

5.2 Proposed

Review of AW asset record plans indicates that there is no requirement to divert or build over any existing water mains to facilitate the development.

Existing water main easements associated with the existing mains can be readily accommodated within the illustrative masterplan.

In terms of potential supply the existing water main beneath the business park access road is expected to be utilised for supplying the proposed residential development area. The proposed employment areas are expected to be served from the existing main beneath Warren Road adjacent to the south western Site boundary.

From discussions, AW has not indicated any significant constraints to making a connection to this main at the present time.

A formal connection application would be made in the standard way, post-determination of the planning application, at which time an assessment of capacity issues and any associated reinforcement works may be undertaken by AW.

FHDC's Sustainability Appraisal⁷ [21.1.1] sets out across Forest Heath "...the existing potable water strategic supply network is well placed to accommodate growth...". Refer to extracts provided in Appendix H.

Furthermore, [21.1.2] also confirms that *"Further evidence is provided by Anglian Water's Water Resources Management Plan (WRMP) 2015, which states how the water company proposes to maintain the balance between supply and demand over the next 25 years, as well as deal with the longer term challenge of population increase, climate change and growing environmental needs".*

AW is able to demonstrate a surplus in deployable output, and therefore available headroom, in the baseline potable water supply demand balance for the next 25 years. No deficit is forecast at any time during the assessed period.

FHDC's SA⁷ concludes [21.1.5] that *"significant negative effects are not predicted"* upon water resources from proposed growth across Forest Heath.

Forest Heath WCS⁶ [4.1.1] confirms that the Newmarket RZ is supplied by groundwater abstraction, and its forecast water balance is *"in surplus"* thereby strongly indicating that adequate water resources are expected to be available to accommodate future development growth in the Red Lodge area.

Forest Heath WCS⁶ [4.4] confirms that there is "...more than sufficient resources to supply water..." to accommodate proposed growth, and more, at Red Lodge and across Forest Heath. It concludes that "...water supply should not be considered a key determining factor for sites within Forest Heath".

FHDC's Infrastructure Delivery Plan⁵ concludes for Red Lodge that "Demand for water can be met - no constraint on development". This view is based upon the much larger development area referred to as *RL2(a)* Red Lodge North. Refer to extracts provided in Appendix E.

In light of the above findings, there would appear to be adequate capacity within the potable water supply network to accommodate the quantum of development proposed at the Site.

⁷ Forest Heath District Council : Sustainability Appraisal (SA) of the Forest Heath Core Strategy Single Issue Review : Interim SA Report : Aecom : April 2016

6.0 ELECTRICITY SUPPLY

6.1 Existing

UK Power Networks (UKPN) are the electricity company that control the existing local network in the vicinity of the Site. Asset plans indicate that electrical cables traverse the Site. No Extra High Voltage (EHV) cables are present within the locale. Refer to Appendix I.

UKPN asset plans confirm that electrical supply networks are located to the east and south west of the Site.

6.1.1 On-Site Apparatus

High voltage (HV), i.e. over 230 / 400V up to 11kV, distribution cables from the Bay Farm Worlington Solar Switchroom (ref. Pole 1S) are routed beneath (within a 200mm metal duct, circa 1.2m deep) a short section of the north western Site boundary at the south western end of proposed employment area 1. The ducted cables traverse the proposed employment area 2 in a southerly direction before being routed east (ref. HV12369), within 3 no. 300mm ducts, immediately adjacent to the southern boundary of proposed employment area 2 and along the northern and eastern boundaries of the existing business park before being routed south.

HV distribution cables (ref. HV7039) traverse beneath the very southern extent of the existing access road adjacent to the Warren Road roundabout, linking to an existing substation adjacent to King's Warren SPS. Refer to Figure 5.



Figure 5 View North Of King's Warren SPS Electricity Substation

HV distribution cables (ref. HV3830) extend beneath the eastern verge of the existing Site access road before heading east along the existing business park access. Two further secondary distribution substations are linked to HV3830, abutting the north western boundary of the proposed residential development area (refer to Figure 6), and immediately to the south of the existing business park (refer to Figure 7).

Low voltage (LV) secondary distribution cables (230 / 400V) serving the existing business park are supplied from the secondary distribution substation shown in Figure 7.

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Figure 6 View South Of Electricity Substation On Residential Area Boundary



Figure 7 View North West Of Business Park Electricity Substation



6.1.2 Off-Site Apparatus

An HV Overhead Line (OHL) traverses the A11 Nerwmarket Road circa 150m to the north of the northern Site boundary before being routed (off-site) in a south easterly direction parallel to Park Farm Drive adjacent to the north eastern boundary of employment area 1. The HV OHL comprises 3 no. 50mm2 Aluminium Conductor Steel Reinforced Cables (ASCR) and is located in excess of 75m from the Site along its extent. Refer to Figure 8.

Figure 8 View South Of ASCR OHL From Eastern End of Business Park Access



6.2 Proposed

Review of UKPN asset record plans indicates that there is minimal requirement to divert, bury, or build over any existing electrical cables or apparatus to facilitate the development.

The ducted underground cables that traverse the proposed employment area 2 in a southerly direction may require diversion, although it is quite feasible that the future development layout can be adapted to accommodate the associated wayleave.

Existing electricity wayleaves associated with other existing underground HV cables can be readily accommodated within the illustrative masterplan within the extents of proposed cycle paths and access roads.

From discussions, UKPN have not indicated any significant constraints to making a connection to existing electricity cables at the present time. No significant impact on the electricity network is anticipated, although local reinforcement works would be anticipated.

Due to the close proximity of the Site to two secondary distribution substations, no further electrical substations are deemed to be required to be incorporated within the proposed residential development layout.

Provision should be made for at least 2 no. on-site substations within the proposed employment areas. Where required, there is adequate land available within the illustrative masterplan to accommodate substation kiosks which typically require a land take of $30m^2$ (6m x 5m), typically offset 7m - 10m from new buildings.

FHDC's Infrastructure Delivery Plan⁵ concludes for Red Lodge that *"No capacity issues have been identified"*. This view on energy supply is based upon the much larger development area referred to as RL2(a) Red Lodge North. Refer to extracts provided in Appendix E.

In light of the above findings, there would appear to be adequate capacity within the potable water supply network to accommodate the quantum of development proposed at the Site.

7.0 GAS SUPPLY

7.1 Existing Transmission Infrastructure

7.1.1 Details of Existing Infrastructure

National Grid Gas PLC (NG) asset plans indicate that a strategic high pressure gas pipeline traverses the Site, bisecting the proposed employment areas. Refer to Appendix J.

The high pressure gas pipeline is Feeder 3 Roudham Heath – Great Wilbraham. The pipeline has an external diameter of 900mm, and is constructed of high grade carbon steel (X60) with a wall thickness of 15.88mm.

It is not known at this stage whether the pipeline has undergone any pipeline modifications subsequent to its construction.

Depth of cover to the pipeline has not been confirmed across the Site, although a depth of cover of 1.9m beneath the A11 Newmarket Road has been indicated.

7.1.2 Easement Distance

NG has confirmed that the easement distance applicable to the high pressure gas pipeline is 6m either side of the pipeline (i.e. 12m in total), plus an adjoining 3m either side for access (i.e. 18m).

7.1.3 HSE Consultation Zones

Although NG owns the infrastructure, it is the Health & Safety Executive (HSE) who are responsible for advising whether development is permitted near installations.

The HSE have derived a methodology for defining their "consultation zones" which accompany high pressure gas pipelines.

Land Use Planning Distances are distances defined by the HSE to allow them to advise on the acceptability of new developments next to hazardous installations and are based upon the HSE's Planning Advice for Developments near Hazardous Installations (PADHI) process.

The affected land areas are those defined as inner, middle and outer zones that run parallel to the pipe on both sides.

<u>These zones are not necessarily coverage of sterilisation</u>. They vary according to the risks associated with the pipeline. Each zone controls and categorises the types of development that may take place within a particular zone.

Communication between SLR and the HSE has confirmed the consultation zones for the high pressure gas pipeline based upon an initial 'Option 1' appraisal. The findings of the initial HSE appraisal are set out in Appendix K and summarised below:

Inner Zone9m to 78m from the pipeline (on both sides)Middle Zone9m to 78m from the pipeline (on both sides)Outer Zone78.01m to 255m from the pipeline (on both sides)

Refer to HSE graphical output presented in Figure 9.



Figure 9 HSE Consultation Zones

HSE mapping shows that the pipeline bisects the proposed northern employment areas. The proposed employment areas extend into the "inner" and "middle" zones, but do not overlay the gas pipeline itself. Only the access road crosses the pipeline (perpendicular to the pipeline to minimise the crossing width). The peripheral areas of the proposed employment land extend into the "outer" zone.

The northern boundary of the proposed residential area lies outside of the "outer" zone, over 275m from the pipeline.

7.1.4 Development Compatibility Matrix

SLR has used the HSE's Planning Advice Web App and associated land use planning methodology to categorise the Site into the HSE's development types and derive a sensitivity level.

It should be noted that this appraisal has been derived based upon the initial 'worst case' criterion. Constraints may be reduced in the future by considering the wall thickness of the pipeline, and taking into account any modifications or protection works to the pipeline that may have been undertaken.

Based upon HSE Development Type Tables, a suite of land uses have been considered and sensitivity levels assessed within the information provided overleaf.

	HSE Devt	HSE		HSE	Development Compatibility		
Land Use	Type Ref.	Development Type	HSE Description	Sensitivity Level	Inner	Middle	Outer
Employment B1	DT1.1	Workplaces (Offices)	Offices < 100 occupants per building and < 3 occupied storeys	1	DAA	DAA	DAA
Employment B1	DT1.1	Workplaces (Offices)	Offices > 100 occupants per building or 3 or more occupied storeys	2	AA	DAA	DAA
Employment B2	DT1.1	Workplaces (Factories)	General Industrial < 100 occupants per building and < 3 occupied storeys	1	DAA	DAA	DAA
Employment B2	DT1.1	Workplaces (Factories)	General Industrial > 100 occupants per building or 3 or more occupied storeys	2	AA	DAA	DAA
Employment B8	DT1.1	Workplaces (Warehouses)	Storage / Distribution < 100 occupants per building and < 3 occupied storeys	1	DAA	DAA	DAA
Employment B8	DT1.1	Workplaces (Warehouses)	Storage / Distribution > 100 occupants per building or 3 or more occupied storeys	2	AA	DAA	DAA
Employment Parking Areas	DT1.2	Parking Areas	Parking associated with above land uses	Sensitivity	level based upon associated land use.		
Residential Dwellings	DT2.1	Housing	Developments up to 30 dwelling units and Density < 40 / ha	2	AA	DAA	DAA
Residential Dwellings	DT2.1 x2	Housing	Developments > 30 dwelling units	3	AA	AA	DAA
Highway Access	DT2.3 x1	Transport Links (Estate Roads)	Single carriageway roads	1	DAA	DAA	DAA

DAA HSE "Don't Advise Against Development"

AA HSE "Advise Against Development"

7.1.5 Appraisal Summary

Based upon the initial appraisal, based upon worst case criterion, HSE guidance indicates that the HSE "does not, on safety grounds, advise against the siting of proposed residential development" in the location shown upon the illustrative masterplan (i.e. in excess of 255m from the pipeline).

HSE guidance indicates that the HSE "does not, on safety grounds, advise against the siting of proposed employment development (B1, B2 or B8)" between 9m and 78m from the pipeline provided that units comprise less than 100 occupants and are of less than 3 storeys in height.

HSE guidance indicates that the HSE "does not, on safety grounds, advise against the siting of parking areas and access roads associated with proposed employment development (B1, B2 or B8)" between 6m and 78m from the pipeline provided that units comprise less than 100 occupants and are of less than 3 storeys in height.

HSE guidance indicates that the HSE "does not, on safety grounds, advise against the siting of proposed employment development (B1, B2 or B8) of any storey height or occupancy" in excess of 78m from the pipeline.

7.2 Existing Supply Infrastructure

National Grid UK Gas (NGUG) asset plans indicate that no other gas supply mains traverse the Site. Refer to Appendix J.

NGUG plans indicate that the existing business park is served by Gas Transportation Company (GTC).

7.3 Proposed

Review of NGUG asset record plans indicates that there is no requirement to divert any existing gas pipelines or mains to facilitate the development.

Review of NGUG asset record plans indicates that there is a localised requirement to build over the high pressure gas pipeline to provide a vehicular access crossing to the proposed northern employment area 1.

The existing gas main easement or wayleaves can be accommodated within the illustrative masterplan. Green space, landscaping, car parking and a cycle paths are proposed within the existing easement to provide a suitable stand-off distance and facilitate access for maintenance.

Whilst the high pressure gas pipeline presents a degree of constraint to the type and form of development proposed within the "inner" and "middle" zones, the proposed quantum of development and chosen land uses can be accommodated within the proposed locations identified upon the illustrative masterplan in Appendix B, taking into account the initial appraisal of "consultation zones" without further assessment or mitigation measures.

Further refinement of the "consultation zones" in due course, post-determination, should allow future evolution of the illustrative masterplan into a detailed development layout that maximises land use opportunities whilst safeguarding future site users and residents from a major hazard accident pipeline.

Subsequent discussions and correspondence with GTC confirmed that allowance was made within the provision of existing gas infrastructure at King's Warren Business Park to serve the existing business park together with the proposed residential area and other facilities. Refer to plan and correspondence in Appendix L.

No allowance has been made, to date, for the proposed employment areas to the north of the Site. However, due to the proximity of the proposed development to existing plant, and GTC's willingness to supply to new gas customers in a competitive commercial market, GTC have not indicated any significant constraints to making a connection to existing gas infrastructure at the present time.

No significant impact on the gas supply network is anticipated, although some local reinforcement works would be anticipated in order to accommodate gas loads generated by the proposed development.

To support the anticipated gas load and plot distribution, a gas governor house may need to be provided as build out of the proposed development proceeds to reduce the pressure for feeds to proposed employment units. The gas governor will regulate the gas pressure in the supply mains dependent upon the local demand around the proposed development. Adequate land is readily available within the proposed employment land to accommodate such a facility with a very minor land take.

8.0 **TELECOMMUNICATIONS SUPPLY**

8.1 Existing

BT is the telecommunications (telecom) supplier for the Site and locale. Asset plans indicate that overhead lines and underground cables traverse the Site. Refer to Appendix M.

BT asset plans confirm that an overhead telecom line runs parallel to, and alongside the south western boundary of the Site along the western verge of the existing Site access road. A distribution point, located overhead on a pole, is situated to the west of the main access road opposite the access serving the existing Business Park.

BT asset plans confirm that underground telecom cables are routed beneath the footpaths and verges along the access serving the existing Business Park, fed from a cabinet and distribution point adjacent to the King's Warren SPS adjacent to the south western extent of the Site off the Warren Road roundabout. Refer to Figure 10.

Figure 10 View North East Of Cabinet and Distribution Point at Site Entrance

Further distribution points are located on land just to the north of the proposed residential development area, and adjacent to the entrance to the Hundred Acre Way development just to the south west of the proposed residential development area.

From BT and other potential service providers information, no evidence of existing full fibre networks has been established in the locale.



8.2 Proposed

Review of BT asset record plans indicates that there are negligible existing easements or wayleaves to be accommodated within the illustrative masterplan.

Existing BT easements or wayleaves associated with the overhead line adjacent to the south western Site boundary can be accommodated within the illustrative masterplan within the proposed verge and soft landscaping.

Given the presence of underground plant immediately adjacent to the Site it is anticipated that there will be no constraints in making a connection to the existing plant from the proposed development.

In accordance with their standard operating procedures, BT is unable to provide an assessment of any diversion works or infrastructure upgrades prior to the granting of planning consent.

Due to the competitive nature of the telecoms market, new supplies can be readily provided to the Site and telecoms are not deemed to be a constraining feature in this location.

9.0 OTHER UTILITIES

A utilities search (LineSearch Before You Dig) has confirmed that no other services or utilities providers maintain plant within the vicinity of the Site.

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A full list of all providers contacted is included in Appendix N.

Providers not notified as part of the LineSearch process were contacted individually and responses also confirmed that no other services or utilities providers maintain plant within the vicinity of the Site.

Responses gathered from the follow-up search have also been included in Appendix N.

10.0 STUDY LIMITATIONS & FUTURE WORKS

10.1 Study Limitations

Details of existing utility infrastructure and asset data has been obtained from utility and service companies, referred to, and presented within, this report. The accuracy of this report is somewhat dependent upon the accuracy of the information provided by third parties, over which SLR has little or no control.

A site walkover survey was undertaken to seek to verify the findings of the initial asset data searches.

It should also be noted that unrecorded or abandoned plant may be present within the Site boundary which are not recorded within searches presented within this report.

The purpose of this Assessment is to establish the principle of siting the proposed development at this location; detailed appraisal and costing of future infrastructure connections would be undertaken at the appropriate stage, post-determination. Many utility providers only provide substantive advice, connection strategies, and supply costings upon the grant of planning consent.

10.2 Location of Plant

The precise location of existing utility infrastructure should be confirmed by contacting the relevant utility company, and undertaking manual tracing and surveys prior to any on-site construction activity and, in particular, groundworks.

Specifically relating to existing electrical infrastructure, it is recommended to ascertain the presence of UK Power Networks electric lines and/or electrical plant by the digging of trial holes. Trial holes should be dug by hand only. Excavations must be carried out in line with the Health and Safety Executive guidance document HSG47.

Any future work near to any overhead electric lines must be carried out in accordance with the Health and Safety Executive guidance document GS6 and the Electricity at Work Regulations.

Any future working in the vicinity of the high pressure gas pipeline must follow the 'Specification for Safe Working in the Vicinity of National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties' (SSW22).

Prior to any tree planting along permanent easements of high pressure gas mains (or within 10m, whichever is the greater), written approval should be obtained from National Grid.

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11.0 CONCLUSION

SLR Consulting Limited has been commissioned by Eclipse Planning Services on behalf of RJ Upton 1987 Settlement to prepare a Services & Utilities Assessment to support an outline planning application for development of land north of Red Lodge, Suffolk ("the Site").

This Assessment has identified existing foul drainage, potable water mains, electricity cables, gas supply mains, and telecommunications infrastructure within close proximity to the Site, offering opportunities for future connections from the proposed development.

Strategic studies undertaken by others to support the Forest Heath District Council (FHDC) Local Plan Review, in particular the FHDC Infrastructure Delivery Plan, clearly indicate that demand can be readily met for potable water, sewage treatment capacity, sewerage network capacity, and energy, to facilitate growth at Red Lodge. Studies indicate that these infrastructure demands can be met and pose no constraint upon future development. This view is based upon the much larger development area referred to as RL2(a) Red Lodge North, therefore, the quantum of development at the Site is expected to be readily accommodated.

No significant constraints to making connections to other existing utility infrastructure have been identified. No significant impacts upon local off-site utility networks, watercourses, or water resources, are anticipated.

National Grid's high pressure gas pipeline Feeder 3 Roudham Heath – Great Wilbraham traverses the Site and bisects the proposed employment development areas. Associated easement distances and Health & Safety Executive (HSE) "consultation zones" and land use planning criterion may place constraints upon the future form and layout of the proposed employment area.

However, the principle of siting residential development on the Site, along with a significant quantum of employment land within the "consultation zones" associated with the pipeline, is supported by the HSE guidelines which indicate that the HSE does not, on safety grounds, advise against the siting of the proposed land uses as shown upon the illustrative masterplan.

In conclusion, there are no insurmountable issues associated with the provision of utilities infrastructure to serve the proposed quantum of development at the Site.

12.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

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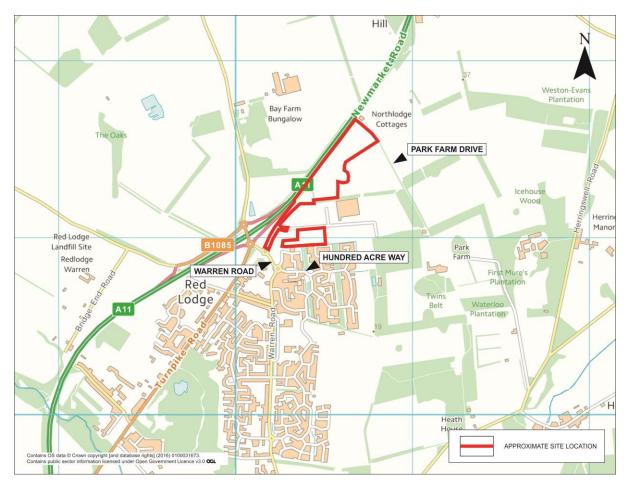
This report is for the exclusive use of RJ Upton 1987 Settlement; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

APPENDIX

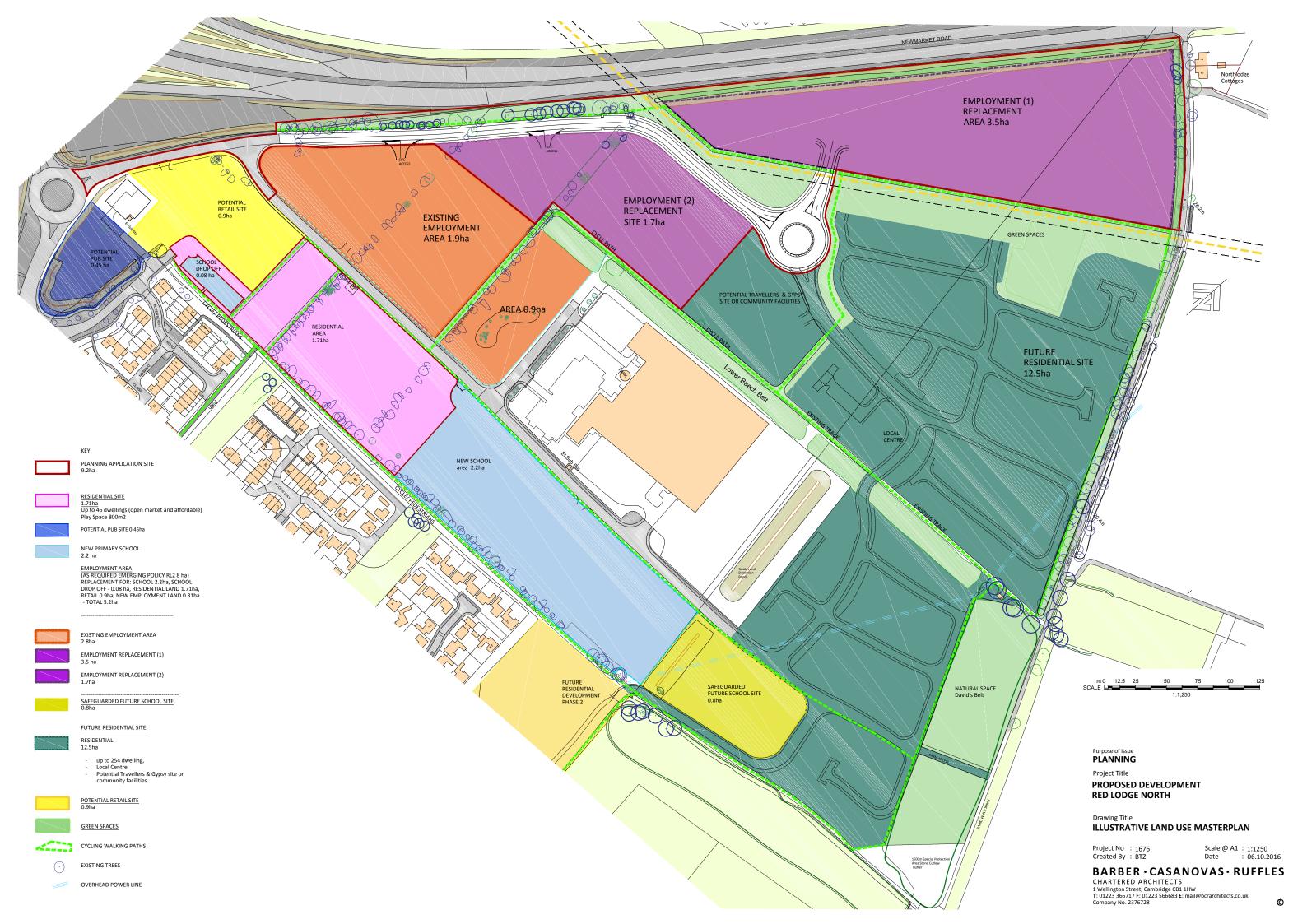
APPENDIX A

Site Location Plan



APPENDIX B

Illustrative Masterplan



APPENDIX C

Utility Loadings Calculations

FOUL WATER DISCHARGE

Land Use	Scenario	Gross Internal Floor Area (m2)	No. of Dwellings	Occupancy (per dwelling)	Equivalent Population (person)	Typical Foul Water Flow Rates (l/person/day)	Typical Foul Water Flow Rates (l/m2/day)	Estimated Average Daily Foul Water Discharge (I/day)	Estimated Average Foul Water Discharge (I/s)	Estimated Peak Foul Water Discharge (3DWF) (I/s)	Land Use Subtotal (Average) (I/s)	Land Use Subtotal (Peak) (I/s)
Residential	n/a	n/a	46	2.5	115	150	n/a	17250	0.6	1.8	0.6	1.8
B1 Business / R&D (Offices)	50%	12,500	n/a	n/a	n/a	n/a	7.5	93750	3.3	9.8		
B2 General Industrial	50%	12,500	n/a	n/a	n/a	n/a	4.3	53125	1.8	5.5	5.1	15.3
B8 Storage & Distribution	0%	0	n/a	n/a	n/a	n/a	1.5	0	0.0	0.0		
B1 Business / R&D (Offices)	55%	13,750	n/a	n/a	n/a	n/a	7.5	103125	3.6	10.7		
B2 General Industrial	45%	11,250	n/a	n/a	n/a	n/a	4.3	47813	1.7	5.0	5.2	15.7
B8 Storage & Distribution	0%	0	n/a	n/a	n/a	n/a	1.5	0	0.0	0.0		
B1 Business / R&D (Offices)	25%	6,250	n/a	n/a	n/a	n/a	7.5	46875	1.6	4.9		
B2 General Industrial	25%	6,250	n/a	n/a	n/a	n/a	4.3	26563	0.9	2.8	3.2	9.6
B8 Storage & Distribution	50%	12,500	n/a	n/a	n/a	n/a	1.5	18750	0.7	2.0		
Application Site Total											5.8	17.5

1) Residential flows estimated using Building Regulations Part H rates.

2) Employment flows estimated using Surveyor 1992 rates:

B1 750 l/day per 100m2 Offices

B2 425 l/day per 100m2 Average of 550 l/day per 100m2 (Manufacturing Unit) and 300 l/day per 100m2 (Commercial Premises)

B8 150 l/day per 100m2 Warehouse

3) No allowance has been made for abnormal trade effluent or process discharges.

POTABLE WATER DEMAND

Land Use	Scenario	Gross Internal Floor Area	No. of Dwellings	Occupancy	Equivalent Population	Typical Water Consumption Rates	Typical Water Consumption Rates	Estimated Daily Water Consumption	Estimated Water Demand	Land Use Subtotal
		(m2)		(per dwelling)	(person)	(l/person/day)	(l/m2/day)	(l/day)	(l/s)	(l/s)
Residential	n/a	n/a	46	2.5	115	125	n/a	14375	0.5	0.5
B1 Business / R&D (Offices)	50%	12,500	n/a	n/a	n/a	n/a	7.5	93750	3.3	
B2 General Industrial	50%	12,500	n/a	n/a	n/a	n/a	4.3	53125	1.8	5.1
B8 Storage & Distribution	0%	0	n/a	n/a	n/a	n/a	1.5	0	0.0	
B1 Business / R&D (Offices)	55%	13,750	n/a	n/a	n/a	n/a	7.5	103125	3.6	
B2 General Industrial	45%	11,250	n/a	n/a	n/a	n/a	4.3	47813	1.7	5.2
B8 Storage & Distribution	0%	0	n/a	n/a	n/a	n/a	1.5	0	0.0	
B1 Business / R&D (Offices)	25%	6,250	n/a	n/a	n/a	n/a	7.5	46875	1.6	
B2 General Industrial	25%	6,250	n/a	n/a	n/a	n/a	4.3	26563	0.9	3.2
B8 Storage & Distribution	50%	12,500	n/a	n/a	n/a	n/a	1.5	18750	0.7	
Application Site Total								165313		5.7

1) Residential demand estimated using Building Regulations Part G rates.

2) Employment demand based upon foul flows estimated using Surveyor 1992 rates:

B1 750 l/day per 100m2 Offices

B2 425 l/day per 100m2

B8 150 l/day per 100m2

Average of 550 l/day per 100m2 (Manufacturing Unit) and 300 l/day per 100m2 (Commercial Premises)

day per 100m2 Warehouse

ELECTRICAL DEMAND

Scenario	Gross Internal Floor Area	No. of Dwellings	Assumed Electrical Demand	Assumed Electrical Demand	Estimated Electrical Demand	Land Use Subtotal	Power Factor	Land Use Subtotal
	(m2)		(kW/property)	(kW/m2)	(kW)	(kW)		(kVA)
n/a	7,820	46	4	n/a	184	184	0.85	216
50%	12,500	n/a	n/a	0.095	1188			
50%	12,500	n/a	n/a	0.060	750	1938	0.85	2279
0%	0	n/a	n/a	0.053	0			
55%	13,750	n/a	n/a	0.095	1306			
45%	11,250	n/a	n/a	0.060	675	1981	0.85	2331
0%	0	n/a	n/a	0.053	0			
25%	6,250	n/a	n/a	0.095	594			
25%	6,250	n/a	n/a	0.060	375	1625	0.85	1912
50%	12,500	n/a	n/a	0.053	656			
						2165		2547
	n/a 50% 50% 0% 55% 45% 0% 25%	Scenario Floor Area (m2) n/a 7,820 n/a 7,820 50% 12,500 50% 12,500 50% 12,500 0% 0 0% 0 55% 13,750 45% 11,250 0% 0 25% 6,250 25% 6,250	Scenario Floor Area (m2) Dwellings n/a 7,820 46 n/a 7,820 46 50% 12,500 n/a 6 0 n/a 0% 0 n/a 0% 0 n/a 0% 0 n/a 45% 11,250 n/a 0% 0 n/a 0% 0 n/a 25% 6,250 n/a 25% 6,250 n/a	Scenario Floor Area (m2) Dwellings Electrical Demand (kW/property) n/a 7,820 46 4 n/a 7,820 46 4 50% 12,500 n/a n/a 50% 12,500 n/a n/a 50% 12,500 n/a n/a 0% 0 n/a n/a 50% 12,500 n/a n/a 50% 12,500 n/a n/a 0% 0 n/a n/a 0% 0 n/a n/a 0% 0 n/a n/a 45% 11,250 n/a n/a 0% 0 n/a n/a 0% 0 n/a n/a 25% 6,250 n/a n/a 25% 6,250 n/a n/a	Scenario Floor Area (m2) Dwellings Electrical Demand (kW/property) Demand (kW/m2) n/a 7,820 46 4 n/a n/a 7,820 46 4 n/a 50% 12,500 n/a n/a 0.095 50% 12,500 n/a n/a 0.095 50% 12,500 n/a n/a 0.095 0% 0 n/a n/a 0.060 0% 0 n/a n/a 0.053 45% 13,750 n/a n/a 0.095 0% 0 n/a n/a 0.095 0% 0 n/a n/a 0.095 13,750 n/a n/a 0.053 0% 0 n/a n/a 0.053 0% 0 n/a n/a 0.053 11,250 n/a n/a 0.053 25% 6,250 n/a n/a 0.095	Scenario Floor Area (m2) Dwellings Electrical Demand (kW/property) Demand (kW/m2) Electrical Demand (kW/m2) n/a $(m2)$ $(m2)$ (kW) $(kW/m2)$ (kW) n/a $7,820$ 46 4 n/a 184 n/a $7,820$ 46 4 n/a 184 50% $12,500$ n/a n/a 0.095 1188 50% $12,500$ n/a n/a 0.060 750 50% $12,500$ n/a n/a 0.060 750 0% 0 n/a n/a 0.060 750 0% 0 n/a n/a 0.060 750 $11,250$ n/a n/a 0.095 1306 0% 0 n/a n/a 0.060 675 0% 0 n/a n/a 0.060 675 0% 0 n/a n/a	Scenario Floor Area Dwellings Electrical Demand (kW/property) Demand (kW/m2) Electrical Demand (kW) Electrical Demand (kW) Subtotal (kW) $(m2)$ $(m2)$ $(m2)$ (kW) (kW) (kW) (kW) n/a $7,820$ 46 4 n/a 184 184 n/a $7,820$ 46 4 n/a 184 184 n/a $7,820$ 46 4 n/a 184 184 n/a $7,820$ n/a n/a 0.095 1188 184 50% $12,500$ n/a n/a 0.060 750 1938 0% 0 n/a n/a 0.060 750 1938 0% 0 n/a n/a 0.060 675 1981 0% 0 n/a n/a 0.060 675 1981 0% 0 n/a n/a 0.060	Scenario Floor Area (m2) Dwellings Electrical Demand (kW/property) Demand (kW/m2) Electrical Demand (kW) Subtotal (kW) Power Factor (kW) n/a 7,820 46 4 n/a 184 1.00 1.00 n/a 7,820 46 4 n/a 184 184 0.051 n/a 7,820 46 4 n/a 184 184 0.051 50% 12,500 n/a n/a 0.095 1188 1.01 1.01 50% 12,500 n/a n/a 0.060 750 1938 0.851 50% 12,500 n/a n/a 0.060 750 1938 0.851 0% 0 n/a n/a 0.060 1.01 1.01 1.01 55% 13,750 n/a n/a 0.060 675 1981 0.851 45% 11,250 n/a n/a 0.063 0 1.01 1.01 25%

1) Employment electrical demand based upon BSRIA Rules of Thumb : Guidelines for Building Services (5th Edition):

B1 95 W/m2

 95 W/m2
 Offices

 60 W/m2
 Average of 50 W/m2 (Light Industrial) and 70 W/m2 (Retail Warehouse)

 B2
 60 W/m2
 Average of 50 W/m2 (Light Industrial) and 70 W/m2 (Retail Warehouse)

 B8
 53 W/m2
 Average of 35 W/m2 (Storage / Depot) and 70 W/m2 (Retail Warehouse)

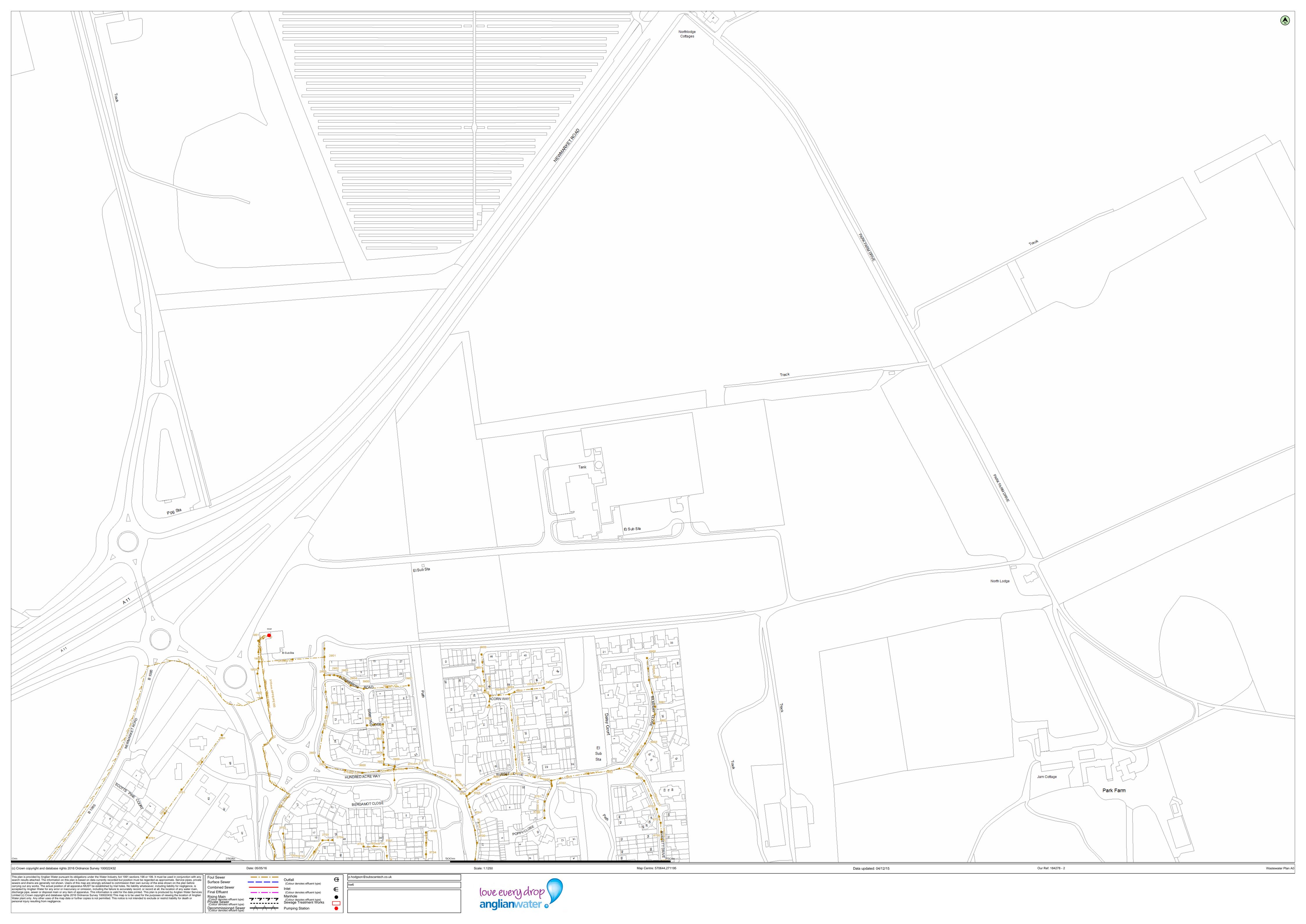
GAS DEMAND

Land Use	Scenario	Gross Internal Floor Area	No. of Dwellings	Assumed Gas Demand	Estimated Peak Gas Load	Heating Season	Heating Days Per Week	Heating Hours Per 24hr Day	Boiler Efficiency	Load Factor	Estimated Annual Gas Load	Land Use Subtotal
		(m2)		(kW/m2)	(kW)	(Weeks)		(Hours)	(%)	(%)	(kWh)	(kWh)
Residential	n/a	7,820	46	0.125	978	45	7	10	90%	70%	2394875	2394875
B1 Business / R&D (Offices)	50%	12,500	n/a	0.080	1000	40	5	8	90%	70%	1244444	
B2 General Industrial	50%	12,500	n/a	0.090	1125	40	6	8	90%	70%	1680000	2924444
B8 Storage & Distribution	0%	0	n/a	0.050	0	40	7	8	90%	70%	0	
B1 Business / R&D (Offices)	55%	13,750	n/a	0.080	1100	40	5	8	90%	70%	1368889	
B2 General Industrial	45%	11,250	n/a	0.090	1013	40	6	8	90%	70%	1512000	2880889
B8 Storage & Distribution	0%	0	n/a	0.050	0	40	7	8	90%	70%	0	
B1 Business / R&D (Offices)	25%	6,250	n/a	0.080	500	40	5	8	90%	70%	622222	
B2 General Industrial	25%	6,250	n/a	0.090	563	40	6	8	90%	70%	840000	2551111
B8 Storage & Distribution	50%	12,500	n/a	0.050	625	40	7	8	90%	70%	1088889	
Application Site Total					3103							5319319

1) Gas demand based upon BSRIA Rules of Thumb : Guidelines for Building Services (5th Edition):

APPENDIX D

Foul Sewage : Anglian Water Asset Plans



701	rence Easting 570068	Northing 270739	Liquid Ty F	pe Cover Lev 17.56	el Invert Level	Depth to Inve
701 801	570068 570107 570153	270739 270793 270855	F F F	17.96 18.11	16.21 16.6	1.74 1.75 1.51
900 901	570195 570195	270855 270939 270962	F F F	18.23	12.012	6.218
901 902 903	570195 570199 570193	270962 270897 270925	F F F	-	-	-
903 702 703	570193 570223 570267	270925 270743 270736	F F F	- 18.55 18.9	- 17.486 17.236	- 1.064 1.664
703 704 800	570267 570279 570273	270736 270736 270887	F F F	18.9 18.9 19.1	17.236 17.48 12.354	1.664 1.42
801	570263	270831	F F F	19.15	12.512	6.638
802 900	570272 570270	270819 270923	F	18.9 18.65	12.556 15.5	6.344 3.15
901 902	570270 570281	270944 270923	F F	12.349 18.51	12.199 15.645	0.15 2.865
903 904	570287 570299	270922 270912	F F	18.45 18.25	15.689 15.933	2.761 2.317
700 701	570385 570340	270744 270728	F F	18.6 18.95	17.25 16.861	1.35 2.089
703 704	570314 570385	270729 270720	F F	18.9 18.75	17.285 16.498	1.615 2.252
800 801	570313 570376	270812 270818	F	18.4 19	12.671 -	5.729 -
802 803	570348 570318	270816 270866	F	18.6 18.35	16 16.794	2.6 1.556
804 805	570336 570337	270868 270847	F F	18.25 18.45	16.473 16.335	1.777 2.115
806 807	570337 570337	270833 270821	F	18.55 18.57	16.239 16.162	2.311 2.408
808 900	570350 570315	270820 270908	F F	18.75 18.4	16.08 16.039	2.67 2.361
901	570366	270912	F	18.4	16.887	1.513
700 701	570443 570438	270733 270762	F F	18.899 19.096	13.216 13.117	5.683 5.979
702 703	570431 570435	270786 270789	F	19.076 19.092	13.035 13.185	6.041 5.907
704 800	570448 570415	270799 270803	F F	18.823 19.36	14.309 12.955	4.514 6.405
801 802	570463 570457	270808 270889	F F	18.681 18.687	14.498 16.933	4.183 1.754
803 804	570458 570486	270900 270842	F F	18.824 18.673	16.26 15.659	2.564 3.014
805 900	570489 570449	270812 270947	F F	18.832 18.677	14.675 16.85	4.157 1.827
900 901 902	570449 570450 570452	270928 270906	F F F	18.651	16.534 16.39	2.117
902 903 904	570452 570490 570480	270906 270906 270902	F F F	18.853 18.866 18.772	16.68 16.1	2.463 2.186 2.672
700	570520	270761	F	19.359	17.98	1.379
701 702	570520 570529	270779 270797	F F	19.193 19.047	17.627 15.753	1.566 3.294
800 801	570528 570546	270804 270808	F F	18.963 19.111	15.114 15.247	3.849 3.864
802 900	570592 570519	270814 270909	F F	19.136 18.863	15.566 16.88	3.57 1.983
700 701	570653 570652	270737 270755	F F	19.068 19.132	17.2 16.91	1.868 2.222
702 800	570648 570634	270771 270803	F F	19.015 18.814	16.79 16.22	2.225 2.594
801 802	570646 570645	270888 270869	F F	18.313 18.468	16.223 16.097	2.09 2.371
803 804	570635 570616	270846 270820	F F	18.674 18.962	15.935 15.725	2.739 3.237
900 901	570637 570639	270943 270918	F F	18.052 18.059	16.6 16.425	1.452 1.634
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APPENDIX E

FHDC Draft Infrastructure Delivery Plan Extracts

Red Lodge

SIR Distribution additional provision: Option 1 – 950 dwellings; Option 2 – 850 dwellings

SALP: Policy RL1 allocates three sites for residential development in Red Lodge with a combined indicative capacity of 596 dwellings; and Policy RL2 allocates 27.4ha of land for mixed use development as a focus of growth at north Red Lodge to include 300 dwellings.

Infrastructure Category	Lead Organisation	Existing	Improvements Required	Provision planned and/or funding sources
Transport	Bus and Rail operators SCC Highways England	 Buses to Mildenhall and Bury St Edmunds A11 connects Red Lodge to Norwich, and the A14 (eastbound only). Kennett train station 1.5miles south of Red Lodge 	committed to undertake further work with the District Council to ensure that the issues for the different areas of growth are understood and identify areas where further transport assessment is required to build on the work	Developer contributions Government
Energy	UK Power Networks	Energy supply	 No capacity issues have been identified Investment is driven by demand and improvement plans Not known 	Developer contributions
Waste Management	Suffolk County Council		To be ascertained at the planning application stage.	Suffolk County Council's S106 Developers Guide to Infrastructure

				Contributions sets standard contributions toward waste disposal facilities (dependent on local need). In many cases it will be appropriate to use planning conditions to reduce waste through on-site measures such as providing composting and recycling facilities.
Water & Drainage	AWS	Newmarket RZ	Demand for water can be met – no constraint on development.	N/A
		Tuddenham WRC	Quality improvements to WRC required (AMP6). Sewerage capacity sufficient to accommodate proposed development at Red Lodge.	Improvement works to Tuddenham WRC planned by Anglian Water (see Water Cycle Study Update, Arcadis, March 2016).
			No significant increase in flood risk from WRC discharges identified.	Any local infrastructure upgrades required to accommodate increased flow to be funded by developers.
	SCC	Surface water flooding issues.	Known pluvial flooding issue on part of site RL2(a) (SALP	Surface water flooding issue needs to be

APPENDIX F

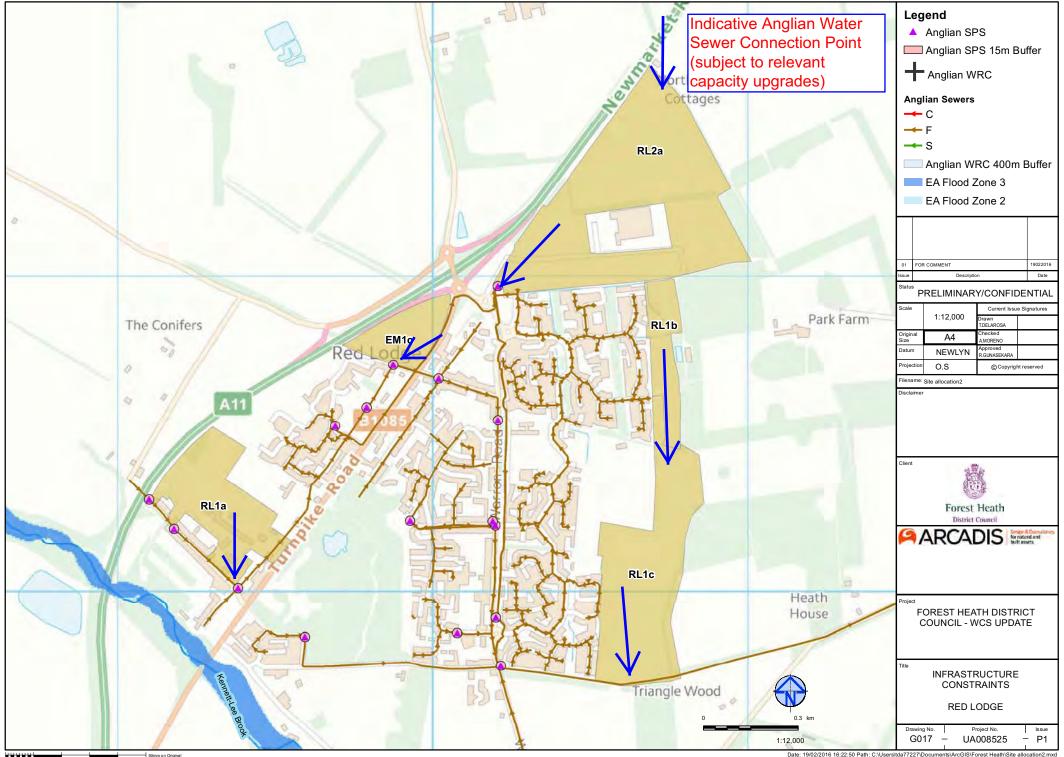
Forest Heath Water Cycle Strategy Update Extracts

Forest Heath Water Cycle Strategy Update 9.1 RAG Tables

Settlement	Water Supply (Section 4)	Wastewater Treatment (Section 5)	Sewerage Network (Section 7)	Water Quality (Section 6)	Flood Risk (Section 8)
Beck Row	Has sufficient resources	No new consents required. Adequate capacity at Mildenhall WRC to cope with proposed growth. Developments BR1a, BR1b, BR1c, BR1f are within 15m of sewerage pumping station	No significant sewerage capacity issues however upgrades may be necessary to accommodate increased flow. Developers should contact Anglian Water in order to assess what upgrades are required	As current WRC consents will not be exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Low
Brandon	Has sufficient resources	No new consents required. Adequate capacity at Brandon WRC to cope with proposed growth. Developments B1a, B1c are within 15m of sewerage pumping station	No significant sewerage capacity issues however upgrades may be necessary to accommodate increased flow. Developers should contact Anglian Water in order to assess what upgrades are required	As current WRC consents will not be exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Low
Exning	Has sufficient resources	No new consents required. Adequate capacity at Newmarket WRC to cope with proposed growth.	No significant sewerage capacity issues however upgrades may be necessary to accommodate increased flow. Developers should contact Anglian Water in order to assess what upgrades are required	As current WRC consents will not be exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Low
Kentford	Has sufficient resources	No new consents required. Adequate capacity at Newmarket WRC to cope with proposed growth.	No significant sewerage capacity issues however upgrades may be necessary to accommodate increased flow. Developers should contact Anglian Water in order to assess what upgrades are required	As current WRC consents will not be exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Low
Lakenheath	Has sufficient resources	No new consents required. Adequate capacity at Lakenheath WRC to cope with proposed growth. Developments L2c, L2d are inside the 400m cordon sanitaire of existing WRCs	No significant sewerage capacity issues however upgrades may be necessary to accommodate increased flow. Developers should contact Anglian Water in order to assess what upgrades are required	As current WRC consents will not be exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Low

Forest Heath Water Cycle Strategy Update

Mildenhall	Has sufficient resources	No new consents required. Adequate capacity at WRC to cope with proposed growth. Development M1a is inside the 400m cordon sanitaire of existing WRCs. Developments M2c, EM1a are within 15m of sewerage pumping station	No significant sewerage capacity issues however upgrades may be necessary to accommodate increased flow. Developers should contact Anglian Water in order to assess what upgrades are required	As current WRC consents will not be exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Low
Newmarket	Has sufficient resources	No new consents required. Adequate capacity at Newmarket WRC to cope with proposed growth. Developments N1d are within 15m of sewerage pumping station	No significant sewerage capacity issues however upgrades may be necessary to accommodate increased flow. Developers should contact Anglian Water in order to assess what upgrades are required	As current WRC consents will not be exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Low
Red Lodge	Has sufficient resources	No new consents required until 2026. Adequate capacity at Tuddenham WRC to cope with proposed growth as AWS have already increased treatment capacity although further minor upgrades will be required post 2021 period. AWS have already started planning investigations to determine the required treatment upgrades. EA says there will be adequate capacity in River Lark and Tuddenham stream for an increased consent. Developments RL1a, RL2a, EM1c are within 15m of sewerage pumping station	AWS have carried out notable improvements. The sewerage network capacity is not considered a significant constraint to proposed development, and does not warrant a 2021 embargo. Limited upgrades may be necessary to accommodate increased flow and developers should contact Anglian Water in order to assess what upgrades are required.	Although current WRC consents will be slightly exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Medium
West Row	Has sufficient resources	No new consents required. Adequate capacity at Mildenhall WRC to cope with proposed growth. Developments WR1a are within 15m of sewerage pumping station	No significant sewerage capacity issues however upgrades may be necessary to accommodate increased flow. Developers should contact Anglian Water in order to assess what upgrades are required	As current WRC consents will not be exceeded, no significant constraints in terms of water quality have been identified as part of the Interim WCS.	Low

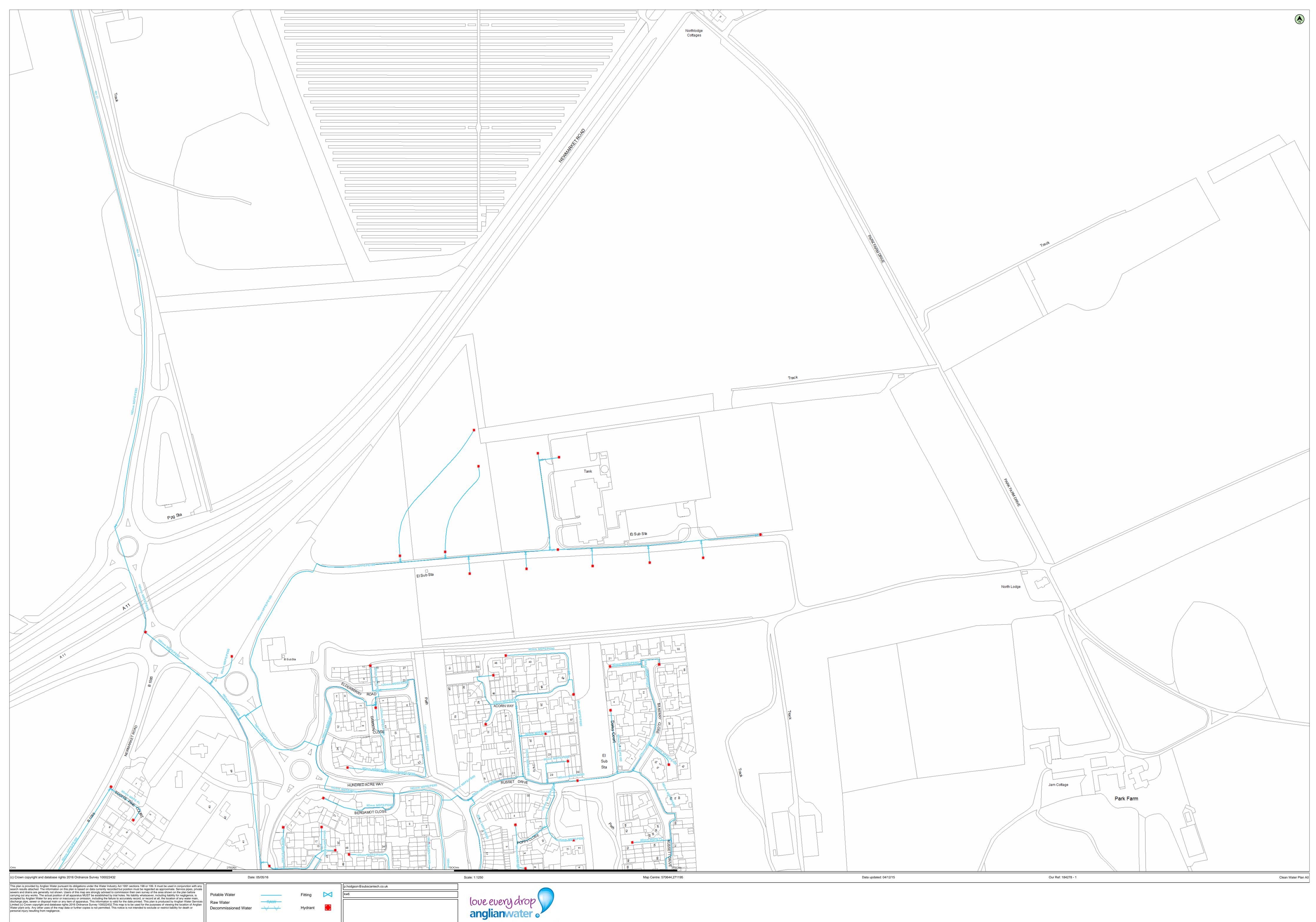


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		:	Site Information			WRC Information	Potable W	ater Constraints	Waster	water Constraints	Surfacewater Constraints
		Site Area	Potential Dwellings	Proposed	Development			Supply Networks		Foul Sewer Network	Storm Sewer Network
Site Ref	Site Location	(m2)	(Nos)	Land Use	Timescale *NOTE	Name	Resource	Capacity	WRC Capacity	Capacity	Capacity
B1a	Brandon	15169	43 Em	nployment	2016-2018	Brandon	Green	Amber	Green	Amber	Red
B1b	Brandon	6582	20 Re	sidential	2020-2021	Brandon	Green	Amber	Green	Amber	Red
B1c	Brandon	3106	10 Re	sidential	2018-2019	Brandon	Green	Amber	Green	Amber	Red
BR1a	Beck Row	23108	60 Mi	xed Use	2016-2018	Mildenhall	Amber	Amber	Green	Amber	Red
BR1b	Beck Row	58391	166 Re	sidential	2019-2024	Mildenhall	Amber	Amber	Green	Amber	Red
BR1c	Beck Row	41547	117 Re	sidential	2019-2023	Mildenhall	Amber	Amber	Green	Amber	Red
BR1d	Beck Row	5522	5 Re	sidential	2018-2019	Mildenhall	Amber	Amber	Green	Amber	Red
BR1e	Beck Row	5969	24 Re	sidential	2018-2019	Mildenhall	Amber	Amber	Green	Amber	Red
BR1f	Beck Row	13138	32 Re	sidential	2018-2020	Mildenhall	Amber	Amber	Green	Amber	Red
E1a	Exning	60831	120 Re	sidential	2016-2020	Newmarket	Amber	Amber	Green	Amber	Red
E1b	Exning	44595	81 Re	sidential	2016-2019	Newmarket	Amber	Amber	Green	Amber	Red
E1c	Exning	100000	179 Re	sidential	2021-2026	Newmarket	Amber	Amber	Green	Amber	Red
EM1a	Mildenhall	40475	0 Em	nployment	N/A	Mildenhall	Amber	Amber	Green	Amber	Red
EM1c	Red Lodge	41253	0 Em	nployment	N/A	Tuddenham	Amber	Amber	Green	Amber	Red
K1a	Kentford	36731	60 Re	sidential	2019-2022	Newmarket	Amber	Amber	Green	Amber	Red
K1b	Kentford	20466	34 Re	sidential	2017-2019	Newmarket	Amber	Amber	Green	Amber	Red
L1a	Lakenheath	6321	12 Re	sidential	2016-2018	Lakenheath	Amber	Amber	Green	Amber	Red
L1b	Lakenheath	52462	140 Re	sidential	2018-2023	Lakenheath	Amber	Amber	Green	Amber	Red
L2a	Lakenheath	34668	81 Re	sidential	2018-2021	Lakenheath	Amber	Amber	Green	Amber	Red
L2b	Lakenheath	200000	375 Re	sidential	2018-2024	Lakenheath	Amber	Amber	Green	Amber	Red
L2c	Lakenheath	27786	67 Re	sidential	2018-2020	Lakenheath	Amber	Amber	Green	Amber	Red
L2d	Lakenheath	92243	165 Re	sidential	2018-2024	Lakenheath	Amber	Amber	Green	Amber	Red
M1(a)	Mildenhall	900000	1241 Mi	xed Use	2024-2031	Mildenhall	Amber	Amber	Green	Amber	Red
M2(a)	Mildenhall	5475	9 Re	sidential	2016-2018	Mildenhall	Amber	Amber	Green	Amber	Red
M2(b)	Mildenhall	6508	20 Re	sidential	2017-2019	Mildenhall	Amber	Amber	Green	Amber	Red
M2(c)	Mildenhall	30629	78 Re	sidential	2016-2020	Mildenhall	Amber	Amber	Green	Amber	Red
M2(d)	Mildenhall	20083	89 Re	sidential	2020-2023	Mildenhall	Amber	Amber	Green	Amber	Red
N1a	Newmarket	29081	87 Re	sidential	2026-2030	Newmarket	Amber	Amber	Green	Amber	Red
N1b	Newmarket	33108	0 Mi	xed Use	N/A	Newmarket	Amber	Amber	Green	Amber	Red
N1c	Newmarket	700000	400 Mi	xed Use	2017-2022	Newmarket	Amber	Amber	Green	Amber	Red
N1d	Newmarket	22386	44 Re	sidential	2018-2020	Newmarket	Amber	Amber	Green	Amber	Red
N1e	Newmarket	49537	50 Mi	xed Use	2018-2020	Newmarket	Amber	Amber	Green	Amber	Red
N1f	Newmarket	20867	73 Re	sidential	2022-2025	Newmarket	Amber	Amber	Green	Green	Red
RE1a	Newmarket	15914	0 Re	tail	N/A	Newmarket	Amber	Amber	Green	Amber	Red
RL1a	Red Lodge	96053	125 Re	sidential	2025-2029	Tuddenham	Amber	Amber	Green	Amber	Red
RL1b	Red Lodge	41451	97 Re	sidential	2025-2029	Tuddenham	Amber	Amber	Green	Amber	Red
RL1c	Red Lodge	200000	374 Re	sidential	2018-2025	Tuddenham	Amber	Amber	Green	Amber	Red
RL2a	Red Lodge	300000	302 Re	sidential	2022-2026	Tuddenham	Amber	Amber	Green	Amber	Red
WR1a	West Row	73475	138 Re	sidential	2020-2025	Mildenhall	Amber	Amber	Green	Amber	Red
WR1b	West Row	7172	26 Re	sidential	2016-2019	Mildenhall	Amber	Amber	Green	Amber	Red
WR1c	West Row	5591	11 Re	sidential	2020-2021	Mildenhall	Amber	Amber	Green	Amber	Red

APPENDIX G

Potable Water Supply : Anglian Water Asset Plans





APPENDIX H

Forest Heath Sustainability Appraisal Extracts

21 WATER RESOURCES

EN6: Reduce and minimise pressures on water resources

Commentary on the broad strategy (SIR)

- 21.1.1 The Council's Water Cycle Study (Hyder, 2011) does not highlight any major constraints; however, there are some uncertainties given that the study was undertaken with certain assumptions made regarding the scale and distribution of growth. Notably, the study found that: the existing potable water strategic supply network is well placed to accommodate growth; the provision of sewerage infrastructure presents a constraint in some areas; and the provision of sufficient wastewater treatment capacity, whilst complying with strict environmental standards, is the largest constraining factor to growth, with Lakenheath and Red Lodge areas of concern. A more recent study (October 2014) concluded that recent capacity improvements mean that wastewater capacity no longer represents a constraint to growth at Red Lodge; however is noted that Red Lodge Parish Council has suggested (through consultation) that this remains an issue.
- 21.1.2 Further evidence is provided by Anglian Water's Water Resources Management Plan (WRMP) 2015, which states how the water company proposes to maintain the balance between supply and demand over the next 25 years, as well as deal with the longer term challenge of population increase, climate change and growing environmental needs. 'Key points' for the Newmarket Resource Zone (RZ) are listed as:¹³
 - Confirmation of sustainability reductions in the Cambridgeshire and West Suffolk RZ highlighted local RZ integrity issues. This has resulted in the RZ being disaggregated into five smaller RZs.
 - Two WTWs in the newly formed Newmarket RZ are targeted for likely sustainability reductions. These may reduce average daily source-works output by 2.5Ml/d.
 - The RZ remains in surplus for the forecast period.
 - No significant baseline climate change or levels of service sensitivities are identified.
 - A worst case 2.6Ml/d climate change reduction in average daily source-works output is forecast. This would affect our abstraction from a drought vulnerable portion of the Chalk.
 - In the long-term, increased connectivity and resource development in the East Suffolk and South Essex RZs will benefit this RZ.
- 21.1.3 These points are obviously quite technical, and so it is **recommended** that the Council engage directly with Anglian Water to ensure that implications for the preferred growth quantum / spatial strategy are fully understood.

Commentary on site allocations (SALP)

21.1.4 Large developments may enable the achievement of higher standards of water efficiency; however, this is not something that is a focus of site specific policy currently. It is **recommended** that the Council engage directly with Anglian Water to ensure that site specific opportunities (in particular at the west of Mildenhall strategic allocation) are fully realised.

Appraisal of 'the draft plan' as a whole (SIR plus SALP)

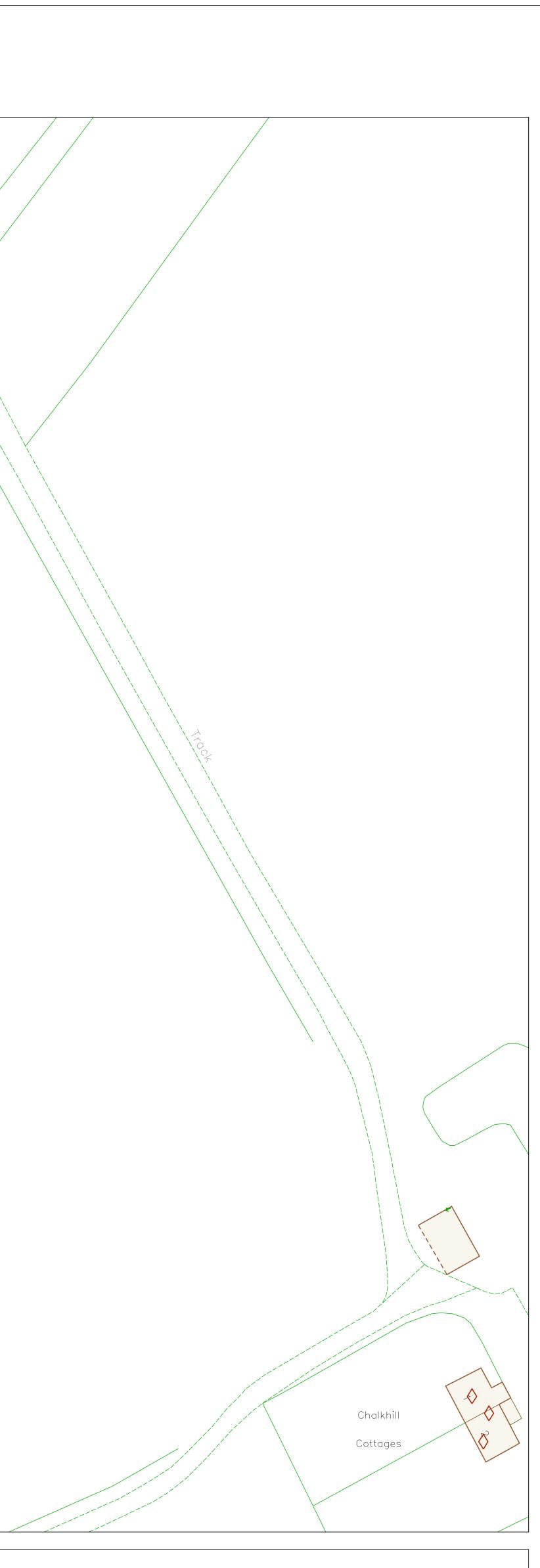
21.1.5 Housing growth in Forest Heath has implications for water resources; however, it is not clear that Forest Heath is any more sensitive than surrounding areas, or that there are areas within Forest Heath that are particularly sensitive. There is also the matter of ensuring that opportunities for increasing water resource efficiency are realised through design measures, and in this respect additional work is necessary to confirm that this is not a strategic matter to be addressed through the SALP. **Significant negative effects are not predicted**.

¹³ See pg. 285 at: <u>http://www.anglianwater.co.uk/_assets/media/WRMP_2015.pdf</u>

APPENDIX I

Electricity : UK Power Networks Asset Plans

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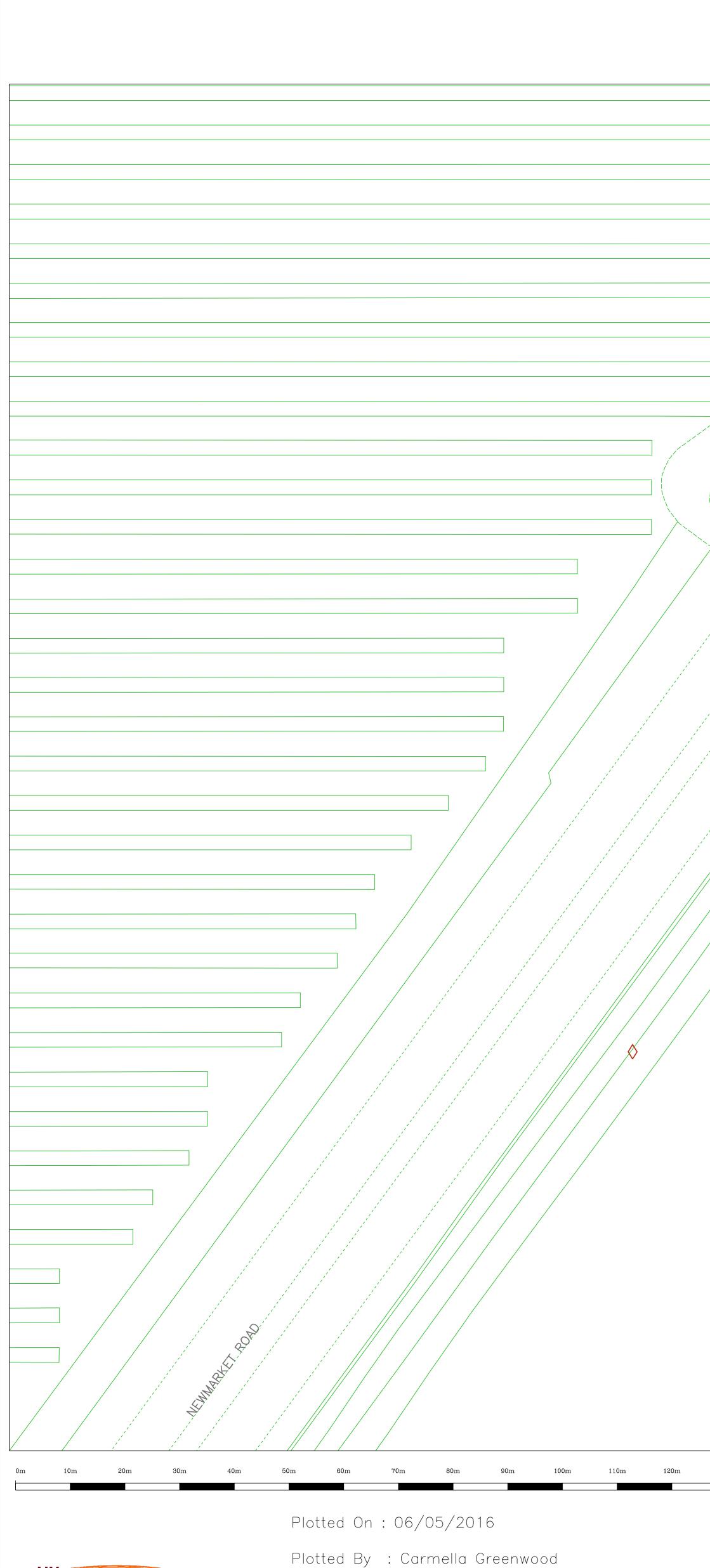
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IF IN DOUBT – ASK! PHONE 0800 056 5866 EMERGENCY – If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

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aware that electric lines belonging to other owners of licensed distribution systems may be present and it is your responsibility their location.



Plot Description: KING WARREN BUSINESS PARK, RED L SUFFOLK, IP28 8WG 2016/2221239/ug_mains

Map Centre : TL7071NE

UK Power Networks Plan Provision Fore Hamlet IPSWICH Suffolk IP3 8AA Tel 0800 0565 866 Fax 08701 963782

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For details of the symbology please refer to http://www.ukpowernetworks.co.uk/safety-emergencies/in-the-workplace/understanding-safety-symbols.shtml

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UK Power Networks Plan Provision Fore Hamlet IPSWICH Suffolk IP3 8AA Tel 0800 0565 866 Fax 08701 963782

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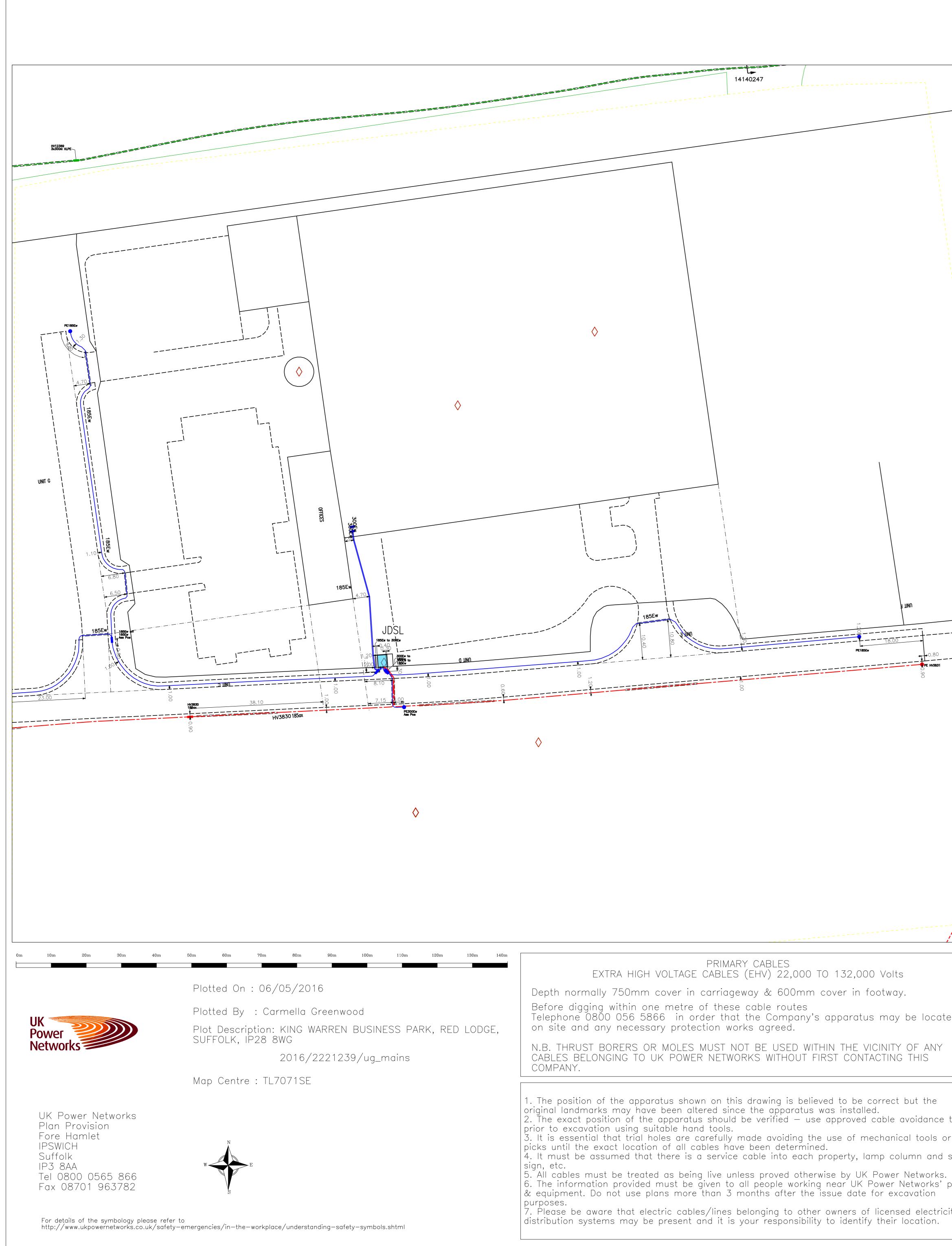


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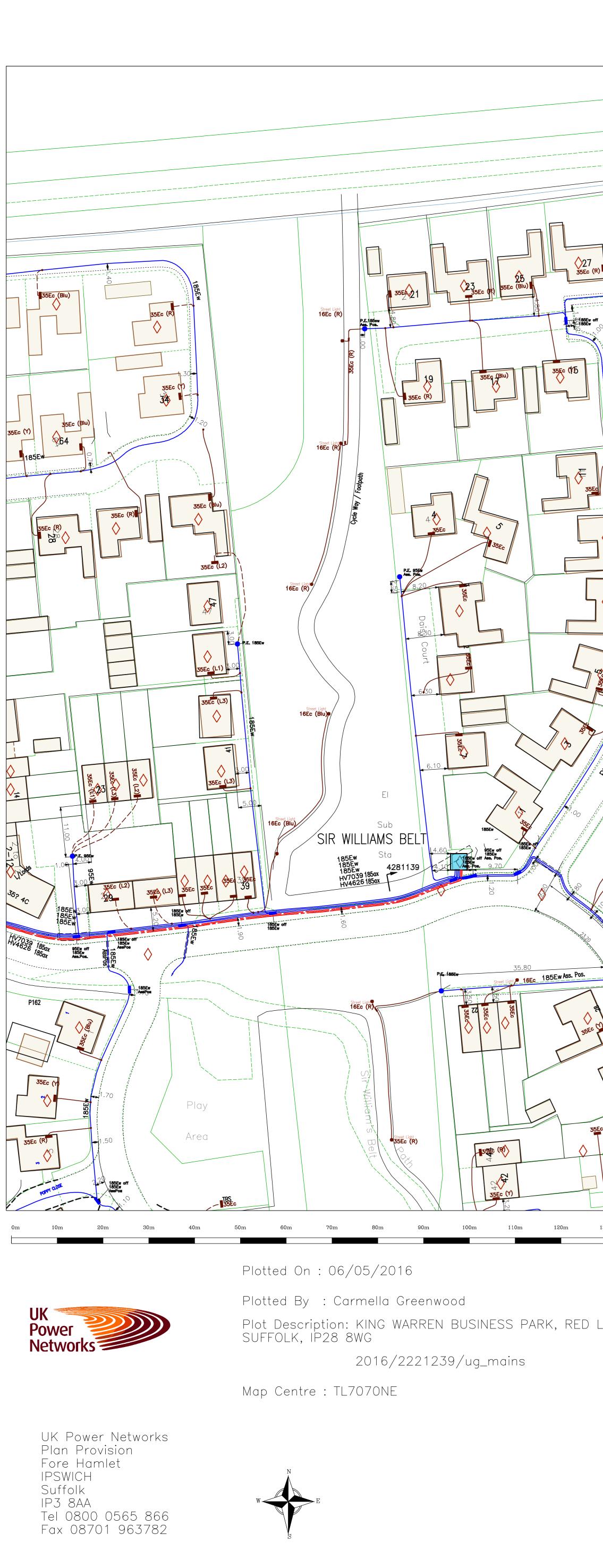
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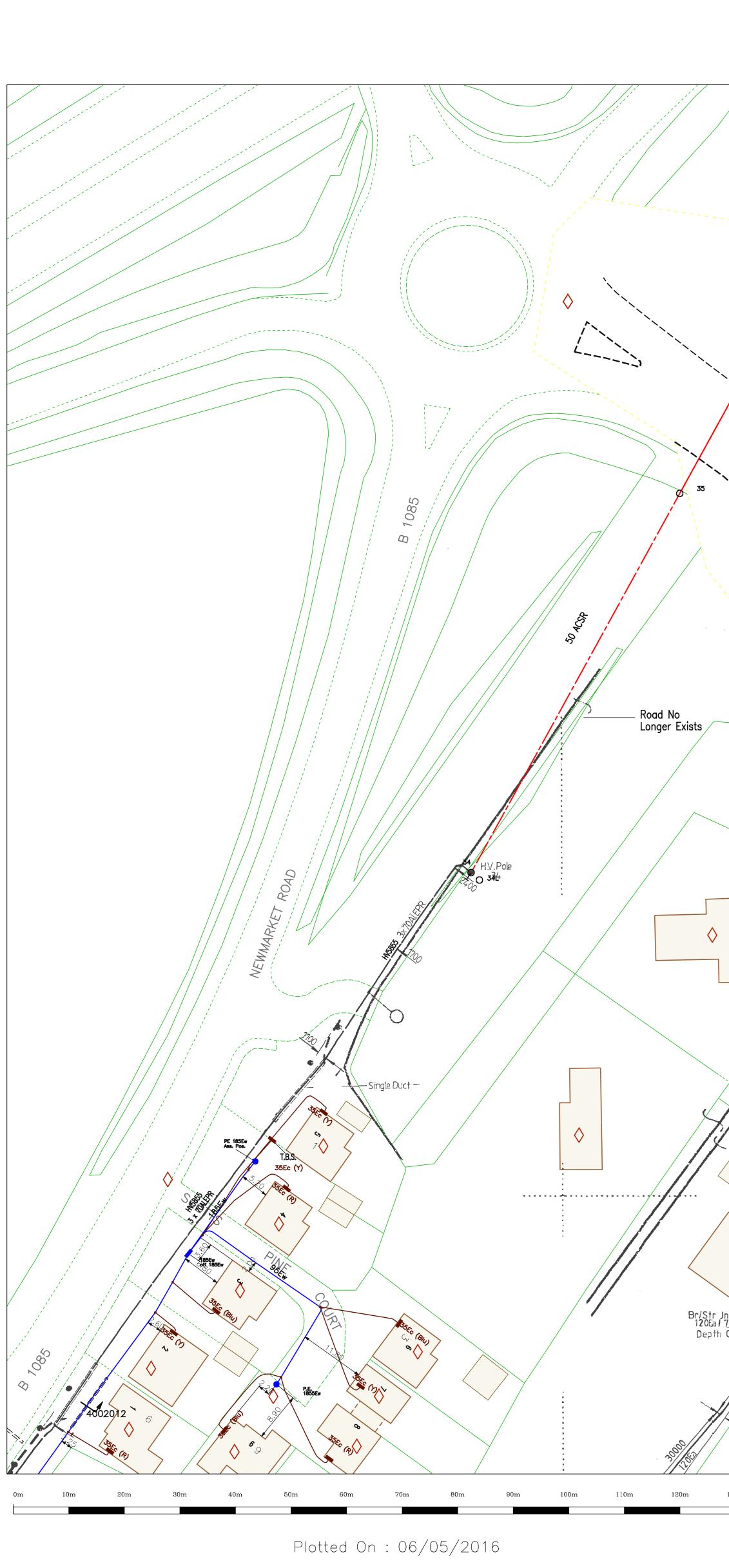
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Plotted By : Carmella Greenwood Plot Description: KING WARREN BUSINESS PARK, RED SUFFOLK, IP28 8WG 2016/2221239/ug_mains

Map Centre : TL7070NW

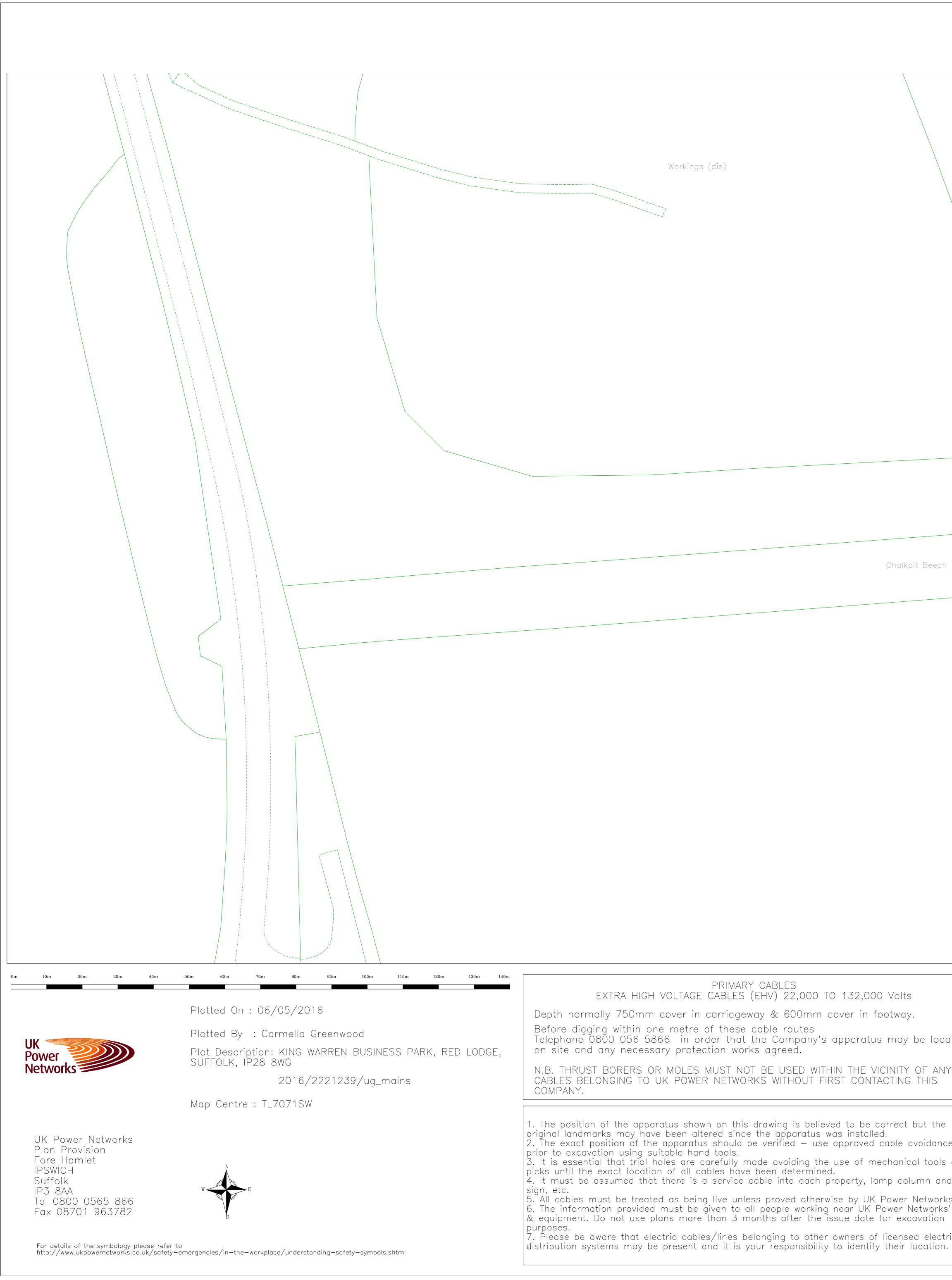
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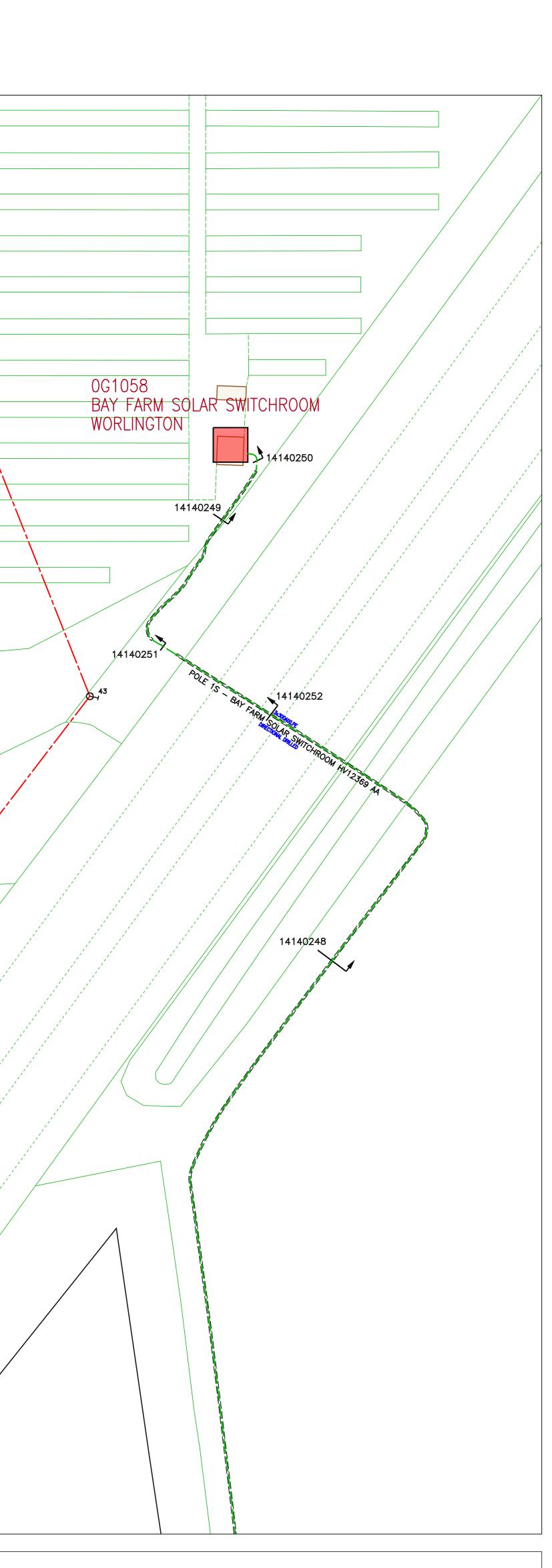
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PRIMARY CABLES EXTRA HICH VOLTACE CABLES (EHV) 22,000 10 1.32,000 Volts Depth normally 750mm cover in carriageway & 600mm cover in footway. Before digging within one metre of these cable routes Telephone 0800 056 5866 in order that the Company's apparatus may be located on site and any necessary protection works agreed. N.B. THRUST BORERS OR MOLES MUST NOT BE USED WITHIN THE VICINITY OF ANY CABLES BELONGING TO UK POWER NETWORKS WITHOUT FIRST CONTACTING THIS COMPANY. 1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed. 2. The execution using suitable hand tools. 3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exect location of all cables have been determined. 4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc. 5. All cables must be treated as being live unless proved otherwise by UK Power Networks. 6. The information provided must be given to all people working near UK Power Networks? plant & equipment. Do not use plans more than 3 months after the issue date for excavation purposes. 7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.	 1. UK Power Networks Ltd does not warrant that the information provided to you is correct. You rely upon it at your own risk. 2. UK Power Networks Ltd does not exclude or limit its liability if it causes personal injury to a person where such death or personal injury is caused by its negligence. 3. Subject to paragraph 2, UK Power Networks Ltd has no liability to you in contract, in tort (including negligence). for breach of statutory duty or otherwise howsoever for any loss, damage, costs, claims, demands or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profil, loss of opportunity, loss of use) or any special or consequential loss or damage whatsoever. Reproduced by permission of Ordnance Survey on behalf of HMSO, (c) Crown copyright and database right 2016. All rights reserved. Ordnance Survey base map; all proprietary rights in such additional data are and shall remain the exclusive property of (c) Eastern Power Networks plc or London Power Networks plc each being a distribution licensee under section 6(1)(c) of the Electricity Act 1989 for the relevant distribution license under services area as that term is defined in such licensee's distribution licensee.



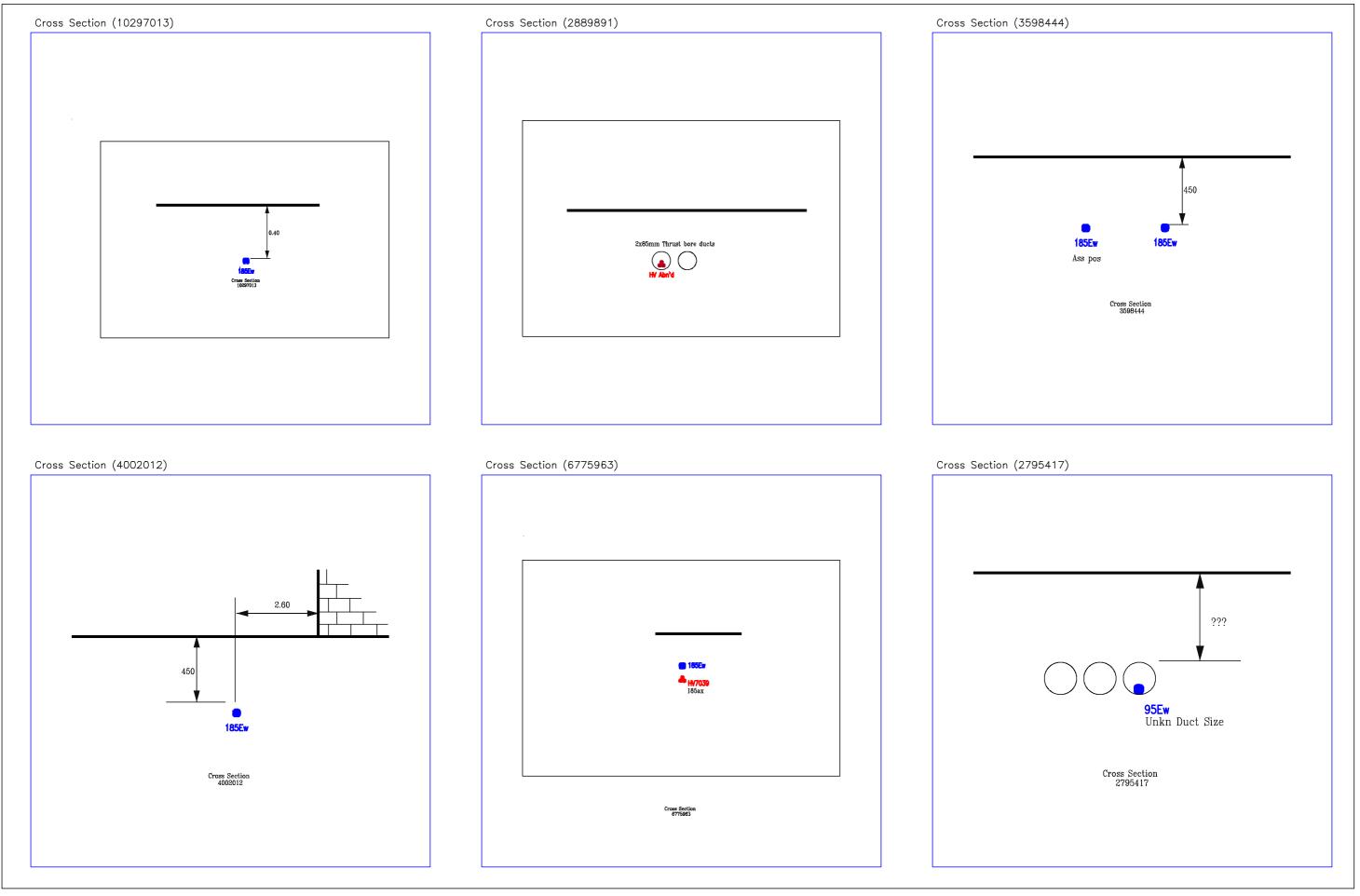
ADVICE TO CONTRACTORS ON AVOIDING DANGER FROM BURIED ELECTRICITY CABLES.

ve cable drawings with you on site and check them before you excavation. ave a cable locator tool on site and use it to help you. out the location of electricity cables. ot use a mechanical excavator within 0.5m of electricity cables. spades and shovels in preference to other tools. or disturb electricity cables and joints or their protective covers.

IF IN DOUBT — ASK! PHONE 0800 056 5866 EMERGENCY — If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

sic safety precautions are explained in detail in the HSE booklet. — Avoiding Danger from Underground Services, a copy of which obtained from your supervisor or HMSO.

e aware that electric lines belonging to other owners of licensed y distribution systems may be present and it is your responsibility y their location.

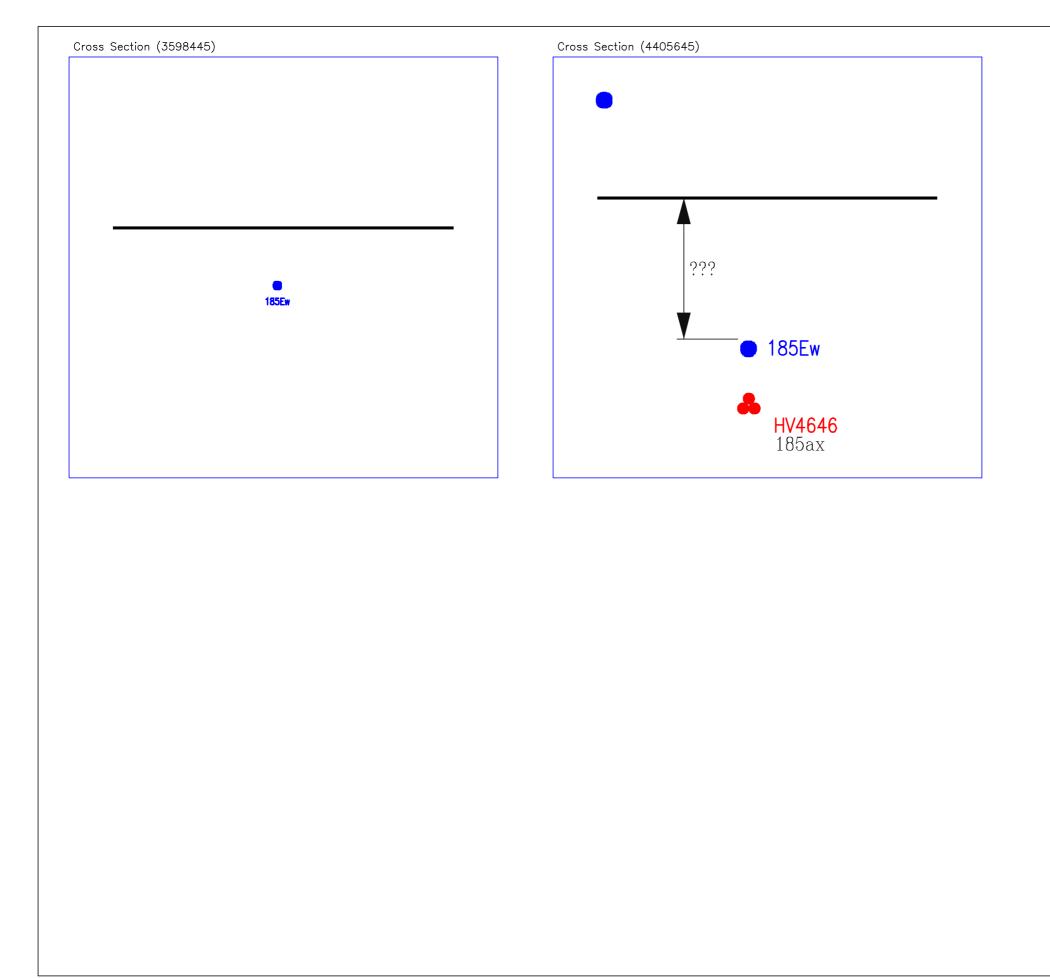


2016/2221239

Plotted On 06/05/2016

TL7070NWA



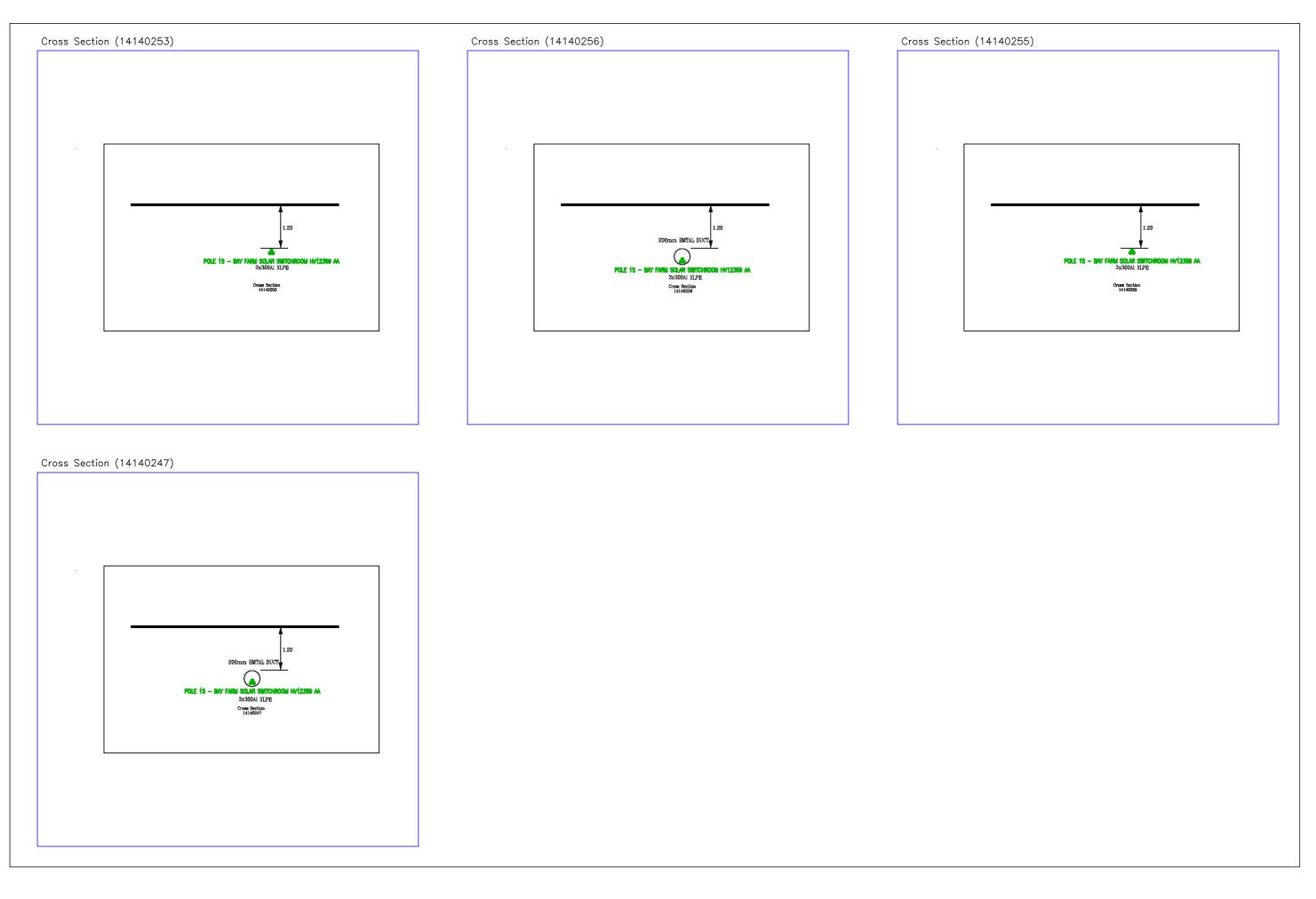


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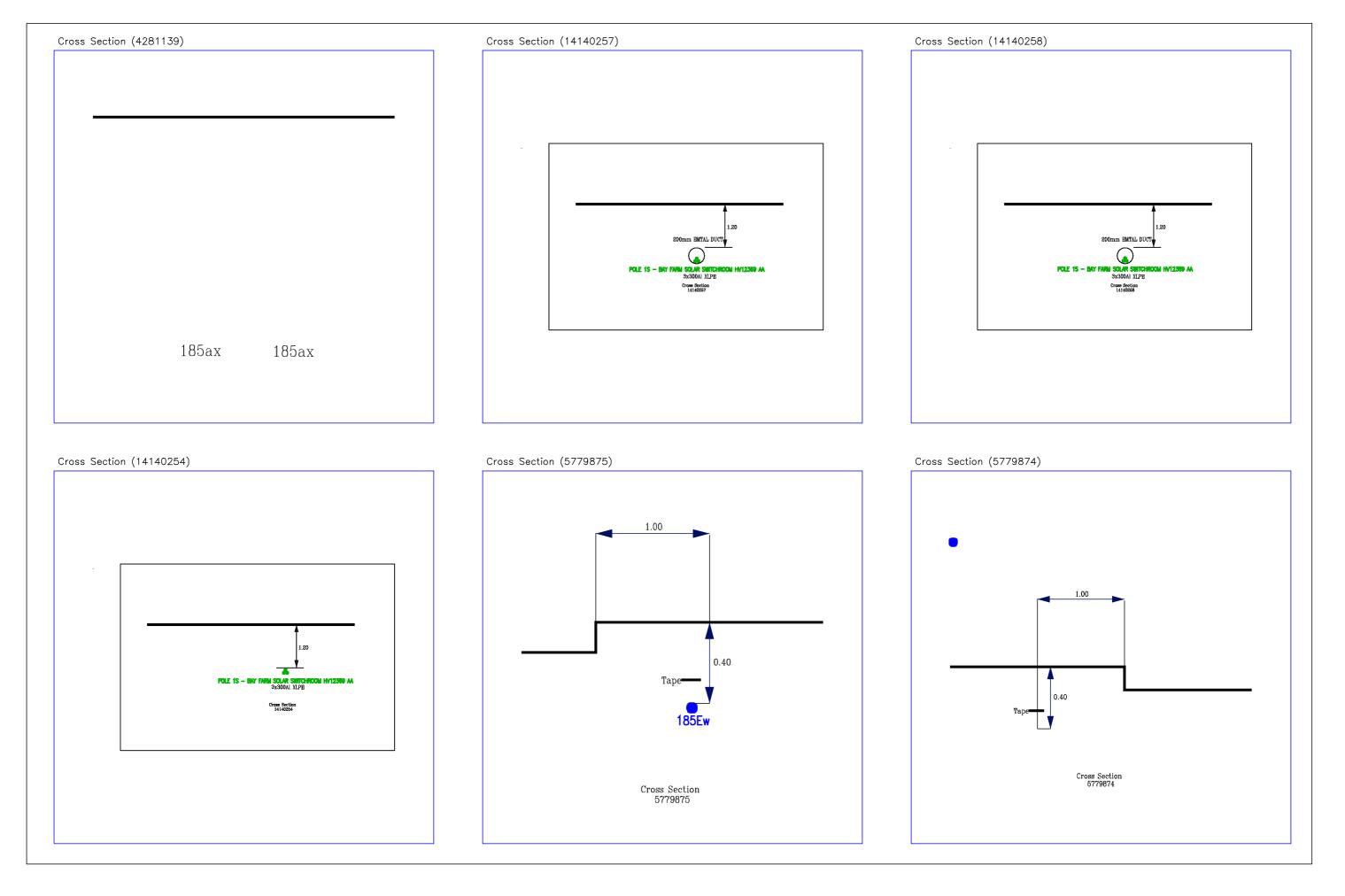
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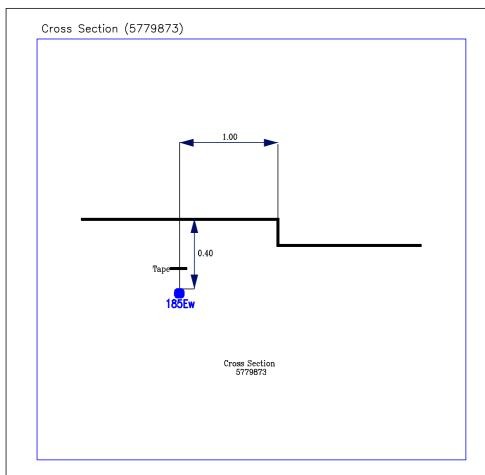
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TL7070NEA





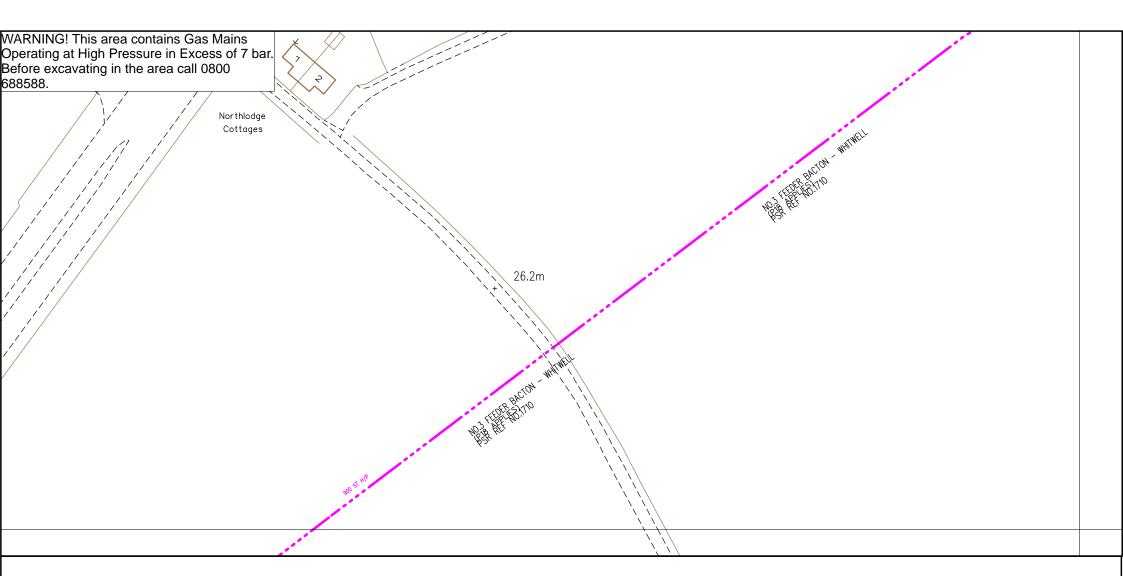
Plotted By: Carmella Greenwood

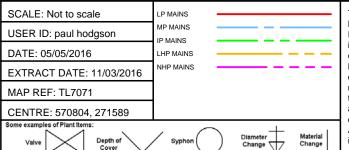
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APPENDIX J

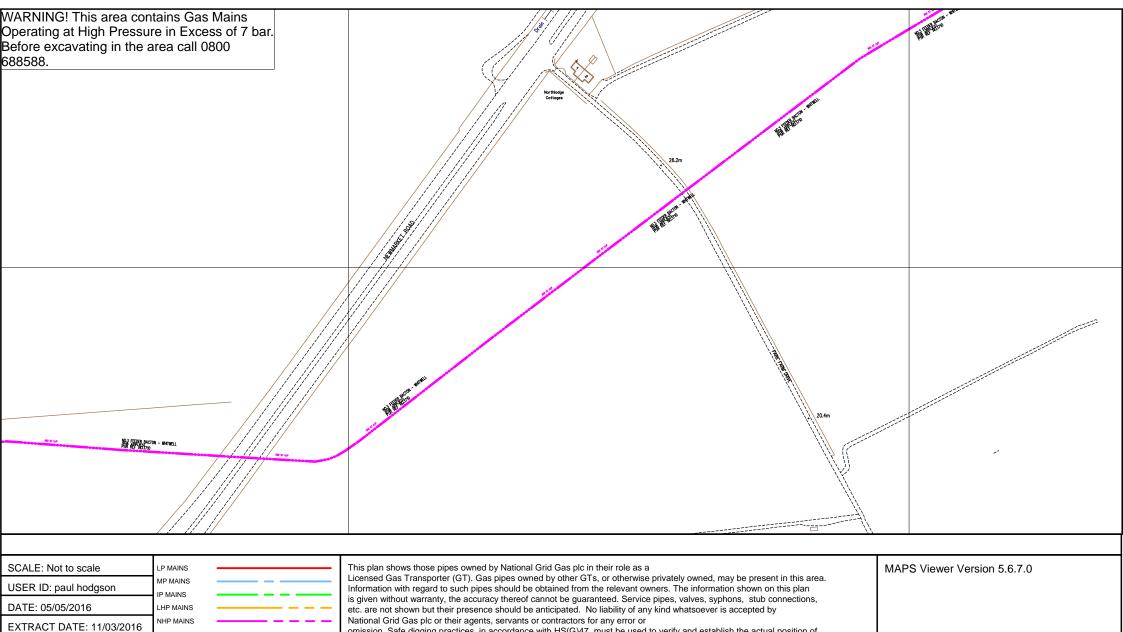
Gas : National Grid PLC Asset Plans





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 National Grid Gas plc 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 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 on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (9am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate. MAPS Viewer Version 5.6.7.0

Local Machine



National Grid Gas pic 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 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. Further information on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (9am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate.

MAP REF: TL7071

Some examples of Plant Items:

Valve

CENTRE: 570690, 271497

Depth of

Cover

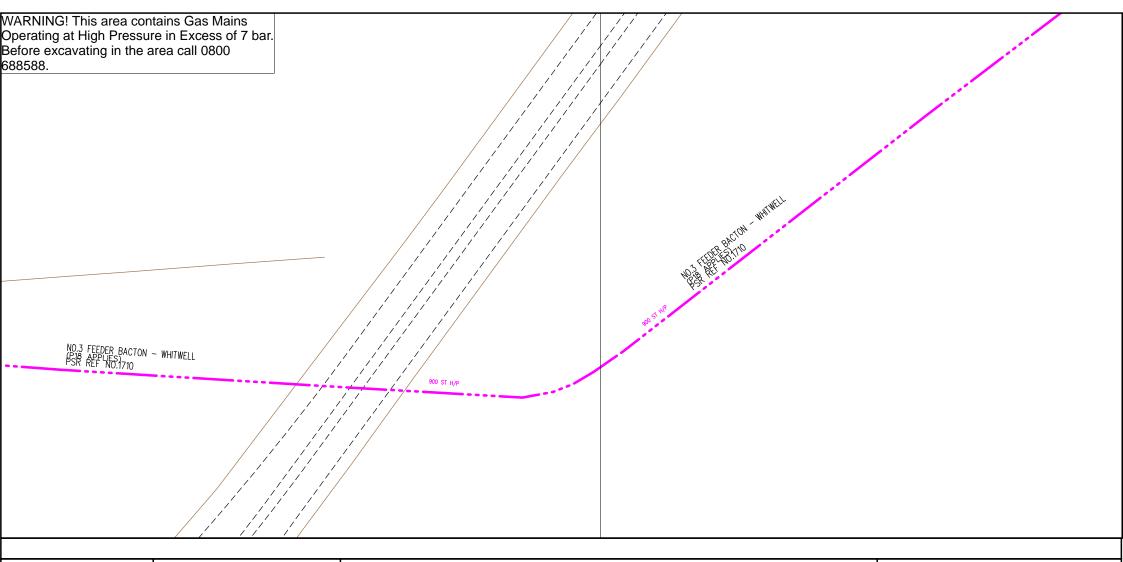
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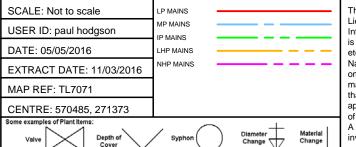
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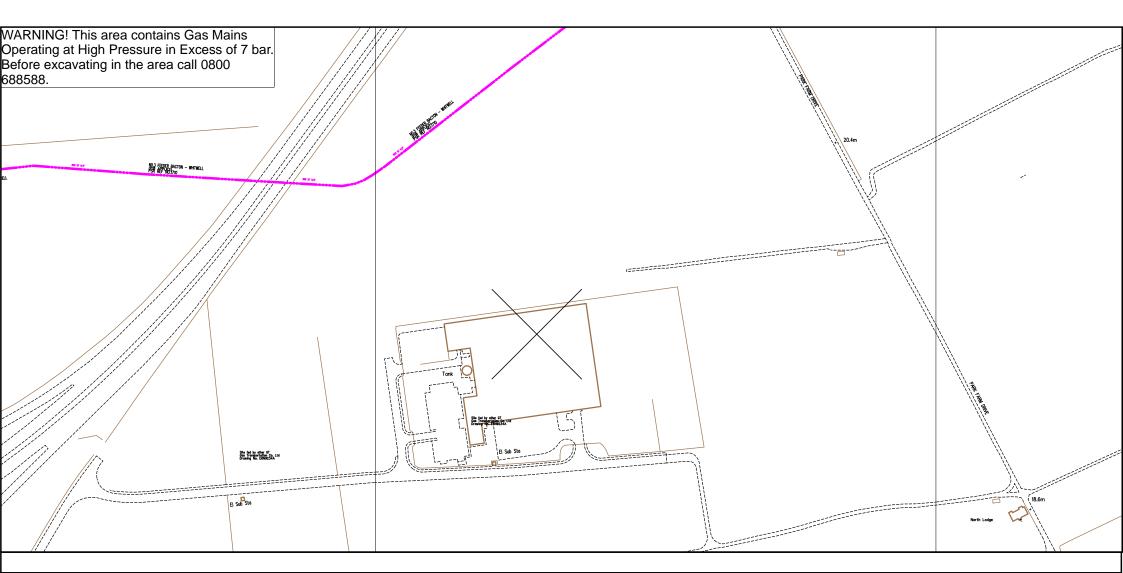
Local Machine

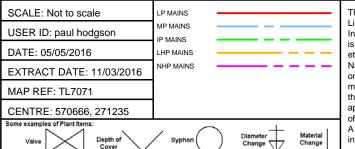




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Local Machine

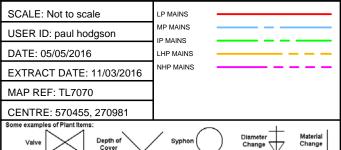




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Local Machine



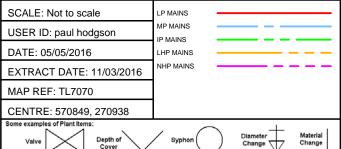


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Local Machine





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MAPS Viewer Version 5.6.7.0

Local Machine

APPENDIX K

Gas : HSE and National Grid Correspondence

SLR Consulting Limited 7 Wornal Park, Menmarsh Road Worminghall



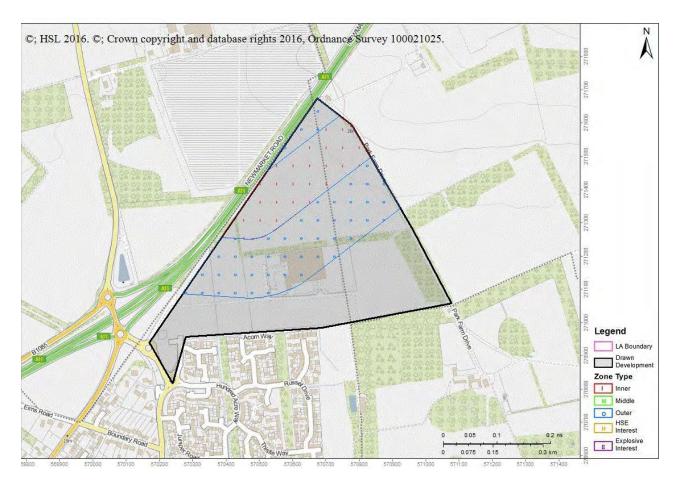
HP18 9PH

Advice : HSL-160725145329-661 Crosses Consultation Zone

Please enter further details about the proposed development by continuing with the enquiry on the HSE's Planning Advice Web App from the Previous Enquiries tab either now or at a later time, unless the Web App has stopped the process and notified you to contact HSE.

Your Ref: 408-05739-00002 Development Name: King's Warren, Red Lodge Local Authority Reference: n/a

Comments:



Protective Marking: Official Sensitive

The proposed development site which you have identified currently lies within the consultation distance (CD) of at least one major hazard site and/or major accident hazard pipeline; HSE needs to be consulted on any developments on this site.

This advice report has been generated using information supplied by Derek Armitage at SLR Consulting Limited on 25 July 2016.

You will also need to contact the pipeline operator as they may have additional constraints on development near their pipeline.

Derek Armitage

From:	lupenquiries@hsl.gsi.gov.uk
Sent:	26 July 2016 11:59
То:	Derek Armitage
Subject:	Re: King's Warren, Red Lodge : HSE Consultation Zones

Dear Mr Armitage,

Thank you for your enquiry regarding possible developments at Red Lodge, Suffolk (nearest postcode IP28 8WG).

HSE is a statutory consultee for certain developments within the consultation distance of major hazard sites and major accident hazard pipelines.

I have had a look at the information you have provided and there are HSE Consultation zones for a Major Accident Hazard Pipeline that affect your proposed development.

The details for the Major Accident Hazard Pipeline and the associated HSE zones (as shown on your provided screenshot from HSE's Web App) are:

Name- 3 Feeder Roudham Heath / Great Wilbraham HSE Ref- 7452 Transco Ref - 1710 Operator - National Grid Gas PLC HSE Consultation Zones- Inner Zone= 78 Meters, Middle Zone= 78 Meters, Outer Zone= 255 Meters

These distances apply on either side of the pipeline. Please contact the operator for any constraints they may have around the pipeline, and for a map showing the pipeline route. Please note that we only have indicative maps for the pipeline routes. If you wish to know the exact layout of the pipelines you will need to contact the pipeline operator.

HSE's Land Use Planning advice is based on an assessment of the risks from the pipeline as originally notified to HSE. It may be that in the vicinity of the proposed development the operator has modified the pipeline to reduce risks by, for example, laying thick-walled pipe. You may wish to consider contacting the pipeline operator to see if the pipeline has been modified in this area; if it has, then HSE is willing to reassess the risks from the pipeline, relative to the proposed development, if all the following details are supplied:

a) pipeline diameter, b) wall thickness, c) grade of steel, d) depth of cover over pipeline, e) start and finish points of thick-walled sections (this is not required if it is confirmed that they are more than 750m from all parts of the proposed development site. Please note that reassessment(s) may incur charges under our Option 3 consultancy services.

There is also further information on HSE's land use planning here: www.HSE.gov.uk/landuseplanning/

Please note we are now charging for elements of the pre-application advice to developers. The information provided in this email is part of our Option 1 service and is free, however options 2 and 3 will incur a charge. For further information please see www.hse.gov.uk/landuseplanning/developers.htm If you require any further help please contact us. Regards,

Peter Rastall Land Use Planning Support Team HSL, Harpur Hill, Buxton, SK17 9JN 01298 218159

Derek Armitage

From: Sent:	Connolly2, Paul <paul.connolly@nationalgrid.com> 21 September 2016 13:01</paul.connolly@nationalgrid.com>
То:	Derek Armitage
Subject:	Kings Warren Business Park, Red Lodge, Suffolk. Enquiry ref: EA_TE_Z5_3SWP_ 255884

Derek,

I have gathered some of the information you have requested relating to the above enquiry. I hope this is of some assistance.

The pipeline in question is our Feeder 3 Roudham Heath – Gt Wilbraham External Diameter: 900mm/36" Wall thickness: 15.88mm Grade: X60 Depth of Cover: 1.9m at A11 road crossing according to latest line walk report.

Start and finish of thick wall section: TBC Easement distance: 20ft (6m) plus adjoining 10ft either side for access. Pipeline mods: TBC Required standoff distances: Inner Zone = 80m Middle Zone = 80m Outer Zone = 270m

The HSE will be better placed to advise on standoff distances for each development type.

Tree planting guidelines:

17. TREE PLANTING GUIDELINES

Before any tree planting is carried out on permanent easements written approval should be obtained from National Grid. This approval shall be subject to National Grid retaining the right to T/PM/MAINT/5 PART 2

remove any trees which might become a danger, or restrict access to the pipeline at any time in the future. The written consent to plant trees should state what area may be planted and also the type of tree. Raspberries, loganberries, gooseberries and currents may be planted on the easement but a 3 m strip centred on the

pipeline should be left clear at all times except in places where planting is required for surface stabilisation. The following trees shall not be planted within 6m of the pipeline: ash, cedar, larch, beech, elm, horse chestnut, sweet chestnut, London plane, hornbeam, lime, lime alder, Scots pine, black pine, oak, sycamore, apple, plum, cherry, pear, and also included in this category are most conifers. The above trees should only be planted as individual specimens or a single row in the area between 6m and 10m of the pipeline. Dense mass planting should only be carried out at a distance greater than 10m from the pipeline.

Poplar and willow trees should not be planted within 10m of the pipeline.

In cases where screening is required (i.e. hedges, road and field boundaries/crossings), the only plants that may be planted over the pipeline, road and field crossings, etc. where necessary are: blackthorn, broom, cotoneaster, elder, hazel, laurel, privet, quick-thorn, snowberry and most ornamental shrubs.

Christmas trees (Picea Abies) may be planted to within 3m of the pipeline. However, permission is given on the strict understanding that they are clear-felled at intervals not exceeding seven years.

Features such as wind breaks, forestry belts, river crossings and engineering access are individual items and should be treated as such, with advice given as the need arises.

If there is anything further you require please do not hesitate to contact me.

Kind regards,

Paul Connolly Officer – Pipelines This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our <u>UK Contacts Page</u> or our <u>US Contacts Page</u> (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <u>http://www.nationalgrid.com/corporate/legal/registeredoffices.htm</u>

APPENDIX L

Gas : GTC Correspondence

Derek Armitage

From: Sent:	John.Blowers@gtc-uk.co.uk 04 August 2016 12:16
To:	Derek Armitage
Subject:	King's Warren, Red Lodge : Gas and Electricity Supply
Attachments:	RE: King's Warren, Red Lodge : Gas and Electricity Supply; FW: King's Warren, Red Lodge : Gas and Electricity Supply; 20160527162644160.pdf

Derek

Good afternoon.

I've been asked to contact you following your enquiry into our office.

The area of future development to the North to which I think you refer was a smaller area than you have shown, encompassing the Red area and some of the Blue area but excluding the Brown area. I've attached a gas drawing showing the extent of the area we were originally asked to provide for.

As you may be aware GTC were originally contracted for the gas only on this scheme and therefore all the electric infrastructure was provided by others, so we cannot comment directly on the suitability of the electric network without recourse to UKPN.

We are happy to assess the overall site requirements but as my colleague has requested we do need some further information on the non-domestic loads and would appreciate it if you could supply the load requirements for both the gas and electricity so that we can make the necessary applications to the incumbents to confirm load availability.

As it currently stands we cannot make even an indicative response, as we will need to re-assess the load previously requested against the new gas loads and also apply to UKPN for the electric loads before we can make an informed response.

I appreciate this scheme is at a very early stage and the full information is not available but could you supply some base load information (based on empirical data) so that we can move your enquiry forward.

Please call me if you need to discuss.

John Blowers National Account Manager GTC Energy House Woolpit Business Park Woolpit Bury St Edmunds Suffolk IP30 9UP Tel: 01359 240154 Mob: 07747 567918 Fax: 01359 243377

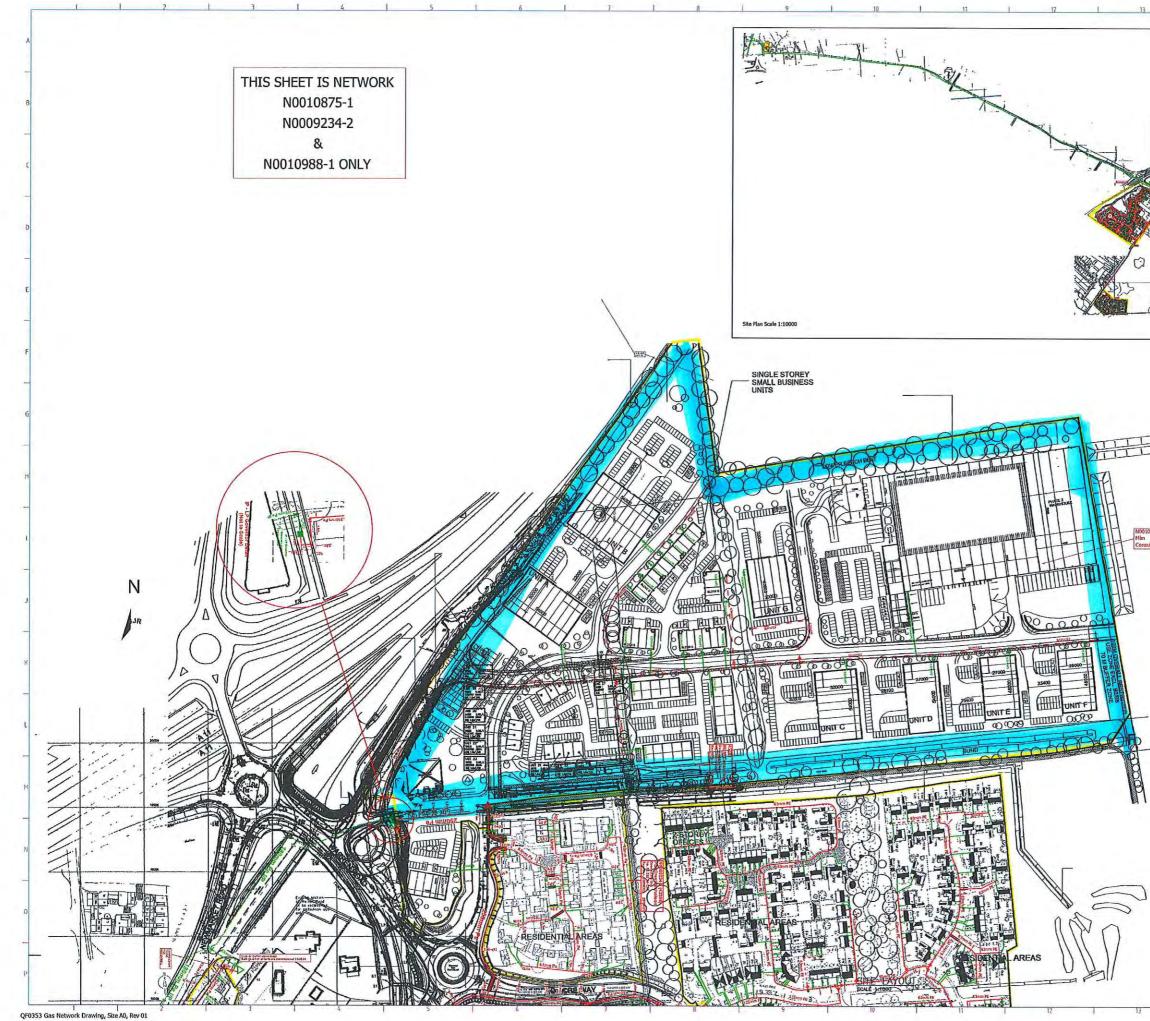
Email: john.blowers@gtc-uk.co.uk Web: www.gtc-uk.co.uk



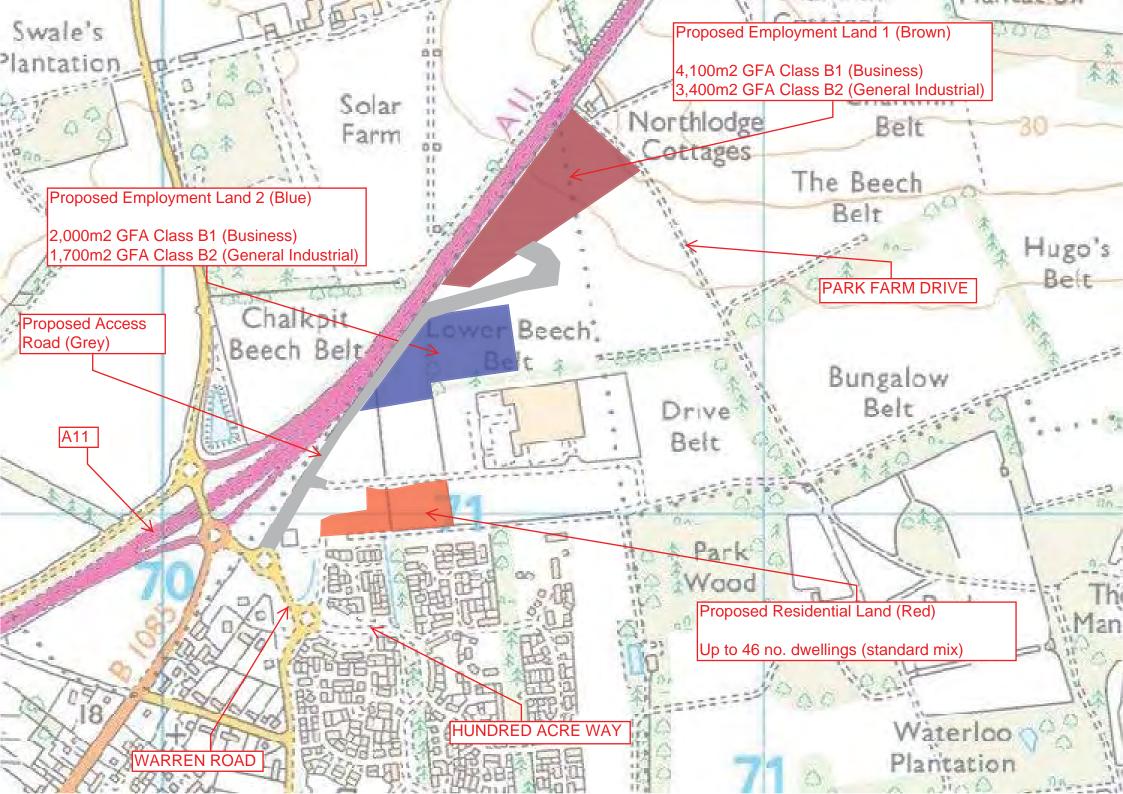
GTC's blazing-fast broadband and calls. Plus FREE Sky TV for 12 months

1

With Sky TV and GTC, faster just got even better

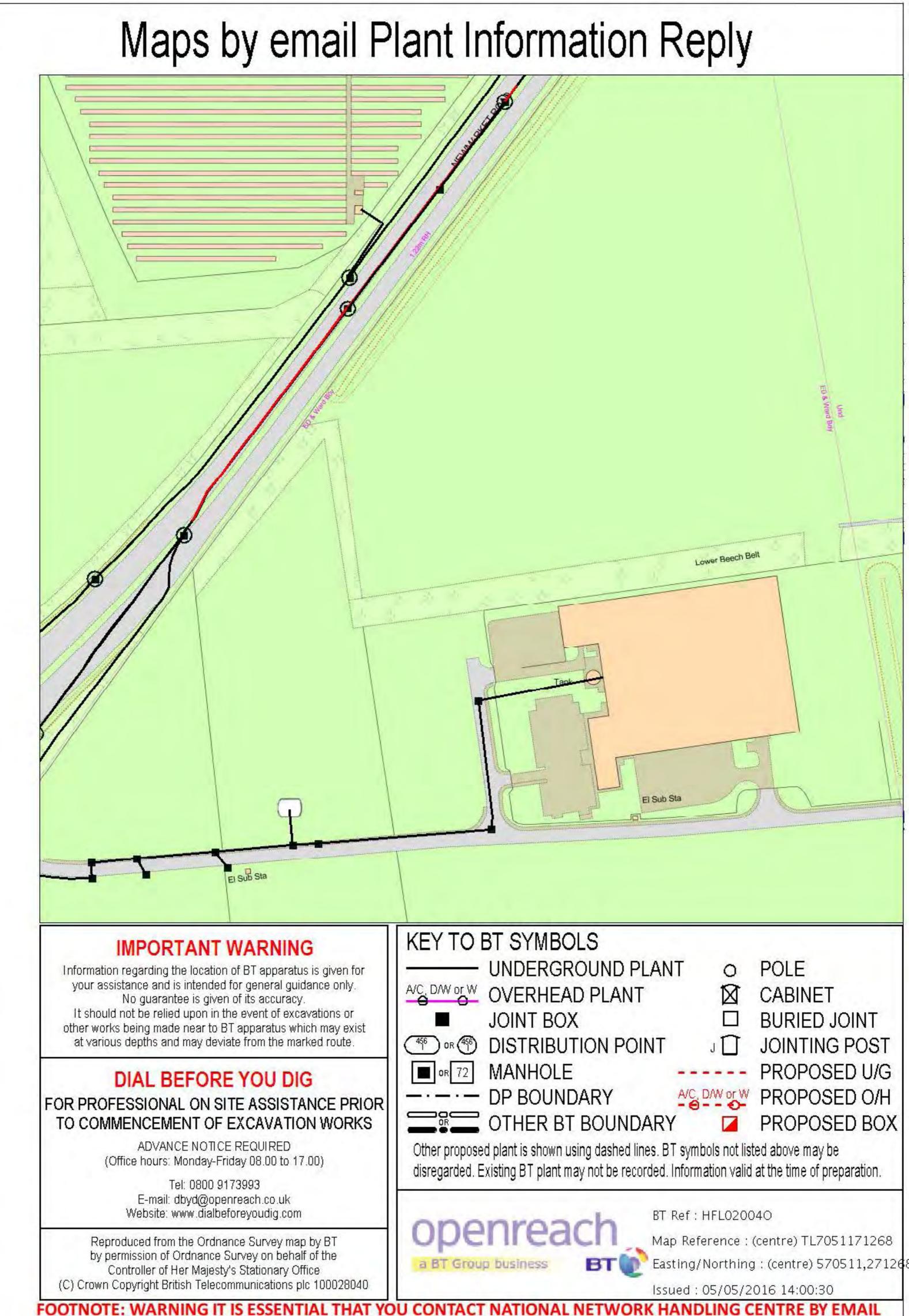


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	15-3 h0009234-15 added dwg ra. (132137% 2001 21/10/13 rei Rev T4) 154 As Laid Data added from Work Request 112540 22/10/13 ASC 154 Meansrement Points 281-303 Added M0234-15 22/10/13 ASC
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	Unit 2 - Piot 1 (100052134-15) 15-4 As Laid Data added from Work Request 131261 21/03/14 DW 15-9 As Laid Data added from Work Request 131261 21/03/14 DW
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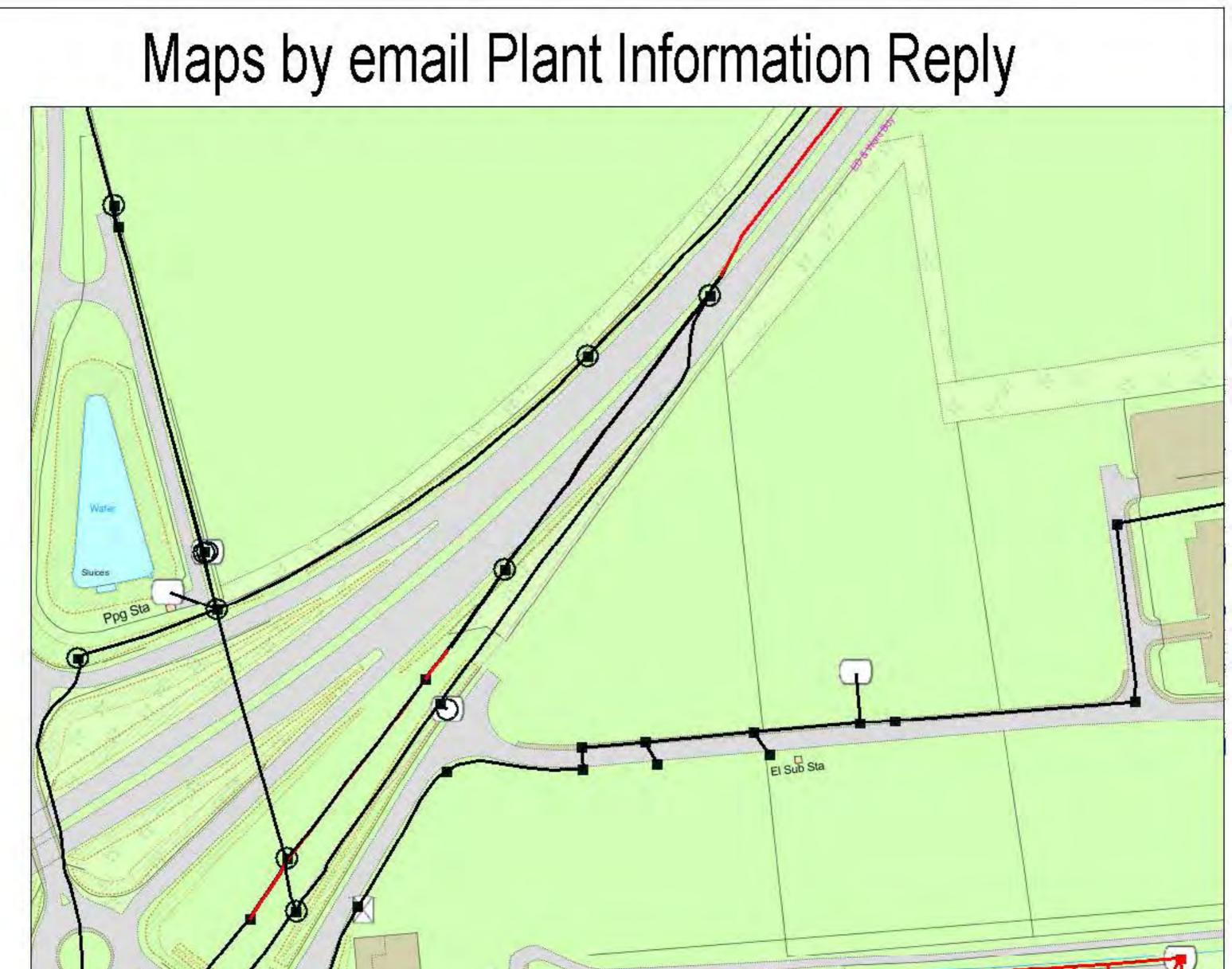


APPENDIX M

Telecommunications : BT Asset Plans



nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA





IMPORTANT WARNING

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

DIAL BEFORE YOU DIG

FOR PROFESSIONAL ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS

> ADVANCE NOTICE REQUIRED (Office hours: Monday-Friday 08.00 to 17.00)

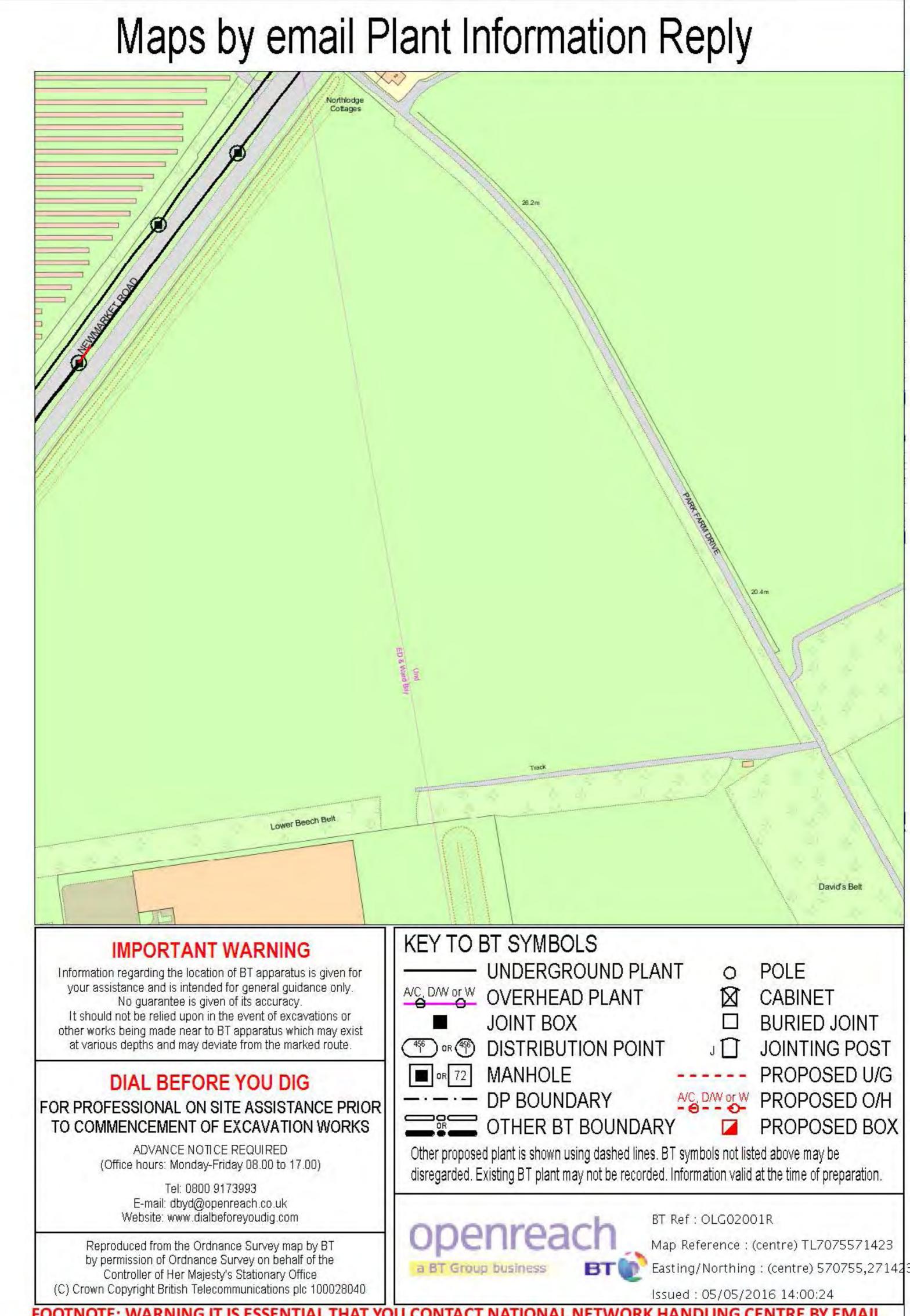
Tel: 0800 9173993 E-mail: dbyd@openreach.co.uk Website: www.dialbeforeyoudig.com

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

KEY TO BT SYMBOLS UNDERGROUND PLANT POLE 0 AVC, D/W or W **OVERHEAD PLANT** Ø CABINET **BURIED JOINT** JOINT BOX JOINTING POST DISTRIBUTION POINT JII (49) PROPOSED U/G MANHOLE or 72 PROPOSED O/H DP BOUNDARY A/C, D/W or W OTHER BT BOUNDARY PROPOSED BOX Other proposed plant is shown using dashed lines. BT symbols not listed above may be disregarded. Existing BT plant may not be recorded. Information valid at the time of preparation. BT Ref : MWK01586V enreac Map Reference : (centre) TL7031071077 Easting/Northing : (centre) 570310,27107 a BT Group business Issued : 05/05/2016 13:59:27

ACORN W

FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA



FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA

APPENDIX N

Other Utilities : Asset Plans and Search

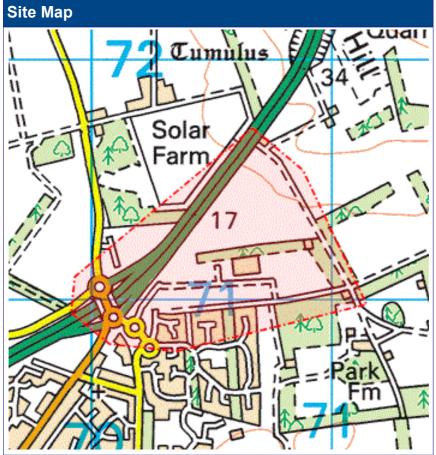


Enquiry Confirmation LSBUD Ref: 8436896

Name	Mr Paul Hodgson	Phone	01302771864
Company	subscan	Mobile	Not Supplied
		Fax	Not Supplied
Address	unit 8 Hayfield Lane Business Park Finningley South Yorkshire dn9 3fl		
Email	p.hodgson@subscantech.co.uk		
Notes	Please ensure your contact details are co contact you.	orrect and up to date on	the system in case the LSBUD Members need to

Enquiry Details			
Scheme/Reference	King Warren		
Enquiry type	Planned Works	Work category	Utility Works
Start date	28/05/2016	Work type	Multiple excavations site
End date	30/06/2016	Site size	668394 metres square
Searched location	XY= 570664, 271195 Easting/Northing	Work type buffer*	25 metres
Confirmed location	570580 271322		

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





Asset Owners

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

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

Below are three lists of asset owners:

- 1. LSBUD Members who have assets registered within your search area. ("Affected")
 - a. These LSBUD Members will either:
 - i. Ask for further information ("Email Additional Info" noted in status). The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.
 - ii. Respond directly to you ("Await Response"). In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.
- 2. LSBUD Members who do not have assets registered within your search area. ("Not Affected")
- 3. Non LSBUD Members who may have assets within your search area. Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

National Grid. Please note that the LSBUD service only contains information on National Grid's Gas above 2 bar asset and all National Grid Electricity Transmission asset. For National Grid Gas below 2 bar asset information please go to www.beforeyoudig.nationalgrid.com



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

List of affected LSBUD members			
Asset Owner	Phone/Email	Emergency Only	Status
National Grid Gas (above 2 bar) and National Grid Electricity Transmission	0800688588	Gas 0800111999 Electricity 0800404090	Await response

LSBUD members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD members make regular changes to their assets.

	List of not affected LSBUD membe	rs
AWE Pipeline	Esso Petroleum Company Limited	Petroineos
BOC Limited (A Member of the Linde Group)	FibreSpeed Limited	Phillips 66
BP Midstream Pipelines	Gamma	Premier Transmission Ltd (SNIP)
BPA	Humbly Grove Energy	Redundant Pipelines - LPDA
Carrington Gas Pipeline	HV Cables	RWEnpower (Little Barford and South Haven)
CATS Pipeline c/o Wood Group PSN	IGas Energy	SABIC UK Petrochemicals
Centrica Energy	Ineos Enterprises Limited	Scottish Power Generation
Centrica Storage Ltd	INEOS Manufacturing (Scotland and TSEP)	Seabank Power Ltd
CLH Pipeline System Ltd	Lark Energy	Shell (St Fergus to Mossmorran)
ConocoPhillips (UK) Ltd	Lightsource SPV Limited	Shell Pipelines
Coryton Energy Co Ltd (Gas Pipeline)	Mainline Pipelines Limited	Total (Finaline, Colnbrook & Colwick Pipelines)
CSP Fibre c/o Centara	Manchester Jetline Limited	Transmission Capital
EirGrid	Manx Cable Company	Vattenfall
Electricity North West Limited	Marchwood Power Ltd (Gas Pipeline)	Western Power Distribution
ENI & Himor c/o Penspen Ltd	Northumbrian Water Group	Wingas Storage UK Ltd
E-on UK Plc (Gas Pipelines Only)	NPower CHP Pipelines	Zayo Group UK Ltd c/o JSM Group Ltd
ESP Utilities Group	Oikos Storage Limited	
FOCAD	Perenco UK Limited (Purbeck Southampton	
ESSAR	Pipeline)	



Enquiry Confirmation LSBUD Ref: 8436896

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

Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	Preferred contact method	Phone	Status
Anglian Water	http://www.digdat.co.uk	01480323891	Not Notified
ВТ	https://www.swns.bt.com/pls/mbe/welcome.home	08009173993	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
Energetics Electricity	plantenquiries@energetics-uk.com	01698404646	Not Notified
ENGIE	nrswa@cofely-gdfsuez.com	01293 549944	Not Notified
Fulcrum	FPLplantprotection@fulcrum.co.uk	03330146455	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
Hibernia Networks	info@hibernianetworks.com	01704 322 300	Not Notified
Instalcom	plantenquiries@instalcom.co.uk	02087314613	Not Notified
Interoute	interoute.enquiries@plancast.co.uk	02070259000	Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquires@turntown.com	01212 621 100	Not Notified
National Grid Gas Distribution (below 2 bar)	plantprotection@nationalgrid.com	0800688588	Not Notified
Redcentric plc	plant-enquiries@redcentricplc.com	0845 200 2200	Not Notified
Sky UK Limited	nrswa@sky.uk	02070323234	Not Notified
Tata, KPN (c/- McNicholas)	plantenquiries@mcnicholas.co.uk	03300558469	Not Notified
UK Power Networks	plans@ukpowernetworks.co.uk	08000565866	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified
Vtesse Networks	https://vtplant.vtesse.com	01992532100	Not Notified

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Attention: Paul Hodgson - Subscan Technology

Dear Sir/Madam,

Thank you for your enquiry.

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

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

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

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

Regards

NRSWA Department Network Infrastructure and Planning BSKYB Telecommunications Services Ltd 70 Buckingham Avenue SLOUGH SL1 4PN

T +44 (0) 207 032 3234/250 F +44 (0) 207 032 3252 E <u>nrswa@bskyb.com</u>

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Please Note: Our search criteria has changed. We previously searched for Colt Network which was within 200 metres, this has now changed to 50 metres. The negative response will be for all enquiries that the network is 50 metres or more away from the place of enquiry.

Dear Sir/Madam,

Thank you for your enquiry for the above reference.

We can confirm that Colt Technology Services do not have apparatus near the above location.

Search is based on Overseeing Organisation Agent data supplied; we do not accept responsibility for O.O. Agent inaccurate data.

If we can be of any further assistance please do not hesitate to contact us.

Kind regards,

Plant Enquiry Team



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Dear Sir/Madam,

Thank you for submitting your recent plant enquiry.

Based on the information provided, I can confirm that Energetics **does not** have any plant within the area(s) specified in your request.

Please be advised that it may take around 10 working days to process enquiries. In the unlikely event that you have been waiting longer than 10 working days, or require further assistance with outstanding enquiries, please call 01698 404945.

Please ensure all plant enquiries are sent to plantenquiries@energetics-uk.com

Regards

Gillian Hare Technical Clerical Team

Energetics Design & Build International House Stanley Boulevard Hamilton International Technology Park Glasgow G72 OBN

t: 01698 404979 f: 01698 404940

e: gillian.hare@energetics-uk.com w: www.energetics-uk.com To Whom It May Concern:

Thank you for your recent enquiry regarding your proposed work at the above location.

euNetworks Fiber UK Limited do not have plant in the vacinity of your proposed works and no strategic additions to our existing network are envisaged in the immediate future.

This information is only valid for a period of 3 months so, if your start date is 3 months or more from the date of this email, please re-apply for updated information at our generic email address: plantenguiries@psgservices.co.uk.

Kind regards

ALL PLANT ENQUIRIES AND DIVERSIONARY REQUESTS SHOULD BE ADDRESSED BY EMAIL TO THE OPERATIONS TEAM AT <u>plantenquiries@psgservices.co.uk</u>, WITH A PLAN AND FULL POSTAL ADDRESS OF YOUR ENQUIRY, THANK YOU



For and on behalf of euNetwork Fiber UK Limited

Regards

Stuart Green

Tel: 01254 200760 Mobile: 07796 696810 E-Mail: <u>plantenquiries@psqservices.co.uk</u> You'll be pleased to know we can confirm Fulcrum Pipelines Limited do not have any existing pipes or equipment on or around the above site address.

Please note that other gas transporters may have plant in the area which could be affected by your proposed works.

We will always make every effort to help you where we can, but Fulcrum Pipelines Limited will not be held responsible for any incident or accident arising from the use of the information associated with this search. The details provided are given in good faith, but no liability whatsoever can be accepted in respect thereof.

If you need any help or information simply contact Fulcrum on 03330 146 455. Or you can email us at <u>FPLplantprotection@fulcrum.co.uk</u>

Regards,



Address: Fulcrum Pipelines, 2 Europa View, Sheffield Business Park, Sheffield, S9 1XH.

Hi,

GTC Apparatus Not Found In Search Area

Our Plant Enquiry Service Ref: 175278 Your Enquiry Ref: N/A

Dear Jessica,

Thank you for your enquiry concerning apparatus in the vicinity of your proposed work. GTC can confirm that we have no apparatus in the vicinity but please note that other asset owners may have and ensure all utility owners have been consulted. For your records, the search area is shown in the attached map.

Please note our assets now include those owned and operated by:

- GTC Pipelines Limited
- Independent Pipelines Limited
- Quadrant Pipelines Limited
- Electricity Network Company Limited
- Independent Power Networks Limited
- Independent Water Networks Limited
- Independent Fibre Networks Limited
- Independent Community Heating Limited

If you have any queries or require any further information please do not hesitate to contact us.

Your sincerely,

GTC Plant Enquiry Service.

GTC Energy House Woolpit Business Park Woolpit Bury St Edmunds Suffolk, IP30 9UP Tel: 01359 240363 plant.enquiries@gtc-uk.co.uk



Instalcom Ltd, Borehamwood Ind. Park, Rowley Lane, Borehamwood, Herts, WD6 5PZ Telephone: 0208 731 4600 Fax: 0208 731 4601 Email: plantenquiries@instalcom.co.uk

10 May 2016

Dear Sir or Madam,

Your RefKing Warren Business ParkOur Ref:E05-16- 1269

With reference to your enquiry regarding the above noted location, I can confirm that LEVEL 3, GLOBAL CROSSING (UK) LTD, GLOBAL CROSSING PEC FIBERNET UK LTD and FIBRESPAN LTD networks **DO NOT** have any apparatus within the immediate proximity of your proposed works.

Instalcom responds to plant enquiries for LEVEL 3, GLOBAL CROSSING (UK) LTD, GLOBAL CROSSING PEC and FIBERNET UK LTD simultaneously and therefore you only need send one copy of a plant enquiry to cover all of these companies. If you would like to query the location further, please email us accordingly and we can arrange an in depth survey, which will be charged at a cost. As we are moving towards a fully electronic database we urge our customers to request plant enquiries by email which will result in a higher level of service, please forward future plant enquiries to **plantenquiries@instalcom.co.uk**

If you require any further information, please do not hesitate to contact me.

Plant Enquiries Administrator

Instalcom Limited Borehamwood Ind. Park Rowley Lane Borehamwood, WD6 5PZ E mail: - <u>plantenquiries@instalcom.co.uk</u> Phone: - 020 8731 4600 Fax: - 020 8731 4601 www.instalcom.co.uk Dear Sir/Madam,

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

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

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

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

http://www.networkrail.co.uk/aspx/1758.aspx?cd=1

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

Regards,

Gareth Milne Distribution Administrator (NRSWA) Asset Information Services

Asset Information Services: to inspire & enable through the power of data National Records Centre, 5 Audax Road, York YO30 4GS

T +44(0)1904 386393 *E* gareth.milne@networkrail.co.uk



To whom it may concern Thank you for your enquiry regarding the above proposals at the above location

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

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

All responses are only vaild for 28 days

Yours faithfully

•

PLANCAST Plant Enquiry Department

The Old Haybarn Rosebery Mews, Mentmore Bedfordshire LU7 0UE

T: 01296 662647 www.plancast.co.uk

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telent

Crompton Close Basildon Essex SS14 3BA United Kingdom

Telephone: +44 (0)800 526 015 Facsimile: +44 (0)1268 507 569

www.telent.com

Date 05/05/2016 Our Ref LPENQ0000078128

Dear Sir/Madam

Teliasonera Line Plant Enquiry.

Thank you for your correspondence enclosing details of your proposals as per your reference below.

King Warren Business Park, Red Lodge, Suffolk

Our client's apparatus, Teliasonera, is not located within the vicinity of the above reference and we therefore have no further interest in this current location.

Please note that all enquiries relating to the Teliasonera line plant should be forwarded to:

By post – to,	telent,
	Teliasonera line plant enquiries,
	Mayne House,
	Fenton Way,
	Basildon,
	Essex
	SS15 6TD
By email - to,	telenttelia.plantenquiries@telent.com

By phone – to, 01268 412670

Yours faithfully

Telent CCO

Basildon

telent Technology Services Limited. Registered in England. No. 703317. Registered Office: Point 3, Haywood Road, Warwick, CV34 5AH, England

Ourref: Damian Sweeney TEL: 07712129249

New Roads and Street Works Act 1991- Sections 83, 84,142 and 143 Codes of Practice Appendix C2

In response to your notice regarding works which you, are proposing to undertake.

I can confirm that Traffic master does not have equipment installed within the boundary of the works.

If you have any further queries regarding this or any other programme, please do not hesitate to contact me on my details below.

Yours sincerely For & on Behalf of Trafficmaster Ltd

Infrastructure Maintenance plantenquiries@trafficmaster.co.uk



Dear Sir/Madam

Turner & Townsend Project Management are appointed on behalf of MBNL to conduct Plant (apparatus) Searches in accordance with the relevant NRSWA Act 1991- Diversionary Works legislation. These searches considered plant belonging to EE (T-Mobile and Orange sites) and the HG3 mobile telecommunication networks.

Further to your plant enquiry please see the response below to the NRSWA request submitted

MBNL do not have any plant that would be affected by the proposed work. Should you have any further queries please use the contact details below.

PS: Please can you send all future Plant enquiries for EE or H3G to this email address mbnlplantenquiries@turntown.com

Kind Regards

MBNL SHQE Team

Turner & Townsend

Tel: +44 (0) 121 262 3663

http://www.turnerandtownsend.com

Turner & Townsend Europe Limited

Registered Office: Low Hall, Calverley Lane, Horsforth, Leeds LS18 4GH, United Kingdom | Registered in England and Wales | Registration No: 3514794

Dear Sir/Madam

Verizon is a licensed Statutory Undertaker.

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

If you have any further queries please do not hesitate to call.

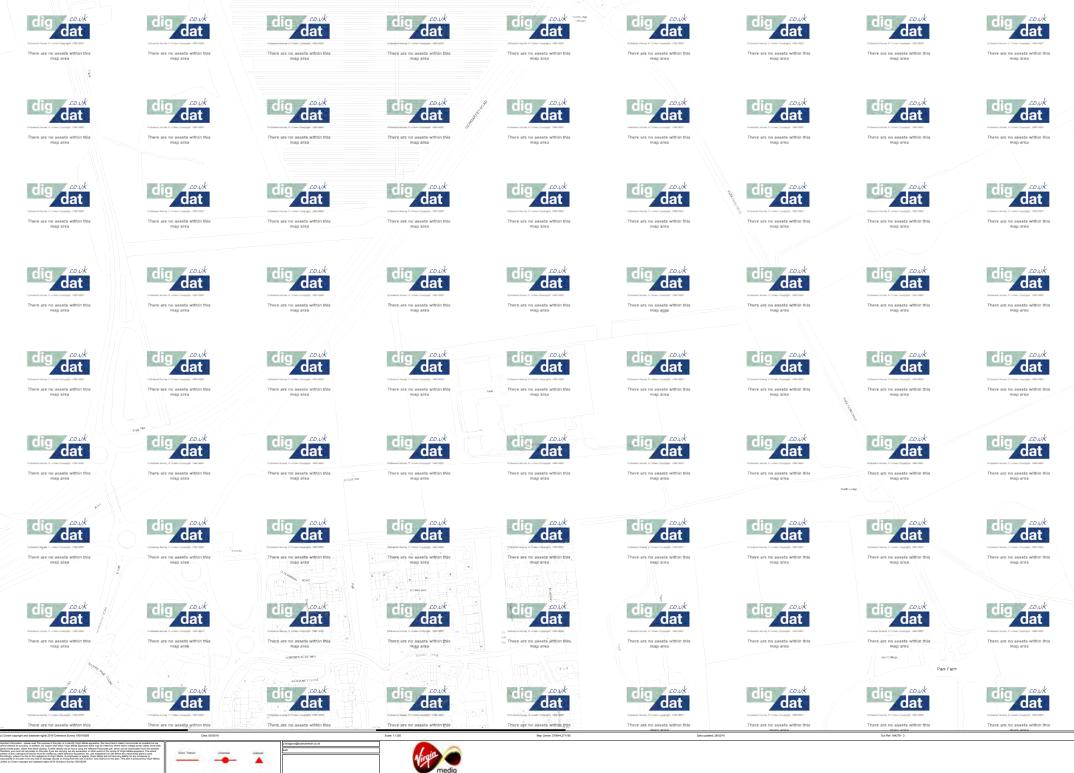
Yours faithfully

Chris Pile

Plant Protection Officer E.mail osp-team@uk.verizon.com



Chris.Pile Plant Protection Officer OSP-Infrastructure Field Operations, UK Office:01293 611736 Mobile:07990 774438 www.verizon.com



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AYLESBURY

7 Wornal Park, Menmarsh Road, Worminghall, Aylesbury, Buckinghamshire HP18 9PH T: +44 (0)1844 337380

BELFAST

24 Ballynahinch Street, Hillsborough, Co. Down, BT26 6AW Northern Ireland T: +44 (0)28 9268 9036

BRADFORD-ON-AVON

Treenwood House, Rowden Lane, Bradford-on-Avon, Wiltshire BA15 2AU T: +44 (0)1225 309400

BRISTOL

Langford Lodge, 109 Pembroke Road, Clifton, Bristol BS8 3EU T: +44 (0)117 9064280

CAMBRIDGE

8 Stow Court, Stow-cum-Quy, Cambridge CB25 9AS T: + 44 (0)1223 813805

CARDIFF Fulmar House, Beignon Close, Ocean Way, Cardiff CF24 5HF T: +44 (0)29 20491010

CHELMSFORD Unit 77, Waterhouse Business Centre, 2 Cromar Way, Chelmsford, Essex CM1 2QE

DUBLIN

7 Dundrum Business Park, Windy Arbour, Dundrum, Dublin 14 Ireland

EDINBURGH

No. 4 The Roundal, Roddinglaw Business Park, Gogar, Edinburgh EH12 9DB T: +44 (0)131 3356830

EXETER 69 Polsloe Road, Exeter EX1 2NF T: + 44 (0)1392 490152

FARNBOROUGH The Pavilion, 2 Sherborne Road, South Farnborough, Hampshire GU14 6JT T: +44 (0)1252 515682

GLASGOW 4 Woodside Place, Charing Cross, Glasgow G3 7QF

T: +44 (0)141 3535037

HUDDERSFIELD

Westleigh House, Wakefield Road, Denby Dale, Huddersfield HD8 8QJ T: +44 (0)1484 860521

I FEDS

Suite 1, Jason House, Kerry Hill, Horsforth, Leeds LS18 4JR T: +44 (0)113 2580650

LONDON 83 Victoria Street, London, SW1H OHW

MAIDSTONE 19 Hollingworth Court, Turkey Mill, Maidstone, Kent ME14 5PP T: +44 (0)1622 609242

NEWCASTLE UPON TYNE

Sailors Bethel, Horatio Street Newcastle-upon-Tyne NE1 2PE T: +44 (0)191 2611966

NOTTINGHAM

Aspect House, Aspect Business Park, Bennerley Road, Nottingham NG6 8WR T: +44 (0)115 9647280

ST. ALBANS

White House Farm Barns, Gaddesden Row, Hertfordshire HP2 6HG T: +44 (0)1582 840471

SHEFFIELD STEP Business Centre, Wortley Road, Deepcar, Sheffield S36 2UH T: +44 (0)114 2903628

SHREWSBURY Mytton Mill, Forton Heath, Montford Bridge, Shrewsbury SY4 1HA T: +44 (0)1743 850170

STAFFORD

8 Parker Court, Staffordshire Technology Park, Beaconside, Stafford ST18 0WP T: +44 (0)1785 241755

WARRINGTON Suite 9 Beech House, Padgate Business Park, Green Lane, Warrington WA1 4JN T: +44 (0)1925 827218

WORCESTER Suite 5, Brindley Court, Gresley Road, Shire Business Park, Worcester **WR4 9FD** T: +44 (0)1905 751310

www.slrconsulting.com













Appendix 2

Site SA10(a) North Red Lodge: Indicative Phasing and Implementation

Forest Heath Local Plan

Examination of the Site Allocations Local Plan

Site SA10(a) – North Red Lodge

Indicative Phasing and Implementation

Timeline	Action
November 2017-	Meet Council to agree form and content of masterplan
February 2018	Prepare draft masterplan
February-March 2018	 Submit draft masterplan to Council for agreement for public consultation Submit EIA Screening/Scoping request for hybrid planning application to Council
March-April 2018	Public consultation on draft Masterplan
April-May 2018	 Final revisions to masterplan and submit to Council
	 Report on masterplan to Joint Growth Steering Group
	 Agreement and approval of Cabinet
February-June 2018	 Preparation and submission of hybrid planning application
October-November	 Resolution to approve hybrid planning application at Forest
2018	Heath Development Control Committee
	 Completion of S106 Agreement⁽¹⁾ and issuing of permission
November-April 2019	 Preparation, submission and approval of conditions and reserved matters (Phase 1)
April 2019	• Phase 1 - start on site ⁽²⁾
February – October	• Preparation, submission and approval of conditions and reserved
2019	matters for remaining phases
March 2020	Phase 1 - complete
March 2020 – March 2026	Remaining residential phases and employment complete

- (1) The S106 will include agreed triggers for the provision of:
 - affordable housing (30% equating to 105 dwellings);
 - the new village centre (including uses such as Class A1, A2, A3, A5, D1);
 - o employment land (Class B1, B2, B8);
 - open space and green infrastructure;
 - financial contributions, as necessary, towards:
 - education
 - healthcare
 - library services
 - open space
- (2) Assumes that Phase 1 of the first residential development will be land to the west of the consented primary school for circa 50 dwellings. The existing estate road is already serviced with key infrastructure and would provide access for construction traffic.

Appendix 3

Site SA10(a) North Red Lodge: Indicative Landuse Masterplan

