



**PROPOSED RESIDENTIAL DEVELOPMENT  
OLD MILVERTON, LEAMINGTON SPA,  
WARWICKSHIRE**

**TECHNICAL REPORT**

**APRIL 2016**

**REPORT REF: 20172/04-16/ 4334**



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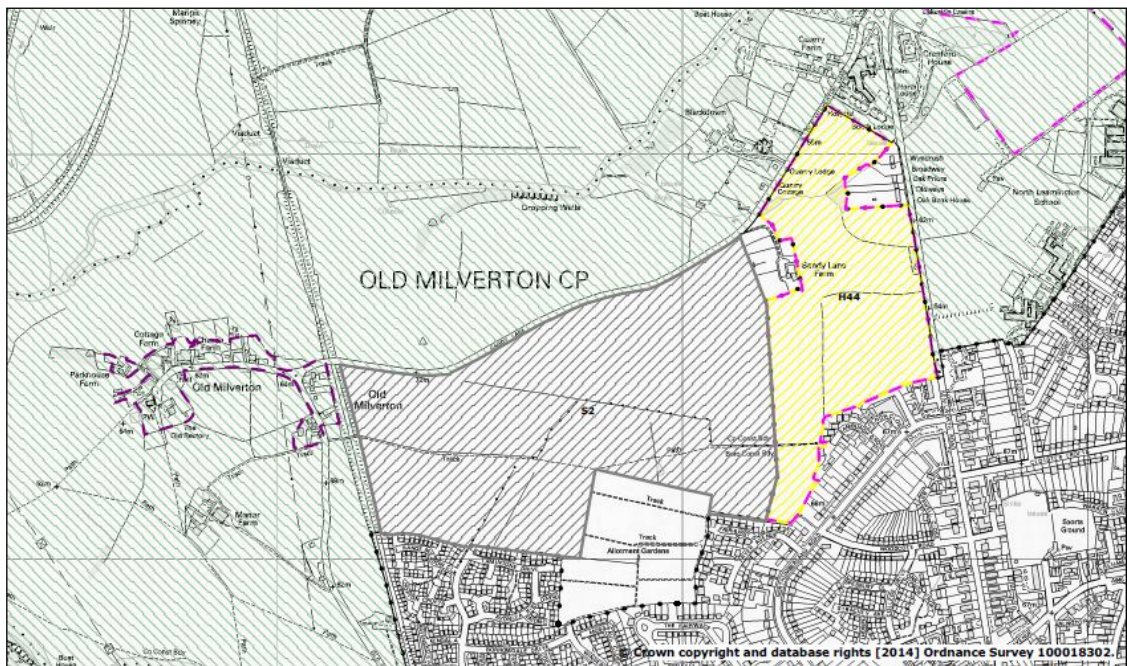
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## 1.0 INTRODUCTION

### General

- 1.1 Mewies Engineering Consultants Ltd (M-EC) has been commissioned by Taylor Wimpey UK Ltd to produce this Technical Report in support of the continued promotion of Land at Old Milverton, Leamington Spa. A site location plan is provided in Appendix A.
- 1.2 The total developable area comprises 73.22ha. With reference to Figure 1 below, the yellow hatched area shows draft allocation H44 of the emerging Warwick District Council (WDC) Local Plan will comprise of approximately 250 residential properties. The blue hatched area, identified as S2, shows land to be safeguarded for future housing. For the purposes of this assessment this area could comprise up to 1150 residential properties. The green hatched area indicates the proposed new boundary for the Green Belt. All the land identified as H44 and S2 is being promoted by Taylor Wimpey UK Ltd.

**Figure 1: Warwick District Council draft allocation plan**



- 1.3 This report will discuss both the draft allocation H44, and the wider site as a whole, to demonstrate that both sites, subject to continued discussions with the relevant authorities, are deliverable.



- 1.4 This report provides an overview on the following technical disciplines:
- Highways and Transportation ;
  - Flood Risk and Drainage ;
  - Noise ;
  - Air Quality;
  - Land Contamination ; and
  - Utilities.
- 1.5 All work is based on initial observations however; further technical work will be required to support any future planning application. For the purpose of this appraisal we have assumed delivery of the allocated site (H44) in isolation and also the wider area identified as S2.
- 1.6 M-EC has completed this report for the benefit of the individuals referred to in paragraph 1.1 and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this report unless explicit written approval has been gained from M-EC.
- 1.7 M-EC accepts no responsibility or liability for:
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  - b) The issue of this document to any third party with whom approval for use has not been agreed.

## **2.0 HIGHWAYS AND TRANSPORTATION**

### **Access**

- 2.1 The Site is bounded by Sandy Lane/Old Milverton Lane to the north, the A452 to the east, a railway line to the west and existing residential development to the south where Guys Cliff Avenue also terminates at the site boundary.
- 2.2 Access to the site can be achieved from the A452 to the east and Sandy Lane to the north. The access strategy is currently subject to further discussions with Warwickshire County Council (WCC) in their role as Highway Authority.
- 2.3 It is likely H44 will be served from 2 points of access, the first a priority junction from Sandy Lane and the second formed on the A452. The final layout of the A452 junction is not yet determined but could take the form of a T-junction with right turn lane or traffic signals. It is considered traffic signals would be appropriate to serve the wider development area (S2) and therefore if a right turn lane is proposed suitable provision will be made for the junction to be modified at a later date. Preliminary access designs have been prepared on drawing 20172\_08\_010\_001 in Appendix B.
- 2.4 With regards to the wider land (S2), it is likely two further access points will be provided from Sandy Lane taking the form of a roundabout in a central location and a T-junction further west. A third access, on to Guys Cliff Avenue, will be facilitated through an extension of the existing cul-de-sac and as a minimum pedestrian cycle and public transport access will be made available. This will ensure good connectivity to the school and enable accessibility into the proposed development and access to new areas of open space. Preliminary access designs have been prepared on drawing 20172\_08\_010\_001 in Appendix B.
- 2.5 As part of the access proposals onto Sandy Lane consideration will be given to longer terms proposals and the WCC aspiration for the Leamington Northern Relief Road, (LNRR), which is discussed in greater detail below. The proposals will be developed to ensure this longer term proposals are not prejudiced.
- 2.6 Highway boundary data has been purchased from WCC. Copies of these plans can be found in Appendix C and this confirms all the access proposals can be delivered without the need for third party land.

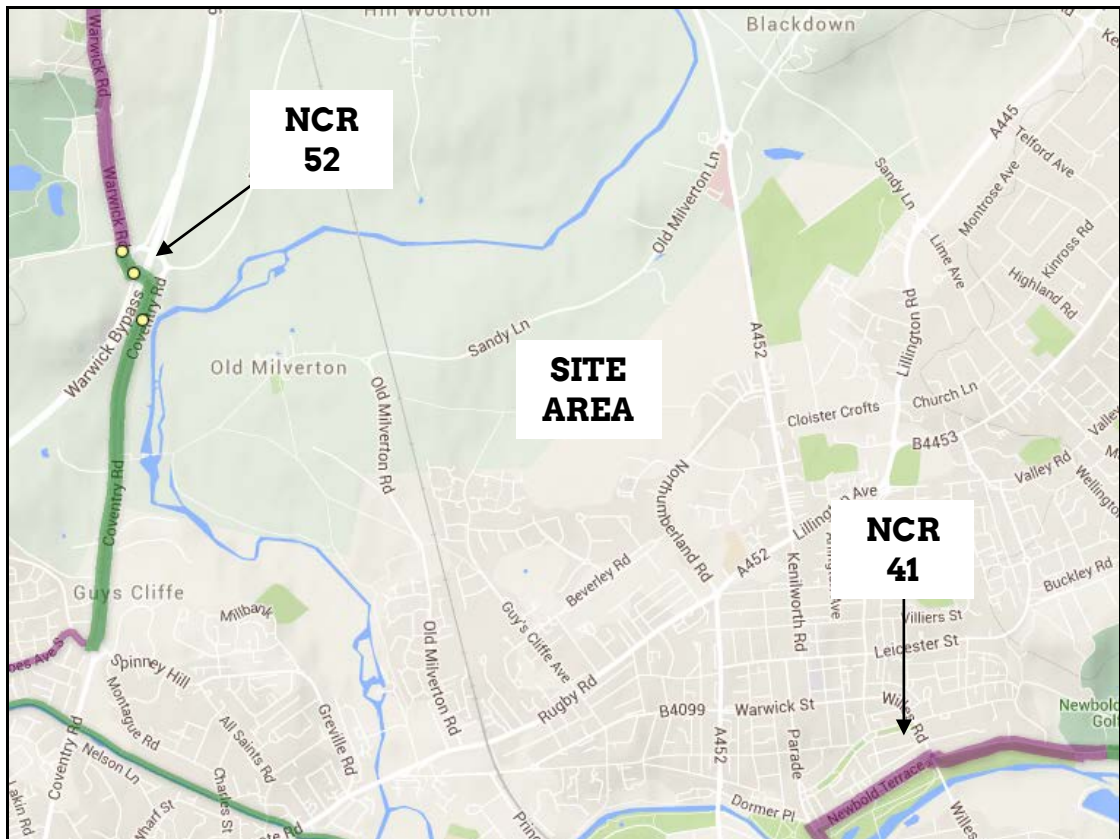
### **Sustainable Transport**

- 2.7 Pedestrian access into the site will be achieved through an extension of the footways along Kenilworth Road to the east of the site. There is potential for further pedestrian access to the south of the site via; Guys Cliff Avenue, Windermere Drive, The Fairways and Bamburgh Grove, subject to access design proposals.
- 2.8 The Warwickshire Nuffield Hospital borders the northeastern boundary of the site and can be accessed via the existing footways along Kenilworth Road. Further facilities and amenities are located to the south of the site and include; various schools, convenience shops, post offices, public houses, restaurants/takeaways and various high street shops. Key facilities and amenities within the local area are identified on drawing 20172\_08\_010\_01, in Appendix D. The NPPF does not specify specific walking distances. However, according to the National Travel Survey (2014), walking constitutes 22% of all journeys made in a year on a national scale. Furthermore, of all trips made which were less than one mile (1.6 km) during 2014, 3 out of 4 (76%) were walking trips. On that basis local facilities are considered to be within a reasonable walking distance of the proposed development.
- 2.9 A number of frequent and infrequent public transport services, as shown on drawing 20172\_08\_010\_02 in Appendix E, are present along Kenilworth Road. Bus service 11, which is operated by National Express, operates 7 days a week on a 20 minute frequency. The service provides links to Leamington Spa, Warwick University and Coventry City Centre. Service X17, operated by Stagecoach, provides a link between Coventry and Warwick Monday to Saturday every 25 minutes.
- 2.10 Service X18, operated by Stagecoach, provides a service from Coventry to Stratford-upon-Avon via Warwick. This service operates along Kenilworth Road on an hourly frequency, Monday to Saturday. A further 6 infrequent services operate along the carriageway serving a variety of different destinations within Warwickshire. It is also noted that service 69, which is an infrequent service, operates along Borrowdale Drive to the south of the site.
- 2.11 Discussions are currently underway regarding the provision of a virtual Park and Ride site on the allocated site, which would include working with current bus operators to enhance the existing bus services in the area. The Park and Ride site is an aspiration of both WCC and Warwick District Council (WDC), and will be discussed in greater detail below. We have held initial discussions with Stagecoach, which will be advanced over the summer of 2016, and they are fully supportive of such provision in this location to

serve the north of the town.

- 2.12 Leamington Spa Rail Station is located circa 2.2km to the south of the site. The station, which is managed by Chiltern Railways, provides services to the neighbouring stations of Warwick, Coventry and Banbury as well as larger towns and cities including Birmingham, Derby and Oxford, all situated within an hourly commute of the station. The station also offers a total of 10 cycle storage spaces coupled with 257 vehicle parking spaces which could form part of a multimodal journey.
- 2.13 Formal cycle provision is available to the west and to the south of the development area. National Cycle Route 41, located to the south of the site, is a long distance route connecting Bristol, Gloucester, Stratford-upon-Avon and Rugby. This route is a mixture of on-road and traffic free routes via unsurfaced bridleways.
- 2.14 National Cycle Route 52 is located to the west of the site and connects Warwick to the west of Loughborough. The route is mostly on road, with small sections of traffic free routes. Further cycling can be undertaken on the local highway network within immediate proximity of the site. Figure 2 below illustrates these cycle routes.

**Figure 2: Sustrans Cycle Map**







**Highway Impact**

Trip Generation

- 2.15 The draft allocation site area (H44) has been included in the Strategic Transport Assessments (STA’s), carried out by WCC to support the Local Plan.
  
- 2.16 The larger site has undergone some testing by WCC but is not part of the forthcoming Examination in Public and is not available.
  
- 2.17 WCC’s STA made use of two large area PARAMICS models, the Warwick and Leamington and Kenilworth and Stoneleigh Wide area traffic models. A number of studies have been carried out by WCC relating to trip rates of new developments within the model areas. It has therefore been agreed with WCC that the STA trip rates are appropriate for this report.
  
- 2.18 The WCC agreed trip rates can be seen in Table 1 below. The trip rates cover the three hour peaks, six hours in total, in line with the hours modelled in the STA. Tables 2 and 3 show the allocated site and reserved land trips respectively.

**Table 1: WCC Residential Trip Rates**

Period	In	Out	Total
07:00 to 08:00	0.08	0.33	0.41
08:00 to 09:00	0.12	0.48	0.6
09:00 to 10:00	0.12	0.22	0.34
16:00 to 17:00	0.35	0.11	0.46
17:00 to 18:00	0.48	0.12	0.6
18:00 to 19:00	0.36	0.11	0.48

**Table 2: Allocated Site 250 Dwellings**

Period	In	Out	Total
07:00 to 08:00	20	83	103
08:00 to 09:00	30	120	150
09:00 to 10:00	30	55	85
16:00 to 17:00	88	28	116
17:00 to 18:00	120	30	150
18:00 to 19:00	90	28	118

**Table 3: Safeguarded Housing Land 1150 Dwellings**

Period	In	Out	Total
07:00 to 08:00	92	380	472
08:00 to 09:00	138	552	690
09:00 to 10:00	138	253	391
16:00 to 17:00	402	127	529
17:00 to 18:00	552	138	690
18:00 to 19:00	414	127	541

Trip Distribution

- 2.19 The STA distributes traffic using census data, for the new developments being included. Therefore, this method has been replicated for this report.
  
- 2.20 Traffic generated from the proposed development has been distributed onto the local highway network based on 2011 Travel-to-Work Census data for Medium Super Output Area 002 (MSOA 002) of Warwick district. MSOAs have been used because ward data is not currently available for 2011 census data. A MSOA is an administrative area somewhat larger than a ward but significantly smaller than a district.
  
- 2.21 The site itself lies within MSOA 005 of the Warwick District. The resulting distribution model considers traffic travelling between the site and MSOAs for the District of Warwick, and the districts throughout the rest of the UK.
  
- 2.22 The distribution of the wider site is considered in the following tables. Using the tables above the total trip generation of the full site area, has been calculated and can be seen in Table 4 below.

**Table 4: Combined Land 1400 dwellings Peak Hour Flows**

Period	In	Out	Total
08:00 to 09:00	168	672	840
17:00 to 18:00	672	168	840

2.23 The 2011 census data has been used to assess the existing trip patterns in the ward and applied to the traffic generated by the combined sites. Table 5 shows the average distance of trip associated with the site which is then applied to the total trip generation.

**Table 5: Combined Peak Hour Flows Distributed by Distance of Trip**

Distance (km)	Existing population associated with distance	Percentage of population by distance that travel by car	Total population that drives by distance	Percentage of total population	Trip generation (1,680 trips for AM and PM peak)
0 to 5	2059	54%	1112	47%	790
5 to 10	216	78%	168	7%	118
10 to 20	713	85%	603	25%	420
20 to 40	400	78%	310	13%	218
40 to 60	69	96%	66	3%	50
60+	191	64%	122	5%	84

2.24 The figures in Table 5 are then distributed through destination, as shown in Table 6.

**Table 6: Combined Peak Hour Flows Distributed by Destination**

Distance (km)	Location	Percentage distribution based on population (gravity model)	Trips (taken from Table 5)	Key routes across highway network
0 to 5	Leamington Spa	59%	465	Via urban area
	Warwick	35%	278	Via urban area
	Kenilworth (1/2)	6%	47	A456/A46 junction
5 to 10	Kenilworth (2/2)	5%	6	A456/A46 junction
	Coventry (1/2)	95%	112	A456/A46 junction and A46
10 to 20	Coventry (2/2)	60%	252	A456/A46 junction and A46
	Stratford	8%	34	Via urban area and M40 J15
	Rugby	8%	34	A452 and A445

Distance (km)	Location	Percentage distribution based on population (gravity model)	Trips (taken from Table 5)	Key routes across highway network
				junction
	Solihull	24%	100	A456/A46 junction, A4177/A46 junction (via urban area)
20 to 40	Tamworth	6%	13	A456/A46 junction
	Birmingham (City)	76%	166	A456/A46 junction, A4177/A46 junction (via urban area)
	Bromsgrove	2%	4	Via urban area
	Redditch	6%	13	Via urban area
	Daventry	2%	4	Via urban area to A425
	Nuneaton	5%	11	A456/A46 junction and A46
	Hinckley	3%	7	A456/A46 junction and A46
40 - 60	Leicester	16%	8	A456/A46 junction and A46
	Birmingham (wider)	65%	33	Via urban area and M40 J15
	Worcester	5%	2	Via urban area and M40 J15
	Banbury	3%	1	Via urban area and M40 J15
	Northampton	11%	6	Via urban area to A425
60+	North	62%	52	Via A456/A46/M69
	South	38%	32	Via urban area and M40 J15

2.25 The initial distribution work shows that 62% of trips arising from the site will route towards the North, and 38% to the South. As the scheme progresses to application stage this analysis will be refined further. But, this initial result support comments made by WCC that traffic travelling North to the A46 will be the main consideration for this site as more detailed transport work progresses.

2.26 The impact of H44 (250 dwellings) has been modelled in the latest iteration of WCC's STA. The impact of the cumulative development, currently being promoted in the Local Plan, is shown and a mitigation package has been tested, as part of the development of the Infrastructure Delivery Plan, which supports the planned growth and this is considered further below.



### Highway Mitigation

#### Draft Allocation H44 (250 Dwellings)

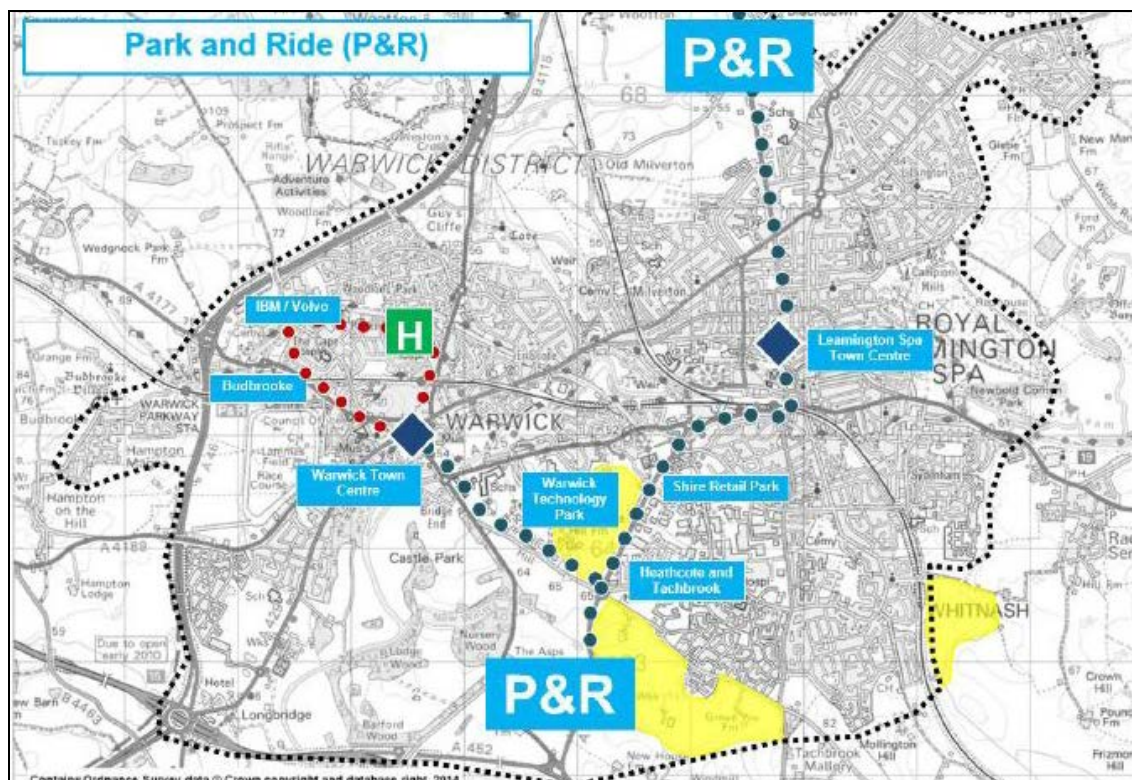
2.27 The latest version of WCC’s STA includes a number of transport mitigation measures which are required to support the Local Plan development. Those schemes H44 will be expected to contribute towards are as follows;

- Park and Ride
- K2L cycle route
- A445/Sandy Lane Junction
- A452 Dualling

#### Park and Ride

2.28 WCC are promoting Virtual Park and Ride schemes to both the North and South of Leamington. The proposed location of the Park and Rides is shown in Figure 3 below;

**Figure 3: Potential Park and Ride Sites**



2.29 Site H44 is one of the sites included in the area of search for the northern Park and Ride and is supported by Stagecoach in locational terms.

2.30 A Virtual Park and Ride is integrated into the local bus network, making use and

enhancing existing services. It is anticipated that the northern site could potentially serve Leamington and Kenilworth.

- 2.31 As it is virtual the main costs involved in this kind of Park and Ride is the land required for the site and the ongoing maintenance of the parking and bus stops and shelters. At this stage it is understood that the management and maintenance of the car parking and bus stops will be undertaken by WDC.
- 2.32 Virtual Park and Ride was last considered by WCC in January 2015 in their document, developed in partnership with the consultant Atkins, 'Warwick and Leamington Spa Transport Strategy: Review of Sustainable Transport Alternatives'. The provision of a number of alternatives were tested using WCC's strategic models and the dual North and South Virtual Park and Rides, scored highly and were recommended to go forward. The Southern Park and Ride will be provided by the Asps development, planning application W14/0300, which has recently secured permission.
- 2.33 As part of WCC's investigations into Park and Ride in this area a meeting was held with Stagecoach, in July 2015. Stagecoach were and are very positive regarding a north site, situated at the junction of the B4115 and A452 Leamington Road. Key points of discussion regarding the north site were as follows:
- As currently envisaged, the site could be served by frequent commercial services between Warwick, Leamington, University of Warwick and Coventry which run on the A452. Subject to satisfactory access being achieved, Stagecoach confirmed that this means there should be little or no cost to for the operation of the bus service;
  - Stagecoach currently runs a number of services towards the University of Warwick from Leamington Spa in the AM peak. Some of the return workings are 'dead' workings, not carrying passengers. Hence the potential to offer significant peak capacity from a new site into Leamington Spa and / or Warwick is greater than that shown in the timetable;
  - Stagecoach believe there may be additional opportunities linked to the University of Warwick, in that with constrained parking at the campus and Travel Plan obligations, plus a number of large events (for example, graduation ceremonies), there may be significant demand potential for northbound Park and Ride services; and

- Stagecoach were not of the opinion that the A452 corridor from the site into Leamington Spa is notably congested at the current time, but supported WCC's modelling approach of maintaining the existing journey time for the 2028 model run, which assumes that a level of bus priority is provided in the future.

2.34 The Northern park and Ride, will be discussed in more detail as the draft allocation moves forward however it is considered this site provides an excellent opportunity to deliver a suitable location for the virtual park and ride to be delivered and an area has been identified on drawing 20172\_08\_010\_001 in Appendix B. It is noted that this is a proposed location and will be subject to further consideration. The premise of the scheme is as follows:

- Park and Ride car parking area to be provided adjacent to Sandy Lane in the northern extents of site H44. Initial indications by WCC are for parking of up to 400 vehicles to be provided.
- Bus services to be diverted along Sandy Lane and to route into Park and Ride area which will be accessed via a new junction.
- Services to travel through this area picking passengers and will then egress into the development via a crossing over the existing watercourse. Additional stops will be provided within the development area to serve residents.
- Services to egress onto the A452.

2.35 The scheme will be funded through CIL contributions however Taylor Wimpey would look to help facilitate the scheme through providing the space and appropriate infrastructure.

2.36 The Northern Park and Ride is classed as Grade 1 Essential mitigation.

#### *K2L Cycle Route*

2.37 The most important inter-urban cycle route which is currently missing within the District is a dedicated facility between Kenilworth and Leamington Spa, often referred to as K2L. The traffic modelling work which has been undertaken by WCC, demonstrated that there will be further pressure on the A452 as a result of growth, which reinforces the need for investment in sustainable transport measures such as

this within the corridor. There is also a need to complete cycle links between Kenilworth and Warwick, Coventry and Stoneleigh Park.

- 2.38 WCC will seek contributions towards these cycle improvements through the proposed CIL Charging Schedule and from other sources such as the Single Local Growth Fund.
- 2.39 In addition to making a contribution towards the K2L, and other cycle routes in the area, through its CIL payment. WCC has also requested that a footway cycleway, forming part of the K2L route, be provided across the frontage of the site on the A452.

#### *A445/Sandy Lane Junction*

- 2.40 Additional widening of the A445/Sandy Lane roundabout will be required as a result of the additional traffic levels travelling between Warwick/Leamington and Kenilworth/Stoneleigh. Traffic from the site will impact on this route and will contribute towards the improvements through the CIL contribution.
- 2.41 The improvements have been developed by WCC and include widening of the junction approaches and, where possible, introduction of two lane exit capacity along the A445 exits.

#### *A452 Dualling*

- 2.42 Modelling the additional housing schemes, now included in the Local Plan, it was found that the potential for relief to be delivered via the inclusion of a wider dualling scheme along the A452, which was first identified in the Coventry and Warwickshire Strategic Economic Plan. Introduction of these measures is intended to compliment the delivery of the signal proposals at the Thickthorn and Bericote junctions by dualling the A452 between the two as well as providing widening to the south of the Bericote roundabout.
- 2.43 In addition to mitigating the impacts of growth to the north of Leamington, the inclusion of these measures is intended to increase the attractiveness of the route to the A46 via the A452 to the north which, in turn, will alleviate alternative routes to the A46 such as the Emscote Road Corridor and also the A452 south through Leamington towards the M40.
- 2.44 Delivery of this scheme, in full, will unlock additional capacity across the network by accommodating a greater number of trips to the north which alleviates problems elsewhere on the network.



2.45 The site is one of the new developments in the North and will contribute to this scheme through the CIL process.

Reserved Housing Land S2 (1150 Dwellings)

2.46 It is felt that delivery of additional development on the site through an enlargement of H44 into the S2 would enable greater contributions and infrastructure to be provided and would assist in the delivery of some of the principle schemes outlined above including the Park and Ride site, A452 dualling and cycleway improvements. It is felt these improvements would aid the provision of a high quality and sustainable development with additional highway capacity provided to ensure greater housing delivery could come forward on the wider site in this plan period.

2.47 In addition to the measures above and one such consideration to the delivery of sustainable development in this area is that WCC are exploring the potential for a small railway station to be provided which would replace the disused Old Milverton Station. S2 has the potential to deliver the land required to provide this station in South Western as shown on drawing 20172\_08\_010\_001 in Appendix B.

2.48 Whilst discussions are at an early stage, and funding would need to be secured, the provision of a Park and Ride facility and railway station has the potential to deliver a high quality sustainable development area with Taylor Wimpey capable of providing the land for these uses and assisting in their delivery. WCC have stated they see real benefits of the close proximity of a Northern Park and Ride, linking to a potential station, providing frequent bus services to the wider site. By delivering sustainable development and assisting highway capacity in the wide network it brings forward the potential to enable e development to be released across S2.

2.49 In respect of wider highway capacity, and perhaps not taking account of the sustainable provisions outlined already, previous modelling, included in early phases of the STA, indicated one of the major infrastructure requirements considered for delivery north of the Leamington Spa was the Leamington Northern Relief Road (LNRR). This new relief road creates a direct route between Kenilworth Road and the A46 and would be complimented by dualing of certain parts of the A452 Corridor, as discussed above.

2.50 The current proposals for the LNRR remain an aspiration for WCC in the long terms with funding delivered through CIL contributions. The current proposed route for the runs adjacent to the site, to the North, along the Sandy Lane Corridor. Initial

discussions with WCC have shown that that their preferred option would be to improve the Sandy Lane Corridor, with land along the edge of the wider land area (S2) reserved outside of the development area for the delivery of infrastructure associated with the road. required, keeping this strategic route outside of the potential development. This provision could be integrated into the land use for this area with space reserved along the Sandy Lane corridor.

### **Transport Summary**

2.51 Key conclusions from this section are outlined below:

- The development area is access and well located for future residents to access proposed and current facilities amenities.
- Access can be achieved to the existing highway network in several locations.
- The potential mitigation identified within the Strategic modelling work will further increase this access making the sites highly sustainable and offer real opportunities to promote modal shift towards sustainable travel movements.
- The development has the opportunity to deliver the northern Park and Ride scheme which is a key aspiration of WCC and WDC. This location will be subject to further consideration.
- Delivery of more housing across the safeguarded land area would unlock further infrastructure improvements including assisting in the delivery of a new train station area and providing further funding support to principle sustainable transport measures as well as highway improvement schemes.

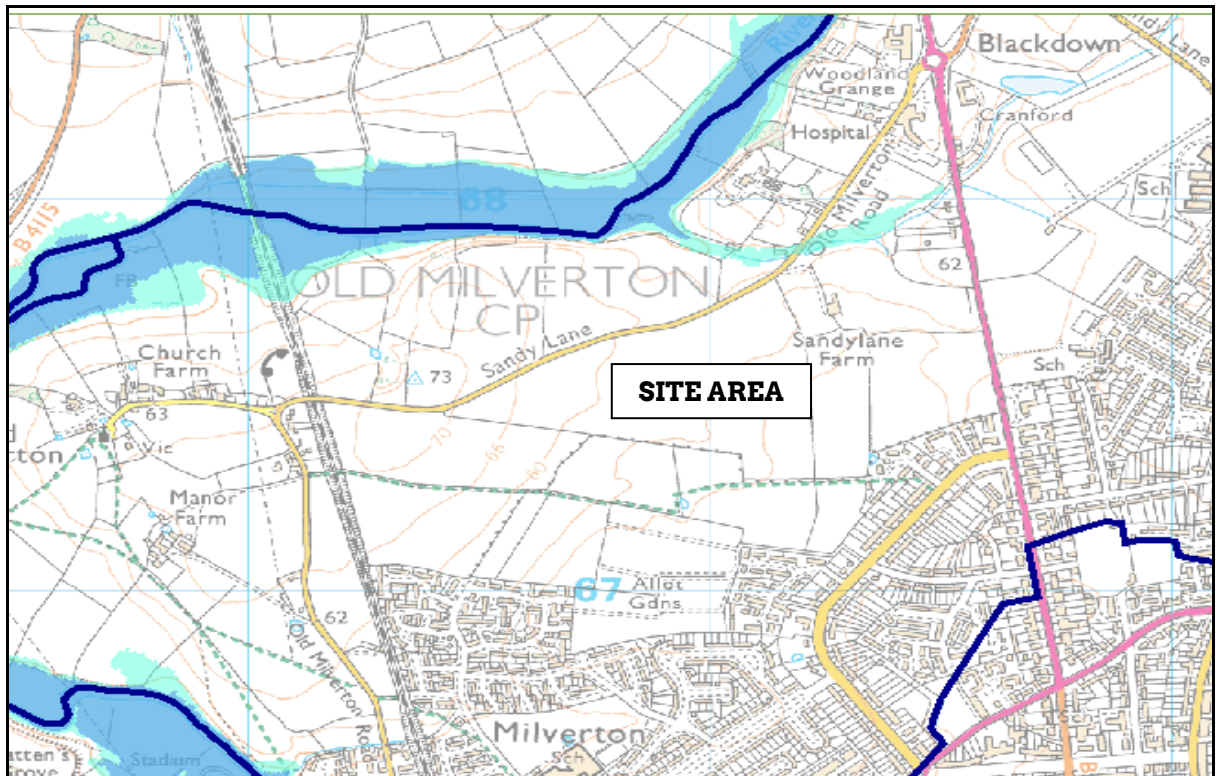
**3.0 FLOOD RISK AND DRAINAGE**

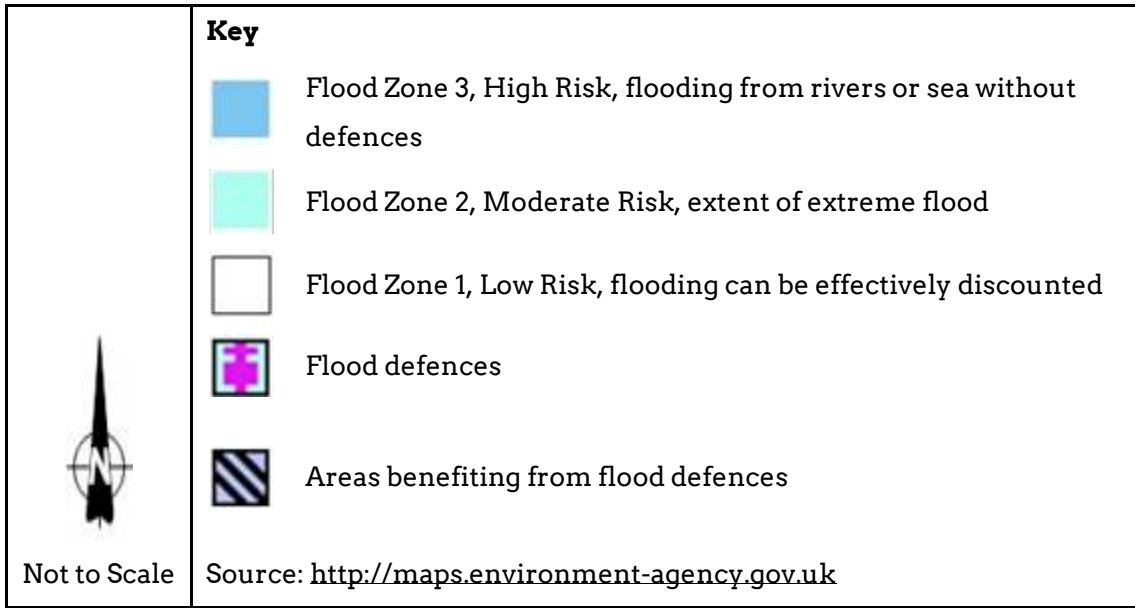
3.1 Environment Agency flood zone maps (see Figure F) show the River Avon flows in a westerly direction approximately 200m to the north of Sandy Lane and Old Milverton Lane. As ordinary watercourse flows in a westerly direction through the north east corner of the site passing through a culvert under Old Milverton Lane as it heads towards the River Avon.

3.2 EA flood zone maps indicate land adjacent to the ordinary watercourse is affected by Flood Zone 2 with an annual probability of flooding between 1 in 100 (1%) and 1 in 1000 (0.1%).

3.3 The proposed development is residential. Using Table 2 – Flood Risk Vulnerability Classification from the Planning Practice Guidance the development is classified as ‘more vulnerable’.

**Figure 4: Environment Agency Flood Zones**





3.4 The Environment Agency flood zone maps show that the majority of the site lies within Flood Zone 1 and is not at risk of fluvial flooding in storm events up to 1 in 1000 years (i.e. a less than a 0.1% chance in any given year). However, the flood maps also indicate that the site is affected by Flood Zone 2 associated with an ordinary watercourse. This means that this part of the site could be at risk of fluvial flooding during an event of between 1 in 100 and 1 in 1000 severity (or between 1.0% and 0.1% chance in any one year).

**Table 7: Copy of Table 3 (Flood Risk Vulnerability and Flood Zone ‘compatibility’) from the Planning Practice Guidance**

Flood Risk Vulnerability classification (see Table 2)		Essential Infrastructure	Water compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Flood Zone	Zone 1	√	√	√	√	√
	Zone 2	√	√	Exception Test Required	√	√
	Zone 3a	Exception Test required	√	✘	Exception Test required	√
	Zone 3b ‘Functional Floodplain’	Exception Test Required	√	✘	✘	✘

Key:

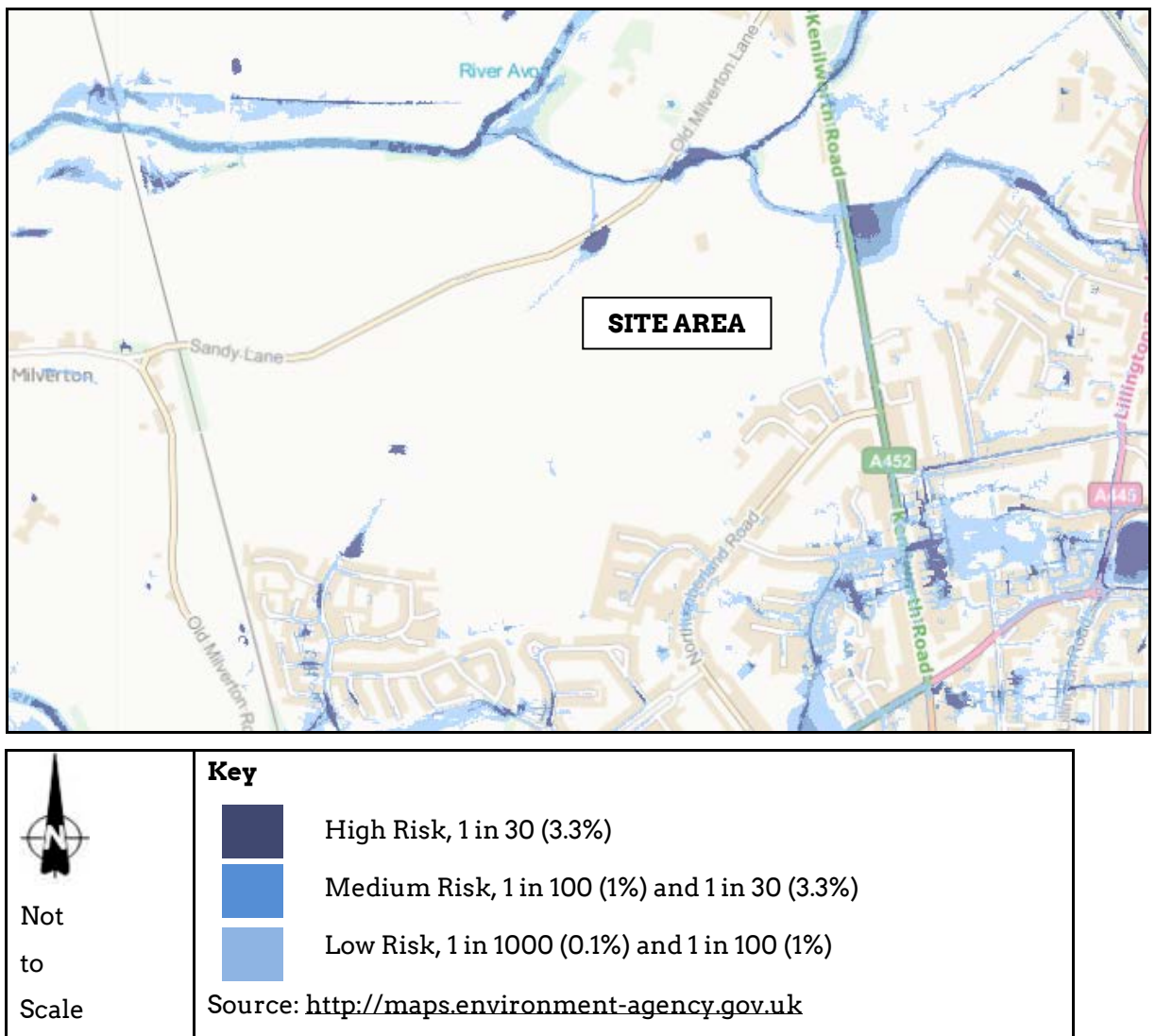
√ Development is appropriate

✘ Development should not be permitted



- 3.5 The site would be designed to ensure no development (built form, required open space or drainage features etc) is located within the flood plain area and all development would be contained to Flood Zone 1 only. In addition hydraulic modelling will be completed to define the exact floodplain extents.
- 3.6 The Environment Agency Risk of Flooding from Surface Water mapping for the site area is shown in Figure 5 below.

**Figure 5: Environment Agency Flood Mapping – Risk of Flooding from Surface Water**



- 3.7 Environment Agency surface water maps indicate that there is potential for surface water flooding alongside the ordinary watercourse as it flows in a westerly direction through the north east corner of the site.
- 3.8 A potential overland surface water route is shown following a natural valley in the

topography heading in a north easterly direction towards a surface water ponding area adjacent to Sandy Lane to the west of Sandy Lane Farm.

- 3.9 There is also a potential overland surface water route following a natural valley in the topography heading in a south westerly direction towards Guy's Cliffe Avenue.

### **Surface Water Drainage**

- 3.10 Surface water arising from a developed site should, as far as practical, be managed in a sustainable manner to mimic the surface water flows arising from the undeveloped site.
- 3.11 Part H of the Building Regulations 2002 recommends that surface water run-off shall discharge to one of the following, listed in order of priority:
- a. an adequate soakaway or some other adequate infiltration system, or where that is not reasonably practicable,
  - b. a watercourse, or, where that is not reasonably practicable,
  - c. a sewer.
- 3.12 At present no soakage testing has been completed across the site area however a review of the BGS geology maps shows the northern extents of the site may be underlain by the Bromsgrove Sandstone Formation and therefore soakaway drainage may be feasible in these areas. At a suitable time detailed soakage testing in accordance with BRE365 will be completed across the development area. It is noted soakage into the ground is the Environment Agency's preferred method of surface water disposal and so the development proposals will give this detailed consideration
- 3.13 However at this stage it is assumed all surface water flows will be attenuated and positively drained to nearby watercourses and ditches and where this is not possible to Severn Trent water surface water sewers.
- 3.14 In order to prevent an increase in flood risk to adjacent land and downstream of the site it will be necessary to restrict the surface water discharge from the development to the Qbar Greenfield runoff from the site providing betterment by reducing the run-off during extreme storm events. In order to provide suitable storage the following level of attenuation is required to accommodate the 1 in 100 year plus 40% for climate storm event.

3.15 In order to determine a surface water drainage strategy for the site the land area has been divided into a series of drainage catchments which are shown on drawing 20172\_01\_230\_01 in Appendix F and are summarised below:

<b>Catchment</b>	<b>Anticipated discharge point</b>	<b>Attenuation Volume (m<sup>3</sup>) For up to 1 in 100year (+40%cc) storm event</b>
Catchment A (S2)	A land drainage system appears to be available at the northern end of Guys Cliffe Avenue which will require investigation and LLFA approval. Alternatively discharge to Severn Trent Water sewer in Guys Cliffe Avenue. This will be subject to agreement with Severn Trent Water and hydraulic modelling may be required.	14,083
Catchment B (S2)	Discharge into ditch alongside Old Milverton Lane or if unacceptable to Highway Authority a new surface water sewer can be laid in carriageway	13,777
Catchment C (H44)	Discharge into watercourse	9,131
Catchment D (H44)	Unlikely to be developed	
Catchment E (H44)	Discharge into watercourse	1,684

*It should be noted the catchment areas over assume the extent of development area at this stage and so storage requirements are considered robust. These will be refined in due course.*

3.16 A number of attenuation ponds are likely to be required across the full site area. In addition to the ponds swales could be incorporated into the development area and their location and size will be considered further in due course however the land use framework of the site allows for these additional features to be provided. For the area of the Park and Ride it is envisaged underground storage beneath the car parking areas will be provided.

#### **Foul Water Drainage**

3.17 STW public sewer records show foul sewers to the north, west and east of the site and it is likely multiple connections will be made. Further discussions will be undertaken with Severn Trent Water (STW) in due course.

3.18 Using the drainage catchments identified above, the foul water drainage strategies are summarised below:

<b>Catchment</b>	<b>Anticipated discharge point</b>
Catchment A	Discharge to Severn Trent Water sewer in Guys Cliffe Avenue.
Catchment B	Discharge into new foul sewer in Old Milverton Lane draining to new foul pumping station within Catchment C.
Catchment C	Discharge into new foul water pumping station
Catchment D	Discharge into new foul water pumping station within Catchment C, if required
Catchment E	Discharge into new foul water pumping station within Catchment C, if required

3.19 In any event and in accordance with the Water Industry Act (1990) STW will be required to provide capacity for the development whilst containing environmental impact and maintaining water quality; therefore improvements to the network will be provided if required.

### **Summary**

3.20 To summarise the key points outlined above:

- All development will be contained to Flood Zone 1 and existing extents of Flood Zone 2 will be left clear and modelled to ensure floodplain extents are accurately determined.
- A Flood Risk Assessment will be prepared in due course that will include a surface water drainage strategy including attenuation proposals, proposed connection points, treatment of run-off and future drainage maintenance proposals.
- Existing overland surface water flow routes and watercourses through the site should be incorporated within the proposed development layout.
- Soakage testing will be undertaken in due course however positive drainage connections to an adjacent watercourse and available surface water sewers will be achieved with onsite attenuation provided.

- Foul drainage can be achieved by gravity and pumped solutions to existing sewers and Severn Trent Water will be required to provide capacity in the network if required. Hydraulic modelling will be undertaken in due course.

## 4.0 NOISE

4.1 Due to the proximity of the site to the local road network and rail line, noise impact should be considered and assessed against the following guidance at the planning application stage:

- BS8233:2014 'Guidance on sound insulation and noise reduction for buildings'; and
- World Health Organisation (WHO) Guidelines for Community Noise 1999.

4.2 These documents provide recommended noise level thresholds for outdoor living areas, living rooms and bedrooms. A summary of the criteria is provided below:

- a. Living rooms (daytime)  $L_{Aeq,16hour}$  35dB(A);
- b. Bedrooms(daytime)  $L_{Aeq,16hour}$  35dB(A);
- c. Bedrooms(night-time)  $L_{Aeq,16hour}$  30dB(A);
- d. Bedrooms (night-time)  $L_{AFmax}$  45dB(A); and
- e. External living areas  $L_{Aeq,16hour}$  50dB(A) lower limit and 55 dB(A) upper limit

4.3 It is noted from recent experience of undertaking Noise Assessment within the Warwick District Council area that the Local Planning Authority has requested that external noise levels in gardens should not exceed the lower limit of 50dB  $L_{Aeq,T}$ .

4.4 To achieve this external sound level threshold, it is anticipated that any dwellings of site H44 situated along northern and eastern boundaries are likely to require gardens to be placed at facades facing away from roads, in order to provide screening to rear gardens.

4.5 Similarly any dwellings that may located along northern and western boundaries of the the safeguarded area S2, are likely to require gardens to be placed at facades facing away from roads.

4.6 The need for linked frontages adjacent to roads would be determined at the more detailed stages, once further noise survey and assessment work has been undertaken.

4.7 Dependent upon existing sound levels at the site, acoustically sound barriers may

also be required at certain locations, for example garden and/or site boundaries adjacent to roads.

- 4.8 In addition, to achieve the requisite internal sound level thresholds, some enhanced glazing and ventilation specifications may be required to protect internal amenity.
- 4.9 It is considered unlikely that a standoff distance will be required, however a suitable mitigation strategy incorporating the measures outlined above should be implemented.
- 4.10 As part of wider considerations and should development extend beyond H44, then additional noise impacts associated with wider proposals including the LNRR and train station proposals can be considered and additional mitigation provided if required and necessary.
- 4.11 It is considered unlikely noise will have a significant adverse impact on the development of this site as any sound levels exceeding the recommended thresholds would be dealt with by way of a suitable mitigation strategy.



## **5.0 AIR QUALITY**

5.1 Part IV of the Environment Act 1995 (the Act) requires UK government and devolved administrations to produce a national air quality strategy containing standards, objectives and measures for ameliorating ambient air quality and to continually review these policies.

5.2 The Act also provides a legislative framework for a system of Local Air Quality Management (LAQM). This system is an integral part of delivering the UK's air quality obligations.

5.3 Under the LAQM regime, responsible authorities are required to carry out a regular review and assessment of air quality in their area against defined national objectives, which have been prescribed in regulations for the purposes of LAQM.

5.4 Where it is found these objectives are unlikely to be met, responsible authorities must designate Air Quality Management Areas (AQMAs) and implement Air Quality Action Plans to tackle the problems.

5.5 WDC has declared several AQMAs within its area, including Leamington Spa, for exceedances of the annual mean objective for nitrogen dioxide (NO<sub>2</sub>). AQMAs have been declared at the following areas:

- Leamington Spa- an area of South Town, centred on the High Street, Clemens Street and Bath Street.
- Coventry Road, Warwick.
- Warwick Town Centre.
- Warwick Road, Kenilworth.
- New Street, Kenilworth.

5.6 In addition, relevant to this exercise as some development traffic will route to the north, a city-wide AQMA has been declared within Coventry (by Coventry City Council).

- 5.7 Traffic generated by the proposed development has the potential to increase NO<sub>2</sub> and particulate matter (PM<sub>10</sub>) concentrations (the key traffic-related pollutants) at receptors adjacent to the local road network, including existing AQMAs.
- 5.8 A report titled 'Air Quality Assessment: Development Associated with the Local Plan, Warwick' was produced by Air Quality Consultants in October 2013. The Air Quality Assessment (AQA) was undertaken as part of the evidence base for the Local Development Framework (LDF), to determine the likely impacts of LDF proposals (potential housing and employment growth) on AQMAs in the WDC area up until 2028.
- 5.9 In brief, the AQA used traffic data produced as part of the WDC Strategic Transport Assessment to model air pollutant concentrations within areas of existing poor air quality, including Warwick and Leamington Spa.
- 5.10 Pollutant modelling results indicated that by 2028 concentrations of NO<sub>2</sub> and PM<sub>10</sub> are expected to be below the national air quality objectives at modelled receptor locations. This decrease in pollutant concentrations is attributable to the expected reduction in vehicle emissions in the future. It is noted that vehicle emission reduction estimates may be overly optimistic, and that some development will occur before 2028, at a time when emissions and concentrations are higher.
- 5.11 To quantify the impact of development-related traffic upon air pollutant concentrations at sensitive receptor locations in the WDC area and in Coventry city centre, AQA is likely to be required at the planning application stage.
- 5.12 A scoping exercise should firstly be undertaken to identify the extent of the study area/road links to be considered. Modelling of pollutants for future development scenarios (including draft allocation H44 and the safeguarded housing land) should then be undertaken using base and trip generation data that would be produced as part of the Transport work for the project.
- 5.13 Modelling and assessment of pollutant concentrations should be undertaken in accordance with current guidance, including the Design Manual for Roads and Bridges Section 11.3.1 'Air Quality' (HA207/07), Defra's Local Air Quality Management Technical Guidance 2009 (LAQM.TG(09)) and EPUK's 'Land-Use Planning and Development Control: Planning for Air Quality 2015 (v1.1)'.
- 5.14 In addition, WDC has produced a document titled 'Low Emissions Strategy Guidance

for Developers’, published in April 2014 (hereinafter referred to as WDC Guidance). WDC Guidance establishes the principle of Warwick District as an ‘Emission Reduction Area’ and requires developers to use ‘reasonable endeavors’ to minimise emissions and, where necessary, offset the impact of development on the environment. The guidance sets out a range of specific measures to be used to minimise and/or offset the emissions from new development, and requires the cumulative impact of developments to be considered as part of the planning application process.

5.15 WDC Guidance is split in to three stages. Stage 1 is used to determine the classification of a development and Stage 2 contains criteria to determine whether an Air Quality Assessment is required. Once Stages 1 and 2 have been carried out, and Air Quality Assessment undertaken where appropriate, Stage 3 is used to assist in determining the level of mitigation that will be required by the proposal to meet Local Development Plan requirements.

5.16 Once AQA has been undertaken, it is envisaged that mitigation measures proportionate to the level of impact would be implemented to offset adverse effects. Depending on the likely impact, mitigation requirements may include such measures as:

- Electric vehicle charging provision;
- Travel Plan;
- Contribution to electric vehicle recharging structure;
- Car clubs;
- Low emission bus/mini-bus provision;
- Bike hire schemes;
- Contributions to subsidized public transport for residents; and
- Air quality monitoring programmes.

5.17 It is noted that this is not an exhaustive list and that the need for and specification of a mitigation strategy will be determined once Air Quality Assessment, and subsequent discussions with the relevant Authorities (likely to be WDC and Coventry City Council) to agree appropriate measures have been undertaken.

**6.0 LAND CONTAMINATION**

6.1 An initial Phase I Environmental Risk Assessment has been completed for the site area and a summary of the findings is outlined in the table below.

<b>Site Location</b>	The site is located to the south of Sandy Lane and Old Milverton Lane and north of the existing residential development of Milverton. The site is located approximately 1.3km north west of Royal Leamington Spa and 2km north east of Warwick town centre. The site is centred within grid reference 430965, 267416.
<b>Existing Site Description</b>	<p>The site, which is irregular in shape, currently comprises several fields with field boundaries including mature hedgerows and trees. Allotment gardens are recorded in the southern half of the site area. Access to the site can be achieved from the A452 to the east and Sandy Lane to the north.</p> <p>The ground surface of the fields across the site is predominantly laid to crop. The area of the allotments is divided up into much smaller private plots. The site is bound by further arable fields to the north, east and west. The River Avon is situated approximately 200m to the north of the site. The existing residential development of Milverton is shown along the full extent of the southern boundary.</p>
<b>Proposed Development</b>	The proposed development will comprise up to 1,400 dwellings with associated works, open space, amenity space and infrastructure. Whilst this report considers the full development area, it is noted there are opportunities to phase the development in terms of delivery.
<b>Site Walkover Findings</b>	At this stage a site walkover of the development has not been carried out.
<b>Regulator Consultations</b>	<p><u>Environment Agency (EA)</u></p> <p>The EA website has been interrogated with reference to any relevant environmental issues in the local area, not included in the environmental data report including:</p> <ul style="list-style-type: none"> <li>• Sandy Lane Landfill is situated immediately north of the site, on northern side of Sandy Lane.</li> <li>• There are no significant pollution incidents or air pollution sites located within 500 m of the site.</li> </ul>
<b>Site History</b>	The earliest map reviewed (1889), shows the site as a multiple open fields with a sparse quantity of trees separating the fields. The north and west of the site are surrounded by open fields. The south of the site is surrounding by residential dwellings. The 1905 map shows that multiple farm houses have been constructed which are situated beyond the northern boundary, The Gables has been constructed towards the south eastern corner with residential dwellings having been constructed within close proximity. The 1939 OS map shows a small group of residential

	<p>dwellings, close to the northeastern boundary, further residential dwellings have been constructed past the southeastern corner of the site. The 1951 OS maps show a small group of residential dwellings (The Gables Bungalows), close to the eastern boundary. The 1964 OS maps show that The Gables Bungalows have been demolished and have been replaced by a playing field and Leamington College for girls. The 1970 OS map shows further residential dwellings, close to the southern boundary. The 1991 OS maps show a lake approximately 300m past the northern eastern corner, several builds have been constructed around Quarry Farm which is situated past the northwestern corner. The 1995 OS maps show residential dwellings and a pond, close to the southern boundary.</p>
<p><b>Geology</b></p>	<p>The 1:50,000 British Geological Survey (BGS) map, Sheet 184 (Warwick) shows superficial deposits overlying the western portion of the site, adjacent to the railway line that forms the western site boundary as well as the area to the centre of the southern boundary (River Terrace Deposits).</p> <p>The solid geology underlying the western and southern portion of the site is the Mercia Mudstone Group - red or green grey mudstone (weathers to clay). The solid strata underlying the north eastern portion of the site are the Bromsgrove Sandstone Formation. Outcropping along the boundary with the Bromsgrove Sandstone Formation are 'skerry bands', which are subordinate sandstone and siltstone bands, associated with the Mercia Mudstone Group. A north-south trending fault is shown within the western area of the site.</p>
<p><b>Hydrogeology</b></p>	<p>The localised superficial deposits are classified as being Secondary (A) Aquifers (Permeable Layers). The solid strata underlying the site include the Bromsgrove Sandstone Formation (Principal Aquifer), the Mercia Mudstone Group (Secondary (B) Aquifer) and the skerry bands associated with the Mercia Mudstone Group (Secondary Aquifer - undifferentiated).</p> <p>There is no groundwater abstractions recorded within 1km of the site boundary.</p> <p>The north eastern portion of the site is situated in Zone III of a Groundwater Source Protection Zones</p>
<p><b>Hydrology</b></p>	<p>Environment Agency flood zone maps show the River Avon flows in a westerly direction approximately 200m to the north of Sandy Lane and Old Milverton Lane. EA flood zone maps indicate land adjacent to the ordinary watercourse is affected by Flood Zone 2. There are seven surface water abstractions recorded within 1km of the site. The nearest active license is 447m to the north west.</p> <p>There is one reference for Surface Water Features recorded within 250m of the site boundary, which is</p>

	<p>within the site boundary.</p> <p>There are eleven Detailed River Network entries within 500m of the site area including two entries within the site boundary, which are likely to be the ditch/stream cutting across the north eastern portion of the site.</p>
<b>Ecology</b>	The site is situated within a Nitrate Vulnerable Zone.
<b>Radon</b>	It is anticipated that no radon protection measures will be required for the proposed development.
<b>Environmental Sensitivity</b>	<p>Groundwater: Low, locally moderate</p> <p>Surface water: Low</p> <p>Ecology: Low</p> <p>Flood risk (Rivers and Sea): Low, locally moderate</p> <p>Flood risk (Surface Water): Very low, locally moderate and high - appears to be localised flooding associated with the boundary ditches.</p>
<b>Preliminary Geotechnical Assessment</b>	<p>Based on the desk based information available it is considered that ground conditions are likely to comprise River Terrace Deposits overlying the western portion of the site, adjacent to the western site boundary and also the area to the centre of the southern boundary. The solid strata underlying the superficial deposits and also outcropping on site, are variable and include the Mercia Mudstone Group - red or green grey mudstone (weathers to clay) in the western and southern portion of the site, the Bromsgrove Sandstone Formation underlying the north eastern portion of the site and 'skerry bands', which are subordinate sandstone and siltstone bands outcropping along the boundary between the Bromsgrove Sandstone and Mercia Mudstone.</p> <ul style="list-style-type: none"> <li>• Both cohesive and granular strata are likely to be present locally across the site and superficial strata may include pockets/lenses of weak soils including soft clays or organic soils (e.g. peat). Deep Made Ground is not recorded on site, however, based on the activities in the local area (several excavations/quarries and pits), unrecorded may be present within the site boundaries.</li> <li>• Provided that deep Made Ground and/or soft or loose materials are not present the site should be suitable for the use of traditional trench fill foundations. Where ground conditions are variable, reinforced foundations may be required or an alternative foundation solution, such as piles, may locally be required where deep Made Ground/variable soils are encountered.</li> <li>• Due to the likely presence of cohesive soils and trees, particularly around the margins of the site, deepening foundations in accordance with NHBC standards is likely. At this stage it should be assumed that all plots close to site boundaries will require some degree of deepening below minimum</li> </ul>

	<p>depth and heave protection.</p> <ul style="list-style-type: none"> <li>• Due to the potential for gas protection measures (Made Ground - backfilled excavations in the local area, an allowance should be made for the use of precast suspended floors with a sub-floor void (beam and block) presence of trees.</li> <li>• Overly aggressive ground conditions are not expected and standard concrete should be suitable.</li> </ul>
<b>Recommendations</b>	<p>Completion of a Phase II land quality assessment, planning conditions &amp; financial security. This will be primarily to assess geotechnical issues and to assist in the design of foundations, drainage, underground services, roads etc. However, it is suggested that confirmatory environmental testing (across the site area) including gas monitoring be completed to assess the site conditions and to obtain sufficient data to further refine the conceptual model and environmental risks for submission to the local planning authority.</p>



## **7.0 UTILITIES**

7.1 Apparatus Plans sourced from all local providers have been obtained and a summary is outlined below. Copies of all relevant plans and correspondence can be found in Appendix G.

### **Sewer (Foul)**

7.2 The sewer records show that there are not any public foul sewers running within the site. The nearest public foul sewers to the development site are located along Old Milverton Road to the west, Lamintone Drive to the south and Bamburgh Close to the south east.

### **Sewers (Surface Water)**

7.3 The surface sewer records show that there are no public surface water sewers running within the site. A 300mm public surface water sewer is shown, adjacent to the eastern boundary, on the far side of the A452.

### **Water Mains**

7.4 A 4" diameter clean water main is shown to run within the eastern verge of the A452.

7.5 A 100mm diameter clean water main is located within the southern verge of Old Milverton Lane. This main connects to a 90mm diameter distribution main towards Sandy Lane Farm. With the exception of this main, no STW owned clean water mains enter the site.

### **Electricity**

7.6 There are existing 32kV underground high voltage cables and 11kV overhead high voltage lines running along Old Milverton Lane. Further apparatus can be found along the A452, with an 11kV overhead high voltage cable and a low voltage underground cable running along the western verge. Diversions may be required to facilitate the site accesses.

### **BT**

7.7 BT underground and overhead apparatus is shown within the southeastern verge of Old Milverton Lane. Further underground apparatus are located along the eastern footway and western verge of the A452. Overhead cables enter the site from the north, connecting onto Sandy Lane Farm, with numerous telegraph poles situated within the

site. Diversions are likely to be required to relocate the affected apparatus to accommodate for suitable accesses.

**Virgin Media**

- 7.8 Virgin Media underground apparatus can be found within the residential areas situated beyond the eastern and southern site boundaries.

**Gas**

- 7.9 A Low Pressure (LP) gas main is noted along the center of the Old Milverton Lane carriageway and connects to Sandy Lane Farm. A further LP main is located along the western verge of the A452, with a Medium Pressure main situated within the eastern side of the carriageway. Further underground apparatus can be found within the residential areas situated beyond the eastern and southern boundary. Diversions will be required for an access onto the A452.

**8.0 SUMMARY AND CONCLUSIONS**

8.1 Outlined below is a summary of our findings:

<p>Highways and Transportation</p>	<p>Access can be achieved from 2 points of access, the first a priority junction from Sandy Lane and the second formed on the A452. It is considered traffic signals would be appropriate to serve the wider development area (S2). Additional access points can be provided from Sandy Lane and Guys Cliff Avenue to serve the wider area.</p> <p>Pedestrian access into the site will be achieved through an extension of the footways along Kenilworth Road to the east of the site. There is potential for further pedestrian access to the south of the site via; Guys Cliff Avenue, Windermere Drive, The Fairways and Bamburgh Grove,</p> <p>With regard to highway impact, the latest version of WCC’s STA includes a number of transport mitigation measures which are required to support the Local Plan development. Scheme H44 will be expected to contribute towards those measures.</p> <p>Delivery of additional development on the site through an enlargement of H44 into the S2 would enable greater contributions and infrastructure to be provided and would assist in the delivery of some of the principle schemes outlined, to aid provision of a high quality and sustainable development with additional highway capacity.</p>
<p>Flood Risk and Drainage</p>	<p>The majority of the site lies within Flood Zone 1. A small area of the site to the west is affected by Flood Zone 2. All development will be located in flood zone 1</p> <p>Surface water drainage will be accommodated through the provision of an attenuation features, including a number of attenuation ponds.</p> <p>Foul sewers are located to the north, west and east of the site and it is likely multiple connections will be made</p>
<p>Noise</p>	<p>Noise mitigation measures are likely to be required to deal with noise from the local road network. Noise Assessment will establish sound levels at the site and a suitable mitigation strategy would be implemented where necessary.</p>
<p>Air Quality</p>	<p>Air Quality Assessment will quantify the impact of development-related traffic upon air pollutant concentrations within the WDC area and in Coventry city centre. Mitigation proportionate to the level of impact will be discussed with the relevant local authorities and implemented to assist in offsetting identified impacts.</p>
<p>Land Contamination</p>	<p>The site is very unlikely to be classified as contaminated land</p>

Utilities	Apparatus plans indicate that diversion of electricity, gas and telecoms apparatus may be required to accommodate site access. Capacity and connection points to utilities will need to be determined.
-----------	---

**APPENDIX A**

**M-EC**  
**Wellington House**  
**Leicester Road**  
**Ibstock**  
**Leicestershire**  
**LE67 6HP**



## **SITE LOCATION PLAN**

**Project:** Old Milverton, Leamington Spa

**File Ref:** 20172

**O.S. Grid Ref:** 430965, 267416

**Postcode:** CV32 6RN



## **APPENDIX B**

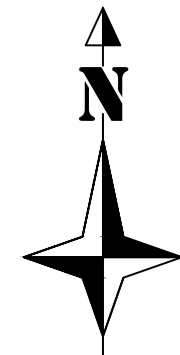
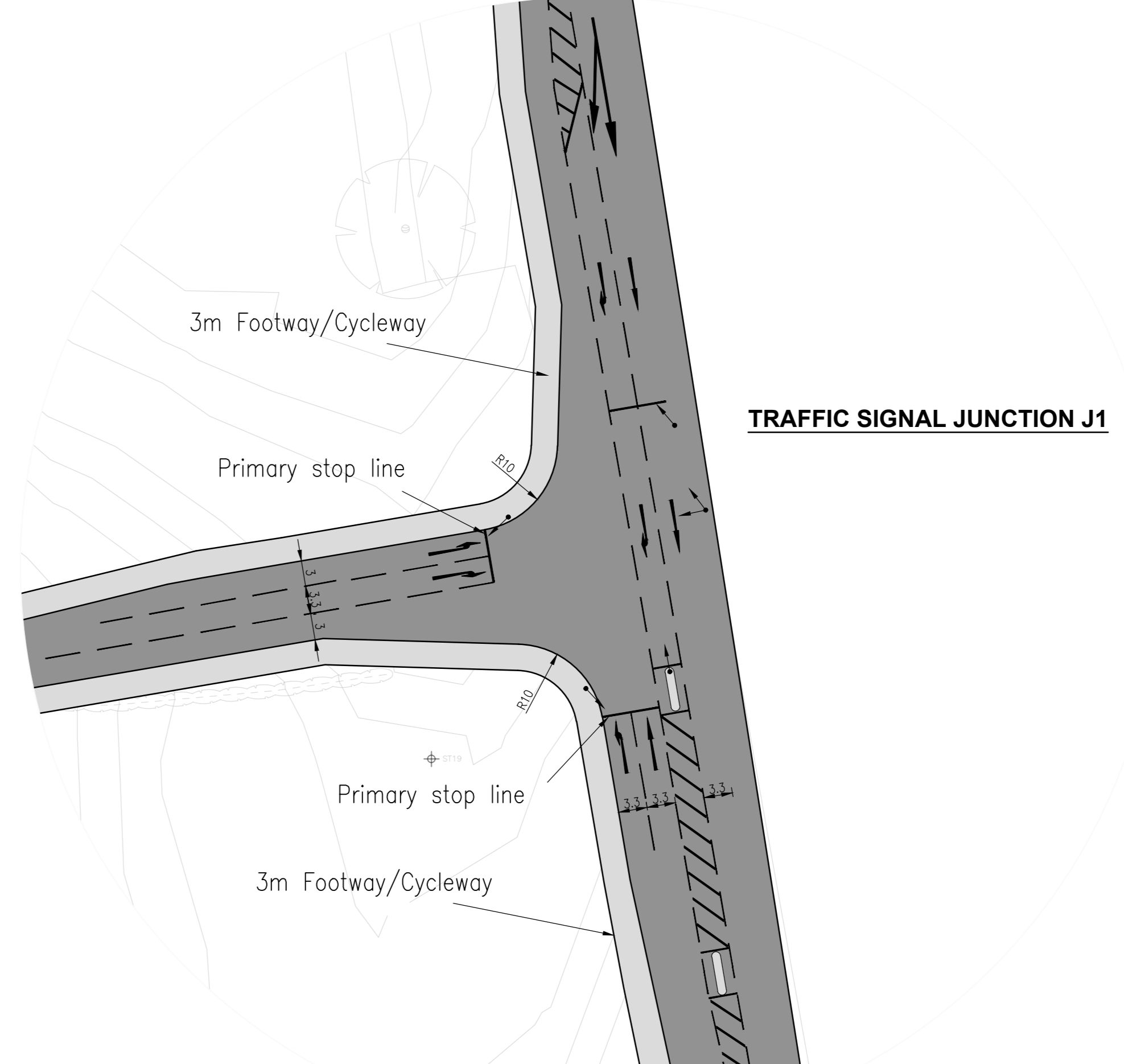
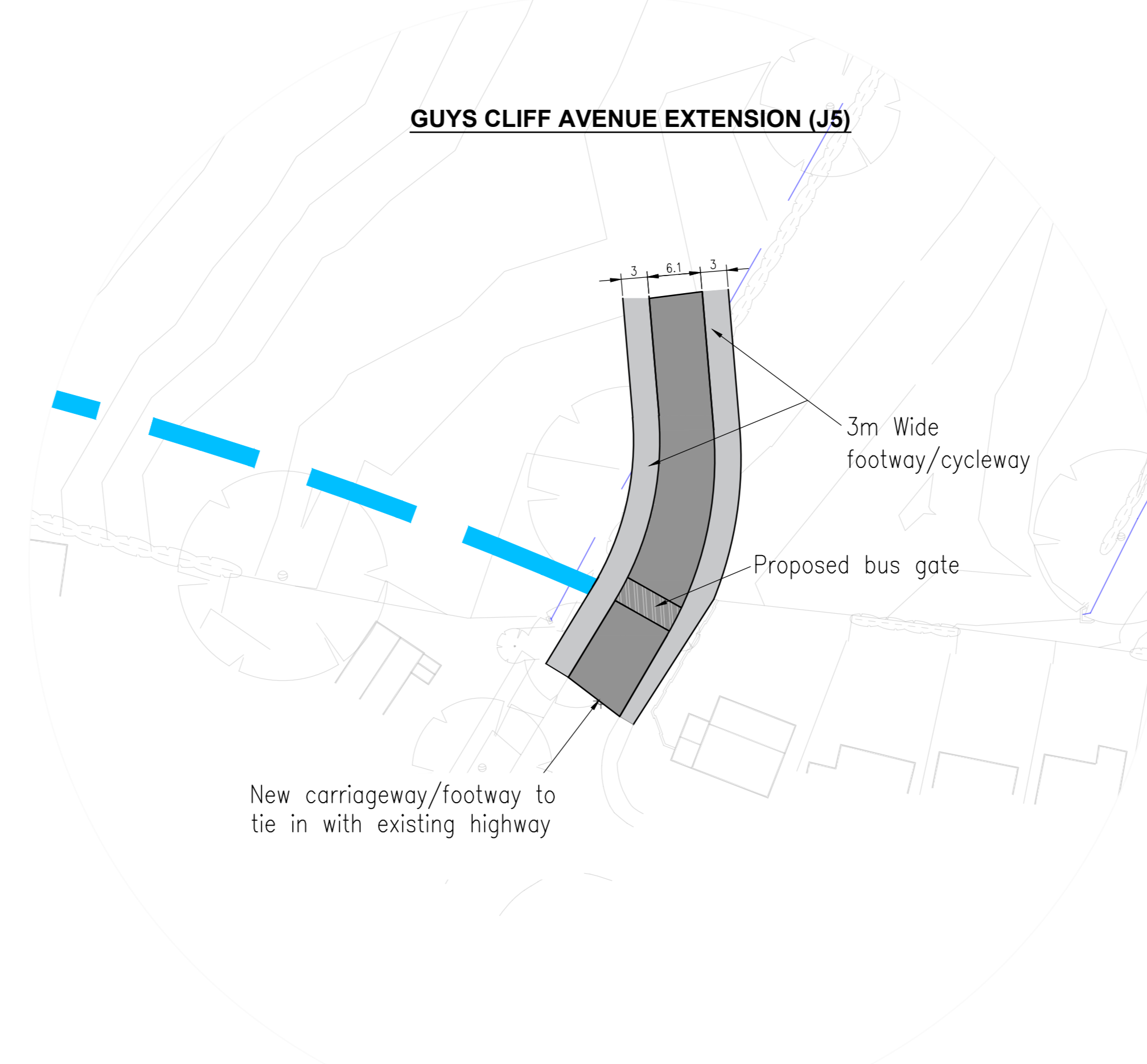
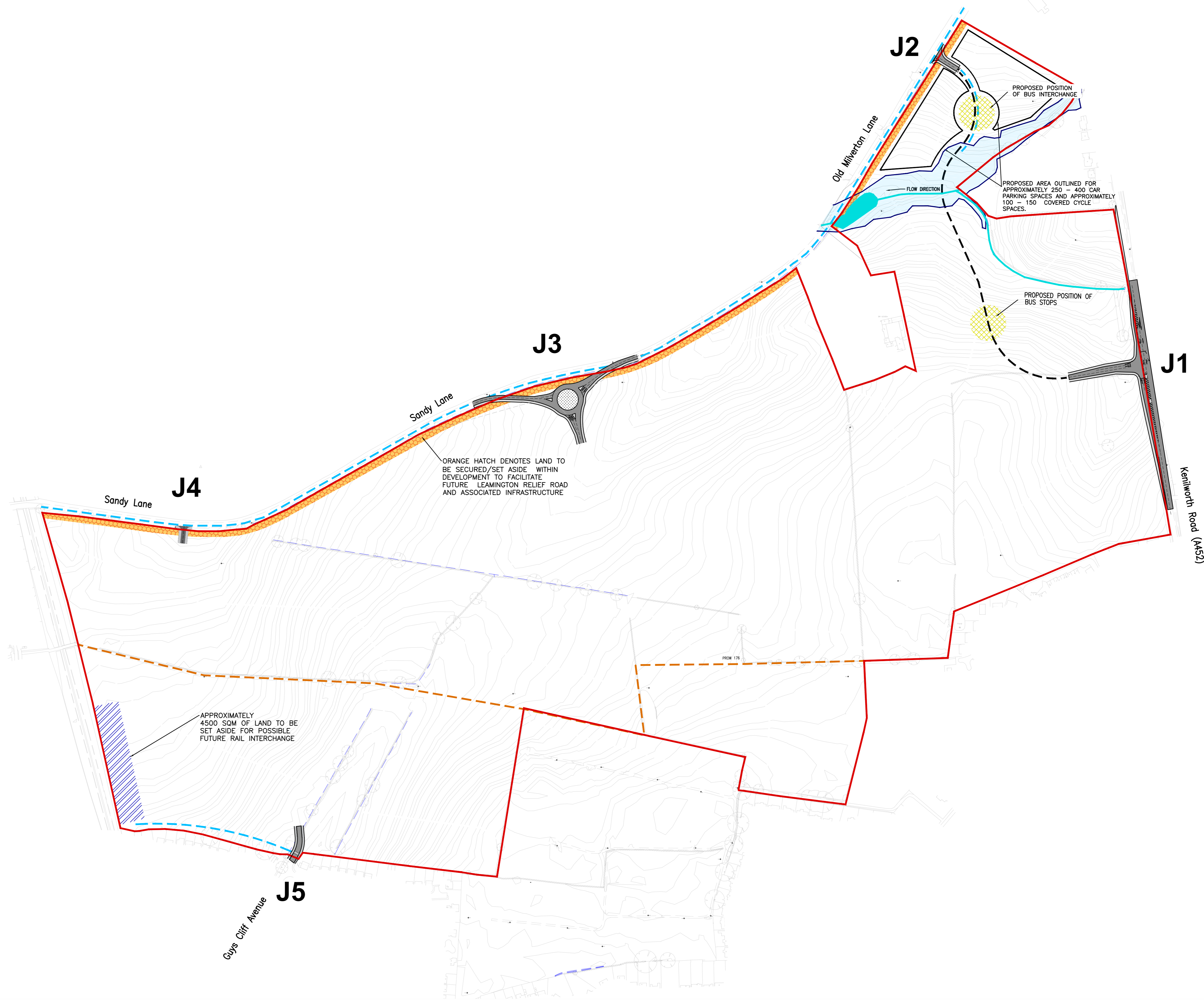
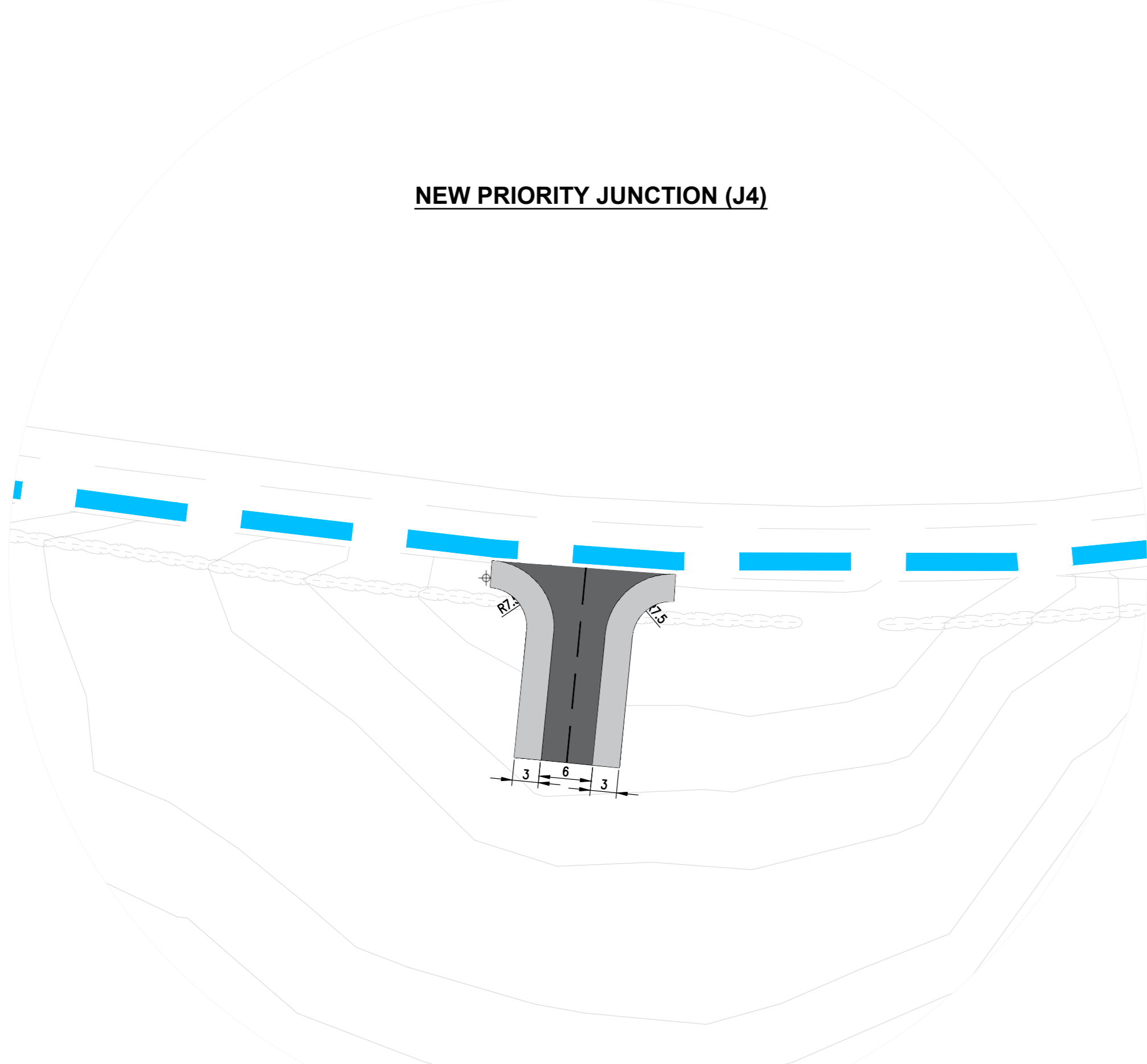
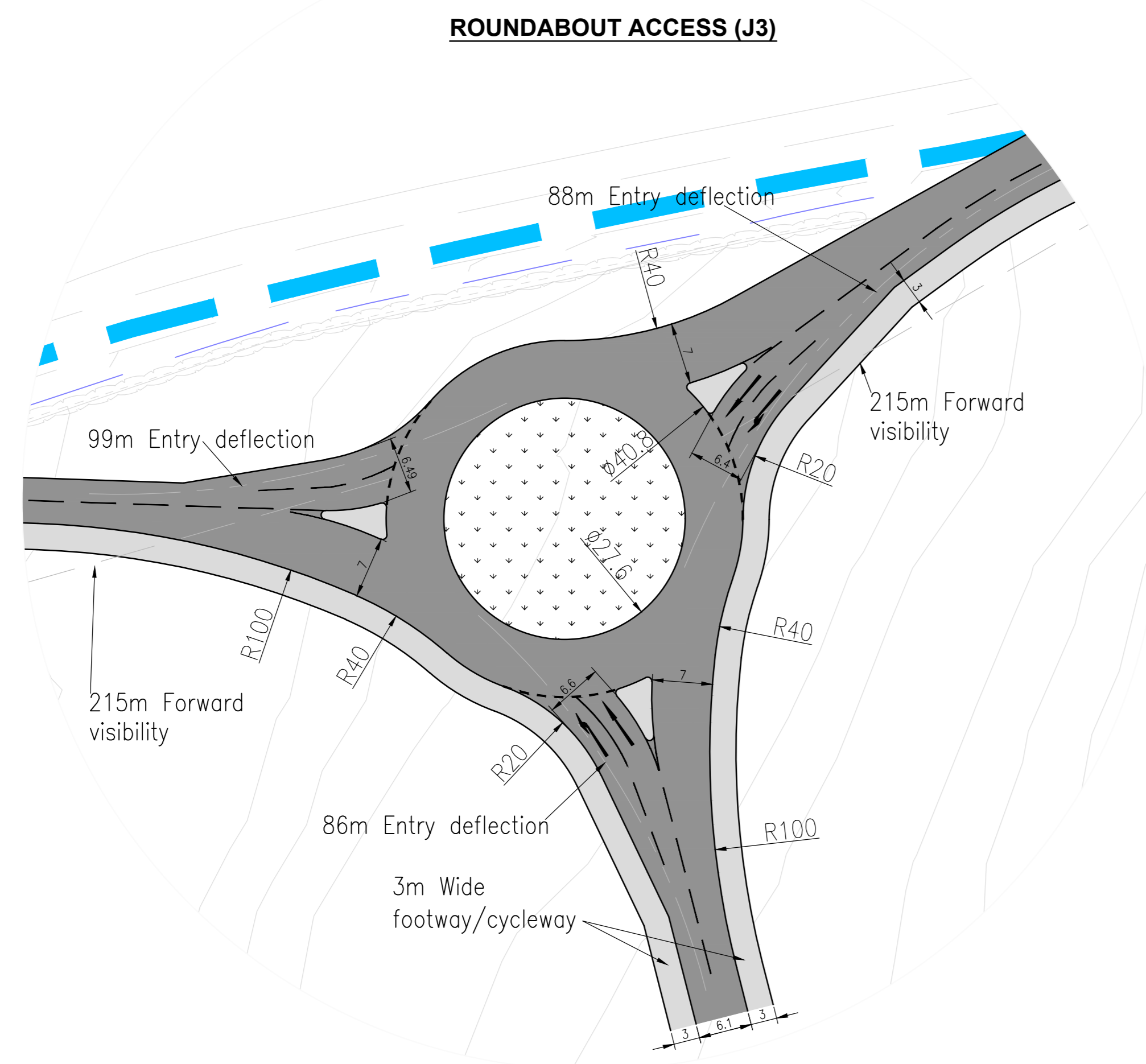
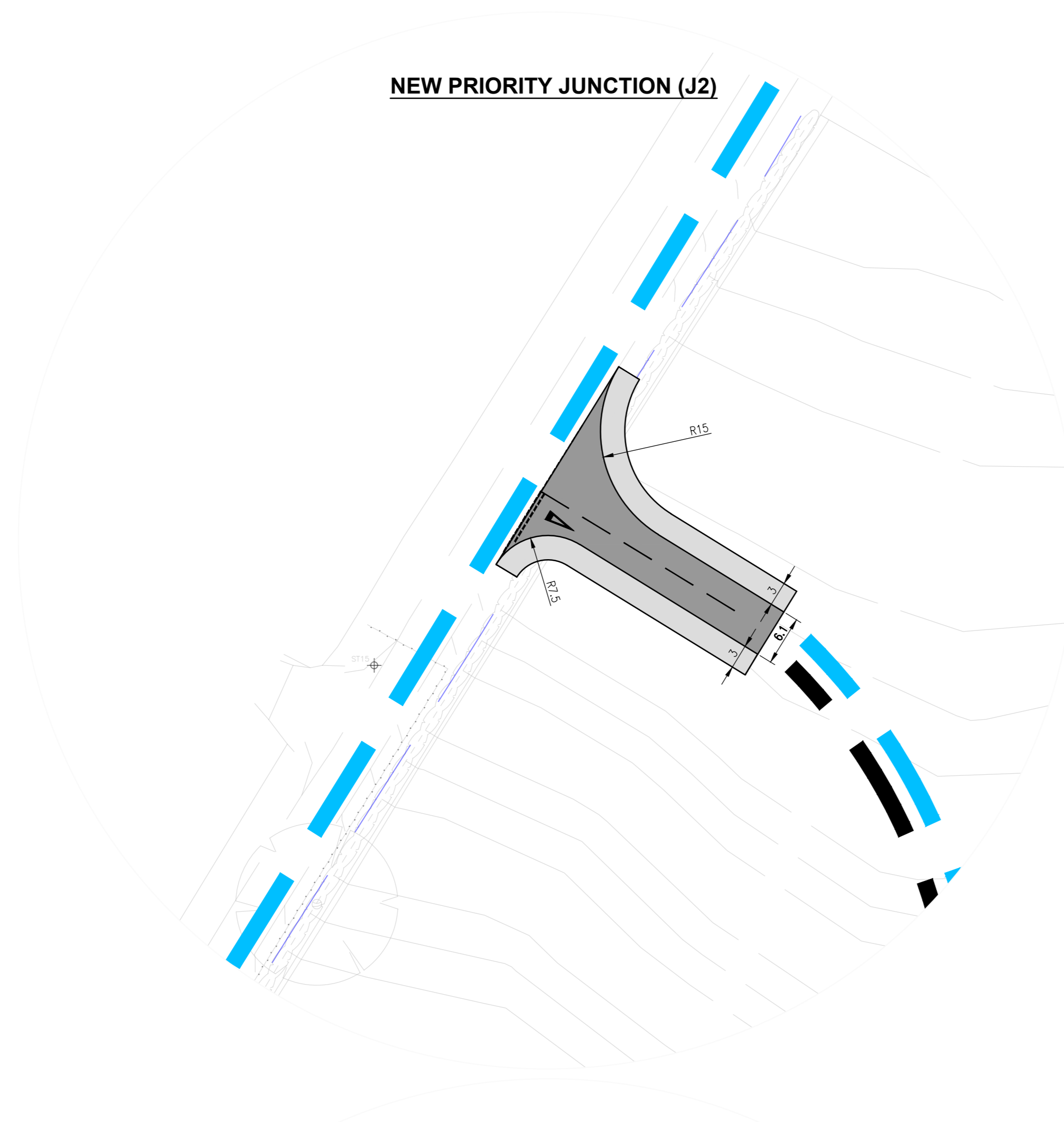


**GENERAL NOTES**

1. Do not scale this drawing, if in doubt, ask.
2. This drawing is to be read in conjunction with all relevant architect's, engineer's and specialist drawings and specifications.
3. This drawing is based on topographical survey by On Centre Surveys Ltd, all levels are in meters and related to Ordnance Survey benchmarks.
4. The development road layout is indicative and subject to detail design.
5. This drawing is not to be used for construction.

**KEY**

- Full development application boundary
- Bus priority route
- Indicative footway/cycleway alignment
- Water course
- PROW 176 route
- Highway carriageway constructed to local Highway Authority requirements
- Highway footway constructed to local Authority requirements
- Indicative line for land set aside for relief road corridor
- Approximate position of bus interchange



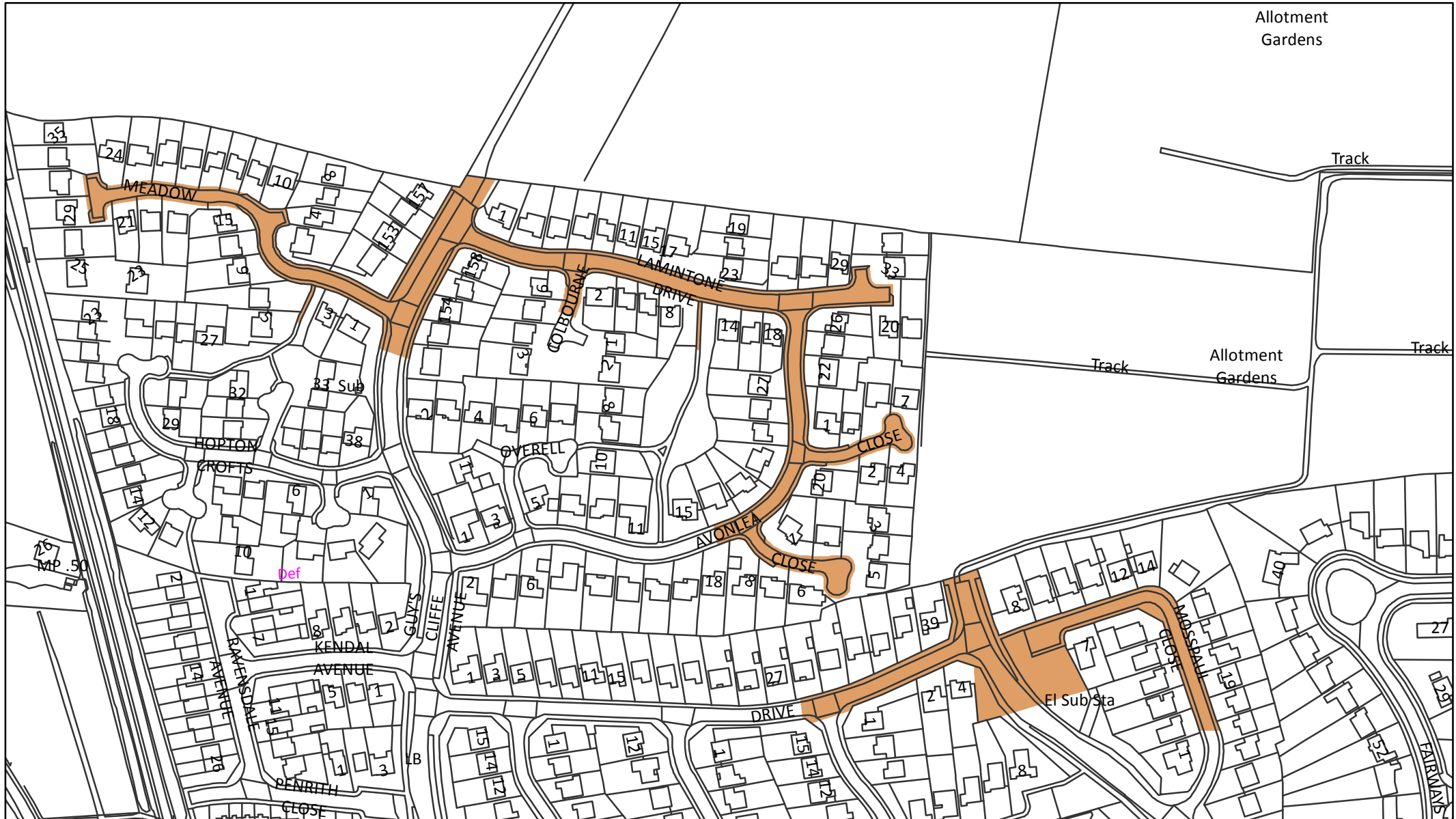
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DRAWING TITLE: DEVELOPMENT ACCESS ARRANGEMENTS PLAN				
CLIENT: TAYLOR WIMPEY UK LTD				
DRAWING NUMBER: 20172_08_010_001				
REVISION:	SHEET SIZE: A0	DATE: 21.04.16		
DRAWN BY: SP	CHECKED BY: AB	SCALE: 1:2500, 1:500		






## **APPENDIX C**

# Old Milverton, Leamington Spa



**Legend**

 Highway Maintainable at Public Expense

Whilst the County Council as highway authority believes the information to be correct it should be noted as a matter of highway law that only a Court can issue the definitive interpretation on matters of highway status and extent




Communities  
30 Sep 2015

# Old Milverton, Leamington Spa



## Legend

 Highway Maintainable at Public Expense

Whilst the County Council as highway authority believes the information to be correct it should be noted as a matter of highway law that only a Court can issue the definitive interpretation on matters of highway status and extent



Communities  
30 Sep 2015

# Old Milverton, Leamington Spa



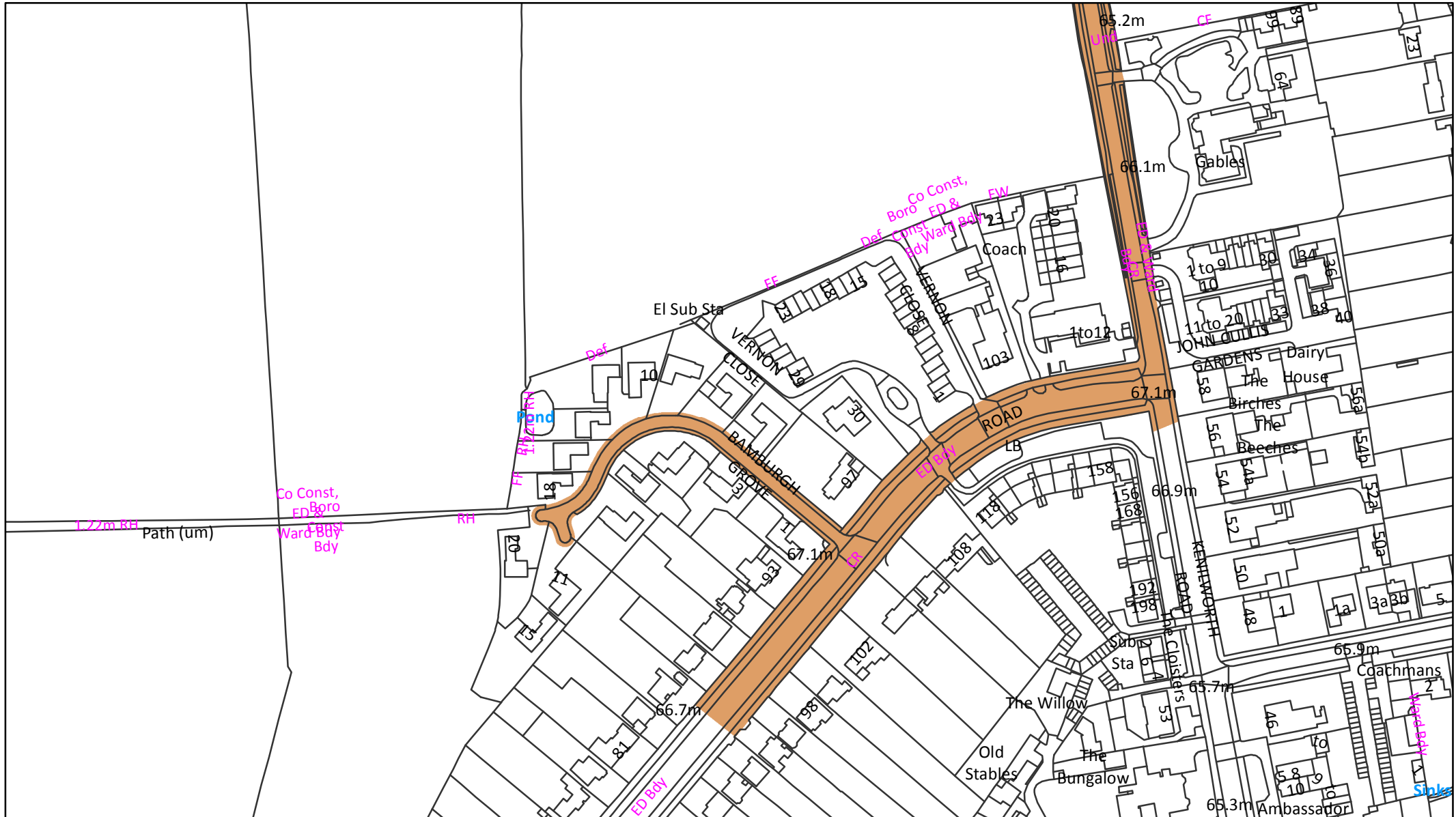
**Legend**  
Highway Maintainable at Public Expense



Communities  
30 Sep 2015

Whilst the County Council as highway authority believes the information to be correct it should be noted as a matter of highway law that only a Court can issue the definitive interpretation on matters of highway status and extent

# Old Milverton, Leamington Spa



**Legend**

 Highway Maintainable at Public Expense

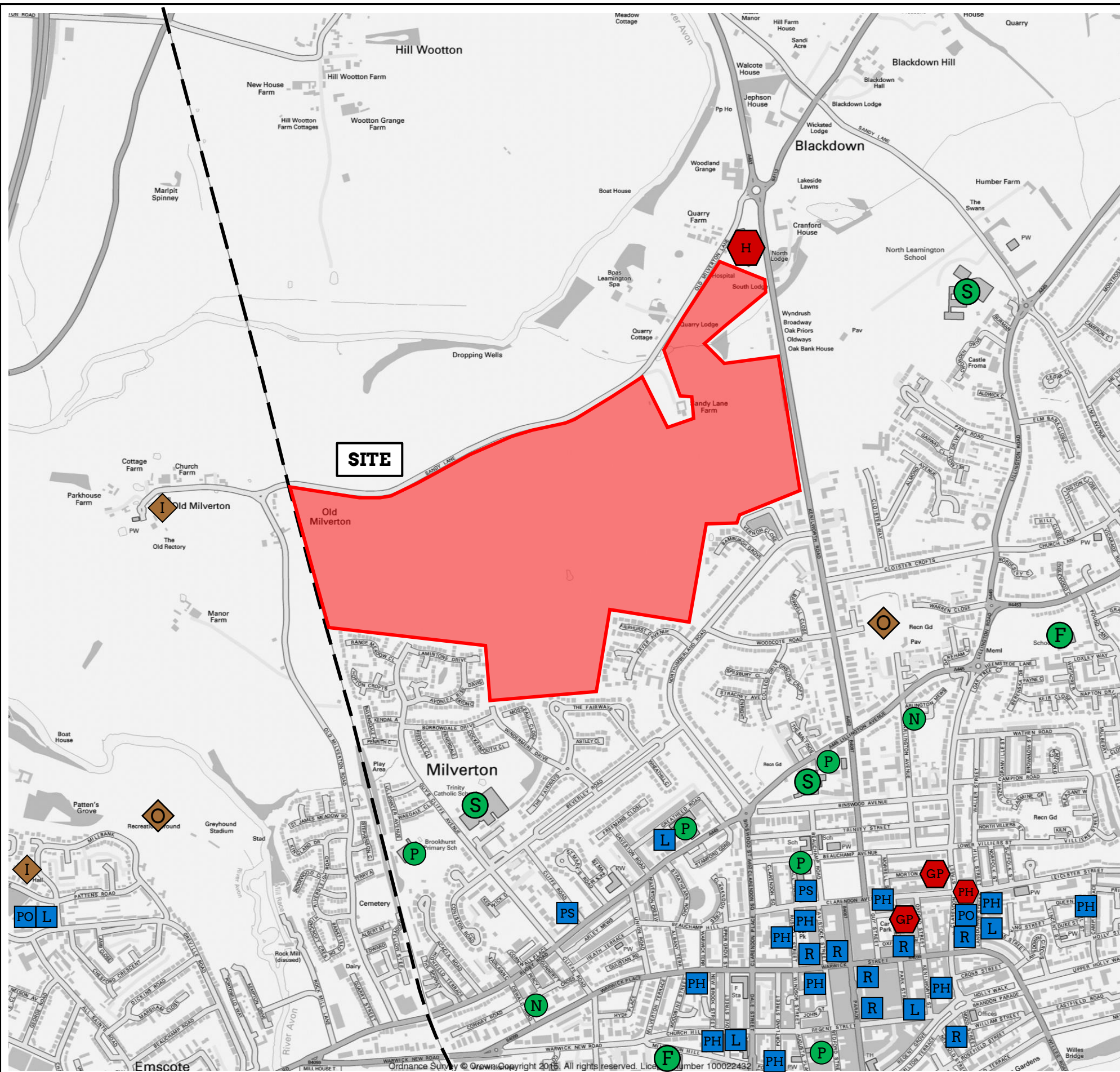
Whilst the County Council as highway authority believes the information to be correct it should be noted as a matter of highway law that only a Court can issue the definitive interpretation on matters of highway status and extent



Communities  
30 Sep 2015

**APPENDIX D**





**INDICATIVE SCALE:**  
NOT TO SCALE.

**NOTES:**  
1. DO NOT SCALE FROM THIS FIGURE.  
2. THIS FIGURE MAY INCLUDE DATA PROVIDED BY 3<sup>rd</sup> PARTIES NO LIABILITY IS ACCEPTED FOR THE ACCURACY OF SUCH DATA.

- |                     |                      |
|---------------------|----------------------|
| <b>LEISURE</b>      | <b>MISCELLANEOUS</b> |
| INDOOR VENUE        | RAILWAY LINE         |
| OUTDOOR VENUE       | <b>EDUCATION</b>     |
| <b>RETAIL</b>       | NURSERY              |
| LOCAL SHOP          | PRIMARY SCHOOL       |
| PUBLIC HOUSE        | SECONDARY SCHOOL     |
| POST OFFICE         | FURTHER EDUCATION    |
| PETROL STATION      |                      |
| RESTAURANT/TAKEAWAY |                      |
| <b>HEALTH</b>       |                      |
| PHARMACY            |                      |
| GENERAL PRACTICE    |                      |
| HOSPITAL            |                      |

REV	AMENDMENTS	DRN	CHK	DATE

PROJECT:  
**OLD MILVERTON,  
LEAMINGTON SPA**

DRAWING TITLE:  
**KEY LOCAL FACILITIES &  
PEDESTRIAN CATCHMENT PLAN**

CLIENT:  
**TAYLOR WIMPEY UK  
LTD**

DRAWING NUMBER:  
**20172\_08\_010\_01**

REVISION: -	DRAWN BY: JR	CHECKED BY: TR	DATE: 15/12/2015
----------------	-----------------	-------------------	---------------------

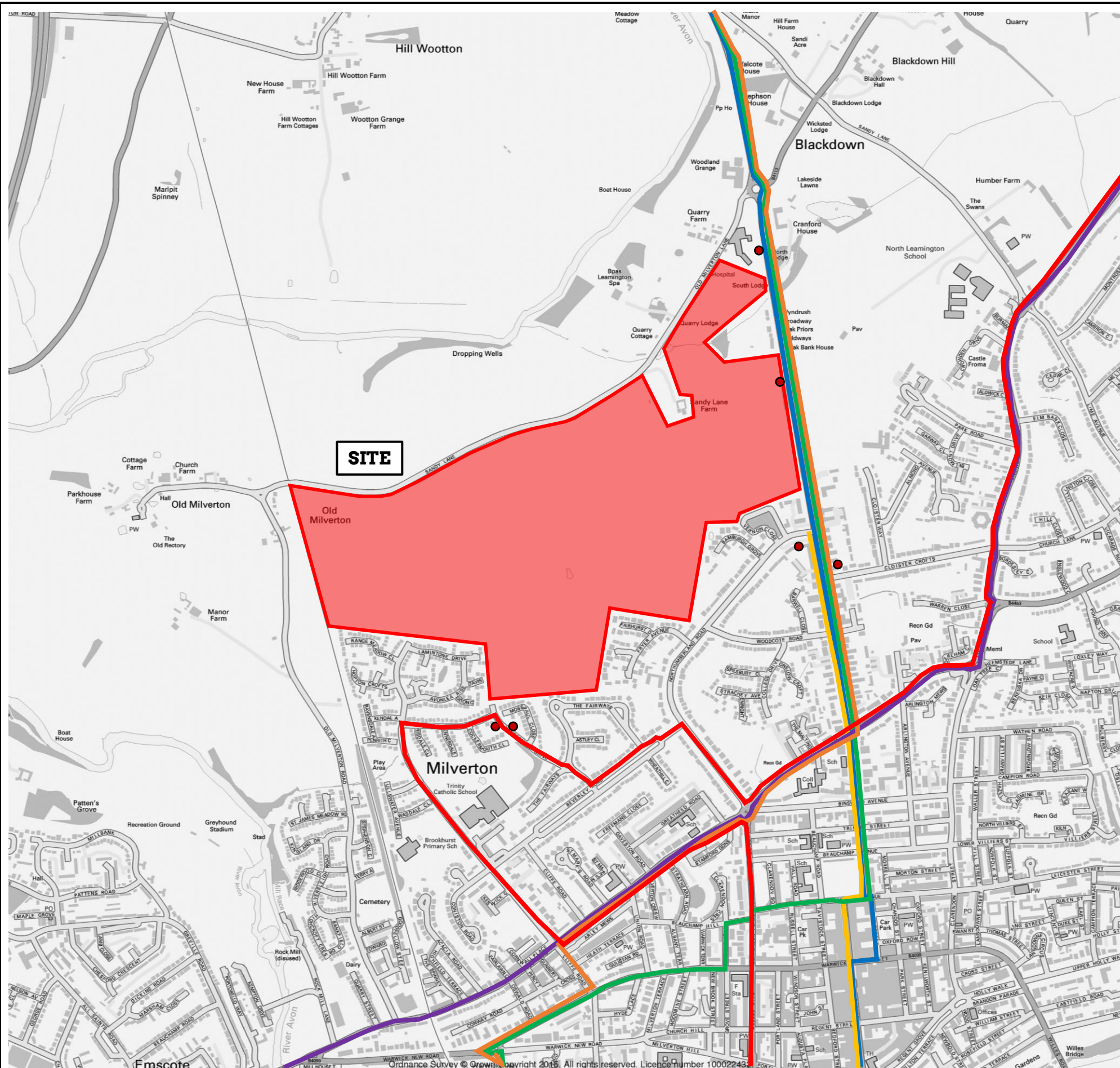
STATUS:  
**PRELIMINARY**

Wellington House, Leicester Road  
Ibstock, Leicestershire LE67 6HP  
T: 01530 264 753  
F: 01530 588 116  
[ibstock@m-ec.co.uk](mailto:ibstock@m-ec.co.uk)  
[www.m-ec.co.uk](http://www.m-ec.co.uk)

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**APPENDIX E**





**SCALE:**

NOT TO SCALE.



**NOTES:**

- DO NOT SCALE FROM THIS FIGURE.
- THIS FIGURE MAY INCLUDE DATA PROVIDED BY 3<sup>rd</sup> PARTIES NO LIABILITY IS ACCEPTED FOR THE ACCURACY OF SUCH DATA.

- 11, 11U, 12X SERVICE (NATIONAL EXPRESS)  
X17 SERVICE (STAGECOACH)  
X18 SERVICE (STAGECOACH)  
X77 SERVICE (STAGECOACH)  
(Mon-Fri/Sat/Sun)
- 16x SERVICE (STAGECOACH)  
(Mon-Sat)  
Limited Service
- X14 SERVICE (STAGECOACH)  
(Mon-Fri)  
Limited Service
- 582 SERVICE (MIKE DE COURCEY TRAVEL)  
1C SERVICE (STAGECOACH)  
(Mon-Fri)  
Limited Service
- 62 SERVICE (STAGECOACH)  
(Mon-Fri)  
Limited Service
- 69 SERVICE (FLEXI-BUS)  
(Mon-Sat)  
Approximately Every 1 Hour
- BUS STOPS WITH 400m OF SITE

REV	AMENDMENTS	DRN	CHK	DATE
-----	------------	-----	-----	------

PROJECT:  
**OLD MILVERTON,  
LEAMINGTON SPA**

DRAWING TITLE:  
**LOCAL PUBLIC TRANSPORT  
ACCESSIBILITY PLAN**

CLIENT:  
**TAYLOR WIMPEY UK  
LTD**

DRAWING NUMBER:  
**20172\_08\_010\_02**

REVISION: -	DRAWN BY: JR	CHECKED BY: TR	DATE: 15/12/2015
----------------	-----------------	-------------------	---------------------

STATUS:  
**PRELIMINARY**

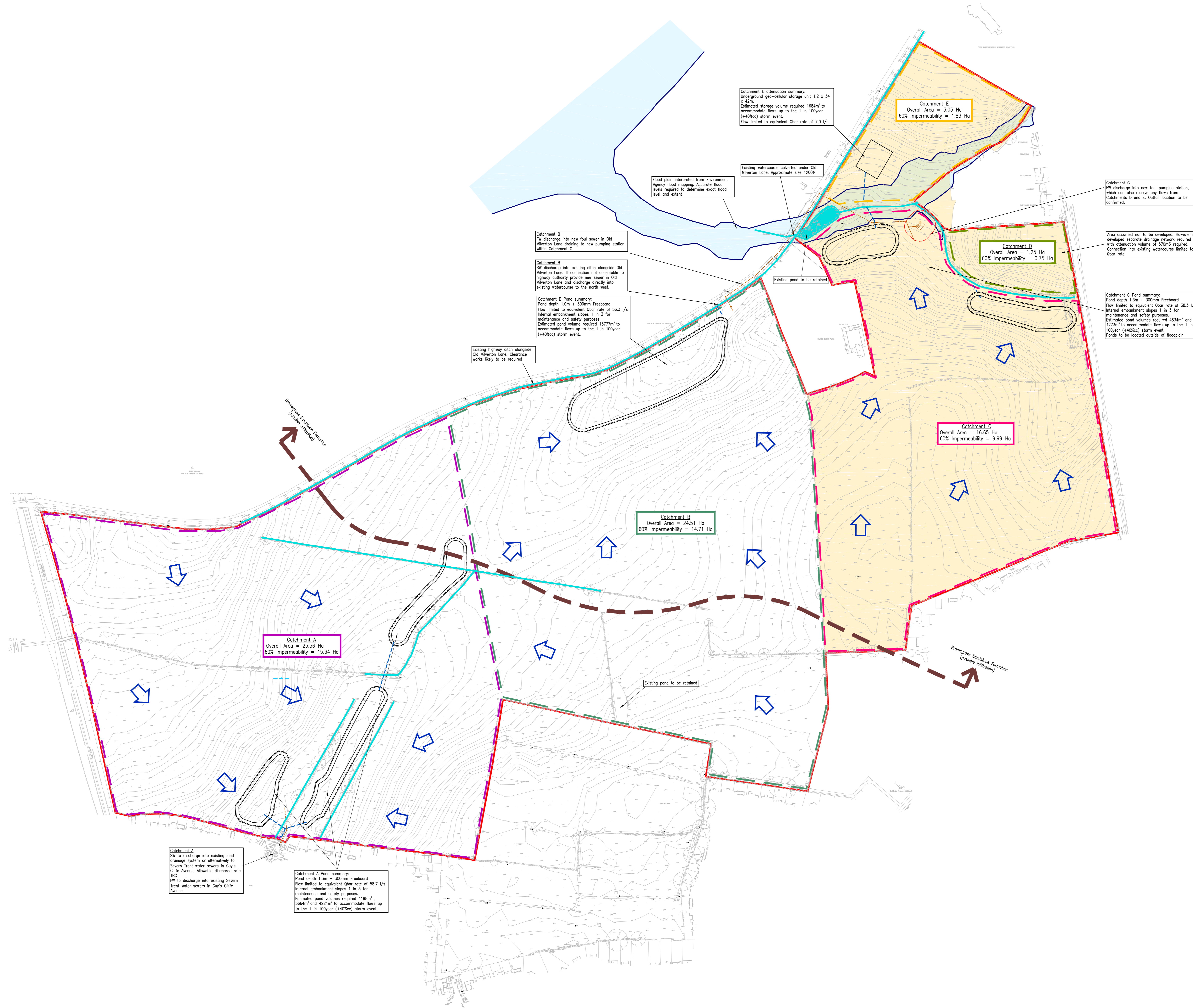
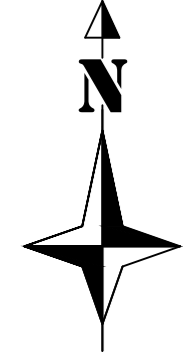


Wellington House, Leicester Road  
Ibstock, Leicestershire LE67 6HP  
T: 01530 264 753  
F: 01530 588 116  
[ibstock@m-ec.co.uk](mailto:ibstock@m-ec.co.uk)  
[www.m-ec.co.uk](http://www.m-ec.co.uk)

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**APPENDIX F**





**General Notes**

- Do not scale this drawing. If in doubt, ask.
- This drawing is to be read in conjunction with all other relevant Engineers, Architects and specialist drawings and details.
- All dimensions are in metres unless noted otherwise. All levels are in metres unless noted otherwise.

**Key**

- EA Flood Plain (subject to hydraulic modeling of watercourse to determine extent)
- Catchment A
- Catchment B
- Catchment C
- Catchment D
- Catchment E
- Draft Allocation Area
- Full development application boundary
- Existing watercourse and ditches
- Drainage direction
- Proposed balancing pond and banking (max 1 in 3). Pond areas are likely to be reduced once development areas are refined.
- Approximate line of geology change across the site

REV	AMENDMENTS	DRN	CHK	DATE
PROJECT: OLD MILVERTON LEAMINGTON SPA WARWICKSHIRE				
DRAWING TITLE: DRAINAGE STRATEGY				
CLIENT: TAYLOR WIMPLEY UK LTD				
DRAWING NUMBER: 20172_01_230_001				
REVISION:	SHEET SIZE: A0	SCALE: 1:2000		
DRAWN BY: WW	CHECKED BY: AB	DATE: 18.04.16		
STATUS: PRELIMINARY				
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**APPENDIX G**



# Maps by email Plant Information Reply



## IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy.

It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

## 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](mailto:dbyd@openreach.co.uk)

Website: [www.dialbeforeyoudig.com](http://www.dialbeforeyoudig.com)

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## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	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.

**openreach**

BT GROUP BUSINESS



BT Ref : FGM11133I

Map Reference : (centre) SP3111267247

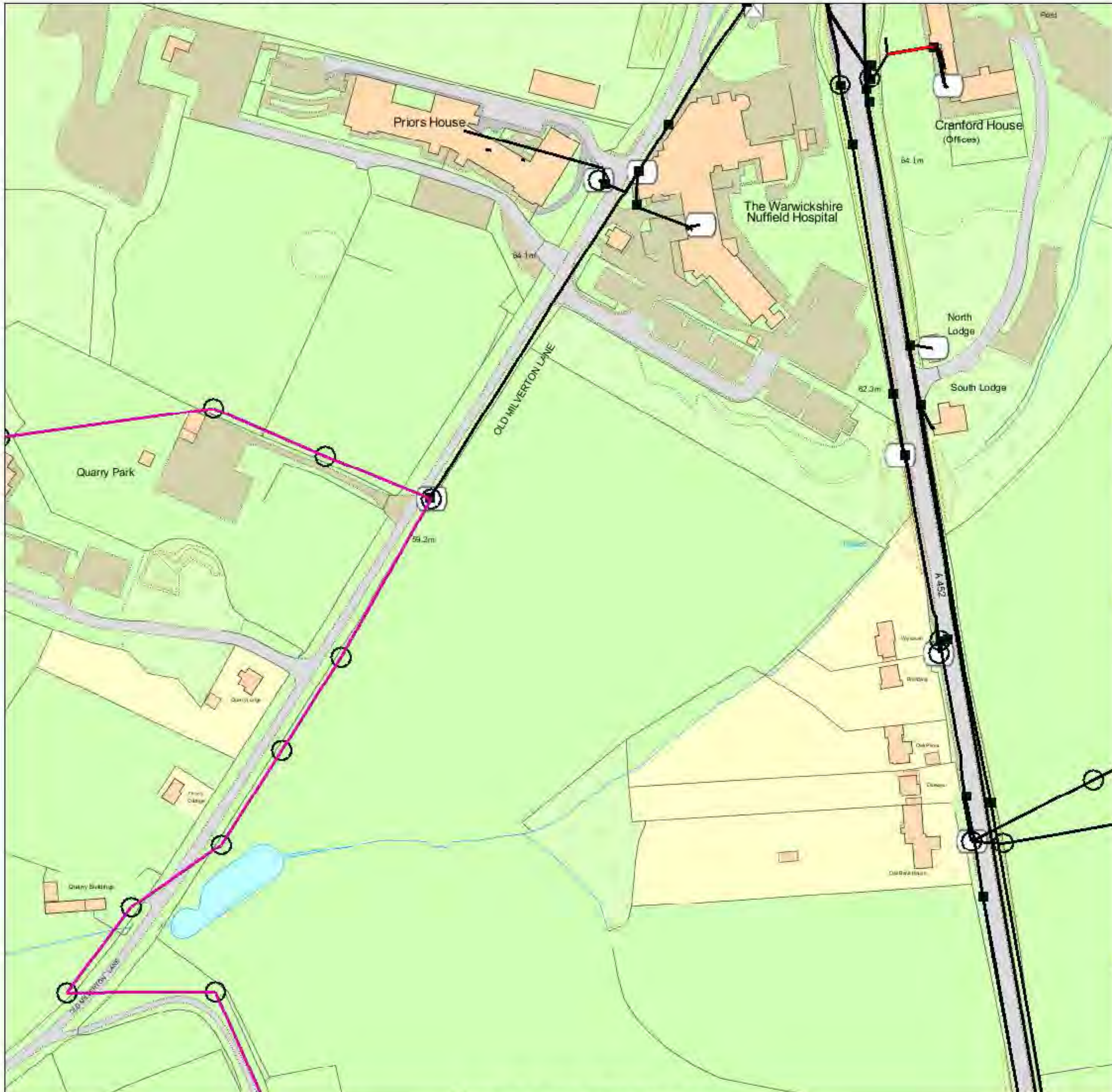
Easting/Northing : (centre) 431112,267247

Issued : 13/04/2016 11:14:09

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# Maps by email Plant Information Reply



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## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	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.

**openreach**  
a BT Group business



BT Ref : FIO11133Q

Map Reference : (centre) SP3136968029

Easting/Northing : (centre) 431369,268029

Issued : 13/04/2016 11:13:25

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# Maps by email Plant Information Reply



## IMPORTANT WARNING

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## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	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.

**openreach**

BT GROUP BUSINESS



BT Ref : KKA11132J

Map Reference : (centre) SP3151967668

Easting/Northing : (centre) 431519,267668

Issued : 13/04/2016 11:13:39

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# Maps by email Plant Information Reply



## IMPORTANT WARNING

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## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	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.

**openreach**  
a BT Group business

BT Ref : LBL11143K

Map Reference : (centre) SP3122467736

Easting/Northing : (centre) 431224,267736

Issued : 13/04/2016 11:15:03

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# Maps by email Plant Information Reply



## IMPORTANT WARNING

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## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	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.

**openreach**

a BT Group business



BT Ref : NYM11146X

Map Reference : (centre) SP3044567158

Easting/Northing : (centre) 430445,267158

Issued : 13/04/2016 11:14:28

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# Maps by email Plant Information Reply



## IMPORTANT WARNING

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

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## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	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.

**openreach**  
a BT GROUP BUSINESS

BT Ref : ORP11142P

Map Reference : (centre) SP3080067573

Easting/Northing : (centre) 430800,267573

Issued : 13/04/2016 11:14:51

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## IMPORTANT WARNING

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## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	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.

**openreach**

a BT Group business



BT Ref : TUV11145Z

Map Reference : (centre) SP3033867400

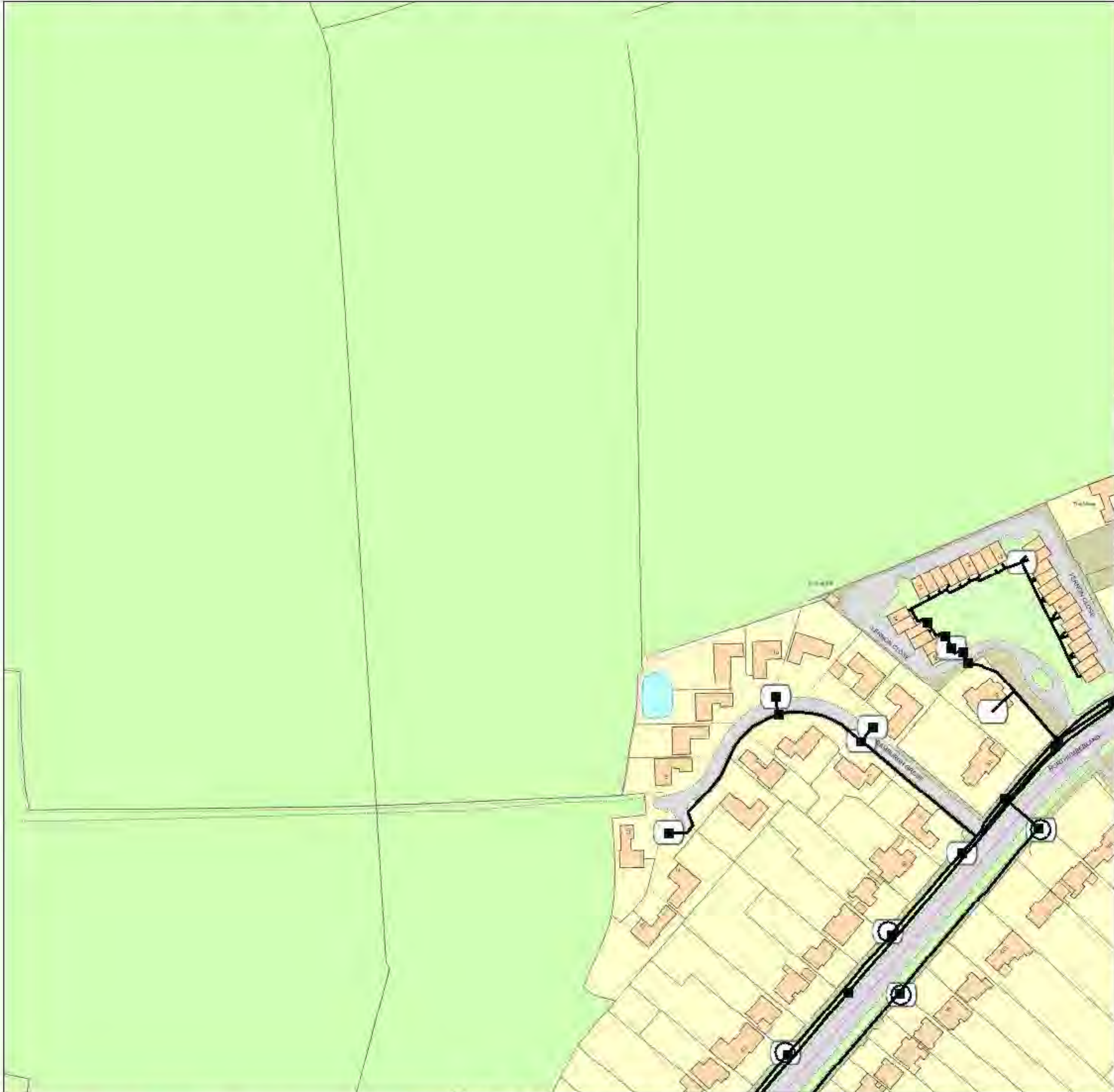
Easting/Northing : (centre) 430338,267400

Issued : 13/04/2016 11:14:45

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## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	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.

**openreach**  
BT GROUP BUSINESS

BT Ref : UBG11138G

Map Reference : (centre) SP3131067402

Easting/Northing : (centre) 431310,267402

Issued : 13/04/2016 11:13:54

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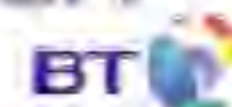
## KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	OTHER BT BOUNDARY		PROPOSED BOX

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**openreach**

BT Group business



BT Ref : UFI11143A

Map Reference : (centre) SP3074867292

Easting/Northing : (centre) 430748,267292

Issued : 13/04/2016 11:14:12

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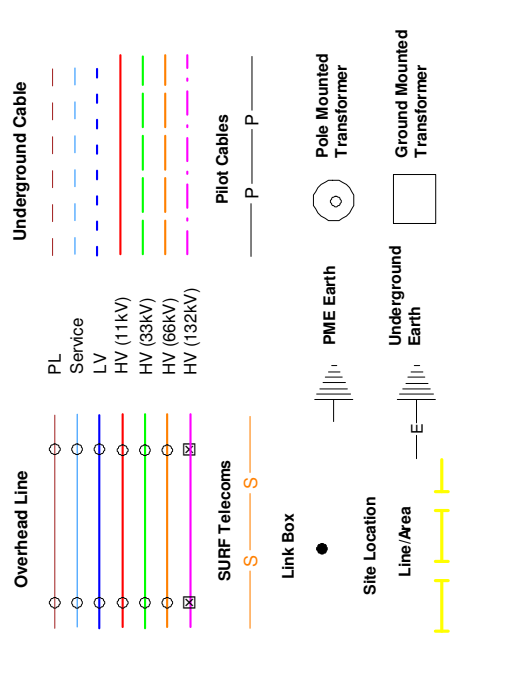


**Contact Us**  
**Mapping Enquiries:** 0121 623 9780 All areas 0800 096 3080  
**General Enquiries:** 0800 096 3080  
**Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA**  
**0800 6783 105**

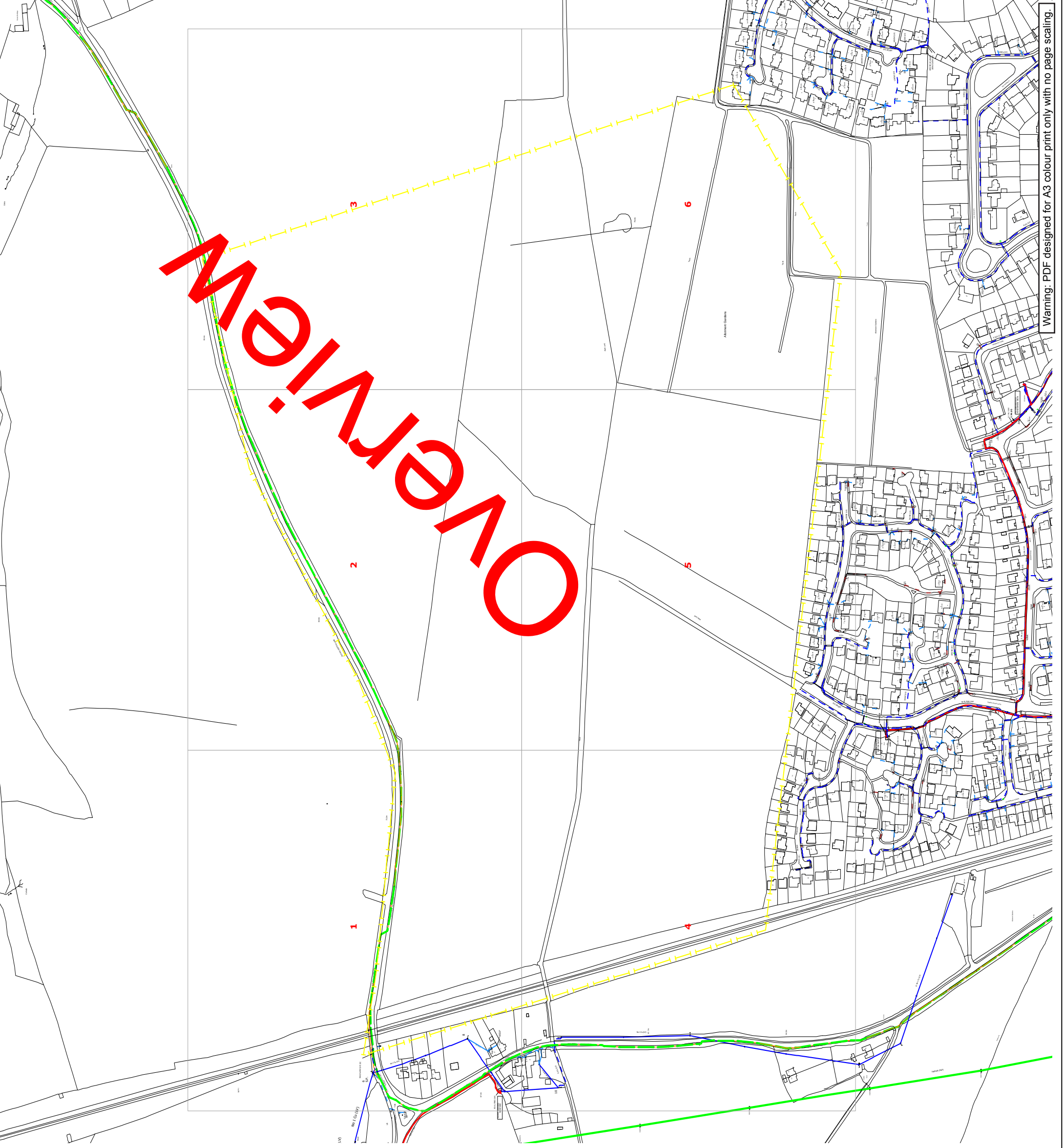
Date Requested: 13/04/2016  
 Job Reference: 8328571  
 Site Location: 430596 267327  
 Requested by: Miss Victoria Jarvis  
 Your Scheme/Reference: 20172

**IMPORTANT NOTICES**

- This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.
- Cables, overhead lines & substations owned by other electricity network owners or private companies may be present but will not be shown.
- You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080



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Warning: PDF designed for A3 colour print only with no page scaling.

**Contact Us**

**Mapping Enquiries:**  
All areas 0121 623 9780

**General Enquiries:**  
All areas 0800 096 3080

**Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA**  
**0800 6783 105**

Date Requested: 13/04/2016

Job Reference: 8328571

Site Location: 430596 267327

Requested by: Miss Victoria Jarvis

Your Scheme/Reference: 20172

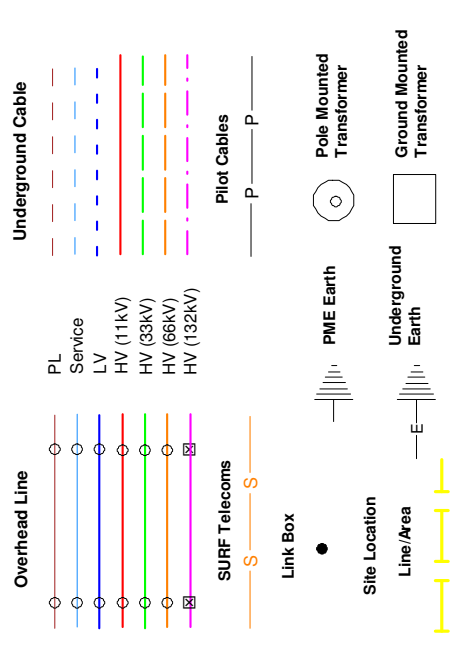
Exact Scales:

1:1250 Area or Circle dig site

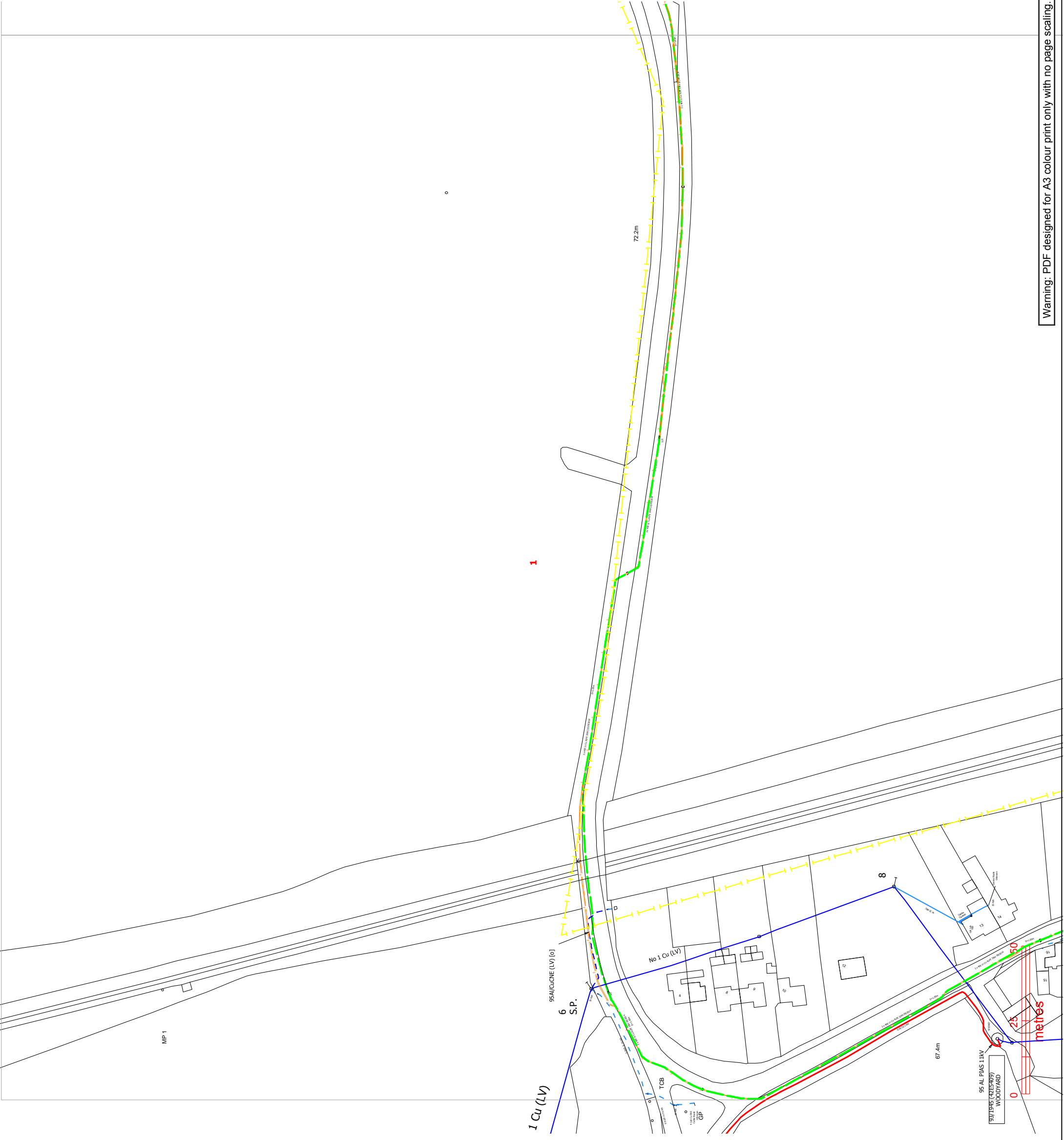
1:500 Line dig site

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- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080



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**General Enquiries:**  
All areas 0800 096 3080

**Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA**  
**0800 6783 105**

Date Requested: 13/04/2016

Job Reference: 8328571

Site Location: 430596 267327

Requested by: Miss Victoria Jarvis

Your Scheme/Reference: 20172

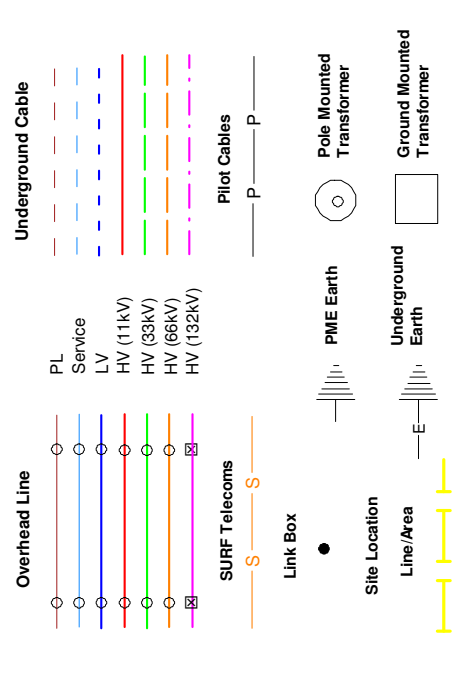
Exact Scales:

1:1250 Area or Circle dig site

1:500 Line dig site

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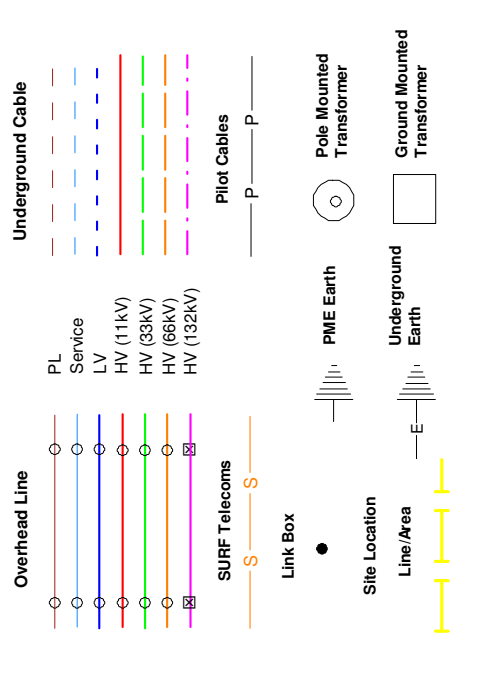
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1:1250 Area or Circle dig site

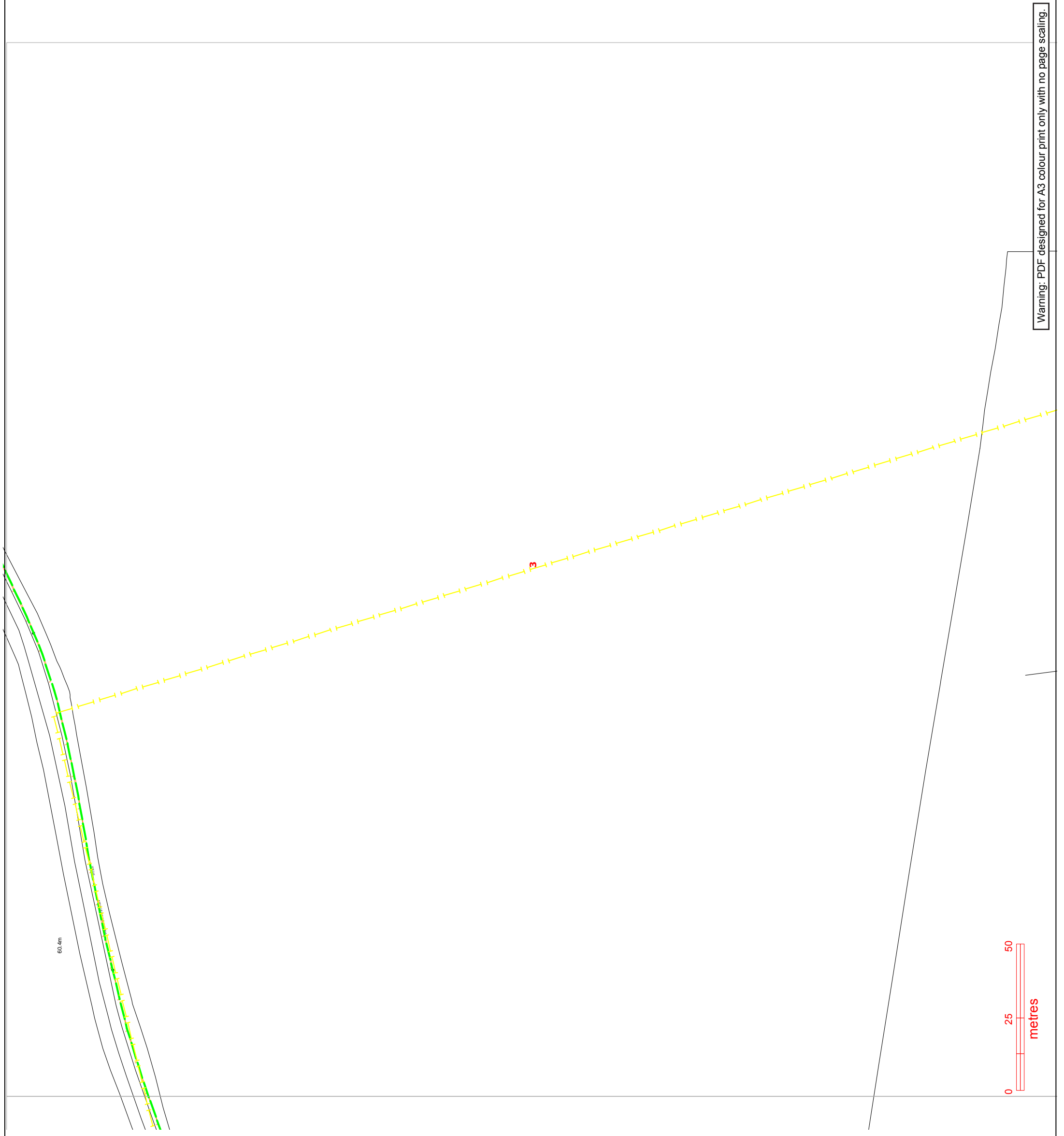
1:500 Line dig site

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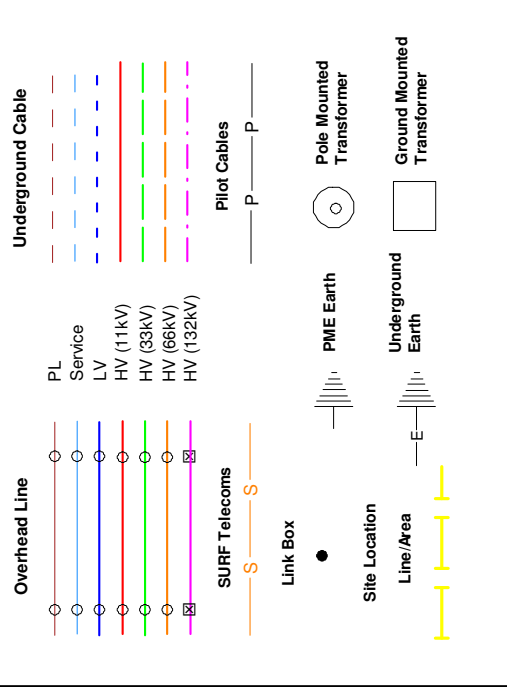
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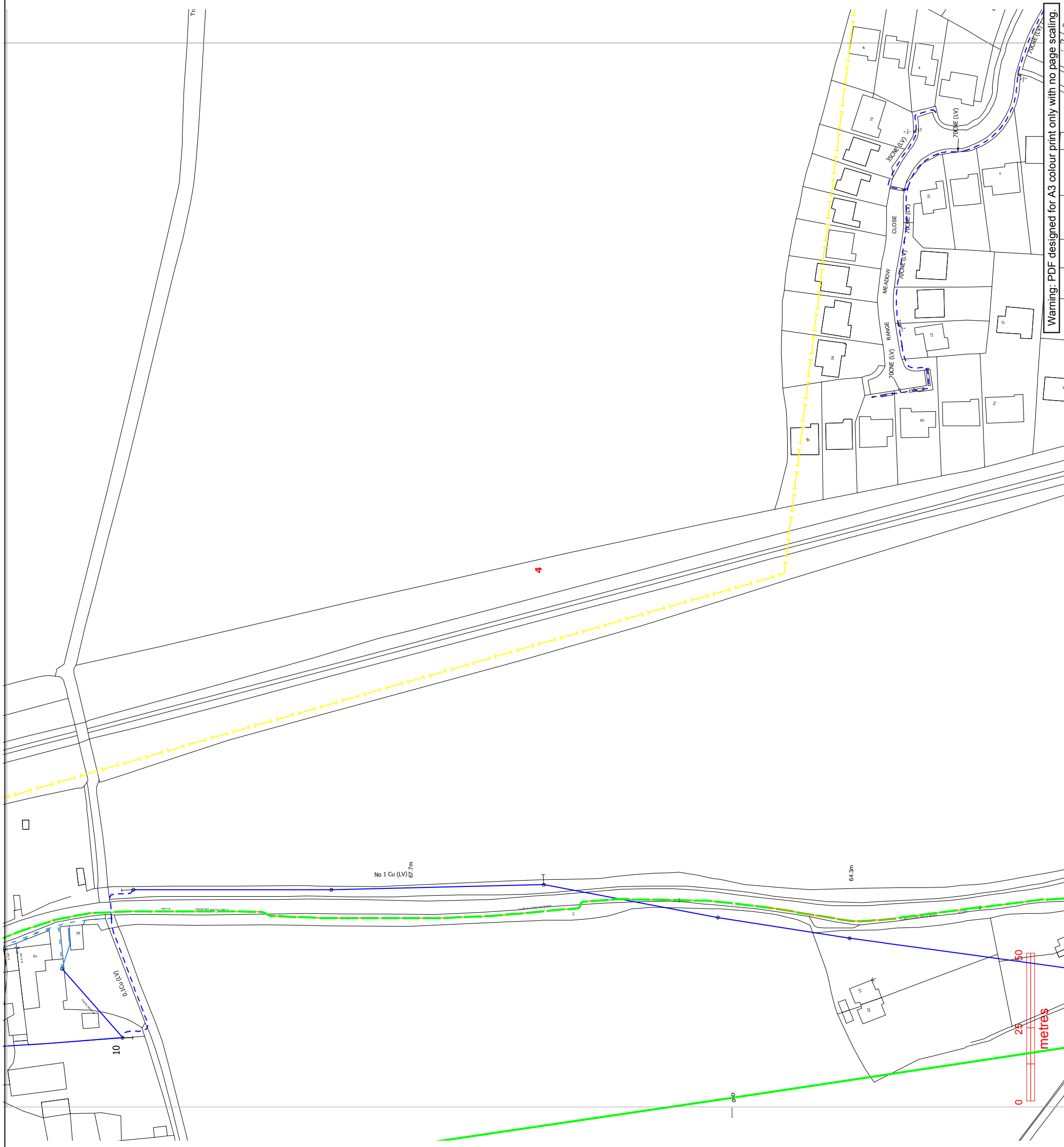
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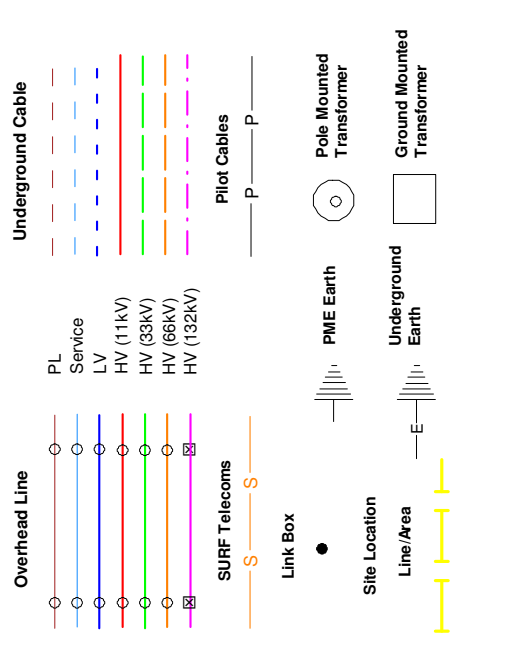
Exact Scales:

1:1250 Area or Circle dig site

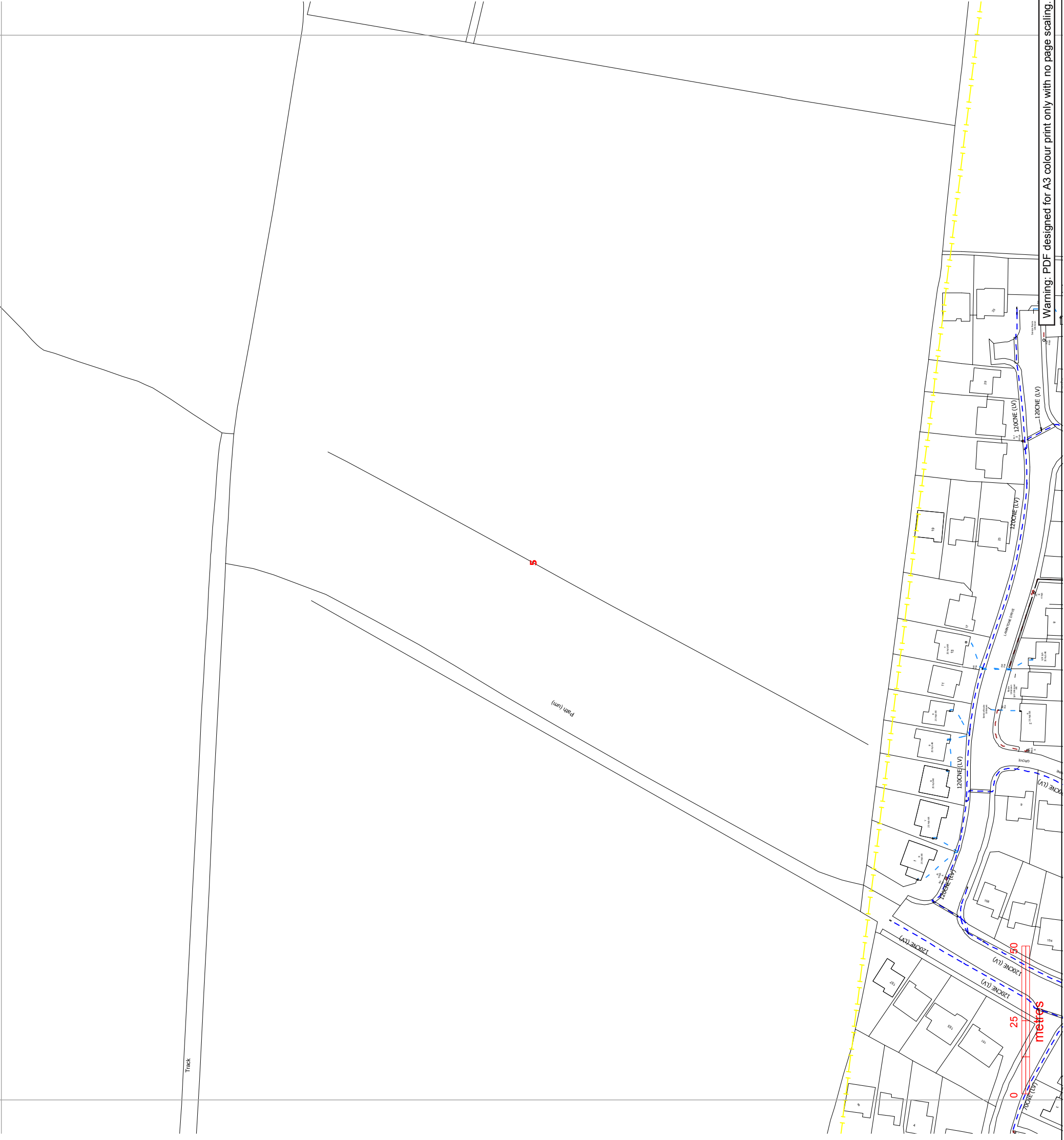
1:500 Line dig site

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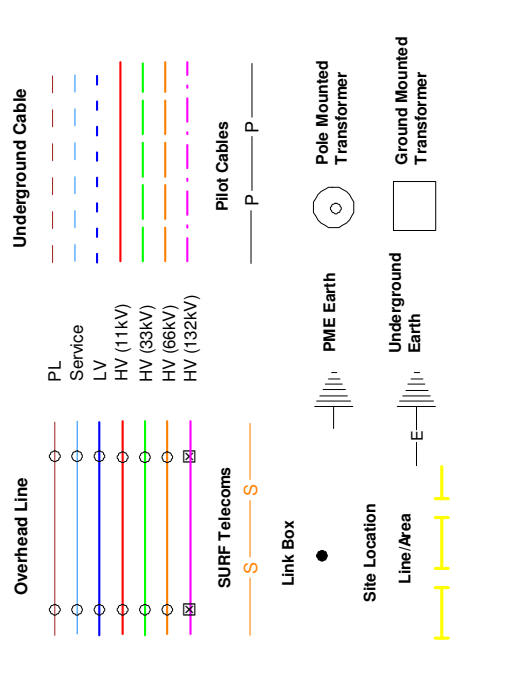
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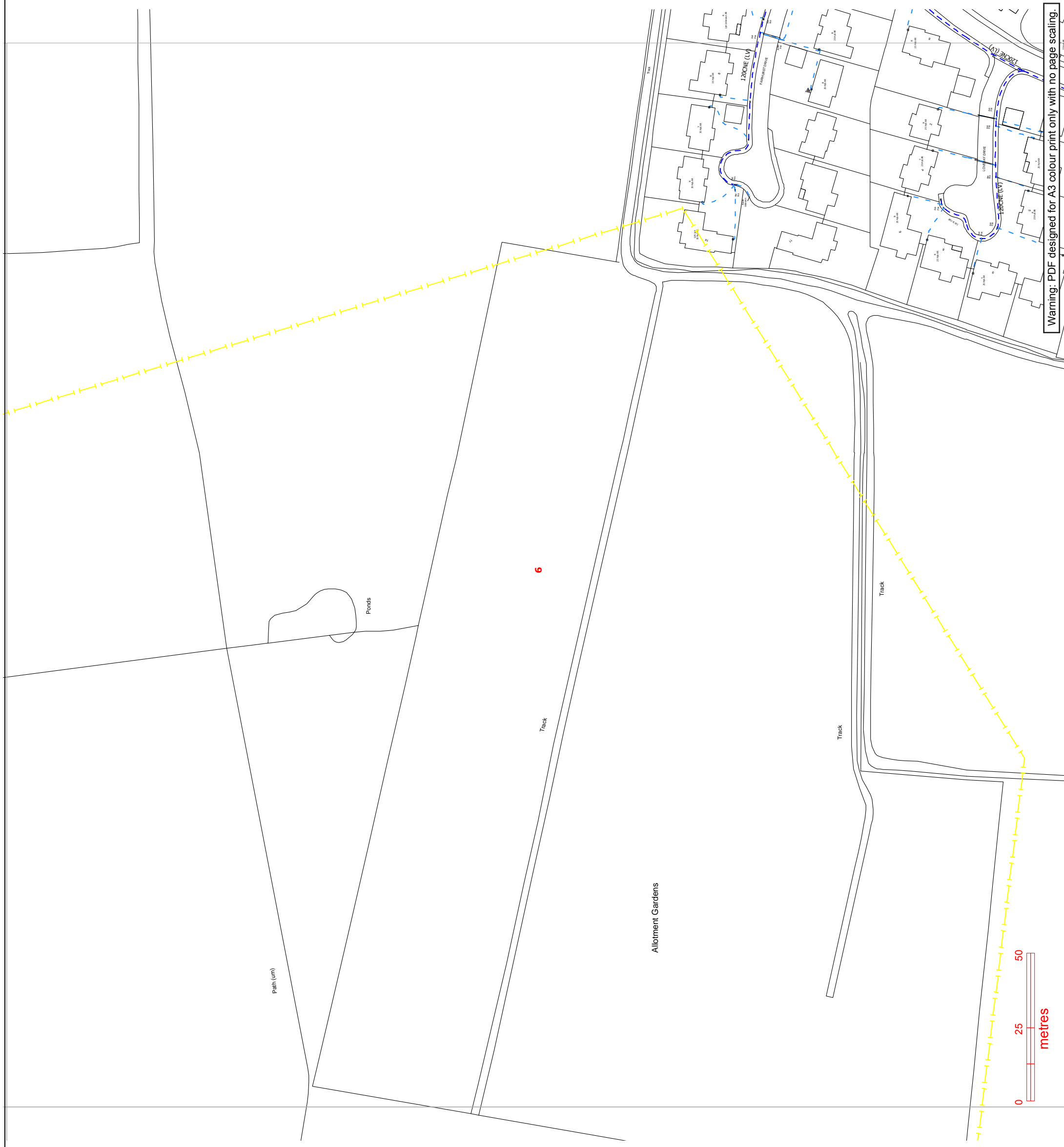
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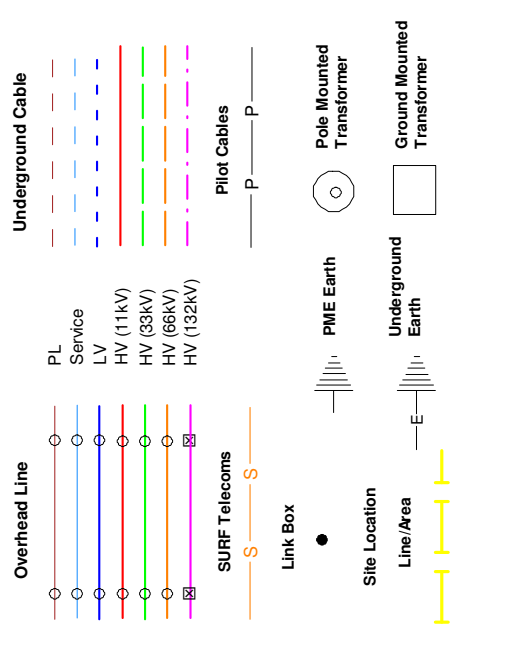


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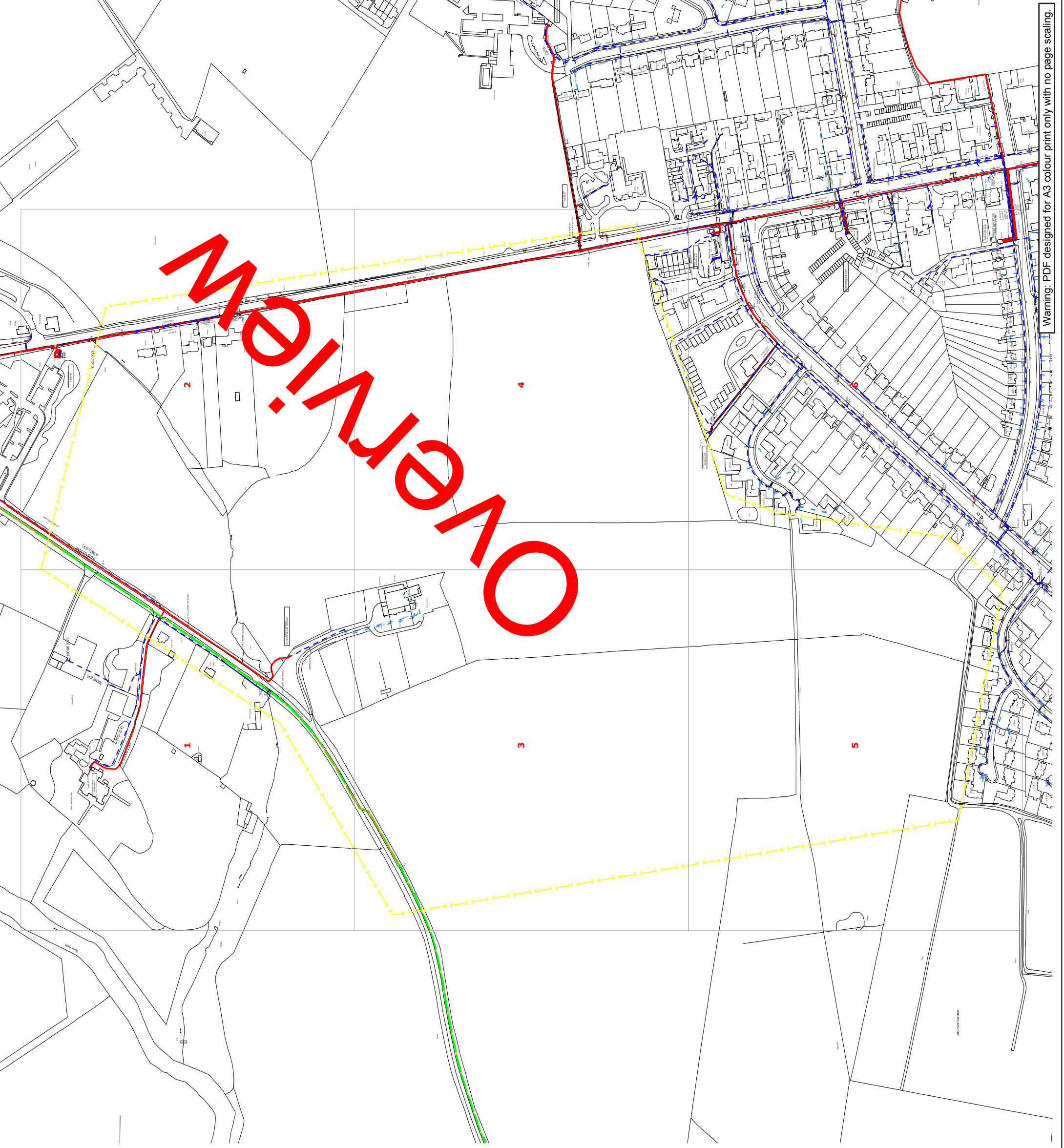
Date Requested: 13/04/2016  
 Job Reference: 8328559  
 Site Location: 431297 267579  
 Requested by: Miss Victoria Jarvis  
 Your Scheme/Reference: 20172

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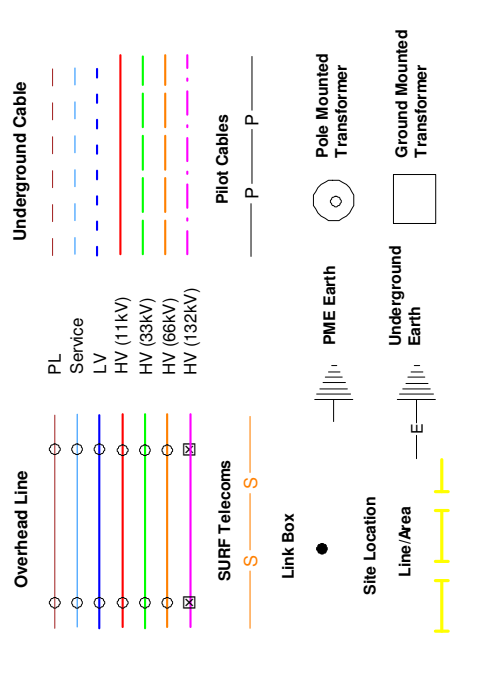


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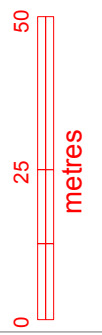
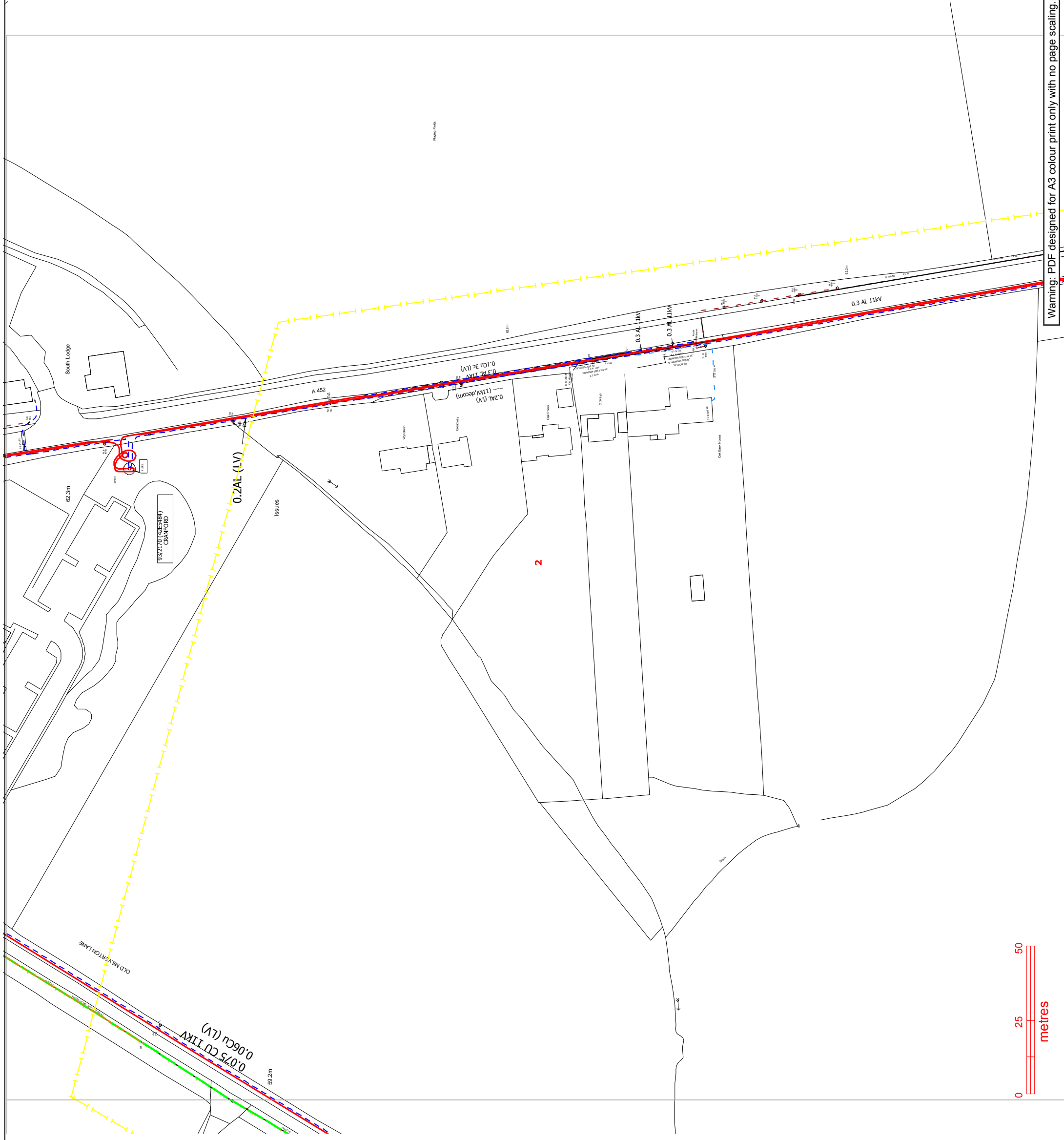
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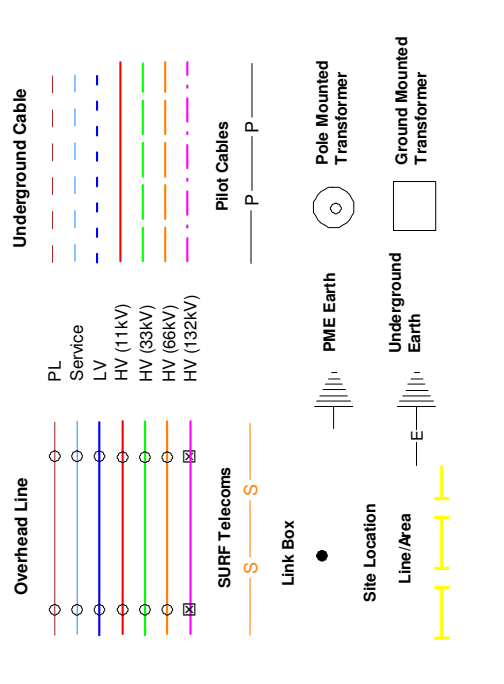
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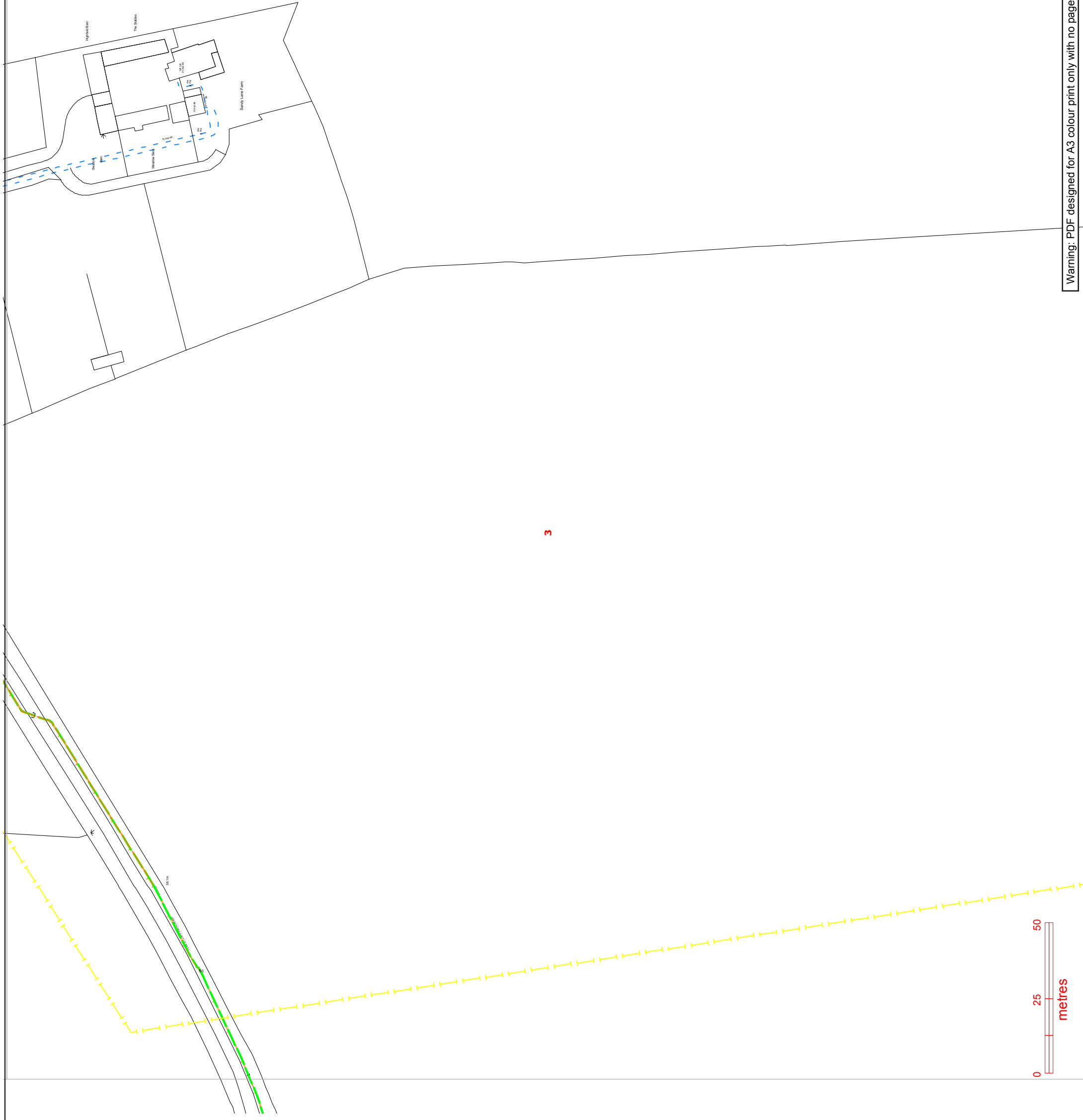
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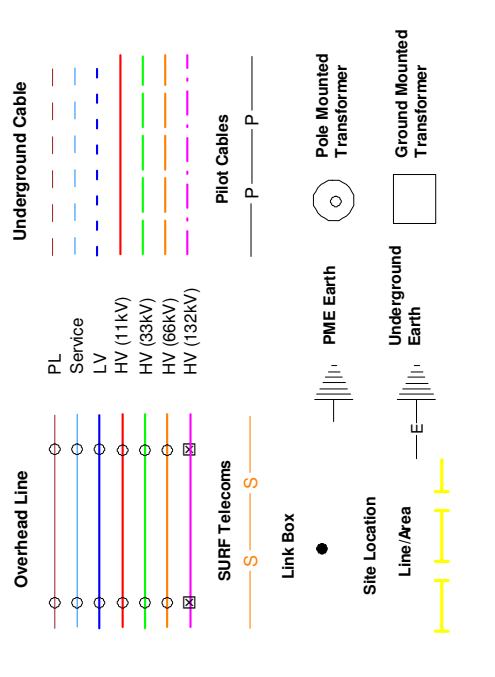


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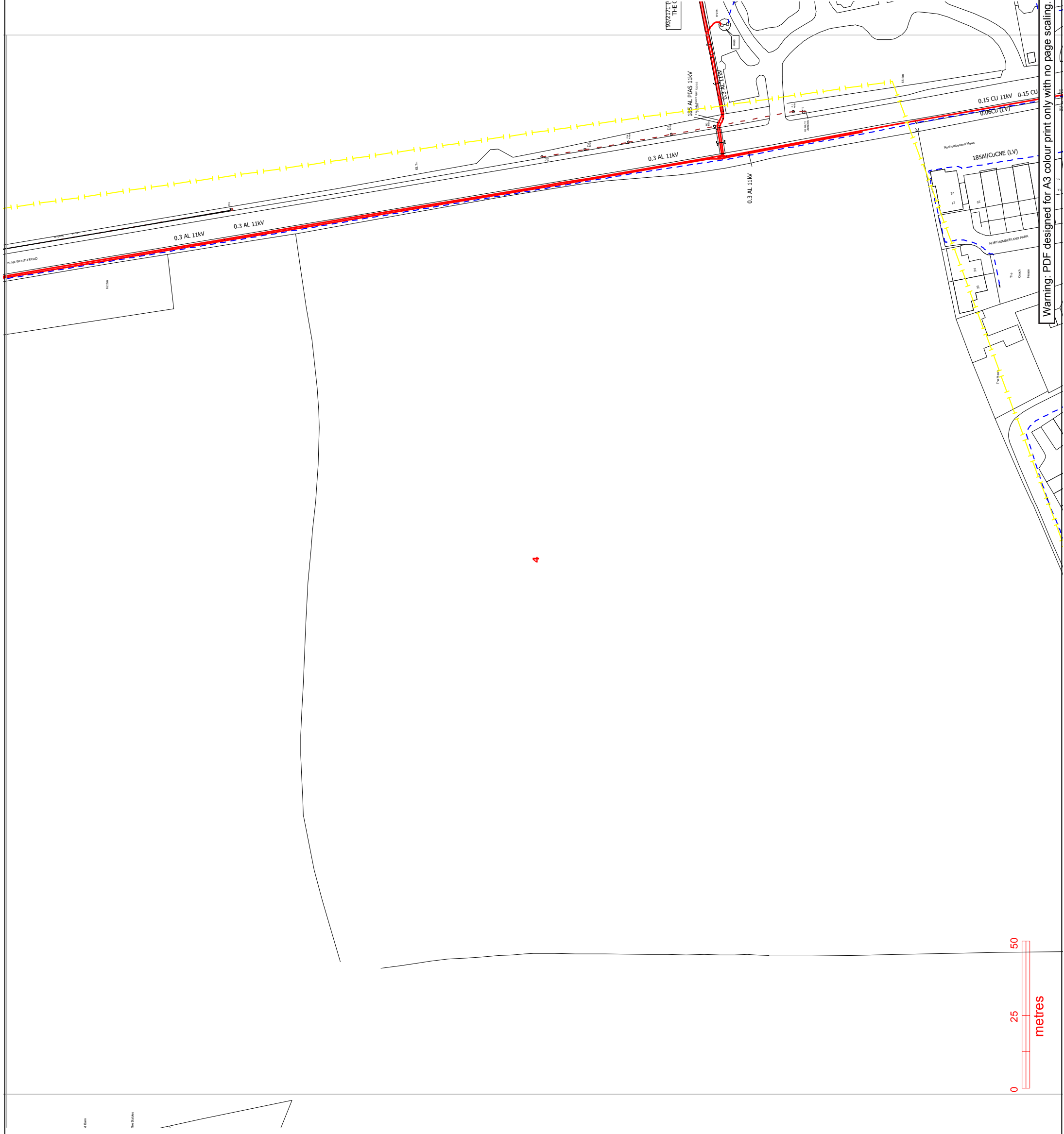
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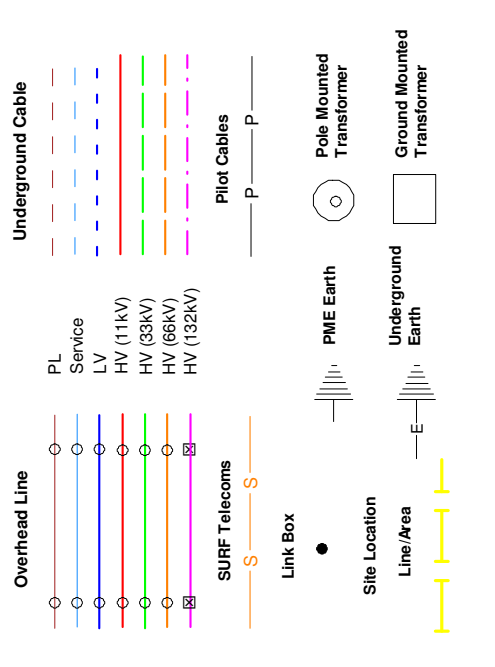
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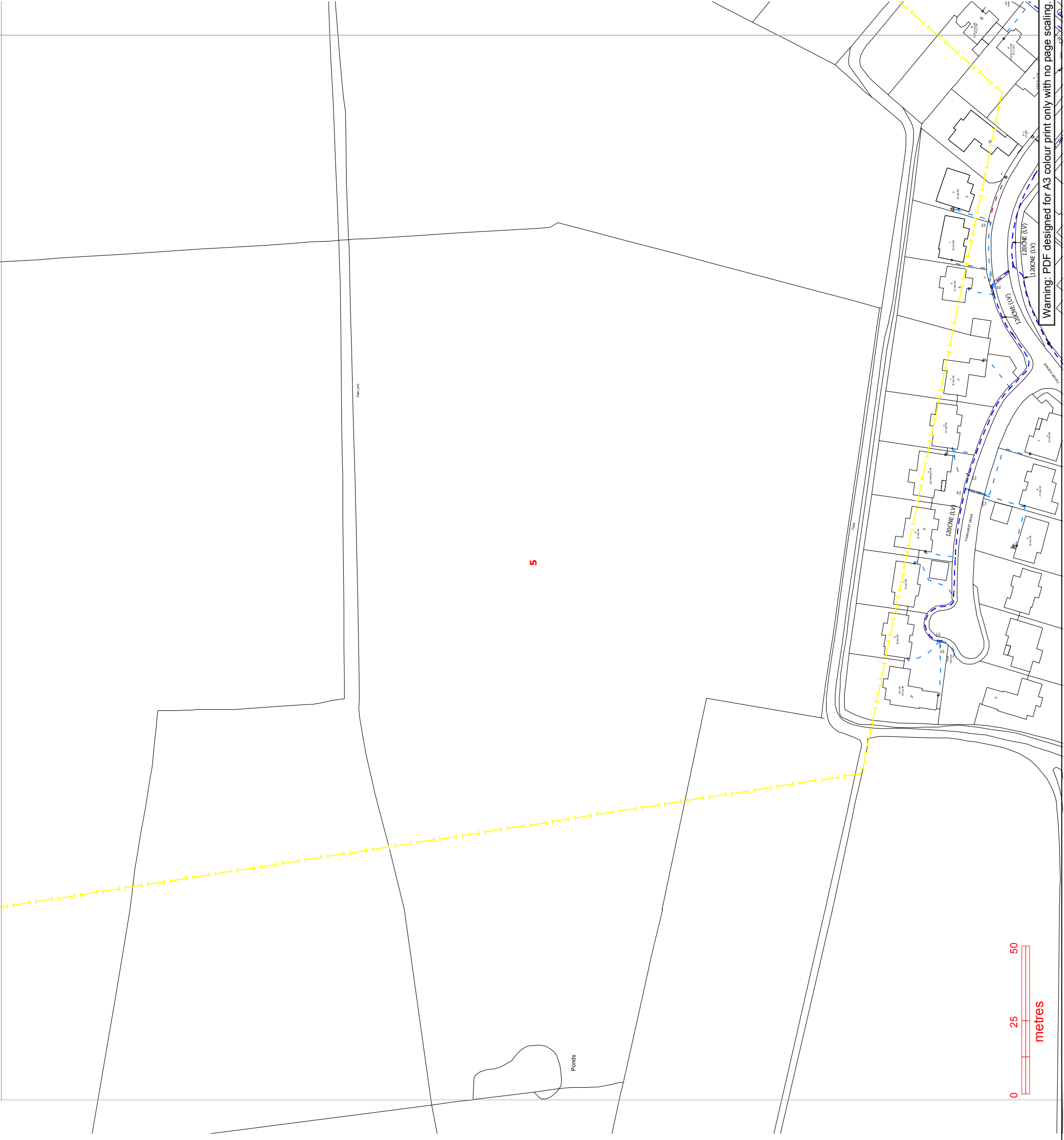
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SP3168NW



SP3167NW

	Distribution Main		Water Isolation Valve (Closed)		Housing, Building
	Trunk Main (local/primary)		Water Isolation Valve (Open)		Housing, Kiosk
	Strategic Main		Water Isolation Valve (Partially Open)		Housing, Other
	Fire Supply Main		Water Air Valve		Pipe Support Structure
	Fire Main		Pressure Reducing Valve		Open Pipe
	Non-Domestic Customer Service Pipe		Pressure Sustaining Valve		Discharge
	Domestic Customer Service Pipe		Non-Return Valve		End Cap
	Abandoned Main		Float Valve		SSSI Area
	Elevated Main		Hydrant (Single/Double)		Access Right
	Aqueduct		Washout (Single/Double)		Pre-1937 Properties
	Duct		Bulk Meter		
	Cable, Earthing		Water Hatch Box		
	Cable, Low Voltage		Pressure Tapping		
	Cable, High Voltage		Insertion Flow Meter Point		
	Cable, Other				
	Pumping Facility				
	Booster Facility				
	Potable Water Storage				
	Water Tower				
	Well / Borehole				
	Intake				
	Water Treatment Works / Chamber				
	Draw-off Tower				
	Bowser Point				
	Water Facility Connection				
	Water Chemical Injection Point				
	Motive Water Point				
	Quality Sample Point				
	Change In Characteristic				
	Marker Post				
	Cable Junction				
	Anode				
	Boundary Box				
	Stop tap				
	Cross Piece				
	Strainer				
	Listening Post				
	Revenue Meter				

MATERIALS	
AC	ASBESTOS CEMENT
AK	ALKATHENE
C	CONCRETE
CI	CAST IRON
CU	COPPER
GF	GLASS FIBRE
GRC	GLASS REINFORCED CONCRETE
GRP	GLASS REINFORCED PLASTIC
HDPE	HIGH DENSITY POLY
HPPE	HIGH PERFORMANCE POLY
LDPE	LOW DENSITY POLY
LEAD	LEAD
MDPE	MEDIUM DENSITY POLY
O	OTHER
PC	PRE-STRESSED CONCRETE
PP	POLY PROPYLENE
PF	POLY FIBRE
PSC	PLASTIC STEEL COMPOSITE
PVC	POLY VINYL CHLORIDE
RPM	REINFORCED PLASTIC MATRIX
SI	SPUN IRON
SST	STAINLESS STEEL
ST	STEEL
UPVC	UNPLASTICISED PVC

LINING	
BI	BITUMEN
CL	CEMENT
PL	PLASTIC
RL	RESIN
O	OTHER



Severn Trent Water Limited  
 Asset Data Management  
 PO Box 5344  
 Coventry  
 CV3 9FT  
 Telephone: 0845 601 6616

### WATER MAINS RECORD (TILE)

O/S Map scale: 1:1250      This map is centred upon:  
 Date of issue: 15.04.16      O / S Tile reference:

SP3168SW

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SP3168NE



SP3268SW

SP3167NE

<ul style="list-style-type: none"> <li>Distribution Main</li> <li>Trunk Main (local/primary)</li> <li>Strategic Main</li> <li>Fire Supply Main</li> <li>Fire Main</li> <li>Non-Domestic Customer Service Pipe</li> <li>Domestic Customer Service Pipe</li> <li>Abandoned Main</li> <li>Elevated Main</li> <li>Aqueduct</li> <li>Duct</li> <li>Cable, Earthing</li> <li>Cable, Optical Fibre/Instrumentation</li> <li>Cable, Low Voltage</li> <li>Cable, High Voltage</li> <li>Cable, Other</li> </ul>	<ul style="list-style-type: none"> <li>Pumping Facility</li> <li>Booster Facility</li> <li>Potable Water Storage</li> <li>Water Tower</li> <li>Well / Borehole</li> <li>Intake</li> <li>Water Treatment Works / Chamber</li> <li>Draw-off Tower</li> <li>Bowser Point</li> <li>Water Facility Connection</li> </ul>	<ul style="list-style-type: none"> <li>Water Isolation Valve (Closed)</li> <li>Water Isolation Valve (Open)</li> <li>Water Isolation Valve (Partially Open)</li> <li>Water Air Valve</li> <li>Pressure Reducing Valve</li> <li>Pressure Sustaining Valve</li> <li>Non-Return Valve</li> <li>Float Valve</li> <li>Hydrant (Single/Double)</li> <li>Washout (Single/Double)</li> <li>Bulk Meter</li> <li>Water Hatch Box</li> <li>Pressure Tapping</li> <li>Insertion Flow Meter Point</li> </ul>	<ul style="list-style-type: none"> <li>Water Chemical Injection Point</li> <li>Motive Water Point</li> <li>Quality Sample Point</li> <li>Change In Characteristic</li> <li>Marker Post</li> <li>Cable Junction</li> <li>Anode</li> <li>Boundary Box</li> <li>Stop tap</li> <li>Cross Piece</li> <li>Strainer</li> <li>Listening Post</li> <li>Revenue Meter</li> </ul>	<ul style="list-style-type: none"> <li>Housing, Building</li> <li>Housing, Kiosk</li> <li>Housing, Other</li> <li>Pipe Support Structure</li> <li>Open Pipe</li> <li>Discharge</li> <li>End Cap</li> <li>SSSI Area</li> <li>Access Right</li> <li>Pre-1937 Properties</li> </ul>
---	---	---	--	--

MATERIALS	LINING
AC - ASBESTOS CEMENT	BI - BITUMEN
AK - ALKATHENE	CL - CEMENT
C - CONCRETE	PL - PLASTIC
CI - CAST IRON	RL - RESIN
CU - COPPER	O - OTHER
GF - GLASS FIBRE	
GRC - GLASS REINFORCED CONCRETE	
GRP - GLASS REINFORCED PLASTIC	
HDPE - HIGH DENSITY POLY	
HDPE - HIGH PERFORMANCE POLY	
LDPE - LOW DENSITY POLY	
LEAD - LEAD	
MDPE - MEDIUM DENSITY POLY	
O - OTHER	
PC - PRE-STRESSED CONCRETE	
PP - PITCH FIBRE	
PP - POLY PROPYLENE	
PSC - PLASTIC STEEL COMPOSITE	
PVC - POLY VINYL CHLORIDE	
RPS - REINFORCED PLASTIC MATRIX	
SI - SPUN IRON	
SST - STAINLESS STEEL	
ST - STEEL	
UPVC - UNPLASTICISED PVC	



Severn Trent Water Limited  
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**WATER MAINS RECORD (TILE)**

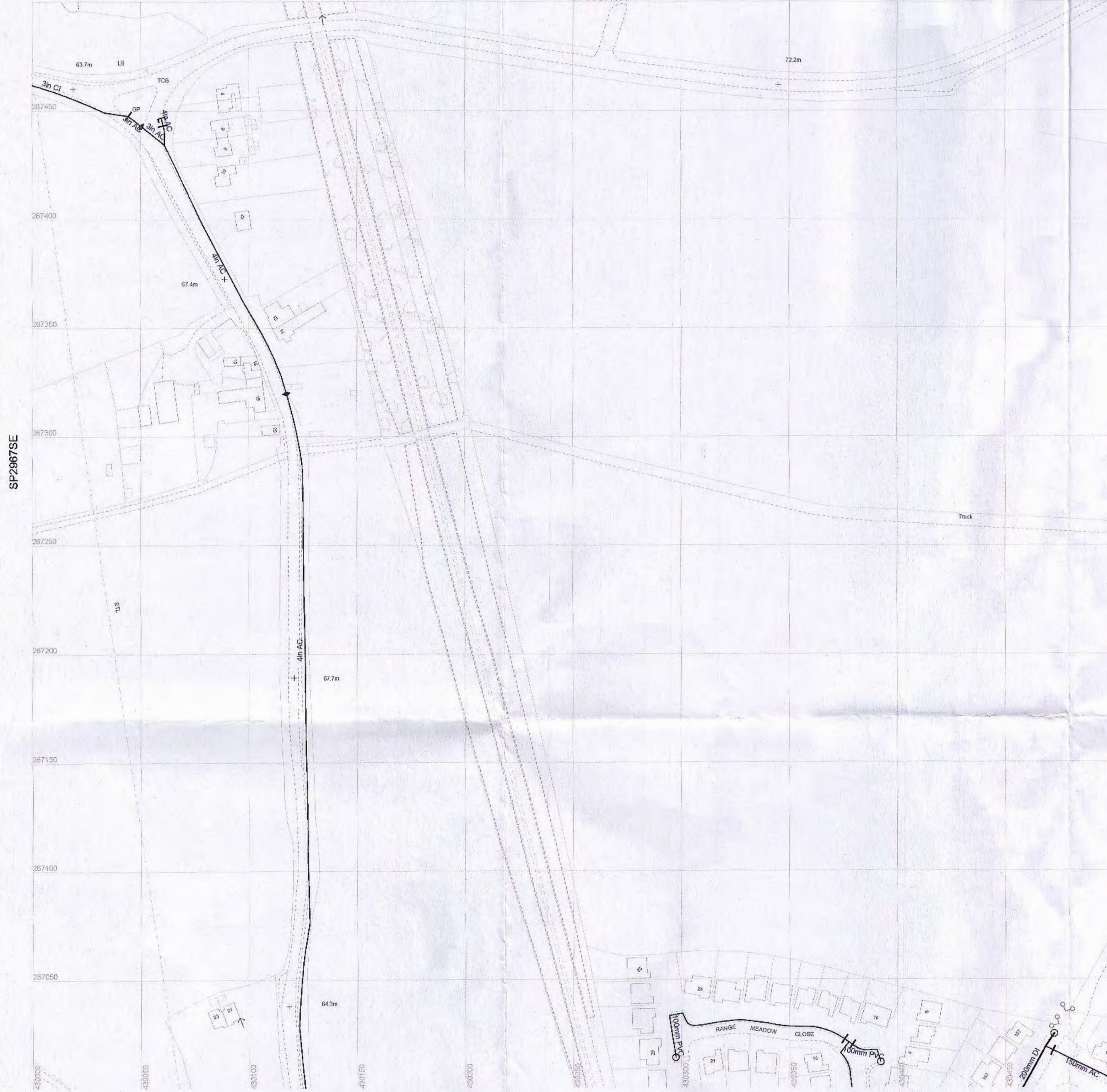
O/S Map scale: 1:1250      This map is centred upon:  
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SP3067NW



SP3066NW

Distribution Main	Pumping Facility	Water Isolation Valve (Closed)	Water Chemical Injection Point	Housing, Building
Trunk Main (local/primary)	Booster Facility	Water Isolation Valve (Open)	Motive Water Point	Housing, Kiosk
Strategic Main	Potable Water Storage	Water Isolation Valve (Partially Open)	Quality Sample Point	Housing, Other
Fire Supply Main	Water Tower	Water Air Valve	Change In Characteristic	Pipe Support Structure
Fire Main	Well / Borehole	Pressure Reducing Valve	Marker Post	Open Pipe
Non-Domestic Customer Service Pipe	Intake	Pressure Sustaining Valve	Cable Junction	Discharge
Domestic Customer Service Pipe	Water Treatment Works / Chamber	Non-Return Valve	Anode	End Cap
Abandoned Main	Draw-off Tower	Float Valve	Boundary Box	SSSI Area
Elevated Main	Bowser Point	Hydrant (Single/Double)	Stop tap	Access Right
Aqueduct	Water Facility Connection	Washout (Single/Double)	Cross Piece	Pre-1937 Properties
Duct		Bulk Meter	Strainer	
Cable, Earthing		Water Hatch Box	Listening Post	
Cable, Optical Fibre/Instrumentation		Pressure Tapping	Revenue Meter	
Cable, Low Voltage		Insertion Flow Meter Point		
Cable, High Voltage				
Cable, Other				

MATERIALS	
AC	- ASBESTOS CEMENT
AK	- ALKATHENE
C	- CONCRETE
CI	- CAST IRON
CU	- COPPER
GF	- GLASS FIBRE
GRC	- GLASS REINFORCED CONCRETE
GPP	- GLASS REINFORCED PLASTIC
HDPE	- HIGH DENSITY POLY
HDPE	- HIGH PERFORMANCE POLY
LDPE	- LOW DENSITY POLY
LEAD	- LEAD
MDPE	- MEDIUM DENSITY POLY
O	- OTHER
PC	- PRE-STRESSED CONCRETE
PF	- PITCH FIBRE
PP	- POLY PROPYLENE
PSC	- PLASTIC STEEL COMPOSITE
PVC	- POLY VINYL CHLORIDE
RPM	- REINFORCED PLASTIC MATRIX
SI	- SPUN IRON
SST	- STAINLESS STEEL
ST	- STEEL
UPVC	- UNPLASTICISED PVC

LINING	
BI	- BITUMEN
CL	- CEMENT
PL	- PLASTIC
RL	- RESIN
O	- OTHER



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- Distribution Main
- Trunk Main (local/primary)
- Strategic Main
- - - Fire Supply Main
- - - Fire Main
- - - Non-Domestic Customer Service Pipe
- - - Domestic Customer Service Pipe
- ✕ ✕ ✕ ✕ Abandoned Main
- Elevated Main
- Aqueduct
- Duct
- ○ Cable, Earthing
- - - Cable, Optical Fibre/Instrumentation
- - - Cable, Low Voltage
- - - Cable, High Voltage
- - - Cable, Other

- ▲ Pumping Facility
- △ Booster Facility
- Potable Water Storage
- Water Tower
- ◆ Well / Borehole
- ◇ Intake
- Water Treatment Works / Chamber
- ⊕ Draw-off Tower
- Bowser Point
- ⊠ Water Facility Connection

- ⊕ Water Isolation Valve (Closed)
- ⊕ Water Isolation Valve (Open)
- ⊕ Water Isolation Valve (Partially Open)
- ⊕ Water Air Valve
- ⊕ Pressure Reducing Valve
- ⊕ Pressure Sustaining Valve
- ⊕ Non-Return Valve
- ⊕ Float Valve
- Hydrant (Single/Double)
- ◇ Washout (Single/Double)
- Bulk Meter
- Water Hatch Box
- ◇ Pressure Tapping
- ◆ Insertion Flow Meter Point

- ⊕ Water Chemical Injection Point
- ⊕ Motive Water Point
- ⊕ Quality Sample Point
- ⊕ Change In Characteristic
- ⊕ Marker Post
- ⊕ Cable Junction
- ⊕ Anode
- ⊕ Boundary Box
- ⊕ Stop tap
- Cross Piece
- Strainer
- ⊕ Listening Post
- ⊕ Revenue Meter

- ⊠ Housing, Building
- ⊠ Housing, Kiosk
- ⊠ Housing, Other
- ⊕ Pipe Support Structure
- ⊕ Open Pipe
- ⊕ Discharge
- ⊕ End Cap
- ⊕ SSSI Area
- ⊕ Access Right
- ⊕ Pre-1937 Properties

- MATERIALS**
- AC - ASBESTOS CEMENT
  - AK - ALKATHENE
  - C - CONCRETE
  - CI - CAST IRON
  - CU - COPPER
  - CF - GLASS FIBRE
  - CRG - GLASS REINFORCED CONCRETE
  - GRP - GLASS REINFORCED PLASTIC
  - HDPE - HIGH DENSITY POLY
  - HDPE - HIGH PERFORMANCE POLY
  - LDPE - LOW DENSITY POLY
  - LEAD - LEAD
  - MDPE - MEDIUM DENSITY POLY
  - O - OTHER
  - PC - PRE-STRESSED CONCRETE
  - PF - FIBRE
  - PP - POLY PROPYLENE
  - PSC - PLASTIC STEEL COMPOSITE
  - PVC - POLY VINYL CHLORIDE
  - RPM - REINFORCED PLASTIC MATRIX
  - SI - SPUN IRON
  - SST - STAINLESS STEEL
  - ST - STEEL
  - UPVC - UNPLASTICISED PVC

- LINING**
- BI - BITUMEN
  - CL - CEMENT
  - PL - PLASTIC
  - RL - RESIN
  - O - OTHER



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SP3168SE



SP3167SE

	Distribution Main		Pumping Facility
	Trunk Main (local/primary)		Booster Facility
	Strategic Main		Potable Water Storage
	Fire Supply Main		Water Tower
	Fire Main		Well / Borehole
	Non-Domestic Customer Service Pipe		Intake
	Domestic Customer Service Pipe		Water Treatment Works / Chamber
	Abandoned Main		Draw-off Tower
	Elevated Main		Bowser Point
	Aqueduct		Water Facility Connection
	Duct		
	Cable, Earthing		
	Cable, Optical Fibre/Instrumentation		
	Cable, Low Voltage		
	Cable, High Voltage		
	Cable, Other		

	Water Isolation Valve (Closed)		Water Chemical Injection Point
	Water Isolation Valve (Open)		Motive Water Point
	Water Isolation Valve (Partially Open)		Quality Sample Point
	Water Air Valve		Change In Characteristic
	Pressure Reducing Valve		Marker Post
	Pressure Sustaining Valve		Cable Junction
	Non-Return Valve		Anode
	Float Valve		Boundary Box
	Hydrant (Single/Double)		Stop tap
	Washout (Single/Double)		Cross Piece
	Bulk Meter		Strainer
	Water Hatch Box		Listening Post
	Pressure Tapping		Revenue Meter
	Insertion Flow Meter Point		

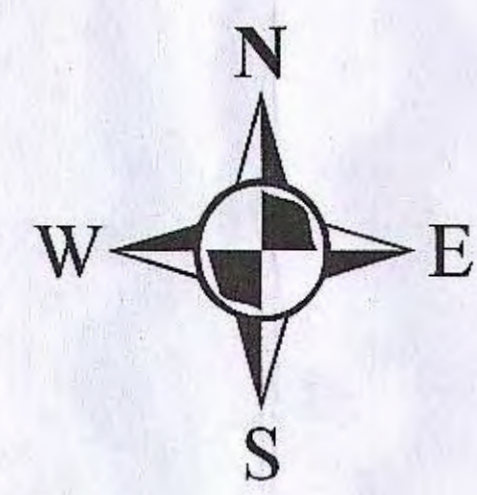
	Housing, Building
	Housing, Kiosk
	Housing, Other
	Pipe Support Structure
	Open Pipe
	Discharge
	End Cap
	SSSI Area
	Access Right
	Pre-1937 Properties

**MATERIALS**

AC	ASBESTOS CEMENT
AK	ALUMINUM
C	CONCRETE
CI	CAST IRON
CU	COPPER
GF	GLASS FIBRE
GRC	GLASS REINFORCED CONCRETE
GRP	GLASS REINFORCED PLASTIC
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SP3167NW



SP3166NW

<ul style="list-style-type: none"> <li>Distribution Main</li> <li>Trunk Main (local/primary)</li> <li>Strategic Main</li> <li>Fire Supply Main</li> <li>Fire Main</li> <li>Non-Domestic Customer Service Pipe</li> <li>Domestic Customer Service Pipe</li> <li>Abandoned Main</li> <li>Elevated Main</li> <li>Aqueduct</li> <li>Duct</li> <li>Cable, Earthing</li> <li>Cable, Optical Fibre/Instrumentation</li> <li>Cable, Low Voltage</li> <li>Cable, High Voltage</li> <li>Cable, Other</li> </ul>	<ul style="list-style-type: none"> <li>Pumping Facility</li> <li>Booster Facility</li> <li>Potable Water Storage</li> <li>Water Tower</li> <li>Well / Borehole</li> <li>Intake</li> <li>Water Treatment Works / Chamber</li> <li>Draw-off Tower</li> <li>Bowser Point</li> <li>Water Facility Connection</li> </ul>	<ul style="list-style-type: none"> <li>Water Isolation Valve (Closed)</li> <li>Water Isolation Valve (Open)</li> <li>Water Isolation Valve (Partially Open)</li> <li>Water Air Valve</li> <li>Pressure Reducing Valve</li> <li>Pressure Sustaining Valve</li> <li>Non-Return Valve</li> <li>Float Valve</li> <li>Hydrant (Single/Double)</li> <li>Washout (Single/Double)</li> <li>Bulk Meter</li> <li>Water Hatch Box</li> <li>Pressure Tapping</li> <li>Insertion Flow Meter Point</li> </ul>	<ul style="list-style-type: none"> <li>Water Chemical Injection Point</li> <li>Motive Water Point</li> <li>Quality Sample Point</li> <li>Change In Characteristic</li> <li>Marker Post</li> <li>Cable Junction</li> <li>Anode</li> <li>Boundary Box</li> <li>Stop tap</li> <li>Cross Piece</li> <li>Strainer</li> <li>Listening Post</li> <li>Revenue Meter</li> </ul>	<ul style="list-style-type: none"> <li>Housing, Building</li> <li>Housing, Kiosk</li> <li>Housing, Other</li> <li>Pipe Support Structure</li> <li>Open Pipe</li> <li>Discharge</li> <li>End Cap</li> <li>SSSI Area</li> <li>Access Right</li> <li>Pre-1937 Properties</li> </ul>
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MATERIALS	
AC	ASBESTOS CEMENT
AK	ALKATHENE
C	CONCRETE
CI	CAST IRON
CU	COPPER
GF	GLASS FIBRE
GRC	GLASS REINFORCED CONCRETE
GRP	GLASS REINFORCED PLASTIC
HDPE	HIGH DENSITY POLY
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SEVERN  
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WATER

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- Distribution Main
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- Strategic Main
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- Domestic Customer Service Pipe
- Abandoned Main
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- Aqueduct
- Duct
- Cable, Earthing
- Cable, Optical Fibre/Instrumentation
- Cable, Low Voltage
- Cable, High Voltage
- Cable, Other

- ▲ Pumping Facility
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- ◆ Well / Borehole
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- ⊘ Water Isolation Valve (Closed)
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- ⊙ Bulk Meter
- ⊙ Water Hatch Box
- ⊙ Pressure Tapping
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  - AK - ALKATHENE
  - C - CONCRETE
  - CI - CAST IRON
  - CU - COPPER
  - GF - GLASS FIBRE
  - GRC - GLASS REINFORCED CONCRETE
  - GRP - GLASS REINFORCED PLASTIC
  - HDPE - HIGH DENSITY POLY
  - HPPE - HIGH PERFORMANCE POLY
  - LDPE - LOW DENSITY POLY
  - LEAD - LEAD
  - HDPE - HIGH DENSITY POLY
  - O - OTHER
  - PC - PRE-STRESSED CONCRETE
  - PF - PITCH FIBRE
  - PP - POLY PROPYLENE
  - PSC - PLASTIC STEEL COMPOSITE
  - PVC - POLY VINYL CHLORIDE
  - RPR - REINFORCED PLASTIC MATRIX
  - SI - SPAN IRON
  - ST - STAINLESS STEEL
  - ST - STEEL
  - UPVC - UNPLASTICISED PVC

- LINING**
- BI - BITUMEN
  - CL - CEMENT
  - PL - PLASTIC
  - RL - RESIN
  - O - OTHER



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 Asset Data Management  
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 Coventry  
 CV3 9FT  
 Telephone: 0845 601 6616

**WATER MAINS RECORD (TILE)**

O/S Map scale: 1:1250  
 Date of issue: 15.04.16

This map is centred upon:  
 O / S Tile reference:

SP3166NW

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Sewer Node	Sewer Pipe Data										
	REFERENCE	COVER LEVEL	INV LEVEL UPSTR	INV LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SP3067001	67.71	65.82	62.40	62.40	F	VC	C	150	nil	33.00	nil
SP3067001	69.88	62.37	61.55	61.55	F	VC	C	150	nil	140.39	nil
SP3067001	68.28	66.55	65.86	65.86	F	VC	C	150	nil	62.02	nil
SP3067001	61.63	60.04	59.08	59.08	F	VC	C	150	nil	30.28	nil
SP3067002	61.60	60.15	59.54	59.54	S	VC	C	150	nil	49.89	nil
SP3067003	61.03	59.06	58.05	58.05	F	VC	C	150	nil	40.77	nil
SP3067004	61.59	59.46	58.45	58.45	S	VC	C	225	nil	40.99	nil
SP3067005	59.89	59.01	nil	nil	F	VC	C	150	nil	0.00	nil
SP3067006	59.83	58.44	nil	nil	S	VC	C	225	nil	0.00	nil
SP30674001	nil	nil	65.38	65.38	F	VC	C	225	nil	0.00	nil
SP30674002	nil	nil	65.95	65.95	S	CO	C	450	nil	0.00	nil

SP2967SE SP3067SE SP3066NW

- Abandoned Sewer
- Private Combined Gravity Sewer
- Private Foul Gravity Sewer
- Private Surface Water Gravity Sewer
- Public Combined Gravity Sewer
- Public Foul Gravity Sewer
- Public Surface Water Gravity Sewer
- Trunk Combined Gravity Sewer
- Trunk Foul Use Gravity Sewer
- Trunk Surface Water Gravity Sewer
- Combined Use Pressurised Sewer
- Foul Use Pressurised Sewer
- Surface Water Pressurised Sewer
- Highway Drain
- Combined Lateral Drain (SS)
- Foul Lateral Drain (SS)
- Surface Water Lateral Drain (SS)
- Cable, Earthing
- Cable Junction
- Cable, Optical Fibre/Instrumentation
- Cable, Low Voltage
- Cable, High Voltage
- Cable, Other
- Housing, Building
- Housing, Kiosk
- Disposal Site
- Sewage Treatment Works
- Housing, Other
- Pipe Support Structure
- Sewage Pumping Facility
- Sewer Facility Connection Inlet / Outlet
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- Penstock
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- Sewer Collapse
- Sewer Chemical Injection Point
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- Sewerage Hatch Box Point
- Sewerage Isolation Valve
- Soakaway
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- Vent Column
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- Pre-1937 Properties

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- Flushing Chamber
- Foul Use Manhole
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- Head Node
- Hydrobrake
- Lampole
- Outfall
- Overflow
- Penstock
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**MATERIALS**

AC	- ASBESTOS CEMENT
BR	- BRICK
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CI	- CAST IRON
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GRC	- GLASS REINFORCED CONCRETE
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MAR	- MASONRY RANDOMLY COURSED
PE	- POLYETHYLENE
PF	- PITCH
PP	- POLYPROPYLENE
PSC	- PLASTIC STEEL COMPOSITE
PVC	- POLYVINYL CHLORIDE
RPM	- REINFORCED PLASTIC MATRIX
SI	- SPUN (GREY) IRON
XXX	- OTHER

All Private Sewers are shown in magenta  
All section 104 sewers are shown in green  
All Sewers that have been transferred to Severn Trent Water after the 1<sup>st</sup> October 2011 but have not been surveyed and confirmed by Severn Trent Water are shown in orange

**CATEGORIES**

W	- WEIR
C	- CASCADE
DB	- DAMBOARD
SE	- SIDE ENTRY
FV	- FLAP VALVE
BD	- BACK DRCP
S	- SIPHON
HD	- HIGHWAY DRAIN
S104	- SECTION 104

**SHAPE**

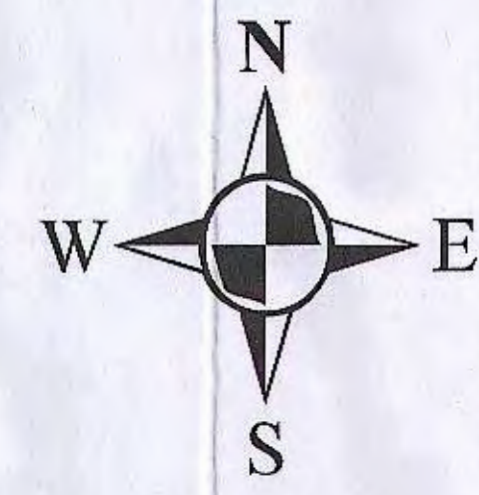
C	- CIRCULAR
E	- EGG SHAPED
O	- OTHER
R	- RECTANGLE
S	- SQUARE
T	- TRAPEZOIDAL
U	- UNKNOWN

**TABULAR KEY**

A. Sewer pipe data refers to downstream sewer pipe.  
B. Where the node bifurcates (splits) X and Y indicates downstream sewer pipe.  
C. Gradient is stated a 1 in ...

**PURPOSE**

C	- COMBINED
E	- FINAL EFFLUENT
F	- FOUL
L	- SLUDGE
S	- SURFACE WATER



**SEVERN TRENT WATER**

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## SEWER RECORD (TABULAR)

O/S Map scale: 1:1250      This map is centred upon: O/S Tile reference: SP3067SW

Date of issue: 15.04.16

Sheet No. 1 of 1

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SP3168SE



SEWER NODE	COVER LEVEL	INVERT LEVEL UPSTR	INVERT LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAD
SP3167600	66.37	64.02	63.92	F	nil	nil	nil	nil	150.86	nil
SP3167601	65.49	63.92	63.22	F	nil	nil	nil	nil	148.77	nil
SP3167601	61.09	59.83	59.14	S	VC	C	300	nil	103.03	nil
SP3167602	65.60	63.01	59.98	S	VC	C	300	nil	39.45	nil
SP3167700	67.20	64.05	64.02	F	nil	nil	nil	nil	151.26	nil
SP3167701	67.08	65.77	64.18	S	VC	C	300	nil	52.83	nil
SP3167702	67.00	65.77	64.18	S	VC	C	300	nil	0.00	nil
SP3167700	66.43	65.33	64.65	F	nil	nil	nil	nil	147.74	nil
SP3167801	71.84	68.62	68.62	S	nil	nil	nil	nil	0.00	nil
SP3167802	68.10	67.17	66.10	F	VC	C	150	nil	36.45	nil
SP3167800	70.50	69.80	69.63	S	nil	nil	nil	nil	101.28	nil
SP3167801	70.75	69.88	69.64	F	nil	nil	nil	nil	78.45	nil
SP3167800	68.30	65.96	65.93	S	nil	nil	nil	nil	483.67	nil
SP3167801	68.40	65.83	65.83	S	nil	nil	nil	nil	0.00	nil
SP3167802	68.30	65.83	65.15	S	nil	nil	nil	nil	52.48	nil
SP3167803	68.50	66.87	66.40	F	nil	nil	nil	nil	148.64	nil
SP3167804	67.50	66.11	65.33	F	nil	nil	nil	nil	148.67	nil
SP3167801	70.50	69.12	68.22	S	VC	C	225	nil	83.49	nil
SP3167802	70.80	68.40	67.47	F	VC	C	225	nil	82.71	nil
SP3167803	72.00	69.84	68.41	F	VC	C	225	nil	172.43	nil
SP3167804	72.21	69.36	68.36	S	VC	C	225	nil	0.00	nil
SP3167801	71.00	69.63	69.50	S	nil	nil	nil	nil	147.84	nil
SP3167801	72.30	68.49	68.49	S	VC	C	450	nil	0.00	nil
SP3167802	71.10	69.64	69.18	F	nil	nil	nil	nil	70.80	nil
SP3167804	71.36	70.00	69.64	F	nil	nil	nil	nil	0.00	nil
SP3167800	71.40	69.80	68.98	S	nil	nil	nil	nil	29.01	nil
SP3167803	71.67	70.61	70.32	S	VC	C	150	nil	104.24	nil
SP3167804	70.40	68.96	68.49	S	nil	nil	nil	nil	65.83	nil
SP3167805	69.80	68.49	67.48	S	nil	nil	nil	nil	18.33	nil
SP3167806	69.00	66.89	65.83	S	nil	nil	nil	nil	504.22	nil
SP3167807	71.00	69.50	69.23	S	nil	nil	nil	nil	39.53	nil
SP3167808	69.33	69.33	69.04	S	nil	nil	nil	nil	73.54	nil
SP3167809	70.36	69.20	69.04	F	nil	nil	nil	nil	67.28	nil
SP3167810	70.40	68.67	68.33	S	nil	nil	nil	nil	0.00	nil
SP3167811	71.80	70.68	69.33	S	nil	nil	nil	nil	0.00	nil
SP3167812	67.84	67.84	67.80	S	nil	nil	nil	nil	185.04	nil
SP3167813	68.90	67.00	67.80	S	nil	nil	nil	nil	152.86	nil
SP3167814	68.05	67.00	67.75	S	nil	nil	nil	nil	132.84	nil
SP3167815	68.50	67.75	67.68	S	nil	nil	nil	nil	28.88	nil
SP3167816	68.80	67.08	66.20	S	nil	nil	nil	nil	20.91	nil
SP3167818	70.00	68.82	67.80	S	nil	nil	nil	nil	0.00	nil
SP3167819	70.65	69.00	68.20	S	nil	nil	nil	nil	36.11	nil
SP3167820	69.48	69.00	68.20	S	nil	nil	nil	nil	36.11	nil
SP3167821	70.20	68.10	66.10	F	nil	nil	nil	nil	18.49	nil
SP3167822	69.52	68.10	67.97	F	nil	nil	nil	nil	139.69	nil
SP3167823	69.30	67.97	67.96	F	nil	nil	nil	nil	79.28	nil
SP3167824	69.36	68.40	68.10	F	nil	nil	nil	nil	38.08	nil
SP3167825	71.00	70.50	69.18	F	nil	nil	nil	nil	15.90	nil
SP3167826	71.00	69.18	68.41	F	nil	nil	nil	nil	50.57	nil
SP3167827	69.80	68.41	68.08	F	nil	nil	nil	nil	68.72	nil
SP3167828	68.00	68.08	67.67	F	nil	nil	nil	nil	25.18	nil
SP3167829	69.20	67.67	66.87	F	nil	nil	nil	nil	25.35	nil
SP3167830	69.88	68.85	68.08	F	nil	nil	nil	nil	23.24	nil
SP3167831	71.20	nil	nil	S	CO	C	450	nil	0.00	2012
SP3167832	71.41	nil	68.35	S	CO	C	450	nil	0.00	nil
SP3167800	65.20	nil	nil	nil	nil	nil	nil	nil	0.00	nil
SP3167801	67.89	65.15	65.15	S	nil	nil	nil	nil	0.00	nil
SP3167802	67.50	65.09	64.20	S	nil	nil	nil	nil	15.12	nil
SP3167803	68.00	67.48	67.20	F	nil	nil	nil	nil	66.91	nil
SP3167804	68.10	67.39	66.97	F	nil	nil	nil	nil	153.89	nil
SP3167805	68.65	67.66	67.20	F	nil	nil	nil	nil	72.21	nil
nil	nil	nil	nil	F	nil	nil	nil	nil	0.00	nil
nil	nil	nil	nil	F	VC	nil	nil	nil	0.00	nil
nil	nil	nil	nil	F	VC	nil	nil	nil	0.00	nil

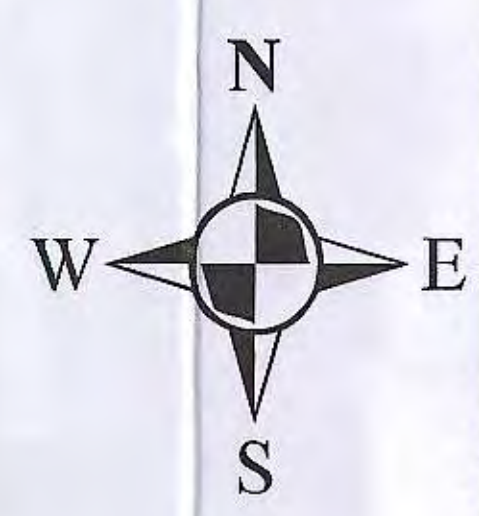
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- CATEGORIES**
- W - WEIR
  - C - CASCADE
  - DB - DAMBOARD
  - SE - SIDE ENTRY
  - FV - FLAP VALVE
  - BD - BACK DROP
  - S - SIPHON
  - HD - HIGHWAY DRAIN
  - S104 - SECTION 104
- SHAPE**
- C - CIRCULAR
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**SEWER RECORD (TABULAR)**

O/S Map scale: 1:1250  
 Date of issue: 15.04.16  
 Sheet No. 1 of 1  
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REFERENCE	COVER LEVEL	INVERT (SPSTR)	OUTLET (SPSTR)	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SP31670001	65.82	65.46	65.15	S	VC	C	225	nil	120.06	nil
SP31670002	66.85	65.04	64.59	F	VC	C	150	nil	62.61	nil
SP31671001	66.46	65.12	64.89	S	VC	C	225	nil	152.65	nil
SP31671002	66.50	64.56	64.05	F	VC	C	150	nil	67.02	nil
SP31671003	66.13	64.02	62.75	F	VC	ni	ni	ni	63.02	nil
SP31671004	66.08	64.79	64.63	S	CO	C	300	nil	213.60	nil
SP31671005	65.84	64.07	64.58	S	CO	C	300	nil	377.78	nil
SP31671006	65.92	62.58	62.35	F	VC	C	225	nil	146.17	nil
SP31671007	65.96	65.05	62.78	F	VC	C	150	nil	65.20	nil
SP31671008	65.92	64.02	64.73	S	VC	C	225	nil	240.05	nil
SP31671009	65.84	62.71	61.00	F	VC	C	225	nil	0.00	nil
SP31672001	65.90	62.34	62.14	F	VC	C	225	nil	140.19	nil
SP31672002	65.93	64.55	64.49	S	CO	C	300	nil	311.11	nil
SP31672003	65.78	64.41	64.33	S	CO	C	300	nil	274.58	nil
SP31672004	65.73	62.10	61.92	F	VC	C	225	nil	111.11	nil
SP31672005	65.54	61.80	61.24	F	VC	C	225	nil	71.23	nil
SP31672006	65.90	64.15	64.01	S	CO	R	1200	300	209.47	nil
SP31672007	65.33	63.86	63.95	S	VC	C	300	nil	307.53	nil
SP31672008	65.28	63.80	63.52	S	CO	C	450	nil	335.04	nil
SP31672009	65.25	62.77	62.56	F	CO	E	480	420	328.71	nil
SP31672011	65.39	63.82	63.81	S	CO	C	450	nil	1204.00	nil
SP31672012	65.66	62.89	62.78	F	BR	E	625	625	307.62	nil
SP31672013	65.10	64.09	63.83	S	CO	C	450	nil	292.12	nil
SP31672014	67.50	65.58	65.52	F	VC	C	150	nil	314.50	nil
SP31672021	67.41	65.47	65.36	F	VC	C	150	nil	223.64	nil
SP31672023	67.13	65.84	66.18	S	VC	C	225	nil	0.00	nil
SP31672024	67.40	65.16	65.05	S	VC	C	225	nil	232.60	nil
SP31673001	67.35	65.33	65.14	F	VC	C	150	nil	148.52	nil
SP31673002	67.29	66.03	65.69	S	VC	C	225	nil	201.29	nil
SP31674001	64.99	62.46	61.64	C	VC	C	150	nil	33.97	nil
SP31674002	64.91	61.62	61.30	C	VC	C	225	nil	128.49	nil
SP31674003	66.86	64.62	64.16	S	CO	C	375	nil	302.41	nil
SP31674004	66.49	61.29	60.83	F	BR	E	525	625	389.67	nil
SP31674005	67.04	64.93	64.63	S	CO	C	375	nil	284.27	nil
SP31674006	67.01	61.77	61.40	F	BR	E	420	600	295.61	nil
SP31674007	67.35	64.68	64.44	F	VC	C	150	nil	179.98	nil
SP31674008	67.36	65.37	65.52	S	CO	C	375	nil	728.00	nil
SP31674009	67.38	65.11	64.67	F	VC	C	150	nil	214.88	nil
SP31674010	67.31	65.79	65.68	S	CO	C	300	nil	293.55	nil
SP31674011	67.41	64.96	64.84	F	VC	C	150	nil	190.00	nil
SP31674012	67.43	65.08	65.49	S	CO	C	375	nil	222.36	nil
SP31674013	67.46	64.94	64.69	F	VC	C	150	nil	155.67	nil

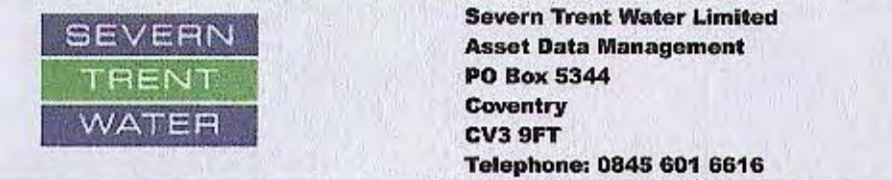
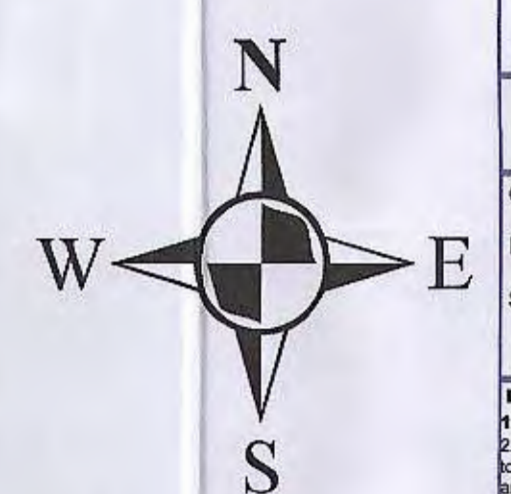
SP3166NW

- x---x---x--- Abandoned Sewer
- Private Combined Gravity Sewer
- Private Foul Gravity Sewer
- Private Surface Water Gravity Sewer
- Public Combined Gravity Sewer
- Public Foul Gravity Sewer
- Public Surface Water Gravity Sewer
- Trunk Combined Gravity Sewer
- Trunk Foul Use Gravity Sewer
- Trunk Surface Water Gravity Sewer
- Combined Use Pressurised Sewer
- Foul Use Pressurised Sewer
- Surface Water Pressurised Sewer
- Highway Drain
- Combined Lateral Drain (SS)
- Foul Lateral Drain (SS)
- Surface Water Lateral Drain (SS)
- Cable, Earthing
- Cable Junction
- Cable, Optical Fibre/Instrumentation
- Cable, Low Voltage
- Cable, High Voltage
- Cable, Other
- Housing, Building
- Housing, Kiosk
- Disposal Site
- Sewage Treatment Works
- Housing, Other
- Pipe Support Structure
- Sewage Pumping Facility
- Sewer Facility Connection Inlet / Outlet
- Blind Shaft
- Combined Use Manhole
- Flushing Chamber
- Foul Use Manhole
- Grease Trap
- Head Node
- Hydrobrake
- Lamphole
- Oufall
- Overflow
- Penstock
- Petrol Interceptor
- Sewer Blockage
- Sewer Collapse
- Sewer Chemical Injection Point
- Sewer Junction
- Sewerage Air Valve
- Sewerage Hatch Box Point
- Sewerage Isolation Valve
- Soakaway
- Surface Water Manhole
- Vent Column
- Waste Water Storage
- Culverted Watercourse
- Pre-1937 Properties

- MATERIALS**
- AC - ASBESTOS CEMENT
  - BR - BRICK
  - CC - CONCRETE BOX CULVERT
  - CI - CAST IRON
  - CO - CONCRETE
  - CSB - CONCRETE SEGMENTS (BOLTED)
  - CSU - CONCRETE SEGMENTS (UNBOLTED)
  - DI - DUCTILE IRON
  - GRC - GLASS REINFORCED CONCRETE
  - MAC - MASONRY IN REGULAR COURSES
  - MAR - MASONRY RANDOMLY COURSED
  - PE - POLYETHYLENE
  - PF - PITCH
  - PP - POLYPROPYLENE
  - PSC - PLASTIC STEEL COMPOSITE
  - PVC - POLYVINYL CHLORIDE
  - RFM - REINFORCED PLASTIC MATRIX
  - SI - SPUN (GREY) IRON
  - XXX - OTHER

- CATEGORIES**
- W - WEIR
  - C - CASCADE
  - DB - DAMBOARD
  - SE - SIDE ENTRY
  - FV - FLAP VALVE
  - BD - BACK DROP
  - S - SIPHON
  - HD - HIGHWAY DRAIN
  - S104 - SECTION 104
  - C - CIRCULAR
  - E - EGG SHAPED
  - O - OTHER
  - R - RECTANGLE
  - S - SQUARE
  - T - TRAPEZOIDAL
  - U - UNKNOWN

- TABULAR KEY**
- A. Sewer pipe data refers to downstream sewer pipe.
  - B. Where the node bifurcates (spits) X and Y indicates downstream sewer pipe.
  - C. Gradient is stated a 1 in...
- PURPOSE**
- C - COMBINED
  - E - FINAL EFFLUENT
  - F - FOUL
  - L - SLUDGE
  - S - SURFACE WATER



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**SEWER RECORD (TABULAR)**

O/S Map scale: 1:1250  
 Date of issue: 15.04.16  
 Sheet No. 1 of 1  
 This map is centred upon:  
 O / S Tile reference:  
 SP3167SW

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 3. On 1 October 2011 most private sewers and private lateral drains in Severn Trent Water's sewerage area, which were connected to a public sewer as at 1 July 2011, transferred to the ownership of Severn Trent Water and became public sewers and public lateral drains. A further transfer takes place on 1 October 2012 (date to be confirmed). Private pumping stations, which form part of these sewers or lateral drains, will transfer to the ownership of Severn Trent Water on or before 1 October 2016.  
 Severn Trent Water does not possess complete records of these assets.  
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SEWER NODE	COVER LEVEL	INVERT UPSTR	INVERT DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAD
SP31675001	63.37	61.16	60.84	C	VC	C	225	nil	163.38	nil
SP31675002	63.12	60.83	nil	C	VC	C	225	nil	0.00	nil
SP31675003	nil	nil	60.55	C	VC	C	225	nil	0.00	nil
SP31675004	67.21	62.05	nil	F	BR	EL	480	500	0.00	nil
SP31675005	67.26	66.29	65.00	S	CO	C	300	nil	232.14	nil
SP31675006	66.81	65.23	65.27	S	CO	C	300	nil	0.00	nil
SP31675007	62.01	62.20	62.25	F	BR	E	300	600	287.52	nil
SP31675008	66.73	65.73	65.23	S	CO	C	300	nil	128.80	nil
SP31675009	63.32	60.71	60.18	C	CO	C	450	nil	125.54	nil
SP31675010	64.89	61.70	61.43	C	VC	C	300	nil	189.15	nil
SP31675011	65.18	62.05	61.73	C	VC	C	225	nil	117.31	nil
SP31675012	65.70	62.94	62.08	O	VC	C	225	nil	80.35	nil
SP31675013	66.97	64.78	62.94	C	VC	C	225	nil	51.73	nil
SP31675014	67.09	62.80	62.25	F	BR	E	425	560	187.69	nil
SP31675015	67.04	65.20	64.77	C	VC	C	225	nil	88.58	nil
SP31675016	67.00	65.98	65.74	S	CO	C	300	nil	195.29	nil
SP31675017	64.80	61.28	60.77	C	CO	C	450	nil	171.20	nil
SP31675018	64.89	63.37	nil	S	VC	C	300	nil	0.00	nil
SP31675019	64.70	63.81	63.39	F	U	U	300	nil	182.71	nil
SP31675020	nil	nil	63.00	F	U	U	300	nil	0.00	nil
SP31675021	66.11	63.81	63.05	F	PVC	C	300	nil	128.98	nil
SP31675022	65.88	64.23	63.93	S	CO	C	375	nil	288.44	nil
SP31675023	nil	nil	nil	F	U	U	100	nil	0.00	nil
SP31675024	nil	nil	61.37	C	VC	C	450	nil	0.00	nil
SP31675025	67.04	65.88	64.89	S	VC	C	225	nil	61.83	nil
SP31675026	66.88	64.83	64.81	S	VC	C	375	nil	671.00	nil
SP31675027	66.81	65.55	63.85	F	VC	C	300	nil	46.72	nil
SP31675028	66.62	64.80	64.24	S	CO	C	375	nil	202.43	nil
SP31675029	68.91	67.09	66.90	S	VC	C	500	nil	349.83	nil
SP31675030	68.00	65.30	64.99	F	VC	C	225	nil	219.39	nil
SP31675031	68.45	66.49	65.69	S	VC	C	225	nil	63.74	nil
SP31675032	67.78	65.07	63.08	F	VC	C	225	nil	0.00	nil
SP31675033	69.05	67.26	67.09	S	VC	C	225	nil	34.44	nil
SP31675034	69.09	66.49	65.25	F	VC	C	225	nil	15.86	nil
SP31675035	69.09	66.49	65.25	F	VC	C	225	nil	15.86	nil
SP31675036	69.09	66.49	65.25	F	VC	C	225	nil	15.86	nil
SP31675037	69.09	66.49	65.25	F	VC	C	225	nil	15.86	nil
SP31675038	68.82	66.66	65.78	S	VC	D	300	nil	110.32	nil
SP31675039	68.80	66.05	65.67	F	VC	C	225	nil	171.37	nil
SP31675040	69.49	66.89	66.67	S	VC	C	300	nil	298.00	nil
SP31675041	69.44	66.89	65.32	F	VC	C	225	nil	202.21	nil
SP31675042	66.08	68.21	67.38	S	VC	C	225	nil	63.27	nil
SP31675043	67.80	65.49	65.68	F	VC	C	225	nil	0.00	nil
SP31675044	70.00	67.44	66.81	F	VC	C	225	nil	86.69	nil
SP31675045	71.33	70.12	69.88	S	VC	C	225	nil	196.38	nil
SP31675046	nil	nil	nil	F	U	U	nil	nil	0.00	nil
SP31675047	nil	nil	nil	F	U	U	nil	nil	0.00	nil
SP31675048	nil	nil	nil	F	U	U	nil	nil	0.00	nil
SP31675049	nil	nil	nil	F	U	U	nil	nil	0.00	nil
SP31675050	nil	nil	nil	F	U	U	nil	nil	0.00	nil

**LEGEND**

- Abandoned Sewer
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- Private Foul Gravity Sewer
- Private Surface Water Gravity Sewer
- Public Combined Gravity Sewer
- Public Foul Gravity Sewer
- Public Surface Water Gravity Sewer
- Trunk Combined Gravity Sewer
- Trunk Foul Use Gravity Sewer
- Trunk Surface Water Gravity Sewer
- Combined Use Pressurised Sewer
- Foul Use Pressurised Sewer
- Surface Water Pressurised Sewer
- Highway Drain
- Combined Lateral Drain (SS)
- Foul Lateral Drain (SS)
- Surface Water Lateral Drain (SS)

**SYMBOLS**

- Cable, Earthing
- Cable Junction
- Cable, Optical Fibre/Instrumentation
- Cable, Low Voltage
- Cable, High Voltage
- Cable, Other
- Housing, Building
- Housing, Kiosk
- Disposal Site
- Sewage Treatment Works
- Housing, Other
- Pipe Support Structure
- Sewage Pumping Facility
- Sewer Facility Connection Inlet / Outlet

**OTHER SYMBOLS**

- Blind Shaft
- Combined Use Manhole
- Flushing Chamber
- Foul Use Manhole
- Grease Trap
- Head Node
- Hydrobrake
- Lampole
- Outfall
- Overflow
- Penstock
- Petrol Interceptor
- Sewer Blockage
- Sewer Collapse
- Sewer Chemical Injection Point
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- Sewerage Air Valve
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**CATEGORIES**

- W - WEIR
- C - CASCADE
- DB - DAMBOARD
- SE - SIDE ENTRY
- FV - FLAP VALVE
- BD - BACK DROP
- S - SIPHON
- HD - HIGHWAY DRAIN
- S104 - SECTION 104

**TABULAR KEY**

- A. Sewer pipe data refers to downstream sewer pipe.
- B. Where the node bifurcates (spits) X and Y indicates downstream sewer pipe.
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**PURPOSE**

- C - COMBINED
- E - FINAL EFFLUENT
- F - FOUL
- L - SLUDGE
- S - SURFACE WATER

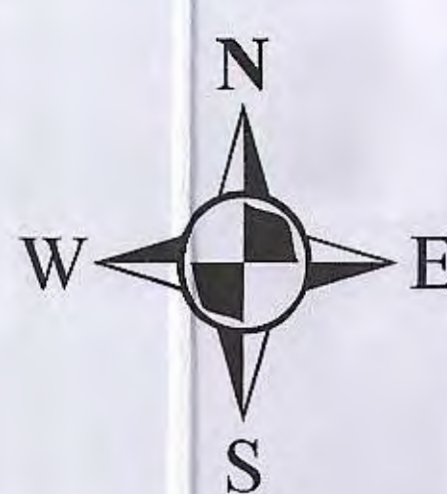
**Severn Trent Water Limited**  
 Asset Data Management  
 PO Box 5344  
 Coventry  
 CV3 9FT  
 Telephone: 0845 601 6616

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## SEWER RECORD (TABULAR)

O/S Map scale: 1:1250      This map is centred upon:  
 Date of issue: 15.04.16      O/S Tile reference:  
 Sheet No. 1 of 1      SP3167SE

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REFERENCE	COVER LEVEL	IN/LEVEL UPSTR	IN/LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SP3066501	57.08	55.48	55.16	S	VC	C	225	nil	200.25	nil
SP3066502	58.29	56.09	54.96	S	VC	C	225	nil	144.02	nil
SP3066503	56.42	54.85	53.95	S	CO	C	300	nil	62.14	nil
SP3066504	56.51	53.65	53.05	S	CO	C	450	nil	28.56	nil
SP3066505	56.63	55.40	53.40	F	VC	C	225	nil	37.79	nil
SP3066506	59.41	57.83	56.82	S	VC	C	225	nil	60.04	nil
SP3066507	56.79	54.79	54.06	S	VC	C	225	nil	188.78	nil
SP3066508	61.27	58.94	56.07	F	VC	C	225	nil	15.76	nil
SP3066509	58.97	56.64	55.49	F	VC	C	225	nil	24.82	nil
SP3066510	57.57	55.47	54.48	F	VC	C	225	nil	41.90	nil
SP3066511	57.85	56.60	55.53	F	VC	C	225	nil	103.25	nil
SP3066512	61.17	59.21	57.12	S	VC	C	225	nil	16.71	nil
SP3066513	58.92	57.12	56.09	S	VC	C	225	nil	20.39	nil
SP3066514	57.57	56.03	54.92	S	CO	C	300	nil	31.89	nil
SP3066515	59.38	56.78	56.31	F	U	C	150	nil	105.09	nil
SP3066516	57.81	56.31	55.18	F	VC	C	150	nil	0.00	nil
SP3066517	59.28	57.08	56.88	S	CO	C	375	nil	121.08	nil
SP3066518	57.84	56.65	55.58	S	CO	C	375	nil	0.00	nil
SP3066519	58.15	56.56	55.31	S	CO	C	450	nil	51.21	nil
SP3066520	58.30	57.16	55.42	F	VC	C	225	nil	48.28	nil
SP3066521	58.92	57.38	56.56	S	CO	C	450	nil	96.08	nil
SP3066522	63.52	61.06	60.03	S	VC	C	150	nil	25.52	nil
SP3066523	60.89	58.16	57.58	S	CO	C	450	nil	44.21	nil
SP3066524	65.45	63.24	61.03	F	VC	C	225	nil	26.70	nil
SP3066525	63.84	61.78	59.69	F	VC	C	225	nil	17.58	nil
SP3066526	65.46	63.81	62.14	S	VC	C	225	nil	22.48	nil
SP3066527	63.93	62.07	59.21	S	VC	C	225	nil	17.32	nil
SP3066528	65.43	63.60	60.82	F	VC	C	150	nil	13.51	nil
SP3066529	63.46	60.75	58.78	F	VC	C	150	nil	13.94	nil
SP3066530	62.37	63.79	61.20	S	VC	C	225	nil	14.92	nil
SP3066531	63.38	61.23	59.26	S	VC	C	225	nil	12.94	nil
SP3066532	61.01	59.22	57.25	F	VC	C	225	nil	0.00	nil
SP3066533	65.40	63.71	62.03	S	VC	C	225	nil	25.22	nil
SP3066534	62.79	58.69	56.18	S	CO	C	600	nil	182.45	nil
SP3066535	65.62	64.13	63.88	S	VC	C	150	nil	72.12	nil
SP3066536	65.19	63.05	62.30	S	VC	C	225	nil	45.35	nil
SP3066537	64.68	63.56	62.44	F	VC	C	150	nil	66.71	nil
SP3066538	65.31	64.43	63.68	F	VC	C	150	nil	57.57	nil
SP3066539	nil	nil	nil	nil	nil	nil	nil	nil	0.00	nil
SP3066540	nil	nil	nil	nil	nil	nil	nil	nil	0.00	nil
SP3066541	nil	nil	nil	nil	nil	nil	nil	nil	0.00	nil
SP3066542	61.01	60.02	59.28	S	VC	C	225	nil	66.07	nil
SP3066543	64.04	62.35	61.78	S	VC	C	225	nil	144.25	nil
SP3066544	63.69	62.44	61.27	F	VC	C	225	nil	37.86	nil
SP3066545	60.91	59.98	58.81	F	VC	C	225	nil	0.00	nil
SP3066546	61.46	59.90	58.69	S	CO	C	600	nil	278.19	nil
SP3066547	62.42	60.95	59.29	S	VC	C	225	nil	33.38	nil
SP3066548	nil	nil	58.67	S	nil	nil	nil	nil	0.00	nil
SP3066549	64.65	63.39	62.27	S	VC	C	150	nil	24.80	nil
SP3066550	nil	nil	nil	nil	nil	nil	nil	nil	0.00	nil
SP3066551	65.10	60.43	60.02	S	VC	C	225	nil	61.54	nil
SP3066552	63.77	59.92	59.04	F	VC	C	225	nil	123.00	nil
SP3066553	63.16	61.25	60.84	F	VC	C	225	nil	25.46	nil
SP3066554	62.57	60.15	60.01	F	U	C	225	nil	175.83	nil
SP3066555	62.94	60.27	60.20	F	VC	C	225	nil	129.43	nil
SP3066556	62.65	61.81	61.51	S	CO	C	375	nil	218.83	nil
SP3066557	62.65	61.78	61.53	S	VC	C	225	nil	260.76	nil
SP3066558	nil	nil	61.30	S	nil	nil	nil	nil	0.00	nil
SP3066559	62.88	61.50	61.00	S	CO	C	375	nil	0.00	nil
SP3066560	62.69	61.43	61.00	S	VC	C	300	nil	0.00	nil
SP3066561	63.28	61.34	61.00	S	CO	C	375	nil	0.00	nil
SP3066562	62.71	61.30	60.34	F	VC	C	225	nil	81.18	nil
SP3066563	62.86	61.75	61.36	S	VC	C	225	nil	53.80	nil
SP3066564	64.44	62.84	61.32	F	VC	C	150	nil	65.39	nil
SP3066565	64.45	62.73	61.32	S	VC	C	225	nil	0.00	nil
SP3066566	64.79	62.87	62.65	F	VC	C	150	nil	116.50	nil
SP3066567	64.81	62.96	62.71	S	VC	C	225	nil	74.72	nil
SP3066568	65.32	63.90	62.93	F	VC	C	150	nil	64.96	nil
SP3066569	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066570	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066571	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066572	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066573	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066574	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066575	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066576	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066577	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066578	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066579	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066580	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066581	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066582	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
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SP3066584	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066585	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066586	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066587	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066588	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066589	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066590	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066591	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066592	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066593	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066594	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066595	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066596	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066597	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066598	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066599	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil
SP3066600	nil	nil	62.93	F	U	nil	nil	nil	0.00	nil

- Abandoned Sewer
- Private Combined Gravity Sewer
- Private Foul Gravity Sewer
- Private Surface Water Gravity Sewer
- Public Combined Gravity Sewer
- Public Foul Gravity Sewer
- Public Surface Water Gravity Sewer
- Trunk Combined Gravity Sewer
- Trunk Foul Use Gravity Sewer
- Trunk Surface Water Gravity Sewer
- Combined Use Pressurised Sewer
- Foul Use Pressurised Sewer
- Surface Water Pressurised Sewer
- Highway Drain
- Combined Lateral Drain (SS)
- Foul Lateral Drain (SS)
- Surface Water Lateral Drain (SS)
- Cable, Earthing
- Cable Junction
- Cable, Optical Fibre/Instrumentation
- Cable, Low Voltage
- Cable, High Voltage
- Cable, Other
- Housing, Building
- Housing, Kiosk
- Disposal Site
- Sewage Treatment Works
- Housing, Other
- Pipe Support Structure
- Sewage Pumping Facility
- Sewer Facility Connection Inlet / Outlet
- Blind Shaft
- Combined Use Manhole
- Flushing Chamber
- Foul Use Manhole
- Grease Trap
- Head Node
- Hydrobrake
- Lamphole
- Outfall
- Overflow
- Penstock
- Petrol Interceptor
- Sewer Blockage
- Sewer Collapse
- Sewer Chemical Injection Point
- Sewer Junction
- Sewerage Air Valve
- Sewerage Hatch Box Point
- Sewerage Isolation Valve
- Soakaway
- Surface Water Manhole
- Vent Column
- Waste Water Storage
- Culverted Watercourse
- Pre-1937 Properties

- MATERIALS**
- AC - ASBESTOS CEMENT
  - BR - BRICK
  - CC - CONCRETE BOX CULVERT
  - CI - CAST IRON
  - CO - CONCRETE
  - CSB - CONCRETE SEGMENTS (BOLTED)
  - CSU - CONCRETE SEGMENTS (UNBOLTED)
  - DI - DUCTILE IRON
  - GRC - GLASS REINFORCED CONCRETE
  - MAC - MASONRY IN REGULAR COURSES
  - MAR - MASONRY RANDOMLY COURSED
  - PE - POLYETHYLENE
  - PF - PITCH
  - PP - POLYPROPYLENE
  - PSC - PLASTIC STEEL COMPOSITE
  - PVC - POLYVINYL CHLORIDE
  - RFM - REINFORCED FIBRE MATRIX
  - SI - SPUN (GREY) IRON
  - XXX - OTHER

- CATEGORIES**
- W - WIER
  - C - CASCADE
  - DB - DAMBOARD
  - SE - SIDE ENTRY
  - FV - FLAP VALVE
  - BD - BACK DROP
  - S - SIPHON
  - HD - HIGHWAY DRAIN
  - S104 - SECTION 104
  - C - CIRCULAR
  - E - EGG SHAPED
  - O - OTHER
  - R - RECTANGLE
  - S - SQUARE
  - T - TRAPEZOIDAL
  - U - UNKNOWN

- TABULAR KEY**
- A. Sewer pipe data refers to downstream sewer pipe.
  - B. Where the node bifurcates (splits) X and Y indicates downstream sewer pipe.
  - C. Gradient is stated a 1 in...
- PURPOSE**
- C - COMBINED
  - E - FINAL EFFLUENT
  - F - FOUL
  - L - SLUDGE
  - S - SURFACE WATER



SEVERN TRENT WATER

Severn Trent Water Limited  
Asset Data Management  
PO Box 5344  
Coventry  
CV3 9FT  
Telephone: 0845 601 6616

**SEWER RECORD (TABULAR)**

O/S Map scale: 1:1250  
Date of issue: 15.04.16  
Sheet No. 1 of 1

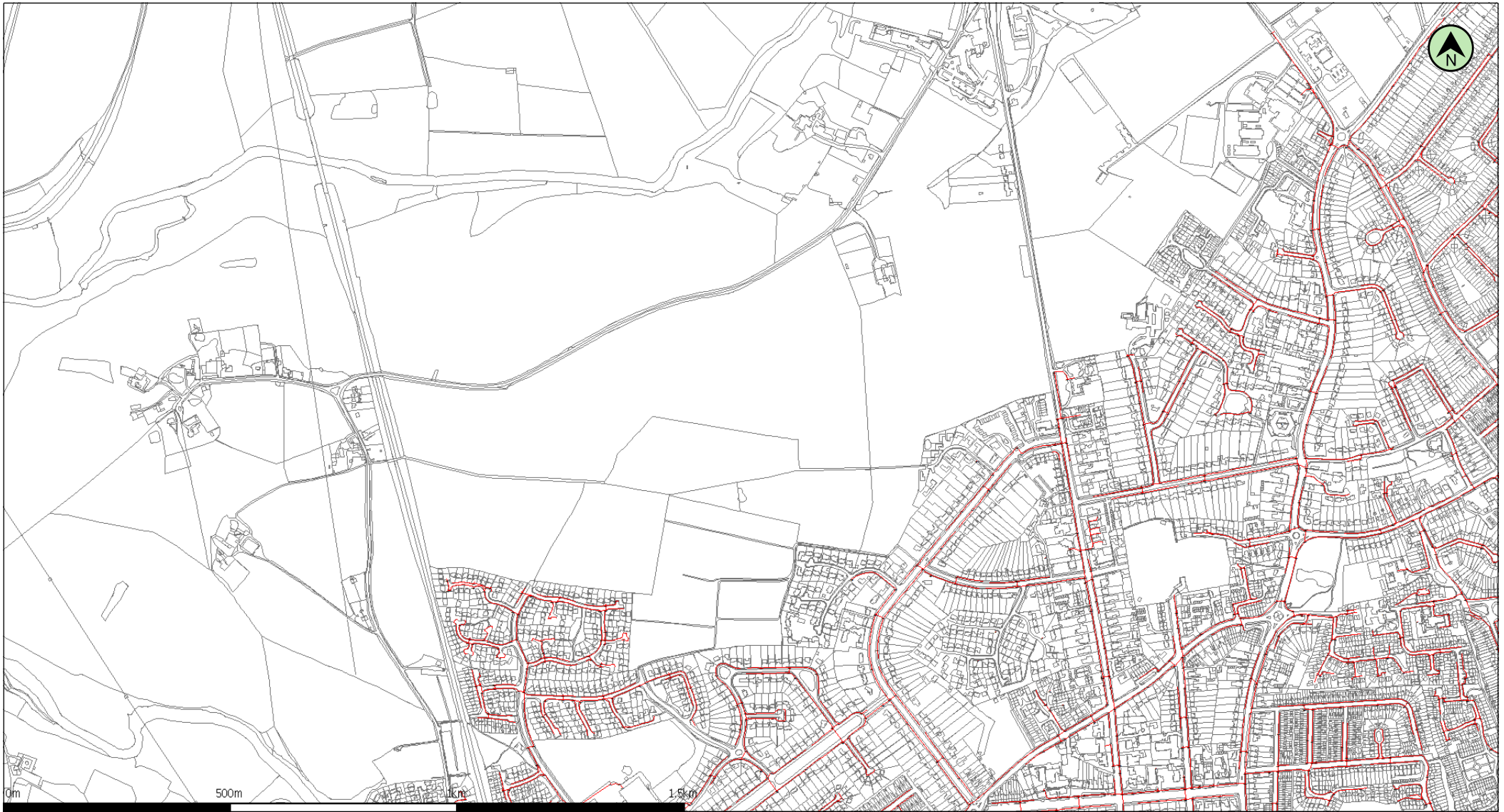
This map is centred upon:  
O / S Tile reference: SP3066NE

**Disclaimer Statement:**  
1. Do not scale off this Map.  
2. This map and any information supplied with it is furnished as a general guide, is only valid at the date of issue and no warranty as to its correctness is given or implied. In particular this Map and any information shown on it must not be relied upon in the event of any development or works (including but not limited to excavations) in the vicinity of Severn Trent Water's assets or for the purposes of determining the suitability of a point of connection to the sewerage or distribution systems.  
3. On 1 October 2011 most private sewers and private lateral drains in Severn Trent Water's sewerage area, which were connected to a public sewer as at 1 July 2011, transferred to the ownership of Severn Trent Water and became public sewers and public lateral drains. A further transfer takes place on 1 October 2012 (date to be confirmed). Private pumping stations, which form part of these sewers or lateral drains, will transfer to the ownership of Severn Trent Water on or before 1 October









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Date: 14/04/16

Scale: 1:11904

Map Centre: 430965,267416

Data updated: 28/02/16

Telecoms Plan A4

Important Information - please read The purpose of this plan is to identify Virgin Media apparatus. We have tried to make it as accurate as possible but we cannot warrant its accuracy. In addition, we caution that within Virgin Media apparatus there may be instances where mains voltage power cables have been placed inside green, rather than black ducting. Further details can be found using the 'Affected Postcodes.pdf', which can be downloaded from this website. Therefore, you must not rely solely on this plan if you are carrying out any excavation or other works in the vicinity of Virgin Media apparatus. The actual position of any underground service must be verified by cable detection equipment, etc. and established on site before any mechanical plant is used. Accordingly, unless it is due to the negligence of Virgin Media, its employees or agents, Virgin Media will not have any liability for any omissions or inaccuracies in the plan or for any loss or damage caused or arising from the use of and/or any reliance on this plan. This plan is produced by Virgin Media Limited (c) Crown copyright and database rights 2016 Ordnance Survey 100019209.

Duct, Trench



Chamber



Cabinet

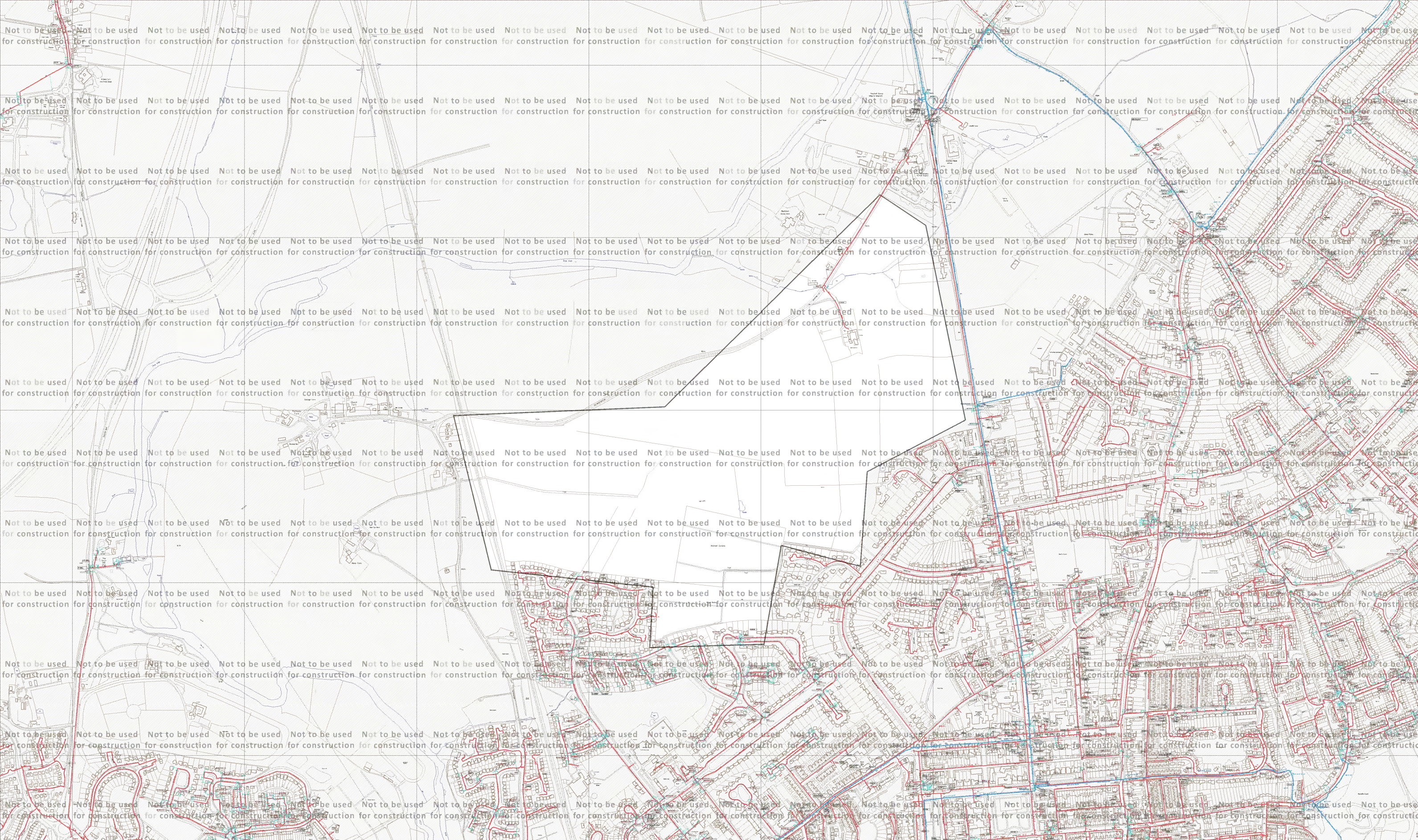


sultan.mohammed@virginmedia.co.uk








VM.144732













ID: WM\_TW\_Z2\_3SWP\_231039 View extent: 4120m, 2440m **Map not to be used for construction** Map 1 of 1 (GAS)

<p><b>USER:</b> Waheed.Sheikh  <b>DATE:</b> 14/04/2016  <b>DATA DATE:</b> 13/04/2016  <b>REF:</b> (WS) Old Milverton  <b>MAP REF:</b> SP3067  <b>CENTRE:</b> 430850, 267469</p>	<p>LP MAINS   MP MAINS   IP MAINS   LHP MAINS   NHP MAINS </p> <p>0m  200m  Approximate scale 1:10000  on A3 Colour Landscape</p>	<p>This plan shows those pipes owned by National Grid Gas plc in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc., are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by 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 included on this plan should not be referred to beyond a period of 28 days from the date of issue.</p>	<p>MAPS Plot Server Version 1.9.0</p>  <p>Requested by: M-EC  This plan is reproduced from or based on the OS map by National Grid Gas plc, with the sanction of the controller of HM Stationery Office.  Crown Copyright Reserved. Ordnance Survey Licence number 100024886</p>
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Some examples of Plant Items:

					
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Civil Engineering

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Drainage

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Flood Risk

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Transport

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Highways

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Structures

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Geotechnics

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Contamination

---

Sustainability

---

Environment

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Services

---

Surveying

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