

SAFETY HEALTH & ENVIRONMENTAL PLAN

PROJECT:	Dandara Homes
ADDRESS:	Bull Field Takeley, CM22 6NS

Rev	Date	Description of Revision	Prepared by	Checked by	Authorised by
V1.0	23/10/2025	Initial Draft	AS	AS	AS

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1 INTRODUCTION

This **Health & Safety Plan** is produced in line with the requirements of the *Construction (Design and Management) Regulations (CDM) 2015* and, as such, sets out the management plan for ensuring that,

This document considers the health & safety issues associated with the construction of the specific project named on the front cover page.

Prospective contractors tendering for work with Houlihan & Co. (Excavations) Limited will receive a copy of this document as part of the tender documents. This document provides information relating to project-specific health and safety risks and requirements so that they can be addressed during the tendering and planning stages of the works.

Having studied the contents of this plan, should any reader have any comments, questions, or contributions to make, they are encouraged to bring these to the attention of Houlihan & Co. so that they may be considered and incorporated where appropriate.

Additional information relating to safety procedures mentioned within this document may be obtained from Houlihan & Co.

A copy of this document will be kept on site at all times and constantly revised and updated to reflect the various phases of the project, input from contractors, and any changing health and safety requirements generated from within and outside the project.

For any part of the project for which Houlihan & Co. is the principal contractor, Houlihan & Co. Health & Safety Management System will be implemented as the minimum standard on this site.

Houlihan & Co (Excavations) Ltd. Management Systems are certified to ISO 9001: 2015, ISO 14001: 2019

2 PROJECT DETAILS

2.1 PROJECT DESCRIPTION

The works are part of a new development that includes the construction of 96 new residential dwellings, including associated parking, landscaping, public open space, land for the expansion of Roseacres Primary School, pedestrian and cycle routes to Smiths.

For the exact location, please see **Appendix A – Site Layout**.

The start date is anticipated to be 3rd November 2025. Houlihan & Co (Excavations) will take the Principal Contractor's role for 8 weeks. This period may be reviewed depending on production. During this phase, the scope of work will include installing foundations and temporary and permanent road construction, including surface water drainage, etc. Once on site, a temporary site compound and temporary welfare facilities, a car park, and a storage area will be constructed.

CDM Duty Holders

Refer to the copy of Form F10 for details of the duty holders appointed for this project in accordance with CDM. **Appendix B – F10**

Client	Dandara Ltd Eastern. Majesty House, Skyline 120 Braintree CM77 7AA	Contact: John Stanton Regional Director Tel: 01376 428999
Principal Contractor	Houlihan & Co (Excavations) Ltd. Unit J2 Brookland Close Sunbury on Thames TW16 7DX	Contact: Richard Carroll Tel: 01784 250650 Richard.Carroll@houlihans.co.uk
Architects	BM3 Selous House, 5-12 Mandela Street. London, NW1 0DU	Contact: Tel: 020 3861 3290 Email: design@bm3.co.uk
Structural & Civil Engineers	INGENT Consulting Engineering Unit 1a Greenwood Court, Skyliner Way, Bury St Edmunds, IP32 7GY	Contact: Tel: 01284 245024 Email: info@ingent.co.uk

3 CDM MANAGEMENT REQUIREMENTS

3.1 HEALTH AND SAFETY GOALS

The following health and safety goals are to be established for this project:

- Protect the environment, assess all hazardous activities, and provide safe systems of work
- ensure all site operatives have been inducted and are skilled, knowledgeable and experienced
- provide regular information and instruction
- Ensure all operatives wear appropriate Personal Protective Equipment
- prevent accidents, near misses, work-related illnesses and dangerous occurrences

Should this fail to be achieved, then:

- Ensure that an investigation determines the cause
- Report the accident/incident, near miss or dangerous occurrence to the HSE, when applicable and ensure the Client is notified
- Take remedial actions and communicate with the workforce to prevent a recurrence

3.2 MANAGEMENT STRUCTURE

While Houlihan & Co. is the principal contractor, they will provide a competent supervisor whose health and safety responsibilities will include ensuring all works carried out on this project are done in the safest, most reasonably practical manner. Details of the management structure on this site will be provided at the site induction (see 5.4 below), which all contractors' operatives must attend.

Houlihan & Co. (Excavations) Ltd.

Head Office: Unit J2, Brooklands Close, Sunbury on Thames, Middlesex TW16 7DX

Tel: 01784 250 650

- R. Hume – Site Supervisor: 07818 016947
- F. Christesku – Site Engineer: 07778 705450
- C. Gough – Contract Manager: 07947 984996
- R. Carroll - Construction Director: 07884 490755
- R. Knight - Managing Director: 07775 625 421
- A. Selita - H&S advisor: 07507 430655

3.3 SAFETY MONITORING AND SITE SAFETY INSPECTIONS

The site safety performance of all works will be continuously monitored. This will include the following:

- The contractors' site supervisors shall conduct daily inspections of the workplace before starting and during the work to check that all their operatives are not at risk or putting others at risk.
- Houlihan & Co. Site Supervisors will continuously monitor the site. The supervisors will address any unsafe activities observed.
- Formal weekly inspections by the Houlihan & Co. Site Supervisors. All observations will be recorded on the standard Weekly Site Safety Inspection Report form.
- Monthly inspections by Houlihan & Co. Health & Safety Manager. Any observations will be recorded, and copies of the report will be issued to the Site Supervisor and Construction Director.

The above inspections will be supplemented by random inspections by the Contracts Manager and Construction Director. All workers and visitors to the site are expected to report any unsafe practices observed to the Site Supervisor.

3.4 COMMUNICATION AND LIAISON

It is the Policy of Houlihan & Co (Excavations) to communicate fully with all parties involved in this project; good standards of communication must be implemented and maintained throughout the duration of this project.

To ensure a constant flow of health and safety information, all organisations appointed either as Subcontractors or principal contractors must hold regular meetings with the principal contractor and/or Persimmon Homes as the Client and with site operatives.

Safety information provided by the principal and sub-contractors must be:

- clearly written and easily understood
- control all known risks
- passed on to all site operatives during induction and training
- fully implemented and understood by site management and operatives
- recorded, with all site records maintained until after project completion

These communication arrangements should involve everyone appointed as Duty Holders under the CDM 2015 Regulations, as well as all site staff and contractors.

3.5 CONTRACTOR MEETINGS

Regular meetings will be held between all the contractors and the Houlihan & Co. Site Supervisor to review all relevant health & safety issues and coordinate future activities so they can be carried out safely at all times.

3.6 EMPLOYEE CONSULTATION

All site operatives must raise any health & safety concerns, observations or suggestions directly with their supervisor, who should deal with them. Issues outside the control of the individual contractor should be raised with the Houlihan & Co. Site Supervisor. Every item will be addressed.

In every case, the individual or contractor who raised the issue will be advised of the action taken or, if no action is taken, the reasons why.

Issues that can be dealt with directly by the contractor as a part of his own work and/or responsibility do not need to be brought to the attention of Houlihan & Co. unless it is a common problem, affects others, or there are lessons to be learnt by others.

A site safety representative will be appointed, and we can encourage someone to take this responsibility. Training will be provided.

3.7 CONTRACTOR COMPETENCY

Every contractor working on this site must be competent to do the relevant work and allocate adequate resources to it, and have the ability to comply with their legal duties for health & safety. This includes sufficient time and resources to work safely at all times while on this project.

The competency of each new contractor will be assessed through the tendering process. Each such contractor will need to demonstrate a successful track record in similar work. Existing contractors will

be assessed as part of the regular health and safety inspections carried out by the Site Supervisor, independent safety advisors, and Houlihan Safety Advisor.

Risk Assessments and Method Statements for all Contractors must be supplied ahead of time to the Houlihan Health and Safety Dept for review.

3.8 COMPETENCY OF OPERATIVE

All operatives working on this site must be competent to carry out their work. This competency must be demonstrated by suitable training and experience and includes, as a minimum, the following trades that must have formal and approved training and hold a valid training certificate or card:

Forklift operators
Excavation plant operators
Dumper drivers
Scaffolders
Hoist operators
Crane Supervisors
Crane operators
Slinger and signallers
Electricians
Plumbers
Gas fitters

Groundworkers working on the public highway.

Houlihan & Co. recognises the following construction industry training registration schemes as an acceptable standard of operative training.

Construction Skills Certification Scheme (CSCS)

Construction Skills Register (N Ireland)

Gas Safe Certificate Certificates

Demolition Operatives (CITB or NFDC)

Lead Workers Certificate

National Plant Operators Registration Scheme

Steeplejacks & Lightning Conductor Scheme

Street Works Register

Construction Plant Competence Scheme

Solas cards issued by an Irish government agency can be transferred to the CPCS scheme with further test compliance. We will assist with this should it arise again.

All operatives wishing to work on this site who do not have any trade or task-specific training containing recognised health & safety content must attend and pass the health & safety module of the Construction Skills Certification Scheme (CSCS) and produce evidence to this effect. This is an industry-wide requirement.

3.9 METHOD STATEMENTS

Before carrying out any operations on this site, each contractor must assess the risks associated with their work and, using risk assessments, produce a method statement detailing how the work will be carried out safely. This must include details of how the risks identified in this Plan will be addressed.

The format to be used may be in accordance with the contractors' own procedures, but should contain, as a minimum, the following information:

- Front sheet - name of contractor, date, title of method statement and the name of this site.
- Scope of work

- How it is going to be done – method of carrying out the work safely, including the sequence of operations
- Who is going to do it – names of personnel and their training records.
- With what are they going to do it – plant and equipment.
- What are the risks – list risks and the proposed control measures, including PPE.
- What emergency procedures will be in place, including reporting procedures.
- Sketch and/or drawings of how it's going to be done, if necessary

No contractor will be allowed to start their works on this site until such time as the method statement has been approved by Houlihan & Co. All contractors due to be on-site in the period while we are PC are to be informed by Persimmon Homes to send their risk assessment, method statement, etc, to Houlihan & Co. For specific Risk Assessments and Method Statements, please see

Appendix J - Method Statements and Risk Assessments

3.10 SITE RULES

The project safety rules for this site will be presented in the site office and canteen for all workers to consider. They will also be briefed on the site's induction. Everyone working on this site must comply with these and any additional site-specific rules highlighted during the induction. See **Appendix C—Project Site Rules & Supervision on Site.**

3.11 INDUCTION AND TRAINING

All operatives working on this site must attend the Houlihan & Co. Site Health & Safety Induction before starting work. This induction is site-specific; attendance at similar inductions on other Houlihan & Co. sites does not exempt anyone from attending the inductions on this site. The site supervisor will carry out these inductions.

Where the Site Supervisor has confidence in the ability of the contractor's site supervisors, he can induct them and then delegate the responsibility to them to induct their own operatives. In such cases, the format of the Houlihan & Co. induction must be strictly followed, including signing attendance registers.

All visitors to the site must be escorted at all times while in the construction area. This includes anyone visiting members of the subcontractors' staff.

The above induction is only intended to inform operatives of the main hazards and arrangements on this site. In addition, each contractor must also induct their own operatives into the content and requirements of their own Risk Assessments and Method Statements and provide all necessary health and safety training as required by legislation and the risks faced while at work.

Please see **Appendix E – Site Health and Safety Induction**

3.12 PERSONAL PROTECTIVE EQUIPMENT

Please note the following minimum items of personal protective equipment must be worn by all operatives, at all times, while on site, regardless of the particular activity being carried out or the location of the work.

Safety helmet

Safety shoes

High visibility clothing

The full specification for items of PPE is as follows:

SAFETY HELMET: BS EN 397;1995 JSP MKIID

EAR DEFENDERS: BS EN 352-1;1993 SUPAMAF

HI-VIS JACKETS BS EN 471

EYE PROTECTION BS EN 166; 1995 1. B

RESPIRATORY PROTECTION BS EN 149;2001 FFP3

FOOTWEAR- SAFETY BOOTS BS EN 345; 1993

- WELLINGTON BOOTS (SAFETY) BS EN 345-1; 1993

GLOVES- STANDARD PVC, GROSS GRAIN PVC COATED BS EN 388; 1994

RATED: 3121 2141; ALSO, A GLOVE SELECTION POLICY BASED ON RISK WILL BE IN FORCE AND MUST BE WORN AT ALL TIMES WHEN ON SITE AWAY FROM THE COMPOUND.

FOR ALL WORKS ON OR NEAR SERVICES, ARC BAN FLAME-RESISTANT CLOTHING WILL BE WORN- THIS IS AN INDIVIDUALLY FITTED, PERSONAL ISSUE.

This excludes the site compound. In exceptional circumstances, the Site Supervisor can grant special dispensations. Turban-wearing Sikhs are exempt from the requirement to wear safety helmets.

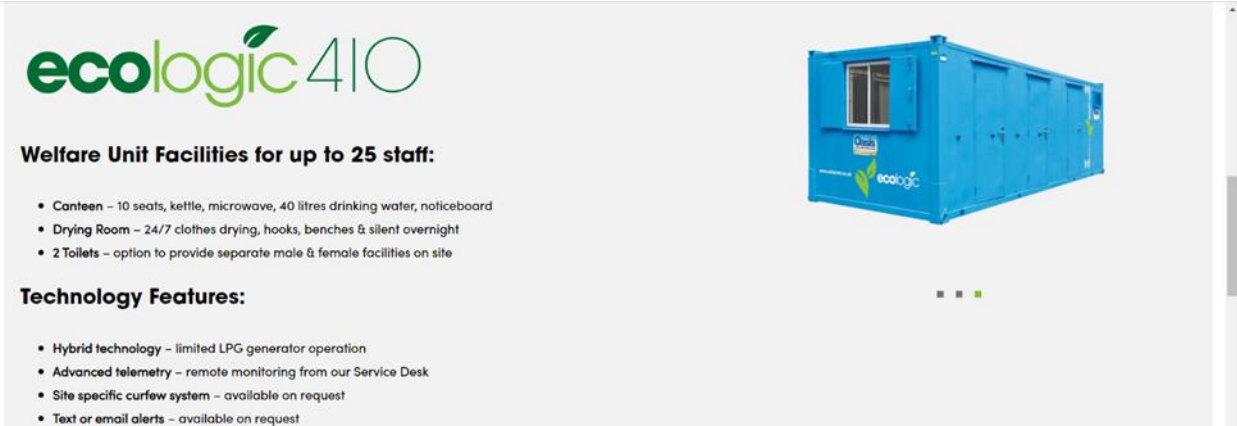
3.13 COMPOUND & WELFARE

The site includes a compound containing offices, welfare facilities and storage, which is in accordance with the Houlihan & Co. Health & Safety Management System.

Similar to this, an Oasis unit will be hired in, along with a canteen, dry room, office units, and a block of toilets. Depending on the number of personnel first selected to initiate the groundworks phase, these may, however, take the form of four separate blocks.

We are responsible for our estimated 8 weeks as Principal Contractors. Depending on production, this period may be reviewed.

Welfare will likely consist of a Site Office for the Site Manager and Engineer supplied internally, and a separate Oasis or similar style unit to facilitate up to 16 persons:



ecologic410

Welfare Unit Facilities for up to 25 staff:

- Canteen – 10 seats, kettle, microwave, 40 litres drinking water, noticeboard
- Drying Room – 24/7 clothes drying, hooks, benches & silent overnight
- 2 Toilets – option to provide separate male & female facilities on site

Technology Features:

- Hybrid technology – limited LPG generator operation
- Advanced telemetry – remote monitoring from our Service Desk
- Site specific curfew system – available on request
- Text or email alerts – available on request



The Site Office will be standard size and contain three seats for the Site Engineer, Site Manager, and +1. The below or equivalent has ten seats, a drying room, and two sit-down toilets. It must be hired and available until Dandara Homes' long-term welfare compound is established.

A generator will supply power. At the start of work, water will be supplied and stored in a 2,5000L water tank connected to the toilet and canteen, while drinking water will be supplied in 19L bottles installed in the water dispenser/cooler.

Anyone found abusing or damaging the welfare facilities will be removed from the site, and the costs of any repairs or replacements will be charged to the contractor for whom the individual was working.

3.14 FIRE PRECAUTIONS AND EMERGENCY PRECAUTIONS

The risk is considerably low during the early phases, particularly ground works. However, plant, machinery, materials, stores, and accommodation are still susceptible and must be given the appropriate control measures.

Suitable fire extinguishers shall be provided for dealing with small fires within temporary accommodation and units under construction. Anyone interfering with or misusing the firefighting equipment shall be disciplined and removed from the site.

Where contractors are carrying out any 'hot work' that has the potential to cause a fire, they shall provide their own fire extinguishers, which shall be kept close to their area of work at all times. These extinguishers are to be suitable and tested within the previous 12 months.

No smoking will be allowed on the site.

In buildings more than two stories high and/or where unusual fire risks exist, additional arrangements will be made in accordance with Houlihan & Co. Health & Safety Management System. Please see **Appendix D—Site Fire and Emergency Procedures**.

3.15 SMOKING RESTRICTIONS

Smoking is not permitted in any building or structure or in any work vehicle. It is only permitted in an area designated as a smoking area by the Site/Project Manager.

3.16 EMERGENCY PROCEDURES AND WAY TO THE HOSPITAL

Procedures for dealing with emergencies will be put in place and displayed from the start of the project. These include contact numbers, first-aid facilities, fire extinguishers and assembly points. Assembly Point is located just outside the site entrance. Everyone working on the site must familiarise themselves with these arrangements, which will be communicated during induction.

While Houlihan & Co. will provide a first-aid box, an eyewash station, and a trained first aider on site, each contractor shall make their own arrangements to comply with the Health & Safety (First Aid) Regulations 1981.

A list of emergency contact numbers and directions to the nearest hospital will be held on-site.

Sufficient access is to be maintained at all times to allow the emergency services reasonable access to the site for the purposes of dealing with an emergency. Where the site is in an unusual location, such as a remote rural area, or the layout of the site is complex, then contact will be made with the emergency services to inform them of the site location. They will also be invited to visit the site to familiarise themselves with the layout and existing arrangements. Please see **Appendix D – Site Fire and Emergency Procedures**

3.17 ACCIDENTS AND INCIDENTS

All accidents, diseases, and dangerous occurrences listed in the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR) will be reported to the Health and Safety Executive. Every contractor is responsible for reporting injuries to their own employees and issuing a copy of the relevant information to Houlihan & Co. within the same time scales for notification set out in the RIDDOR regulations.

Houlihan & Co. will investigate all such incidents and other serious non-reportable near misses.

3.18 SITE TRANSPORT ARRANGEMENTS, VEHICLE MOVEMENT RESTRICTIONS, SITE ACCESS AND EGRESS.

The construction vehicle route to the site is via A120. Construction traffic will follow one of the two routes described below:

- (a) A120 Eastbound (Green to Yellow arrows) Exit signposted Stansted Airport Terminal
 - Take the second exit off the roundabout onto Thremhall Avenue. At the next roundabout, take Takeley turn off (4th exit) marked on the plan.
 - Follow the road round a series of bends, over the bridge to another roundabout and go straight on (2nd exit),
 - Seven Acres Avenue is on the left after approximately 100 yards.
 - Drive between offices towards industrial units, then follow the road round as it bends to the right. The site will be directly in front of you.
- (b) A120 Westbound: (Blue to yellow arrows) Exit signposted for Stansted Airport.
 - Take the second exit off the roundabout (right), then take the second exit again at the next roundabout, signposted 'Terminal'.
 - At the third roundabout, take the third exit, again following the 'Terminal' sign.
 - At the next roundabout, take Takeley turn off (4th exit) marked on the plan.
 - Follow the road round a series of bends, over the bridge to another roundabout and go straight on (2nd exit). Seven Acres Avenue is on the left after approximately 100 yards.
 - Drive between offices towards industrial units, then follow the road round as it bends to the right.
 - The site will be directly in front of you.

Lorries will enter the site in forward gear, and there is space for lorries to turn within the site.

Applicable signs will be erected, directing traffic to the site

Site traffic will then manoeuvre around the site via the site roads and temporary haul roads, which will be kept clean by brushing and dampening down to reduce the risk of nuisance from dust and redistributed mud and spoil.

A gateman will always manage the site's access while the site is open and operational. All deliveries must be scheduled at least an hour apart. Delivery drivers must call the site supervisor prior to approaching the site. A traffic marshal will assist every lorry or delivery truck in entering and leaving the site.

Restrictions.

Delivery times will be between of hours:

Monday to Friday – 08:00 to 18:00

Saturday – 0800 to 1300 by appointment only.

No deliveries are allowed outside working hours without prior agreement with site management.

This will be communicated to all site workers, visitors and deliveries.

No on-street parking is available on nearby local roads. There will be provision for vans to be unloaded on the site in a timed slot.

On no account are HGV drivers to use or turn in the mouths of neighbouring properties.

Parking and storage areas, as discussed above, will be clearly defined on the site layout plan, and this information will be given to all operatives during site induction. Construction vehicles delivering plant and construction materials and collecting waste from this site must be taken care of at all times. During site inductions, all site operatives are informed of the correct route to access site parking areas and areas set aside for storage. This information will be shown on the drawing displayed in the site office.

Subcontractors calling in deliveries must prearrange these with site management to ensure timings are compatible with the site, RAMS are in place for receiving deliveries, including methods of handling (manual and/or mechanical), sufficient storage areas are deemed suitable to receive quantities, and COSHH is accounted for.

All operatives, delivery drivers and visitors must report to the site office in the first instance to receive a full induction prior to commencing works or making deliveries. Foot access to the site office must be available via a pedestrian walkway, ensuring a separate access is installed at the entrance at the main gate.

A jet wash station will be available and set up near the site exit gate to clean vehicle wheels before leaving the site. A catchment arrangement will prevent water from draining onto the highway. This station is identified in the site's 'Traffic Management Plan'.

All pedestrian routes must be observed and maintained at all times. All operatives should be made aware of pedestrian routes and the need to adhere to their use.

The traffic plan must be monitored and updated regularly or as required.

Please see Appendix G – Traffic Management Plan and Site Setup.

3.19 PERMIT TO WORK

Permits to work will be issued for the following:

- confined space working
- groundwork, i.e. permit to dig
- permit to load and permit to pile,

- working close to live services, including overhead cables
- hot works
- entry to electrical switch rooms
- electrical “live works”
- any other high-risk activities, e.g. work adjacent to water courses

3.20 SITE SECURITY

The site will be secured to prevent unauthorised access; *the principal contractor must provide a fixed boundary fence or a fixed proprietary system, e.g. Heras Panels on posts around the site's perimeter, the latter being double-clipped at each panel. This must be in place before work starts.*

The site must be left secure at the end of each working day. All excavations should be protected by suitable barriers. All plant should be immobilised, with keys securely locked away or removed from the site. Fuel storage must be bundled and kept securely locked. Ladders should be removed or locked off where possible, and all materials should be safely stacked.

To prevent unauthorised access during the working day, the layout of the site should be such that access to working areas is controlled.

Additional site security may be required outside of normal working hours, particularly during the later phases of construction once fixtures and fittings are being installed.

The location of the site entrance should be clearly indicated to deter vehicles from causing a hazard and congestion by stopping on the access road into the site.

3.21 SITE SIGNAGE

Safety signage is to be agreed upon at the safety appraisal stage and will include, as a minimum, the following:

- Signs relating to personal protective equipment, general construction hazards and site vehicles
- Warning signs to prevent unauthorised access to the site.
- Hazard-specific signs such as electricity, overhead cables, contamination, etc.
- Warning sign for public on-site entrance, “Heavy Plant in Operation” and “Caution Construction Site Entrances Ahead”

All signs are to be erected before work starts on the site, maintained, and relocated as necessary.

3.22 PARKING RESTRICTIONS

Parking is restricted to designated parking areas as agreed with the site manager. Operatives and contractors should not park in areas that will cause danger or nuisance to the local residents and/or other road users.

4 ENVIRONMENT RESTRICTIONS, EXISTING ON-SITE RISK & SAFETY HAZARDS.

4.1 ADJACENT PROPERTIES

The site is formed by a single field known locally as Bull Field. The site is located to the north of Takeley, east of Parsonage Road, and west of Smiths Green Lane. Bull Field is an arable field of circa 8.5ha and is located to the west of Smiths Green.

The site is proposed to be redeveloped with 96 new residential dwellings, including associated parking, landscaping, public open space, land for the expansion of Roseacres Primary School, pedestrian and cycle routes to Smiths.

North - Priors Wood (an area of ancient woodland)

West and Northwest— Commercial units and Residential dwellings.

East – Smiths Green with residential dwellings beyond.

South and Southwest – Residential dwellings within Takeley, along with Roseacres Primary School.

4.2 GROUND CONDITIONS

Stansted Environmental Services has provided a ground investigation report prepared for Weston Homes plc. (Weston Homes plc used to be the previous landowner that Dandara Homes acquired the land from). The investigation comprised an initial desk study, included sixteen boreholes sunk using dynamic sampling techniques, three machine-dug trial pits, and ten Dynamic Cone Penetrator (DCP) tests to assess ground conditions. Intrusive work has taken place between 24th and 28th March 2025.

Ground conditions generally comprised topsoil overlain by the low-permeability deposits of the Lowestoft Formation, with the London Clay Formation at depth.

4.2.1 Topsoil

All the exploratory holes encountered reworked Topsoil to a maximum recorded depth of 0.38m bgl in TP03. The Topsoil generally consisted of grass over brown, slightly gravelly, silty CLAY with frequent rootlets and rare brick fragments.

4.2.2 Lowestoft Formation

The Lowestoft Formation was encountered in all the intrusive exploration holes to a maximum depth of 5.00m bgl, corresponding to the maximum depth drilled. The formation was generally described as mainly stiff, locally firm and very stiff yellowish brown mottled white slightly gravelly silty clay. Gravel was chalk and flint.

4.2.2 London Clay Formation (Weathered)

As the site is underlain by the low-permeability deposits of the Lowestoft Formation, with the London Clay Formation at depth. Reference to the British Geological Survey website (www.bgs.ac.uk) indicates that the site is underlain by the London Clay Formation, which is described as poorly laminated blue grey silty clay.

4.3 EXISTING HAZARDS

Access constraints—The site entrance is accessed from Parsonage Road, drive between offices in Hatfield Way, towards industrial units, then follow the road round as it bends to the right.

The site will be directly in front of you. No on-street parking is available on nearby local roads. There will be provision for vans to be unloaded on the site in a timed slot.

On no account are HGV drivers to use or turn into the mouths of neighbouring properties.

Schools nearby: Roseacres Primary School is 0.9 miles from the site entrance. However, construction traffic does not interfere with it, so the Planning Condition does not impose restrictions.

There are two Public Right of Way on site. One goes on the northern boundary between the site and the Priors Forest, and the other cuts through the site on the southern part of the site. There is no TTRO in place for either of them, so they must be retained open and segregated with Heras panels from the construction activity. Any crossing must be controlled by a gateman, and any diversion will require a permit from the local authority.

Site topography - The site is flat and level, with very limited undulations in ground level. To the eastern and northern edges of Bull Field are drainage ditches. Drainage ditches are also present along part of the southern boundary.

Surface Water— There are no licensed groundwater abstractions located within 500m of the study. There are a number of active licensed discharges to land within 500m; the closest being approximately 37m to the south for sewage discharge into land (soakaway) for a domestic property. The remaining discharges are also for domestic properties.

During the construction phase, SWMP will be implemented. We have not received one from the Client. However, a Surface Water Management Plan will be drawn and will be asked for approval from the Client before implementation. The aim of this management plan is to prevent any contamination from entering adjacent watercourses and prevent any escape of silt contamination from the site.

Please see Appendix H—**Environmental Management Plan & Pollution Prevention. (yet to be received)**

Groundwater— Groundwater was recorded at depths of 3.12m bgl to 3.68m bgl. Groundwater has been recorded from 1.48m bgl during the monitoring campaign. This water is likely a source from the underlying sand layer identified within this location and is not considered to represent the groundwater at the site.

Trees and hedges – Barton Hyett Arboricultural Consultants have done an arboricultural report where they outline the measures for protecting retaining trees on site and the Prior Forest (Ancient Woodland that is the north boundary of the site). They have prepared a TPO drawing for the protection of the retained trees on site, and they have included a 15m ASNW buffer zone to the Priors Forest.

An Arboricultural Method Statement and finalised tree protection plan will need to be produced. Where the feasibility of a scheme has been agreed by the Local Planning Authority, this detail can be agreed and submitted at a later stage as part of a pre-commencement planning condition (by agreement with the applicant).

TPO “Bull Field, Takeley - Tree Retention, Removal & Protection Plan”, Drawing Number BHA_1030_05. **Appendix J – Tree Protection Area**

The Tree Protection Plan shows the alignment of Tree Protection Fencing (TPF), which is to be installed prior to any construction activity taking place on site. Inside the exclusion area of the fencing, the following shall apply:

- No mechanical excavation whatsoever
- No excavation by any other means without arboricultural site supervision
- No hand digging without a written method statement having first been approved by the project arboriculturist.
- No lowering of levels for any purpose (except removal of grass sward using hand tools)
- No storage of plant or materials

- No storage or handling of any chemical, including cement washings
- No vehicular access
- No fire lighting

UXO—There is no investigation or risk assessment as part of these works, provided by the Client on Unexploded Ordnance (UXO). A search of the area on both “Igne” and “Zetica” websites shows the site located in a Risk area of the UXO. **Please see Appendix “UXO Risk Map”**

Archaeology – No further works are required on site. The Client has fulfilled the planning condition.

Radon– The site is located within the lowest band of radon potential, with less than 1% of homes above the Action Level, and no radon protection is considered to be required on this site.

Invasive species – NA

Ecology – We have not received an Ecology report. However, we are led to believe by the Client that no statutory or non-statutory nature conservation designations pertain to the site or are within the site.

Reptiles—NA

Dormouse—NA

Badger – NA

Bats – NA

Nesting Birds - NA

Great Crested Newt—NA

Existing buildings on-site—NA

Retaining walls and adjacent buildings on or close to the site boundary—NA

Basements on-site – N/A

Potentially unstable slopes on or close to the site. - None observed.

Buried and overhead services are present. There is no existing services on site.

The client has produced and provided a combined drawing showing all services on site and around it.

Appendix N – Existing Services Drawings.

4.4 HEALTH RISKS

4.4.1 CONTAMINATION ON SITE

Stansted Environmental Services has provided a ground investigation report prepared for the Weston Homes plc. (Weston Homes plc used to be the previous landowner that Dandara Homes acquired the land from). The investigation and testing have taken place between 24th and 28th March 2025.

The risk to human health from soil contamination is considered very low and no significant pollution linkages were identified on site.

Asbestos – No asbestos material was found on the site investigation.

4.4.2 EXPOSURE TO ASBESTOS

The discovery strategy will be briefed to all operatives on site. Any contamination detected during or after the ground remediation will be reported to the Client and their environmental contractor. An asbestos-licensed contractor will remove any contamination found. The removal is not notifiable to HSE. However, the asbestos disposal and control measures (RAMS) record for removal will be saved in the Project's Safety File.

4.4.3 DISCOVERY STRATEGY

A discovery strategy will be applied during the construction phase, and all operatives will be briefed on Asbestos Awareness. Should ACM be encountered during construction, this should be reported to the Site Manager immediately so that any necessary inspection may be made.

Depending on the type, nature, and extent of any such 'discovery,' it may be necessary to halt works in that location until the assessment has been completed. This should be reviewed on a 'discovery' specific basis and in conjunction with regulatory consultation.

As a general guide, where such unexpected conditions are encountered, the following approach is recommended:

- All discoveries are to be reported to the Site Manager immediately, and work at that location is to halt until further notice.
- The area should be cordoned off using an appropriate barrier system.
- We will remain observant during excavation work, checking by sight and smell for any unknown contamination.
- The Site Manager is to report any such discoveries to the Client and the Environmental Consultant:
- Following notification from the Site Manager, the Environmental Consultant shall discuss the discovery with the Local Authority and, if necessary, arrange to meet an Officer on site to view it.
- The Environmental Consultant shall attend the site to record the location, extent and nature of the discovery and implement an appropriate sampling and analysis regime, taking due account of the type and nature of the discovery and known and probable land uses in that area of the site.
- Where remedial action is required, regulatory consultation and approval will be sought.

The environmental consultant will produce a record and hold it on-site (with copies held by the Environmental Consultant, Client, and Local Authority) detailing the discovery, assessment works undertaken, findings, confirmation either of no action required or detailing the remedial action taken and validation thereof.

No Houlihan worker on site must handle ACM or suspected ACM. Houlihan & Co (Excavations) are not to carry out NNL- Notifiable Non-licensable asbestos removal or Non-Licensable asbestos removal.

No Houlihan's plant will be used for remediation or any other work involving asbestos.

4.4.4 DUST EXPOSURE

• Routine visual monitoring will be undertaken for dust at all operational areas at the site. In the event that significant visual dust is observed at the boundaries of the operational areas, action will be taken to suppress the dust. We won't wait for the dust to settle; we'll also respond if it is seen between regular preventive road cleaning and dust suppression with a bowser. The most useful stipulation, if we have bulk shifting of waste on haul roads, is that the exhaust vents upwards rather than down onto the road. If haul roads were tarmacked, this would massively reduce the problem. Other control measures will be enforced on-site.

- Speed restricted to 5mph.
- Scrape by blade instead of digging and dumper transfer.
- Avoid double-handling whenever possible.

- Cover loads in motion & static spoils on site.
- Limit drop distances to a minimum.
- Continuous micro-spray as new surfaces are exposed to spoil heaps in dry weather.
- Use a larger plant to minimise the number of movements.
- Retain vegetation until removed just in time.
- Road cleaning on and off-site.
- Battery-operated water dust suppression unit on disc cutters must be used (on diamond-tipped blades only).

4.4.5 MATERIALS HANDLING, MUSCULOSKELETAL INJURIES.

All manual handling is to be limited to items that can be easily handled. Any lifting of heavy or awkward loads must be by mechanical means. All repetitive lifting of items close to but below 20kg in weight should be assessed to determine if they can be substituted or if alternative methods of lifting can be devised.

Mechanical handling shall include the use of forklifts, cranes, and excavators. Where this is not practical, a manual handling assessment must be carried out and a suitable method identified, such as mechanical aids like Easylifters, manhole cover lifters, or sharing the lift. In the event that manual handling is required, it should be carried out in such a manner as to minimise the risk of injury.

4.4.6 USE OF HAZARDOUS MATERIALS AND COSHH

Refer to the COSHH Assessment for all hazardous substances to be used and briefed to all operatives prior to commencing work. COSHH data sheets are provided when COSHH products are issued from stores. Full PPE to be worn in conjunction with COSHH assessments. Please see **Appendix K - COSHH Assessments**.

4.4.7 REDUCING NOISE AND VIBRATION

Noise levels will be kept below the legal limits, both on-site and at the site boundary. Where noise restrictions apply, these shall be strictly enforced.

- Where practicable, position the plant away from site boundaries, particularly on sites with neighbours within close vicinity.
- Make use of stockpiles as noise shields
- Arrange delivery times on site to suit the area.
- Use all silencing equipment available and keep panels closed on all generators and compressors.
- Switch off noisy equipment when not needed.
- Arrange traffic routes for the mobile plant so the amount of reversing required is minimised, reducing the use of reverse warning beepers.
- If there is doubt as to noise levels or complaints, we will deploy a Class 1 noise level meter for operations.
- Observe restrictions on working hours: No plant operating before 8:00 am

Vibration - Our vibration assessments will be on-site. We do not keep registers because it involves recording trigger time and is usually not done properly. Our assessments are based on operations which have been timed, as trigger times, by observing operations and collecting the seconds of use against the ancillary work where there is no vibration. We do not accept recording harm is a good idea rather than avoiding it.

- Plant is selected for low vibration characteristics and a full assessment has been carried out for tasks where vibration exposure is expected.
- The intention is not to expose any operative to even the lower action value.
- Drilling and vibrating concrete works of short duration.
- Tools should be used for their designated purpose.
- All operations have been timed for trigger times, and manufacturers' information regarding vibration has been checked against OPERC emission test results.
- As the trigger time is critical, this will be periodically checked by timing actual operations-monitoring sheets for the site supervisor in vibration.
- HSE nomogram for each item of plant.
- Equipment will, in addition, be tested by accelerometer monitoring vibration levels and trigger time (exposure) by process: results will inform purchasing policy and decision regarding continuous safe use.
- Plant department to maintain contact with suppliers to ensure that they're aware of any engineering control measures that can be installed to minimise vibration levels.
- Any damaged equipment must be taken out of use and reported.

4.4.8 CONTACT WITH INCLEMENT AND VERMIN

- The likelihood of rats and, hence, leptospirosis has been made clear to all operatives at their company induction. The main defence against the disease is personal hygiene, including not smoking on site. The HSE information leaflet has been used in toolbox talks and is issued to operatives.

Prevent/discourage rats from coming onto the site. Adequate pest control provisions will be put in place around the site and welfare facilities. Do not leave scraps of food lying around to attract them. Cuts, grazes, and open wounds will be covered with a waterproof plaster. Waterproof gloves and clothing will be worn when working in wet conditions.

- Wash your hands and arms thoroughly before eating, drinking, and smoking.
- Report any ill health to your Supervisor or Manager. If you start to suffer from what seems like flu but have reason to believe that it may be leptospirosis, see your doctor as a matter of urgency. Inform your GP of your occupation.
- The internal/external refuse storage area is regularly cleaned and monitored. All waste bins are kept clean and emptied frequently. A reputable pest control contractor is employed to monitor the pest activity on site regularly. Non-toxic monitoring bait devices are used for pest control within the food preparation and food storage areas.

Detailed records of the visual checks carried out by employees are maintained, indicating any follow-up action taken when evidence of pest activity has been found.

4.5 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The site EMP described on Forms E1–E3 (with guidance from Appendices E4-E10) will be utilised to ensure that all requirements and commitments made during the planning and environmental assessment process are incorporated and managed effectively during the construction phases of the project.

Appendix H – Environmental Management Plan and Pollution Prevention Plan.

5 SIGNIFICANT DESIGN AND CONSTRUCTION HAZARDS

5.1 SPECIFIC CONSTRUCTION REQUIREMENTS

A significant hazard identification and management list is provided in the preconstruction information. Any requirements specified must be followed unless an alternative process can be agreed with Houlihan & Co., which does not increase the risks to health and safety. While Houlihan & Co. is the principal contractor, they will provide a competent supervisor whose health & safety responsibilities will include ensuring all works carried out on this project are done so in the safest, reasonably practical manner. Details of the management structure on this site will be provided at the site induction, which all contractors' operatives must attend.

5.2 PLANT AND EQUIPMENT

All plant and equipment provided by Houlihan & Co. and contractors will be assessed and must comply with all the current health & safety legislation, services, tested and examined in accordance with manufacturers' requirements and be fit for purpose.

All plant NRMM will meet Emission Stage IIIB of the Low Emission Zone (LEZ) as a minimum. All machinery will be logged online using the register on the GLA NRMM Website.

All operators must be suitably trained and experienced (see above).

All reversing operations must be carried out safely, including the use of appropriate visual aids and/or banksmen where necessary. As a minimum, all plant will have mirrors and/or closed-circuit television (CCTV) cameras fitted to provide the operator with a clear view behind the plant/vehicle when reversing. This excludes dumpers, rollers and vans, which must be guided when reversing by a trained banksman.

All machines with counterbalances are to be provided with suitable mirrors or other visual aids so that the operator can see any workers or obstructions within the counterbalance's line of travel before and during slewing operations.

5.3 CRANES

All cranes used on site are to comply with the following documents:

- BS 7121, relevant parts
 - The Guide to Safe Slings and Signalling
 - Houlihan & Co. Crane Procedure
 - Copies of the above are available on-site or through Houlihan & Co. Health and Safety Manager.
- All lifting operations must be planned and coordinated by the Appointed Person, Alban Shehu. Where contractors are providing cranes or using cranes provided by Houlihan & Co., they must comply with the above documents.

5.4 SPOIL HEAPS

Introduction

Spoil heaps are required on our sites to store temporarily loose material, primarily soil site won. This could be topsoil, subsoil, crushed concrete, material for screening or for crushing. Some materials

categorised as contaminated or for testing will be stockpiled pending disposal off-site or treatment/reuse/recycling. Small quantities of materials like shingles, sand, crushed concrete, and Type 1 are delivered in bulk, usually just in time.

Decisions about when and what to use on-site and what to send for use elsewhere or for disposal off-site are made collectively by the Houlihan site team and client management. Some material held for testing or grading will require external intervention before it can be moved or processed.

Placing spoil heaps

No spoil heaps will be placed in either easements of National Grid or UKPN.

Space available for storage is the first consideration, including the need to separate categories and, especially, to prevent cross-contamination where material requires testing or has been shown to be contaminated. Materials should be stored on an impervious surface- tarmac or concrete if it is still in place, or a membrane. It may also be necessary to cover heaps to prevent wind-borne cross-contamination and erosion. The main restriction on the height of heaps is for the storage of topsoil: a maximum height of 2.0m must be enforced to allow aerobic action to continue within the heap. An initial assessment of the need to store will be made by our site supervisor at the location where the spoil is generated, with a discovery strategy in place to ensure no cross-contamination occurs, newly identified contamination is not disturbed, and it is reported for investigation.

Heaps will be built by tipping loaded dumpers onto prepared bases. As this starts at ground level, tipping will allow a first check of the material's uniformity and consistency —granular to cohesive. Most site won material will be a mixed matrix. As the dumper tips or, later, the bucket of an excavator is emptied, the material will fall to its angle of repose. (This is at full size the laboratory procedure to determine the angle of repose of a sample.) All lists of angles of repose for materials are approximate and do not address mixtures of soils. As the heap is added, the dumper will have to tip at ground level to allow placement by a 360° excavator.

At its simplest and lowest, the heap will rise to 2-3.0m over the base, effectively determined by the natural angle of repose adopted by the material as it is released. The material will not be compacted but may have to be dressed to ensure no material sticks and that the material in the round has no shear edges. If the material is topsoil, then the height will be limited to 2.0m. The angle established at the first placement of material will be maintained as the heap grows in height.

To 5.0m above the ground level, the heap can be maintained, dressed by a 360° excavator and inspected from ground level. Any heaps over this height would require compaction to a regime drawn from the Manual of Contract Documents for Highways Works, dependent on the material. This would probably involve not a spoil heap but a bund with some degree of permanence, then compaction under MCDHW (online version) will be required.

There will be no dumpers driven on the spoil heap.

Where there is a danger of silt running from the spoil heap, a silt barrier will be used to protect.

Inspection of spoil heaps.

As the material is used, further dressing will be required to ensure no sheer faces are left, which could slump. The top and sides of an established spoil heap will have to be dressed by an excavator bucket to throw off rainwater. Every time material is drawn from a spoil, it will be inspected and redressed, taking care to check all faces. Weekly, and after rain, frost, or continuous hot weather, all spoil heaps will be checked for cracking to the top and faces and for loose materials appearing on the face.

Limitations on retention of material on site spoil heaps.

The main determining factor for how much material can be retained in spoil heaps, for whatever reason or end purpose, is the building programme and, hence, the available space to place bulk granular materials.

Proximity of structures, site boundaries, tree protection, no-dig areas and excavations will also reduce the area available. There is a suggested limit for the length of time topsoil is retained in a bund event at <2.0m if it is expected to act as a growing medium.

Definitions

The angle of repose or the critical angle of repose of a granular material is the steepest angle of descent or dip relative to the horizontal plane to which a material can be piled without slumping. At this angle, the material on the slope face is on the verge of sliding. The angle of repose can range from 0° to 90°. Smooth, rounded grains cannot be piled as steeply as can rough, interlocking sand. If a small amount of water bridges the gaps between particles, the electrostatic attraction of water to mineral surfaces will increase soil strength. When bulk granular materials are poured onto a horizontal surface, a conical pile will form. The internal angle between the pile surface and the horizontal surface is known as the angle of repose and is related to density, surface area, particle shape, and the material's coefficient of friction. The angle of repose is also gravity-dependent.

5.5 EXCAVATION PROCEDURES

Excavations

Before starting work, we will consult records, reports and details of disconnections. Safe digging will involve the use of air picks. We will scan continuously as the dig deepens. Depending on the nature of the ground, obstructions, nearby structures, known underground services, depth of excavation, water table and proximity hazards, we will make preliminary provision for support structures and likely variations.

As the hazards become clearer, further risk assessment will be carried out, and if necessary, work will stop until we have the necessary support. Standard proprietary support solutions are available down to 6.0m. Below, these designed solutions will be required and checked by our competent engineers. Emergency rescue procedures are in place after consultation and external and in-house training.

Excavation Types and Edge Protections

All excavation works will be carried out in accordance with Construction (Design and Management) Regulations 2015 and the Guidance contained in Health and Safety in Excavations HS(G) 185 "Be Safe and Shore" and CIRIA guide to Trenching Practice. When preparing to carry out an excavation, a discussion between the Site Manager and the supervisor must be carried out to consider the type of excavation technique that will be implemented, depending on the depth, size and duration. These considerations may include:

- battered
- stepped.
- reduce-dig
- piling (as an alternative to deep excavations).

Where the excavation method may restrict vehicle and pedestrian access, etc., consideration needs to be given to alternative methods, and/or re-routing of pedestrian routes, etc. Excavations will be protected by effective barriers (Heras panels double clipped) and warning signage "Danger Deep Excavation / No Unauthorised Access".

A suitable pedestrian crossing system with edge protection must be provided in instances when The service trench will be left open for a period of time, or where road plates will be installed along On pedestrian routes, the plates must have an anti-slip surface facing upwards.

5.6 COLLAPSE OF STRUCTURE

Demolishing must have been completed, and all existing buildings, single-skinned petrol and diesel tanks, interceptors, and any other existing drainage must have been removed from the site. A demolishing report must have been received and reviewed for any residual risk.

5.6.1 TEMPORARY WORK APPOINTMENTS

Temporary appointments relating to safety responsibilities on this site are listed in **Appendix F – Temporary Works Site Appointment**, with the names of the appointed persons and relevant reference documentation.

5.7 WORKS WITH MAINS SERVICES

Please see **Appendix M - Work on or near Underground Services**

6 SITE WASTE MANAGEMENT PLAN

6.1 WASTE DISPOSAL

Keeping Waste Safely

To comply with our duty of care, we must ensure that the waste is not affected by:

- Corrosion or wear of waste containers.
- Accidental spillage or leakage.
- Accidents or weather breaking the containment of waste and allowing its escape.
- Waste blowing away or falling whilst stored or transported.
- Scavenging of waste by vandals, thieves, children, trespassers or animals.

The site perimeter will be secured and signed.

Stockpile areas will be clearly delineated and set on an impervious membrane.

Dust will be controlled by damping down or covering.

Transferring Waste

Waste can only be transferred to an authorised person. The Waste (England and Wales) Regulations 2011 detail the transfer note arrangements. The note must be completed by a responsible person from the company producing the waste, not by the carrier. The responsible person will consider whether the waste will require a special container to prevent its escape (e.g. a closed skip for asbestos) or if the waste can be mixed safely with other waste.

Part of the duty of care obligation is that checks are carried out before waste is transferred. Tip licences in particular must be carefully checked to ensure that the tip can receive the type of material being sent. Carriers' original registration certificates, not photocopies, must be carefully inspected.

A Waste Transfer Note (WTN) must be completed and signed by both the person handing over the waste and the person receiving it. It must contain enough information about the waste for it to be handled safely and either recovered or disposed of legally.

The WTN must include:

- a description of the waste
- any processes the waste has been through
- how the waste is contained or packaged
- the quantity of the waste
- the place, date and time of transfer
- the name and address of both parties
- details of the permit, licence or exemption of the person receiving the waste
- the appropriate European Waste Catalogue (EWC) code for the waste
- a declaration that you have applied the waste management hierarchy has been applied
- the 2007 Standard Industrial Classification (SIC) code of the person transferring the waste
- The producer is most able to describe their waste accurately. It is not acceptable to use non-specific terms such as 'general waste'.
- Separate paperwork must be completed for hazardous waste.

Every contractor working on this site must have the ability to comply with their legal duties for health & safety. This includes sufficient time and resources to work safely at all times while on this project.

The competency of each new contractor will be assessed through the tendering process. Each such contractor will need to demonstrate a successful track record in similar work. Existing contractors will be assessed as part of the regular health & safety inspections carried out by the Site Supervisor, independent safety advisors and Houlihan Safety Advisor.

7 EMERGENCY PLAN

7.1 EMERGENCY PROCEDURES AND NEAREST EMERGENCY HOSPITAL FACILITIES

For emergency procedures, contact details and way to the nearest A&E/ Hospital, please see **Appendix D - Site Fire and Emergency Procedures**.

8 TRAFFIC MANAGEMENT PLAN

8.1 TRAFFIC MANAGEMENT PLAN AND SITE LAYOUT.

For the Traffic Management Plan, Site Traffic Arrangements, Controlling and Monitoring Measures, and Site Setup, please see **Appendix E - Traffic Management Plan**

9 CDM HEALTH AND SAFETY FILE

9.1 HEALTH AND SAFETY FILE

The Health and Safety File will be prepared by the Principal Contractor for review by the Principal Designer.

Key Health and Safety File information will include the following:

- Document to be titled 'Building Manual and Health and Safety File'
- Project name
- A brief description of the work carried out.
- Any hazards that have not been eliminated through the design and construction process,
- and how they have been addressed (e.g., surveys or other information concerning
- asbestos or contaminated land)
- Key structural principles (e.g., bracing, sources of substantial stored energy – including
- pre- or post-tensioned members) and safe working loads for floors and roofs
- Hazardous materials used (e.g., lead paints and special coatings)
- Information regarding removal or dismantling of plant and equipment (e.g., any special
- arrangements for lifting such equipment)
- Health and safety information about the equipment provided for cleaning or maintaining the
- structure
- The nature, location and markings of significant services, including underground cables.
- gas supply equipment; fire-fighting services etc
- Fire strategy
- Information and as-built drawings of the building, its plant and equipment (e.g., the means
- of safe access to and from service voids and fire doors)

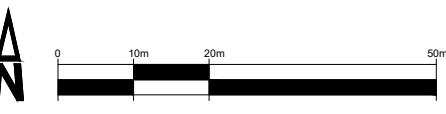
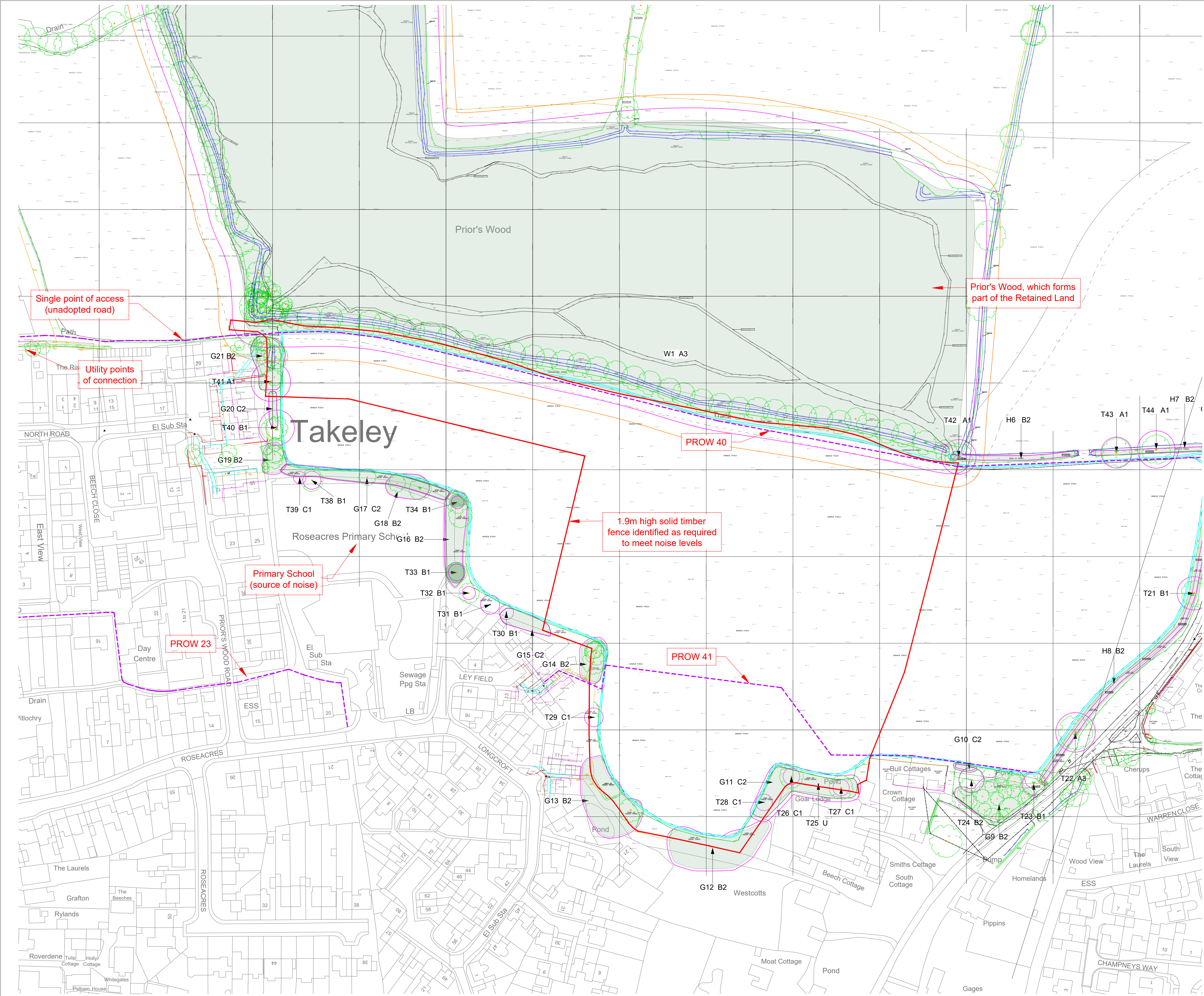
Health and Safety File information will be prepared when appropriate and provided by the Principal Contractor independently/separately to complete handover documentation.

10 GENERAL

Having studied the contents of this plan, should any reader have any comments, questions or contributions to make then they are encouraged to bring these to the attention of Houlihan & Co. so that they may be considered during the next review of this document.

Appendix A

SITE LOCATION AND LAYOUT



- Existing Utility & Service Routes
Further details can be seen in the PAS128 survey and the individual service record packs
- Water Main
 - Water Main (abandoned)
 - Gas Main
 - Gas Main 10m assessment
 - Electric - overhead power lines
 - Overhead electric exclusion zone (typical)
 - Electric Main
 - Telecoms

- Tree Retention / Removal
Refer to arboricultural assessment for full tree details, see labels for categories of tree
- Tree root zone

- Roads & Footpaths
Changes in speed limits are noted within the plan
- Public Right of Way

Single point of access
(unadopted road)

Utility points
of connection

Prior's Wood, which forms
part of the Retained Land

PROW 40


1.9m high solid timber
fence identified as required
to meet noise levels

PROW 41

Primary School
(source of noise)

PROW 23

P1	Information Issue	19.06.25	AR
REV.	AMENDMENT	DATE	BY



Majesty House
Avenue West, Skyline 120
Braintree
Essex
CM77 7AA

Tel 01376 428 999
Web dandara.com

PROJECT: Bulls Field, Warish Farm Hall Takeley CM22	
DRAWING: Constraints Pan	
STATUS: INFORMATION	
SCALE: 1:1000 @ A1	DATE: June 2025
JOB No: BT25--	NAME: AR
DRAWING No.: BT25__-DA-7001	Rev: P1

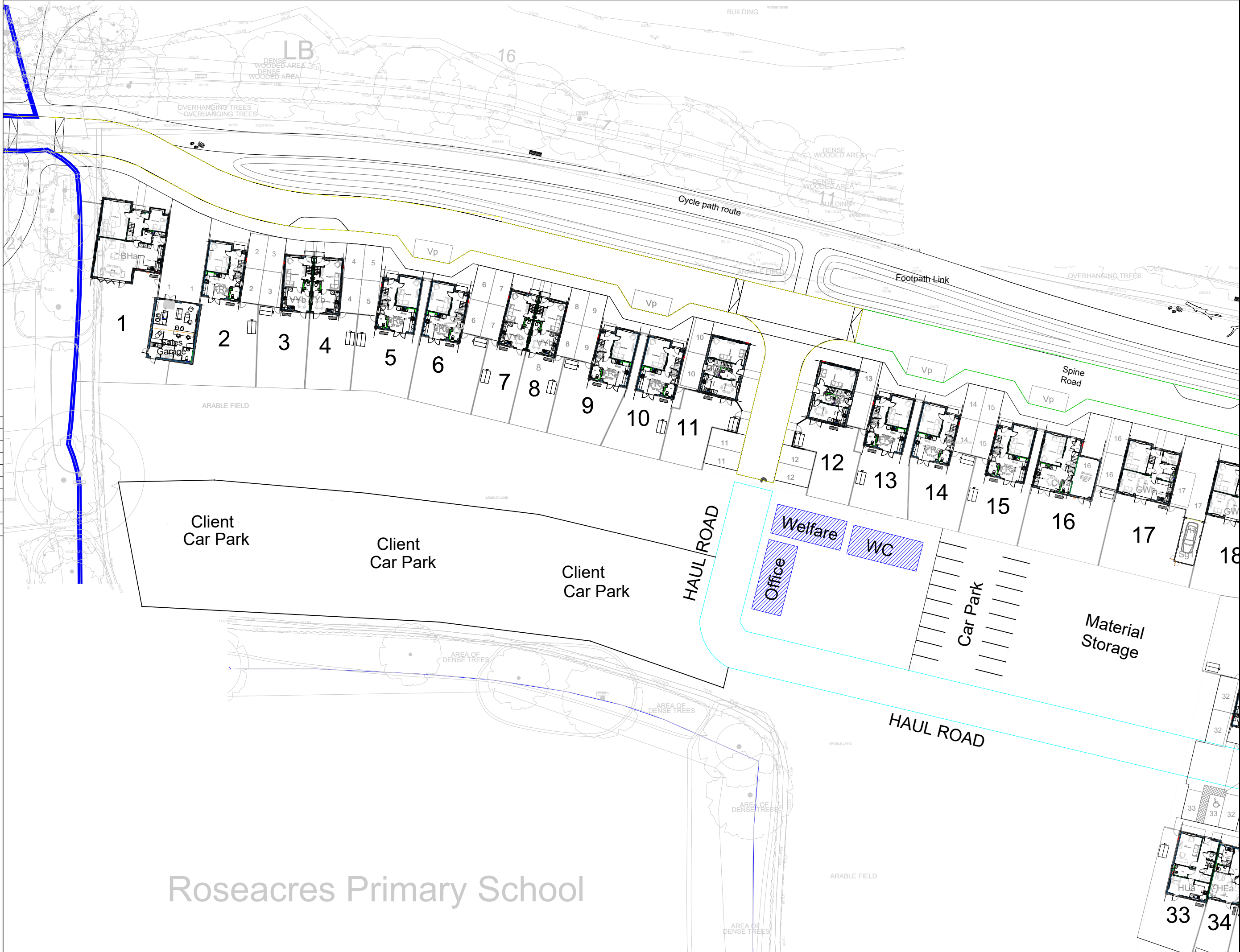
Site Design



Appendix A - Site Set Up Layout- See attached file for full size PDF

TBC:

- Construction offices
- Car Park
- Site Set up
- Site Layout



Roseacres Primary School

Legend

Rev.	Date	Description	By
<div><div></div><div>Head Office: J2 Brooklands Close Sunbury On Thames Surrey TW16 7D</div></div>			
<div><div></div><div></div><div></div></div>			
Client	Dandara Homes		
Site Address	Smiths Green Bishop's Stortford CM22 6NS		
Drawing title	Site Layout Plan		
Project No	DD-TAK-100		
Date	22.10.2025		
Scale	Not to Scale		
Drawn by	JR	Sheet No	
Checked by	JR	1 of 1	

Appendix B

F10 - Duty Holders

Appendix C

PROJECT SITE RULES & SUPERVISION ON SITE

PROCEDURES

SUPERVISION ON SITE

Supervision is a critical management function, and this must be reflected in an organisation's Safety management system,

Supervision has a key influence on the way teams perform. Therefore, the way supervision is delivered must be appropriate for the way the team functions,

Individuals with any form of supervisory role must have the necessary competence and opportunity (including time to carry out supervisory roles, interaction with the people they are supervising and respect from those people) to fulfil their responsibilities,

Contractors can have a significant impact on health and safety performance (positive or negative). Hence, supervision of contractors must be properly managed,

Organisational arrangements must ensure good leadership in emergency situations.

A competent site supervisor must be present on each of our sites all the time we have an operative working.

The minimum external accreditation for competence in supervision is the Site Supervisor Safety Training Scheme certification.

Where a contractor working for us has a competent supervisor, they will be authorised to supervise their own workforce if Houlihan have no presence on site. This authorisation will be formal, site specific and time/ date specific agreed by our site supervisor and contracts manager.

Supervisory responsibilities and so competence extend to:

- Defining overall team workload;
- Allocating day-to-day work priorities;
- Allocating manpower for daily tasks;
- Controlling/monitoring work patterns/shift rotas;
- Communicating operational information to and from
- Problem solving/decision making;
- Identifying competence requirements for work tasks;
- Assessing training requirements of team members;
- Measuring team performance;
- Carrying out appraisal of team members;
- Implementing first-level discipline;
- Initiating and leading incident investigations;
- Maintaining/updating procedures;
- Providing leadership in emergency situations.
 - Demonstrating senior management commitment to health and safety so that 'stakeholders' are in no doubt about how important health and safety is to the organisation,
- Leadership during normal and abnormal situations,

- Communication within and between teams and between employees and management to ensure effective and efficient flow of information,
- Employee involvement in health and safety to improve understanding and gain ownership,
- Defining clear roles and responsibilities,
- Training and competence.

The arrangements for supervision, replacing supervision during temporary absence and permitting contractors to work under their own competent supervision but without Houlihan & Co. presence on site will be authorised by the Contracts Manager.

APPOINTMENT OF SUPERVISION

SITE:	Dandara Homes, Bulls Field Takeley, Essex, CM22 6PU.	
SUPERVISOR:	Richard Hume	
RESPONSIBILITIES:	Company inductions	
	Method Statement/ Risk Assessment Communication	
	Ensuring site induction before work	
	Toolbox talks	
	First aid	
	Site safety inspection	
	Start of shift inspection of excavations	
	Start of shift inspection of temporary works	
	Plant records	
	Lifting accessory records	
	Induction/ assessment of new/ hired operatives' competence	
	Quickhitch register	
	Control of hired plant	
	NRSW	
	Accident/ incident reporting	
	Control of emergencies	
	Planning work, assessing risk, preparing a safe system of work	
	Control of contractors	
	Training	
	Allocation of work to competent personnel	
COMPETENT DELEGATE:	Richard Hume	
CONTRACTOR'S COMPETENT DELEGATE:		
CONSTRUCTION DIRECTOR:		
	NAME: R. Carroll	SIGNED: Richard Carroll

SITE SAFETY RULES

BY OBSERVING THESE RULES, YOU LIMIT THE RISK OF INJURY TO YOURSELF AND OTHERS ON THE SITE. YOUR CO-OPERATION IS ESSENTIAL AND WILL BE APPRECIATED. THE RULES ARE LEGALLY ENFORCEABLE.

**NAME OF CONTRACT: Dandara Homes,
Bulls Field, Takeley, Essex, CM22 6PU**

Site Management Team:

Site Supervisor: **Richard Hume**

Engineer: **Florin Christescu**

First aider: **George Kelly**

1. All operatives must report to the site supervisor upon arrival on site and sign in. At the end of the day, they must sign out. NO-one should sign on behalf of another person.
2. All operatives must attend a Site Safety Induction prior to commencing work. The induction will set out safe systems of work in Method Statements and necessary control measures identified in Risk Assessments.
3. Stop work if you are instructed to do so by your supervisor.
4. All Site Staff and visitors must adhere to the Traffic Management in place and always use the footpaths provided.
5. If you use prescribed or non-prescribed medication or suffer from a medical condition that may affect your ability to work safely, you must notify your employer.
6. Smoking is not permitted in the field nor in any accommodation units or containers.
7. All operatives must park where the site supervisor tells them there is no off-site parking.
8. In case of emergency, the front entrance gate is the assembly point.
9. Contractors will employ only competent labour with a designated on-site Supervisor/Foreman.
10. There are full facilities with canteen, toilet and changing facilities. Anyone found defacing or abusing these will be disciplined.
11. All operatives must comply with Houlihan & Co. (Excavations) Ltd. Health and Safety policy which is available on site.
12. All operatives must wear appropriate Personnel Protective Equipment for the work they are undertaking. They must wear safety helmets, safety boots, gloves, and high-visibility vests at all times.
13. The first aid box is at the site office.
14. All accidents and near misses, however small, should be reported to the site supervisor and entered in the accident book located in the site office. All accidents and incidents

must be reported to the Health and Safety Manager, Alban Shehu, on 07584809221, by phone immediately.

15. All plant (machinery, power tools, hand tools whether owned by the Company or hired) should only be used by a suitably qualified or trained person authorised to use such equipment.
16. Each individual operative has a personal responsibility to: -
 - Ensure a safe working environment.
 - Use safe working practices.
 - Report any defective plant, materials, or tools.
 - Report any unsafe or dangerous working conditions.

Failure to do so can result in disciplinary action or prosecution.

14. All reversing plant must be controlled by a banksman where necessary as per the site traffic management plan for the safety of operatives and the public. All plant must be parked in a proper and safe manner in a designated area.
15. No operative shall interfere or misuse any device which has been provided for compliance with safety laws. Scaffolding alterations will only be carried out by qualified scaffolders.
16. Site tidiness is essential for safe, continuous work. Each trade must clean up after themselves at the end of each day/operation, ensuring a clean, safe environment for other trades.
17. Operatives must work and behave safely to at least the standards set out in the Considerate Constructors scheme and Health and Safety law.
18. All Contractors are to instruct their operatives on the relevant safe method of work, risk assessments, COSHH assessments, and manual handling assessments as appropriate. Self-employed persons must also make themselves familiar with the risk assessments and safe system of work. For Health and Safety purposes, there is no distinction between employed and self-employed.
19. Operatives should always work with due regard for the public, the environment, and the following trades.
20. Anyone found on site to be under the influence of alcohol or drugs will be disciplined and removed from the site.
21. The site working hours are.

Monday – Friday 08.00- 17.30

Working outside these hours requires authorisation and supervision by the Site Supervisor.

22. All on-site electrical tools must be 110V or battery-powered and regularly tested and inspected. 240v with RCDs is not acceptable.
23. No children are allowed on site, either during or after working hours, unless under the supervision of a competent person. This includes the children of Houlihan & Co. (Excavations) Ltd. employees, Contractors and Suppliers.

24. The rules and regulations have been made for your benefit to provide you with a safe and healthy working environment. Failure to comply with them will result in your removal from the site.
25. Operatives must comply with the Houlihan & Co. Environmental Policy and Site Waste Management Plan.
26. These Site Rules are not exhaustive. Further information will be provided during the site induction and reference to the Site Traffic Management Plan.
27. The following additional items are specific to this site:
 - Report any ground that has an unusual colour or smell.
 - Report and do not touch any material which could contain asbestos.

Appendix D

SITE FIRE AND EMERGENCY PROCEDURES

EMERGENCY PROCEDURES

First Aid and Emergency Care

In the event of an emergency the Site Supervisor will be responsible for allocating a member of staff to meet the emergency services at the security gate and escort them to the incident site.

All areas of the site will be accessible via the temporary haul roads in the early stages of the site and via the permanent road which is being constructed early to afford access.

Details of how to contact the emergency services are located on the site notice board. (Please see attached for maps to local A&E, Fire and Police Stations).

Details of the site First Aider and nearest Accident and Emergency Unit will be displayed within immediate vicinity of the First Aid materials on site.

Fire Arrangements

A Site Fire Safety Co-ordinator (normally the Site Supervisor) will be appointed to keep up to date the Site Fire Safety Plan

The Site Fire Safety Co-ordinator must check and monitor all procedures, arrangements and equipment etc, in accordance with FPA Construction Site Fire Prevention Checklist. Written emergency procedures will be prepared and displayed in a prominent position. This will include the means (a compressed air horn) of warning of fire or other emergency. (See attached).

Clear access to the site, temporary and permanent buildings must be maintained at all times.

Identified personnel (key holders, security guards etc.,) must be briefed to unlock doors, gates etc., in the event of an alarm.

Clear signs must be installed and maintained in prominent positions indicating the locations of fire access routes, escape routes and positions of fire extinguishers and dry riser inlets.

During the site Health & Safety induction, everyone is made aware (verbally) of emergency exit points, positions of extinguishers, and the location of the muster point.

The security of the site must be maintained with a view to arson attack and child trespass.

EMERGENCY PROCEDURE

Site Address: <u>To Be Stated Fully and Clearly</u> <u>When Calling Emergency Services</u> DIAL 999 using MOBILE phone	Site address: Dandara Homes, Bulls Field, Takeley, Essex, CM22 6PR
Telephone Numbers / Location	
Site Supervisor	Site foreman: Richard Hume Mobile number: 07818016947
Contracts Manager	Conor Gough 07947984996
Health & Safety Representative	A. Shehu/ A Selita 07584 809 221/ 07507430655
First Aider	Appointed first aider: George Kelly Phone number: 07990822109
First Aid Kit	In the site office
Fire Extinguisher	In the site office
Assembly Point	At the main site entrance
Nearest HOSPITAL with A&E	Hamstel Road, Harlow, Essex, CM20 1QX Tel: 01279 444455
EYE EMERGENCY (09.00- 17.00)	Moorfields Eye Hospital, 162 City Road, London EC1V 2PD 00207 253 411
Nearest POLICE Station	Stansted Airport Police Station (Essex Police) Enterprise House Bassinbourn Road Stansted Airport CM24 1PS Call: 999
Other Emergency contacts:	
Gas- Cadent	0800 111 999
Electricity- UKP	0800 072 7282
Water- Thames Water	03453572407
Environment Agency-	0800 807 060
UXB discovery-	999

EMERGENCY PROCEDURES

IN CASE OF FIRE

1.0 RAISE THE ALARM BY SHOUTING “FIRE” AND USING THE AIR HORN IN THE OFFICE IF CLOSE

If you are able, dial 999 and tell the operator that the Fire Brigade is needed at:

HOULIHAN & CO. SITE

Dandara Homes,

Bulls Field, Takeley,

Essex,

CM22 6PR

2.0 ENSURE ALL WORKERS NEAR YOU ARE AWARE OF THE ALARM

3.0 EVACUATE THE SITE

4.0 ENSURE THE FIRE CO-ORDINATOR IS AWARE OF FIRE AND LOCATION


5.0 ALL WORKERS REPORT TO THE ASSEMBLY POINT; WAIT UNTIL THE SUPERVISOR ACCOUNTS FOR YOU

6.0 DO NOT PICK UP PERSONAL BELONGINGS OR TOOLS

7.0 ATTACK FIRE WITH EQUIPMENT PROVIDED IF SAFE TO DO SO UNDER THE DIRECTION OF THE COORDINATOR



PROJECT FIRE RISK ASSESSMENT

Project Name:	Dandara Homes, Takeley, Essex	Site Manager:	
Project Address:	Dandara Homes, Bulls Field, Takeley, Essex, CM22 6PU		
Fire Risk Assessment Completed by:	Alban Shehu	Date:	23.10.2025
Signed:		Revision Date & Number:	Date:23.10.2025 No.:
Description of Works, Work Areas, & Projected Activities:	Works on site comprise enabling work, temporary site setup, topsoil stripping, installation of haul roads, installation of drainage, and building foundations for the Dandara Homes development.		
NOTE: This document MUST be reviewed regularly and updated to ensure that current and future risks are reviewed and mitigation methods are planned and programmed to eliminate, mitigate, and reduce fire risk.			

Assessment Criteria	Applicable [Yes or No]	Potential Hazards	Persons at Risk	Initial Risk Rating	Precautions / Controls to be put in place	Residual Risk Rating
Ignition Sources						
Are hot works or heat-generating operations going to be completed on the Project? [e.g. welding, grinding, burning, etc.]	Yes	Ignition / Heat source. Sparks; Explosion and blowback; Competence. Storage of flammable gases and associated equipment.	All site Personnel	High	Consideration of cold-cutting methods during the risk assessment and project RAMS process. Use hot work permit, task risk assessment and safe system of work to manage the operation. Ensure processes are supervised at all times and completed by competent persons. Instigate a fire watch after the completion of the works and monitor compliance with the conditions of the hot works permits. Provide 2no of suitable fire extinguishers, fire blankets or appropriate emergency control measures/equipment;	Medium

Assessment Criteria	Applicable [Yes or No]	Potential Hazards	Persons at Risk	Initial Risk Rating	Precautions / Controls to be put in place	Residual Risk Rating
					Ensure operatives completing hot works are trained in the use of emergency fire control measures and equipment;	
Are internal cabin heaters or any portable heaters used? [e.g. drying rooms, offices]	Yes	Electrical fault. Restricted airflow. Unbalanced/unstable/unsecured covering of heaters with clothing or articles;	All site Personnel	High	Portable heat sources - avoid use only when other options are unavailable. Use equipment that has the heating element enclosed, preventing contact with materials, dust and combustibles – e.g. tube heaters. Comply with manufacturer instructions. All equipment PAT tested or, where possible, secured to the building and fixed electrical installation. All cabins must be electrically tested upon installation on-site by a competent electrician. Avoid covering the heaters with clothes and site materials – provide guards to keep clothes away from the heaters and signage to warn of hazards. Good housekeeping and avoidance of use alongside/near combustible material and fuel sources. Do NOT cover heaters with office furniture, tables and filing units,	Medium
Is portable electrical equipment used?	Yes	Electrical fault / short circuit. Trailing cables and extension lead. Overheating. Ingress of liquids?	All site Personnel	High	PAT - test electrical equipment 3 monthly for site equipment and 12 monthly for office equipment. Inspect equipment and wiring regularly to ensure it is not damaged. Do not overload electrical sockets or connect multiple extension leads. Ensure leads are fully unravelled to prevent overheating of cables;	Medium
Site's operatives smoking and onsite smoking facilities	Yes	Operatives smoking on site. The ignition source for combustible materials.	All site Personnel	High	No smoking policy on the construction site/work areas. Smoking ONLY allowed at a designated smoking area on site that is free from fuel sources and combustible materials.	Medium

Assessment Criteria	Applicable [Yes or No]	Potential Hazards	Persons at Risk	Initial Risk Rating	Precautions / Controls to be put in place	Residual Risk Rating
		Smoking in close proximity to fuel sources or combustible materials;			<p>Provide a suitably controlled smoking area with suitable extinguishing points for disposal of ends [e.g. sand, filled containers, extinguishing points];</p> <p>No waste or litter bins within smoking areas to discourage the placement of combustible materials in the area.</p> <p>Regular litter picking and housekeeping on site.</p> <p>Inclusion of smoking policy in induction and enforcement on site.</p> <p>Boarding around the bases of site cabins where these are raised above the ground to avoid litter and rubbish accumulation;</p>	
Combustible Materials						
Is there likely to be any build-ups of combustible materials or dusty environments, e.g. cardboard, paper, wood, plastics, etc?	Yes	<p>Arson.</p> <p>Explosive environments or spontaneous combustion.</p> <p>Contact with ignition source;</p>	All site Personnel	High	<p>Empty litter bins at regular intervals and promote good housekeeping, stopping works to complete clearance where required.</p> <p>RA and MS are developed for operations where dusty or explosive environments can be created.</p> <p>Restrict unauthorised access to storage areas to ensure materials are not abandoned.</p> <p>Keep ignition sources clear of storage areas and combustible materials.</p> <p>Store combustible materials away from electrical equipment and heating/cooling vents of electrical appliances;</p>	Medium
Any Flammable Liquids used on site e.g. petrol, Oil, Diesel etc?	Yes	<p>Arson.</p> <p>Contact with ignition source.</p> <p>Overfilling of plant and spillage onto hot surfaces/components.</p> <p>Poor maintenance of plant or storage vessels/bunds;</p>	All site Personnel	High	<p>Store flammables in fire-resisting containers away from ignition sources.</p> <p>Containers are to be locked away or padlocked to prevent trespass and unauthorised access.</p> <p>Correct filling techniques should be used, and equipment should be refilled at designated areas away from areas of risk.</p>	Medium

Assessment Criteria	Applicable [Yes or No]	Potential Hazards	Persons at Risk	Initial Risk Rating	Precautions / Controls to be put in place	Residual Risk Rating
					<p>Equipment should not be refilled when hot from operations to prevent ignition if accidental spillage occurs.</p> <p>Regular maintenance of the plant to ensure equipment is in good working order.</p> <p>Ensure hot works are not completed near the storage areas or flammable materials.</p> <p>Provide localised firefighting equipment for refuelling and flammable storage areas;</p>	
Fire Detection & Warning						
Clearance of offices and work areas	Yes	Non-evacuation of site;	All site Personnel	Medium	<p>All operatives are informed of the emergency procedures during the site induction.</p> <p>Site work areas swept for employees during evacuation.</p> <p>All operatives and personnel entering the site must sign in and out to ensure the site has a record of movements and who is present in an emergency;</p>	Low
Assignment of individuals to telephone the emergency services in the event of an emergency?	Yes	Delay in notifying fire service;	All site Personnel	Medium	<p>All persons on-site are advised of the emergency procedures in site induction.</p> <p>Ensure the nominee and deputy communicate if they are leaving the office to ensure a presence is always on site.</p> <p>Ensure continuity of cover during the absence.</p> <p>Ensure trained individuals are used and supported in any training requirements.</p> <p>Complete emergency posters and documentation for placement on site noticeboards for onsite reference;</p>	Low
Escape Routes						
Are Fire Marshals and Fire Wardens employed?	Yes	Placing themselves in unnecessary danger;	All site Personnel	Medium	<p>Ensure adequate and suitable training is provided so they understand their role and do not place themselves in danger.</p>	Low

Assessment Criteria	Applicable [Yes or No]	Potential Hazards	Persons at Risk	Initial Risk Rating	Precautions / Controls to be put in place	Residual Risk Rating
					Ensure each nominated role has a suitably trained deputy;	
Is there adequate signage in place to direct people to the closest emergency exit	Yes	Confusion or panic, leading to increased risk or not following safe routes;	All site Personnel	Medium	Signs to be of an internationally recognised standard. Internal fire doors are to be signed accordingly. Display appropriate signage outside lifts to prevent use in an emergency. Ensure signs indicate the route to the nearest / most suitable exit; All gangways are to be kept clear of obstacles;	Low
An assembly or muster point has been assigned, which is well away from buildings and combustible materials.	Yes	Plant and materials are stored in the muster area, making it inaccessible; Poor signage and knowledge of position;	All site Personnel	Medium	Ensure the assembly point or muster point is appropriately signed Ensure combustible materials are stored well away from assembly or muster points. Ensure assembly or muster point is never obstructed Ensure a backup area is available should assembly or muster point become unsuitable, i.e. due to weather or smoke.	Low
Fire Drills						
Are fire drills held every six months and at varying times of the day, with the escape route notionally blocked during fire drills to simulate potential fire conditions?	Yes	The escape route becomes unusable	All site Personnel	Medium	Ensure that problems that arise during drills are acted on and appropriate documentation is kept. Keep accurate records of fire drills and escape times. Ensure any lessons learnt from the fire drills are communicated and actioned as required;	Low
Fire Fighting Equipment						

Assessment Criteria	Applicable [Yes or No]	Potential Hazards	Persons at Risk	Initial Risk Rating	Precautions / Controls to be put in place	Residual Risk Rating
<p>Are there suitable extinguishers close to electrical equipment?</p> <p>Is there a suitable fire extinguisher for the operations or works</p> <p>Is there a fire blanket positioned adjacent to the cooking facilities?</p>	Yes	<p>Suitability for fire experienced</p> <p>Availability and recharge</p>	All site Personnel	Medium	<p>Ensure extinguishers are fixed adjacent to high-risk areas such as electrical equipment. Ensure the equipment provided is appropriate to the hazard being managed.</p> <p>Ensure extinguishers are located adjacent to escape routes, and a clear fire point is provided.</p> <p>Ensure training, toolbox talks, and fire awareness training are provided to those completing high-risk activities or operations.</p> <p>Ensure extinguishers are visually checked weekly for signs of tampering or leakage.</p> <p>Ensure extinguishers are serviced annually.</p> <p>Where equipment is being tampered with, remove individuals from the site for interference with equipment provided for the safety of the whole.</p> <p>Ensure fire extinguishers are used as designed / appropriately – e.g. not for task dampening operations – welding/burning;</p>	Low



Fire Plan



Key:	Fire Exits –	Fire Points & Extinguishers – Compound	Fire Call Points – Site office	Fire Assembly Point – Car Park
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Appendix E

SITE HEALTH AND SAFETY INDUCTION FORMS

Houlihan & Co. (Excavations) Limited Health & Safety Management System

SITE INDUCTION

If you have difficulty reading or understanding, please speak to the Site Supervisor/ Health and Safety Manager.

PLEASE ask questions.

The induction will be provided by Richard Hume, Site Supervisor, and Agron Selita, Health and Safety Advisor.

Sign in and out every day. Look at the traffic management drawing by the signing-in book.

Facilities: toilets, canteen, drying room.

Fire extinguishers.

Assembly point in an emergency.

Emergency contact numbers on notice board.

Site address on notice board.

First Aid box in the office. First Aider/ Appointed person George Kelly

HSE contact details on poster, with Houlihan H&S manager 24/7 number- 07584 809 221

PLEASE READ AND OBEY THE SITE RULES.

NO WORK BEFORE 08.00.

If you work for Houlihan & Co., please read our Method Statement and Risk Assessments.

If you work for a contractor to us, please read your own company M/S and R/A.

Our Health and Safety Policy is here to read.

No smoking on site or in welfare units. No alcohol. No drugs.

REPORT all accidents and near misses to the H&S Manager- 07584 809221.

IF YOU HAVE ANY QUESTIONS OR CONCERNS, RAISE THEM NOW OR RING THE H&S MANAGER.

Protect the Environment- no spills or waste. Be careful of our neighbours- we depend on their goodwill. Do the job correctly the first time- our clients won't work with us again unless we give them the job they want.



Houlihan & Co. (Excavations) Limited Health & Safety Management System

There will be toolbox talks, and we want your involvement in making the workplace safer. Jobs are examined for improvements, and you are best placed to help with this. Make suggestions to the site supervisor or H&S Manager.

Site-specific issues:

- Priors Forest is an ancient woodland, and it requires an 15m buffer zone between forest and the construction activity. No work must take place on the buffer zone unless it is following an Arboricultural Method Statement approved by Local Authority. No materials are to be stored on the buffer zone.**
- There are two PROW on site. One on the north of the site is in the buffer zone of the ancient woodland, between the forest and the site. The other one goes from east to west on the southern part of the site. There is no TTRO in place so both must be retained and fenced off with Heras fencing. Any crossing must be done in a controlled point maned by a gateman. Any work or diversion on them requires permit from the local authority.**
- There is a ditch on the north boundary and some on the southern boundary. They must be protected with silt fence from any site contamination.**
- No deliveries before 8:00 am.**
- No on-street parking is available on nearby local roads.**
- On no account are HGV drivers to use or turn in the mouths of neighbouring properties**



Houlihan & Co. (Excavations) Limited Health & Safety Management System

PLEASE SIGN THE INDUCTION ATTENDANCE SHEET

SITE INDUCTION

CONTRACT: Dandara Homes, Bull Field, Takeley, Essex,
CM22 6PU

NAME (PRINT)	DATE	SIGNATURE	COMMENTS
Issues raised by those attending must be noted and responded to by the person giving the induction.			
Induction covered Site-specific hazards, Emergency procedures, and Facilities. Services, Site rules, Method statement/ Risk assessments for your work Health and Safety Policy, Traffic Management Plan, Consultation, Environment Considerate Constructor Quality			
INDUCTION BY: 			

Company (site) induction sheet

Full Name:	Occupation:
Date of birth:	Employer:
Site:	Vehicle Registration if parked on site:
Home Address:	Next of Kin Contact Details or who will contact the next of kin: <i>Address:</i> <i>Tel No:</i>
<p>Do you have any medical condition that our First Aider or Site Supervisors should be made aware of? This information is not mandatory, but is requested to ensure information for emergency services or first aiders is available in the event of an emergency, so you are treated promptly.</p> <p>Asthma <input type="checkbox"/> Heart <input type="checkbox"/> Condition <input type="checkbox"/> Diabetic <input type="checkbox"/> Epilepsy <input type="checkbox"/> Hearing Loss <input type="checkbox"/> Back problems <input type="checkbox"/></p> <p><i>Other, please state:</i></p>	
<p>Are you on any medication? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><i>If you are on medication that may affect any drug test you should declare it – if you are prescribed drugs at any time whilst working on this site, you should advise the site management team.</i></p>	
<p><u>Health Surveillance Questions:</u></p> <p>Hand Arm Vibration Syndrome (HAVS) - Hand arm vibration syndrome is a widespread industrial disease affecting many workers. The most common form of Hand Arm vibration Syndrome is Vibration White Finger. Have you ever suffered from your fingers going white and numb when exposure to cold? Yes No Do you suffer from tingling in your hands? Yes No Are you suffering from loss of grip strength in your hands and do you have pain in your wrist and arm? Yes No Do you feel that the sensation of touch in any of your fingers isn't what it used to be? Yes No Is there a reduction in how you can do fiddly and fine tasks because your fingers don't work like they used to? Yes No</p> <p>Musculoskeletal disorders (MSD) - Back pain is common in society and will affect most people at some time in their life. It can occur anywhere from the base of the skull to the bottom of the tailbone. The pain may be acute or chronic, which may occur once or more than once in 12 weeks. It is commonly caused by straining the muscles or ligaments or tendons along the backbone. The pain may get worse when bending or sitting. Coughing and sneezing can also worsen the pain. Pain often begins suddenly after a strain or injury and may even come out of the blue or come on slowly. Do you get regular pain in your back? No Yes Do points in your back often feel tender? No Yes Do you have limited back motion, with tightness or tenderness in the back muscles? Yes No During inactivity to you suffer back pain? No Yes Do you have any pain in your buttocks or running down the backs of your legs? Yes No</p> <p>Noise Induced Hearing Loss (NIHL) - Every day in the workplace we are exposed to different noises and sounds and at different levels. Some of these can affect our ability to hear noise including speech, close or far sounds. Noise induced hearing loss happens over time and you may not be aware that it is happening to you. Do you have trouble hearing the telephone or doorbells? Yes No Do any of your family or friends complain that you have the television or radio on too loud? Yes No Do you have difficulty hearing conversation against a noisy background? No Yes Do you suffer from permanent / constant ringing in your ears? Yes No</p> <p>Respiratory Health (Asthma, COPD, and Other Respiratory Conditions) - Workers exposed to dust, fumes, chemicals, and other airborne particles on-site may be at risk of developing or worsening respiratory illnesses such as Asthma, Chronic Obstructive Pulmonary Disease (COPD), or occupational bronchitis. Identifying respiratory symptoms early ensures appropriate protective measures can be put in place. Do you have a history of respiratory diseases such as asthma, COPD, or bronchitis? Yes <input type="checkbox"/> No <input type="checkbox"/> Have you ever experienced chest tightness, wheezing, or shortness of breath when exposed to dust or cold air? Yes <input type="checkbox"/> No <input type="checkbox"/> Do you regularly use an inhaler or other breathing medications? Yes <input type="checkbox"/> No <input type="checkbox"/> Do you experience frequent coughing, particularly in the morning or after physical exertion? Yes <input type="checkbox"/> No <input type="checkbox"/> Have you noticed any decline in your ability to breathe freely during work or after exposure to airborne particles? Yes <input type="checkbox"/> No <input type="checkbox"/> Are you currently under medical supervision for any respiratory condition? Yes <input type="checkbox"/> No <input type="checkbox"/> Have you ever had a work-related respiratory assessment or been advised to use respiratory protection equipment (e.g., masks, respirators)? Yes <input type="checkbox"/> No <input type="checkbox"/></p>	
<p><u>Personnel Protective Equipment (PPE):</u></p> <p>Do you have the following PPE (Houlihan branded where applicable)? Boots Hi-Vis vest / jacket Hard Hat Gloves Do you know who to ask & where PPE stock is located? No Yes Are you aware of where additional PPE is located on-site such as: Dust Mask (P3) Safety Glasses If a face mask is required have you been face fit tested: Yes No <i>(If NO immediate arrangements must be made to arrange for a face-fit test carried out by the H&S department along with abrasive wheel awareness training if applicable. If Yes – please provide evidence of face fit testing and mask type.</i></p>	

Existing Competence:

CSCS Card: Yes No

Card Type (Please circle): Labourer or Skilled Worker (note no other card should be accepted)

Registration no:..... Expiry Date:.....

CPCS / NPORS(CSCS) Card: Yes ☐ No ☐

Category..... Registration no:.....

CPCS / NPORS(CSCS) Card: Yes ☐ No ☐

Category..... Registration no:.....

CPCS / NPORS(CSCS) Card: Yes ☐ No ☐

Category..... Registration no:.....

CPCS / NPORS(CSCS) Card: Yes ☐ No ☐

Category..... Registration no:.....

CPCS / NPORS(CSCS) Card: Yes ☐ No ☐

Category..... Registration no:.....

NVQ's:

Other (First-Aid / Confined Spaces/ SMSTS / SSSTS / NRSW / CAT/ Abrasive Wheel)

Future training I am interested in:

Copies of all cards/ certificates to be held securely with this form.


Please indicate by signing below if you are happy to provide Houlihan & Co (Excavations) Ltd with information and details above: Y / N

Signed..... Date.....

Appendix F

TEMPORARY WORKS SITE APPOINTMENTS

APPOINTMENT- TEMPORARY WORKS CO-ORDINATOR

Site: Bulls Field, Takeley, Essex,	Client: Dandara Homes
<p>In accordance with BS 5975:2008 "Code of Practice for Temporary Works Procedures." and Company Temporary Works Procedure, the following person is hereby appointed as Temporary Works Co-ordinator:</p> <p>NAME: CONOR GOUGH</p>	
<p>The Temporary Works Co-ordinator TWC) will undertake the following duties:</p> <ol style="list-style-type: none">1. Ensure that all Temporary Works have been identified by the Estimator.2. Review and keep update a Temporary Works Schedule3. Assess the Risk Level for each element of Temporary Works4. Check that design Briefs are adequate and in accord with site conditions5. Assess the level of design checking required6. Check that actual loads encountered on site do not exceed the designer's assumptions and intentions7. Ensure that each design element has been checked as determined by procedures. If in doubt, require another independent check8. Refer to the designer for approval of any proposed changes in materials, construction methods or any other significant changes9. Ensure checklists safe systems of work for each element of Temporary Works are in place, that the Temporary Works Supervisor (TWS) has been briefed and monitors these safe systems as work progresses10. Where permits to load, strike or dismantle are part of the safe system of work, ensure that the TWS is applying these11. Jointly with the Designated Person (DP) appoint Temporary Works Supervisors for the Company12. Ensure that a fully briefed Company TWS is always present during Temporary Works13. Approve the appointment of TWS by contractors to the Company	
<p>I accept the appointment as Temporary Works Co-ordinator for the above project. I understand my role and responsibilities according to the BS Code of Practice, Company Procedure, and the terms set out above.</p> <p>SIGNATURE: <i>Conor Gough</i> PRINT NAME: CONOR GOUGH DATE: 23.10.2025</p>	
<p>Designated Person:</p> <p>SIGNATURE: </p> <p>PRINT NAME: Richard Carroll</p> <p>POSITION: Construction Director</p>	<p>Date: 23.10.2025</p>

APPOINTMENT- TEMPORARY WORKS SUPERVISOR

Site: Bulls Field, Takeley, CM22 6PR	Client: Dandara Homes.
<p>In accordance with BS 5975:2008 "Code of Practice for Temporary Works Procedures." and Company Temporary Works Procedure, the following person is hereby appointed as Temporary Works Supervisor:</p> <p>NAME: R. Hume</p>	
<p>The Temporary Works Supervisor (TWS) will undertake the following duties:</p> <ol style="list-style-type: none">1. You will be responsible for the TWC2. You will assist in the supervision and checking of the temporary works3. You will supervise the erection, use, maintenance and dismantling of the temporary works4. You will carry out the checks at hold points during the works following B&G quality procedures5. You will liaise with the TWC to ensure any modifications to the scheme or differences from the envisaged conditions (use or environmental) are drawn to the attention of the designer6. Review with TWC and keep update a Temporary Works Schedule7. Report to TWC if the Risk Level for any element of Temporary Works is inadequate.8. Check that actual loads encountered on site do not exceed the designer's assumptions and intentions9. Check with TWC that each element of the design has been checked as determined by procedures.10. Refer to the TWC and designer for approval of any proposed changes in materials, construction methods or any other significant changes11. Meet with TWC to develop checklists of safe systems of work for each element of Temporary Works and monitor these safe systems as work progresses12. Where permits to load, strike or dismantle are part of the safe system of work, ensure that these are in place and up to date13. Arrange for acting TWS in case of absence if TW is ongoing.	
<p>I accept the appointment as Temporary Works Co-ordinator for the above project and understand my role and responsibilities according to the BS Code of Practice, Company Procedure and the terms set out above.</p> <p>SIGNATURE: <i>Richard Hume</i> PRINT NAME: Richard Hume DATE: 23/10/2025</p>	
<p>Designated Person: SIGNATURE: <i>Conor Gough</i> PRINT NAME: Conor Gough POSITION: TWC</p>	<p>Date: 23/10/2025</p>



Temporary Works Register

Project name		Dandara Homes, Takeley, Essex,CM22 6PU				Temporary Works Coordinator		Conor Gough			Project Manager					Register reference/ revision no.				
Date of first issue		23.10.2025		Date of revision		23.10.2025		Reviewed by	A. SHEHU											
Step 1				Step 2				Step 3			Step 4			Step 5			Step 6			
Identify scheme				Design Brief				Design, verification and approval			Construction/Installation			Maintenance and inspection			Dismantle and removal			
Designated Individual, Technical Manager, Project Manager, Temporary Works Coordinator				Temporary Works Coordinator				Project Manager, Temporary Works Coordinator, Designers, Permanent Work Designer			Temporary Works Supervisor			Temporary Works Coordinator			Temporary Works Supervisor			
Temporary works number	Title and description of temporary works; (Location, height, length, CBR rating)			Date, temporary works design, is required		Date Temporary Works Engineering Design Brief is issued to Temporary Works Designer.	Classification of Temporary Works M – Minor N – Normal S - Special	Level of design check category 0,1,2,3	Date design approved by Technical/ Temporary Works Designer	Date accepted by Principal Contractor	Date RAMS reviewed and accepted prior to installation	Date of temporary works inspection prior to loading/ issue of permit to load	Details of temporary works inspection regime			Date RAMS reviewed and accepted prior to removal (if changed)	Date of temporary works completion/ permit to strike/ dismantle			
01	Heras Fencing																			
02	Piling Mat																			
03	Spoil Heaps																			
04	Drainage up to 3.0 m																			
05	Crane Base																			
06	Crane Hoarding																			
07	Site Hoarding																			
08	Scaffold Platform																			
09	Silo Base																			
10	Formwork – Columns																			
11	Formwork – Walls																			
12	Formwork – Stair Cores																			
13	Formwork – Lift Shafts																			
14	Formwork – Podium																			



15	Formwork – Edge Protection											



Appendix G

TRAFFIC MANAGEMNET PLAN

TRAFFIC MANAGEMENT PLAN

For

Dandara Homes, Parsonage Road, Takeley

CM22 6PU

Contents:

- 1.0 Introduction
- 2.0 Construction Traffic and Site Access
- 3.0 Site Arrangements
 - 3.1 Site Parking
 - 3.2 Pedestrian Access Routes
 - 3.3 Construction Vehicle Movements
 - 3.4 Banking of Vehicles
 - 3.5 Speed Limits
 - 3.6 Hazard Fencing
 - 3.7 Road Clearance
 - 3.8 Vehicle Movement Restrictions
 - 3.9 Site Terrain
- 4.0 Monitoring and Control
- 5.0 Further Guidance

1.0 INTRODUCTION

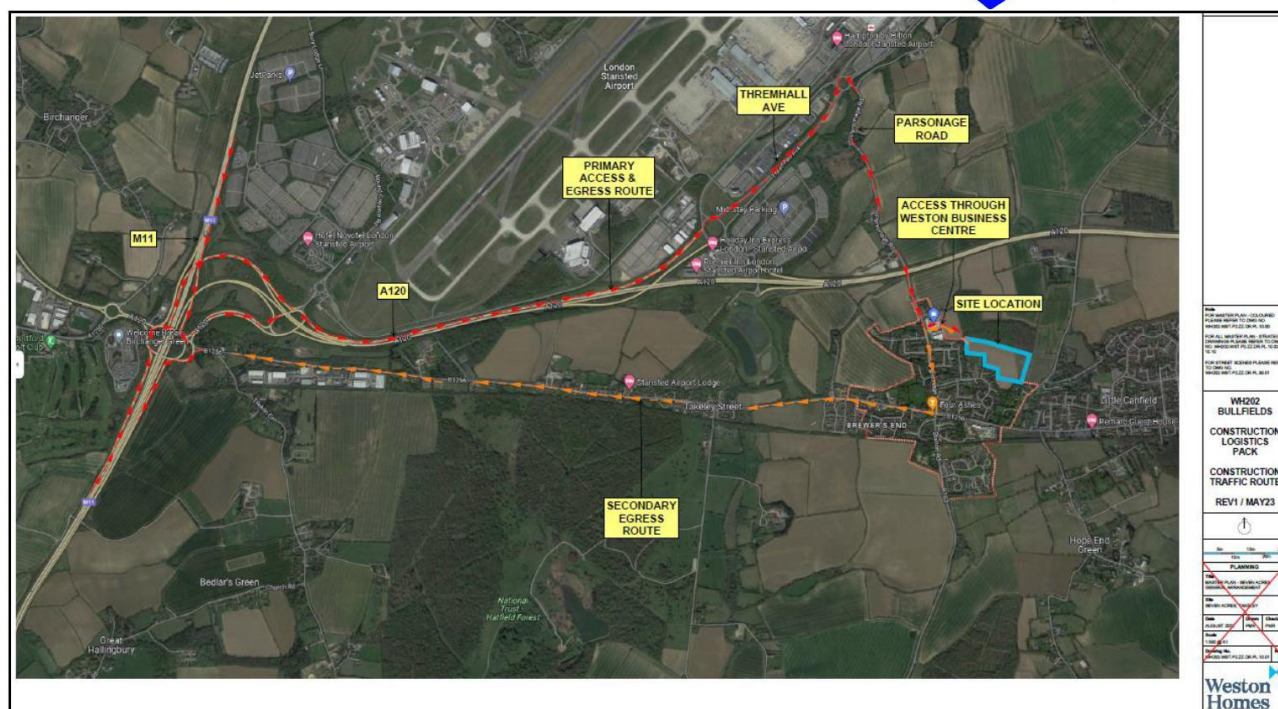
Due to the risks associated with the movement of traffic on site it is necessary to operate a traffic management system to prevent any accidents occurring involving the construction plant, vehicles entering or leaving the site and pedestrians.

The contents of this plan will be constantly monitored by the Site Supervisor and, where necessary, amended as the site develops.

The construction vehicle route to the site is as follows:

- (a) A120 Eastbound (Green to Yellow arrows) Exit signposted Stansted Airport Terminal
 - Take second exit off roundabout onto Thremhall Avenue, at the next roundabout take Takeley turn off (4th exit) marked on plan.
 - Follow road round a series of bends, over the bridge to another roundabout and go straight on (2nd exit),
 - Seven Acres Avenue is on left after approximately 100 yards.
 - Drive between offices towards industrial units then follow the road round as it bends to the right. The site will be directly in front of you.

- (b) A120 Westbound: (Blue to yellow arrows) Exit signposted for Stansted Airport.
 - Take second exit off roundabout (right), then take the second exit again at the next roundabout signposted 'Terminal'.
 - At the third roundabout take the third exit, again following the 'Terminal' sign.
 - At the next roundabout take Takeley turn off (4th exit) marked on plan .
 - Follow road round a series of bends, over the bridge to another roundabout and go straight on (2nd exit), Seven Acres Avenue is on left after approximately 100 yards.
 - Drive between offices towards industrial units then follow the road round as it bends to the right.
 - The site will be directly in front of you. Lorries will enter the site in forward gear and there is space for lorries to turn within the site.



Site working hours will be as dictated by the planning conditions. Construction plant will only be allowed to operate between the following hours (provided they comply with the hours permitted, as mentioned above):

- 8 am to 5 pm, Monday to Friday.
- 8 am to 1 pm Saturday (only if required as per the construction programme)
- No work will be permitted on Sundays and Bank Holidays unless a requirement is identified under a statutory, i.e. Energy provider & Highways team.

Deliveries to the site will be timed in accordance with the Planning Conditions and to avoid the start and finish times of local schools, if applicable. During term time, deliveries will take place outside the hours of 08.15 to 09.30 and 14:45 to 16.00.

All subcontractor agreements and material supply orders will stipulate delivery times in accordance with this.

No deliveries are permitted outside working hours unless by prior agreement with site management.

Vehicles arriving outside normal hours will be turned away, and Houlihan & Co will not be responsible for any costs incurred.

The site is surrounded by residential properties and vehicles entering/leaving the site must drive with extreme caution at all times, at a reduced speed. The location of, entrance/exit gates, laydown areas and materials storage are also indicated by PC Site Traffic Management Plan. Vehicles will not be allowed to be reversed out of site access.

All site workers, visitors and deliveries will be notified of the construction route and site access. Deliveries and waste lorries. All deliveries times must be scheduled at least an hour apart. Delivery drivers must call the site supervisor prior to approaching site. Every lorry or delivery truck will be assisted by a traffic marshal to enter and leave site.

2.0 CONSTRUCTION TRAFFIC AND SITE ACCESS

- It is proposed that access to the site set-up and enabling phase will be via the existing entrance off Parsonage Road, which will be controlled by a gateman. The site access approval will be via A construction management plan detailing this site access, which has been issued to the local authority by Dandara Homes for approval.
- The access arrangements will incorporate measures and features to provide segregation of public and construction traffic/access as set out in the Drawing, which is attached in Appendix A.
- A Gateman/Banksman will be positioned at the site entrance and will manage access and egress of the construction traffic. His main aim is to maintain a free entrance for incoming traffic into the site to avoid any stopping and disruption on the access roads, which includes other road users (Vehicles and cyclists) and pedestrians. This will be achieved by construction vehicles being held back on site until the road and associated footpath are clear of any other road users and pedestrians.
- Pedestrian and cyclist safety around the development will be paramount and, as such, in addition to the presence of the Gateman and appropriate signage will be situated at the proposed entrance/exit point to the site to ensure any traffic entering or leaving the site are aware of potential pedestrians, cyclist and that the proposed segregation is adhered to.
- A key part of the management of the route is to minimise potential conflict between construction vehicles and the general public and students.

3.0 SITE ARRANGEMENTS

3.1 SITE PARKING

Parking is restricted to designated parking areas as agreed with the site manager, operatives and contractors should not park in areas that will cause danger or nuisance to other road users and local residents. Construction staff will be asked, where possible, to share vehicles to minimise site numbers. Then, this will be reviewed together with CHSP)

3.2 PEDESTRIAN ACCESS ROUTES

Where practicable, pedestrian routes will be formed to segregate personnel from site traffic movement. 'Pedestrians' include all site operatives as well as visitors and members of the public. Pedestrian access route(s) will be set out and detailed on a drawing displayed in the site canteen. All operatives on site must wear hi-visibility clothing at all times. If barriers have to be taken down, alternative access must be planned.

Any areas where pedestrians must cross the traffic routes (e.g., for access to parking areas, welfare facilities, etc.) may need to be clearly marked with signs.

3.3 CONSTRUCTION VEHICLE MOVEMENTS ON SITE

Only those persons who are competent will be authorised to drive site construction vehicles.

All site plant used must be inspected, tested and serviced at the appropriate intervals laid down by legislation and the manufacturers' instructions. All faults must be reported as soon as possible and, where the defect presents a risk to safety, the vehicle must be taken out of use. Records on maintenance, inspection and test will be available on site.

All site plant when not in use must be parked safely with the engines turned off and the ignition keys removed. If site conditions permit, a one-way traffic system will be operated. Such a one-way system will be clearly sign posted.

Where practicable to do so, a turning area for vehicles must be installed and identified as such. No vehicles will be permitted to park, and no materials will be stored, within this area.

Where it is not practicable or convenient to create or use a turning area then all reversing plant must be banked safely. Any site plant with restricted visibility reversing must also be banked.

Lorries are not permitted to travel in reverse on site unless under the control of a trained banksman. This does not include site plant reversing over short distances, such as a forklift reversing from a loading bay, so long as the operator is aware that it is safe to do so. Audible reversing warning equipment must be fitted to all site plant and be maintained in working condition. This will not be fitted to tracked vehicles as forward or reverse depends on the orientation of the cab/ dipper arm and would confuse.

Suitable signs will be provided indicating:

- a) No Lorries to reverse without a banksman.
- b) Site operatives to stay clear of reversing vehicles and site plant.
- c) A bankman will attend to all pick and carry duties.

3.4 BANKING OF VEHICLES

Managing the site access will require two banksmen, one on the site entrance (serving as gateman) and another one on the Haul Road/ site entrance. They will be coordinating as circumstances require; some deliveries will be walked by the banksman into the site, and some deliveries might be stopped to give away to equestrians and pedestrians. Every contractor with plant on site or in control of lorries will have a trained banksman on site. Standard signals are to be used by banksmen. This will be explained in a toolbox talk to operatives as the only acceptable signals to be used on this site.

3.5 SPEED LIMIT

Parsonage Road has a 30mph speed limit. All site operatives and visitors will be briefed as to the road and access specifics. A speed limit of 5 MPH will apply to this site/ college grounds and, as necessary, appropriate signs will be placed at the site entrance and at various intervals on the site roads. Traffic calming measures in the form of ramps may also be provided if necessary.

3.6 HAZARD FENCING

Where specific hazards may produce additional risks to the movement of site plant and vehicles and pedestrians they must, where practicable, be protected by a physical barrier and high visibility chapter 8 plastic fencing. This will include scaffolding in close proximity to the roadway and excavations. Excavations close to vehicle and pedestrian routes must be backfilled as soon as practicable.

3.7 ROAD CLEANING

A jet wash station will be available and set up near the site exit gate to clean vehicle wheels before leaving the site. This will ensure that mud is not deposited on Highways.

3.8 VEHICLE MOVEMENT RESTRICTIONS

Deliveries to the site will be timed in accordance with the planning conditions to avoid the start and finish times of local schools, if applicable. During term time, deliveries will take place outside the hours of 08.15 to 09.15 and 15.00 to 16:00

All subcontractor agreements and material supply orders will stipulate delivery times in accordance with this. No vehicles are allowed to park in areas that will cause danger or nuisance to local residents and/or other road users.

Until a time the that the permanent entrance is constructed deliveries will be restricted to rigid lorries not exceeding 24.5 tons in weight. Once the entrance is constructed a review of the traffic route may be reviewed to ensure surrounding roads restrictions are adhered too.

3.9 SITE TERRAIN

Where uneven terrain exists or is likely to be created as a result of the temporary or permanent construction works then additional measures will be required to prevent site plant and vehicles overturning. This included temporary spoil heaps.

All vehicles will have ROPS and will be provided with a personal restraint system to the seat in accordance with the plant manufacturers requirements.

4.0 MONITORING AND CONTROL

This is the responsibility of the Site Supervisor. Supervisors appointed by contractors on this site will also ensure that persons working under their control comply with these requirements.

Personnel failing to comply with the requirements of this traffic plan, placing themselves or others at increased risk will be dealt with in accordance with normal disciplinary procedures and may be removed from site.

5.0 TRAFFIC MANAGEMENT DRAWING

The traffic management plan will be visually displayed by the signing in book and will be kept up to date every change.

6.0 FURTHER GUIDANCE

Refer to the CITB Construction Site Safety (GE700) manual for further information or consult the Health & Safety Manager if making any changes to this Traffic Management Plan.



APPENDIX A



Appendix H

Environmental Managment Plan & Pollution Prevention Plan

Houlihan & Co. (Excavations) Limited

OHSEQ Management System



FORM E1 – EMP MANAGEMENT PROPOSALS FOR SITE RISK MITIGATION

Site: Persimmon Homes, Barton Hill Drive, Minster on Sea.		
Impact	Specific Aspect	Mitigation Approach
Contamination	Any unexpected colours, smells, objects, structures	Any contamination discovered will be reported to Persimmon Homes as the client and LEAP as their appointed environmental consultant. No contaminated fill will be imported to the site. There is no contamination on site: Every ground worker will be briefed on the Discovery Strategy.
Oil pollution	Refuelling vehicles	The fuel tank will be double-skinned bunded (110% of capacity) and placed in the designated refuelling area. The refuelling area will be Heras Fenced, marked out with visible signage, and the fuel tank will be positioned upon 150mm/ type 1 sitting on a sheet of Tarpaulin. During the fuelling process, a drip tray will be positioned under the connection point to ensure that any diesel drips are caught in the tray. The same process applies to filling petrol tools/cans, etc. If the hose has been contained within the secondary bund and submersed in diesel, the hose itself must be located within the drip tray; take the lid off if necessary. A spill kit and nappy sacks will be there for any emergency. A fire point with 2no. CO2 extinguishers will be placed close to the refuelling area and appropriately signed.
Dust	Cutting concrete, wind and vehicle-borne dust arising from operations	Water dust suppression on cutting tools, roads swept, damped down. spoil heaps covered and reduced as soon as possible
Noise	Public adjacent	Plant selected for noise reduction, working hours controlled, regular maintenance
Silt	Contamination reaches surface water drains	Roads will be cleaned as required. Gulley sealed. Retaining vegetation cover across the boundary on-site as much as possible. Haul road will be topped with a tarmac running course, easy to clean with a road sweeper.

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		<p>A jet wash will be installed at the site's exit to clean the wheels of vehicles leaving the site.</p> <p>The designated car park will be topped with stone and be maintained mud-free.</p> <p>Surface Water Management will have specific measures to prevent run-offs.</p> <p>The surface water attenuation swale will be constructed early in the construction phase.</p> <p>Minimising the movement of the plant on and off roads to prevent the tracking of excess soil onto roads and highways.</p> <p>Installing hardstanding areas to the front of all plots enables 'clean' forklift access.</p> <p>The placement of hardstanding or topsoil at the earliest opportunity to control surface runoff from completed areas.</p>
Oils	Inadequate Storage	Minimum stored securely. (COSHH cage)
Vibration	Public, adjacent site	Plant selected for low vibration characteristics. no work involving vibration at site boundaries.
Hedgerows, trees	<p>Ancient Woodland north to the boundary of the site</p> <p>Tree Protection Order and Root Protection will determine exclusion areas that will be fenced.</p>	<p>15m Buffer zone to the Prior Forest. Any works within the buffer zone will require an Arboricultural method statement approved by the local authority.</p> <p>The Tree Protection Plan shows the alignment of Tree Protection Fencing (TPF), which is to be installed prior to any construction activity taking place on site. Inside the exclusion area of the fencing, the following shall apply:</p> <ul style="list-style-type: none"> • No mechanical excavation whatsoever • No excavation by any other means without arboricultural site supervision

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OHSEQ Management System



		<ul style="list-style-type: none"> • No hand digging without a written method statement having first been approved by the project arboriculturist. • No lowering of levels for any purpose (except removal of grass sward using hand tools) • No storage of plant or materials • No storage or handling of any chemical, including cement washings. • No vehicular access • No fire lighting
Sheet no. 1		Signed: A. Shehu

The Site Supervisor/Contracts Manager must review forms 'E1' and 'E2' every month and every time any of the details change. Any changes must be copied to the Health and Safety Manager so that they can be included in any future issues of the health safety and environmental plan.

FORM E2 – EMP SUBCONTRACTOR PROPOSALS FOR SITE RISK MITIGATION

Houlihan & Co. (Excavations) Limited OHSEQ Management System



SITE: PERSIMMON HOMES, BARTON HILL DRIVE, MINSTER ON SEA.		
MAIN ISSUE	SPECIFIC ASPECT	MITIGATION APPROACH
		IN THIS PHASE, ALL WORKS BY HOULIHAN & CO. AS PRINCIPAL CONTRACTOR AND GROUNDWORK CONTRACTOR
SHEET NO.		SIGNED: A. SHEHU

The Site Supervisor/Contracts Manager must review forms 'E1' and 'E2' every month and every time any of the details change. Any changes must be copied to the Health and Safety Manager so that they can be included in any future issues of the health safety and environmental plan

FORM E3 – ENVIRONMENTAL MANAGEMENT PLAN REVIEWS AND UPDATES

SITE: PERSIMMON HOMES, BARTON HILL DRIVE, MINSTER ON SEA.	SHEET NO.
--	------------------

Houlihan & Co. (Excavations) Limited
OHSEQ Management System



DATE	FORM	COMMENTS	SIGNED

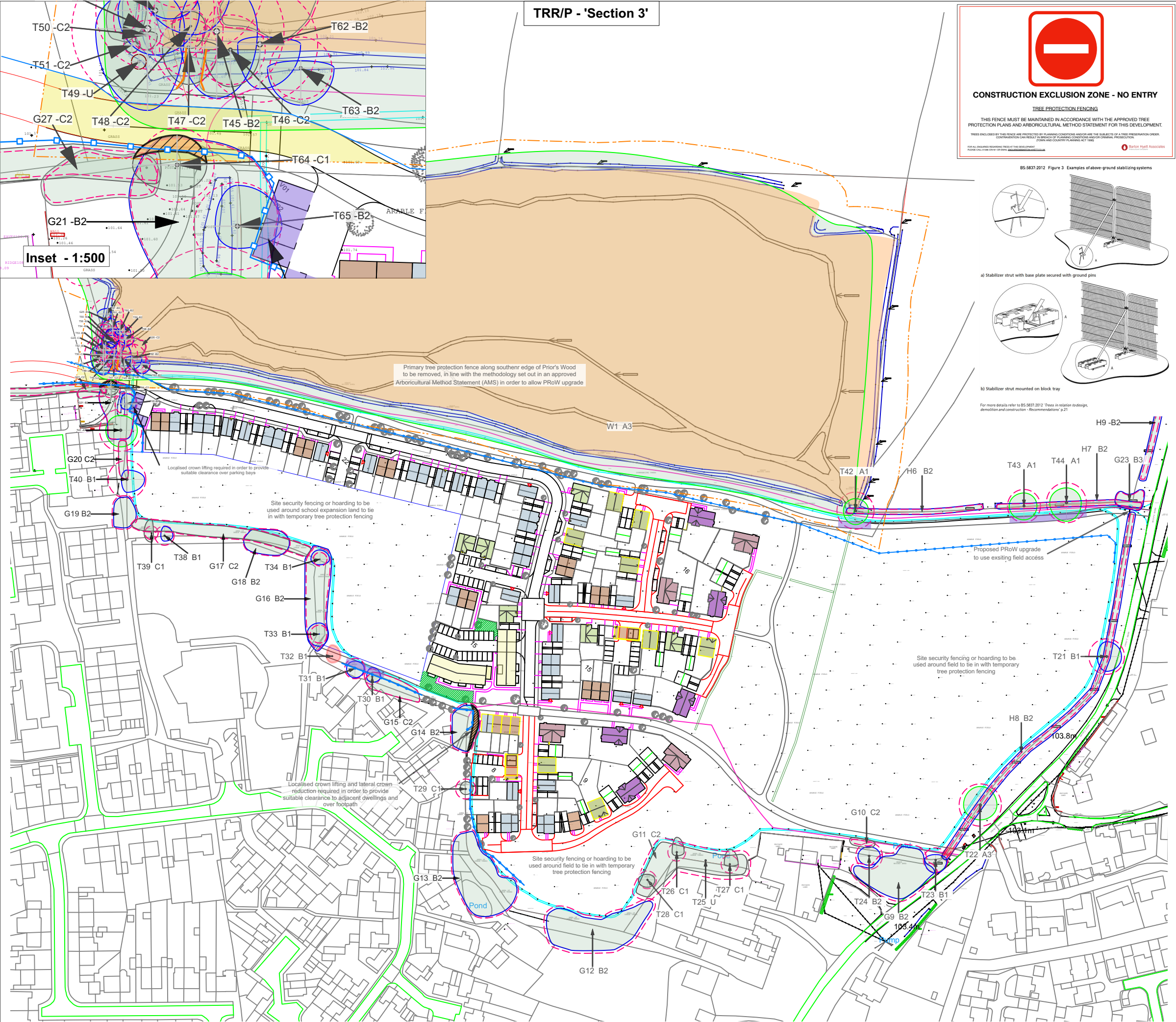
Car Park

Pond

Rev.	Date	Description	By	
 HOULIHAN				
Head Office: J2 Brooklands Close Sunbury On Thames Surrey TW16 7D				
<div>    </div>				
Client		Dandara Homes		
Site Address		Smiths Green Bishop's Stortford CM22 6NS		
Drawing title		Construction Build Plan		
Project No		DD-TAK-100		
Date		07.10.2025		
Scale		Not to Scale		
Drawn by		JR	Sheet No	
Checked by		JR	1 of 1	

Appendix I

TREE PROTECTION AREA & SILT FENCE LOCATION



- KEY**
- Category A Tree - High quality (Retention highly desirable)
 - Category A - Hedgerow, Group, Woodland - High quality (Retention highly desirable)
 - Category B Tree - Moderate quality (Retention desirable)
 - Category B - Hedgerow, Group, Woodland - Moderate quality (Retention desirable)
 - Category C Tree - Low quality (May be retained but should not constrain development)
 - Category C - Hedgerow, Group, Woodland - Low quality (May be retained but should not constrain development)
 - Category U Tree - Very low quality (Mostly unsuitable for retention)
 - Category U - Hedgerow, Group, Woodland - Very low quality (Mostly unsuitable for retention)
 - Root Protection Area (RPA) - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability
 - Shrub mass/offsite tree/out of scope (OOS)
 - * Tree/Group not on topo stem location given is estimate
- Ancient Tree / Woodland or Veteran Trees**
- Ancient tree/woodland or Veteran tree: Important trees that require special cons
 - Ancient tree/woodland or Veteran tree buffer: As per published standing advice 1 Natural England and the Forestry Commission
- Impacts/Protection**
- Tree of tree group to be removed
 - Area of tree canopy to be pruned back/crown lifted
 - Tree Protection Barrier to Figure 3 of BS5837:2012
 - Area of 'No Dig' parkign bay and path construction (separate Engineers speciaiont to be prepared and an AMS report prepared)
 - Area of reduced dig and narrowed highway construction through ASNW buffer - See AIA report for further details.

Note: The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice

Appendix J

METHOD STATEMENT AND RISK ASSESSMENTS

Houlihan & Co. (Excavations) Limited

OHSEQ Management System



Project	C/O Dandara Homes: Bulls Field, Takeley		
Activity	Houlihan has been contracted by Dandara Homes to carry out the groundwork operations for the new housing development, Bulls Field, Takeley. . This development consists of developing 96 dwellings, 81 houses and two apartment blocks. The work comprises foundations, substructure, drainage, roads, external works, and services ducting for the above project. There are also adoptable works in connection with roads and sewers. The foundations are combined strip foundations and piled foundations. Houlihan will be the Principal Contractor for a period of 8 weeks until the permanent Dandara Site Compound have been installed.		
No:	Doc. Ref	M0622 MS 2501 Groundworks	Client: Dandara Homes

1.0	Project submission information	Document Prepared by:	Agron Selita	Signature:		Issue Date:	23/10/2025
		Document Reviewed by:	Conor Gough	Signature:		Issue Date:	23/10/2025
		Document issued to (Client):		Signature:		Issue Date:	23/10/2025

2.0	Document Control	Issue Date:	Amendment Number:	Date Amended:	Person Amending:	Remarks
		23/10/2025	0			

3.0	Document Contents	1.0	Project submission information	Page Number:	01
		2.0	Document Control	Page Number:	01
		3.0	Document Contents	Page Number:	01
		4.0	Site Description	Page Number:	01
		5.0	Scope of Works	Page Number:	02
		6.0	Preparation	Page Number:	03
		7.0	Access & Egress	Page Number:	03
		8.0	Supervision, Responsibilities and Site Organisation	Page Number:	03
		9.0	Labour, Management Resources & Training	Page Number:	03
		10.0	Major Plant & Minor Plant/ Equipment (Typical)	Page Number:	04
		11.0	Method of Work: Plant/ Materials and vehicle preparation and delivery	Page Number:	05
		12.0	Method of Work: Cut and Fill	Page Number:	05
		13.0	Method of Work: Constructing Piling Mat and Piling Assistance	Page Number:	06
		14.0	Method of Work: Substructure to Building	Page Number:	07
		15.0	Methodology: Mains Drainage	Page Number:	10
		16.0	Method of Work: Domestic Drainage	Page Number:	16
		17.0	Method of Work: Adoptable & Private Road / Footpath Construction	Page Number:	16
		18.0	Method of work: Installing Services	Page Number:	18
		19.0	Method of Work: Work On/Near Underground Services	Page Number:	21
		20.0	Method of Work: Spoil Heaps	Page Number:	21
		21.0	Method of Work: Lifting with Excavator	Page Number:	23
		22.0	Method of Work: Working in confined spaces	Page Number:	25
		23.0	Health and Safety	Page Number:	25
		24.0	Discovery Strategy Contamination Waste Disposal	Page Number:	28
		25.0	Silt Management	Page Number:	29
		26.0	Applicable COSHH	Page Number:	29
		27.0	Immediate Emergency Procedures	Page Number:	30
		28.0	Site Specific Risk Assessments	Page Number:	31-41
		29.0	Hand Arm Vibration & Decibel Level Reference Chart	Page Number:	42
		25.0	Communication: Confirmation of Operatives Briefings	Page Number:	45

4.0	Site Description Access & Egress	The site is an arable field of circa 8.5ha otherwise called Bulls Field, located to the north of Takeley east of Parsonage Road and west of Smiths Green Lane. Bordering the site to the north is Priors Wood (an area of ancient woodland) and a further agricultural field. To the east is Smiths Green with residential dwellings beyond. To the south and west of the site are residential dwellings within Takeley along with Roseacres Primary School. To the northwest are industrial units and residential dwellings. The access into the site will be off the Parsonage Road onto Hatfield Way through the Industrial Units, keeping on the right and there will be the side entrance. • A gateman will man the gate. • All Lorries and Traffic Movement will be banked around the site to the area of discharge /loading by training the banksman. Dandara, as Principal Contractor, will sweep the roads.
		The site entrance will be clearly signposted. The construction plant will only be allowed to operate between the following hours:

Prepared by: Alban Shehu	Client: Dandara Homes
Page 1 of 48	Doc: M0622 MS 2501 Groundworks

Prepared by: Alban Shehu	Client: Dandara Homes
Page 2 of 48	Doc: M0622 MS 2501 Groundworks

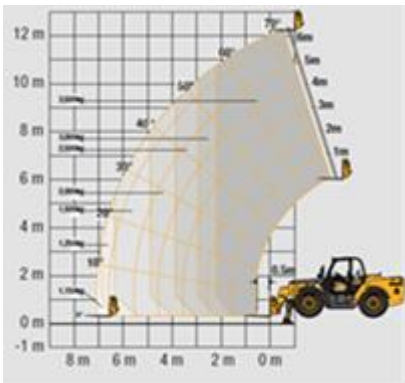
		<p> <u>5.9</u> Installation of concrete. <u>5.10</u> Installation of substructure blockwork <u>5.11</u> Installation of plot drainage/ domestic drainage <u>5.12</u> Installation of beam and block <u>5.13</u> Service trenching. </p> <p>Installation of Foul & Surface Water Drainage</p> <p> <u>5.14</u> Foul Water pipe' sizes vary from 100Ø mm to 150Ø mm and the deepest excavation is at the run from F16 -F17- F18 – F19- F20 at 4m depths. <u>5.15</u> Foul water manholes are all of 1200Ø mm. The biggest depth of the foul drainage is of 4m at F16, F17,18, F19. <u>5.16</u> SW pipes' sizes vary from 150Ø mm and 225Ømm clay and 300Ø mm, 375Ø mm, and 525Ø mm concrete pipes. The deepest run is that of S6 to S3 at 1.76m. <u>5.17</u> SW manholes sizes vary from 1200Ømm, 1350Ø mm, and 1500Ø mm, the deepest at S6 1.8m </p> <p>External Work</p> <p> <u>5.18</u> Tarmac Road <u>5.19</u> Tarmac footway <u>5.20</u> Block Paved Roads <u>5.21</u> Porous Block Paved shared driveways <u>5.22</u> Porous Block Paved individual driveways <u>5.23</u> Hoggin Pathways <u>5.24</u> Paths Patios – using Marshall Urbex paving32mm thick. <u>5.25</u> Kerbs and Edgings <u>5.26</u> Shed bases <u>5.27</u> Topsoil and landscaping Note: Task specific method statements & associated risk assessments will additionally be drafted at the health and safety representatives, site supervisors or site agent's discretion. </p>
6.0	Preparation	<p>Pre-start on site:</p> <ul style="list-style-type: none"> Site perimeter hoarding must be put in place before any construction activity starts on site. Tree removal, pruning must be completed by others. Tree and root protection fencing must be erected as per TPO by others. Buffer zone fencing for the ancient woodland must erected. No storing materials, and no works in the buffer zone area. For each work there must be an arboriculturist method statement and that approved by local authority. Public Right of Ways must be segregated from construction activity when the cross the site by Heras fencing. There must be only a designated crossing for the construction plant and it must be manned by a gateman. Silt fencing must be installed in the site boundary where there is any possibility of the silt contamination escaping from site. Everyone working on site must be briefed on silt management and pollution prevention. All operatives must be inducted and sign their appropriate RAMS. No work to start before 08:00 in the morning. <p>Pre-Start Each day :</p> <ul style="list-style-type: none"> Every morning before each shift, no operative / sub-contractor must commence work without attending a daily briefing held by the site work supervisor at the site compound no later than 0730hrs, where the day's task/s and associated risk/s will be addressed, planned and possibly challenged if operatives have any concern. Toolbox talks must be undertaken after the daily briefing with the operatives about to engage in high-risk work, such as: excavating on/near live services / deep excavation activities/work in the public highway / confined space work, etc. Check if there are any changes to the traffic management on site. Carry out a CAT scan survey in the proposed excavation areas routinely & review existing utility plans. Ensure there are no other trades or public works along the line of the proposed works. Check that all drawings are current and are the latest issues. Cordon off the area of work from other personnel and traffic not involved in the work. Ensure that the area of work is closed and that no access is permitted by the public. Carry out Topographical Survey: Agree on levels with client. The team or teams involved will carry out a task-specific briefing and sign off on it. If the work is on or near live services, the prestart procedure will be followed in addition.
7.0	Access & Egress	<ul style="list-style-type: none"> The access into the site will be off the Parsonage Road onto Hatfield Way through the Industrial Units, keeping on the right and there will be the side entrance. A gateman will man the gate. There will be a jet wash to clean the wheels of the vehicles leaving the site. All Lorries and Traffic Movement will be banked around the site to the area of discharge /loading by training the banksman. No on-street parking is available on nearby local roads. There will be provision for vans to be unloaded on the site in a timed slot. On no account are HGV drivers to use or turn in the mouths of neighbouring properties.

Houlihan & Co. (Excavations) Limited

OHSEQ Management System



8.0	Supervision, Responsibilities and Site Organisation	<ul style="list-style-type: none"> Richard Hume – Site supervisor Florin Christescu – Site Engineer Conor Gough – Contracts Manager Agron Selita – H&S Adviser Richard Carroll – Construction Director Conor Gough – Temporary Work Coordinator Richard Hume – Temporary Work Supervisor
9.0	Labour, management resources & training	<ul style="list-style-type: none"> Sufficient time and resources will be made available to undertake the work involved. The works described will be undertaken by one gang of 7 - 14 operatives under the supervision of a competent Supervisor and Site Engineer. The Contracts Manager, Conor Gough, will visit the site as often as required. Every morning before each shift, no operative / sub-contractor must commence work without attending a daily briefing held by the site supervisor at his site office no later than 0730hrs, where the day's task/s and associated risk/s will be addressed, planned and possibly challenged if operatives have any concern. Toolbox talks must be undertaken after the daily briefing with the operatives who are about to engage in high-risk work such as excavating on/near live services, deep excavation activities, work in the public highway, confined space work, etc. Routinely carry out CAT scan surveys of proposed excavation areas and review existing utility plans when obtained, bearing in mind the constraints above. <i>Note: when excavating on/near underground services, trial holes must be established to ascertain the line and depth of apparatus via the use of an air-pick and insulated shovels by trained and authorised personnel only. Only hand digging is to be conducted within 1 metre of services. Hand digging means using the air pick after removal of hard cover with bladed tools only used to remove concrete pieces, rock, which the air pick can't move. The depth of hard cover will be ascertained by trial excavation in an area where there are no services, followed by horizontal excavation below the hard cover surface to establish a safe breakout depth for the machine.</i> Ensure there are no other trades or public works along the line of the proposed works. Check that all drawings are current and the latest issue. Cordon off the work area from other personnel and traffic not involved in the work. Obtain a permit to commence works from the Principal Contractor. The Contracts Manager will report to our Construction Director, Richard Carroll, who will visit the site weekly. The Health and Safety Advisor, Agron Selita, will visit at least monthly to monitor compliance with the Method Statement and risk assessments. He will also carry out re-inductions / inspections and investigate all site accidents and near misses. All our operatives have undertaken safety training. Our Managers and Directors have also attended CITB Safety Courses. All personnel have a schedule of health and safety (refresher) training in order to maintain our high standards. Machine operators are all certified to NPORS or CPC standards, and copies of certification are held on site and readily available from the head office. Our entire workforce is undergoing on-site assessment via the CITB experienced worker route or has already achieved. This leads to National Vocational Qualifications in General Construction and Plant Operations for all relevant categories of operations or plant. Our whole workforce is accredited under the Construction Skills Certification Scheme (CSCS) all skilled groundworkers possess a blue Skilled Worker CSCS card; all labourers possess a green Labourers CSCS card as an absolute minimum and are working to gain NVQs. Note- All plant operators regardless of cards carried must be formally appointed as competent by our site supervisor, recorded on the H & Co plant operator authorisation register.
10.0	Major Plant & Minor Plant/ Equipment	<p><u>Major Plant (Typically):</u> JCB JS 135/140/160/220 6t/9t/10t forward tipping dumper 80/120/135 Ride on roller</p> <p><u>(Refer to H&Co's site safety OHSEQ notice board for current records & registers)</u></p> <p>Note: The machine operator carries out all Weekly Check Sheets for 360°s and will always be available within the cab for inspection, including the most recent through examination certificate. Copies are also kept in H&Co's site office (OHSEQ board).</p> <p>Excavators will have monitoring cameras fixed in the rear of the machine for all-around vision. Any machine that is not fixed with a camera and is not carrying out bulk earthworks will be accompanied by a Banksman. A Major Plant that does not have cameras fitted will achieve all-around vision using mirrors. We will continue to promote the "thumbs up" campaign Green flashing beacons are being progressively fitted across the Company. The new plant will come equipped.</p> <div data-bbox="379 1682 842 1944"> <p>360 Tracked Excavator</p> </div> <p>Banksman</p> <ul style="list-style-type: none"> The banksman must be situated in a safe position and preferably outside of the operational area of the machine's fully extended boom, dipper and attachment.

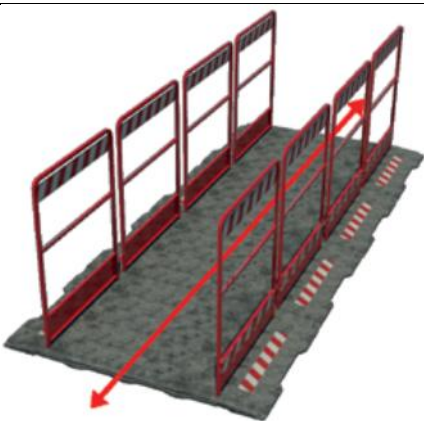
	<ul style="list-style-type: none"> The banksman must face the operator when signalling and be clearly visible to them. The banksman must always maintain a clear line of sight with the excavator operator. The banksman must have direct sight of the load and lifting equipment at all times during the lifting operation and have adequate visibility of the load path. The communication between the operator and the banksman must be continuous throughout the duration of the lifting operation <p>Plant Operator/ 360° Machine Driver</p> <ul style="list-style-type: none"> The operator must not respond to any hand signals (or other communication) that are not clearly understood and should seek additional clarification. Hand signals and any additional voice instructions should only be given by the identified banksman – except for an emergency stop, which can be given by any person, at any time, if a perilous circumstance is spotted. If other instructions are required (other than the agreed hand signals), then the operation should be stopped. Where there is any concern about the safety of, or the need to halt, the operation, all movement (and therefore, the lifting and any operation) should be stopped until the issue has been resolved to the mutual satisfaction of both the operator and the banksman. Comprehensive <p><u>Telescopic Handler JCB 535-125</u></p> <p>JCB 525-125 will be utilised with the fork attachment to move Heras panels and on-site materials. The Telescopic handler operator will have the relevant NPORS/CPCS endorsements and will be competent to operate the plant. The telescopic handler operator will be briefed on his duties and made aware of any height restrictions set on site. A safety clearance of 5.3M will be achieved at all times.</p> <ul style="list-style-type: none"> 3500kg Maximum lift capacity with stabiliser extended. 8.06m maximum forward reach with stabilisers extended To maintain stability, the telehandler should be used on firm level ground that resists sinking of the wheels or stabilisers. Telehandler should be stationary with the brakes applied, lifting normal loads. A marshaller will accompany all telescopic handler movements. Reversing is to be kept to a minimum with a marshaller present, and turning points are to be used when applicable. The operator should follow the manufacturer's instructions for travelling on slopes and inclines. It is essential that they do not attempt to climb, descend, or cross inclines in excess of the manufacturer's limiting values, as this significantly increases the likelihood of overturning. Daily checks will be completed every morning by the operator. If any issues are observed, do not operate the telescopic handler. Please notify the site supervisor and do not operate until remedial action has been taken. When traveling with a load, the load should point up-slope and tilted back, regardless of direction of travel. This will keep the load from shifting and falling off the forks. When traveling without a load, the forks should point down-slope, regardless of the direction of travel. This will improve stability, traction and adhesion, and applies regardless of the direction of travel. Any loads should be strapped and properly secured on the grid of the forks.  <p><u>Recovery of overturned plant.</u></p> <ul style="list-style-type: none"> In the event of an accident where a plant has turned over, the site supervisor and site manager must be notified immediately. Assess the well-being of the plant operator. Call emergency services if a rescue operation is required. Attend to the plant operator with first aid and call for an ambulance if he needs professional medical help. Secure the area and notify the Houlihan Plant Department of the incident. Provide as much information as possible, such as the plant involved, the location on the site, any restrictions that could hinder the rescue operation, or any other specific risks within the area that will be helpful to the recovery team to plan. The Plant Department will contact one of the approved Plant Recovery contractors closer to the site. Site supervisor to ensure any leakage is contained within the area and does not go into the drainage or any water course. The site supervisor will arrange for someone to meet with the Recovery team at the gate and accompany them through the site. The Health and Safety department must be notified immediately. The incident will be investigated to identify the failures and contributory factors
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		<p>that led to it and establish control measures to prevent the repeat of similar incidents.</p> <p><u>Minor Plant & Equipment (Typically):</u></p> <ul style="list-style-type: none"> • Block Grab • Concrete Skip/Bucket • Excavation Support Equipment • Setting out Instruments • Compressor & associated pneumatic tools • Heras Fence Panels / Avalon barrier • Shovels Inc. insulated • Hand Tools • Small electrical tools • Kerb lifter/ laying dolly • Block barrow • Pipe Lifter • Rammax • Concrete Skip / Pouring Bucket
11.0	<p><u>Methodology:</u></p> <p>Plant/ Materials and vehicle preparation and delivery</p>	<ul style="list-style-type: none"> • Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. • They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. • A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. • Work must stop when the weather conditions, or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to</p> <p>RA_23 Unloading Vehicles</p> <p>Unless it is reasonably practicable to do so, the following safe systems of work must be followed at all times.</p> <ul style="list-style-type: none"> • Driver to have MS and RA in cab (supplier to have submitted this for approval by H & Co.). • The Low Loader Driver will sign in at the site entrance or Site Office prior to delivering the plant. • Plant deliveries are not to be made outside site working hours unless previously agreed upon with the Site Manager. • Lone Working is not permitted, and deliveries are not to be made unless a member of staff is present on site. • Plant deliveries are not to be made in areas where adequate lighting is not present. • The vehicle collecting the plant shall be a vehicle designed for the collection, transportation and delivery of mobile plant, be it wheeled or tracked. Low Loader. • The vehicle must have a suitable means of getting the plant onto the trailer and will include designed loading ramps. • The Low Loader driver must be a competent person trained in the loading/unloading of all categories of plant from the lorry and for its security during transport. • All loading/unloading operations shall be supervised by a competent person. The Low Loader driver shall act as the competent person. • All plant shall be loaded/unloaded onto the low loader by a competent plant operator only and directed by the lorry driver only. No other person shall undertake these instructions. The low loader driver can unload the plant provided he is qualified to do so. • During the plant loading/loading operations all persons other than the plant operator and lorry driver shall stand away out of the loading area. • During access to the lorry platform, if there is a risk of personal injury from a fall, a means of preventing a person from falling off needs to be installed, or the use of a safety harness must be implemented. All such persons shall be trained in the risk of falling off the lorry platform and how to control those risks. Where clients provide access platforms/podiums, these must be used. • Prior to moving all loaded plant, it shall be adequately secured by the appropriate means, such as chains, etc., by the low-loaded driver only, or assisted by others working under his instructions • The driver shall determine the route and final resting place of all plant to be loaded/offloaded before the activity commences. • The driver shall also ensure the plant/materials loading/unloading route is clear of all hazards, obstructions, restrictions, etc., if the operations commence. • All suppliers have been asked to work to industry guidance re work at height on their vehicles- a solution for each load will have been determined before the load is dispatched- loads which cannot be safely unloaded will be turned away. • Loads depending on banding or shrink wrapping must be strapped to include each row and in addition strapped twice perpendicular to straps on each row. <p>Note: no individual must enter the bed of a lorry without edge protection.</p>

12.0	Method of work Cut and Fill	<ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions, or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers RA_33 Operating Ride on Roller</p> <p>The anticipated main materials that will be encountered at the site:</p> <ul style="list-style-type: none"> The general site clearance will be done on this section, removing bushes, scrubs, undergrowth, etc (from development areas only) The area to be excavated will be CAT & Genny scanned and checked for the presence of existing services, and identified services will be clearly marked using spray paint. (There is no record of existing services on site) Then, using an excavator, 360° standing on the surface of the topsoil, dig the topsoil to an average depth of 300mm and load it into forward tipping dumpers. Forward tipping dumpers should run on the subsoil layer to avoid degradation of the topsoil. It will be stockpiled on heaps not higher than 2m at a designated location. This topsoil could be reused only after testing and validation. If sustained heavy rainfall (i.e. >10mm in 24 hours) occurs during soil stripping operations, work must be suspended and not restarted until the ground has had at least one full dry day. Topsoil stripping should be completed as an entirely separate operation to the cutting of other soils to avoid cross-contamination of soil types. The site engineer will set out the area to be excavated in accordance with the issued drawings for cut and fill according to that section. The correct dig level will be ascertained by means of a rotating laser. The cut/excavation will be done again using a 360 ° excavator, and the subsoil will be moved by forward tipping dumpers to a location agreed by the site manager and stockpiled on a heap to a temporary design. This subsoil (assuming that the use of site-won materials is suitable) is going to be used as fillings under roads and paving, double handling as required. Dumpers are not allowed on the stockpiles. Surplus topsoil and subsoil to be removed off-site, to be agreed with Dandara. Records will have to be kept for a Waste Management Plan. Any soft spot will be removed and backfilled with approved material compacted. Filling will be done with approved gained site material. It will be laid on layers no thicker than 150mm consolidated to an even surface and to the required levels and contours, and with a three-tonne roller or with a mechanical compactor capable of equivalent compaction. <p>Operation will continue in the same way for the other areas of the site.</p>
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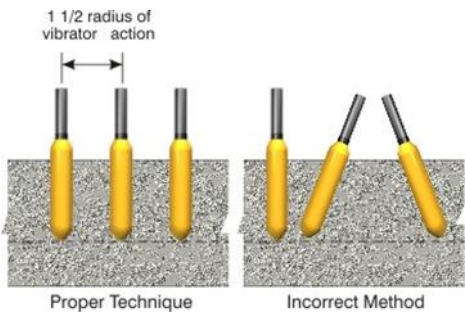
13.0	Method of work Constructing Piling Mat and Piling Assistance	<ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers RA_33 Operating Ride on Roller Lifting Plan (Subcontractor Piling)</p> <p>Constructing Piling Mat</p> <ul style="list-style-type: none"> There three foundation that require piling on site. Piling is going to be done in two visits. The first visit is going to be piled Plot 1. The other two plats are going to be piled at a later date. A piling mat will be constructed following the provided and approved design from the Pilers. Construction of the Piling Mat will start after the cut-and-fill operation has been completed, areas deemed soft spots have been removed, and suitable material and compaction have been backfilled. The piling mat will be 400 mm thick and have a Geogrid or TX160 or similar-strength geomembrane as the first layer. On top of the TX160 geotextile will be placed crushed concrete in layers no thicker than 150mm, levelled and compacted by a Bomag Roller 1 dead pass and 6 compaction passes. This will continue until 400mm of piling mat has been reached. The piling mat will be level, firm, well drained and kept in good condition for the duration of the works. Any soft spots will be dug out and replaced with the same material as the piling mat and compacted in a similar manner. Deterioration of the exposed piling mat formation should be prevented by drainage or by minimising exposure to wet and frosty weather. Where deterioration occurs, it should be removed and replaced by suitably compacted material prior to placement of the piling platform.
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14.0	<p>Method of work</p> <p>Substructure to Building</p>	<ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p><u>STRIP FOOTING</u></p> <p>Refer to</p> <p>RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers RA_38 Pouring Concrete or RA_07 Use of Concrete Pump if there is a concrete pump being used. RA_05 Laying Blocks and Bricks COSHH – Wet Concrete, Bituthene Primer HAV / Decibel Chart for the Poker Vibrator.</p> <p><u>Foundation Excavations: Strip footings:</u></p> <ul style="list-style-type: none"> Identify the extent of the individual plots' foundation by marking it out with spray paint, as set out by our engineer. Excavate to the void level to reduce the depth of the strip foundation. No man entry to the excavation is permitted. While excavating, the groundworker will check the excavation depth using the staff, receiver and rotating level to signal the formation depth. The groundworker will set up a suitable movable barrier to prevent access to the excavation. The groundworker will take all dips from behind this barrier. Excavate the foundation to the designed formation level, using a tracked 3600 excavator. Ensure the foundations are pulled straight and level. Any cleaning up to formation level, if required, will be carried out by over digging beyond a corner and blowing loose material beyond the line of footing needed, using an air lance- NOTE, not the air pick. Allow NHBC inspection prior to pouring mass concrete. Where strip footings are to be left open at any time, MGF Walksafe or similar will be installed and maintained to provide safe access to plots.



Strip footings:
Concreting Foundation

- Bank concrete delivery lorries to a safe distance from the excavation and place concrete by either discharging directly from the lorry (using 3 chutes) or discharging into the excavator bucket and placing by machine. The concrete will be poured from the back of the lorry, and operatives will wear the appropriate PPE, as specified in the RA.
- The strip footings will be backfilled to within 100mm of the top of the beam.
- A vibrating poker will be used to eliminate air bubbles. The vibrators should be completely inserted into the concrete, and sufficient numbers of operatives should be rotated to the task to reduce exposure to HAVs. Over-vibration should normally be avoided during the compaction of concrete. Do not remove the vibrator head too quickly, and do not drag the vibrator head through the concrete. Dragging a vibrator through the concrete will form a mortar channel in the concrete, creating a structurally weak area in the finished product. Lower the vibrator vertically into the concrete, allowing the head to descend under its own weight. Internal vibrators should not be forced down into the concrete. The vibrator head should penetrate previously placed concrete lifts by 6 inches (150 mm). If there is a considerable amount of time lapse between the placements of subsequent lifts, it may be necessary to re-vibrate the previous lift prior to placing additional concrete to minimize the potential for pour lines and cold joints. An insertion time of 5 to 15 seconds will usually provide adequate consolidation. A general rule of thumb is to allow the vibrator to sink under its weight and then remove the vibrator at a rate of about 3 seconds per vertical 300 mm. Concrete should move to fill the hole left by the vibrator; otherwise, briefly reinserting the vibrator nearby should solve the problem. The vibrator should then be reinserted close enough to the last location so that the radius of action overlaps the last one.



- Allow the concrete to cure sufficiently.
- Brickwork and blockwork footings will then be carried out as required to the standards and requirements contained within the contract drawings, specifications and suppliers recommendations.
- **Ensure all foundations once dug or recently poured are adequately fenced off with suitable signage for deep excavations.**

Footings deeper than 2.5m

- Designers would usually avoid footings deeper than 2.5m, and NHBC inspectors may raise objections. In the event we are faced with the need for deeper footings, and this is approved, an Alsipercha system will be required using 2no. Kentledge and 2 fixing points for any operative approaching the trench edge.
- Reduce ground level to void level, prior to excavating foundations. Where trench crossing is required due to the layout of the foundations, proprietary trench crossing bridges will be deployed.

PILED FOUNDATIONS:

Refer to

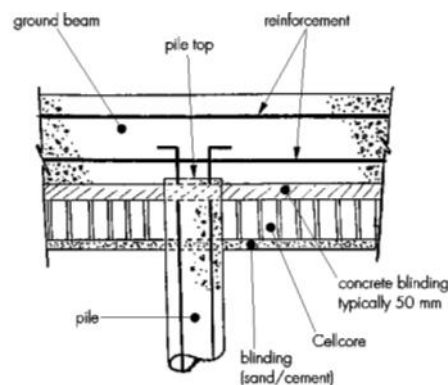
	<p> RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers RA_22 Steel Fixing RA_38 Pouring Concrete or RA_07 Use of Concrete Pump if there is a concrete pump being used. RA_05 Laying Blocks and Bricks COSHH – Wet Concrete / Mortar Silica Cement HAV / Decibel Chart for the Poker Vibrator., Air Saw Lift Plan – for lifting into position cages (Ground Beams) </p> <ul style="list-style-type: none"> • Piling Contractor will install CFA piles. Houlihans will attend the Pilers. • Once the CFA piles have been poured, tested and allowed to cure sufficiently, the 360° operator will excavate along the line of the piles, grading back on both sides to provide safe working access. Excavate to levels provided by the Site Engineer. The arisings will be loaded onto the attending site dumper and stored away from the excavation for disposal or re-use at a later date. Once the formation levels are provided by the on-site engineer, the edges of the trench will be battered back to allow for safe entry into the trench. Once excavated, the piles cropped and the broken concrete removed, the area will be blinded. The blinding will allow sufficient time to be cured. • The steel fixers will fabricate the cage to the design specifications. • The reduced level and trenching works will be undertaken by a JCB JS 130 tracked excavator. The material will be loaded onto 6T/9T Thwaites dumpers and taken to the spoil heap. • Planking and strutting will be carried out to suit the depths of trenches and the type of ground conditions. • All piles will be cropped to 200mm above formation level. A munching attachment attached to the excavator will be used to cut down to level. Using an air saw and water suppression, the pile will be trimmed to the finished level, as given by the site engineer. Concrete blinding to ground beams and pile caps will proceed prior to the fixing of reinforced ground beams and pile caps. • Only final trimming will require handheld tools, which will be vibration-reduced. • Allow inspection by NHBC prior to pouring mass concrete. • Formwork shuttering will follow once the line and level are checked. • No special construction techniques are required for these operations. However, all surplus material will be taken to a registered tip by an authorised haulage contractor registered under 'The Duty of Care' Scheme and bearing in mind the requirements of the Environmental Protection Act. <p><u>PILE CROPPER</u></p> <p>BEFORE USE</p> <ul style="list-style-type: none"> • Ensure the excavator is capable of carrying the weight of the cropper. • It is essential that operatives familiarise themselves with the cropper and its operations and read the Method Statement. Where possible, get a demonstration from the Cropper Delivery Team. • Operatives should be aware of their hands when manoeuvring the cropper, as the controls for the excavator are not in their control. • All operatives should wear the appropriate PPE for the task. This must include safety glasses to EN 166 F, mandatory site safety boots, a safety helmet, ear protection, and gloves. <p>USING THE CROPPER</p> <ul style="list-style-type: none"> • The 360° excavator will again position the machine parallel with Network Rail on safe, stable ground. • The operatives and the machine operator must be fully aware of the standard hand signals. The plant operator should always have the operatives in visual contact at all times. The operatives should never use hydraulic pipes as handles. • Operatives that do not need to be in the vicinity should, for their own safety, stay away. The operatives working with the cropper should stay well clear of the cropper until he is needed for the final crop at the cutoff mark. Operative should avoid working underneath the cropper, but in the event that he has to, the plant operator will ensure the excavator is switched off, and the driver's hands are well clear of any operating levers. • Always take the pressure off the hydraulics when detaching the cropper from the machine. • The pile cropper must be attached to the machine prior to entering the Network Rail Zone of Influence area. • The first step in using the cropper is to lower the cropper over the pile. Operatives should move away. For the best results, the distance between each break should be approximately 200mm. To achieve a clean horizontal fracture at the cut-off level, ensure that 200mm of uncrushed concrete remains for the last cut. A cut-off saw will be used to mark the final cut-off position to prevent any fracturing of the pile below that mark. When using the cutoff saw, water suppression techniques shall be employed, and the operator must be wearing correct PPE (FFP3 dust mask, goggles and ear defenders) • When crushing oversized piles, a half link can be used. Ensure the safety plate is positioned and tightened. • For durability, all blades should penetrate the concrete between the reinforcement bars. • After 15 minutes of crushing, check that all blades and bolts are still secure. A loose blade will damage the piston, and a loose bolt will damage the link. <p>UNDER NO CIRCUMSTANCES SHOULD THE CROPPER BE USED FOR STRIPPING THE PILES. IF THERE IS ANY EVIDENCE OF STRIPPING THE PILES, NPC WILL CHARGE FOR ANY DAMAGE CAUSED.</p>
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Shuttering to Groundbeams

- Once the NHBC has passed the excavation after the piles have been munched down to the required level and blinding laid in the trench, pile caps and groundbeams can be set out for the steelfixers.

Cellcore – associated with Groundbeams & Pile caps

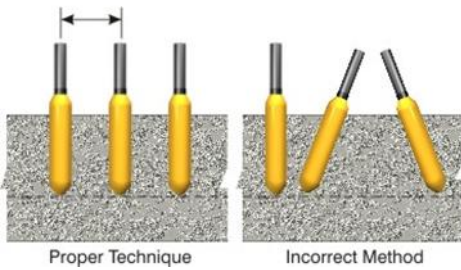
- The panels must be stored flat and be protected from high winds and prolonged exposure to sunlight.
- Cellcore products must not be exposed to flame or ignition. Careful consideration should also be given to the management of fire risk when in storage; detailed guidance is given in the health and safety data sheet packaged with the product.
- Cellcore must be placed on a firm, level surface and the bottom of the excavation properly compacted and blinded with a layer of concrete or a sand/cement blinding.
- For piled ground beams, the top of each pile should be trimmed so that it extends slightly above the proposed underside of the ground beam each pile should penetrate the void former to allow for an approximate 50 mm thickness of concrete blinding on top where applicable, and a keying depth of approximately 25 mm into the ground beam.
- (See typical detail below)



- When required, the product can be cut to shape with a fine-toothed saw. Care should be taken to ensure that, after cutting, exposed ends of the cellular stiffening ribs do not exceed a maximum length of 50 mm.
- Joints between panels should be sealed with formwork tape supplied by the Certificate holder.
- Reinforcement should be fixed and adequately supported to ensure that the correct depth of concrete cover is achieved, and to ensure that the maximum imposed load beneath each support is appropriate to the grade of panel being used. The panels should be covered with a 50 mm thickness of concrete blinding where heavy reinforcement is proposed, or where the reinforcement will be subjected to significant point loads from foot traffic or other imposed loading.
- During construction, spreader boards are recommended to reduce the imposed load transmitted to the panels.
- Concrete should be placed with care to avoid overloading the panels.

FIXING OF REINFORCEMENT: Groundbeams

- The steel reinforcement will be delivered by flatbed lorry and mechanically lifted into position by the use of lifting chains/delivery web slings and under the supervision of the banksman. Upon delivery, the steel will be offloaded by a suitably equipped machine. The offloaded steel will be stored in a designated storage area and fenced off. Any web slings that come with the steel bundles delivery, due to new legislation, the breaking load safety factor now has to be 7:1. It therefore does not necessarily need to be disposed of after just one use. Single use slings for lifting, loading, transporting and unloading certain types of cargo; they are designed to be attached/fitted to the load for the very first lifting operation, they will stay with the load throughout its journey which may or may not include loading and unloading multiple times, until it arrives at its final destination. Once the bundles are in place at the fabrication area, the web slings are to be removed from the bundles, and the web slings will be destroyed and disposed of in the correct skip, as per the SWMP. Under no circumstances are the web slings to be discarded around the site, stored on the site or reused. The web slings must be cut/destroyed, and discarded.
- The area will be barriered off, and no operatives will be in the area while off-loading is taking place.
- All reinforcement where practicable will be prefabricated according to the engineer's drawings; it will be carried out in situ where this cannot be achieved.
- Any fabrication will be carried out in a fenced-off area, as discussed with the site management team. The steel will be tied by hand and checked for accuracy by our engineer
- A reinforced cage will be fabricated to specifications in the schedule, in an area where the steel has been stored. Once fabricated, the cage will be lifted into position by the on-site suitable 360 excavator. The route of transportation will be addressed on the lifting plan, and tag lines will be used to avoid swings. Certified lifting chains and lifting shackles will be attached to the cage. DO NOT USE THE DELIVERY WEB SLINGS, these should have been disposed of. Steel will be fabricated as required and lifted into place by an excavator.

		<p>If necessary a crane will be used if beyond the safe working envelope of the 360°.</p> <ul style="list-style-type: none"> Under no circumstances is anyone to be in the excavation when the fabricated cage is being lowered into it. The cage will be lifted into position, and the steel fixers will follow the cage into the excavation. Once the cage has been positioned, any subsequent cage will be secured using splicing bars. The splicing bars will have sufficient ties to secure the bars to the cage. The steel fixers will fix sufficient spacers to establish and maintain the specified concrete coverage. Steel fixers will fix sufficient spacers to avoid unit deflection under load from loose backfill. Mushroom caps will be placed over exposed steel. If they fall off, site personnel will replace them. Once placed, the reinforcement will be cleaned off and inspected by the Principal Contractor's representative as necessary. Any cutting of reinforcement will be carried out using a disc cutter, prior to which a 'Hot Works Permit' will be obtained from the Principal Contractor. A suitable fire extinguisher is to be on hand. The formwork comes in standard sizes corresponding to the depth of the beam. Cutting and shaping will be by use of a Stanley knife. Jointing is by standard straight connectors and joint clips. The beams are spaced apart by sheet ties, which fit into the formwork directly. Continuous spacers are supplied as part of the system. The shutters will be backfilled, externally, to within 100mm of the top of the beam. Concrete can now be poured continuously. Bank concrete delivery lorries to a safe distance from the excavation and place concrete by either discharging directly from the lorry (using 3 chutes) or by discharging into the excavator bucket and placing by machine. The concrete will be poured from the back of the lorry and operatives will wear the appropriate PPE, as specified in RA 13, 22, 38. A vibrating poker will be used to eliminate air bubbles. The vibrators should be completely inserted into the concrete, and sufficient numbers of operatives should be rotated to the task to reduce exposure to HAVs. Over-vibration should normally be avoided during the compaction of concrete. Do not remove the vibrator head too quickly, and do not drag the vibrator head through the concrete. Dragging a vibrator through the concrete will form a mortar channel in the concrete, creating a structurally weak area in the finished product. Lower the vibrator vertically into the concrete, allowing the head to descend under its own weight. Internal vibrators should not be forced down into the concrete. The vibrator head should penetrate previously placed lifts of concrete by 6 inches (150 mm). If there is a considerable amount of time lapse between the placements of subsequent lifts, it may be necessary to re-vibrate the previous lift prior to placing additional concrete to minimize the potential for pour lines and cold joints. An insertion time of 5 to 15 seconds will usually provide adequate consolidation. A general rule of thumb is to allow the vibrator to sink under its own weight and then remove the vibrator at a rate of about 3 seconds per vertical 300 mm. Concrete should move to fill the hole left by the vibrator; otherwise, briefly reinserting the vibrator nearby should solve the problem. The vibrator should then be reinserted close enough to the last location so that the radius of action overlaps the last one. <p style="text-align: center;">1 1/2 radius of vibrator action</p>  <p style="text-align: center;">Proper Technique Incorrect Method</p> <ul style="list-style-type: none"> Allow the concrete to cure sufficiently. Brickwork and blockwork footings will then be carried out as required to the standards and requirements contained within the contract drawings, specifications and suppliers recommendations. Ensure all foundations once dug or recently poured are adequately fenced off with suitable signage for deep excavations. If the site foundations have steps, care must be taken where there is a trench side over 1.0m. This will require support, benching, or battering to a safe angle of repose. In all other situations, a reduced dig will have brought the ground surrounding the trench down to the top of the ground beam level. In deeper excavations, access will be done by ladder. Brickwork and blockwork footings will then be carried out as required according to the standards and requirements contained in the contract drawings, specifications, and supplier recommendations. <p>All Internal drainage & service Ducts / Services will then be installed.</p> <p><u>Beam & Block Floors :</u></p> <p>Refer to RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers RA_38 Pouring Concrete or RA_31 Power Floating COSH – Wet Concrete/Mortar Petrol</p>
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		<p>Lifting Plan for lifting beams.</p> <ul style="list-style-type: none"> Once all the services have been installed, the internal course of blockwork will be built to the underside of the beam and block floors. Lay DPC on top of the bearing wall, prior to any beam placement to prevent lifting / moving placed beams and tearing the DPC. Once the blockwork has cured, the precast concrete beams will be lifted into position with the 360 Tracked Excavators. Beams will be located and slung into position in preparation for the placement of the infill panels. On the plots where underbuilding is encountered, the Site team must cooperate with the principal contractor to enable edge protection and a safe working environment. To ensure that the edge protection is in place during the floor construction and after we have handed over the plot, the most effective way will be to install the first fit of scaffolding on the underbuilt site. In cavity construction, beams should not project into the cavity. Where two or more beams are placed side by side, the space between the beams above the flanges must be filled with in-situ concrete of minimum compressive strength 30N/mm² with 10mm maximum-sized aggregate. The concrete must cure to the necessary strength before loads, such as partition walls, are applied. <i>The beam shall not be worked on site in any way, i.e., by drilling, notching, cutting, or in any other manner, without the permission of the beam suppliers.</i> Panels can be omitted to accommodate service penetrations, and the holes can be made good with concrete Bed 2 x thermalite 80mm coursing blocks around the perimeters. This will provide a screen rail to facilitate the correct depth of concrete to be poured to achieve the correct floor construction depth. (Scaffold boards or Cordek sheets can be used for access for bricklayers when walking on the polystyrene panels to spread the load and prevent any fall. (despite the fact that the manufacturer's guide says that the panels can support the weight of operatives) Install DPM membrane. 80mm thick insulation sheets can be laid over the top of the floor and cut with a handsaw to suit the layout. Any offcuts can be reused within this floor. Install another DPM layer. If required, install the perimeter edge insulation strips against the perimeter wall. Pour the fibre reinforced concrete topping from the bucket of an excavator ensuring that the drop height is not greater than 500mm this will avoid overloading the infill blocks and reduce concrete splash. The concrete topping will be tamped and levelled as required. <p>Scaffold Bases</p> <p>Refer to RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers RA_33 Use of Ride-on Roller COSHH - Petrol HAV / Decibel Chart for the Compactor Plate</p> <ul style="list-style-type: none"> Install a 100mm minimum stoned and compacted scaffold base topped with 50mm of Type 1 material to the perimeter of each dwelling, extending 2m from the building face. The scaffold base will include a base for any loading bays. The base for loading bays will be deeper. The design will be discussed on-site. A scaffold base for all screens and retaining walls is required. Specification as above. Scaffold base to be laid in conjunction with path / patio bases when possible. Engineer will mark out. Perimeter of building to be cut/filled to correct level prior to laying scaffold bases to allow correct setting out of scaffold lifts. Allow the laying of scaffold bases, patio bases, and path bases to be completed at the time of the over-site. Allow the removal of scaffold bases upon commencement of Stage 2 works.
15.0	Methodology: Mains Drainage	<ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers RA_06 Cutting Concrete, kerbs, blocks, edges, pipes. RA_38 Pouring Concrete Installing the Proprietary Trench support – Trench Box, Manhole Box, Trench Sheet Piled COSHH – Wet Concrete / Mortar</p>
Prepared by: Alban Shehu		Client: Dandara Homes
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Silica
Cement
Petrol

HAV / Decibel Chart for the Petrol Saw

21 MoW Lifting with excavators and Lift Plan – for lifting pipes, manhole rings, and bases into position.

Setting-out / Earthwork preparation & installing proprietary support systems:

All excavation works will be carried out in accordance with Construction (Design and Management) Regulations 2015 and the Guidance from the CPA "Be Safe - Shore" guide to Trenching Practice.

- Set out the extent of the run/s, ideally commencing from the terminal connection or lowest point.
- The foul drainage is gravity run and connection point is on the site entrance.
- The storm water drainage will have two separate runs discharging on at the ditch in the northern border and the other one at the new pond that will be constructed in the open space on the southern side of the site.
- The foul drainage will be mainly clay pipes of the 1000 mm.
- The storm water drainage pipes varies from 1500 and 2250 clay pipes and 3000 mm. 3750 mm and 5250 mm concrete pipes.
- The extent of the proposed drainage run must be subject to a reduced level dig, so drainage trenches are dug at reduced levels; ideally below the proposed road formation/level.
- Identify and supply appropriate earthwork support – such as proprietary trench and manhole boxes. Note: support systems must be set up in accordance with the installation guidance provided by the preferred supplier.
- Conduct existing survey investigations, to include marking on the ground any potential services in close proximity with the use of CAT's, excavating trial holes to ascertain actual line and depth.
- Identify access, movement and storage areas and erect safety exclusion fencing to enclose the works.
- The perimeter of the proprietary earthwork support systems should be sprayed on the ground of the proposed dig so that the excavator operator can cut the trench/ excavation tightly and ultimately prevent voids around the in-situ boxes.
- Commence excavation, initially to a suitable depth to allow installation of the trench box, typically 1.00m below ground level (bgl).

Please note that in unstable conditions the box would be installed at a higher level and would be adjusted as the excavation proceeds.

- In excavations 2.4m and below it will be necessary to use an additional base or top box section or to terrace the top of the excavation – ensure handrails and ladder access platform is installed.
- Remove all excavated material from the excavation area to prevent imposing an unnecessary load onto the excavation face. – the material should be kept a minimum of the excavation depth away, and immediately used for backfilling as soon as the earthwork support system has been extracted.
- Installation of the box by hooking a suitable set of 4 leg chains to the specified lifting eyes, attached to the designated lifting eye on the 360° excavator's quick hitch.
 - Continue excavation within the confines of the box to the intended level.
 - Where there is doubt, provide gas testing/monitoring equipment and fix it at an appropriate position in the excavation to ensure safety.
 - Place clean, washed shingle/concrete bedding using the excavator bucket. Materials will generally be discharged into a drag skip or alternatively into the skip of a dumper.
 - During the placement of any material/product into trenches, all operatives must evacuate the excavation.
 - Dumpers must not directly tip into the trench.

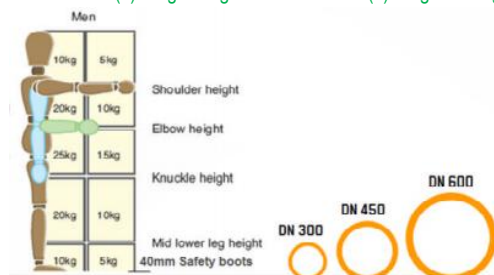
Recommended excavator bucket selection (mm) versus pipe diameter (Ø mm):

1500mm – 450mm / 2250mm – 600mm / 3000mm – 600mm / 3750mm – 750mm / 4500mm – 750mm / 5250mm – 750mm / 6000mm – 900mm / 6750mm – 900mm / 7500mm – 900mm / 9000mm – 1200mm or 1350mm / 10500mm - 1200mm or 1350mm / 12000mm – 1500mm or 1800mm / 15000mm – 2100mm

Pipe laying (clay): Nominally foul sewers

Clay pipe weights: Suitable to manually lift / Unsuitable to manually lift

1000 x 1.6m (L) weigh 15kgs / 1500 x 1.00m (L) weigh 18.5 kg / 1500 x 1.75m (L) weigh 31 kg / 2250 x 1.75m (L) weigh 61 kg.



- Pipe laying will commence and should (but not always necessary) start at the downstream end, the pipes being usually laid with the sockets upstream.
- Operatives can manually place pipes of 1500 or below, depending on the excavation depth; pipes can be passed down or lowered manually, utilising a web sling. Pipes will be aligned using either a string line or pipe laser, as appropriate.
- Ensure that the inside of the coupling and the exterior of the spigot are clean.
- Spread a layer of lubricant over the pipe end to the required insertion depth and push the coupling home onto the pipe.

- The pipes shall be laid true to the line and level within tolerances specified by the design. Any necessary adjustments to the level shall be made by raising or lowering the bedding, always ensuring that the pipes are finally provided with support along their whole length. Adjustment to level and position shall not be made by local packing.
- Lower the next pipe into the trench, inserting the pipe end into the mouth of the previously laid coupling and align the pipe along the central axis of the pipeline. Apply a horizontal forward pressure, in combination with a small side to side movement, and push the pipe home into the sleeve coupling.
- All pipe laterals must be capped with suitable plugs/caps – not scrunched up bags/package etc.
- Each run or section will be tested before and after backfilling. This will be carried out in accordance with the recommendations set out in BS EN 1610:2015.
- The larger pipes 225Ø+ will be placed by the excavator, pre-slung with 2x web-slings by a slinger/signaller and lowered into position in the excavation. Note – there must be no operative within the proprietary earthwork support system whilst any load is being slung overhead – especially clay pipes due to their vulnerability to shattering, producing razor sharp fragments.
- For pipes 225Ø+ will require gentle prizing home using a metal bar and small section of 4"x 2" timber as per the images below.

See installation images below:



Pipe cutting (Clay):

- Pipe chain cutter for 100Ø & 150Ø pipes - Cutting shall be performed with the correct tools and as recommended by the pipe manufacturer, cuts shall ensure adequate performance of the ensuing joint.

*This procedure should be followed to ensure a good quality cut with a Lever action pipe chain cutter (100mmØ & 150mmØ clay pipes **MUST** be cut with a pipe chain cutter as follows):*

- Make a clear mark around the circumference of the pipe at the desired length.
- Pass the chain under the pipe, aligning the cutting wheels on the desired mark.
- Hook the chain link onto the jaw of the pipe cutter.
- Tighten the chain upon the pipe by closing the arms of the lever cutter together.
- Make a final check for the chain's correct alignment with the pipe, then continue to increase the chain tension until the pipe cuts.
- After cutting, any sharp edges may require trimming with an emery stone. Use a pipe trimmer for both 100mm and 150mm diameters.

Powered Masonry Saw:

- A powered masonry saw can be used to cut any diameter of pipe we use. Generally, 100Ø & 150Ø diameter pipes are cut with a pipe chain cutter for speed and efficiency.
- All persons operating power saws are to be trained to use abrasive wheels.
- 225 & 300Ømm pipes are generally cut by a powered masonry saw, using a diamond-tipped blade.
- When using a powered masonry saw a safe system of work should be followed: Note only appointed and authorised individuals should use an abrasive wheel.
- Before any pipe cutting operation is started, read and adhere to the safety and operating instructions of both the masonry saw and the blade manufacturer.
- Check that the masonry saw is fitted with the correct blade specification.
- Make a clear mark around the circumference of the pipe at the desired length.
- The pipe being cut should be positioned in a horizontal and stable position.
- Care should be taken to support and secure both halves of the pipe being created by the cut, to avoid the blade being nipped as the pipe separates.
- With the correct personal protective equipment in place commence the cut; the best quality cut is generally achieved by making one continuous cut.
- After cutting, any sharp edges may require trimming with an emery stone.

Note- Short length pipes should be ordered directly from the preferred supplier to minimise cutting operations on site.

Backfilling:

- Withdraw earthwork support when backfill reaches the underside of waling.
- In the first stages of backfill, selected material should be placed uniformly on both sides of the pipe by hand in layers not exceeding 100mm in thickness, each layer being compacted by hand tamping until the pipe has a minimum of 150mm compacted cover.
- Further backfill should be placed in layers not exceeding 300mm, each layer being well compacted. Mechanical compaction equipment should not be used until there is a minimum of 450mm of compacted material above the crown of the pipe.

Pipe laying (PCC): Nominally surface water

PCC pipe weights: Suitable for manual lifting / Unsuitable for manual lifting

225Ø x 1.25m (L) weigh 122kg / 300Ø x 1.25m (L) weigh 217kg / 300Ø x 2.05m (L) weigh 420 kg / 375Ø x 2.5m (L) weigh 510 kg / 450Ø x 2.5m (L)

weigh 705kg / 525Ø x 2.5m (L) weigh 900kg / 600Ø x 2.5m (L) weigh 1200kg / 675Ø x 2.5m (L) weigh 1275kg / 750Ø x 2.5m (L) weigh 1924kg / 825Ø x 2.5m (L) weigh 1820kg / 900Ø x 2.5m (L) weigh 1920kg / 1050Ø x 2.5m (L) weigh 2590kg / 1200Ø x 2.5m (L) weigh 3550kg.

- Once the trench has been excavated to the specified line and levels, and the proprietary earthwork support system has been adequately installed with attached handrails and ladder access platform.
- Before lowering into the trench, each unit should be inspected carefully for any damage which may have occurred in transit or during handling and storage on site. Pay special attention to jointing surfaces. Units should be lowered carefully into the trench with tackle suitable for their weight and for the depth of the trench.
- Pipe laying will commence and should start at the downstream end, the pipes being usually laid with the sockets upstream.
- Trenches should be kept to the specified width since any increase in trench width will increase the load on the pipe, the quantity of excavation and will also require more bedding material.

Using a proprietary pipe-lifter:

Pipe lifters are specifically designed to allow excavators to quickly and efficiently pick up and place a wide range of concrete pipes without the need for an operative to contact either the pipe or the pipe-lifter.



No operative should be within the excavator's fully extended radius in transit.

All users must be familiar with the pipe lifters manufacturer's user guide.

Prior to delivery of any concrete pipe, ensure the correct pipe lifter head is compatible with the appointed excavator/s.

The pipe lifter must have a current thorough examination certificate valid within 6 months. This certificate must also be logged on the OHSEQ site notice board clipboard—lifting accessories register.

The most common pipe lifter we use is from MGF this particular item has been tested to a SWL of 3.7t and designed for use with collared concrete pipes ranging from 300Ømm - 1200Ømm and a maximum length of 2.6m (our max purchased pipe length is 2.5m).

The clamping plate has TWO available settings: an upper hole for clamping 300Ømm - 450Ømm pipes and a lower hole for use with 525Ømm - 1200Ømm pipes. (see photograph below).



If the adjustment is required to be undertaken on-site ensure this is carried out whilst the lifter is stabilised and contained within its stillage. Two operatives are required to perform the task. Remove securing bolt and collar and carefully take out 40mm diameter pin. Re-position the clamp to the required hole and slide the pin back in place, slip over the collar and tighten M10 bolt.

When the pipe-lifter is not in-use it must be placed in a bucket/attachment area for safe storage and coupling.

When the pipe-lifter has coupled a load and raised 2 foot above ground level the operator must confirm that the load is stable by tilting the pipe + & - 15° from horizontal.

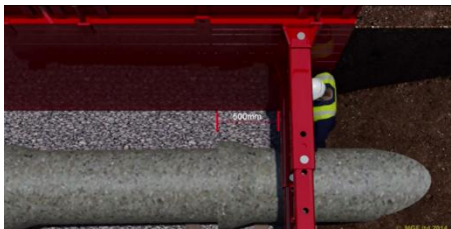


If the pipe is stable and correctly coupled the pipe may be lifter and transferred to a suitable storage location or placed into a prepared trench and jointed following the application of a lubricant to the pipe spigot and visual inspection of the socket profile checking for any fractures or obvious damage. Note- care should be taken to prevent the lubricant coming into contact with the pipe or equipment as this can cause the pipe to slip. Pipes being lifted must be kept as near the ground as is practicable and never lifted over operatives.

Upon reaching the trench with the pipe attached and the excavator stabilised it will carefully begin to lower the pipe into the required position.

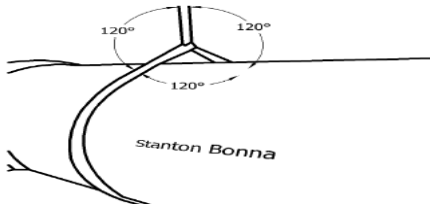


- The pipe may be tilted up to 30° from horizontal and manoeuvred between the struts of the trench box. During the operation ensure neither the pipe lifter nor the pipe snags other equipment or the ground as this could lead to a dangerous release of the pipe-lifter.
- For all operations ensure that the pipe is being laid on suitable ground/bedding and the pipe is chocked/backfilled to prevent unexpected movement.
- The pipe lifter can be used to push the pipe into position – care must be taken when jointing to ensure even pressure is being applied to the gasket. – No personnel should be in the working area or come into contact with the pipe-lifter/ excavator / any pipe in transit / installation.
- IF personnel are required inside the trench, then the operative must stand well behind the collar of the previously installed pipe (as per illustration below).



Alternatively, if a pipe lifter cannot be used due to size or weight

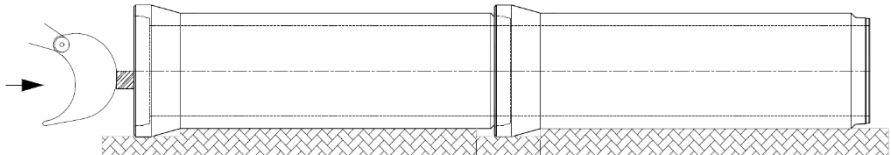
- Jointing chains or appropriate straps can be utilised to carefully lift and guide pipe spigots into the previously laid pipes sockets taking care not to disturb the jointing ring/damage the jointing surfaces.
- The spigot should be offered up to and centred carefully into the receiving socket.
- The pipe can now be allowed to rest on the bedding material (alternatively the pipeline can be back-laid i.e. new pipes laid with the socket offered up to previously laid pipes spigot – special attention should be made to ensuring the socket does not scoop up bedding material and hence contaminating the joint when laid using this method).
- The sling must be wrapped around the barrel of the pipe in a choke at the balance point. Position the bight for the choke lift at 120°(natural angle) – as per the sketch below:



Using the excavator bucket or pulling the pipe home with a strap/jointing chains, which are common methods of completing the joint. If using the excavator bucket to push the pipe home, always place a timber between the back of the bucket and the pipe's socket (spigot if back-laying). Apply a steady, even pressure until the pipe is in its final jointed position with the joint gap being within the recommended limits of between 10-25mm (joint gap measured internally).

ENSURE NO OPERATIVES ARE WITHIN THE TRENCH WHILST THE BUCKET IS APPLYING PRESSURE AGAINST THE TIMER PUSHING THE PIPE INCASE THE TIMBER BREAKS AND STRIKES AN OPERATIVE IN CLOSE PROXIMITY – NOTE THIS HAS HAPPENED WITHIN THE INDUSTRY BEFORE AND RESULTED IN A FATALITY.

As shown below: (Jointing with the excavator bucket).



Note: Mechanical plant must not be used to press pipes down to their correct level.

Ground water should be kept below the bottom of trench by use of temporary drains and not allowed to rise before backfilling is complete. All pipelines, especially those for foul sewers, are tested after each independent pipe is laid, and prior to backfill.

Manhole installation:

Recommended excavation size / manhole box to suit manhole Ø mm:

		<u>Manhole Ø</u>	<u>Square Manhole box dimensions</u>	<u>Comments</u>
		1050Ømm, 1200Ømm, 1350Ømm	2.5m(L) x 2.5m(W)	1350Ømm (tight)
		1350Ømm, 1500Ømm, 1800Ømm	3.0m(L) x 3.0m(W)	1800Ømm (tight)
		1800Ømm, 2100Ømm	3.5m(L) x 3.5m(W)	2100Ømm (tight)
		2100Ømm, 2400Ømm, 2700Ømm	4.0m(L) x 4.0m(W)	2700Ømm (tight)
		2700Ømm, 3000Ømm	4.7m(L) x 4.7m(W)	None
		3000Ømm, 3660Ømm	5.0m(L) x 5.0m(W)	None

Manhole excavations will be conducted/supported similarly as previously mentioned drain runs and will have PCC chamber sections placed by the attendant excavator.

- Again, operatives will leave the excavation until the PCC chamber ring is near the intended position and is stable.
- The section will then be manually guided into the final position on the concrete/shingle bed or the previous section.

Note – the second and subsequent PCC rings must not be installed until all benching has been undertaken.

- Once the benching has been undertaken with the additional sections installed, and the manhole is a traditional type (not pre-formed) a concrete manhole surround steel shutter will be lifted into place with the inclusion of the surround safe handrails.
- Once the concrete has cured the shutter will be removed and cover slab will be lifted into position; there is usually lifting anchors on the face allowing the use of hook and chain.

Backfilling:

- Withdraw earthwork support when backfill reaches the underside of waling.
- In the first stages of backfill, selected material should be placed uniformly on both sides of the pipe by hand in layers not exceeding 100mm in thickness, each layer being compacted by hand tamping until the pipe has a minimum of 150mm compacted cover.
- Further backfill should be placed in layers not exceeding 300mm, each layer being well compacted. Mechanical compaction equipment should not be used until there is a minimum of 450mm of compacted material above the crown of the pipe.

Producing as-built drawings & testing:

On completion, the run will be marked on the as-built record drawing together with dates of test & inspections.

Emergency Plan:

- If there is an emergency at the bottom of an excavation, then initial assessment by first aiders will establish if the IP can be moved or must be stabilised in situ pending arrival of paramedics.
- Until and unless agreed, first treatment can be carried out in situ, preparation for paramedic access and subsequent evacuation by stretcher will immediately begin.
- In the event of evacuation being necessary, this will be achieved down to 5.0m. BGL by the excavator pulling a ramp in the direction of the run being pulled, to an angle of approximately 20°. The sides of this ramp will then be reduced to allow safe access and egress by paramedics.
- If the ramp cannot be pulled in the direction of the run, the excavator will move round to the opposite end of the boxes, where the pipework has already been installed, and a ramp will be constructed in the opposite direction to the run.
- Below 5.0m. A davit arm will be provided and attached to the box side. A rescue stretcher will be available at ground level for deployment as necessary.

16.0	<u>Method of work</u>	<ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers COSHH – Pipe Joint Lubricant – Hepworth / Osma</p> <p>Excavations are generally at or below 1.2m bgl, and typically 100mmØ – 150mmØ plastic pipe runs are typically described below:</p> <ul style="list-style-type: none"> Set out the extent of the run/s, ideally commencing from the terminal connection or lowest point. Conduct existing survey investigations as previously described. Identify access, movement and storage areas and erect safety exclusion fencing to enclose the works. Excavate the trench using a trench box as shoring support or step/ batter back the excavation when possible. Place shingle bedding using the excavator bucket or by a site dumper being banked to the point of discharge. Note that during the placement of any material to trenches that all operatives will evacuate the excavation. Manually place pipes of 150Ø or below and align using either a string line or pipe laser, as appropriate. Pipes will be cut using a hand saw. Test the section prior to placing shingle protection as noted above. Backfill in the appropriate layers using excavated material and compacting with a trench or standard vibrating plate compactor.
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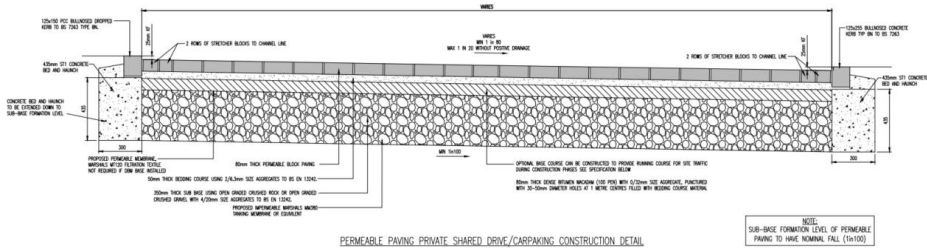
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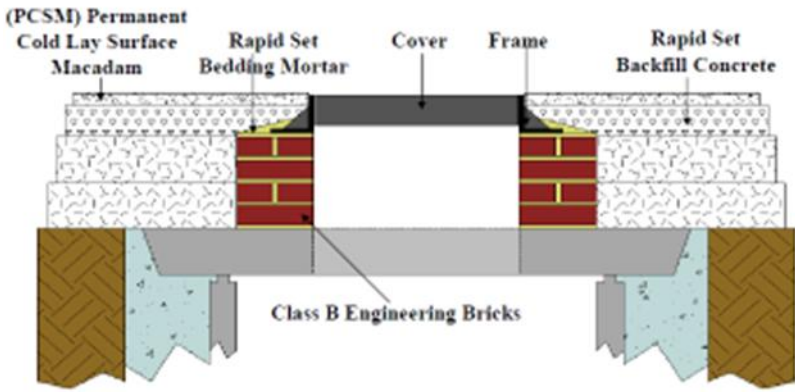


		<ul style="list-style-type: none"> Manhole excavations will be conducted and either supported via a proprietary manhole box or stepped/battered sufficiently; a qualified general construction worker will place the non-man entry chamber sections. On completion, the run will be marked on the as-built record drawing together with dates of test & inspections.
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17.0	<p>Method of work</p> <p>Adoptable & Private Road / Footpath Construction</p>	<ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to</p> <p>RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers RA_33 Ride on Roller RA_14 Hand Laying and Compacting Tarmac Surfaces. RA_29 Tarmac Surfacing RA_18 Laying Kerbs RA_19 Laying Slabs RA_06 Cutting Concrete, kerbs, blocks, edges, pipes. RA_38 Pouring Concrete</p> <p>Installing the Proprietary Trench support – Trench Box, Manhole Box, Trench Sheet Piled</p> <p>COSHH – Wet Concrete / Mortar</p> <p>Silica Petrol</p> <p>Preparation:</p> <ul style="list-style-type: none"> The foreman will consult with the client and agree on the areas for the works to commence. Signage and barriers will be erected to segregate the works area from other trades and members of the public (if applicable). H & Co to commence the work, starting with a detailed survey of the area for live cables and services using a Cable Avoidance Tool and hand excavation methods to ascertain the actual line and level of underground apparatus that could be encountered, mark and plot all live services encountered on a relevant drawing. <p>Haul Road Construction (Hard Stand for Compound)</p> <ul style="list-style-type: none"> Terram 100 will be laid at the formation, and the site foreman will call for crushed concrete to be delivered to the site. The lorries will back up at the site entrance and offload onto the Terram. The 360° excavator will spread and level the crush and track it in (normally on a 150mm layer ready for compaction, 200mm depth) Once level, a twin drum vibrating roller will compact the crushed material using a sufficient number of passes (6 passes). A turning point will be constructed as soon as possible to avoid the need for lorries to access the side reversing. Edges of layers shall be benched to provide full compaction of subsequent fill layers against a leading or open edge. <p>Tarmac Road Formation</p> <ul style="list-style-type: none"> Excavate the road to formation level using traveler and profile boards, as set out by the site engineer. If possible, excavations should be dug from reduced levels and backfilled on the same day, thus avoiding any risks that open excavations would incur. The excavated material will be removed from the site directly in tipper trucks to avoid double handling. If the material is suitable for reuse, stockpiles will be required. All stockpiles must be managed to allow safe access for dumpers with shallow gradient ramps and bunded sides. Excavate the road to formation level using traveller and profile boards, as set out by the site engineer. If possible, excavations should be dug from reduced levels and backfilled on the same day, thus avoiding any risks that open excavations would incur. A level survey will be carried out in all areas prior to the commencement of grading works, which will be undertaken by a 360° excavator to achieve the correct construction depths. Offer formation to the client for approval: HOLD POINT The formation will be inspected to confirm uniformity and compliance with the specification. Lay Terram and cap Formation once approved. Install formation material to the underside of the Tarmacadam level. A capping layer of 380mm of 6F2 will be installed and compacted. A layer of 230mm of type 1 granular sub-base will be laid and compacted. The approved subbase layer will be formed to a nominal 100mm thickness and compacted using a twin-drum vibrating tandem roller (Bomag 120). Compaction shall be a minimum of 1 No "dead-roll" pass, 6 no passes on full-service vibration, and a further "sealing" pass to close the upper surface and remove "tram lines." A specialist contractor will later do a 60mm binding course, 20mm and 30mm wearing courses of 10mm tarmac in one go. The tarmac base will be formed using 100mm of AC32 base course. It will be compacted using a twin-drum vibrating tandem roller (Bomag
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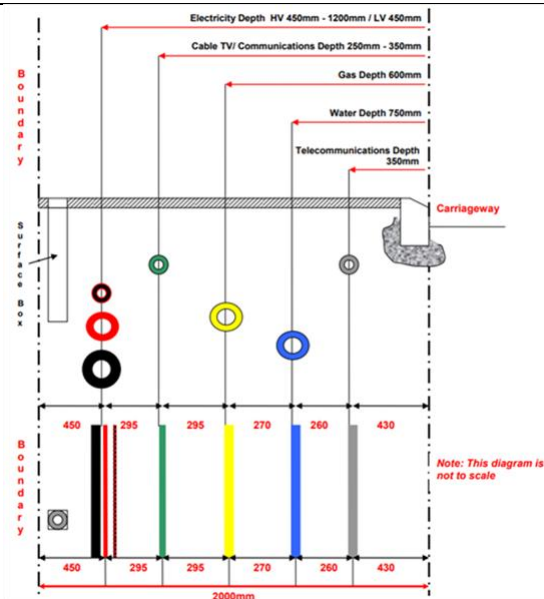
Prepared by: Alban Shehu	Client: Dandara Homes
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	<p>120). Compaction shall be a minimum of 1 No "dead-roll" pass, 6 no passes on full-service vibration, and a further "sealing" pass to close the upper surface and remove "tram lines."</p> <ul style="list-style-type: none">A specialist contractor will later do a 60mm binding course using AC20 tarmac, and AC10 tarmac of 40mm wearing courses in one go. <p>Kerb / Edging Installation</p> <ul style="list-style-type: none">New kerb and edging lines will be set out using non-penetrating cantilevered 'pin-safe' with "top of kerb/ edging" levels marked.The excavator will conduct minor excavations to provide suitable depth for kerb /edging and concrete bedding. <p>There are 2 options relating to initial kerb installation:</p> <p>Option 1 - Sacrificial full-height kerbs to retain the edge of the roads.</p> <ul style="list-style-type: none">Kerbs will be loaded out by the tracked excavator using lifting straps or, alternatively, forklift attachment and will deposit each stack at a suitable position along the kerb line.Kerbs will then be installed or deposited from the pallet using the Probst kerb laying dolly, as close to the proposed kerb line as possible.The concrete will be distributed by the excavator bucket to the line.Concrete will be manually levelled under the string lines and will be left approx. 20mm high to allow for bedding of the kerb.For Kerbs that aren't able to be finally placed by the Probst kerb dolly, two skilled groundworkers will use the 'bicycle handle type' kerb lifter and finally lift them into their proposed position <p>Note: Under no circumstance should anybody use the 'bicycle type' handle lifter as their primary laying process; it should only be used where the Probst kerb dolly is limited in use. Once kerbs have been placed on the concrete bed and aligned/levelled, they will be levelled using a pick.</p> <p>Option 2 – 7N concrete blocks used as templates.</p> <ul style="list-style-type: none">Blocks will be loaded out by the tracked excavator using lifting straps or, alternatively, forklift attachment and will deposit each stack at a suitable position along the kerb line.The concrete will be distributed by the excavator bucket to the line.Concrete will be manually levelled under the string lines and will be left approx. 20mm high to allow for bedding of the kerb.Blocks will then be manually placed in accordance with the engineer's pins and string line.Bedding and hunching concrete will be delivered to the site ready mixed and will be deposited in a stockpile.Following kerb/ block installation, all iron works will need to be raised to base course level to avoid subsequent damage or residual trip hazards.Carry out final preparation of the sub-base using the excavator and Bomag roller.Base course tarmac will either be installed by us or a specialist contractor, depending on road features and quantity. The base course tarmac, if installed by us, will typically be levelled off by a 360 excavator and rolled in accordance with the relevant specification. <p>Note: Edgings will be installed in a similar method to the installation of concrete 7N blocks.</p> <p>Block Paving Road</p> <ul style="list-style-type: none">Excavate the road to formation level using traveller and profile boards, as set out by the site engineer. If possible, excavations should be dug from reduced levels and backfilled on the same day, thus avoiding any risks that open excavations would incur.A level survey will be carried out in all areas prior to the commencement of grading works, which will be undertaken by a 360° excavator to achieve the correct construction depths.Offer formation to the client for approval: HOLD POINTThe formation will be inspected to confirm uniformity and compliance with the specification.Lay Terram and cap Formation once approved.Install formation material to the underside of the Tarmacadam level.A capping layer of 380mm of 6F2 will be installed and compacted.A layer of 230mm of type 1 granular sub-base will be laid and compacted.The approved subbase layer will be formed to a nominal 100mm thickness and compacted using a twin-drum vibrating tandem roller (Bomag 120). Compaction shall be a minimum of 1 No "dead-roll" pass, 6 no passes on full-service vibrationA base course of 100mm AC32 tarmac will be laid and compacted. It will be compacted using a twin-drum vibrating tandem roller (Bomag 120). Compaction shall be a minimum of 1 No "dead-roll" pass, 6 no passes on full-service vibration.A layer 30mm of sharp sand will be levelled to bed the block paving.The block paving will be delivered to the immediate area mechanically, then using a paving barrow, transported to the paving operative/s.The pavers will be laid by hand to the agreed pattern.Once the area has been paved, it will be settled in using a vibrating plate. <p>Porous Block Paving</p>  <p>Excavate the road to formation level using traveller and profile boards, as set out by the site engineer. If possible, excavations should be dug</p>
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		<p>from reduced levels and backfilled on the same day, thus avoiding any risks that open excavations would incur.</p> <ul style="list-style-type: none"> • Than a layer of the Impermeable Marshalls MM380/ tanking membrane will be laid at the bottom and brought up of the sides. • 350mm subbase of clean graded crushed rock or clean graded gravel 4/20 size will be laid and compacted. • Another permeable membrane will be used to cap the aggregate. The membrane will be Marshalls MT120 filtration textile. • Then a base course of tarmac AC32 will be laid on top. • This will be punctured with core drill coring holes of 30-50mm at 1m distance from each other and filled with clean stone for filtration. • A layer of 50 mm 6.3-2mm grit will be laid out over the intended paved area and levelled using timber and steel guide rails to the required level. • The grit will be compacted using the vibrating plate. • The block paving will be delivered to the immediate area mechanically, then using a paving barrow, transported to the paving operative/s. • The pavers will be laid by hand to the agreed pattern. • Once the area has been paved, it will be settled in using a vibrating plate. • Any cutting will be carried out using a Block Cutter. <p><u>Raise Ironworks.</u></p> <p>Enclose the work area with half-height barriers. Ch 8 signage will be used to direct other on-site trades away from the area of work and the access and egress routes to the area of work.</p> <p>Using a Petrol Saw with a water-suppression pressurised pump, will cut the tarmac around the ironwork.</p> <p>The operator using the Petrol Saw will be trained to use the abrasive wheel and will wear the correct PPE for the task, which includes impact goggles, ear defenders, and an FFP3 dust mask. He will also be face-fit tested for the FFP3 mask he uses.</p> <p>Using a pneumatic breaker mounted on the excavator the tarmac will be broken. The retaining material will be scored, broken, and transported to a stockpile for reuse or removal.</p> <p>The engineer will give the finished road level and camber, and operatives will lay the ironworks at these levels.</p> <p>Engineering brick will be laid on a bed of mortar, with a minimum of 2 courses and no more than 4 courses.</p> <p>The cover will be laid to line and level and surrounded by concrete to the underside of the tarmac level. The concrete will be allowed to cure and tarmac will be called to site, laid levelled and compacted.</p>  <p><u>Final Wearing Course Road Surfacing</u></p> <ul style="list-style-type: none"> • The sacrificial kerbs and existing bedding will be removed; all new kerbs will be bedded on a new bed. • The road will receive a final clean in preparation for wearing the course tarmacadam. • An appointed specialist contractor will then undertake the required tarmac resurfacing works.
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18.0	Method of work Installing Services	<ul style="list-style-type: none"> • Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. • They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. • A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. • Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to RA_12 Excavations / Trenches RA_11 Operating 306° Excavators</p> <p>Preparation Before any work is carried out, the following items must have been completed, and copies of relevant documents are available at the site of the works:</p> <ul style="list-style-type: none"> • Accurate plans showing all existing services in the vicinity of the work site. • Plan of proposed new services trench.
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	<ul style="list-style-type: none"> Correct signing & guarding implemented as per TMP. <p>The actual width of the trench depends on the following factors:</p> <ul style="list-style-type: none"> Type and size of services being laid. Number of services being laid in the same trench. If low—and high-voltage cables are laid in the same trench, the effect on the cable ratings must be considered. Whether ducts are being used. If mechanical means are used to excavate the trench to install a single cable, the width can be as narrow as 150mm. The trench width must also allow for mechanical compaction. <p>Trenches should: -</p> <ul style="list-style-type: none"> Be as straight as possible. Where bends are unavoidable, the trench should allow the service to be installed at not less than its minimum bending radius. It should be to the approved dimensions and normally have vertical sides, which should have a side support system (e.g. timbering) if the ground is soft or loose. Have a firm and smooth contoured base. The trench shall be cleared of water by pumping to prevent the risk of collapse and a hazard to the general public, especially trespassing children. In locations where flooding can occur, measures shall be taken to divert rainwater away from the trench (e.g., use of sandbags). Have provisions made during their excavation to cater for persons and vehicles to access the properties and places alongside the route. In concrete surfaces, cut through the concrete as per the HAUC <p><i>Specification for the Reinstatement of Openings in Highways.</i></p> <p><i>When machines are being used for excavation, and the location of the other plant is known, the plant should be uncovered by hand excavation to reduce the possibility of damage. If the excavation is likely to reduce the stability of any part of any structure, work shall not be commenced unless adequate precautions are taken to prevent the structure from collapsing or deteriorating. Flooding or vibration from heavy traffic can cause a collapse of trench sides and the subsidence of adjacent structures. A trench-side support system or shoring shall be used to avoid this.</i></p> <p>Where service trenches are to be left open at any time, MGF Walksafe or a similar device will be installed and maintained to provide safe access to plots.</p>  <p>When machines are being used for excavation, and the location of the other plant is known, the plant should be uncovered by hand excavation to reduce the possibility of damage. If the excavation is likely to reduce the stability of any part of any structure, work shall not be commenced unless adequate precautions are taken to prevent the structure from collapsing or deteriorating. Flooding or vibration from heavy traffic can cause a collapse of trench sides and the subsidence of adjacent structures. A trench-side support system or shoring shall be used to avoid this.</p> <p><u>Excavating service trench</u></p> <p>Excavation</p> <p>All excavation works will be carried out in accordance with the Construction (Design and Management) Regulations 2015, the Guidance contained in Health and Safety in Excavations HS(G) 185 "Be Safe and Shore," and the CIRIA Guide to Trenching Practice.</p> <p>Before excavation, a Permit to Dig must be raised, an existing utility drawing must be on site, and the excavation area must be scanned using Cat & Genny.</p> <ul style="list-style-type: none"> Each drainage run opened at any one time will not exceed 50m. Where practicable, we will backfill excavations overnight. In the event that excavations are left open, they will be physically barriered off. The foreman will check the face of the excavation before the start of the shift. Any excavation will be checked after events such as heavy rain that might affect its stability. The checks will follow Houlihan & Co.'s checklist. All inspections will be recorded in the Houlihan Record book.
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- Apparatus must be installed below the carriageway construction layers unless special arrangements have been made with the relevant authorities. Where the plant can only be laid in the road, adequate protection should be provided. Ducts will be laid to specifications, sanded, and warning tape will be placed over them.
- Pre-tender information and the Construction Phase Plan will be used and considered in light of additional information from utilities' plan drawings, section drawings from utility companies recording the depth of services, and commissioned ground probing radar surveys as necessary.
- The assumption that live working can be avoided as the default position is set out above, and a full justification of any live working must be set out before this is considered. A method statement for live working will be required as live working is not considered to be properly controlled by any permit-to-work system. HSG47 states, "Where new services such as electrical or gas supplies are being installed, it may be possible to reduce risks by not installing or commissioning them until other groundworks and work on the installation have been completed. This should be considered early in the design process to allow the works to be sequenced accordingly."
- A cable avoidance tool in conjunction with a transmitter will be used by a competent person prior to the commencement and during any work to identify all services capable of being identified. The intention will be to bring up to date records of existing services and to supplement these records where they are deficient. Services found will be clearly identified to avoid the risk of damage, and where necessary, we will hand dig around them to expose the services prior to full excavation. Hand digging will require the use of air picks to expose services, starting immediately under the hardcover. Record drawings will be red-lined to show the most up-to-date information, held available on site for consultation and details communicated at inductions, toolbox talks and in careful briefing on site prior to excavation.
- If any service is exposed, it will be photographed and sketched with offset notes to inform future re-visits.
- The backfill will be with self-compacting granular material to a level where compaction is acceptable and then in a suitable material, including selected as dug, which must be possible to excavate with the air pick in the future: i.e., dense, cohesive material like clay must NOT be used. If suitable backfill material is unavailable, the excavation should not proceed.
- Warning tape will always be placed, and if the utility has not provided it, we will have rolls to use. In addition to using marker tape provided for each service, another physical barrier will be placed on top of the sand. As agreed by management, half the width of the red debris net will be placed first before the backfill. If the physical protection specified is not in place, then the backfill will not be completed until the protection is in place.
- Great care will be taken to establish what is meant by "terminations" or "diversions", and any assertion that there are "no" services will be treated with caution.
- Techniques using ground penetrating radar will be considered where information is clearly deficient and services are congested.
- We will comply with the Permit to Dig system.
- Traffic management will set up traffic control in stages throughout the entire route to keep disruption to a minimum.
- The operatives will barrier the work area at all times to keep the general public safe.
- The trench to be excavated will be cat and genny to mark up all existing services, and all appropriate drawings will be read. If in any doubt, a trial hole will be hand excavated to confirm any existing services.
- The trench will be marked out in the footpath or verge so the tarmac or turf can be removed, so the service trench can be excavated to allow the installation of the service main. All arising is to be removed from the site by use of a forward tipping dumper for reuse or removal from the site at a later date, as per the SWMP.
- Water mains, gas mains and LV electricity cables will be laid by others, into the trench at the correct depth and surrounded with sand or a similar bedding material. Warning tape will be installed and pegged. We will then fill the remainder of the trench with 6F2 or similar and compact it layers to the underside of the new tarmac reinstatement.
- The trench will be reinstated to the HAUC spec. Once the services are laid, installation records will be taken, and the GPS positions of the services will be noted on the site drawing for the as-installed records.

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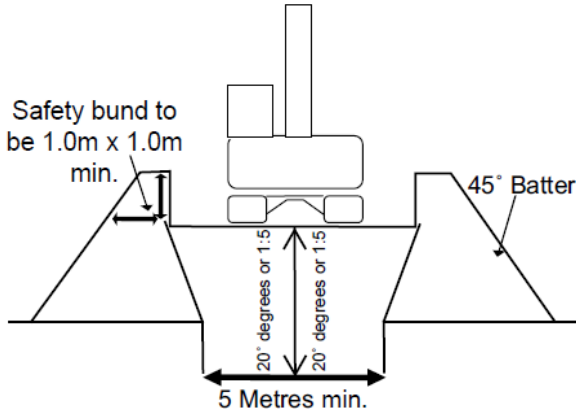
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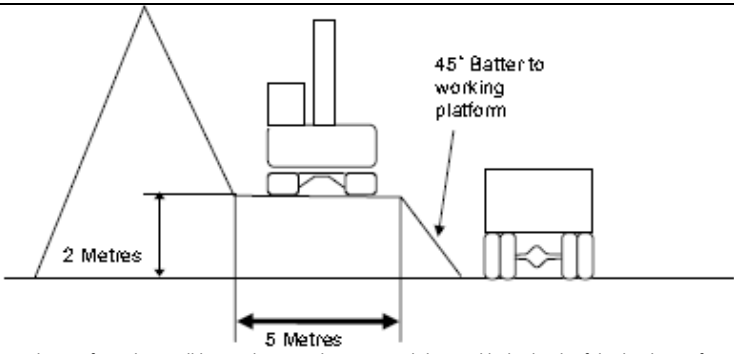
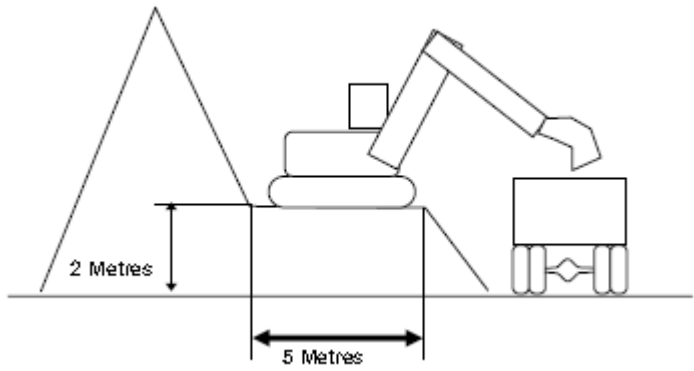


	<ul style="list-style-type: none"> On completion of the works, the traffic management and site equipment will be removed, and any surplus materials and rubbish will be removed from the area. <p>Install services crossovers (Proposed)</p> <ul style="list-style-type: none"> Services positions are per the combined services drawing and must be considered when placing the carriageway. All ducting under the carriageway must be to UKPN standards of 125mm.  <ul style="list-style-type: none"> 125ømm and 150ømm Ridgiduct Power HV class 1 ducts fully comply with the electrical supply industry specification for cable protection, ENATS 12-24.
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19.0	<p><u>Method of work</u></p> <p>Works on/near Underground Services</p> <ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to</p> <p>RA_26 Work Near Underground Services RA_12 Excavations / Trenches RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers</p> <ul style="list-style-type: none"> Pre-tender information and the Construction Phase Plan will be used and considered in light of additional information from utilities' plan drawings, section drawings from utility companies recording depth of services and commissioned ground probing radar surveys as necessary. Any on-site service disconnections should be confirmed by Persimmons prior to the commencement of construction. It is not clear if the proposed disconnections to the cottages have taken place. We will assume they have not happened until we can see proof otherwise. The assumption that live working can be avoided as the default position is set out above, and a full justification of any live working must be set out before this is considered. A method statement for live working will be required as live working is not considered to be properly controlled by any permit-to-work system. HSG47, rev. Feb.2014, states "Where new services such as electrical or gas supplies are being installed, it may be possible to reduce risks by not installing or commissioning them until other groundworks and work on the installation have been completed. This should be considered early in the design process to allow the works to be sequenced accordingly." Permit to Dig will be completed prior to excavating on/near underground services, and this will be accompanied by existing and as-built services drawings. Team working on / near underground services will be trained on "Digging on/ near Underground Services" Houlihan's Procedures and will be briefed on the task, provided with existing and/or as-built drawings, and will sign Permit to Dig prior to starting any works. A cable avoidance tool in conjunction with a transmitter will be used by a competent person, prior to the commencement and during any work, to identify all services and ducts. The intention will be to bring up to date records of existing services and to supplement these records where they are deficient. Services found will be clearly identified to avoid the risk of damage, and where necessary, we will hand dig around them to expose the services prior to full excavation. Hand digging will require the use of air picks to expose services, starting immediately under the hard cover. Record drawings will be red-lined to show the most up-to-date information, held available on site for consultation and details communicated at inductions, toolbox talks and in careful briefing on site prior to excavation. As each service is exposed, it will be photographed and sketched with offsets noted to inform future re-visits. Backfill will be with self-compacting granular material to a level where compaction is acceptable and then in suitable material, including selected as dug, which must be possible to excavate with the air pick in future: i.e. dense cohesive material like clay must NOT be used. If suitable backfill material as described is not available, the excavation should not proceed. Warning tape will always be placed on top of the sand backfill, and if it has not been provided by the utility, we will have rolls to use. If physical protection is specified, then the backfill will not be completed until the protection is in place. A 1 tonne bag of sand will be placed at each planned service connection. Red debris netting will be placed over the sand backfill as an additional warning. Great care will be taken to establish what is meant by "terminations" or "diversions" and any assertion that there are "no" services will be treated
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		<p>with caution.</p> <ul style="list-style-type: none"> Techniques using ground penetrating radar will be considered where information is clearly deficient, and services are congested. We will comply with the Principal Contractor's Permit to Dig system. We will additionally follow HSE advice that work on or near live services cannot be adequately controlled by a permit to work system. We will provide a full method statement for the work and brief our competent team.
20.0	<p><u>Method of work</u></p> <p>Spoil Heaps</p>	<ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to RA_11 Operating 306° Excavators RA_10 Operating Forward Tipping Dumpers Installing the Spoil to the TW design</p> <p><u>There will be a need to stockpile separately different categories of material whether it eventually goes to landfill or can be recycled or re-used.</u></p> <ul style="list-style-type: none"> Stockpiles will be constructed by the dumper tipping material at ground level for an excavator to place as a graded pile. The excavator is required to grade off the sides to a compacted batter throwing off rainwater, and dressing the top likewise. Dumpers must not tip on uneven ground: all tipping operations must be undertaken on level firm ground. The sides and end of the spoil heap must be banded (at least 1.0m(H)1.0m(W)) The stockpile will be monitored for slippage and damped down if any dust becomes airborne. The angle of repose will be estimated for different materials, with 45° an accepted average unless there is evidence of slippage. Stockpiles of topsoil will be no higher than 2.0m as this would prevent aerobic action in the heap and render the topsoil sterile. Notify the H&S department to arrange inspection within 24 hours of the formed spoil heap. We will include spoil heaps in our temporary works register, but the detailed construction of the spoil heap will be determined from the material it consists of. Note: any characterisation of material site won is an approximation or average, and a 45° batter has been a proven average, approximate solution. There is no way of removing uncertainty completely in creating spoil heaps but the experience of our site supervisors practically succeeds. We will provide details in our temporary works register, with risk and category before creating a stockpile If there is a need to place contaminated material in a spoil heap, awaiting the results of tests or grading for example, it will be placed on thick polythene on hard standing while it remains available. The heap will be graded, sealed and polythene placed over and weighted down. The Company procedure for forming stockpiles will accompany this MS. <p>Standard detail below:</p>  <p>Spoil Heap Removal</p> <ul style="list-style-type: none"> A single excavator will be used for the spoil heap removal. The excavator will be used to remove spoil from the heap, dragging it down from higher levels to the loading area. The excavator will work from a platform cut into the spoil heap as depicted in the sketch below.

		 <ul style="list-style-type: none"> The working platform must be cut from the spoil heap above and compacted down with the back of the bucket to form a secure and stable working area. The platform must not be higher than two metres and must be a minimum of 5 metres wide. The machine must not work closer than a metre from the edge of the platform. The front of the platform must be battered back at a 45-degree angle at all times. The working platform must extend the length of the spoil heap face that is being cut away with an access ramp onto the platform at both ends. When tracking the excavator, the operator must always face the direction of travel. When slewing around to face the direction of travel he must be mindful of any lorries in close proximity to his position. The loading area will be restricted area with no pedestrians allowed into this area. All drivers are to stay in their vehicles at all times while waiting to be loaded. While loading the vehicles the excavator will face the vehicles with the tracks pointing towards the vehicles. This will increase the stability and the driver will have better visibility while loading the vehicles.  <ul style="list-style-type: none"> This process will continue until the spoil heaps are removed down to existing ground levels. All vehicular movements are to be monitored and supervised by the machine driver. He will signal when the next lorry is to come forward into the loading area. The loading area is large enough for the lorries to turn and reverse into position if necessary. There are no areas with a restricted view, and as only one lorry will be reversing at a time, a banksman is not required at this point. Where required and as necessary, continual watering down procedures will be maintained throughout the progress of the work contributing to the suppression of dust migration.
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21.0	<u>Method of work</u> Lifting with excavators	<p>All lifting operations on site should be planned to ensure that they can be carried out safely and that all foreseeable risks have been taken into account.</p> <p>Poor planning is one of the major causes of accidents arising from the use of excavators for lifting operations.</p> <p>LOLER requires that the siting, setting up, and use of an excavator for lifting operations be carefully planned so that these activities can be carried out safely and efficiently. The responsibility for planning lifting operations lies with the employer who is undertaking the task. The employer should ensure that they identify one person with sufficient training, practical and theoretical knowledge, and experience, who should be appointed to be responsible for planning and supervising the tasks. This person is known as the "Appointed Person" to BS 7121. – Alban Shehu 07584809221.</p> <p>To enable lifts to be planned, supervised and carried out effectively, three categories of lifts are detailed below. The category into which a particular lift will fall depends on the assessment of the hazards associated with both the environment in which the lift is to be carried out and those associated with the load and lifting equipment. As can be seen from the table below, increases in either or both environmental or load complexity (the "Complexity Index") will lead to the lift being allocated a higher category. Having identified the hazards associated with a particular lift, a hierarchy of control measures should be applied to eliminate or control those hazards.</p> <p>Lift categories (Basic / Intermediate / Complex).</p>
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Environmental complexity (E)	3	Complex	Complex	Complex	Complexity variables and constants	Lift category		
						Basic	Intermediate	Complex
	2	Intermediate	Intermediate	Complex	Increasing environmental complexity	The excavator operator has clear sight of the load path and the load is to be placed on the ground.	The load is to be placed over an obstruction such that the excavator operator might not have clear sight of the landing area from the control position.	The load is to be placed in a trench behind a bund, without line of sight, and with proximity hazards, such as scaffolding or overhead power lines.
					Constant low load complexity	A load of known weight with designated top lifting points and central centre of gravity. The load does not contain fluids, is not fragile and is inherently stable when landed.	A load of known weight with designated top lifting points and central centre of gravity. The load does not contain fluids, is not fragile and is inherently stable when landed.	A load of known weight with designated top lifting points and central centre of gravity. The load does not contain fluids, is not fragile and is inherently stable when landed.
	1	Basic	Intermediate	Complex		Complexity Index E1:L1	Complexity Index E2:L1	Complexity Index E3:L1
					Increasing load complexity	A load of known weight with designated top lifting points and central centre of gravity. The load does not contain fluids, is not fragile and is inherently stable when landed.	A load of estimated weight with an estimated centre of gravity and without designated lifting points. The load does not contain fluids, is not fragile and is inherently stable when landed.	A load of estimated weight and centre of gravity and without designated lifting points. The load contains fluids, is fragile and is not stable when landed.
		1	2	3	Constant low environmental capacity	The excavator operator has clear sight of the load path and the load is lifted to and from the ground.	The excavator operator has clear sight of the load path and the load is lifted to and from the ground.	The excavator operator has clear sight of the load path and the load is lifted to and from the ground.
						Complexity Index E1:L1	Complexity Index E1:L2	Complexity Index E1:L3

Load complexity (L)

** Only basic lifts can be undertaken in the absence of a formal lift plan produced by the Company's appointed person, providing the criteria below are met.*

Planning, Supervisory and Operating Personnel

The Lifting Team

All lifting operations should be carried out by the lifting team. The team will consist of persons carrying out the following roles:

- Appointed Person
- Lift Supervisor
- Excavator operator
- Slinger/Signaller

The exact team structure will depend on the complexity and size of the job, but all roles must be allocated and duties discharged.

Roles and Responsibilities

Appointed Person

- Planning the lifting operation for Intermediate & complex tasks; selection of the lifting equipment and lifting accessories. Instruction, supervision, and consultation with other responsible bodies to ensure effective collaboration as is necessary for the work to be undertaken safely.
- Ensuring that the outcomes of the planning process are recorded in a lift plan.
- Ensuring that adequate pre-operational checks, intermediate inspections, maintenance and thorough examination of the equipment have been carried out.
- Ensuring that there is an effective procedure for reporting defects and incidents and for taking any necessary corrective action.
- Taking responsibility for the organisation and control of the lifting operation.
- Ensuring that the Lift Supervisor and other lifting team members are competent to carry out their roles and are fully briefed on the lift plan's contents, scope and limits.
- Being familiar with the relevant parts of the project health and safety plan where the lifting operation is being carried out on a site where the Construction (Design and Management) Regulations 2015 apply.
- Liaising effectively with the site temporary works coordinator regarding relevant issues such as ground stability.

NOTE: The Appointed Person should have the required understanding and experience in planning lifting operations with excavators.

Lift Supervisor

- All lifting operations should be supervised by a Lift Supervisor. This role may be combined with that of a slinger signaller for basic lifts, while a separate person will be required for more complex lifts.

NOTE: The degree of supervision required will depend on the category of lift and the outcomes of the risk assessment

- The Lift Supervisor should direct and supervise the lifting operation, ensuring that it is carried out in accordance with the lift plan. The Lift Supervisor should be competent, suitably trained, and have sufficient experience to carry out all relevant duties.

NOTE: Competence requirements for self-supervision might differ from those for supervising others.

- The Lift Supervisor should also have sufficient authority to stop the lifting operation if they consider it dangerous to proceed.

NOTE: The Appointed Person may decide to undertake the Lift Supervisor's duties or delegate these to another person with appropriate expertise for the lifting operation.

Excavator Operator

- The excavator operator should be responsible for the correct operation of the excavator in accordance with the manufacturer's instructions and within the safe system of work, as detailed in the lift plan.
- The excavator operator should respond only to the signals from the slinger/ signaller, who should be clearly identified.
- The excavator operator should:
- Have the necessary competence (skills, knowledge and experience) to carry out lifting operations.
- Be familiar with the excavator to be operated. Check that it is in good condition and that it has sufficient capacity to carry out the lift safely.
- Ensure that they do not wear loose clothing, which could snag on the controls and lead to unintended movement.
- Ensure that the bucket is removed from the machine before the lifting operation starts if the lifting attachment (hook) is fitted to the quick hitch or dipper end.
- Ensure that lifting operations are only carried out with the excavator in lifting mode and the overload warning device or rated capacity indicator/limiter selected.
- Ensure that they have been briefed on and understand the lift plan (for Intermediate and complex lifts).

		<ul style="list-style-type: none"> Identify the other members of the lifting team and ensure that they are clear of the excavator's arc before operating the machine. Check that the area where the excavator is to be positioned for the lifting operation is suitable for the task, the landing area is suitable to take the load, the area is segregated from the rest of the site and that only those personnel directly involved in the lift are within the segregated area. Ensure that the pre-use checks of the lifting accessories to be used have been carried out and that the lifting accessories have been correctly attached to the excavator's lifting attachment. Ensure that the excavator's control isolator (the dead man lever) is selected when the lifting accessories and load are being attached to avoid unintended movement. Only follow signals from the designated slinger-signaller during the lifting operation, using the pre-arranged system of signals. <p>NOTE: It is essential that the excavator operator responds immediately to an emergency stop signal from any person.</p> <p><u>Slinger-signaller</u></p> <p>The slinger-signaller should be properly trained in all aspects of slinging loads and signalling and be authorised by the Appointed Person – for intermediate and complex tasks.</p> <p>The slinger-signaller should be responsible for:</p> <ul style="list-style-type: none"> Carrying out pre-use and post-use checks of lifting accessories. Attaching and detaching the load to and from the excavator load-lifting attachment. Using the correct lifting accessories and other equipment in accordance with the lift plan (for intermediate & complex tasks); Initiating and directing the safe movement of the excavator using a pre-arranged system of signals. If there is more than one slinger-signaller, only one of them should have this responsibility at any one time, depending on their position relative to the excavator. Guiding movements of the excavator during pick and carry lifting operations. Ensuring that they are readily identifiable as the designated Slinger/Signaller by the excavator operator. Movement of the excavator includes pick and carry duties. All pick and carry duties will be continuously controlled by a banksman. <p>NOTE: Where continuity of signalling is required and this slinger-signaller is not visible to the excavator operator, another slinger-signaller or signaller will be necessary to relay signals to the excavator operator. Alternatively, other audio or visual methods may be used. A typical example of audio methods used is where a Slinger/Signaller using a radio continuously instructs the operator to lower a load, e.g. by saying "Lower...lower...lower...", and failure of this continuous instruction from the slinger-signaller indicates that the operator needs to halt all excavator movements.</p> <p>Lift plans will be in the excavator cabs.</p>
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22.0	<u>Method of work</u>	<ul style="list-style-type: none"> Contract Manager and Site Supervisor to assess the works and identify the hazards and control measures that need to be put in place to avoid the exposure or to minimise the risk to a reasonably acceptable level. They will be responsible for selecting the correct equipment for the task and the personnel trained to carry out the task. A Task Activity Briefing must be held with the team carrying out the Task, and they must be briefed on the hazards identified, control measures that will be applied, plant and equipment used, work package plan, detailed drawing, and every member of the team must understand and sign the briefing sheet. Work must stop when the weather conditions or any other circumstances change. The risks must be assessed and control measures applied to mitigate these risks before work commences. <p>Refer to RA_08 Working in Confined Space</p> <p>We will avoid the creation of confined spaces where possible: for example, benching will be done when the first manhole ring is placed.</p> <ul style="list-style-type: none"> A confined space is defined by the presence or absence of prescribed risks. It is possible but unusual for these risks to be present at excavations for foundations or drainage, or for these risks to be reasonably foreseeable. The most common confined space encountered is a manhole connected to a live sewer. All such manholes encountered on this site will be treated as confined spaces. Prior to entering any existing manhole, gas monitoring equipment (which will be kept on site at all times) will be used to determine that it is safe to enter the manhole. The gas monitor will be in use all the time operatives are inside any existing manholes or excavations where it is reasonably foreseeable that the confined space procedures may be necessary. This can be determined by site investigation reports, olfactory smell, visual contaminants, or recommended as a precautionary measure by geotechnical consultants. NOTE: This will be a specific requirement to address a foreseen risk, for example the presence of PAHs. In that case, a gas monitor would have to be specifically calibrated to detect a marker for PAHs, benzo-A-pyrene. The gas monitors used on site will be calibrated to methane/ carbon monoxide and hydrogen sulphide (dual toxic)/ oxygen 19%-23%/ /hydrogen sulphide, and carbon dioxide. TPHs/ PAHs can be discovered by sight and smell. If there is a hostile environment in the confined space, no entry will be attempted. If it is essential to enter, entry will be made by a specialist contractor, using self-contained breathing apparatus or air lines. The contractor we use for specialist entry and accompaniment is ESS SafeForce. Safety harnesses and a tripod will be on site and will be used by the surface rescue trained operatives where a confined space is to be entered vertically. If the confined space involves working away from a vertical access point, a harness is not acceptable, and the operative would have to be accompanied by a specialist team or a rescue entry to bring a rescue stretcher into use would be required.. Escape B.A., which is good for 10 minutes, will be held at the workface, and operatives will be harnessed while in the confined space. Extraction will be by the topman operating the overhead winch attached to the harness. Should entry to the confined space be necessary, only the trained topman will enter using a 30-minute rescue B.A. The tripod is suitable for manhole entry. The gantry will span excavations up to 5.0m in width. Davit arms are suitable for fixing on shoring apparatus. Where working away from vertically under the rescue apparatus, rescue will be by rescue stretcher, which requires entry by trained rescue operatives.
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		<ul style="list-style-type: none"> If a problem should arise, the emergency services are to be summoned immediately on a 999 call. If anyone has been trapped for more than 5 minutes, they will not be released until paramedics are present to deal with possible toxic shock. Under no circumstances is anyone else to enter a manhole where an incident has occurred other than the competent person/s who have been trained to use the rescue equipment and have completed their training to work in confined spaces. Any operative who engages in work within deep excavations or confined space entry must be trained and certificated for work in Confined Spaces, including rescue. A confined space entry permit will be issued confirming control measures are in place for each day maximum or for each configuration of work. Any changes in support or rescue arrangements will require a new permit. The foreman will control this by issuing, discharging, revising, and ensuring the procedure applies. There will be some confined space entry required, though most is avoidable.
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23.0	Health & Safety	<ul style="list-style-type: none"> All operators and personnel shall be trained and certified in the functions and role suitable to their responsibility on the site. Approved method statements are to be used together with site rules and restrictions to inform and advise the workforce of the manner in which the operations will be conducted. PPE appropriate to the scheme will be issued on commencement and the operatives and site management are to ensure the correct and continued use of such whilst on site. All items of plant, access and lifting equipment are to have been inspected prior to delivery and be accompanied by the required documentation. Site checks will be performed to the manufacturer's / supplier's recommendations. Where appropriate, Operatives will be trained for Confined Space Work. Works contained in or about live sewers are to be tested for the presence of gas and are to employ additional PPE of gauntlets, enclosure suits / overalls, breathing equipment and tripod / harness / winch. Gas monitoring equipment is to be used throughout such operations. If it is not possible to Step or batter the Excavations Earthwork support is to be used in all excavations over 1.2m deep and at any other time as is deemed necessary. Manual handling to be kept to a minimum, with nothing larger than 25 Kg without a suitable risk assessment. Banksmen are to attend all machine excavations, lifting operations, especially all pick and carry duties, and direct site traffic as required. Eye and ear protection is required when using powered tools. All users of abrasive wheels must be abrasive wheel awareness trained & face-fit tested. Site dump trucks etc. are to be fitted with ROPS, seat belts & reversing warning indicators. Existing site services are to be identified located [using scanners] and protected throughout the works and shall only be exposed by means of hand excavations to determine depths etc. Main traffic routes are to be established for bulk removal or transportation of materials. Small tools will be kept in the storage container when not in use. Plant is to be left in-situ on site but will be secured and immobilised. All small drum oils to be kept in COSHH store. <p><u>Welfare Arrangements</u></p> <ul style="list-style-type: none"> Dandara Homes has provided adequate welfare provision. The team will use the main compound on Drewer Way until the site / Phase 4 B compound is constructed. <p><u>Personal Protective Equipment</u></p> <ul style="list-style-type: none"> Basic PPE for our groundworkers has been assessed to be boots, hi-vis jackets, helmets at all times. Gloves, helmet mounted ear defenders, wellington boots and eye protection are available on site depending on the task in hand. We have a mandatory glove policy, following a glove selection procedure, based on risk assessment. Glove selection policy attached. - Safety helmets EN 397 - High visibility vest/jacket EN 471 Class 2 - Safety Gloves EN 388, and see the full glove selection policy - Hearing protection EN 352-1/EN 352-2 is mandatory when using breakers, or working in areas where noise levels rise above 85 dB(A). - Safety glasses to EN 166-F when placing concrete. - Safety goggles to EN 166 B when cutting concrete or steel products. - Safety boots to EN 345: S1-P - Suitable footwear when standing on concrete, Wellingtons to EN 345 S4 - Face shield when using an air pick • Vibration procedure attached, which includes assessment nomograms for all handheld vibration-emitting plant • Noise assessments are attached for all noise-emitting plant. • More specialised equipment for confined spaces, asbestos, and contaminated land will be issued as required by risk assessments from time to time and signed for in a Construction Confederation register compliant with the Construction (Design and Management) Regulations 2015. • PPE must still be worn in hot weather: Breaks from work and drinking water are essential, but where risk assessments show the need for PPE, it must be worn, or work halted. • Sun block is available on all sites. • Sunglasses will be issued on sites where glare is a problem and on all sites where chalk is present. • Personal protective equipment is provided free of charge to our employees and will be replaced when required. <p><u>Bucket changing areas</u></p> <ul style="list-style-type: none"> • Suitable fencing and signage will be erected in close proximity to excavator working areas where buckets will require changing. The designated areas will move to minimise transit but will remain of the same standard even for short-duration work. • The smallest changing area must consist of 3 Heras fencing panels and a half-height barrier along the face so all 4 sides are enclosed; the requirement for the half-height barrier is to prevent 10t & below excavators from damaging any hydraulic hoses on the underside the boom or the fencing panel. • NOTE: All our quick hitches are fully automatic.
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Noise Monitoring

The following working practices will be employed to reduce noise throughout construction activity on site:

- Where practicable, position the plant away from site boundaries, particularly on sites with neighbours within close vicinity.
- Make use of stockpiles as noise shields
- Arrange delivery times on site to suit the area.
- Use all silencing equipment available and keep panels closed on all generators and compressors.
- Switch off noisy equipment when not needed.
- Arrange traffic routes for mobile plant so the amount of reversing required is minimised, reducing the use of reverse warning beepers.
- If there is doubt as to noise levels or complaints, we will deploy a Class 1 noise level meter for operations. Environmental noise measurement has been by a specialist. There is no Sec.60/61 in place.
- Observe restrictions on working hours: No plant operating before 8:00 am
- We have assessed the noise levels for all our plant- see attached..

Dust Monitoring

- Routine visual monitoring will be undertaken for dust at all operational areas at the site. In the event that significant visual dust is observed at the boundaries of the operational areas, action will be taken to suppress the dust. We won't wait for the dust but will also respond if it is seen in between regular preventive road cleaning and dust suppression by water from a bowser. The most useful stipulation if we have bulk shifting of waste over haul roads is that the exhausts vent upwards and not down at the road. If haul roads were tarmacked, this would massively reduce the problem.

This action would comprise application of water to waste stockpiles, roads, and waste treatment activities as appropriate. Inspections will be carried out by site operatives throughout the day and by the Site Manager on a daily basis.

Refuelling Area

- During the fuelling process a drip tray will be positioned under the connection point to ensure that any drips of diesel are caught in the tray, the same process applies to filling petrol tools/cans etc. If the hose has been contained within the secondary bund and submersed in diesel the hose itself must be located within the drip tray, take the lid of if necessary.
- A fire point with 2 no. CO2 extinguishers will be placed close to the refuelling area, appropriately signed.

Storage of tools & materials

- Small tools will be kept in the storage container when not in use. Plant is to be left in-situ on site but will be secured and immobilised. All small drum oils to be kept in CoSHH store.
- Materials that are on pallets will not be stacked more than two pallets high.
- Lightweight materials such as cellcore, cordek, and polystyrene panels used for floors will be weighted down.

Interface with other trades



- Coordinating work with other trades.
- From the arrival of other trades on site, work will be coordinated by our Site foreman
- Our works will be segregated from other trades.
- Excavations will be guarded to prevent unauthorised access. We will not undermine scaffolding at later stages of the job and will not work underneath scaffolding. Our machinery has flashing hazard lights, and all reversing will be kept to a minimum.
- Note that flashing lights interfere with laser levels. Manufacturers have found no way around this problem. So lights should be switched off when the laser level is in use, but only in the area our site engineer defines as where interference could occur. This is not a blanket excuse for the whole site.

Housekeeping

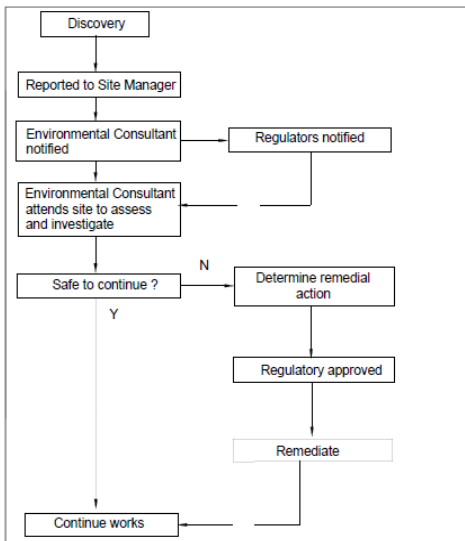
- Materials will only be stored in designated areas. Work areas will be cleared of waste as soon as practical, including materials surplus to a task. If this does not happen in a timely fashion, the working area will become constricted, and separation will become difficult. If we leave behind waste or surplus materials, this makes distancing difficult for others. We should require this of other trades before we enter a new work area.
- Any waste materials are to be disposed of in the appropriate skip.
- Waste from disposal bins around the site, including in offices, must be removed on a regular basis during the day.
- Clear access at all times must be maintained should the emergency services be required.

Reporting of Accidents

- Any accidents whatsoever arising out of or in connection with the site works on or off Site which cause personal injury, property damage shall be reported to the OHSEQ department immediately, in writing giving full details and statements of witnesses. In the event of a reportable accident the Health & Safety Executive shall be informed and an F2508 submitted.
- All accidents to be recorded in the Accident Book and reported to the Client.
- All near misses will be reported to the Client.
- If CPR is required, then the following guidelines have been extracted from the latest Resuscitation Council UK Statement on COVID-19 in relation to CPR and resuscitation:
 - Because of the heightened awareness of the possibility that the victim may have COVID-19, the Resuscitation Council UK offers this advice:
 - Recognise cardiac arrest by looking for the absence of signs of life and the absence of normal breathing. Do not listen or feel for breathing by placing your ear and cheek close to the patient's mouth. If you are in any doubt about confirming cardiac arrest, the default position is to start chest compressions until help arrives.
 - Make sure an ambulance is on its way.
 - If there is a perceived risk of infection, rescuers should place a cloth/towel over the victim's mouth and nose and attempt compression-only CPR and early defibrillation until the ambulance (or advanced care team) arrives. Put your hands together in the middle of the chest and push hard and fast.
 - Early use of a defibrillator significantly increases the person's chances of survival and does not increase the risk of infection.
 - If the rescuer has access to personal protective equipment (PPE) (e.g. face mask, disposable gloves, eye protection), these should be worn.
 - After performing compression-only CPR, all rescuers should wash their hands thoroughly with soap and water; alcohol-based hand gel is a convenient alternative. They should also seek advice from the NHS 111 coronavirus advice service or a medical adviser.

		<div data-bbox="414 268 949 392" data-label="Section-Header"> <h3>How to do CPR on an adult COVID-19 update</h3> </div> <div data-bbox="399 403 941 963" data-label="List-Group"> <ol style="list-style-type: none"> 1. If someone is unconscious and not breathing normally, do not put your face near to theirs 2. Call for an ambulance 3. Use a towel or piece of clothing and lay it over the mouth and nose 4. Do not do mouth to mouth 5. Start chest compressions to the tempo of "Staying Alive" 6. Use a Public Access Defibrillator if available. </div> <div data-bbox="949 313 1244 974" data-label="Image">  </div> <div data-bbox="399 985 869 1097" data-label="Text"> <p>Find out how St John are supporting the NHS with the COVID-19 outbreak at sja.org.uk/COVID-19</p> </div> <div data-bbox="869 1030 1260 1108" data-label="Image">  </div> <div data-bbox="327 1164 1484 1377" data-label="List-Group"> <ul style="list-style-type: none"> Any accidents whatsoever arising out of or in connection with the site works on or off Site which cause personal injury, property damage shall be reported to the OHSEQ department immediately, in writing giving full details and statements of witnesses. In the event of a reportable accident the Health & Safety Executive shall be informed and an F2508 submitted. All accidents to be recorded in the Accident Book and reported to the Client. All near misses will be reported to the Client /Principal Contractor. Trained First Aider, Rober Mihalache, will be responsible for all on-site treatment to operatives. First Aid equipment and facilities shall be available in the Houlihan & Co site office H&Co's First Aider will make entries in the Accident Book if the IP does not want to and agrees to the entry. </div>
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24.0	Discovery Strategy Contamination	<p>It remains possible that unexpected soil conditions may be encountered during the process of construction. Examples may include oily pockets within the soil, pockets of cement boarding or fibrous materials within the soil, black ashy materials, soils exhibiting strong odours, brightly coloured materials and former structures or brickwork. Should previously undiscovered contamination be encountered during construction, this should be reported to the Site Manager immediately in order that any necessary inspection may be made. A watching brief approach is to be adopted during the various phases of the site's development such that in the event of suspicious conditions or materials being encountered, the Environmental Consultant can attend site to inspect the 'discovery'. Records should be kept and samples submitted for analysis where conditions encountered are not as anticipated. The results of any such testing should be sent to the Local Authority for consultation. Depending on the type, nature and extent of any such 'discovery', it may be necessary to halt works in that location until such time as the assessment has been completed. This should be reviewed on a 'discovery' specific basis and in conjunction with regulatory consultation.</p> <p>As a general guide, where such unexpected conditions are encountered the following approach is recommended:</p> <ul style="list-style-type: none"> All discoveries are to be reported to the Site Manager immediately and works at that location are to halt until further notice; The area should be cordoned off using an appropriate barrier system. The Site Manager is to report any such discoveries to the Client and the Environmental Consultant: - LEAP Following notification from the Site Manager, the Environmental Consultant shall discuss the discovery with the Local Authority and if considered necessary, arrange to meet an Officer on site to view the discovery; The Environmental Consultant shall attend the site to record the location, extent and nature of the discovery and implement an appropriate sampling and analysis regime, taking due account of the type and nature of the discovery, known and probable land uses in that area of the site. Where remedial action is required, regulatory consultation and approval will be sought; A record will be produced by the Environmental Consultant and held on site (with copies held by the Environmental Consultant, Client and Local Authority), detailing the discovery, assessment works undertaken, findings thereof, confirmation either of no action required or detailing the remedial action taken and validation thereof.
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	<p>The process is shown below.</p>  <pre>graph TD Discovery[Discovery] --> Reported[Reported to Site Manager] Reported --> ECNotified[Environmental Consultant notified] ECNotified --> Regulators[Regulators notified] Regulators --> ECAttends[Environmental Consultant attends site to assess and investigate] ECAttends --> SafeContinue{Safe to continue?} SafeContinue -- Y --> ContinueWorks[Continue works] SafeContinue -- N --> DetermineAction[Determine remedial action] DetermineAction --> RegulatoryApproved[Regulatory approved] RegulatoryApproved --> Remediate[Remediate] Remediate --> ContinueWorks</pre>
Waste Disposal	<p>Duty of Care</p> <p>As the persons undertaking construction work and specifying a particular waste disposal carrier and receiver, Houlihan & Co. have a duty of care under the Environmental Protection Act 1990. We must and will take all reasonable measures:</p> <ul style="list-style-type: none">• To prevent any contravention by another person of the legal requirements associated with depositing, treating or keeping of controlled waste or its transport.• To prevent the escape of waste from our control or that of any other person. <p>On the transfer of waste to ensure that the transfer is only to an authorised person and that a written description of the controlled waste is transferred, which will enable other persons to understand clearly the nature of the waste and comply with the duty to prevent its escape. (An authorised person is a waste collection authority or the holder of a waste management licence.)</p> <p>Keeping Waste Safely</p> <p>To comply with our duty of care, we must ensure that the waste is not affected by:</p> <ul style="list-style-type: none">• Corrosion or wear of waste containers.• Accidental spillage or leakage.• Accidents or weather breaking the containment of waste and allowing its escape.• Waste blowing away or falling whilst stored or transported.• Scavenging of waste by vandals, thieves, children, trespassers or animals. <p>The site perimeter will be secured and signed.</p> <p>Stockpile areas will be clearly delineated and set on an impervious membrane.</p> <p>Dust will be controlled by damping down or covering.</p> <p>Transferring Waste</p> <p>Waste can only be transferred to an authorised person. The Waste (England and Wales) Regulations 2011 detail the transfer note arrangements. The note must be completed by a responsible person from the company producing the waste, not by the carrier. The responsible person will consider whether the waste will require a special container to prevent its escape (e.g. a closed skip for asbestos) or if the waste can be mixed safely with other waste.</p> <p>Part of the duty of care obligation is that checks are carried out before waste is transferred. Tip licences in particular must be carefully checked to ensure that the tip can receive the type of material being sent. Carriers' original registration certificates, not photocopies, must be carefully inspected. A Waste Transfer Note (WTN) must be completed and signed by both the person handing over the waste and the person receiving it. It must contain enough information about the waste for it to be handled safely and either recovered or disposed of legally.</p> <p>The WTN must include:</p> <ul style="list-style-type: none">• a description of the waste• any processes the waste has been through• how the waste is contained or packaged• the quantity of the waste• the place, date and time of transfer• the name and address of both parties• details of the permit, licence or exemption of the person receiving the waste• the appropriate European Waste Catalogue (EWC) code for the waste• a declaration that you have applied the waste management hierarchy.• the 2007 Standard Industrial Classification (SIC) code of the person transferring the waste• The producer is most able to describe their waste accurately. It is not acceptable to use non-specific terms such as 'general waste'.• Separate paperwork must be completed for hazardous waste.

25.0	Silt Management	<p><u>Measures on Enabling Phase and Preparatory Earthworks.</u></p> <ul style="list-style-type: none"> Stripping topsoil must be done in stages to maintain as much vegetation cover across the site as possible. Retention of vegetation as far as reasonably practicable along south-western boundaries to promote infiltration of any surface water and silt run-off. Haul road will be topped with tarmac, easy to clean with a road sweeper. Jet wash and cattle grid will be installed in the exit of the site to clean the wheels of any vehicle leaving the site. Designated car park will be topped with stone and will be maintained mud-free. <p><u>Additional Measures during Construction Phase</u></p> <ul style="list-style-type: none"> The placement of gully protection (specially designed gully guards, or standard protection - straw and terram) in all gullies during construction, which are to be inspected and replaced/cleaned when necessary. Minimising the movement of plant on and off roads to prevent the tracking of excess soil onto roads and highways. The installation of hardstanding areas to the front of all plots to enable 'clean' forklift access. The placement of hardstanding or topsoil at the earliest opportunity to control surface runoff from completed areas. Avoid tracking on areas of permeable paving once installed and otherwise maintain paving areas. <p><u>Monitoring Procedures and Records</u></p> <ul style="list-style-type: none"> Inspection of all silt fencing, silt traps and manholes to monitor the discharge entering the drainage system and the sensitive receptors around all site boundaries. Maintenance, cleaning and replacement of silt fences, silt traps, silt matting, and Terram as required. The completion of the Environment Checklist (Site Audit form) on a weekly basis, which will assist in documenting any changes on site and identifying any changes needed to the protection systems as the development progresses. The Site Specific Environmental Action Plan (SSEAP) will be reviewed using the Environmental Checklist and updated when required to reflect changes to site conditions and operations. All records will be reviewed on a monthly basis. Dandara Environmental Department must be contacted apart from the Health and Safety department of Houlihan & Co in the event of heavy rainfall breaching protective measures.
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26.0	COSHH	<p>COSHH Register: refer to the OHSEQ notice board in the site office:</p> <ul style="list-style-type: none"> AdBlue Asphalt Materials Bituthene Primer Bituthene Adhesive Primer Butane - Calor Cement – packaged Cement colouring – Sealotone Diesel JCB Grease JCB Hydraulic Fluid Engine Oil Marking Paint – Powerline Mortar Plasticiser – Sealocrete Petrol Pipe Joint Lubricant – Hepworth/ Osma Sika block paving seal Silica Weedkiller Doff Wet Concrete White spirit
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27.0	Immediate Emergency Procedures	<ol style="list-style-type: none"> In case of an accident, Phone 999 and ask for the Emergency Services. Shut Down all Plant and Cordon off the Area. Inform the Main Contractor Site Manager. Contact Alban Shehu at 07584 809221 In case of Fire, follow the Signage and meet at the Assembly point near the front gate:
	Author:	Alban Shehu

Houlihan & Co. (Excavations) Limited

OHSEQ Management System



Contract: Dandara, Bulls Field, Takeley.				OPERATION: (Site Specific) Groundworks						
ORIGINATED BY: A. Shehu			DATE: 23/10/2025		APPROVED BY: Conor Gough			RE-ASSESS: At least every 3 months or following an incident or change in working equipment or processes		
Risk Rating: Severity (S) & Likelihood (L) as 1 (low), 2 or 3 (high), multiply to give Overall Rating (R) 1 (low) to 9 (high) for priority actions										
A=Operative: B=Others on Site, including clients, staff: C=Public										
Hazard	People at Risk			Risk Rating			Control Measures STANDARD PPE TO BE WORN ON SITE (HI-VIZ, SAFETY FOOTWEAR, HEAD PROTECTION) ADDITIONAL/ALTERNATIVE PPE TO BE WORN WHEN REQUIRED BY RISK ASSESSMENT	Residual Risk Rating		
	A	B	C	S 1,2,3	L 1,2,3	R 1-9		S 1,2,3	L 1,2,3	R 1-9
All works Leptospirosis	Y	Y	N	2	3	6	<ul style="list-style-type: none">The likelihood of rats and hence leptospirosis has been made clear to all operatives at their company induction.The main defence against the disease is personal hygiene, including not smoking on site.The HSE information leaflet has been used in toolbox talks and is issued to operativesPrevent/discourage rats from coming onto the site.Ensure adequate pest control provisions are in place around the site and welfare facilities.Do not leave scraps of food lying around to attract them.Ensure a waterproof plaster covers cuts, grazes, and open wounds.Wear waterproof gloves and clothing when working in wet conditions.Wash your hands and arms thoroughly before eating, drinking and smoking.Report any ill health to your Supervisor or Manager.If you start to suffer from what seems like the flu but have reason to believe that it may be leptospirosis, see your doctor as a matter of urgency. Inform your GP of your occupation.The internal/external refuse storage area is regularly cleaned and monitored.All waste bins were kept in a clean condition and emptied on a frequent basis.Non-toxic monitoring bait devices are used for pest control within the food preparation and food storage areas.Visual checks are carried out by employees, and detailed records are maintained when evidence of pest activity has been found, initiating any follow-up action.	2	1	2
Delivering, unloading, and reloading vehicle on site Mechanical failure, road traffic incident, contact with pedestrians or others.	Y	Y	N	3	3	6	<ul style="list-style-type: none">Only trained and competent site staff to complete tasks.Staff to follow prescribed safe systems of work detailed under the sub-heading “Plant and vehicle preparation and delivery” of this document.If at any point, the safe systems of work detailed in this document are deemed insufficient, work is to stop, a risk assessment shall be completed and new safe systems of work developed and implemented.All deliveries to be undertaken on-site; within a controlled offloading pre-planned area, not in the public domain.	3	1	3
Vehicle movements Vehicles, including mobile plant, , coming into contact with workers, other plant/vehicles or property resulting in potential serious injury to persons and/or damage to plant/property.	Y	Y	N	3	3	9	<ul style="list-style-type: none">All site personnel will be made aware of the requirements of the Principal Contractor’s traffic management arrangements at the site induction and updated whenever necessary.Vehicle banksman are to be suitably trained.Suitable safety signs will be displayed on site instructing drivers not to use mobile phones, not to reverse without a banksman and to stop if they cannot see the banksman.The use of mobile phones is not permitted within the processing area.All persons on site, including lorry drivers outside of their cabs are to wear the PPE required by site rules including high visibility vest / coat.All vehicles must travel at a safe speed for the conditions below the site speed limit, which is displayed on site. Within the processing area,	3	1	3

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							<p>the speed limit is 5 mph.</p> <ul style="list-style-type: none">Access routes on site will be formed with a safe incline, and bunds or barriers will be provided to prevent vehicles from falling into excavations or off ramps.			
<p>Operating Plant and Equipment Contact between the plant and operatives resulting in possible serious injury. Plant overturning resulting in injury to the operator or other persons Failure of lifting equipment resulting in persons being struck by falling loads/equipment</p>	Y	Y	N	3	3	9	<ul style="list-style-type: none">Establish a clear work area, cordon off if necessary to prevent pedestrian / unauthorised access. Site management to determine the need for fencing/barriers to ensure operatives not involved in the task do not enter the works area.Operatives must never stand under an excavator bucket or a suspended load.Only authorised competent people are allowed to operate the plant.All plant operators to hold valid qualifications for the category of plant they operate.All machinery to be inspected before use and, where required, to have valid thorough examination certificates.Operators are required to complete and record daily pre-use inspections. The operator must ensure that any defects/damage are reported to H&Co's Site Manager before operating the plant.All mobile plant to have flashing beacons and 360-degree vision ability. Loading shoves to have a reversing audible warning system.Plant to travel at a safe speed for the conditions and always within the site speed limit.Keys are to be removed from the plant, not in use, and safely secured at the end of the shift.The plant is only to be used for the purpose for which it is intended and in conditions for which it is intended.The plant must be banked in areas where pedestrians are present.Access routes on site will be formed with a safe incline, and bunds or barriers will be provided to prevent mobile plant from falling into excavations or off ramps.	3	1	3
<p>Lifting with site excavators Failing Loads, trapping fingers, Load swing causing injury, falls from height, and Crushing.</p>	Y	Y	N	3	3	9	<ul style="list-style-type: none"><u>Staff to follow prescribed safe systems of work detailed under the sub-heading "Lifting with excavators" of this document.</u>Loads to be slung by competent operatives.Banksman to ensure that no lifts are taken over the adjacent work area and that all loads are correctly slung.Basic task lifts are to be undertaken without the approval of the company's appointed person.Intermediate & complex tasks require a specific lift plan.No lifting over populated areas.No lifting with bucket attached.Prior to the instruction to lift the slinger signaller to stand clear of the loadKeep load as low as possible and use guide ropes on 2 corners where necessaryAll delivery vehicles to have edge protection fitted. If delivery vehicles have no edge protection - TURN THE LORRY AWAY.All excavator drivers to hold current CPCS cards. being operatedExcavators to be thoroughly examined at 12 monthly intervals.All excavators to have daily inspection (F91) to be carried out and recorded by the machine operatorAll accessories are to be checked prior to use by the slinger signaller. All accessories are to have 6 6-monthly thorough inspections. Slinger signaller to ensure lifting accessories have sufficient SWLIF IN DOUBT CONSULT H&Co's APPOINTED PERSON – ALBAN SHEHU: 07584809221	3	1	3
<p>Quick Hitch devices on excavators Operatives being crushed by falling buckets, possible fatal or very serious injury.</p>	Y	Y	N	3	2	6	<ul style="list-style-type: none">Identify the type of quick hitch on each excavator and ensure you know if it requires pins to be fitted. Test that the bucket is correctly attached. (IE Shake, rattle and roll)The machine will be checked regularly. Faults will be reported to the site manager immediately, and the machine will be stood down until repaired.Where required, pins must be fitted after changing the buckets; this is the driver's responsibility, not the nearest operative. Operatives are <u>not</u> to stand underneath buckets at any time.	3	1	3

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Work potentially generating dust-vehicle movements on site Inhalation of silica, asbestos, other respirable airborne contaminants, and environmental nuisance	Y	Y	Y	3	2	6	<ul style="list-style-type: none"> Speed restricted to 5mph. Lorries to be specified on hire as having upward-directed exhausts. PC to control forklift movements. Hard top to roads, haul roads where practicable. Road cleaning. Drop distances from bucket into lorry or dumper skip to be minimised. Traffic marshal to explain routes on site. Any concrete and tarmac cutting will be carried out using water suppression. Water bowser will be used when it is required (especially in the summertime) 	3	1	3
Work potentially generating dust-bulk movement of materials Inhalation of silica, an environmental nuisance	Y	Y	Y	3	2	6	<ul style="list-style-type: none"> Scrape by blade instead of digging and dumper transfer. Avoid double handling whenever possible. Cover loads in motion & static spoils on site. Limit drop distances to a minimum. Continuous micro spray as new surfaces are exposed on spoil heaps in dry weather. Use a larger plant to minimise the number of movements. Retain vegetation until removed just in time. Road cleaning on and off-site. 	3	1	3
Machine operations Maintenance work on plant- greasing, hydraulic oil leaks, pressurising tracks Oil, and fuel spills.	Y	Y	N	3	2	6	<ul style="list-style-type: none"> Re-fuelling area. Environmental procedure for spills and hydraulic hose bursts. Fluids under pressure, whether toxic or not, carry the risk of serious harm if injected. Minor entry wound belies harm caused as fluid blocks veins or arteries. No fault should be traced without Kevlar gloves; only Houlihan-issue grease guns should be used. Fitters to adjust excavator tracks unless the driver has had training. Preventive maintenance of machines. Daily pre-operation inspection checks are carried out & recorded weekly as a minimum. 	3	1	3
Compressor operations Oil, fuel spills.	Y	Y	N	2	2	4	<ul style="list-style-type: none"> Re-fuelling area. Environmental procedure for spills and hydraulic hose bursts. Preventive maintenance of machines. Daily pre-operation inspection checks are carried out & recorded weekly as a minimum. Check the lifting eye before lifting. Whip check fitting attached to the hose inlet. Lifting eye to have a compatible shackle. Plant "nappy" under compressor. The newest compressors are internally bound. 	2	1	2
Use of a vibrating plant Hand Arm Vibration	Y	N	N	3	2	6	<ul style="list-style-type: none"> Plant is selected for its low vibration characteristics, and a full assessment has been carried out for tasks where vibration exposure is expected. The intention is not to expose any operative to even the lower action value. Drilling and vibrating concrete works of short duration. Tools should be used for their designated purpose. All operations have been timed for trigger times, and manufacturers' information regarding vibration has been checked against OPERC 	3	1	3

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							<p>emission test results.</p> <ul style="list-style-type: none"> As the trigger time is critical, this will be periodically checked by timing actual operations- monitoring sheets for site supervisor in vibration pack. HSE nomogram for each item of plant. In addition, equipment will be tested using an accelerometer to monitor vibration levels and trigger time (exposure) by process: the results will inform purchasing policy and decision-making regarding continuous safe use. The plant department will contact the supplier to ensure that they are aware of any engineering control measures that can be installed to minimise vibration levels. Any damaged equipment must be taken out of use and reported. All work equipment must have appropriate guards in place. If guards are missing, the item may not be used. Our vibration assessments will be on-site. We do not keep registers because it involves recording trigger time, which is usually not done properly. Our assessments are based on operations which have been timed, as trigger times, by observing operations and collecting the seconds of use as against the ancillary work where there is no vibration. We do not accept that it is a good idea to record harm rather than avoiding it. 			
Use of a plant emitting noise Noise-Induced Hearing Loss	Y	Y	N	3	2	6	<ul style="list-style-type: none"> Plant has been selected for low noise rating. Ear defenders and ear plugs are available to the workforce. Where the noise at the workplace reaches 80dBA ear protection will be worn as company policy. It is not expected that anyone will be exposed to noise of 90dBA or over, but where the level exceeds 85dBA, ear protection must be worn, and we will try to reduce the noise dose by reducing it at the source. All noisy areas display mandatory 'Ear Protection' signs. Site monitoring by process and site-specific operations if necessary. Acoustic blankets are deployed at the site boundary and/ or locally to the source, depending on ongoing monitoring and site-specific requirements. The plant department will contact the supplier to ensure that they are aware of any engineering control measures that can be installed to minimise noise levels. Any damaged equipment must be taken out of use and reported. All work equipment must have appropriate guards in place. If guards are missing, the item may not be used. Wherever possible, noise is combated at the source by enclosures and engineering controls. Acoustic enclosures and engineering controls are regularly inspected to ensure they achieve the designed noise reduction. Access to noisy areas is restricted to only those persons who have to enter the zone, thereby reducing the number of persons exposed by distance. 	3	1	3
Cutting concrete – Kerbs, slabs and other PCC items. Inhalation of respirable silica, strike by flying fragments. Vibration.	Y	Y	N	3	3	9	<ul style="list-style-type: none"> Kerbs cut in area excluding public, other operatives. physical screening positioned to protect other workers and passers-by. A battery-operated water dust suppression unit must be used on disc cutters (on diamond-tipped blades only). Correct blade used on disc cutters. Filter masks to P3 standard worn (personal issue, disposable, fit-tested). Stihl disc cutters selected for low vibration. Task will not require trigger time over lower action level. Nomogram for specific work equipment on site. COSHH assessment in place. Abrasive wheel training <u>must</u> be provided to all abrasive wheel users. Eye protection to BS EN166:1995 1. B will be worn 	3	1	3
Cutting Steel Strike by flying fragments, Vibration	Y	Y	N	3	2	6	<ul style="list-style-type: none"> Steel will be cut on site in a cordoned-off section clear of fire hazards, and the correct PPE will be worn. Ensure refuelling areas containing flammable substances are at least 20.0m away. 	3	1	3

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							<ul style="list-style-type: none"> Task will not require trigger time over lower action level. Nomogram for specific work equipment on site. Hot works permit to be in place Fire extinguishers to be at the workplace Operatives to wear safety goggles Operatives to wear ear defenders Fire watchman to be present at all times when cutting 			
Placing concrete, backing kerbs, slabs, and strip footings Contact with wet concrete causing chemical burns, irritant or contact dermatitis	Y	N	N	2	2	4	<ul style="list-style-type: none"> Concrete delivered ready mixed to avoid site mixing where practicable. The chutes from RM lorries will be opened out and directed by the driver ONLY. Mix for backing kerbs will be dry to prevent slump, which will minimise the possibility of splash. Placing by hand from the dumper skip. PPE will include nitrile gloves and clothing to cover up arms and legs. Standing on concrete should be avoided if possible. Use of a vibrating poker is limited where possible and selected for low vibration. COSHH assessment in place 	2	1	2
Lifting and placing kerbs/slabs Injury to the back from the manual handling of standard HB2 pre-cast concrete kerbs	Y	N	N	3	3	9	<ul style="list-style-type: none"> HB2 kerbs weigh 67kg: substitution of lighter kerbs only possible if permitted in specification. Kerb lifting wheelbarrow will be used: push force only 5kg after kerb is levered off the ground by pressing down on the handle. Easylifter replaces the need to use a machine in a constricted space and with passing traffic. Transit carried out safely by Probst kerb Caddy. Refer to the full Houlihan & Co slab/kerb laying manual handling assessment 	3	1	3
Confined spaces in manholes Asphyxiation, Poisoning from toxic gases, Injuries from exploding or igniting gases, Infection from contaminated water, e.g. Weils disease, Drowning, Back injuries from falls or collisions with structures/ fittings in the working area.	Y	N	N	3	3	9	<ul style="list-style-type: none"> Wherever possible, consider doing the work from outside the space A Permit to Work system should be in operation. A detailed assessment of the task has been carried out: <ul style="list-style-type: none"> Available ventilation The potential for hazardous gases/atmosphere being present Hygiene/welfare requirements. The local rescue services have been informed of the work and where necessary, advice or inspection has been sought. (High risk operations). Suitable detection equipment is on site and used prior to each entry and continually during the presence of people in confined spaces. Emergency breathing apparatus and harnesses are readily available on site. Precautions for the use of plant and equipment or heavier-than-air gases are established. Flood potential and isolation have been checked. Emergency procedures are fully developed and have been adequately rehearsed. Workers must be physically fit and competent to enter and undertake work in confined spaces Effective communication should be established between workers in the confined space and those outside the area. The atmosphere of the confined space should be monitored for the presence of and levels of gases and must always be tested before entry. If dangerous fumes are present, suitable breathing apparatus should be worn, and the person entering the confined space should wear a safety rope, one on each end, held by the person keeping watch outside Equipment which may release excess oxygen, or engines which emit carbon monoxide gas, should not be used in confined spaces Smoking, naked lights, sparking tools, and any nylon material should be prohibited If working in contact with contaminated water, e.g. in sewers, workers must be inoculated against serious disease. Any skin cuts should be covered Washing facilities should be available to encourage good hygiene 	3	1	3

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							<ul style="list-style-type: none"> • Trenches deeper than 4.5m should be treated as confined spaces. • Manholes to be vented for 30 minutes before entering. • Gas monitor to be placed in manhole 30 minutes before entering. • A confined space work permit is to be obtained before entering. • Operatives to be briefed on escape plan. • Operatives to be trained for confined space working. • Top man to be present at all times. • Rescue harness and tripod to be used. • Escape kit to be used where necessary. • Benching should be carried out with the cover slab removed to allow air entry. 			
Working with live sewers/Sewer diversions Gastroenteritis, Weils disease, Infection of the skin or eyes; and/or occupational asthma, resulting in attacks of breathlessness, chest tightness and wheezing produced by the inhalation of living or dead organisms	Y	N	N	3	3	9	All the above items are covered in Confined spaces in manholes <ul style="list-style-type: none"> • Over pumping to be carried out where operatives need to enter a live sewer. • Ensure that employees and line management understand the risks through proper instruction, training and supervision • Waterproof gloves and overalls to be worn at all times • Gas monitors to be in place • Good personal hygiene • Flow to be diverted where possible. • Management to ensure a good welfare standard is kept on site before any live sewerage works occur. 	3	1	3
All work in the area- live services Contact with live service resulting in burns from flashover or electric shock. Toxic or flammable gases from a damaged sewer pipe. Damaged or severed pipes leading to leakage of substances, resulting in potential flood, gas leak, explosion or fire. Contact with severed fibre optic cables	Y	Y	N	3	3	9	<ul style="list-style-type: none"> • A Permit to dig will be completed and authorised from client site team. • <u>Works must be undertaken as per H&Co's safe digging procedure "works on/near underground services".</u> • Operatives to receive full TBT relating to site services provided by the services coordinator prior to starting works. • Cable and metal location equipment must be duly calibrated and in good working order, operatives appointed will be trained on how to locate services using the EziSystem & safe digging techniques as set out in the H&Co's works/on near underground services procedure. (Note: Lighting columns may be dormant during the day so the generator should be used to trace cables). • Utility plans from network operators must be reviewed in conjunction with a visual survey to be carried out for any service covers nearby that may indicate buried services in trench line. • Located services will be identified, i.e. gas, electricity, etc, and indicated clearly by the survey operative using marker paint on the ground, with depth estimations if possible. • Operatives will now wear flame resistant clothing (a Nomex material by J.Ross) for all close proximity work to any exposed cable. (Note: The clothing can be used in layers to reduce the heat burden of wearing it, but as UKPN have not provided an arc flash risk assessment giving us a calorific value to inform clothing selection, we will assume worst case scenario and wear the highest level of protection). • An air-pick must accompany every excavation on/near underground services to loosen up fill material & insulated tools to remove loose material only – forced digging must be avoided if ground conditions permit. • No mechanical digging within 1m of a known service. • All workers will practise safe digging practices when hand digging in the proximity of an underground service. For example, an air pick must always be the first tool of choice to loosen up backfill material, spades/shovels should be used, not picks or power tools, and horizontal digging should be used to locate the exact position of a cable to avoid fracturing it. • All exposed services must be supported. • It should be assumed that all services are "Live" until proved otherwise. • If a service is struck, cease work immediately and report it to site management. 	3	1	3

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Work near overhead lines Contact with live conductor, arcing	Y	Y	N	3	3	9	<ul style="list-style-type: none"> The quality of backfill is important for future site users and also if a main has to be exposed for service connections- only granular material should be used, no cohesive soil, and marker tape is essential. Engineers should record sufficient data before backfill for the PAS256 recording. Control measures set out in GS6. A site visit from the DNO required establishing sag and swing, and advice on safety clearance- (GS6 survey). Routes to transit are set out with goalposts at entry and exit and sideways barriers to delineate the width of access. Working underneath will require notification to DNO, a grant of permission, probably with conditions, and limiters/ chaining back of booms, etc. or use of small plant, in either case to prevent absolute reach of plant into space above the clearance limit. 	3	1	3
Presence of contaminated ground Chemical injury, skin irritants, burns, blindness, death	Y	N	N	2	2	4	<ul style="list-style-type: none"> Ground conditions must be established by a survey to identify the type of ground in which the excavation is to be carried out Contaminants will be removed by a remediation contractor and validation/clearance report must be issued to us from the client. Discovery procedure in place for reporting unusual conditions not previously discovered in surveys, e.g. unusual smells, bright coloured layers in the ground 	2	1	2
Constructing walls from foundation level using bricks or blocks & raising brickwork on manholes leading to Manual handling issues, Slip and trip hazards from an untidy working area Repeated contact with mortar, Collapse of brickwork/blockwork Contact with sharp edges Concrete mixers with faulty or missing guards, Silicosis.	Y	N	N	2	2	4	<ul style="list-style-type: none"> Small bags of cement (25kg) should be used to minimise the risk of back injuries, etc Management should arrange for the safe delivery of materials to the work area As a result of the COSSH assessment, all operatives should be informed of the hazards of dermatitis and the control measures required to avoid contact with mortar, and good personal hygiene The operative knocking-up mortar MUST wear a P3 mask and eye protection when using the mixer Washing facilities should be available on site to ensure good personal hygiene Mechanical or electrical cement mixers should be inspected for faults before use Safe working platforms should not be required for substructure blockwork; if required, consult with the H&S department. Foundations must always be stripped to the TOC level prior to the bricklayer's arrival Where practicable, lifting aids are provided to reduce/remove the need for manual handling. Lightweight blocks are specified where possible. COSHH data sheets are readily available on-site, displayed on the OHSEQ site notice board Manual handling assessments are readily available on site. Work is halted/curtailed in inclement weather. Suitable and sufficient dust control measures are provided and used. Bricklayers' foreman should ensure bricks/blocks stacked close to the working area are on a level base and stacked to a safe working height where they cannot topple over – this should minimise bending, carrying, stretching and twisting activities, all of which can generate back injuries. Concrete blocks to be cut with a block splitter or hammer and bolster, to minimise the use of airborne dust. Eye protection must be worn when cutting/breaking blocks manually. 	2	1	2
Excavations Noise / Vibration Weakening of adjacent structures Ingress of water Falls of persons Falling materials or plant Underground services – gas,	Y	Y	N	3	3	9	<ul style="list-style-type: none"> Permit to Excavate will be completed and authorised by the Contractors Management. Ground conditions must be established by a survey to identify the type of ground in which the excavation is to be carried out Prior to commencement of excavation, the need for and method of support should be determined Support materials will be on site before excavation starts If there is a possibility of underground services being present, the area will be surveyed using a suitable detection instrument Excavations will be inspected prior to each shift, after any event likely to affect strength or stability, and after any accidental fall of material. A logged report must be carried out every seven days. 	3	1	3

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electricity or water Toxic or flammable gas Oxygen deficiency "Boiling" Collapse of excavation Presence of contaminated ground							<ul style="list-style-type: none"> No heavy plant within 2m of an unsupported excavation. Excavations should be assessed by a competent individual, nominally the site supervisor. Where necessary, the sides of the excavation will be battered to the angle of repose or stepped, making sure the step is equal to the depth of the excavation. Where an assessment establishes possible ventilation problems, a gas monitor will be utilised to monitor the atmosphere before entry Plant and materials will be kept away from the side of the excavations to prevent undue pressure or ingress of exhaust fumes Excavations must be suitably illuminated To keep the atmosphere healthy, ventilating equipment should be used in confined areas If the depth of the excavation is two metres or more, or if the depth is less but there is a particular risk of anybody falling, suitable guard-rails will be placed and suitable access arrangements, such as ladders or ramps, should be provided If there is a risk of water ingress, suitable methods and/or equipment should be provided to either prevent the entry of water or to remove water, e.g. water pumps If the plant could fall into the excavation, timber baulks should be provided Inspections of excavations will be carried out prior to each shift, after any event likely to affect strength or stability, and after any accidental fall of material Suitable gloves must always be worn when working in/around excavations. All excavations must be fenced off with suitable fencing and signage; pins and bunting/barriers may be suitable for shallow trenches. Heras Fencing should be used for deep trenches. 			
Working from height with loose materials/plant Falling material, debris striking operatives/visitors	Y	Y	N	2	2	4	<ul style="list-style-type: none"> Plant and materials will be kept away from the side of excavations to prevent undue pressure or ingress of exhaust fumes. If the plant could fall into the excavation, timber baulks should be provided All loose material is to be cleared at the end of every shift. No loose material to be left close to the excavation where there could be a risk of material falling. All excavations must be fenced off with suitable fencing and signage. 	2	1	2
General - Manual Handling Strained/pulled muscles, abrasions, cuts, foot injuries, back strain, slips/trips/falls	Y	Y	N	3	2	6	<ul style="list-style-type: none"> Assess the task; use appropriate lifting equipment / lifting accessories for the activity. Always use mechanical lifting aids where necessary. Assess the weight of the load; avoid lifting heavy loads of more than 20kg. Break the load down into smaller, lighter parts. Plan the work to avoid excessive carrying. Change the layout of the work if possible. Ensure work areas are clean and tidy, free from tripping and slipping hazards. Check individual capabilities of those carrying out manual handling operations. The weight of the load is checked before any lifting commences. Mechanical equipment such as forklift trucks, pallet trucks, trolleys, and sack barrows is used to reduce employees' handling injuries. Ensure a clear working area for general distribution and installation. Environmental conditions including unobstructed walkways, no tripping hazards, adequate lighting, etc. 	3	1	3
Concrete operations. Vibration, Concrete penetration of eyes, nose or ears due to an uncontrolled surge during cleaning operations or clearing of blockages, Exposure burns to skin	Y	N	N	2	2	4	<ul style="list-style-type: none"> PPE & washing facilities should be provided. Regular toolbox talk training must be provided on PPE, burn injuries, dermatitis, etc. Appropriate personal protective equipment (PPE) should be worn Coveralls to be worn whilst concreting – there should be no exposed skin. The accumulation of concrete spillage should be prevented. Glasses to be worn whilst concreting. Walking boards' are to be in place prior to slab/beams/ crane base pour commencing for safe passage of concrete workers. Concrete Poker can be used for no more than 3 hours, which is the Daily Exposure Action Value (EAV). (Daily Exposure Limit Value ELV is 	2	1	2

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							reached over 12 hours)			
Steel fixing, shuttering & general site duties Stepping on tied-steel wire, cuts to hands from Stanley knife & various site materials, trapping fingers, sprained ankles,	Y	N	N	2	2	4	<ul style="list-style-type: none">• Exclusion zones to be erected by physical barriers prior to works commencing. Banks man to enforce exclusion zones.• Steel-toe cap boots have midsole protection.• NO loose correx to be left 'laying' and especially unweighted.• The site fixers will clean and collect all loose tie wire as they progress to new work fronts.• Automatic retractable blades are only to be used for cutting materials, such as Correx for shuttering.• Suitable gloves MUST be worn; however, Gloves will not completely protect your hands, but if you do receive a cut, it may not be quite so bad.• NO walking on ground beams or any other RC cages without walking boards.• High-impact glasses or goggles to be worn at all times whilst cutting site materials. Task specific.• Minimum FFP3 dust masks to be worn whilst cutting site timber/ply.• Minimum FFP3 dust masks to be worn whilst cutting any concrete objects, including kerbs & slabs.• Electronic water attachment to be in place on the cut of saws whilst cutting concrete surfaces, including kerbs & slabs.• Cutting station to be fenced off and ear protection to be worn at all times.• A Hot Permit must be obtained prior to any cutting taking place.	2	1	2
Setting out with instruments / surveying with cobras/rods Slips/trips/falls, Service strikes, cobra/rod striking operative.	Y	Y	N	2	2	4	<ul style="list-style-type: none">• Read and understand the setting out and service drawings prior to setting out.• Pins and stakes are only to be installed when no services are present. The site engineer must review stat plans & CAT survey the area, if services are remotely likely Pin Safe setting out instruments MUST be used.• Cat scanning of the area to take place prior to excavation.• Line marker paint to be stored in the COSHH storage area.• Empty line marker paints to be disposed of in the empty line marker paint can in the general waste bin – ONLY IF EMPTY.• Do not enter the swing radius of an excavator; adhere to exclusion zones.• Operatives using the cobra reel / rods must wear eye protection & gloves at all times whilst undertaking the operation.• Flashing safety lights on site can interfere with levels, necessitating the removal of machinery or turning off rotating orange lights while the plant is in the vicinity. Risk migrates to plant/ pedestrian interface: engineer/ site foreman must authorise lights off, arrange work to minimise time this is necessary and arrange banking vehicles if required.	2	1	2
COSHH Chemical injury, skin irritants, burns, blindness, death	Y	Y	N	3	2	6	<ul style="list-style-type: none">• Refer to the COSHH Assessment for all hazardous substances to be used and brief all operatives prior to commencing work.• COSHH data sheets provided when COSHH products are issued from stores• Full PPE to be worn in conjunction with COSHH assessments• All hazardous substances must be stored in the COSHH storage cage provided.	3	1	3
Work near asbestos Inhalation of respirable fibres leading to mesothelioma, lung cancer	Y	Y	N	3	3	9	NOTE: there is no known safe level of exposure to asbestos. <ul style="list-style-type: none">• Additional MS from specialist licensed contractor who will be in attendance for monitoring and for emergency if bulk asbestos uncovered.• Background air monitoring must have taken place to give a baseline, which must be a measured figure below the clearance level or undetectable.• Continuous monitoring during operations with analysis continuous from on-site facility. Personal dosimeters for all personnel involved. Again with analysis in real time.• Prevention of dust raised by damping down, minimising drop distances, avoiding double handling, prompt removal from site, stockpiles only if absolutely necessary and covered, on an impervious membrane.• Licensed contractor operative I place in case of bulk asbestos found- then stop work, re-assess and treat as licensed work, with full facility for this already on site.	3	1	3

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Hand laying tarmac Burns from contact with hot tarmac-delivered at 170°. Irritant or contact dermatitis	Y	N	N	3	2	6	<ul style="list-style-type: none"> Heat - resistant gauntlets to be worn. Body covered up against splash. Placing at a minimal drop distance from the dumper skip. Tools kept clean- Farvis tool heater used- no open fire or use of diesel. COSHH assessment in place 	3	1	3
Fire	Y	Y	Y	3	3	9	<ul style="list-style-type: none"> All fuels must be kept in the correct type of container that is clearly identified and labelled. No refuelling to take place in the vicinity of forms of ignition. Engines must be switched off. Do not improvise for containers or funnels. Check you are using the correct fuel. . No smoking/no naked flames. Signs to display. All Hazardous Substances must be stored in the COSHH storage. Any cutting metal, welding involving sparks or naked flame must be controlled with a Hot Work Permit 	3	1	3
Silt Management. Silt getting into the water courses and contaminating water system, damaging environmental on the water ways/ risk to aquatic life.	N	N	Y	2	3	6	<ul style="list-style-type: none"> The placement of gully protection (specially designed gully guards, or standard protection - straw and terram) in all gullies during construction, which are to be inspected and replaced/cleaned when necessary. The placement of a terram layer within all manholes during construction, and to be inspected and replaced when necessary. Minimising the movement of plant on and off roads to prevent the tracking of excess soil onto roads and highways. The installation of hardstanding areas to the front of all plots to enable 'clean' forklift access. The placement of hardstanding or topsoil at the earliest opportunity to control surface runoff from completed areas. Avoid tracking on areas of permeable paving once installed and otherwise maintain paving areas. Stripping topsoil must be done in stages to maintain as much vegetation cover across the site as possible. Retention of vegetation as far as reasonably practicable along western and south-western boundaries to promote infiltration of any surface water and silt run-off. Haul road preferably be topped with tarmac, which is easy to clean with a road sweeper. A jet wash will be installed at the site's exit to clean the wheels of vehicles leaving the site. The designated car park will be topped with stone and maintained mud-free. Silt traps and silt fencing will be strategically constructed along the site's western and southwestern boundaries to reduce runoff. These will be formed to a depth of 400mm, with excavated arisings placed on the downgradient side of the slope to aid the retention of silt and excessive surface water runoff to the detention basins. A series of Sady Matts will be placed along the watercourse to prevent any silt from going to the main water system should the silt traps placed on western and south-western boundaries alone not be sufficient to prevent run-off of surface water/silt. 	2	1	2

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H&Co's Contracts Manager and Site Manager to ensure suitable first aid arrangements are available on site at all times & compliance with the above document.										

B 29.0 HAND ARM VIBRATION & DECIBEL LEVEL REFERENCE CHART						
	Equipment/Plant	m/s ²	Time to reach EAV 2.5m/s ² (Daily Exposure Action Value)	Time to reach EVL 5m/s ² (Daily Exposure Limit Value)	Sound levels	HSE Points (per 15/60 mins)
	Hilti DD130	2.2m/s ²	10hr 20mins	24hr mins	80dB(A)	2.2/10
	Hilti TE 1000	6.5m/s ²	1hr 11mins	4hr 44mins	87dB(A)	21 / 85
	Hilti TE 700 AVR	6.6m/s ²	1hr 09mins	4hr 35mins	86dB(A)	22 / 87
	Hilti AG230-S	8.7m/s ²	3hr 08mins	12hr 34mins	89dB(A)	8 / 32
	Atlas Copco 09 PE (Ver)	3.8m/s ²	3hr 28mins	13hr 51mins		7 / 29
	SK12 Med Breaker	4.2m/s ²	2hr 55mins	10hr mins	108dB(A)	25/100
	Atlas Copco 230 PE	4.2m/s ²	2hr 50mins	11hr 20mins		9 / 35
	Tex 150PE Breaker	4.5m/s ²	2hr 28mins	9hr 53mins	90dB(A)	10 / 41
	Atlas Copco LT5005	6.4m/s ²	1hr 13mins	4hr 53mins	106dB(A)	20 / 82
	Vibrating Poker	4m/s ²	3hr 08mins	12hr 30mins	85dB(A)	8 / 32
	Wacker Plate Belle 320-574mmx320mm	2.42m/s ²	8hr 32 mins	>24hr	101dB(A)	3 / 12
	Wacker Plate13/40Belle 720mmx400mm	3.20m/s ²	4hr 53 mins	19hr 32 mins	105dB(a)	5 / 20
	Wacker Plate Belle 320-720mmx320mm	4.43m/s ²	2hr 33 mins	10hr 11 mins	105dB(A)	10 / 39
	MBW Plate Compactor GBX Series 3550	4.5m/s ²	2hr 28mins	9hr 53mins		
	Plate compactor	5.18m/s ²	1hr 52mins	7hr 27mins	93dB(A)	13.4/54
	LF75 Vibration Plate	6m/s ²	1hr 23mins	5hr 33mins		18/72

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	Wacker Plate Bomag/1845	7.3m/s	0hr 56min	3hr 45mins	89dB(A)	27 / 107
	Skill saw 5903R	3.0m/s ²	5hr 33mins	22hr 13mins	95dB(A)	4.5/18
	Airsaw Toku 9"	3.6m/s	3hr 51min	15hr 26 min	82Db(A)	35
	Petrol Saw Stihl/TS410	3.9m/s	3hr 17 mins	13hr 9 mins	98dB(A)	8 / 30
	Petrol Saw Stihl/TS420	3.9m/s	3hr 17 mins	13hr 9mins	98Db(A)	8 / 30
	Petrol Saw Stihl/TS800	Left/6.5 Right3.9m/s			116dB(A)	
	Cut-off Saw Stihls	3.90m/s ²	3hr 17mins	13hr 09mins	98dB(A)	7.5/30
	Bosch Angle Grinder GWS 7-115	6.5m/s	1hr 11 mins	4hr 44 mins	91dB(A)	
	Hilti DD130	2.2m/s ²	10hr 20mins	24hr mins	80dB(A)	2.2/10
	Hilti TE 800 AVR	9m/s ²	3hr 0mins	12hr 0mins	87dB(A)	8/32
	Stirrer Drill / Paddle Mixer	3.5m/s ²	4hr 5mins	16hr 20min	87dB(A)	6 / 25
	Ausa 3t Dumper	m/s ²	hr mins	hr mins	101dB(A)	
	Thwaites 9t FTD	m/s ²	hr mins	hr mins	103dB(A)	
	Takeuchi 1.5t	m/s ²	hr mins	hr mins	93dB(A)	
	JCB 4.5t	m/s ²	hr mins	hr mins	94dB(A)	70(dBA) cab
	JCB 13t	m/s ²	hr mins	hr mins	101dB(A)	70(dBA) cab
	Doosan 14t	m/s ²	hr mins	hr mins	101dB(A)	70(dBA) cab
	Doosan 22.5t	m/s ²	hr mins	hr mins	105dB(A)	70(dBA) cab
	JCB 22t	m/s ²	hr mins	hr mins	105dB(A)	70(dBA) cab

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	Bomag 135 AD	2.5m/s	8hr	>24hr	106dB(A)	
	Rammax	Remote control	hr mins	hr mins	109dB(A)	
	Bosch Angle Grinder GWS 7-115	6.5m/s	1hr 11 mins	4hr 44 mins	91dB(A)	
	Pramac 10KVA	m/s ²	hr mins	hr mins	70dB(A)	@ 7 mts
	Soil-Mech 4 piling rig	m/s ²	hr mins	hr mins	103dB(A)	
	SP11 screed pump	m/s ²	hr mins	hr mins	79dB(A)	

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Appendix K

COSHH ASSESSMENTS

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Health & Safety Management System

COSHH INDEX

1. AdBlue
2. Ardex Part A
3. Ardex Part B
4. Asphalt Materials
5. Bituthene Primer
6. Bituthene Adhesive Primer
7. Bleach
8. Butan Calor
9. Cement – Packaged
10. Cement
11. Adolease
12. Concrete Curing Agent – Chemcure S
13. Chemlease
14. Diesel – Gas oil
15. Engine Oil
16. E Pine
17. EC410 Fast Cure Adhesive
18. Special HP Grease
19. Hardwood - Oak
20. Inkjet Printer HP
21. Mould Oil
22. Petrol
23. Petrol Fumes
24. Pipe Jointing Lubricant
25. Marking Paint
26. R - KEM
27. RAWL R KF2 Polyester Resin
28. Powder Mortar Plasticiser
29. Sealotone Powder
30. Sika Block Paving Seal



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- 31. Pre-cast Concrete Products
- 32. Weedkiller
- 33. Ready Mix/Site Concrete

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Health & Safety Management System



1- Add Blue		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Tetrosyl		
Substance/Material	AdBlu		
Hazardous Contents	none		
			
Process	Additive to fuel to reduce NoX		
Activity/Application	Pour in to tank		
Location			
Risk to Health	Discomfort if swallowed. Temporary eye irritation. "Can be hazardous when inhaled and or touched."		
Control Measures			
Fire Information	Carbon Dioxide(Co2), Black – <u>USE / DON'T USE</u> Foam, Cream – <u>USE / DON'T USE</u> Dry Powder, Blue - <u>USE / DON'T USE</u> Water, Red - <u>USE</u>		
Storage	Keep upright; tightly seal original container.		
Disposal	Waste to local licensed site.		
Spillage	Can be diluted and discharged to sewer		
First Aid			
• Inhalation	Remove to fresh air and rest.		
• Eye Contact	Irrigate with water for at least than 15 minutes.		
• Skin Contact	Wash with soap/cleanser with plenty of water.		
• Ingestion	Do not induce vomiting. Drink plenty of water.		
<u>Monitoring</u> ➤ Pre-employment screening, on go-going there on after.		<u>Health Surveillance</u> ➤ MCG Health and safety strategy Occupational health questionnaires	
Issued: Alban Shehu		Date: 10.06.2025	


2-Ardex Part A		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	ARDEX		
Substance/Material	ARDEX R 3 E Part A		
Hazardous Contents	EPOXY RESIN (Number average MW<=700) BISPHENOL F EPICHLOROHYDRIN RESIN OXIRANE MONO [(C12-14- ALKYLOXY) METHYL] DERIVS		
<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;">H315, H317, H319</div> </div> <div style="display: flex; align-items: center; margin-top: 10px;">  <div style="margin-left: 10px;">H411</div> </div>			
Process	One part of two component solvent free epoxy resin for use with ARDEX cement screeds.		
Activity / Application	Used as primer coat for cement floor screed.		
Location	On floors that are required		
Risk to Health	Irritating to eyes and skin. May cause sensitisation by skin contact. Toxic to aquatic life with long lasting effects.		
Control Measures	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;">Wear chemical splash goggles .</div> </div> <div style="display: flex; align-items: center; margin-top: 10px;">  <div style="margin-left: 10px;">Wear Nitrile rubber gloves with a breakthrough time of at least 8 hours .</div> </div>		
Fire Information	Suitable extinguishing – The product is not flammable. Use fire-extinguisher media suitable for surrounding fire. DON'T USE – Water jet as an extinguisher, as this will spread the fire.		

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Storage	Store in tightly closed, original container in a dry, cool and well-ventilated place. Keep only in the original container.	
Disposal	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.	
Spillage	Absorb in vermiculite, dry sand or earth and place into hazardous containers. Avoid the spillage or runoff entering drains, sewers or watercourses.	
First Aid		
▪ Inhalation	No significant hazard at normal ambient temperatures. Heating may generate the following products: Toxic gases or vapours.	
▪ Eye Contact	Irritating to eyes.	
▪ Skin Contact	May cause sensitisation by skin contact	
▪ Ingestion	Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract	
<u>Monitoring</u> <ul style="list-style-type: none">Not Applicable		<u>Health Surveillance</u> <ul style="list-style-type: none">Not Applicable
Issued: Alban Shehu		Date: 10.06.2025

3-Ardex Part B		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	ARDEX		
Substance/Material	ARDEX R3E Part B		
Hazardous Contents	BENZYL ALCOHOL 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL ISOPHORONEDIAMINE 4,4'-ISOPROPYLIDENEDIPHENOL 3-AMINOPROPYLDIMETHYLAMINE M-PHENYLENEBIS(METHYLAMINE)		
			
Process	One part of two component solvent free epoxy resin for use with ARDEX cement		
Activity / Application	Used as primer coat for cement floor screed.		
Location	On floors that are required		
Risk to Health	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H361f Suspected of damaging fertility. H412 Harmful to aquatic life with long lasting effects		

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Health & Safety Management System






Control Measures	<div data-bbox="495 226 597 325"></div> <p>The following protection should be worn: Chemical splash goggles</p> <div data-bbox="495 336 597 434"></div> <p>Use protective gloves. It is recommended that gloves are made of the following material: Viton rubber (fluoro rubber). Nitrile rubber. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected</p> <div data-bbox="495 535 597 634"></div> <p>Wear appropriate clothing to prevent any possibility of skin contact</p>
Fire Information	<p>Carbon Dioxide(Co2), <i>Black</i> – <u>USE</u></p> <p>Foam, <i>Cream</i> – <u>USE</u></p> <p>Dry Powder, <i>Blue</i> - <u>USE</u></p>
Storage	Store in tightly closed, original container in a dry, cool and well-ventilated place. Keep only in the original container
Disposal	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Spillage	Do not touch or walk into spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water.
First Aid	
▪ Inhalation	Remove affected person from source of contamination. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.
▪ Eye Contact	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention
▪ Skin Contact	Remove affected person from source of contamination. Remove contaminated clothing. Continue to rinse for at least 15 minutes. Get medical attention. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing
▪ Ingestion	DO NOT induce vomiting. Get medical attention immediately. Rinse mouth thoroughly with water. Give plenty of water to drink.
<p style="text-align: center;"><u>Monitoring</u></p> <ul style="list-style-type: none"> Not Applicable 	<p style="text-align: center;"><u>Health Surveillance</u></p> <ul style="list-style-type: none"> Not Applicable
Issued: Alban Shehu	Date: 10.06.2025

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4- Asphalt Materials		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Tarmac, Cemex		
Substance/Material	Asphalt		
Hazardous Contents	Bitumen, volatile organic fumes, hydrogen sulphides, silica in aggregate		
			
Process	Constructing road, footway, car park surfacing		
Activity	Delivery of material, placing and levelling		
Location	As per drawings		
Risk to Health	Harmful to lungs, possible risk of irreversible effects- Cat 3 carcinogen. Exposure to vapour irritating to respiratory tract and eyes. H ₂ S released when heated. Silica in asphalt may be released on cutting. Bitumen has the possible risk of irreversible effects- category 3 carcinogen. High delivery temperature will cause burns on contact. Dermatitis		
Control Measures	Access for delivery vehicle to shorten distance for second handling. Delivery controlled by Banksman. All in open air. Gloves and overalls worn. <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;">  <p>Safety Gloves EN388:2016 rating 4.1.1.1.X</p> </div> <div style="text-align: center;">  <p>Safety Boot and Long Sleeves</p> </div> </div>		
Fire Information	Use powder, foam to extinguish, NOT water. Product of combustion is toxic H ₂ S/ hydrocarbons - do not fire fight- call emergency services.		
Storage	Must be used as delivered- storage close to point of use		
Disposal	Inert when solid		
Spillage	Avoid entry to watercourse.		
First Aid			
▪ Inhalation	Remove to fresh air. Immediate medical attention, CPR		
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Immediate medical attention		
▪ Skin Contact	Cool area with water immediately. Bitumen is then to be removed under medical supervision with warm medicinal paraffin.		
▪ Ingestion	Give water to drink. Immediate medical attention		
Monitoring ➤ Pre-employment screening, on go-going there on after.		Health Surveillance ➤ MCG Health and safety strategy Occupational health questionnaires	
Issued: A. Shehu		Date: 10.06.2025	

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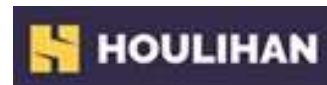
Health & Safety Management System





5-Bituthene Primer		COSHH ASSESSMENT RECORD	
Project/Premises			
Company			
Substance/Material	Granular Sodium Bentonite – Trade name: Voltex Granules		
Hazardous Contents	Bentonite, Smectite, Sodian, Calcian, Montmorillonite.		
			
Process	Used to fill cavities/voids/footings to provide a waterproofing protection.		
Activity	Cut a corner of the bag for direct placement. Or mix/place as required for footings/penetrations.		
Location	As per specification on contract drawings.		
Risk to Health	None known – occupational exposure to the mixture may cause adverse effects.		
Control Measures			
Fire Information	n/a		
Storage	Store in a dry area. no special restrictions on storage with other products.		
Disposal	General waste skip – no classified as hazardous.		
Spillage	Collect the dust via vacuum or sweeping technique with FFP3 mask & dispose as above.		
First Aid			
▪ Inhalation	Move to fresh air. If symptoms worsen, admit casualty to hospital.		
▪ Eye Contact	Flush through thoroughly with water. If irritation occurs admit casualty to hospital.		
▪ Skin Contact	Wash skin with soap and water. If symptoms worsen, admit casualty to hospital.		
▪ Ingestion	Rinse mouth thoroughly. If symptoms worsen, admit casualty to hospital.		
Monitoring		Monitoring	
➤ Pre-employment screening, on go-going there on after.		➤ Pre-employment screening, on go-going there on after.	
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6- Bituthene Adhesive Primer CSHH ASSESSMENT RECORD	
Project/Premises	
Supplier	Grace construction products
Substance/Trade Name	BITUTHENE®ADHESIVE PRIMER B2 LVC
Hazardous Contents	Xylene
	
Uses	Bituthene Primer seals porous substrates and encourages the adhesion of bituminous waterproofing systems and sheet coverings. It may be applied successfully to a wide range of surfaces: Metals, concrete, lightweight concrete screeds.
Method of use	<p>Apply by brush or spray.</p> <p>Surfaces should be clean, ie. free from all oil, grease, dirt, dust and loose debris. On metal surfaces all loose rust should be removed using a wire bristled brush and where advanced signs of corrosion are evident these areas should initially be treated with a rust inhibitor such as red lead. Surfaces should preferably be dry although BITUMEN PRIMER will adhere to damp but not wet surfaces. BITUMEN PRIMER should be applied evenly across the surface in one generous coating. BITUMEN PRIMER is resistant to rainfall within 20-30 minutes of its application.</p>
Location	As per specified on dwg.
Risk to Health	The risk to health is low since appropriate protective clothing is worn during application.
Control Measures	 <p>Ensure adequate ventilation.</p>
Fire Information	<p>Carbon Dioxide(Co2), Black – <u>USE / DON'T USE</u></p> <p>Foam, Cream – <u>USE / DON'T USE</u></p> <p>Dry Powder, Blue - <u>USE / DON'T USE</u></p> <p>Water, Red - <u>USE / DON'T USE</u></p>
Storage	Store in sealed drums away from all sources of ignition.
Disposal	Transfer to suitable container and dispose of as harmful waste according to local authority regulations.
Spillage	Absorb into sand or other absorbent material. Eliminate all possible sources of ignition. Wear face shield/goggles and impervious gloves.
First Aid	
• Inhalation	Remove to fresh air.
• Eye Contact	Irrigate thoroughly with clean water. Obtain medical advice immediately.

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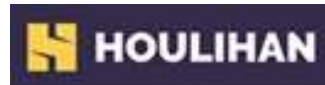


• Skin Contact	Wash skin with suitable skin cleanser followed by soap and water. Seek medical attention if irritation persists.	
• Ingestion	Obtain medical attention immediately.	
<u>Monitoring</u> ➤ Not Applicable		<u>Health Surveillance</u> ➤ Not Applicable
Issued: A. Shehu		Date: 10.06.2025

7- Bleach COSHH ASSESSMENT RECORD	
Project/Premises	All sites
Company	Evans Vanodine International
Substance/Material	Bleach SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE
Hazardous Contents	H315 Causes skin irritation. H318 Causes serious eye damage. H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects.
	
Process	Disinfect toilets, drains and sinks clear of bad odours, waste matter and bacteria.
Activity / Application	<p>SINKS, TOILETS AND DRAINS: Use undiluted.</p> <p>GENERAL CLEANING AND DISINFECTING: Dilute up to 1:125 parts water (40 ml per 5 L).</p> <p>SOAKING MOPS AND CLOTHS: Dilute 1:250 parts water (20 ml per 5 L). Soak for 30 minutes and rinse with clean water.</p> <p>Please take care when handling this product to avoid spillages on skin and clothing. Do not use on silk, wool, coloured materials, leather or garments with a special finish.</p>
Location	<ul style="list-style-type: none"> • Suitable for wiping down washable hard surfaces and sanitising crockery. • Easily removes tannin stains from teacups and teapots. • For use in washrooms, toilets and kitchens. • If used undiluted, product provides 50,000 parts per million available chlorine.
Risk to Health	<p>General information - The severity of the symptoms described will vary dependent on the concentration and the length of exposure.</p> <p>Inhalation - Irritation of nose, throat and airway.</p> <p>Ingestion May cause discomfort if swallowed.</p> <p>Skin contact Causes skin irritation. Prolonged and frequent contact may cause redness and irritation.</p> <p>Eye contact Severe irritation, burning and tearing. Prolonged contact causes serious eye and tissue damage.</p>

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Control Measures	<div data-bbox="495 224 597 325"></div> <div data-bbox="602 304 846 331">- Wear eye Protection.</div> <div data-bbox="495 338 597 438"></div> <div data-bbox="602 415 1183 443">- Wear protective gloves. (Household rubber gloves.)</div> <div data-bbox="495 445 597 546"></div> <div data-bbox="602 525 1352 552">- Wear appropriate clothing to prevent any possibility of skin contact.</div>
Fire Information	<p><u>Extinguishing media</u></p> <p>The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.</p> <p><u>Special hazards arising from the substance or mixture</u></p> <p>Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours.</p> <p><u>Advice for firefighters</u></p> <p>Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.</p>
Storage	<p>Keep only in the original container in a cool, well-ventilated place. Protect from light. Store away from the following materials: Acids.</p>
Disposal	<p>Discharge used solutions to drain. Small amounts (less than 5 Litres) of unwanted product may be flushed with water to sewer. Larger volumes must be sent for disposal as special waste. Rinse out empty container with water and consign to normal waste.</p>
Spillage	<p>Small Spillages: Flush away spillage with plenty of water. Large Spillages: Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely.</p> <p><i>Dangerous for the environment. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.</i></p>
First Aid	
<ul style="list-style-type: none"> Inhalation 	<p>Unlikely route of exposure as the product does not contain volatile substances. If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.</p>
<ul style="list-style-type: none"> Eye Contact 	<p>Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse. Get medical attention immediately.</p>
<ul style="list-style-type: none"> Skin Contact 	<p>Wash with plenty of water. Get medical attention if irritation persists after washing.</p>
<ul style="list-style-type: none"> Ingestion 	<p>Do not induce vomiting. Give plenty of water to drink. Get medical attention.</p>

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<p style="text-align: center;"><u>Monitoring</u></p> <ul style="list-style-type: none">· Pre-employment screening.· on go-going there on after.	<p style="text-align: center;"><u>Health Surveillance</u></p> <ul style="list-style-type: none">· MCG Health· Occupational health questionnaires
Issued: A. Shehu	Date: 10.06.2025

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8-Butan Calor		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Calor Gas Ltd.		
Substance/Material	Butane		
Hazardous Contents	Liquefied Gas		
			
Process	Calor Liquefied Butane is a multi-purpose product.		
Activity/Application	Intended for uses including fuels for equipment which has been specifically designed to run on commercial butane.		
Location			
Risk to Health	Extremely flammable liquefied gas. Keep container in a well-ventilated place. Keep away from sources of ignition – no smoking. Take precautionary measures against static discharge.		
Control Measures			
Fire Information	<p><u>Large Fires: ONLY TO BE FOUGHT BY FIRE BRIGADE.</u></p> <p>Carbon Dioxide(Co2), Black – <u>USE / DON'T USE</u></p> <p>Foam, Cream – <u>USE / DON'T USE</u></p> <p>Dry Powder, Blue <u>USE / DON'T USE</u></p> <p>Water, Red - <u>USE / DON'T USE</u></p>		
Storage	Calor Liquefied Butane Gas must be stored in purpose designed mild steel cylinder(s) or tank(s) or other systems of suitable pressure rating. These should be segregated from oxidant gases and other oxidants in store.		
Disposal	<p>Calor Gas Cylinders are the property of Calor Gas Limited and should be returned to the local dealer / stockist.</p> <ul style="list-style-type: none"> • Users are recommended to contact their local Calor Gas representative when they wish to dispose of surplus quantities of Calor Butane. • Emptying of tanks containing Calor Butane is the responsibility of Calor Gas Limited • Do not discharge product into areas where there is a risk of an explosive mixture with air. • Empty vessels and cylinders may contain some remaining product. • Hazard warning labels are a guide to the safe 		

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Spillage / Accidental release measures	Immediate Emergency Action: <ul style="list-style-type: none"> • Clear people away from the area to a safe place • Do not operate electrical equipment unless flameproof • Summon aid of emergency services • Treat or refer casualties if necessary Further Action – Fire <ul style="list-style-type: none"> • Stop product flow • Use dry powder or carbon dioxide extinguishers • Cool containers exposed to fire by water fog/spray Further Action – Spillage <ul style="list-style-type: none"> • Extinguish naked lights, e.g. cigarettes – AVOID MAKING SPARKS. Do not use a mobile phone • Isolate power from sources of ignition and ventilate the area • Position fire fighting equipment • Try to stop the flow of liquid product • Cover drains and sewers. Disperse vapour with water spray <p>Note: Vapour may collect in confined spaces</p> INFORM THE RELEVANT AUTHORITIES IF A MAJOR SPILLAGE OCCURS
First Aid	
<ul style="list-style-type: none"> ▪ Inhalation 	Remove the affected person to fresh air. Keep the patient warm and at rest. If breathing has stopped administer artificial respiration. Give external cardiac massage if necessary. If the person is breathing, but unconscious, place them in the recovery position. Obtain medical assistance immediately.
<ul style="list-style-type: none"> ▪ Eye Contact 	Cold burns should be flushed immediately with tepid water to normalise temperature. Hold eyelids apart while flushing to rinse entire surface of the eye and lids with water. Cover the eye with a sterile dressing and obtain medical assistance immediately.
<ul style="list-style-type: none"> ▪ Skin Contact 	Burns should be flushed with tepid water to normalise temperature and until circulation returns. Cover the burns with sterile dressings. Do not apply ointments or powders. Obtain medical assistance immediately.
<ul style="list-style-type: none"> ▪ Ingestion 	Not applicable
<p style="text-align: center;"><u>Monitoring</u></p> <p>➤ Not Applicable</p>	<p style="text-align: center;"><u>Health Surveillance</u></p> <p>➤ Not Applicable</p>
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9-Cement - Packaged		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Tetrosyl		
Substance/Material	CarPlan		
Hazardous Contents	d-Limonene: R10 Flammable; R43 May cause sensitisation by skin contact; R38 Irritating to skin .; R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment		
			
Process	Screenwash		
Activity/Application	<p>Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.</p> <p>Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.</p> <p>Wear suitable respiratory protection. Check that mask fits tight and change filter regularly. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Protection against this substance requires special consideration</p> <p>Wear tight-fitting goggles or face shield.</p>		
Location			
Risk to Health	Mildly irritating to eyes. Irritation and dermatitis may result from contact with skin. Do not breathe/inhale mist.		
Control Measures			
Fire Information	<p>Carbon Dioxide(Co2), Black – <u>USE / DON'T USE</u></p> <p>Foam, Cream – <u>USE / DON'T USE</u></p> <p>Dry Powder, Blue - <u>USE / DON'T USE</u></p> <p>Water, Red - <u>USE / DON'T USE</u></p>		
Storage	The substance is not affected by frost or ambient heat. The shelf life is practically unlimited.		
Disposal	"Only experts should be permitted to carry out disposal of this material."		
Spillage	Absorb in sand. Do not let substance enter water course. Collect in a container and close lid. Dispose of in accordance with local authority regulations.		

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First Aid	
• Inhalation	Move injured person into fresh air immediately. Call an ambulance. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Bring these instructions. Place unconscious person on the side in the recovery position and ensure breathing can take place
• Eye Contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Immediately transport to hospital or eye specialist
• Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water. Consult a physician for specific advice. Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital .
• Ingestion	Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions.
<p style="text-align: center;"><u>Monitoring</u></p> <p>➤ Pre-employment screening, on going there on after.</p>	<p style="text-align: center;"><u>Health Surveillance</u></p> <p>➤ MCG Health and safety strategy Occupational health questionnaires</p>
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10- Cement		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Lafarge, Tarmac, Cemex		
Substance/Material	Cement		
Hazardous Contents	Calcium hydroxide (produced on contact between calcium carbonate and water), chromium VI		
			
Process	Laying bricks, blocks, placing concrete		
Activity	Mixing mortar, mixing small amounts of concrete		
Location	As per drawings		
Risk to Health	Irritating to eyes and skin, risk of serious damage to eyes, burns due to strongly alkaline Ca(OH) ₂ , irritant contact dermatitis, allergic dermatitis		
Control Measures	Use ready mixed concrete or mortar. Keep within shelf life dates: beyond this, CRVI precipitants no longer effective. Avoid contact using gloves, overalls, eye protection. Boots to be waterproof. If mixed on site, avoid using half bags. Low drop height. Do not throw materials into mixer. Do not compress empty bags.		
Fire Information	Cement is not flammable		
Storage	Store in waterproof area, silo. Monitor shelf life on bags, rotate silo stored cement.		
Disposal	Do not wash down gulleys or into watercourse. Dispose of dry cement by adding water, preventing slurry run off and curing.		
Spillage	Clean up by wet brushing: do not dry brush		
First Aid			
▪ Inhalation	Remove to fresh air. Immediate medical attention if coughing or other symptoms do not go		
▪ Eye Contact	Irrigate eyes for at least 45 minutes. Do not rub eyes. Immediate medical attention from specialist eye emergency department.		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention for all burns or if irritation persists		
▪ Ingestion	Do not induce vomiting. Immediate medical attention		
Monitoring ➤ Not Applicable		Health Surveillance ➤ Not Applicable	
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11- Adolease		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Grace Construction Products		
Substance/Material	Adolease (Concrete chemical release agent)		
Hazardous Contents	Petroleum distillate		
			
Process	A chemical release agent used on formwork & shuttering which gives a superior finish to cast concrete.		
Activity/Application	Apply by spray – a very light application		
Location			
Risk to Health	Mildly irritating to eyes. Irritation and dermatitis may result from contact with skin. Do not breathe/inhale mist.		
Control Measures	    		
Fire Information	Carbon Dioxide(Co2), <i>Black</i> – <u>USE / DON'T USE</u> Foam, <i>Cream</i> – <u>USE / DON'T USE</u> Dry Powder, <i>Blue</i> - <u>USE / DON'T USE</u> Water, <i>Red</i> - <u>USE / DON'T USE</u>		
Storage	The substance is not affected by frost or ambient heat. The shelf life is practically unlimited.		
Disposal	Hazardous waste skip on site supplied by Principle contractor.		
Spillage	Absorb in sand. Do not let substance enter water course. Collect in a container and close lid. Dispose of in accordance with local authority regulations.		
First Aid			
• Inhalation	Remove to fresh air and rest.		
• Eye Contact	Irrigate with water for at least than 15 minutes.		
• Skin Contact	Wash with soap/cleanser with plenty of water.		
• Ingestion	Do not induce vomiting. Drink plenty of water.		
<u>Monitoring</u> ➤ Pre-employment screening, on go-going there on after.		<u>Health Surveillance</u> ➤ MCG Health and safety strategy Occupational health questionnaires	
Issued: A. Shehu		Date: 10.06.2025	

12- Chemcure 'S' COSHH ASSESSMENT RECORD	
Project/Premises	
Company	Universal Sealants (UK) Limited
Substance/Material	Chemcure 'S'
Hazardous Contents	Sodium Silicate- Which is a white powder that is readily soluble in water producing an alkaline solution. In acidic solutions, the silicate reacts with hydrogen ions to form silicic acid which when heated and roasted forms silica gel, a hard glassy substance.
	
Process	Concrete curing agent.
Activity	Carefully sprayed onto concrete.
Location	All newly poured concrete.
Environmental Precautions	Eliminate all ignition sources. Keep all people and animals away. Prevent entry into drains, sewers and watercourses. If spillage enters drains leading to sewage works inform the water company. If spillage enters river or watercourses inform the Environmental Agency.
Risk to Health	Irritating to eyes, lungs and skin, risk of serious damage to eyes, irritant contact dermatitis, and allergic dermatitis after possible sensitisation. May cause pulmonary oedema.
Control Measures	Avoid contact using nitrile gloves (yellow gloves available on site.) Splash goggles. Chemical resistant safety footwear. Suitable overalls. The area of works needs to be cordoned off. The substance shall only be sprayed under low wind conditions.
Fire Information	Product is not combustible however if involved in a fire use, water spray, foam, dry powder, carbon dioxide or sand. May give off toxic fumes if heated.
Storage	Store in original containers in a well ventilated area away from heat. Avoid exposures to low temperatures – may freeze with the separation of ice crystals, which will rise to the surface. Should this occur warming and agitation of the material will return the product to its original condition.
Disposal	Disposal of product should be on site in a hazardous work skip located on site.
Spillage	Cordon off area. Transfer collected material to a heavy duty plastic/steel drum and keep in a well ventilated place for subsequent safe disposal.
First Aid	
<ul style="list-style-type: none"> Inhalation 	In case of drowsiness or sickness remove to fresh air, keep patient warm and at rest. If unconscious turn to the recovery position. Seek medical assistance

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▪ Eye Contact	Flush with copious amounts of clean water for at least 20 minutes, with the eyelids held open. This prolonged irrigation is of extreme importance and must be done at once otherwise permanent damage will result. Continue irrigation until medical attention can be obtained.
▪ Skin Contact	Promptly remove contaminated clothing and wash the affected area with plenty of soap and water to ensure all traces of product are removed, then rinse thoroughly Any contaminated clothing must be thoroughly cleaned before re-using. Seek medical advice if irritation persists.
▪ Ingestion	Wash out mouth with water. Keep patient at rest and obtain medical attention. DO NOT INDUCE VOMITING.
<p style="text-align: center;"><u>Monitoring</u></p> <p>➤ Not Applicable</p>	<p style="text-align: center;"><u>Health Surveillance</u></p> <p>➤ Not Applicable</p>
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13- Chemlease		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Nufins Ltd Tel. 091 263 4126		
Substance/Material	Chemlease (Concrete chemical release agent)		
Hazardous Contents	Petroleum distillate		
Process	A chemical release agent used on formwork & shuttering which gives a superior finish to cast concrete.		
Activity/Application	Apply by spray – a very light application		
Location			
Risk to Health	Mildly irritating to eyes. Irritation and dermatitis may result from contact with skin. Do not breathe/inhale mist.		
Control Measures			
Fire Information	Carbon Dioxide(Co2), <i>Black</i> – <u>USE / DON'T USE</u> Foam, <i>Cream</i> – <u>USE / DON'T USE</u> Dry Powder, <i>Blue</i> - <u>USE / DON'T USE</u> Water, <i>Red</i> - <u>USE / DON'T USE</u>		
Storage	The substance is not affected by frost or ambient heat. The shelf life is practically unlimited.		
Disposal	Hazardous waste skip on site supplied by Principle contractor.		
Spillage	Absorb in sand. Do not let substance enter water course. Collect in a container and close lid. Dispose of in accordance with local authority regulations.		
First Aid			
• Inhalation	Remove to fresh air and rest.		
• Eye Contact	Irrigate with water for at least than 15 minutes.		
• Skin Contact	Wash with soap/cleanser with plenty of water.		
• Ingestion	Do not induce vomiting. Drink plenty of water.		

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<p><u>Monitoring</u></p> <p>➤ Not Applicable</p>	<p><u>Health Surveillance</u></p> <p>➤ Not Applicable</p>
<p>Issued: A. Shehu</p>	<p>Date: 10.06.2025</p>

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14- Diesel - Gas Oil		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Linton		
Substance/Material	Diesel- gas oil		
Hazardous Contents	Hydrocarbons- petroleum distillate		
Process	Supplying fuel for plant		
Activity	Delivery of fuel; refuelling plant		
Location	Tank situated at agreed position		
Risk to Health	Harmful to lungs, possible risk of irreversible effects- Cat 3 carcinogen. Irritation to eyes and possible severe adverse reaction. Exposure to vapour may cause drowsiness. H ₂ S released when heated.		
Control Measures	<p>Stored in steel bunded tank, drip tray to be used, spill kit to hand. All refuelling in one place- vehicles come to tank. Access for delivery vehicle to shorten distance for hose to reach. Delivery controlled by Banksman. All in open air.</p> <p>PVC or nitrile gloves may be suitable whilst re-fuelling.</p>		
Fire Information	Use powder, foam or CO ₂ to extinguish, NOT water. Product of combustion is toxics H ₂ S- do not fire fight- call emergency services.		
Storage	In steel double skinned, bunded, lockable tank		
Disposal	Spill collecting pads, spilled diesel disposed of as hazardous material		
Spillage	Spill kit to hand, report any spill over 100 litres to Environment Agency. Area for tank to be selected for separation from surface water gulleys, watercourses.		
First Aid			
▪ Inhalation	Remove to fresh air. Immediate medical attention, CPR		
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Immediate medical attention		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists		
▪ Ingestion	Do not induce vomiting. Immediate medical attention		
Monitoring > Not Applicable		Health Surveillance > Not Applicable	
Issued: A. Shehu		Date: 10.06.2025	




Houlihan & Co. (Excavations) Limited

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15-Engine Oil		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	JCB		
Substance/Material	Engine Oil		
Hazardous Contents	None		
<p>This product is not classified as hazardous under current UK legislation when used in the application for which it is intended. However prolonged or extensive skin contact with the product may result in skin disorders. The risk of skin disorders may be increased if the products become contaminated.</p>			
Process	Engine oil is used for lubrication of various internal combustion engines. The main function is to lubricate moving parts; it also cleans, inhibits corrosion, improves sealing, and cools the engine by carrying heat away from moving parts		
Activity	The lubricant is applied generously to the required area/s by either poured/brushed.		
Location			
Risk to Health	No health risks if substance is used for its intended use.		
Control Measures	Only use in well ventilated areas. If engineering controls do not reduce airborne vapours to an acceptable level, use suitable respiratory equipment.		
Fire Information	Carbon Dioxide(Co2), <i>Black</i> – <u>USE / DON'T USE</u> Foam, <i>Cream</i> – <u>USE / DON'T USE</u> Dry Powder, <i>Blue</i> - <u>USE / DON'T USE</u> Water, <i>Red</i> - <u>USE / DON'T USE</u>		
Storage	In fitters vehicle		
First Aid			
• Inhalation	Prolonged exposure to oil mist / vapours may cause irritation of mucous membranes and the upper respiratory tract.		
• Eye Contact	Unlikely to cause more than transient stinging or reddening if accidental eye contact occurs.		
• Skin Contact	Not expected to be primary skin irritant. Prolonged or repeated skin contact may lead to dermatitis.		
• Ingestion	There may be irritation of the throat. There may be vomiting.		
<u>Monitoring</u> ➤ Not required		<u>Health Surveillance</u> ➤ Not required	
Issued: A.Shehu		Date: 10.06.2025	

16- E-Pine		COSHH ASSESSMENT RECORD	
Project/Premises	All sites		
Company	Evans Vanodine International		
Substance/Material	E-PINE ALCOHOL (C9-11) ETHOXYLATE (8EO), ALKYL (C12-16) DIMETHYL BENZYL AMMONIUM CHLORIDE		
Hazardous Contents	H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects. EUH208 Contains I-LIMONENE. May produce an allergic reaction		
			
Process	Disinfectant based on quaternary ammonium bactericide.		
Activity / Application	DISINFECTING: Dilute 1:50 parts hot water (100 ml per 5 L) 3 x per 5 L Mop or wipe surface. Always use fresh & accurately prepared solution. TOILETS, SINKS & DRAINS: Use undiluted		
Location	<ul style="list-style-type: none"> • For use on all washable hard surfaces. • Suitable for mopping floors, wiping sinks & toilet surrounds. • Can also be poured down drains & toilets to overcome malodours. 		
Risk to Health	General information - The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Inhalation - No specific symptoms known. Ingestion - No specific symptoms known. But - May cause discomfort if swallowed. Skin contact - Prolonged and frequent contact may cause redness and irritation. Eye contact - May cause temporary eye irritation. Prolonged contact may cause redness and/or tearing.		

Control Measures	 - Wear eye protection.  - No specific hand protection noted, but protection for the skin is advisable to prevent removal of natural oils from skin. For users with sensitive skin, it is recommended that suitable protective gloves are worn.  - Avoid contact with skin.
Fire Information	<p><u>Extinguishing media</u></p> <p>The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.</p> <p><u>Special hazards arising from the substance or mixture</u></p> <p>Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours.</p> <p><u>Advice for firefighters</u></p> <p>Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.</p>
Storage	Keep only in the original container in a cool, well-ventilated place. Store away from the following materials: Oxidising materials.
Disposal	Discharge used solutions to drain. Small amounts (less than 5 Litres) of unwanted product may be flushed with water to sewer. Larger volumes must be sent for disposal by approved waste contractor. Rinse out empty container with water and consign to normal waste.
Spillage	<p>Small Spillages: Flush away spillage with plenty of water.</p> <p>Large Spillages: Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely.</p>
First Aid	
▪ Inhalation	Unlikely route of exposure as the product does not contain volatile substances. If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
▪ Eye Contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
▪ Skin Contact	Wash with plenty of water. Get medical attention promptly if symptoms occur after washing.
▪ Ingestion	Do not induce vomiting. Give plenty of water to drink. Get medical attention if any discomfort continues.

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<p style="text-align: center;"><u>Monitoring</u></p> <ul style="list-style-type: none">• Pre-employment screening.• on-going there after.	<p style="text-align: center;"><u>Health Surveillance</u></p> <ul style="list-style-type: none">• MCG Health• Occupational health questionnaires
Issued: A. Shehu	Date: 10.06.2025

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17-EC410 Fast Cure Adhesive COSHH ASSESSMENT RECORD			
Project/Premises			
Company			
Substance/Material	EC410 fast cure adhesive		
Hazardous Contents	Styrene, dibenzoylperoxide, Bis(2-ethylhexyl)phthalate		
Process	Adhesive for placing steel dowels in concrete		
Activity	Mixing adhesive, placing		
Location			
Risk to Health	Irritating to eyes, lungs and skin, risk of serious damage to eyes, irritant contact dermatitis, allergic dermatitis after possible sensitisation. T: Toxic; Repr Cat 2: R60: May impair fertility; R61: May cause harm to the unborn child		
Control Measures	Avoid contact using nitrile gloves, overalls, eye protection. Gun premixes 2 parts before application into hole- no finishing required. Use in open air.		
Fire Information	If in fire BA required. Use foam, water CO2		
Storage	Store away from fire load or source of ignition. Store minimal amounts		
Disposal	Dispose of empty cartridges as non-hazardous. Part filled tubes to be emptied and adhesive allowed to harden- then no longer hazardous		
Spillage	Allow to cure, then remove.		
First Aid			
▪ Inhalation	Remove to fresh air. Immediate medical attention if coughing or other symptoms do not go		
▪ Eye Contact	Irrigate eyes for at least 45 minutes. Do not rub eyes. Immediate medical attention from specialist eye emergency department.		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists		
▪ Ingestion	Do not induce vomiting. Immediate medical attention		
<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;"> <u>Monitoring</u> ➤ Not Applicable </td> <td style="width: 50%; text-align: center;"> <u>Health Surveillance</u> ➤ Not Applicable </td> </tr> </table>		<u>Monitoring</u> ➤ Not Applicable	<u>Health Surveillance</u> ➤ Not Applicable
<u>Monitoring</u> ➤ Not Applicable	<u>Health Surveillance</u> ➤ Not Applicable		
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18- Special HP Grease		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	JCB		
Substance/Material	Special HP grease		
Hazardous Contents	None in concentration sufficient to be regarded as a hazard		
Process	Plant Maintenance		
Activity	Lubricating plant		
Location	At refuelling area		
Risk to Health	Prolonged exposure defats skin		
Control Measures	Wear PVC gloves		
Fire Information	Do not use water		
Storage	Cool, well ventilated area		
Disposal	Take to authorised disposal point		
Spillage	Surfaces may become slippery. Sand placed on spill and scrape up.		
First Aid			
▪ Inhalation	Take exposed person into fresh air		
▪ Eye Contact	Flush eye		
▪ Skin Contact	Wash skin		
▪ Ingestion	Do not induce vomiting		
<u>Monitoring</u> > Not Applicable		<u>Health Surveillance</u> > Not Applicable	
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19- Hardwood - Oak		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	N/A		
Substance/Material	Hardwood- oak		
Hazardous Contents	Respirable dust, carrying eg. methanol		
			
Process	Trimming of Hardwood Branches		
Activity	See Above		
Location			
Risk to Health	Asthmagen, causes nasal cancer		
Control Measures	Work in open air. Use hand tools where possible. P3 aerosol particle filter mask when using power tools with dust extraction as close to source as possible. Exposure must be reduced ALARP.		
Fire Information	Use water, powder, foam or CO ₂ to extinguish.		
Storage	N/A		
Disposal	Spill collecting pads, spilled diesel disposed of as hazardous material		
Spillage	Spill kit to hand, report any spill over 100 litres to Environment Agency. Area for tank to be selected for separation from surface water gulleys, watercourses.		
First Aid			
▪ Inhalation	Remove to fresh air. Medical attention if symptoms persist		
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Immediate medical attention		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists		
▪ Ingestion	Do not induce vomiting. Immediate medical attention		
<u>Monitoring</u> > Not Applicable		<u>Health Surveillance</u> > Questionnaire repeated at least annually	
Issued: A. Shehu		Date 10.06.2025	

20- Inkjet Printer HP

COSHH ASSESSMENT RECORD

Project/Premises	Head Office
Company	Houlihan & Co. Ltd.
Substance/Material	Inkjet printer ink HP C9370A
Hazardous Contents	1,2-Benzisothiazolin-3-one. Pacified Reactive Black 31. 2-pyrrolidone. Glycerol



Process	Printing drawings
Activity / Application	Replacing ink cartridges in printer, folding drawings
Location	1 st floor, Head Office
Risk to Health	<p>Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.</p> <p>Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk.</p> <p>Contains 2-pyrrolidone which is an Eye Irritant. 2;H319</p> <p>Contains Glycerol which is an Eye Irritant. 2;H319</p>
Control Measures	 <p>Product comes in sealed cartidges: whole cartridge is inserted in printer</p>
Fire Information	<p>Carbon Dioxide(Co2), <i>Black</i> – <u>USE</u></p> <p>Foam, <i>Cream</i> – <u>USE</u></p> <p>Dry Powder, <i>Blue</i> - <u>USE</u></p> <p>Water, <i>Red</i> - <u>USE</u></p>
Storage	Incompatible with strong bases and oxidizing agents- do not store with these. Keep out of the reach of children. Keep away from excessive heat or cold.
Disposal	Do not allow this material to drain into sewers/water supplies. HP supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle . Available and used at Head Office.

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Spillage	Wear appropriate personal protective equipment- gloves. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Dyke the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents..
First Aid	
▪ Inhalation	Move to fresh air. If symptoms persist, get medical attention.
▪ Eye Contact	Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists get medical attention.
▪ Skin Contact	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
▪ Ingestion	If ingestion of a large amount does occur, seek medical attention.
<p style="text-align: center;"><u>Monitoring</u></p> <ul style="list-style-type: none"> • Pre-employment screening. • on-going there after. 	<p style="text-align: center;"><u>Health Surveillance</u></p> <ul style="list-style-type: none"> • MCG Health • Occupational health questionnaires
Issued: A.Shehu	Date:10.06.2025

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21- Mould Oil		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Adawall Construction Chemicals		
Substance/Material	Mould oil		
Hazardous Contents	Hydrocarbons- petroleum distillate		
			
Process	Erecting formwork for concrete		
Activity	Sprayed / brushed on shutter to aid striking, finish and re-use		
Location	Container situated at agreed position close to formwork		
Risk to Health	Harmful to lungs if swallowed and aspirated. Could cause vomiting. Irritation to respiratory tract and eyes. Degreases skin, possibly leading to dermatitis.		
Control Measures	<p>Stored in steel drum, set on drip tray, spill kit to hand. All in open air. Spray to be directed carefully. No spraying if wind could disperse oil mist. No-one to be in area of formwork to be sprayed. Impervious gloves and goggles to be worn.</p> <p>Vapour RPE masks to be worn when spraying the oil, to avoid inhalation of mist.</p>		
Fire Information	Use powder, foam or CO ₂ to extinguish.		
Storage	In steel bunded drum		
Disposal	Spill collecting pads, spilled oil disposed of as hazardous material		
Spillage	Spill kit to hand, report any spill over 100 litres to Environment Agency. Area for drum to be selected for separation from surface water gulleys, watercourses.		
First Aid			
▪ Inhalation	Remove to fresh air. Immediate medical attention, CPR		
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Immediate medical attention		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists		
▪ Ingestion	Do not induce vomiting. Immediate medical attention		
Monitoring > Not Applicable		Health Surveillance > Not Applicable	
Issued: A. Shehu		Date: 10.06.2025	

22- Petrol		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	High street petroleum garages.		
Substance/Material	Petrol		
Hazardous Contents	Hydrocarbons- petroleum distillate; benzene, toluene		
			
Process	Supplying fuel for plant		
Activity	Delivery of fuel; refuelling plant		
Location	Petrol stored at position near container		
Risk to Health	Harmful to lungs, may cause cancer- Cat 1 carcinogen. Irritation to skin. Exposure to vapour may cause drowsiness. Toxic to aquatic organisms. Extremely flammable. Vapour may cause flash fire.		
Control Measures	Spill kit available when refuelling or taking delivery of fuel. Drip tray under refuelling operations. All refuelling in one place- plant brought to store. All in open air. PPE: coveralls, eye protection, gloves selected for hazard and worn correctly.		
Fire Information	Use powder, foam or CO ₂ to extinguish, NOT water. Product of combustion is toxic CO and CO ₂ - do not fire fight- call emergency services.		
Storage	Store minimum amount in lockable ventilated cage in open air.		
Disposal	Spill collecting pads, spilled petrol disposed of as hazardous material		
Spillage	Spill kit to hand, report any spill over 100 litres to Environment Agency. Area for store to be selected for separation from surface water gulley, watercourses.		
First Aid			
▪ Inhalation	Remove to fresh air. Immediate medical attention, CPR		
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Immediate medical attention		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists		
▪ Ingestion	Do not induce vomiting. Can enter lungs causing damage. Immediate medical attention		
<u>Monitoring</u> ➤ Pre-employment screening, on going there on after.		<u>Health Surveillance</u> ➤ MCG Health and safety strategy Occupational health questionnaires	
Issued: A. Shehu		Date: 10.06.2025	

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23- Petrol Fumes		COSHH ASSESSMENT RECORD	
Project/Premises			
Company			
Substance/Material	Petrol fumes		
Hazardous Contents	CO2 - Carbon dioxide, CO - Carbon Monoxide, HC - Hydro carbon		
			
Process	Petrol driven motors with exhausts producing fumes e.g. disc-cutters, generators.		
Activity	As above.		
Location	Yard / Site in general – NEVER TO BE USED IN UNVENTILATED AREAS. Without adequate control measures in place.		
Risk to Health	Inhaling petrol fumes brings concentrated hydrocarbons into your lungs and bloodstream. Some of the ingredients in gasoline are extremely toxic and are mutagens. Liver damage and permanent brain damage are possibilities.		
Control Measures	Petrol driven equipment should always be sited in the open-air. Turn off engines when not required. Ensure equipment is regularly serviced. Exhaust extraction systems to be considered.		
Fire Information	N/A		
Storage	N/A		
Disposal	N/A		
Spillage	N/A		
First Aid			
▪ Inhalation	Remove to fresh air. Immediate medical attention, CPR		
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Immediate medical attention		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists		
▪ Ingestion	Do not induce vomiting. Can enter lungs causing damage. Immediate medical attention		
Monitoring		Health Surveillance	
➤ Pre-employment screening, on go-going there on after.		➤ MCG Health and safety strategy Occupational health questionnaires	
Issued: A.Shehu		Date: 10.06.2025	

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24- Pipe Jointing Lubricant		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Hepworth, Osma		
Substance/Material	Pipe jointing lubricant		
Hazardous Contents	None		
			
Process	Jointing elements of drainage		
Activity	Lubricant applied to collars of pipes by brush		
Location	All drainage as shown on drawings		
Risk to Health	Skin and eye contact produce irritation		
Control Measures	Store in container securely. Only small amounts on site. PPE – gloves to be worn. Personal hygiene after use.		
Fire Information	Use powder, foam or CO ₂ to extinguish, water fog safe, not water jet.. Product of combustion is CO, CO ₂ , other toxic gases and vapours- do not fire fight- call emergency services as SCBA specified for fire fighting.		
Storage	In steel lockable storage container away from oxidising agents. Avoid frost- gel freezes at 5°, expands and may burst container.		
Disposal	Spill collecting pads, spilled gel disposed of as controlled waste		
Spillage	Spill kit to hand. Do not allow to enter watercourse		
First Aid			
▪ Inhalation	Remove to fresh air. Medical attention if discomfort continues.		
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Medical attention		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists		
▪ Ingestion	Get affected person to drink water to dilute chemical.. Get medical attention		
<u>Monitoring</u> ➤ Not Applicable		<u>Health Surveillance</u> ➤ Not Applicable	
Issued: A. Shehu		Date: 10.06.2025	

25- Marking Paint		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Powerline		
Substance/Material	Marking paint		
Hazardous Contents	Aromatic hydrocarbon (20-30%) 2- Butoxyethanol (5-10%).		
			
Process	Spraying.		
Activity	Used to mark out on the ground, steel, road surfaces.		
Location	Throughout construction phase at the above location.		
Risk to Health	Irritation of respiratory system, damage to lung if swallowed, repeated exposure may cause skin dryness or cracking, vapours may cause drowsiness or dizziness. Harmful by inhalation, in contact with the skin and if swallowed, irritating to respiratory system. The substance may aggravate the health of employees with pre-existing asthma.		
Control Measures	Only to be used in open air; never in confined space. Do not smoke when using. Do not get on skin; use gloves and do not use if wind blows spray. Do not get in eyes; either wear eye protection or stop use in the wind. Consider safer substances by next review. Use gun with handle allowing upright position while applying and also distancing from nose and mouth.		
Fire Information	Extremely flammable. Dispose of fully used containers as special waste. If natural ventilation is insufficient, respirator with organic vapour cartridge filter must be used.		
Storage	Store away from fire load or source of ignition. Store minimal amounts. Keep out of direct sunlight.		
Disposal	Dispose of empty spray cans in general waste skip. Unempty cans will be disposed of in a hazardous waste skip.		
Spillage	Allow to cure, and then remove.		
First Aid			
▪ Inhalation	Remove to fresh air. Immediate medical attention if coughing or other symptoms do not go		
▪ Eye Contact	Irrigate eyes for at least 45 minutes. Do not rub eyes. Immediate medical attention from specialist eye emergency department.		
▪ Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists		
▪ Ingestion	Do not induce vomiting. Immediate medical attention		

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<p><u>Monitoring</u></p> <p>➤ Not Applicable</p>	<p><u>Health Surveillance</u></p> <p>➤ Not Applicable</p>
<p>Issued: A. Shehu</p>	<p>Date: 10.06.2025</p>

26- R-KEM COSHH ASSESSMENT RECORD	
Project/Premises	
Company	Rawlplug
Substance/Material	R-KEM-II, R-KEM-II-W, R-KEM-II-S; R-CFS+RM50, R-CFS+RM50-W, R-CFS+RM50-S
Hazardous Contents	Dibenzoyl peroxide
	
Process	Chemical anchoring system for building industry
Activity / Application	Placement by sealant gun
Location	As per instruction / engineers drawing
Risk to Health	<p>IF ON SKIN: Wash with plenty of soap and water.</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>If skin irritation or rash occurs: Get medical advice/attention.</p> <p>If eye irritation persists: Get medical advice/attention.</p>
Control Measures	
Fire Information	<p>Carbon Dioxide(Co2), <i>Black</i> – <u>DON'T USE</u></p> <p>Foam, <i>Cream</i> – <u>DON'T USE</u></p> <p><i>Dry Powder, Blue</i> - <u>USE</u></p> <p><i>Water, Red</i> - <u>DON'T USE</u></p>
Storage	Use only in places with sufficient ventilation. Wear appropriate respirator when ventilation is inadequate. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Follow the manufacturer's instructions for use of product. Keep product in the original container. Do not use product after the expiration date.
Disposal	Must not be disposed together with household garbage. Do not allow product to reach sewage system, ground water and water course. Uncured product dispose of as a chemical waste in licensed facility, in accordance with local regulations of environmental protection and binding legislation on recycling. It is recommended to incinerate wastes arose during product usage in a proper incineration oven. Small quantities of both components may be reacted together, allowed to cure and dispose of as a solid waste.
Spillage	Secure drains and sewers. Collect product mechanically (e.g. with shovel) together with contaminated soil. Possible spillages absorb with inert, absorbent material (e.g. sand, earth, diatomaceous earth) and place in an appropriate waste disposal container according to local regulations.

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First Aid	
• Inhalation	Move the exposed individual to the fresh air and keep at rest in a position comfortable for breathing. If not breathing, breathing is irregular or respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Contact toxicology centre.
• Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Check for and remove any contact lenses. Get medical attention.
• Skin Contact	Wash with plenty of soap and water for at least 10 minutes. Remove contaminated clothing and shoes. In case irritation or any complaints occur, get medical attention and avoid further exposure.
• Ingestion	Wash out mouth with water. Move the exposed individual to the fresh air and keep at rest in position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low, so that the vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Loosen tight clothing (e.g. tie, belt). Get medical attention.
Issued: : A. Shehu	
Date: 10.06.2025	

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27- RAWL R-KF2 Polyester Resin COSHH ASSESSMENT RECORD	
Project/Premises	
Company	Rawlplug Limited
Substance/Material	RAWL R-KF2 Polyester Resin
Hazardous Contents	CAS-Nr. Hazardous ingredient Conc.(weight.-%) Symbol R-phases Component A: 10-20-36/38 100-42-5 Styrene 12,5-30% Xn 10-20-36/38 Component B: 94-36-0 Dibenzoylperoxide 10-40/% O,
Process	Adhesive for placing steel dowels in concrete
Activity	Mixing adhesive, placing
Location	As specified on drawing.
Risk to Health	Irritating to eyes, lungs and skin, risk of serious damage to eyes, irritant contact dermatitis, allergic dermatitis after possible sensitisation. T: Toxic; Repr Cat 2: R60: May impair fertility; R61: May cause harm to the unborn child
Control Measures	Avoid contact using gloves, overalls, eye protection. Gun premixes 2 parts before application into hole- no finishing required. Use in open air.
Fire Information	Carbon Dioxide(Co2), <i>Black</i> – <u>USE / DON'T USE</u> Foam, <i>Cream</i> – <u>USE / DON'T USE</u> Dry Powder, <i>Blue</i> - <u>USE / DON'T USE</u> Water, <i>Red</i> - <u>USE / DON'T USE</u>
Storage	Store away from fire load or source of ignition. Store minimal amounts
Disposal	Dispose of empty cartridges as non-hazardous. Part filled tubes to be emptied and adhesive allowed to harden- then no longer hazardous
Spillage	Allow to cure, then remove.
First Aid	
• Inhalation	Remove to fresh air. Immediate medical attention if coughing or other symptoms do not go
• Eye Contact	Irrigate eyes for at least 45 minutes. Do not rub eyes. Immediate medical attention from specialist eye emergency department.
• Skin Contact	Wash skin with soap and water. Remove wash contaminated clothing. Medical attention if irritation persists
• Ingestion	Do not induce vomiting. Immediate medical attention

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<p style="text-align: center;"><u>Monitoring</u></p> <p style="text-align: center;">➤ Not Applicable</p>	<p style="text-align: center;"><u>Health Surveillance</u></p> <p style="text-align: center;">➤ Not Applicable</p>
Issued: A. Shehu	Date: 10.06.2025

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28- Powder Mortar Plasticiser COSHH ASSESSMENT RECORD	
Project/Premises	
Company	Sealocrete
Substance/Material	Powder Mortar Plasticiser
Hazardous Contents	Sodium Alkyl Benzene Sulphate 10-20% Irritation to eyes and skin.
	
Process	Improves the workability and strength of bricklaying, rendering and plastering mortars.
Activity	Added as an extra ingredient to mortar.
Location	All newly mixed mortar.
Environmental Precautions	Eliminate all ignition sources. Keep all people and animals away. Prevent entry into drains, sewers and watercourses. If spillage enters drains leading to sewage works inform the water company. If spillage enters river or watercourses inform the Environmental Agency.
Risk to Health	Irritating to eyes, lungs and skin, risk of serious damage to eyes, irritant contact dermatitis, and allergic dermatitis after possible sensitisation. May cause pulmonary oedema.
Control Measures	Avoid contact using nitrile gloves (yellow gloves available on site.) Splash goggles. Chemical resistant safety footwear. Suitable overalls. The area of works needs to be cordoned off. The substance shall only be sprayed under low wind conditions.
Fire Information	Product is not combustible however if involved in a fire use, water spray, foam, dry powder, carbon dioxide or sand. May give off toxic fumes if heated.
Storage	Store in original containers in a well ventilated area away from heat. Keep container tightly closed. Avoid contact with water or humidity.
Disposal	Disposal of product should be on site in a hazardous work skip located on site.
Spillage	Cordon off area. Transfer collected material to a heavy duty plastic/steel drum and keep in a well ventilated place for subsequent safe disposal.
First Aid	
<ul style="list-style-type: none"> Inhalation 	In case of drowsiness or sickness remove to fresh air, keep patient warm and at rest. If unconscious turn to the recovery position. Seek medical assistance

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▪ Eye Contact	Flush with copious amounts of clean water for at least 20 minutes, with the eyelids held open. This prolonged irrigation is of extreme importance and must be done at once otherwise permanent damage will result. Continue irrigation until medical attention can be obtained.
▪ Skin Contact	Promptly remove contaminated clothing and wash the affected area with plenty of soap and water to ensure all traces of product are removed, then rinse thoroughly Any contaminated clothing must be thoroughly cleaned before re-using. Seek medical advice if irritation persists.
▪ Ingestion	Wash out mouth with water. Keep patient at rest and obtain medical attention. DO NOT INDUCE VOMITING.
<p style="text-align: center;"><u>Monitoring</u></p> <p>➤ Not Applicable</p>	<p style="text-align: center;"><u>Health Surveillance</u></p> <p>➤ Not Applicable</p>
Issued: A. Shehu	Date: 10.06.2025

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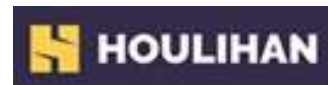
Health & Safety Management System



29- Sealotone Powder		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Sealocrete		
Substance/Material	Sealotone Powder		
Hazardous Contents	Calcium Chloride, Cement, silica, hexavalent chromates		
			
Process	When the substance is mixed with wet cement it changes the desirable tone.		
Activity/Application	Mixing and infilling voids where masonry cuts are not achievable.		
Location	As specified on drawing.		
Risk to Health	Irritant contact dermatitis due to wetness and alkalinity, allergic contact dermatitis due to reaction to chromates, chemical burns from cement, silica present in aggregates- respirable if cut or abraded after concrete sets.		
Control Measures			
Fire Information	This product is not flammable.		
Storage	Mixed moisture cement will cure, so storage is limited.		
Disposal	Washout area to allow bunding of runoff and disposal of hardened concrete.		
Spillage	Avoid entry to water courses.		
First Aid			
▪ Inhalation	For work on hardened concrete, see silica assessment. For site mixing, remove to open air, medical attention if irritation persists		
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Immediate medical attention		
▪ Skin Contact	Immediately wash skin with soap and water. Remove and wash contaminated clothing. Medical attention if contact results in burning or irritation persists		
▪ Ingestion	Do not induce vomiting. Drink water. Immediate medical attention		
Monitoring ➤ Not Applicable		Health Surveillance ➤ MCG questionnaire. Examination by foreman of hands for dermatitis symptoms.	
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30- Sika Block Paving Seal COSHH ASSESSMENT RECORD

Project/Premises	
Company	Sika
Substance/Material	Sika Block Paving Seal
Hazardous Contents	Hydrocarbons, C9, aromatics, kerosine (petroleum), hydrodesulfurized
Process	The substance is rolled onto block paving to resist oil and diesel & improves overall appearance of the block paving.
Location	As per consulting engineers drawings
Risk to Health	Serious eye damage/eye irritation Aspiration may cause pulmonary oedema and pneumonitis. Cough Respiratory disorder
Control Measures	
Fire Information	Carbon Dioxide(Co2), <i>Black</i> – <u>USE / DON'T USE</u> Foam, <i>Cream</i> – <u>USE / DON'T USE</u> Dry Powder, <i>Blue</i> - <u>USE / DON'T USE</u> Water, <i>Red</i> - <u>USE / DON'T USE</u>
Storage	Store in original container. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Disposal	The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Spillage	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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First Aid	
▪ Inhalation	Move to fresh air. Consult a physician after significant exposure.
▪ Eye Contact	Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
▪ Skin Contact	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If symptoms persist, call a physician.
▪ Ingestion	Do not induce vomiting without medical advice. Rinse mouth with water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.
<p style="text-align: center;"><u>Monitoring</u></p> <ul style="list-style-type: none"> • Pre-employment screening. • On go-going there on after. 	<p style="text-align: center;"><u>Health Surveillance</u></p> <ul style="list-style-type: none"> • MCG Health • Occupational health questionnaires
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31- Pre-cast Concrete Products COSHH ASSESSMENT RECORD	
Project/Premises	All Sites
Company	Milton, Marshalls, Edenhall
Substance/Material	Pre-cast concrete products
Hazardous Contents	Respirable crystalline silica
<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Health hazard Acute toxicity </div>	
Activity	Cutting pre-cast materials
Location	As required within construction within the drawings.
Risk to Health	Chronic or acute silicosis; cancer; autoimmune diseases; tuberculosis; renal disease; Chronic obstructive pulmonary disease (COPD); irritation to skin and eyes
Control Measures	Elimination of cutting by design or work process guillotining pre-cast materials; substitution of other material for kerbs at design stage; suppression of dust at source by water; wearing of P3 filter masks by operator, all operatives to be face-fit tested with adequate RPE.
Fire Information	Concrete materials not combustible.
Storage	n/a
Disposal	n/a
Spillage	n/a
First Aid	
▪ Inhalation	Remove to fresh air. Seek medical attention, CPR. If exposure is massive- immediate medical
▪ Eye Contact	Irrigate eyes for at least 10 minutes. Immediate medical attention
▪ Skin Contact	Wash skin with soap and water. Medical attention if irritation persists
▪ Ingestion	Do not induce vomiting. Seek medical attention
<u>Monitoring</u> > Of control measures- without control measures, WEL will be exceeded.	<u>Health Surveillance</u> > Use of MCG individual questionnaires
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32- Weedkiller		COSHH ASSESSMENT RECORD	
Project/Premises	All Sites		
Company	Westland Horticulture Ltd		
Substance/Material	Weedkiller New Way Wed Spray		
Hazardous Ingredients	Nonanoic Acid, (1,2- Benzisothiazol-3 (2)H-one		
			
Process			
Activity	Spraying weed killer, Resolva Zero On oversite		
Location			
Risk to Health	Causes serious eye irritation, may cause allergic reaction		
Control Measures	Avoid eye and skin contact, do not eat drink or smoke when using this product. Take of any potential contaminated clothing and wash before reuse. Wash hands and forearms and observe good hygiene. Take notice of direction of use on the label. Good general ventilation should be enough to control worker exposure to airborne contaminants. Protective equipment to be used: Splash proof goggles, Protective gloves (Butyl-rubber, chloroprene, PVC) ensure you do not flush into surface water or sanitary sewer system. Avoid using in windy conditions to prevent runaway		
Fire Information	Use water spray, dry powder, foam, carbon dioxide. DO NOT USE WATER JET.		
Storage	Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, protect from freezing. Keep container tight and sealed. If opened must be carefully resealed and to be kept in an upright position to prevent leaks and spills.		
Disposal	The generation of waste should be avoided or minimized where possible. Disposal of this product, solutions and any by-products should always comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.		
Spillage	Contain Spillage, soak up with non-combustible absorbent material, (eg sand, earth)		
First Aid			
▪ Inhalation	Move person to fresh air, keep patient warm and at rest. Consult a physician for severe cases.		
▪ Eye Contact	Rinse several minutes cautiously with water if product gets contact with eyes. Remove contacts if applicable and resume rinsing. Get medical advice if eye irritation persists.		
▪ Skin Contact	Wash the affected area with soap and plenty of water. If irritation continues, call a physician.		
▪ Ingestion	Wash out mouth with water and drink plenty of water afterwards. DO NOT INDUCE VOMITING. Consult with a physician if applicable.		

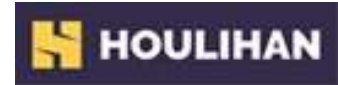
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<p><u>Monitoring</u></p> <p>➤ Not Applicable</p>	<p><u>Health Surveillance</u></p> <p>➤ Not Applicable</p>
<p>A.Shehu</p>	<p>10.06.2025</p>

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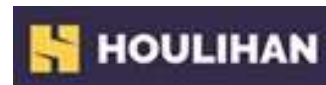
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33- Ready Mix/Site Mix Concrete COSHH ASSESSMENT RECORD	
Project/Premises	All Sites
Company	Hanson, Tarmac, Brett, Euromix
Substance/Material	Ready mix concrete, site mixed concrete
Hazardous Contents	Cement, silica, hexavalent chromates
	
Process	Constructing in-situ concrete structures
Activity	Placing concrete, vibrating concrete
Location	See drawings
Risk to Health	Irritant contact dermatitis due to wetness and alkalinity, allergic contact dermatitis due to reaction to chromates, chemical burns from cement, silica present in aggregates- respirable if cut or abraded after concrete sets.
Control Measures	Mixing off-site when practicable. Direct pour when possible. Pump used for difficult to reach areas. Gloves for wet work. Overalls, eye protection. Boots to be waterproof. Avoid standing in concrete. If mixed on site, avoid using half bags, do not throw materials into mixer
Fire Information	Not applicable
Storage	Concrete will cure, so storage is limited.
Disposal	Washout area to allow bunding of runoff and disposal of hardened concrete
Spillage	Avoid entry to water courses.
First Aid	
▪ Inhalation	For work on hardened concrete, see silica assessment. For site mixing, remove to open air, medical attention if irritation persists
▪ Eye Contact	Irrigate eyes for at least 15 minutes. Immediate medical attention
▪ Skin Contact	Immediately wash skin with soap and water. Remove and wash contaminated clothing. Medical attention if contact results in burning or irritation persists. Do not place/aim chute of lorry.
▪ Ingestion	Do not induce vomiting. Drink water. Immediate medical attention
<u>Monitoring</u> ➤ Not Applicable	<u>Health Surveillance</u> ➤ MCG questionnaire. Examination by foreman of hands for dermatitis symptoms.
Issued: A. Shehu	Date: 10.06.2025

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34- White Spirit		COSHH ASSESSMENT RECORD	
Project/Premises			
Company	Bartoline Limited		
Substance/Material	White spirit		
Hazardous Contents	Naphtha (petroleum) hydrodesulfurised heavy		
Process/Activity	A highly refined solvent suitable for general degreasing purposes, brush cleaning and paint thinning.		
Location			
Risk to Health	If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions. Repeated exposure may cause rashes or more serious skin conditions. Vapours inhaled in strong concentrations may have a narcotic effect on the central nervous system (headache, dizziness...)		
Control Measures	Avoid contact using Nitrile gloves, overalls, eye protection. Maintain a good standard of ventilation at all times.		
Fire Information	Carbon Dioxide(Co2), Black – <u>USE / DON'T USE</u> Foam, Cream – <u>USE / DON'T USE</u> Dry Powder, Blue - <u>USE / DON'T USE</u> Water, Red - <u>USE / DON'T USE</u>		
Storage	Store away from fire load or source of ignition. Store minimal amounts. Keep in original container and out of direct sunlight.		
Disposal	Empty drums/containers should be taken for recycling, recovery or disposal through a suitably qualified or licenced contractor.		
Spillage	Prevent liquid from entering watercourse, keep away from public area, and shut of source if possible to do so without hazard. Contain spillage with earth or sand. Consult with expert on disposal of recovered material and ensure conformity with local disposal regulations.		
First Aid			
• Inhalation	Remove to fresh air. If unconscious, place in recovery position. Seek medical help. Symptoms: Irritation of the respiratory system; narcosis.		
• Eye Contact	Wash area with plenty soap and water. Remove any heavily contaminated clothing. Seek advice if irritation persists. -Symptoms: Skin irritation		
• Skin Contact	Flush out eyes with clean water, whilst lifting the eyelids, continue for 15 minutes or until the irritation subsides. Seek medical help if irritation persists. -Symptoms: Burning feeling and temporary redness.		

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• Ingestion	If swallowed, DO NOT induce vomiting. Wash out mouth and give water to drink Get immediate medical help. -Symptoms: Nausea, vomiting, abdominal pains.	
<u>Monitoring</u> ➤ Not Applicable		<u>Health Surveillance</u> ➤ Not Applicable
Issued: A. Shehu		Date: 10.06.2025

Appendix L

WORK ON OR NEAR UNDERGROUND SERVICES

SERVICES 1

Site Procedure When Requested To Undertake Work On Or Near Live Services

On being requested to carry out works on or near services, issue “Request to render dead” form (SERVICES 2) to manager making request, in order to gather information. Please make clear that Houlihan & Co. need a minimum of 2 days’ notice.

The completed form (Services 2) must be returned by the PC/ Client/ Developer before works can be planned or will proceed.

The OHSEQ department must be contacted and the completed form sent immediately. Note any problems identified at this time.

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Jason Meadows: Alex.Salmon@houlihans.co.uk

Agron Selita: Agron.Selita@houlihans.co.uk

A task specific method statement will be produced and sent to site, and copied to the PC/ Client/ Developer for approval. This method statement must be on site and communicated to the site team, ensuring they have been consulted, on the day work is to commence. All available drawings will be in hand and will have been consulted.

Photographic evidence of the preparations for the works will be submitted by 08.30, before intrusive work starts to OHSEQ advisor named on the method statement.

The photographs will be date and time stamped, as follows:

1. Method statement and briefing signed off
2. Drawings used
3. Team wearing correct PPE
4. Compressor and air pick
5. CAT, generator/ transmitter

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Civil Engineering Contractors
Specialists in Road Sewers & Groundworks



- 6. Ground marked out**
- 7. 360° excavator with toothless bucket**
- 8. Floor saw/ disc cutter**
- 9. Heras panels with fire resistant debris netting**
- 10. Suitable backfill available**
Work can now start
- 11. Services when exposed**
- 12. Geolocation of services verified recorded**
- 13. Backfill, tape over**
- 14. Reinstatement**



SERVICES 2

Work Requested On Or Near Services

Description of works:

Date of works proposed:

NOTE: we require a minimum of 2 days' notice to plan and produce a Method Statement.

What service drawings are available:

Records of existing services?

Design drawings?

As built drawings?

Issued now: Yes/ No

When received:

Have utility companies been contacted to inform them that work is due to be undertaken on or near their apparatus? Yes/ No

What is the status of the electrical services:

LIVE? CHARGED? DEAD? NOT KNOWN?

If the service is due to be diverted or disconnected this should be done now.

If the service is dead:

Evidence of disconnection

Date of testing as dead (including testing for capacitance)

If the service is live:

Has a responsible person from the ICP or DNO been asked to isolate and render dead? Yes/ No

If it is considered unreasonable in the circumstances to render dead, who has taken this decision?

NAME:

POSITION:

What reason has been given for this?

REASON:



SERVICES 3

Checklist to be completed as procedure is followed

Identification of Works: Site/ Reference Number _____

Works notified to OHSEQ 2 days in advance (minimum) Y/N

Method Statement received Y/N

Method Statement briefed Y/N

Photographs pre start taken and sent:

- | | |
|---|------------|
| 1. Method statement and briefing signed off | Y/N |
| 2. Drawings used | Y/N |
| 3. Team wearing correct PPE | Y/N |
| 4. Compressor and air pick | Y/N |
| 5. CAT, generator/ transmitter | Y/N |
| 6. Ground marked out | Y/N |
| 7. 360° excavator with toothless bucket | Y/N |
| 8. Floor saw/ disc cutter | Y/N |
| 9. Heras panels with fire resistant debris netting | Y/N |
| 10. Suitable backfill available | Y/N |

Work can now start

Photographs for works progressing sent:

- | | |
|--|------------|
| 11. Services when exposed | Y/N |
| 12. Geolocation of services verified recorded | Y/N |
| 13. Backfill, tape over | Y/N |
| 14. Reinstatement | Y/N |

Works completed- retain completed checklist on site notice board.

If NO is recorded, DO NOT START or later in works STOP works until photo can be sent or OHSEQ department contacted re problem.

WORK ON OR NEAR UNDERGROUND SERVICES

INTRODUCTION- the present situation

In the groundworks that we tender for, it is inevitable that at some stage we will work “on or near” underground services.

It is not inevitable that we have to work on or near **live** services.

Legal context:

EAW Regulations. Memorandum of guidance.

The law applicable to work on electrical services is primarily the Electricity at Work Regulations, 1989.

Regulation 14 Work on or near live conductors

No person shall be engaged in any work activity on or so near any live conductor (other than one suitably covered with insulating material so as to prevent danger) that danger may arise unless –

- (a) it is unreasonable in all the circumstances for it to be dead; and
- (b) it is reasonable in all the circumstances for him to be at work on or near it while it is live; and
- (c) suitable precautions (including where necessary the provision of suitable protective equipment) are taken to prevent injury

Guidance: HSG47, updated:

The assumption that live working can be avoided as the default position is set out in Reg.14 and a full justification of any live working must be detailed before this is considered.

A method statement for live working will be required as live working is not considered to be properly controlled by any permit to work system.

HSG47, rev. Feb.2014, states “Where new services such as electrical or gas supplies are being installed, it may be possible to reduce risks by not installing or commissioning them until other groundworks and work on the installation have been completed. This should be considered early in the design process to allow the works to be sequenced accordingly.”

Electrical utilities regard the fact that damage to a live service triggers a release of energy sufficient to kill or maim as an acceptable fault finding exercise.

All our clients have been requested to ask the DNO or ICP not to liven up the service main when it is installed until this is required for service and testing when the service connections are made. The correct DNO/ICP contacts should also be ascertained for rendering dead conductors if work on or near a live conductor be proposed. If rendering dead is ever determined to be unreasonable, then the reasons for this and the name and position of the person making that decision will be recorded by the developer.

PLANNING BEFORE CONSTRUCTION STARTS

When the decision is taken by developers to build out a site, the presence and status of existing services should be known or investigated. Best practice for this is set out in PAS 128:2014.

PAS 128 and PAS 256 involve both planning proper safe verification and full geospatial recording which must be shared. Original NJUG code of practice in this founded on different utilities unable to get their computer systems to talk to each other. Original target was to have every new service recorded on a national gazetteer available for consultation within 14 days.

Some of our clients have adopted this and pass on to contractors information from utility/ owner historical records, supplemented by GPR surveys and where critical verification (exposure and geolocation- position and reduced levels) of services.

The extent of a “site” must be seen as including off-site works- drainage connections and Se.278 works, and the route of proposed utility mains connections.

This information, continuously under review and updating as new information comes to light, should inform the site planning with, as a minimum, overlaying proposed new works with existing service layouts. Any necessary diversions or permanent disconnections should be carried out before construction work starts. The diversions should be designed to safely avoid later construction. Disconnections should where possible be outside the site boundary in a confirmed position. Disconnection and diversions should be recorded and communicated following best practice as set out in PAS 256:2017. Disconnection certificates should be communicated along with other records to inform construction.

If a site is handed over for demolition before all disconnections and diversions have happened in the expectation that this will be undertaken by a demolition contractor, then all the above verification and recording must be monitored and continued through the demolition phase and used to update the information for any incoming contractor. This communication will have to happen in a timely fashion- any delay until a final demolition report is produced risks information not reaching the groundworkers of fencers for example, especially when the demolition is not completed before other contractors are brought on site.

If there is a delay between deciding to develop the site, commissioning the investigative work above and actual start on site, the whole investigation should be reviewed for changes over what could be years.

If this planning and implementation of best practice takes place, then much risk will be removed.

Utilities/ competition rules and consequences:

Utility companies are no longer statutory bodies. Their only rights are as asset owners. They tend to behave as if they have statutory rights still. 80% of utility work in Hertfordshire is notified so late it can't be properly evaluated and all cannot be checked.

Uncertainty of arrival or working to completion or unannounced arrival by a utility or their contractor causes chaos and rushed work, revisits when laid live cable has to be uncovered again for jointing, services.

Older assets, especially pre privatisation, are not evaluated and recovery of information requires extensive hard copy research in archives.

Existing records- limitations, caveats:

National Grid place a standard text box on drawings saying the accuracy can't be relied on.

At Welwyn Garden City a new laid, diverted pipe placed 4.0m. away from the design position, in the middle of a bellmouth, with a tapping on top going nowhere but standing proud by 80mm. was struck and we had no recourse.

A fleet of 33kV cables at High Wycombe were transposed on record drawings to the opposite side of the road. A low voltage cable shown nearby in an ill-defined position snaking across a road junction proved to be power for the controls in a transformer station covering High Wycombe to Portsmouth.

6 known 33kV cables at Tunbridge were safely exposed safely by air pick, and as surrounding material cleared away, another fleet of 3 cables uncovered immediately below the first 6. Drainage was intended to run under the cables, and a redesign was necessary. Note, the redesign was also possible and could have been the first choice of route.

Wayleaves ignored for a 132kV cable routed through proposed foundations.

An ESSO high pressure pipeline was ignored at planning stage and we identified it by our own enquiry.

Limited search areas and use of consultants.

Frequently the search areas commissioned are only to edge of site or near- site footway but required drainage may cross the road beyond boundary.

"Specialist" services consultants' contribution to PCI is usually only a report to a client, with no specification of high risk added to PCI. They are fallible and miss things and have been known to dismiss as unimportant what they have missed. If our works include 100 metres of work off site for 278 works as an example, the surveys will rarely include this. Results are

apparently not passed to civil engineer to ensure foundations don't clash. HV and EHV should be addressed to see if the risks can be designed out. How can a foundation be designed by a competent professional engineer when an existing live service passes through it?

Wayleaves are easily discoverable and should be highlighted in PCI

OH surveys must take place- it shouldn't be an option to require a sag and swing survey with specified safe clearances.

A single line indicating a service on 1 of 8 drawings with annotation off the page in view can be missed. 3x25kV cables in ducts with 1.0m of foamed concrete over, not known to UKPN, nor to Network Rail (though marked Railtrack) proved to be live and supplying the OH lines to Edinburgh. Interruption to service estimated cost £500 per minute. A BAPA was drawn up after our intervention, though initial response was to dismiss as unimportant and probably dead. Our method statement was "approved" by Network Rail- they call it "no objections" rather than approval- and the works- drainage and service connections- were successfully carried out. The cables were located 450mm in the ground with no concrete over, only tape.

PLANNING SITE WORKS

Nothing in these procedures should encourage any person to work near a live cable when there is any doubt about their safety.

This restates a basic statement in UKPN procedures- working "live" is not a first option nor one to be undertaken lightly. Rendering dead, diversions must be the first choice, addressing the EAW hierarchy.

Before ground is broken in the next phases of construction, the information collated to date should be used to mark out points of disconnection, to plot any diversion routes and check issued drawings for clashes of existing services with proposed works- for groundworks, foundations, drainage, service trenches, road construction which should have been eliminated at design stage. Some of this checking could take place at tender stage, but will depend on the availability of construction drawings and changes between tender and construction issue. Any apparent clashes between services, existing or proposed, and our works will be raised with the client urgently.

However accurate and comprehensive the information we have received, we will not accept it without question and ongoing investigation. We will undertake a utility search using Landmark and check this against information received. We will always assume there is a possibility of unrecorded services missed or misinterpreted on GPR surveys.

We have never tendered for working on or near a live service. We have of course tendered to excavate for service trenches. When mains are placed in a common trench, the laying sequence should be complete for each utility, at each level, deepest first. If the service runs are not completed immediately after the mains are laid, then it is inevitable that the groundworker will have to dig back down through the sequence of laid mains to allow jointing. This could be arranged by co-ordinating utilities and certainly digging down on top of live mains is always avoidable.

For works requested on or near services we have the following procedures:

SERVICES 1

Site Procedure When Requested To Undertake Work On Or Near Live Services

On being requested to carry out works on or near services, issue “Request to render dead” form (SERVICES 2) to manager making request, in order to gather information. Please make clear that Houlihan & Co. need a minimum of 2 days’ notice.

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The OHSEQ department must be contacted and the completed form sent immediately. Note any problems identified at this time.

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Patrick Byrne patrick.byrne@houlihans.co.uk

Agron Selita Agron.Selita@houlihans.co.uk

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2. Drawings used
3. Team wearing correct PPE
4. Compressor and air pick
5. CAT, generator/ transmitter

- 6. Ground marked out**
- 7. 360° excavator with toothless bucket**
- 8. Floor saw/ disc cutter**
- 9. Heras panels with fire resistant debris netting**
- 10. Suitable backfill available**

Work can now start

- 11. Services when exposed**
- 12. Geolocation of services verified recorded**
- 13. Backfill, tape over**
- 14. Reinstatement**

Appendix M

EXISTING SERVICES DRAWINGS

Land known as Bull Field, Warish Hall Farm Utilities Statement

Utilities Statement prepared in support of the Section
62A Application relating to the Land known as Bull
Field, Warish Hall Farm, Takeley, Essex.

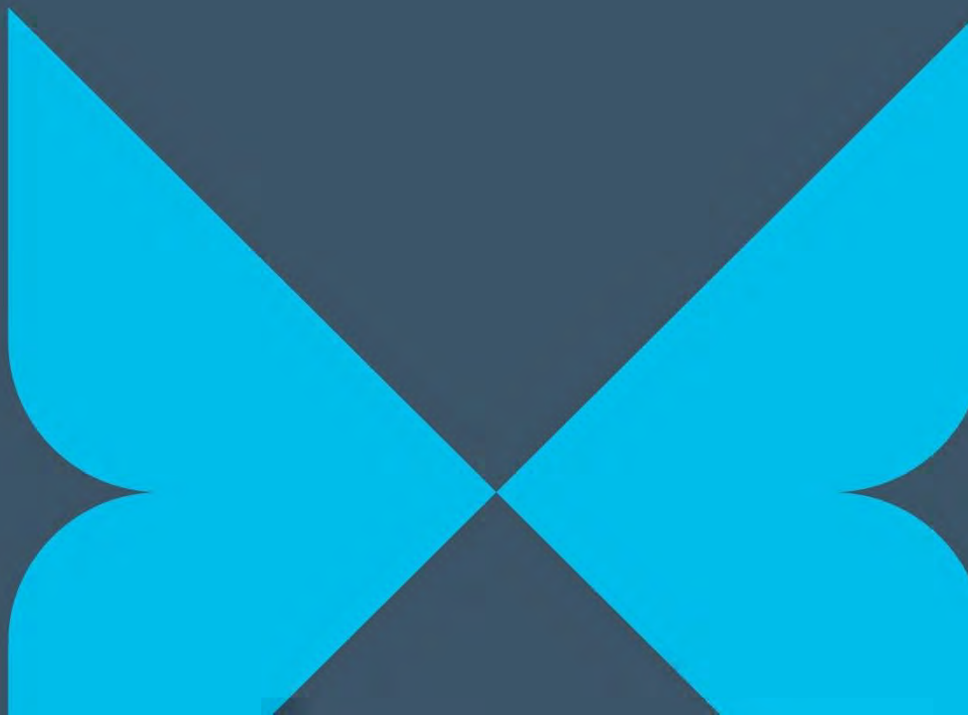


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Document History

Date	Version	Author	Revision/ Notes
19.07.2023	1.0	J.Spencer	

1. Introduction

- 1.1. This report has been prepared to provide an overview of the servicing constraints and supply implications associated with the proposed residential-led development on the Land known as Bull Field, Warish Hall Farm, Takeley, Essex (PINS Ref. No. S62A/2023/0019). The location of the Site is shown on **Figure 1** below.

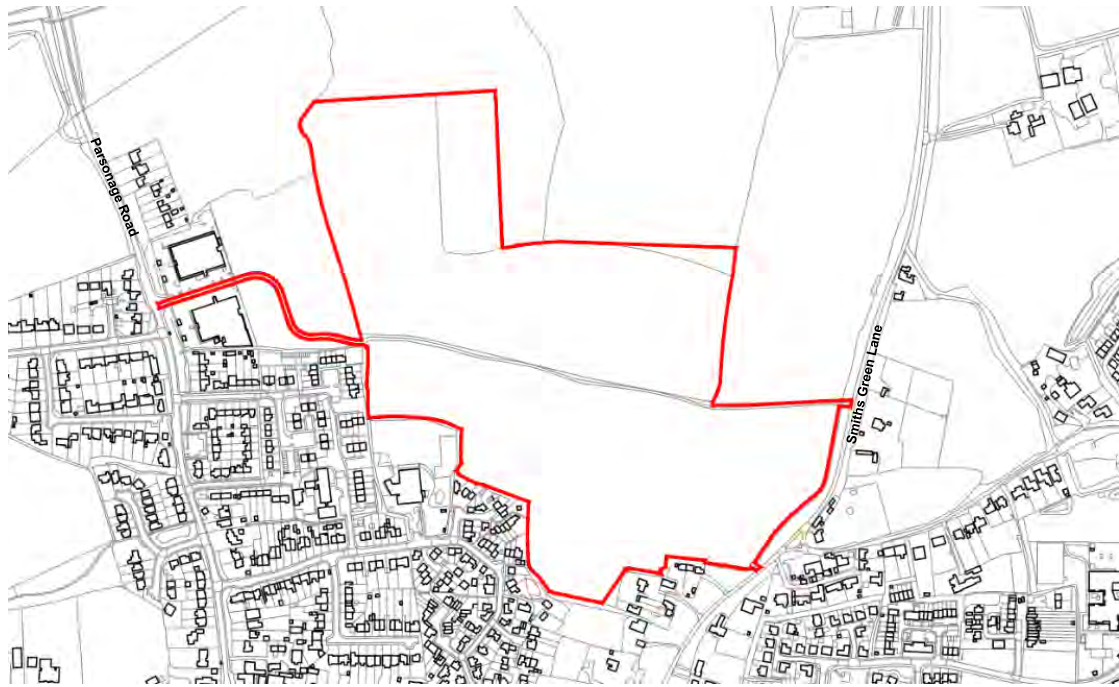


Figure 1 - Site Location

- 1.2. The site is a greenfield site on the northern fringe of the village of Takeley. The location benefits from the presence of utility networks serving the adjacent developed areas of Takeley and Priors Green.
- 1.3. The content of this report relates to a full Section 62A planning application submitted to the Planning Inspectorate for the following:

“Access to/from Parsonage Road between Weston Group Business Centre and Innovation Centre buildings leading to: 96 dwellings on Bulls Field, south of Prior’s Wood, including associated parking, landscaping, public open space, land for the expansion of Roseacres Primary School, pedestrian and cycle routes to Smiths Green Lane together with associated infrastructure.”

2. Utilities

Electricity

- 2.1. The Distribution Network Operator (DNO) for the area is UK Power Network (UKPN). UKPN has overhead and underground high voltage (HV) cables within the vicinity of the Site (see **Appendix A**).
- 2.2. The location of the HV overhead cables has been respected when developing the layout such that these are not directly impacted upon and thus would not require diverting / undergrounding.

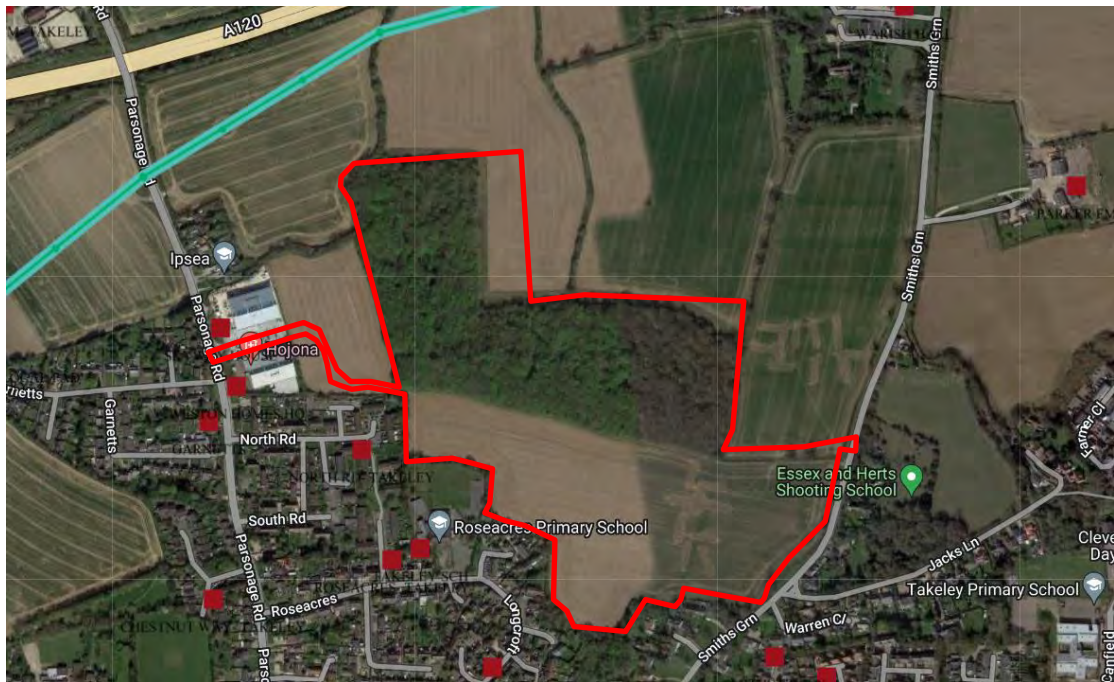


Figure 2 - Existing UKPN Infrastructure (UKPN DG Map, 2023)

- 2.3. Supply has already been agreed for the 7 Acres (to the rear of the Weston Group Business Centre) development which is connecting into the existing network on Parsonage Road. The proposed strategy for the application proposals is to connect into the existing network via the 7 Acres development.
- 2.4. The initial enquiry to UKPN was for a dwelling load of 5 kVA to allow for air sourced heat pumps and electric vehicle chargers to all dwellings.

Gas

- 2.5. Cadent Gas Limited (CGL) has a low pressure (LP) main serving the existing developed area of Takeley (see **Appendix B**).
- 2.6. However, with gas being phased out as a heating source there will be no gas serving the development. There will be no impact on existing infrastructure as a result

Water Supply

- 2.7. Affinity Water (AW) has potable water mains to the west of the site located within Parsonage Road (see **Appendix C**).
- 2.8. Supply has already been agreed for the 7 Acres development which is connecting to the existing main in Parsonage Road. The proposed strategy for the application development is to connect to the 7 Acres main and link through to the existing main on Smiths Green Lane to the east, to provide sufficient pressure and flow to this development
- 2.9. The proposed connection point will be to the existing 4" potable water main to the west of the Site via the 7 Acres development.

Telecommunications

- 2.10. BT operates a service in the area and has undergone ducts and cables located within the adjacent road networks (see **Appendix D**). BT has a statutory obligation to provide telecommunications services but it will be the developer's responsibility to arrange the required service at the appropriate time when the development proposals are advanced.
- 2.11. Fibre broadband is available at Takeley exchange (owned and maintained by Openreach) which has been fibre enabled and has average speeds of 67 Mbps. Companies such as BT, Plusnet, Sky and TalkTalk are able to provide fibre broadband.
- 2.12. A fully fibre connection has also recently been installed by Gigaclear within Takeley (**Appendix E**). This network provides ultrafast and hyperfast connections up to 900 Mbps. Hyperoptic and Open Fibre Networks Limited are also available in the area to provide high speed broadband to the development.
- 2.13. It is intended that connection to these fibre networks would be undertaken for all dwellings to provide Fibre to the Premises (FTTP).

Pipelines

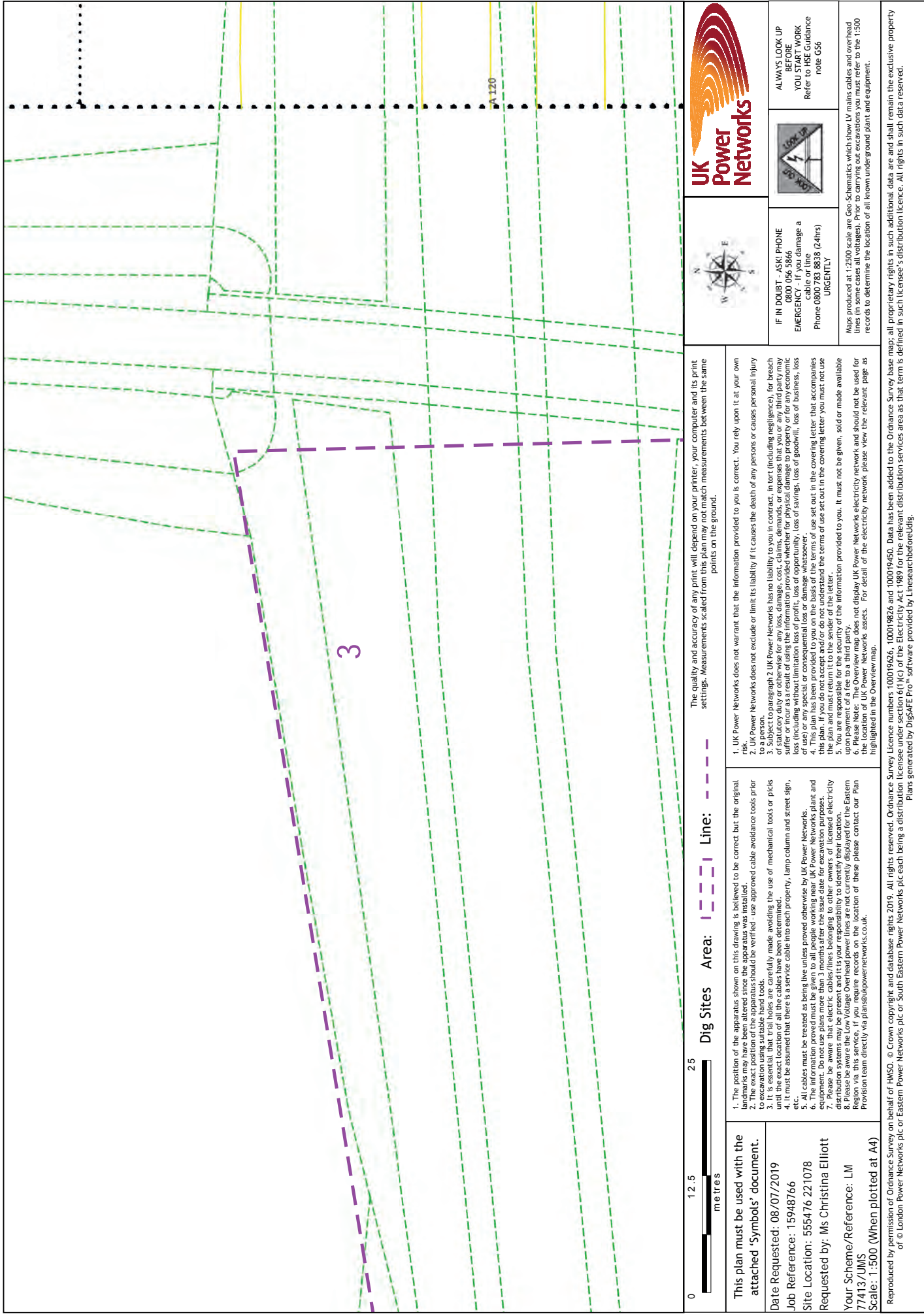
- 2.14. Linesearch has alerted the presence of UKPN infrastructure. There are no other major pipelines or transmission infrastructure noted in the vicinity of the site that would act as a constraint to the proposed development.

3. Wastewater Drainage

Network & Treatment

- 3.1. Thames Water (TW) own and maintain the wastewater network serving Takeley. There are public wastewater sewers in Parsonage Road. This network has been extended to serve the adjacent 7 Acres development and it is proposed to connect this application development into this sewer extension. TW have confirmed that capacity is available in their sewer network for the application development and the 7 Acres sewer extension has been sized to provide additional capacity for the application development.
- 3.2. Correspondence with TW has confirmed that there is currently adequate capacity within the existing sewerage network to the west of the Site to accept the flow generated by the proposed development via a gravity system. As part of the recent appeal scheme Weston Homes engineers contacted Thames Water to confirm that this was still the case. This was subsequently confirmed in an email response of 27 May where it is stated *“I confirm that the capacity Confirmation letter issued by Siva Sivarajan on 31 May 2021 is still valid (Appendix F).”* In light of this there is no necessity to impose further conditions in this regard.
- 3.3. In summary, Thames Water have been contacted about the proposed development, have assessed their sewerage network, and have confirmed to us that there is sufficient capacity for the scheme.
- 3.4. The development proposals will trigger a wastewater infrastructure charge (£365) for each new property connecting to the existing network. Payment will be required prior to the premises being connected.

Appendix A – Electricity – Existing Network – UKPN



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Dig Sites Area: Line:

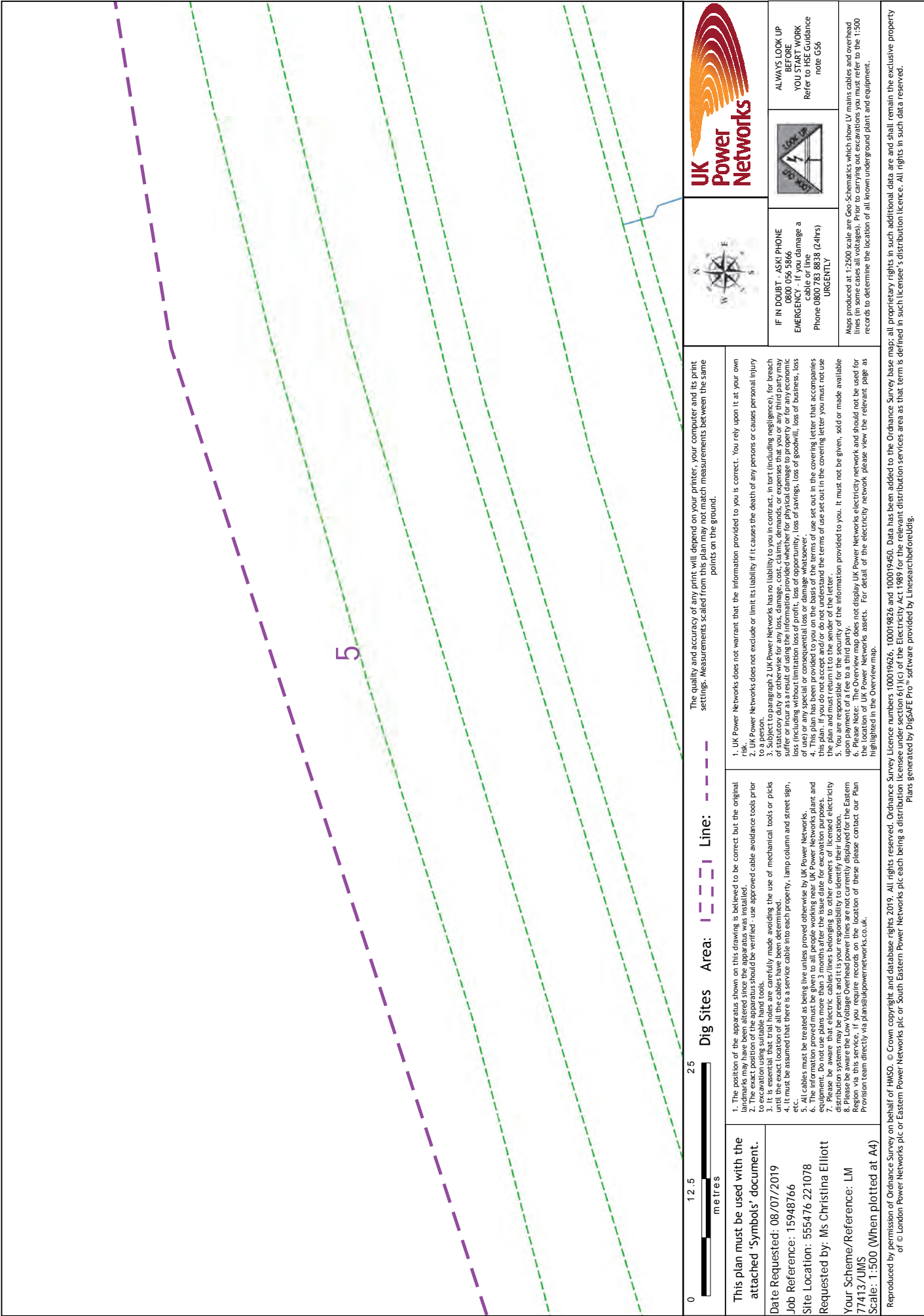
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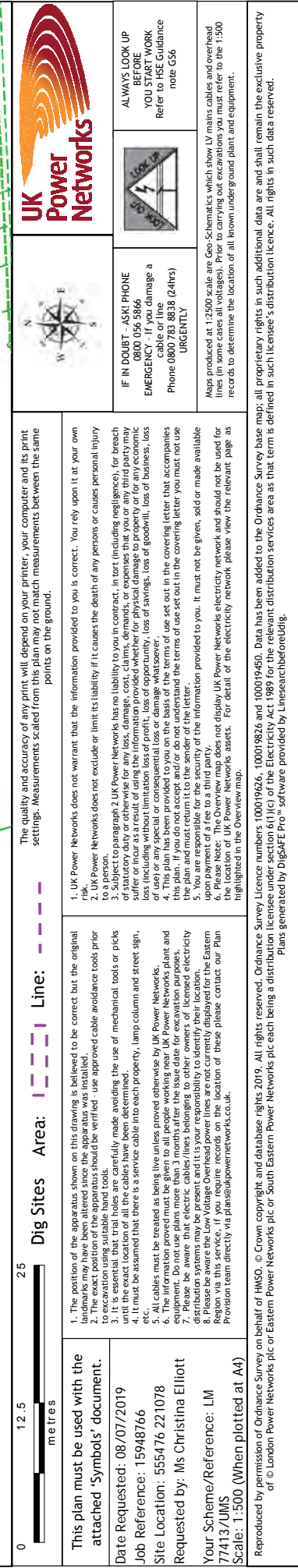
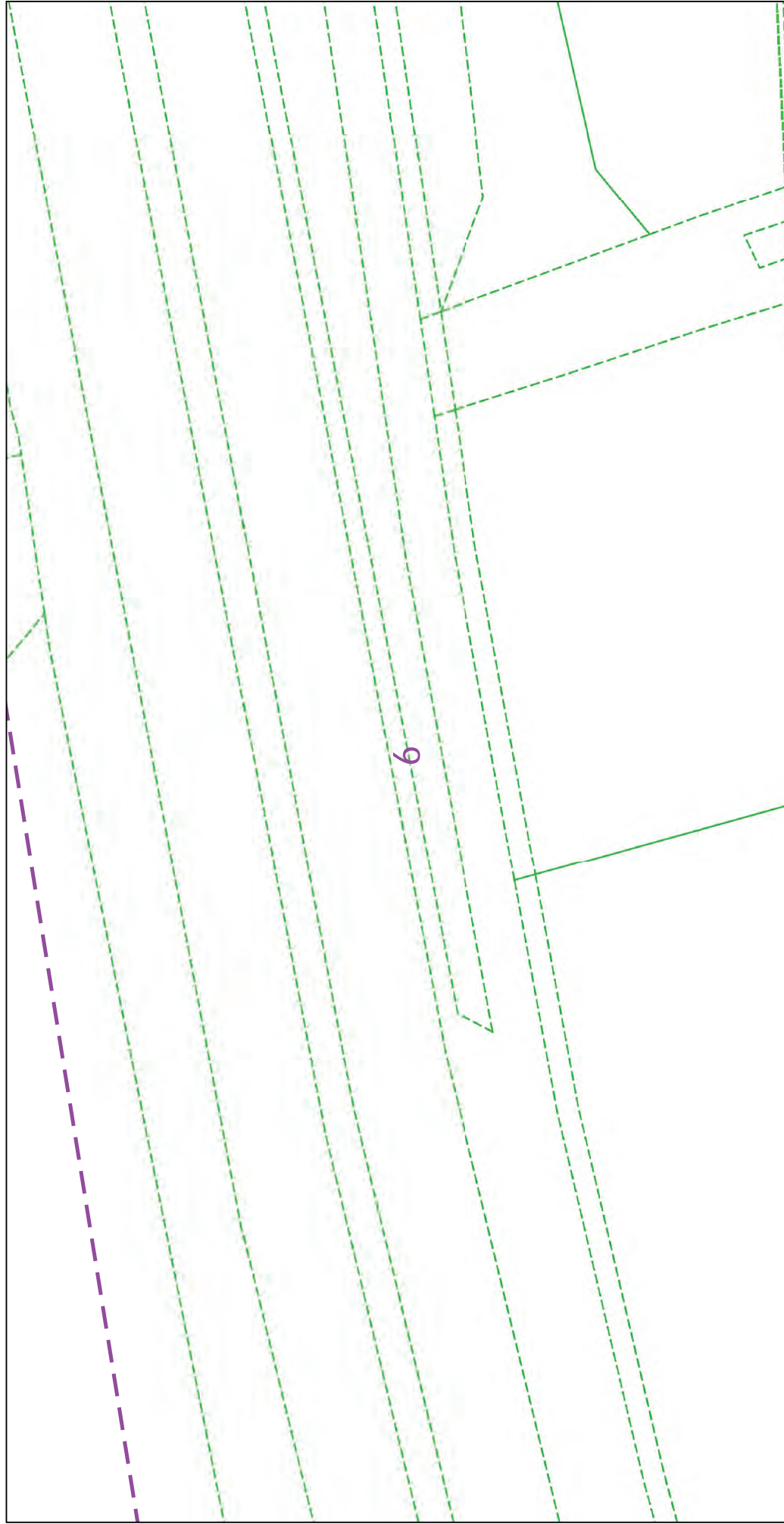
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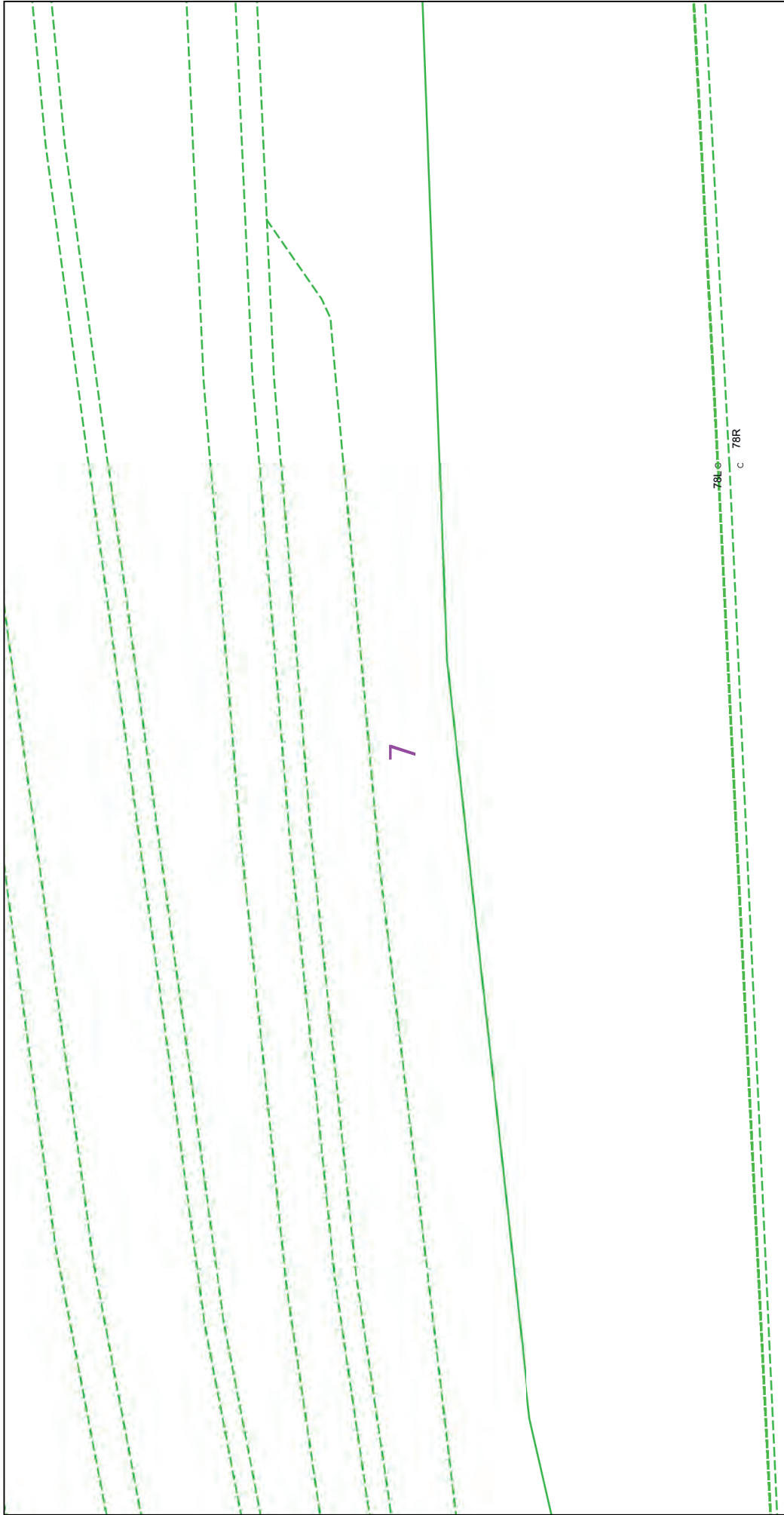
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Scale: 1:500 (When plotted at A4)



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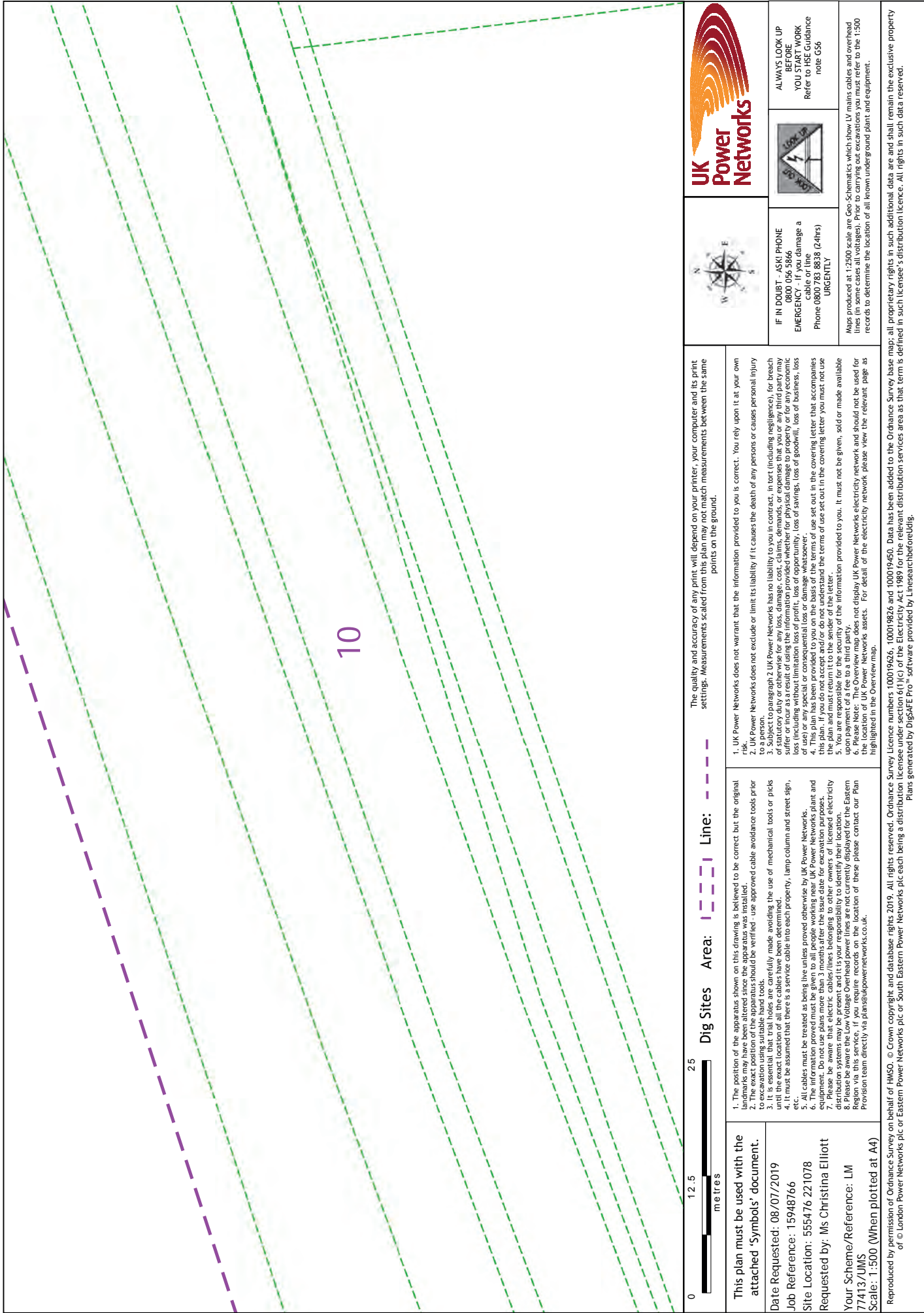
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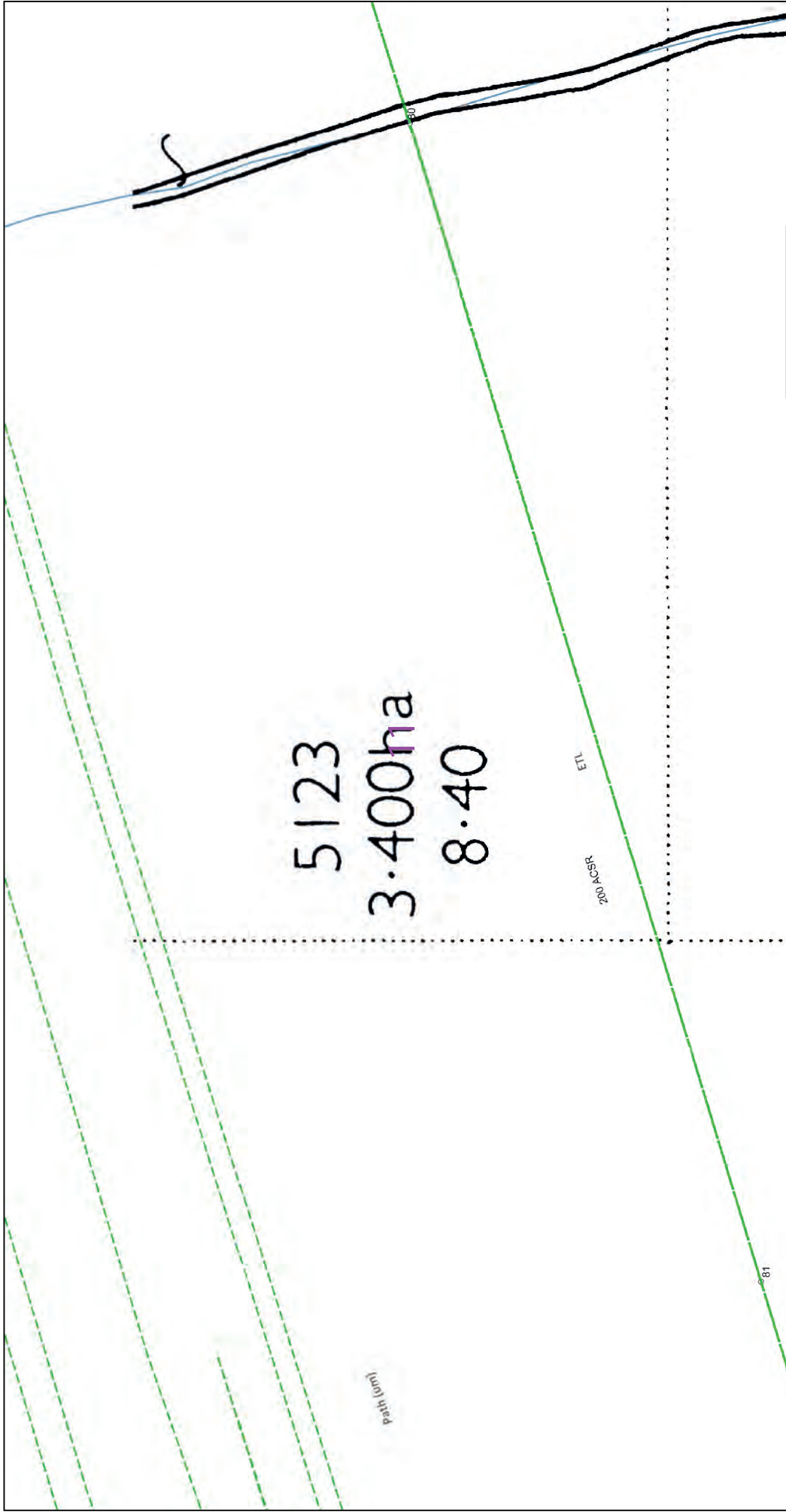
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BR/JT
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metres

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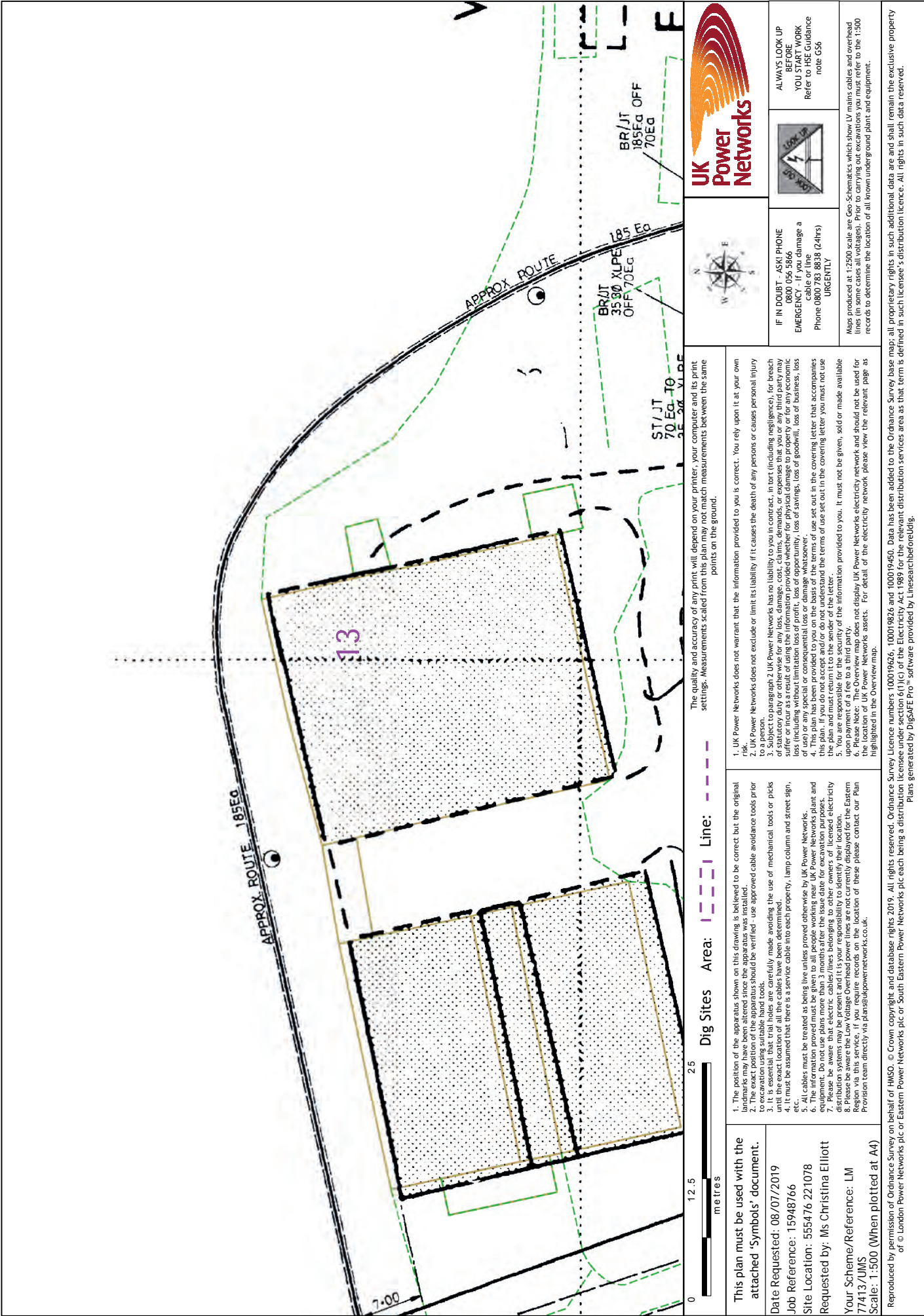
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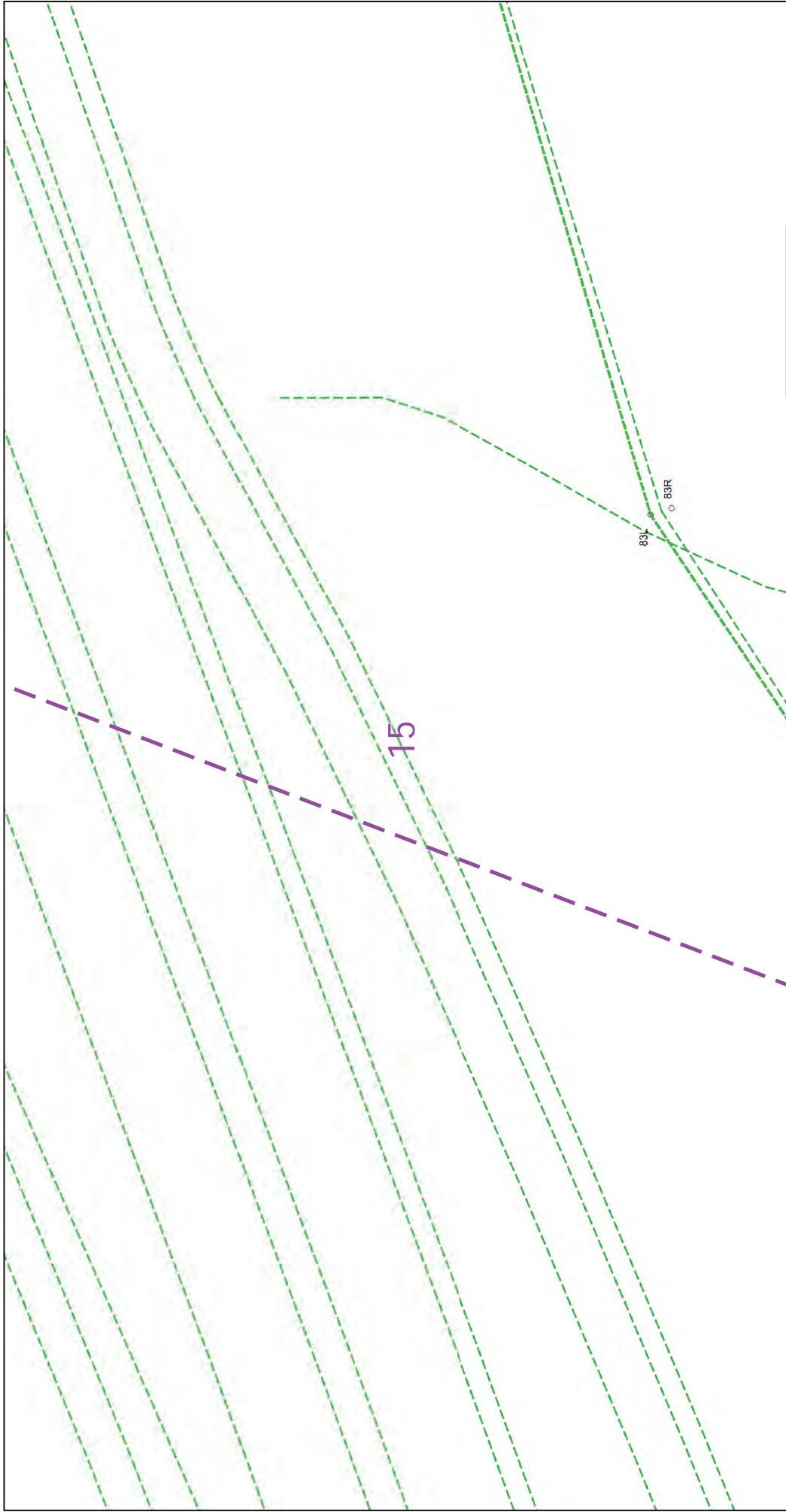
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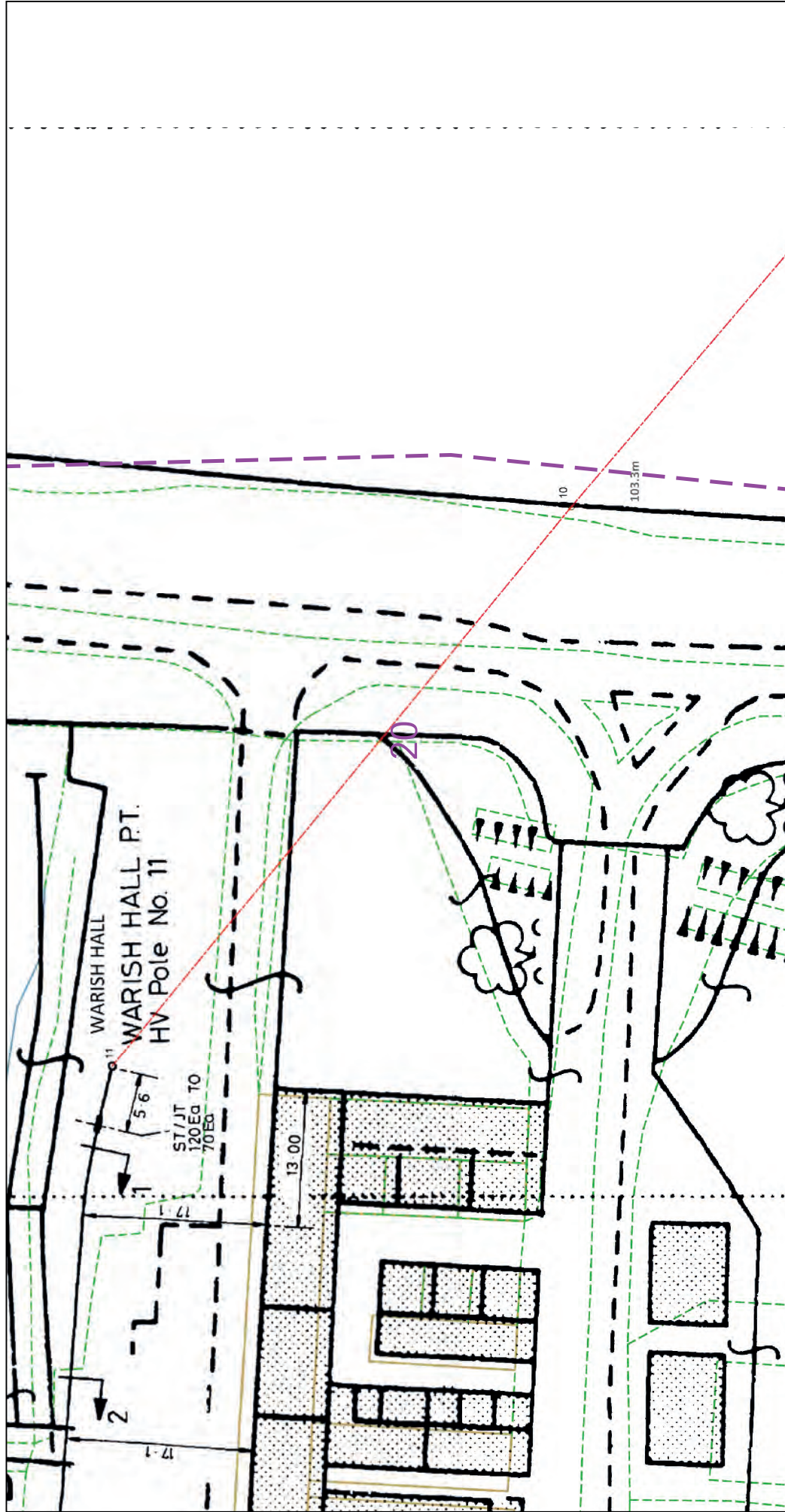
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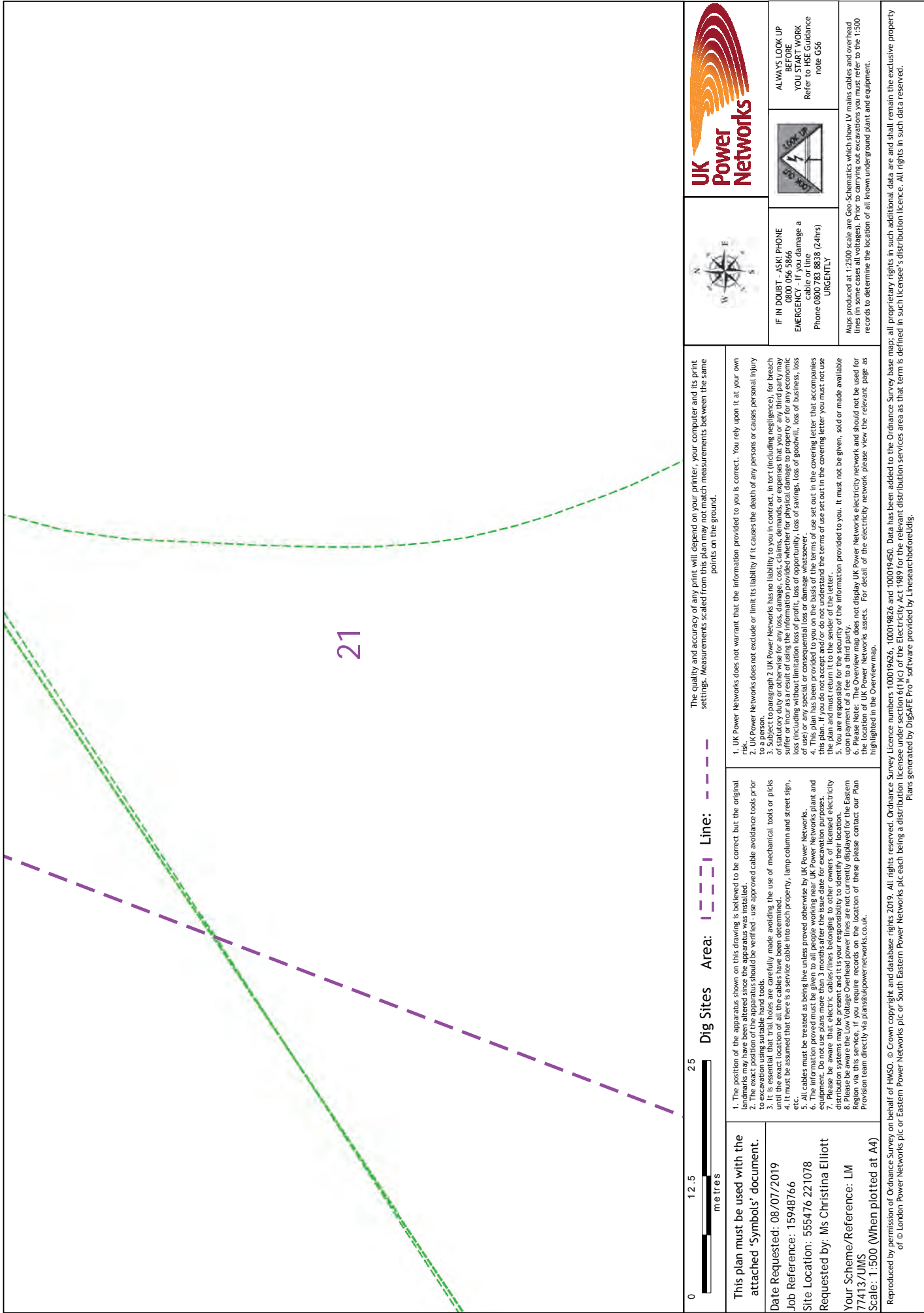
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Date Requested: 08/07/2019		Job Reference: 15948766		Site Location: 555476 221078		Requested by: Ms Christina Elliott		IF IN DOUBT - ASK! PHONE 0800 056 5866	
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1. The position of the apparatus shown on this drawing is believed to be correct but the original drawings may have been altered since the apparatus was installed.		2. The exact position of the apparatus should be verified using approved cable avoidance tools prior to excavation using suitable hand tools.		3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.		4. It must be assumed that there is a service cable into each property, lamp column and street sign.		5. All cables must be treated as being live unless proved otherwise by UK Power Networks.	
6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.		7. Please be aware that electric cables/lines belonging to other owners of licensed electricity equipment. Do not use plans more than 3 months after the issue date for excavation purposes.		8. Please be aware that electric cables/lines belonging to other owners of licensed electricity equipment. Do not use plans more than 3 months after the issue date for excavation purposes.		9. Please be aware that electric cables/lines belonging to other owners of licensed electricity equipment. Do not use plans more than 3 months after the issue date for excavation purposes.		10. Please be aware that electric cables/lines belonging to other owners of licensed electricity equipment. Do not use plans more than 3 months after the issue date for excavation purposes.	
11. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any other person without the prior written consent of UK Power Networks.		12. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.		13. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.		14. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.		15. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss or any special or consequential loss or damage whatsoever.	
16. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.		17. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any other person without the prior written consent of UK Power Networks.		18. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.		19. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.		20. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.	
21. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss or any special or consequential loss or damage whatsoever.		22. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.		23. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any other person without the prior written consent of UK Power Networks.		24. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.		25. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.	






<p>0 12.5 25 metres</p>		<p>25</p>		<p>Dig Sites Area: Line: ---</p>		<p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>		<p>UK Power Networks</p>	
<p>This plan must be used with the attached 'Symbols' document.</p>		<p>Date Requested: 08/07/2019 Job Reference: 15948766 Site Location: 555476 221078 Requested by: Ms Christina Elliott Your Scheme/Reference: LM 77413/UWS Scale: 1:500 (When plotted at A4)</p>		<p>1. The position of the apparatus shown on this drawing is believed to be correct but the original may have been located in a different position. 2. The exact position of the apparatus should be verified by the use of approved cable avoidance tools prior to excavation using suitable hand tools. 3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined. 4. It must be assumed that there is a service cable into each property, lamp column and street sign. 5. All cables must be treated as being live unless proved otherwise by UK Power Networks. 6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes. 7. Please be aware that electric cables/lines belonging to other owners of licensed electricity provision system may be present and it is your responsibility to identify them. 8. Please use the Dig Safe Overview map to identify the location of the Eastern Region via this service. If you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.</p>		<p>IF IN DOUBT - ASK! PHONE 0800 056 5866 Cable or line EMERGENCY - If you damage a cable or line (in some cases all voltages) Refer to DSE Guidance note G56 Phone 0800 781 8636 (24hrs) URGENTLY</p>		<p>UK Power Networks</p>	
<p>Map produced at 1:2500 scale are Gas Schematics which show LV main cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.</p>		<p>Map produced at 1:2500 scale are Gas Schematics which show LV main cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.</p>		<p>ALWAYS LOOK UP BEFORE YOU START WORK Refer to DSE Guidance note G56</p>		<p>UK Power Networks</p>			
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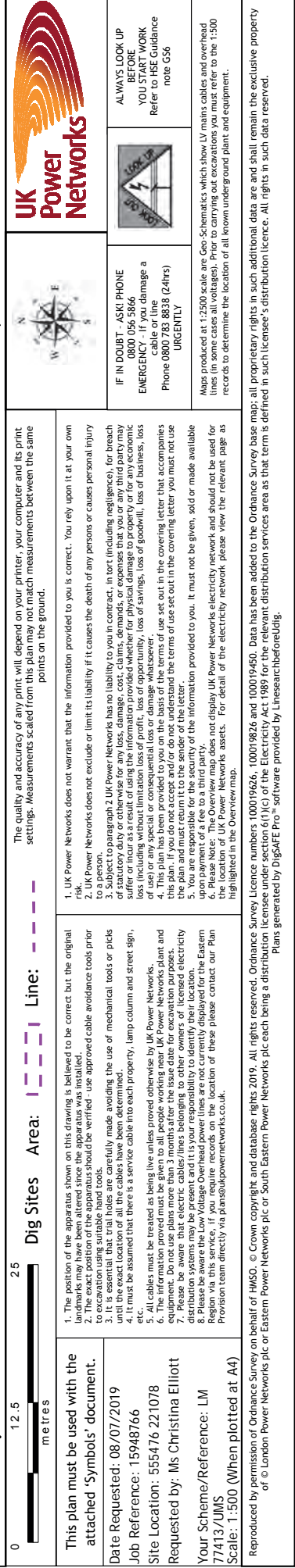
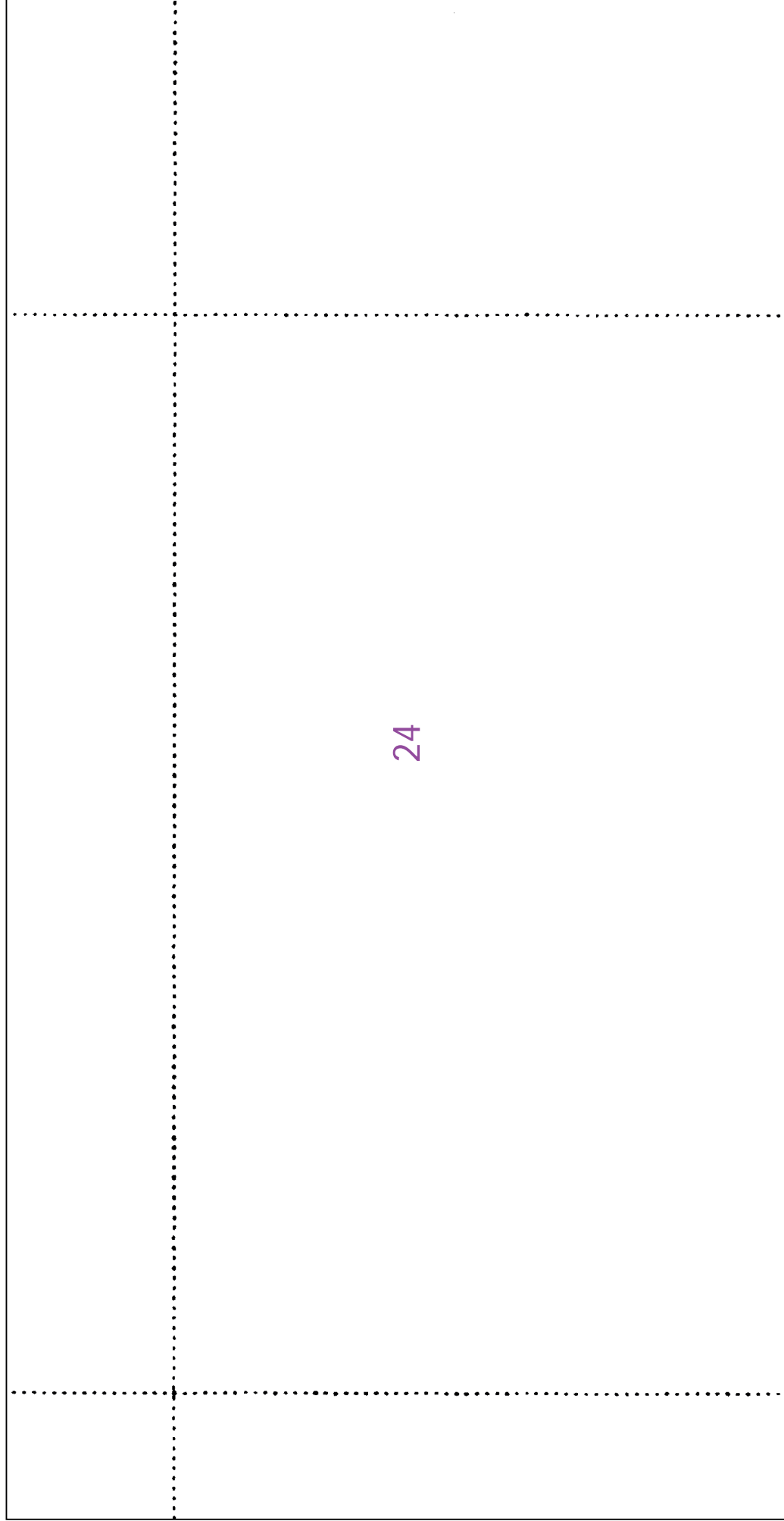
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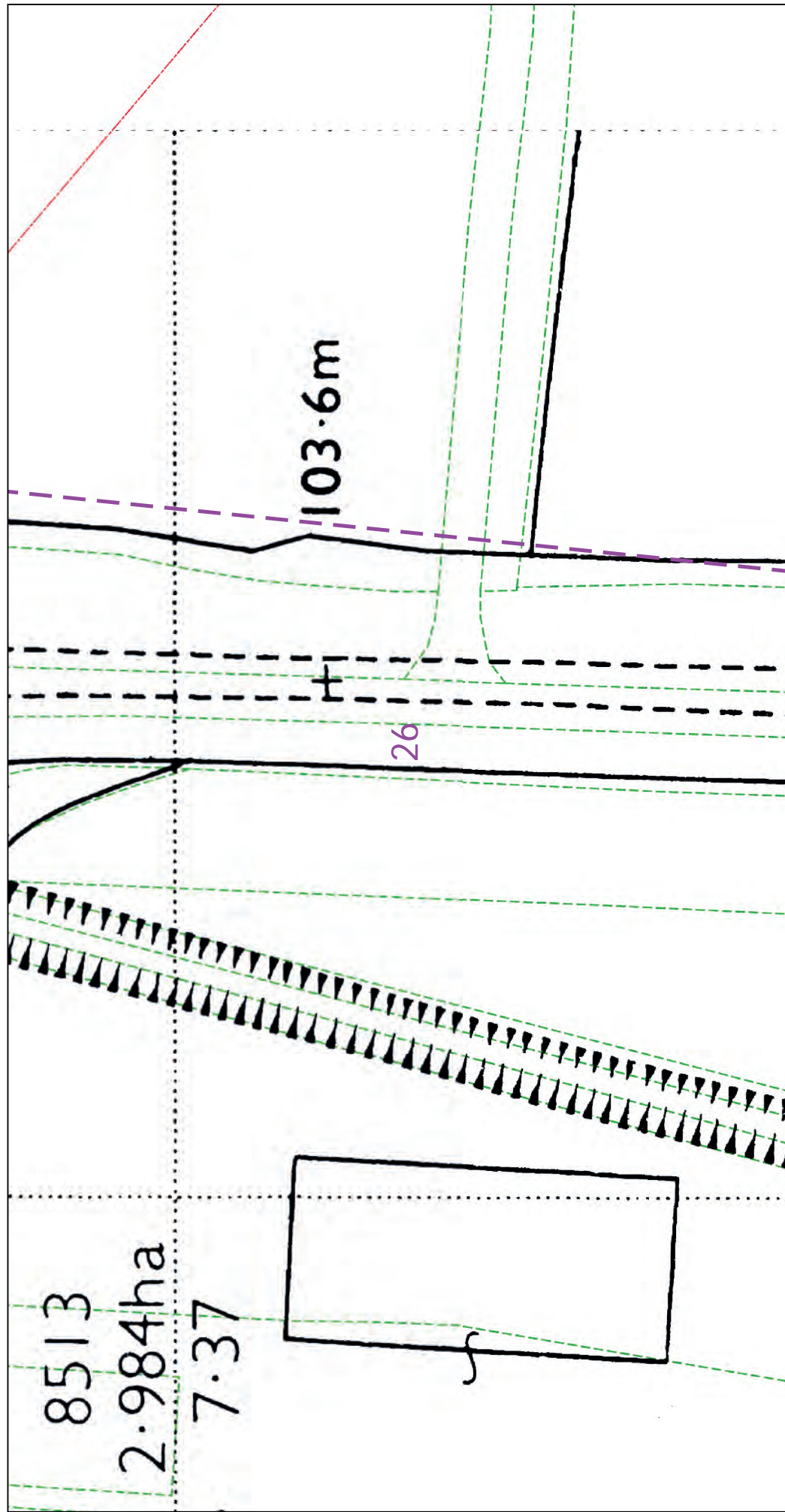


<div><div>012.5metres</div><div>25</div></div>		<div><div>Line: - - - -</div><div>Dig Sites Area:</div></div>		<div>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</div>		<div><div></div><div></div></div>		<div><div></div><div><div>ALWAYS LOOK UP BEFORE YOU START WORK</div><div>Refer to DSE Guidance note G56</div></div></div>	
<div><div>This plan must be used with the attached 'Symbols' document.</div><div>Date Requested: 08/07/2019</div><div>Job Reference: 15948766</div><div>Site Location: 555476 221078</div><div>Requested by: Ms Christina Elliott</div><div>Your Scheme/Reference: LM 77413/UWS</div><div>Scale: 1:500 (When plotted at A4)</div></div>		<div><div>1. The position of the apparatus shown on this drawing is believed to be correct but the original owner may wish to confirm the location of the apparatus is installed.</div><div>2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools.</div><div>3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.</div><div>4. It must be assumed that there is a service cable into each property, lamp column and street sign.</div><div>5. All cables must be treated as being live unless proved otherwise by UK Power Networks.</div><div>6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.</div><div>7. Please be aware that electric cables/lines belonging to other owners of licensed electricity equipment, may not be shown on this plan and it is your responsibility to identify them.</div><div>8. Please do not excavate any underground services or cables without the written consent of the Eastern Region via this service. If you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.</div></div>		<div><div>1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.</div><div>2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.</div><div>3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including loss of profits, loss of business, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.</div><div>4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.</div><div>5. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any third party without the written consent of UK Power Networks.</div><div>6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.</div></div>		<div><div>IF IN DOUBT - ASK! PHONE 0800 056 5866</div><div>EMERGENCY - If you damage a cable or line</div><div>Phone 0800 781 8636 (24hrs)</div><div>URGENTLY</div></div>		<div><div>Map produced at 1:2500 scale are Geo-Schematics which show LV main cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.</div></div>	
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<p>This plan must be used with the attached 'Symbols' document.</p>	<p>1. The position of the apparatus shown on this drawing is believed to be correct but the original marks may have been altered since the apparatus was installed.</p> <p>2. The UK Power Networks should be notified - use approved cable avoidance tools prior to excavation using suitable hand tools.</p>
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Date Requested: 08/07/2019
Job Reference: 15948766
Site Location: 555476 221078
Requested by: Ms Christina Elliott

<p>7. Please be aware that electric cables/lines belonging to other owners of a distribution system may be present and it is your responsibility to identify their location. Please be aware the Low Voltage Overhead power lines are not currently displayed for the Epan 8. Again via this notice, if you require records on the location of these please contact our Epan Provision team directly via Plans@powernetworks.co.uk.</p>	<p>5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.</p> <p>6. Please be aware that the Network map does not display UK Power Networks electricity network and should not be used for the design of any new electrical assets. For details of the electricity network please view the relevant page as highlighted in the Overview map.</p>	<p>Maps produced at 1:2500 scale are Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.</p>
<p>Your Scheme/Reference: LM 77413/UMS</p>	<p>Scale: 1:500 (When plotted at A4)</p>	

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Power Networks

<p>IF IN DOUBT - ASKI PHONE 0800 056 5866</p> <p>EMERGENCY - if you damage a cable or line</p> <p>Phone 0800 783 8838 (24hrs)</p>		<p>ALWAYS LOOK UP BEFORE YOU START WORK</p> <p>Refer to HSE Guidance note G56</p>
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Maps produced at 1:2500 scale are Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

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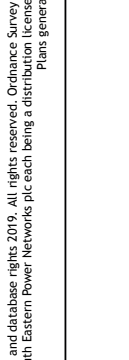
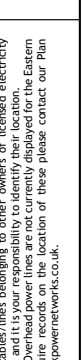
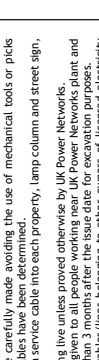
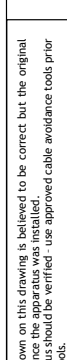
The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

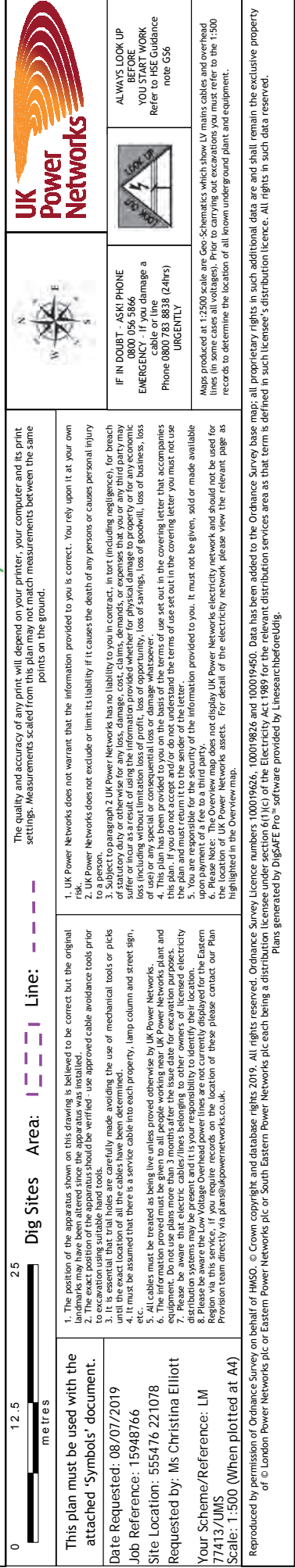
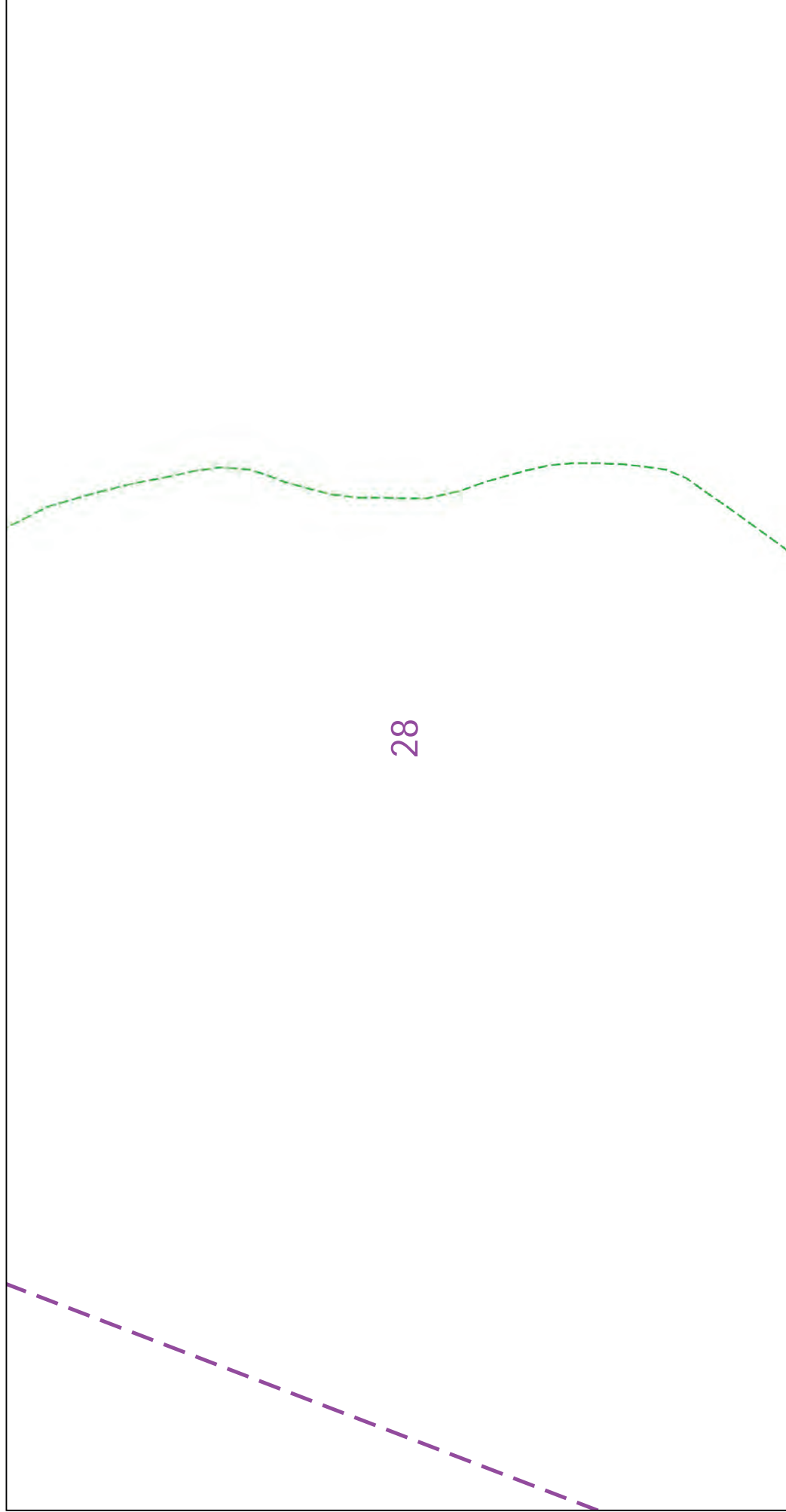
1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.

3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.

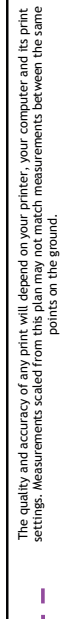
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

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This plan must be used with the attached 'Symbols' document.

Date Requested: 08/07/2019
Job Reference: 15948766
Site Location: 555476 221078
Requested by: Ms Christina Elliott
Your Scheme/Reference: LM 77143/UMS

1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.

2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools.

3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.

4. It must be assumed that there is a service cable into each property, a lamp column and street sign.

5. All cables must be treated as being live unless proven otherwise by UK Power Networks.

6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.

7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present, and it is your responsibility to identify their location.

8. Please be aware the Low Voltage Overhead powerwires are not currently displayed for the Eastern Region. Please refer to the Eastern Region website for the location of these powerwires.

9. Provision team direct via low.voltage@powerworks.co.uk or please contact our Plan

3. Subject to paragraph 2, UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, costs, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of data) or any special or consequential loss or damage whatsoever.

4. The information that you use to set up the meter and the meter itself are not to be used in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.

5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

6. You must not disclose UK Power Networks electricity network and should not be used for the operation or management of UK Power Networks assets. For details of the electricity network please view the relevant page on the location of UK Power Networks assets.

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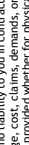
	ALWAYS LOOK UP BEFORE YOU START WORK Refer to HSE Guidance note G56
IF IN DOUBT - ASK PHONE 0800 056 5866 EMERGENCY - If you damage a cable or line Phone 0800 783 8838 (24hrs) URGENTLY	
Maps produced at 1:2500 scale are Geo Schematics which show LV mains cables and overhead powerlines down to the 1:500 records to determine the location of all known underground plant and equipment.	

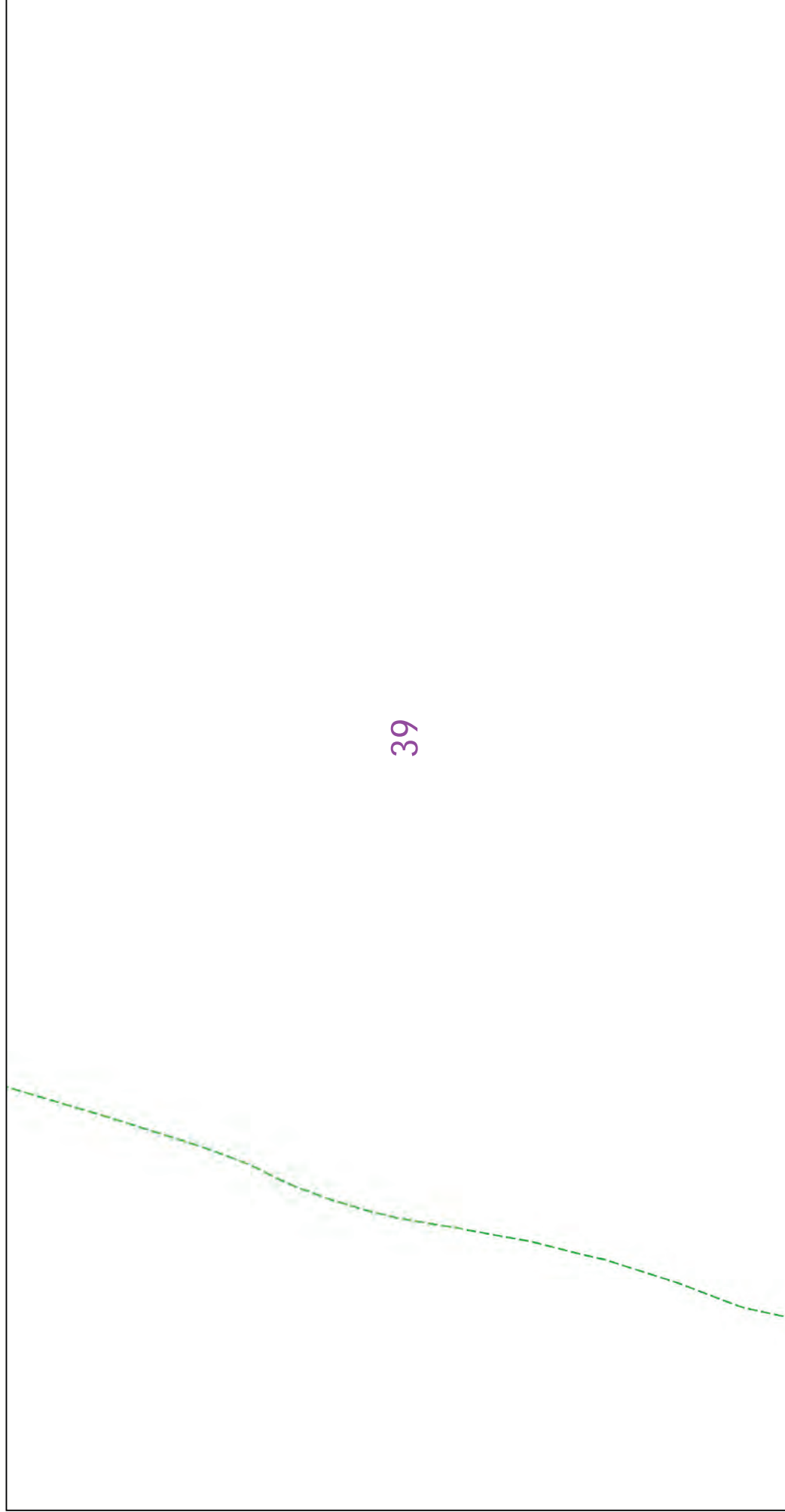
The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.	
Dig Sites Area: Line:	
This plan must be used with the attached 'Symbols' document.	
Date Requested: 08/07/2019 Job Reference: 15948766 Site Location: 5555476 221078 Requested by: Ms Christina Elliott Your Scheme/Reference: LM 77413/UIMS Scale: 1:500 (When plotted at A4)	
<ol style="list-style-type: none">1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools.3. It should be noted that trial pits are carefully made avoiding the use of mechanical tools or picks as it is important that trial pits do not hit live buried cables.4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc.5. All cables must be treated as being live unless proved otherwise by UK Power Networks.6. This plan is valid for 3 months after the issue date for excavation purposes.7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.8. If you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.	<ol style="list-style-type: none">1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of contract or in tort as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.4. The information provided is for guidance only and is set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.5. You are responsible for the security of the information provided to you. It must not be given, sold or made available to third parties.6. Please Note: This Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network please view the relevant page as highlighted in the Overview map.6. Please Note: This Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network please view the relevant page as highlighted in the Overview map.

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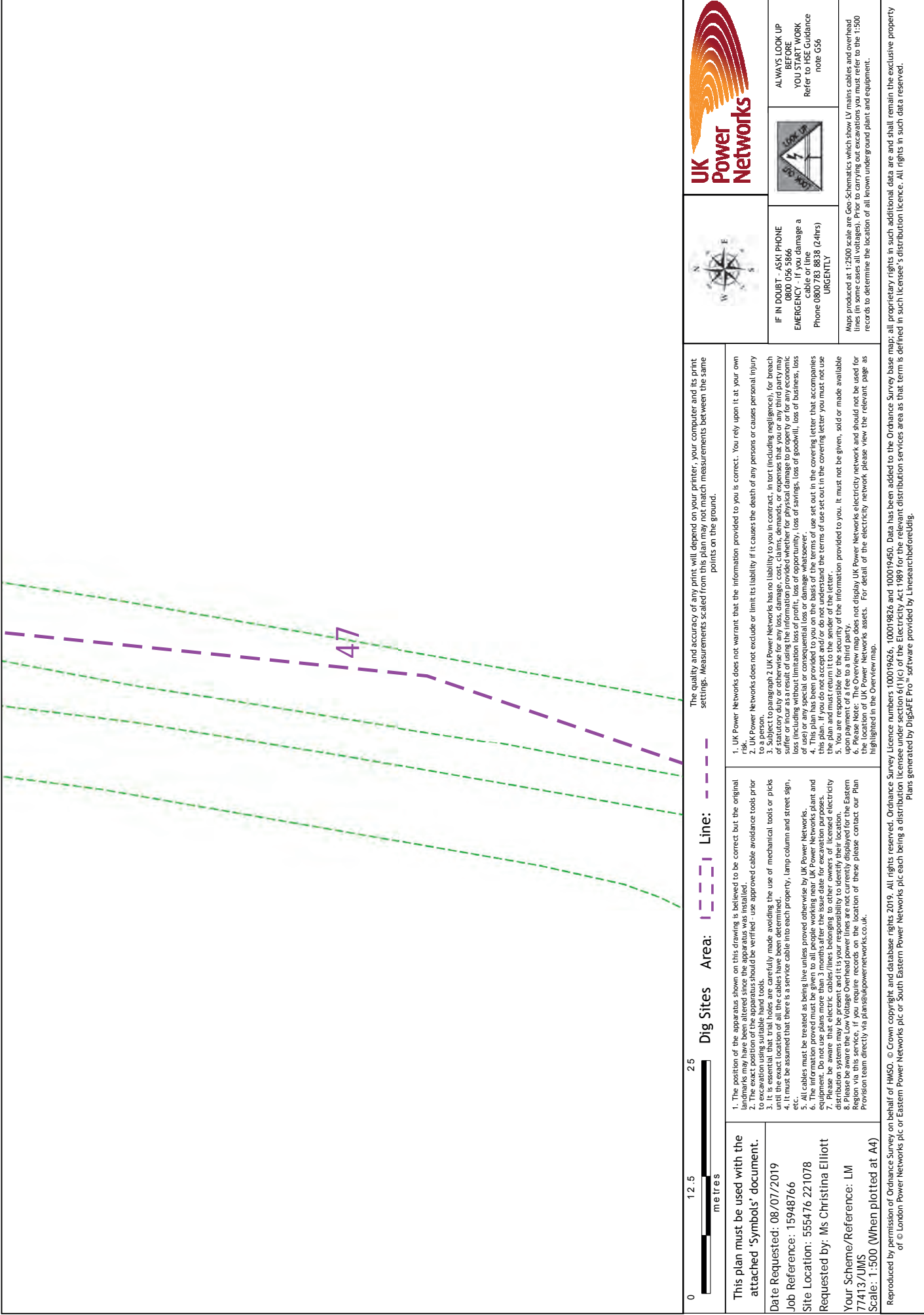
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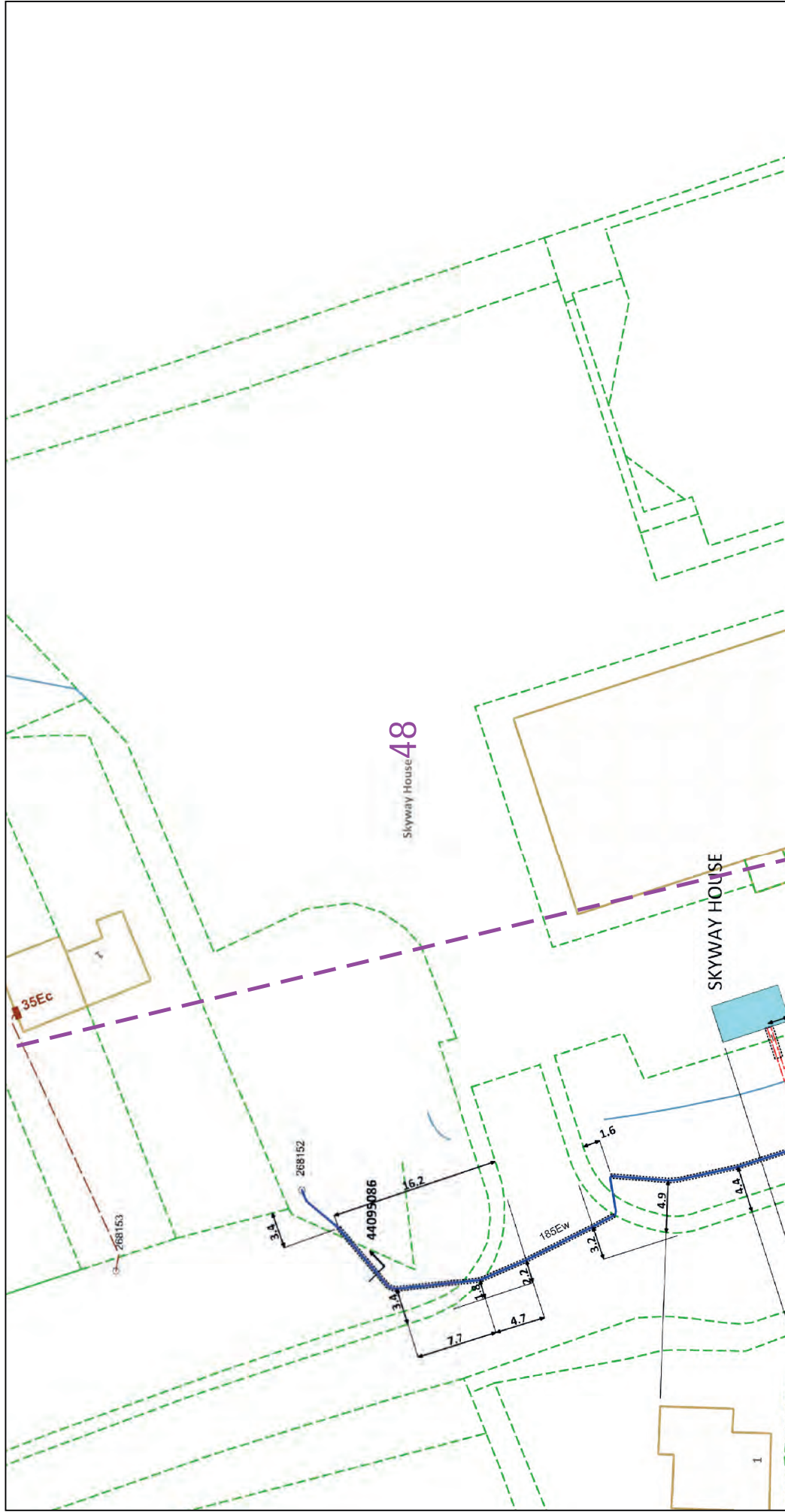
0		12.5 metres	25	Dig Sites	Area: 1.500	Line: - - - - -	The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.				ALWAYS LOOK UP BEFORE YOU START WORK Refer to HSE Guidance note G56						
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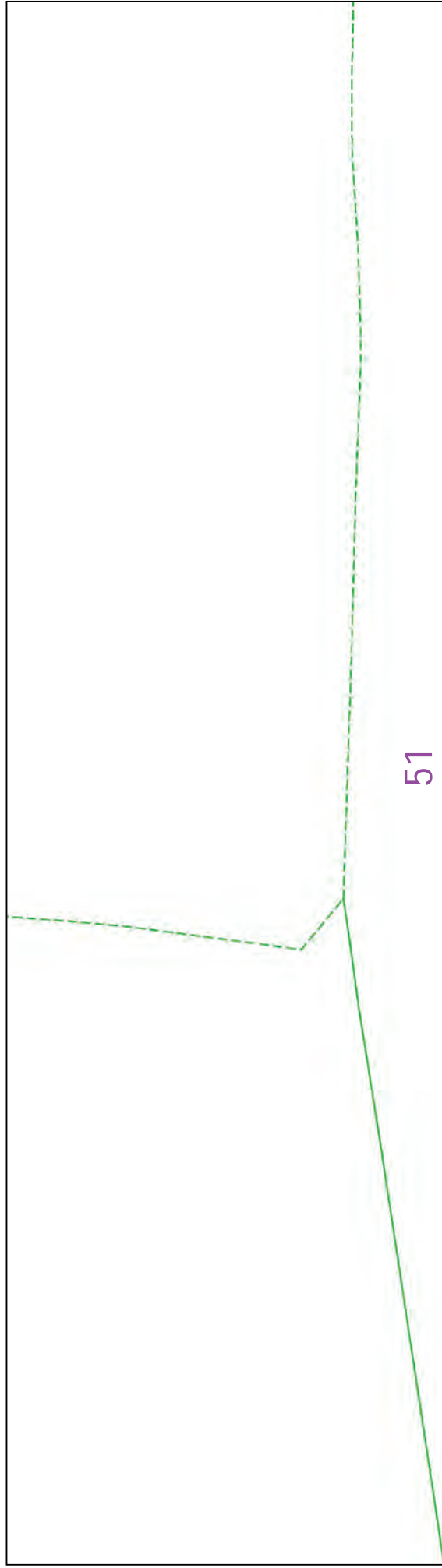
<div>012.5metres</div>		<div>Dig SitesArea:Line:</div>		<div>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan should not be used for measurements between the same points on the ground.</div>			
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<div>Date Requested: 08/07/2019 Job Reference: 55947866 Site Location: 555476 221078 Requested by: Ms Christina Elliott Your Scheme/Reference: LM 77413/UMS Scale: 1:500 (When plotted at A4)</div>		<div>1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk. 2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person. 3. The exact position of the apparatus should be verified - use approved cable avoidance tools or picks to excavation using suitable hand tools. 4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc. 5. All cables must be treated as being live unless proved otherwise by UK Power Networks. 6. The responsibility for any damage to the apparatus or cables belongs to the UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes. 7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location. 8. The responsibility for any damage to the apparatus or cables belongs to the Eastern Region via this service, if you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.</div>		<div>Maps produced at 1:2500 scale are Geo Schematics which show LV mains cables and overhead cables. Refer to the 1:500 records to determine the location of all known underground plant and equipment.</div>			




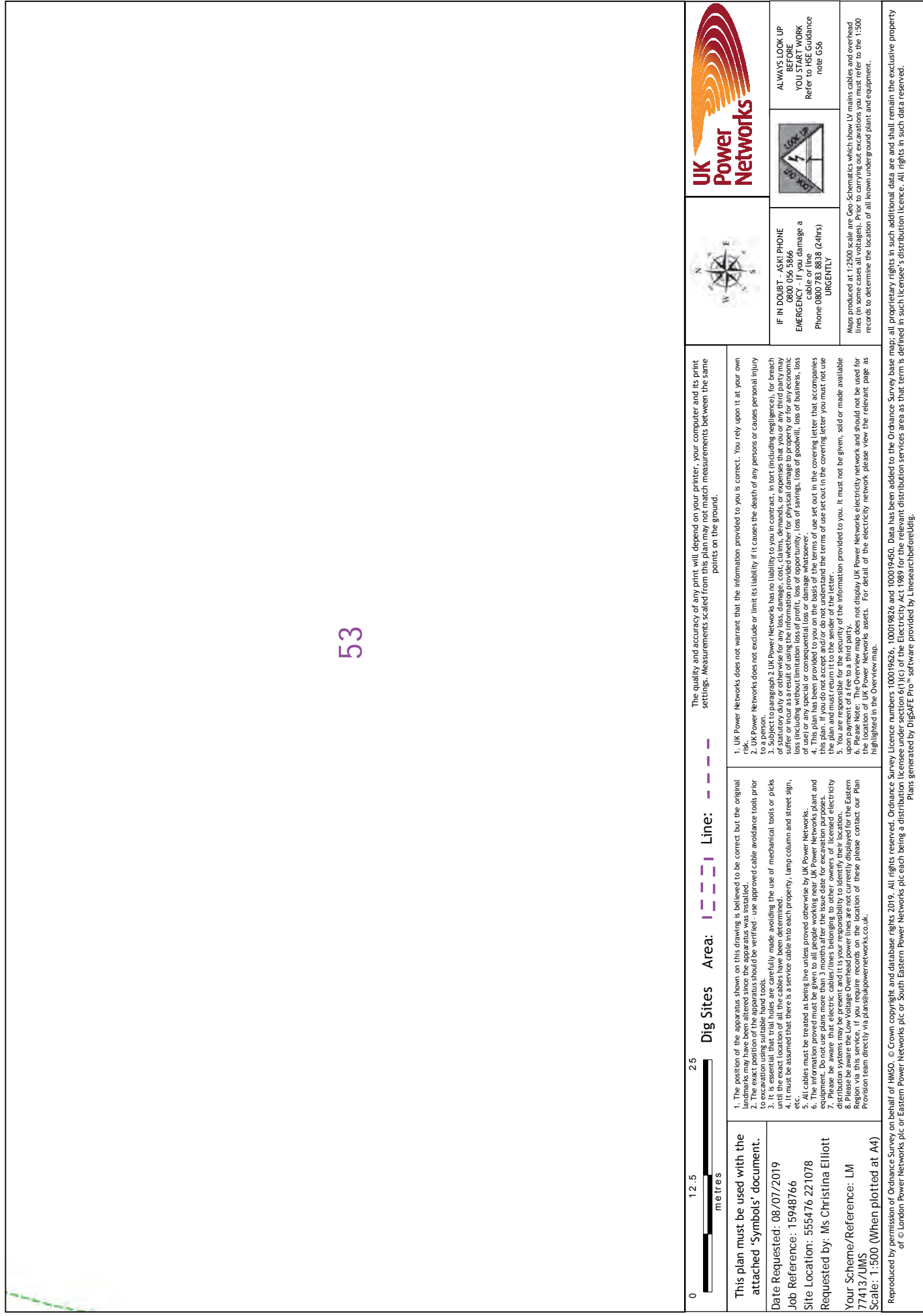
<p>0 12.5 25 metres</p> <p>This plan must be used with the attached 'Symbols' document.</p> <p>Date Requested: 08/07/2019</p> <p>Job Reference: 15948766</p> <p>Site Location: 555476 221078</p> <p>Requested by: Ms Christina Elliott</p> <p>Your Scheme/Reference: LM 77413/UWS</p> <p>Scale: 1:500 (When plotted at A4)</p>	<p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>	<p>IF IN DOUBT - ASK! PHONE 0800 056 5866</p> <p>EMERGENCY - If you damage a cable or line</p> <p>Phone 0800 781 8636 (24hrs)</p> <p>URGENTLY</p>	<p>UK Power Networks</p>	<p>ALWAYS LOOK UP BEFORE YOU START WORK</p> <p>Refer to DSE Guidance note G56</p> <p>Map produced at 1:2500 scale are Gas Schematics which show LV main cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.</p> <p>Reproduced by permission of Ordnance Survey on behalf of HM50. © Crown copyright and database rights 2019. All rights reserved. Ordnance Survey base map; all proprietary rights in such additional data are and shall remain the exclusive property of © London Power Networks Plc or South Eastern Power Networks Plc each being a distributor of the Electricity Act 1989 for the area shown. Plans generated by DigsAFE Pro® software provided by LinesearchbeforeUdig.</p>
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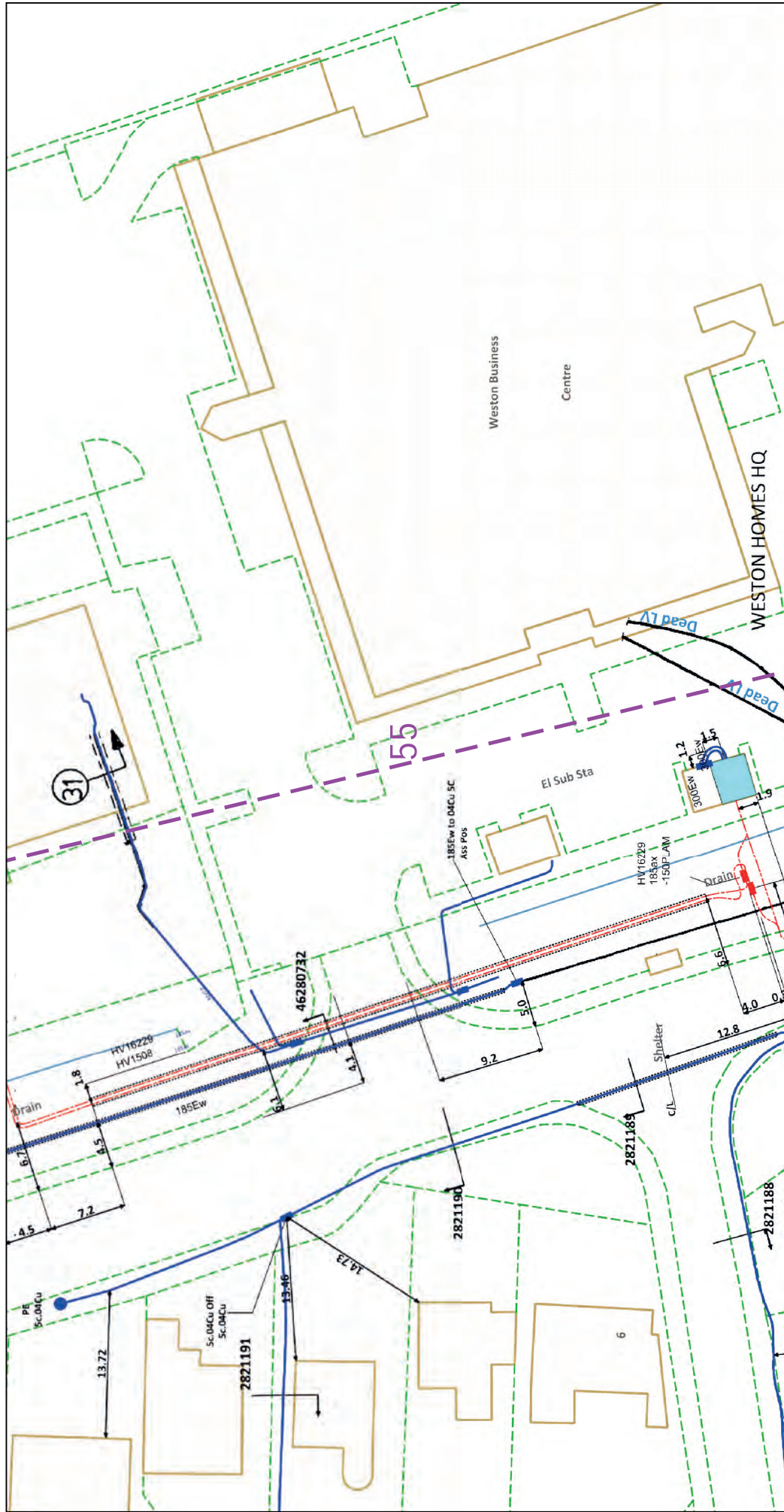


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<p>1. ALWAYS LOOK UP BEFORE YOU START WORK Refer to ISE Guidance note G56</p>			
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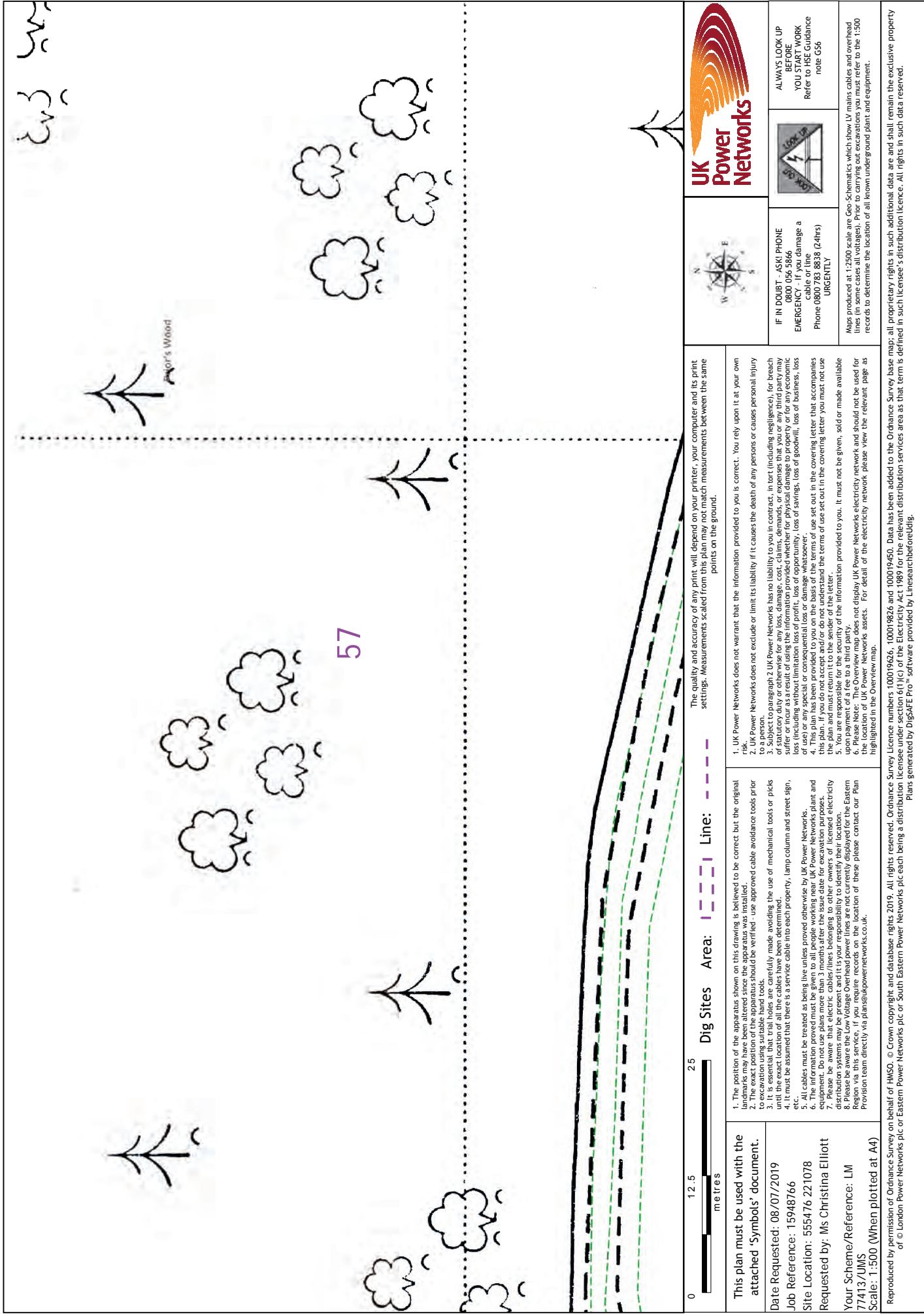


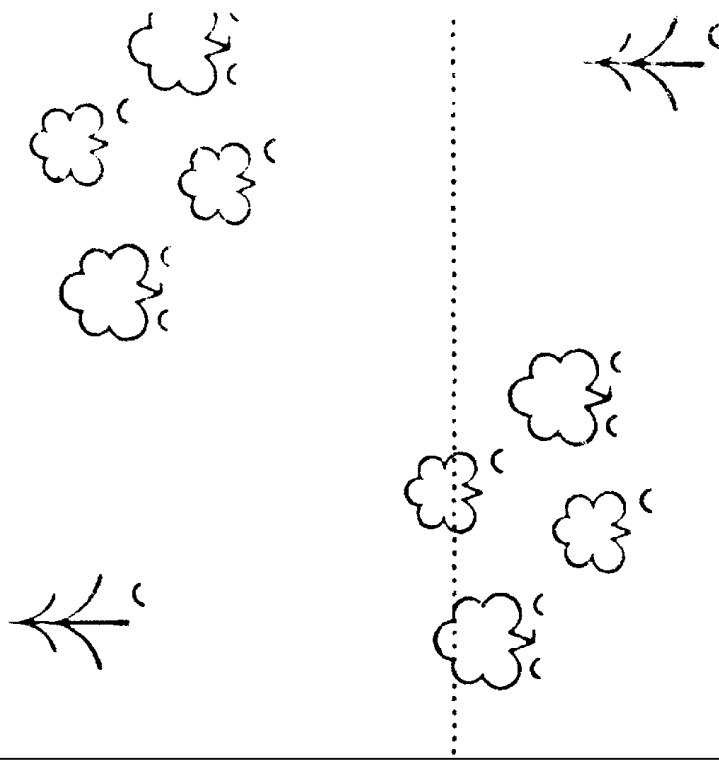
0	12.5 metres	25	Dig Sites Area: Line: ---	<p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>	
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<p>Job Reference: 15948766</p>			<p>EMERGENCY - 999</p>		
<p>Site Location: 555476 221078</p>			<p>Phone 0800 783 8838 (24hrs) URGENTLY</p>		
<p>Requested by: Ms Christina Elliott</p>			<p>ALWAYS LOOK UP</p>		
<p>Your Scheme/Reference: LM 77413/JUMS</p>			<p>YOU STOP WORK Refer to the Guidance note G56</p>		
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0	12.5	metres	25	Dig Sites	Area: 12.5 x 12.5	Line: ---	<p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>
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<p>IF IN DOUBT - ASK PHONE 0800 056 5866</p> <p>EMERGENCY - If you damage a cable or line Phone 0800 783 8838 (24hrs) URGENTLY</p>				<p>ALWAYS LOOK UP BEFORE YOU START WORK</p> <p>Refer to HSE Guidance note G56</p>			
				<p>Maps produced at 1:2500 scale are Geo Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.</p>			
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Date Requested: 08/07/2019
Job Reference: 15948766

Requested by: Ms Christina Elliott

Your Scheme/Reference: LM

1/413/UMS
Scale: 1:500 (When plotted at A4)

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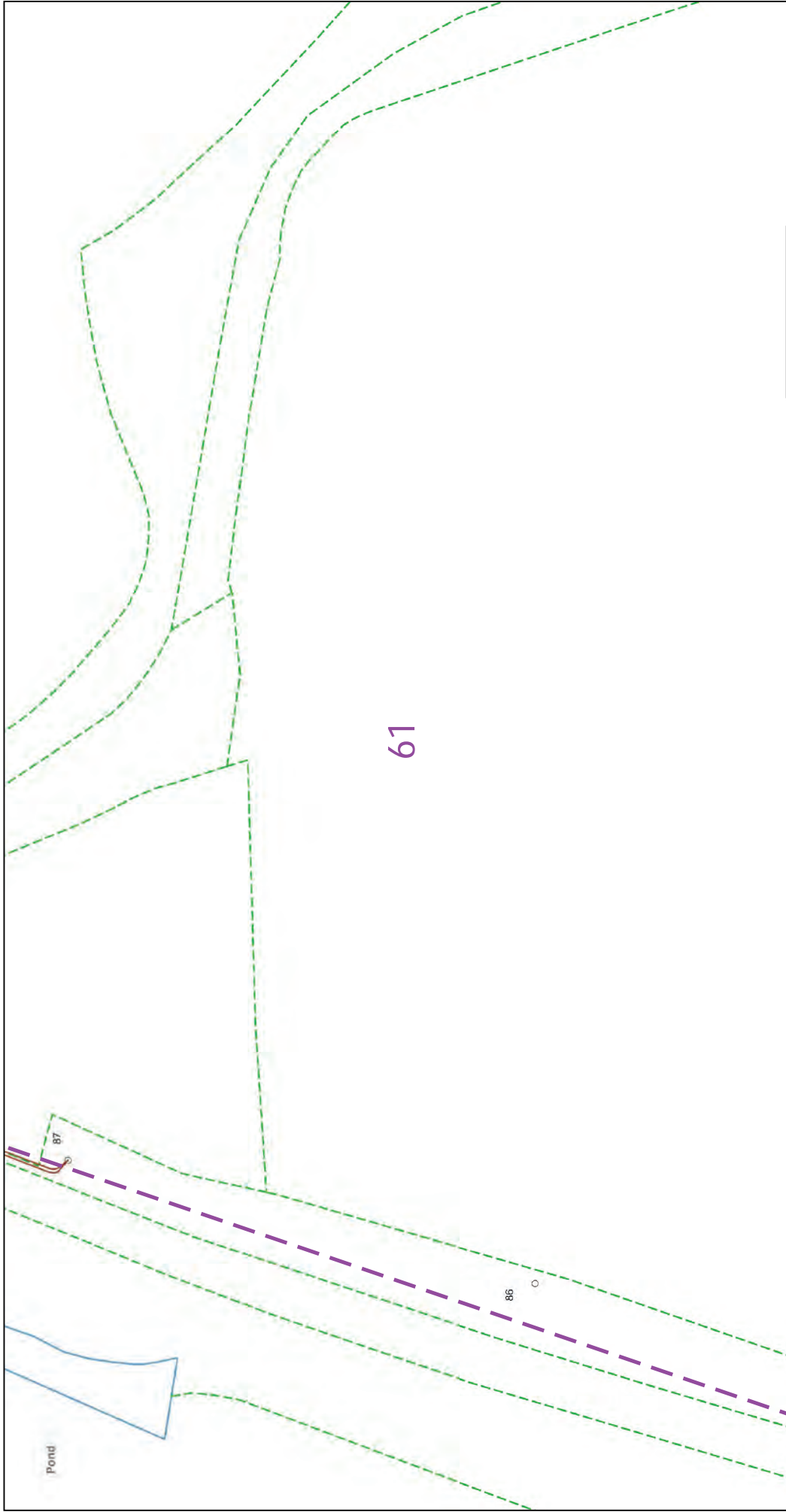



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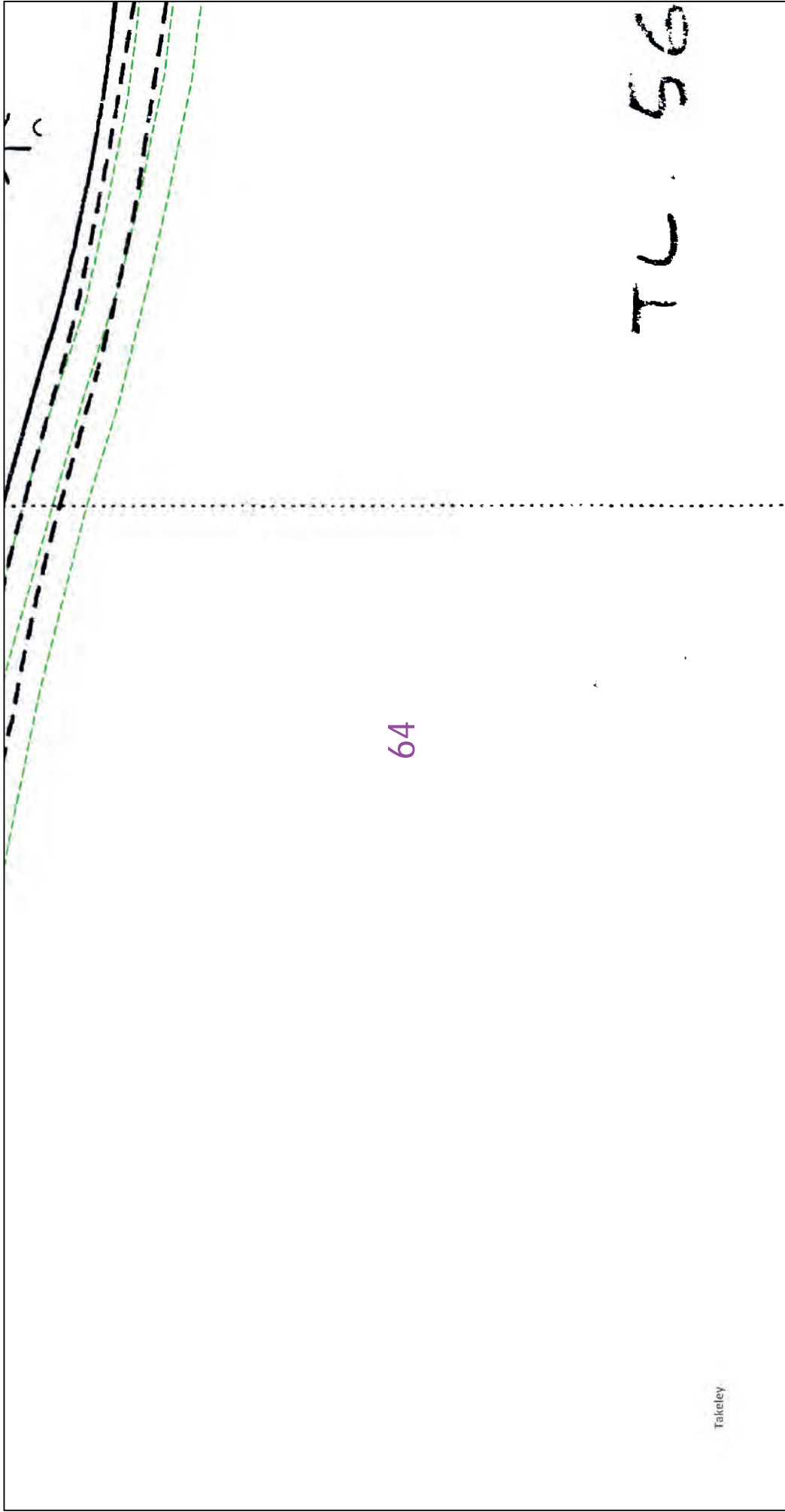
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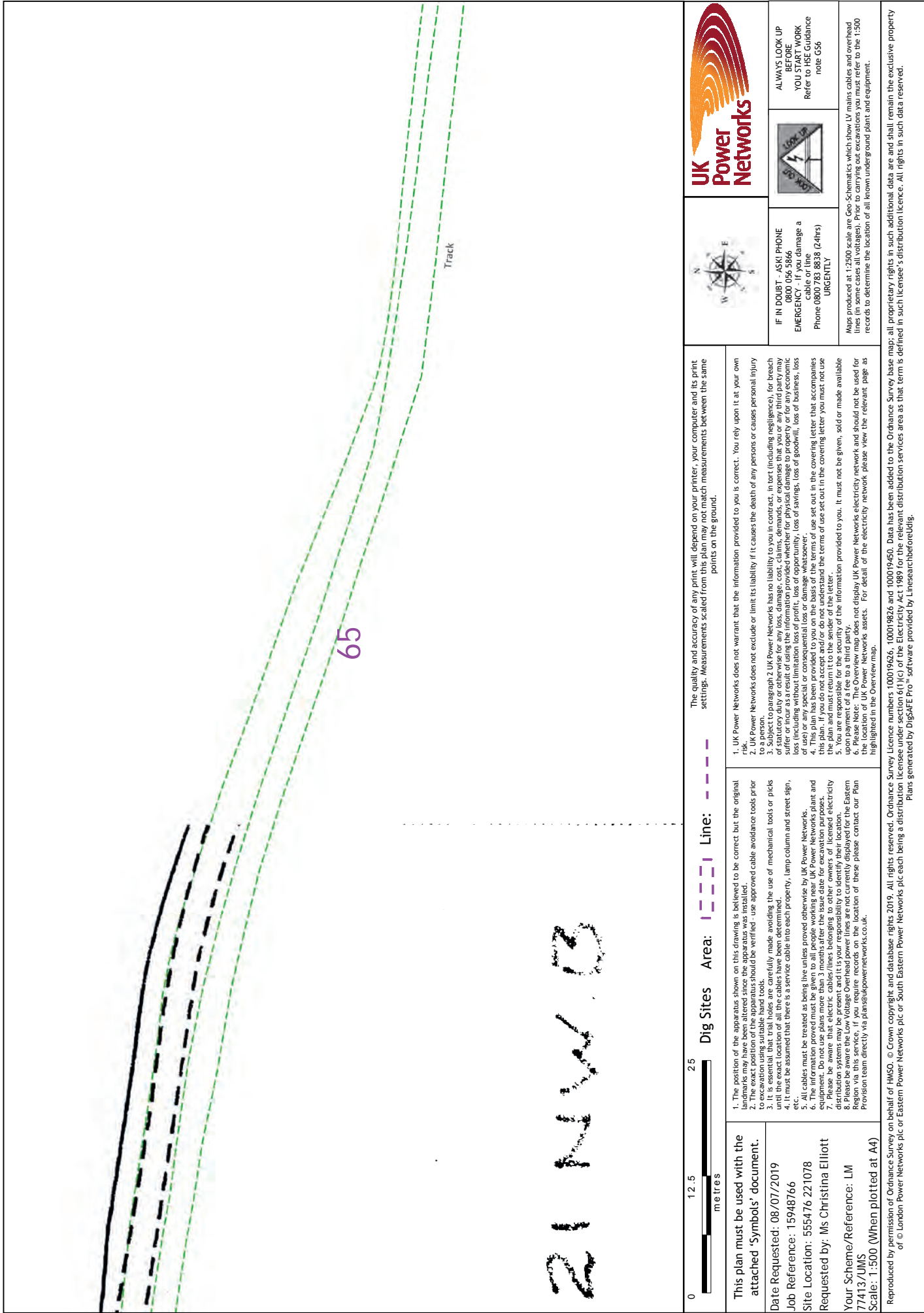
This plan must be used with the attached 'Symbols' document.		Dig Sites Area: Line: 25		The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.			
Date Requested: 08/07/2019	Job Reference: 15948766	1. The position of the apparatus shown on this drawing is believed to be correct but the original apparatus may have been moved since the apparatus was installed.		1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.		IF IN DOUBT - ASK! PHONE 0800 056 5866	
Site Location: 555476 221078	Requested by: Ms Christina Elliott	2. The exact position of the apparatus should be verified by use of approved cable avoidance tools prior to excavation using suitable hand tools.		2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.		EMERGENCY - If you damage a cable or line Phone 0800 781 8636 (24hrs) URGENTLY	
Your Scheme/Reference: LM 77413/UIMS	Scale: 1:500 (When plotted at A4)	3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.		3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including loss of profits, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.		Map produced at 1:2500 scale are Geo-Schematics which show LV main cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.	
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		5. All cables must be treated as being live unless proved otherwise by UK Power Networks.		5. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any third party without the prior written consent of UK Power Networks.			
		6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.		6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.			
		7. Please be aware that electric cables/lines belonging to other owners of licensed electricity equipment, do not come under the responsibility of UK Power Networks.					
		8. Please be aware that any damage to the apparatus shown on this drawing is the responsibility of the Eastern Region via this service. If you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.					







Takeley


012.5metres		25	Dig SitesArea:Line: - - - -		The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.	
This plan must be used with the attached 'Symbols' document.			1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed. 2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools. 3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined. 4. It must be assumed that there is a service cable into each property, lamp column and street sign. 5. All cables must be treated as being live unless proved otherwise by UK Power Networks. 6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes. 7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location. 8. Please be aware that any cables shown on this plan are not necessarily displayed for the Eastern Region via this service. If you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.			
Date Requested: 08/07/2019		IF IN DOUBT - ASK! PHONE 0800 056 5866 EMERGENCY - If you damage a cable or line Phone 0800 781 8636 (24hrs) URGENTLY				
Job Reference: 15948766		UK Power Networks				
Site Location: 555476 221078		Map produced at 1:2500 scale are Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.		ALWAYS LOOK UP BEFORE YOU START WORK Refer to DSE Guidance note G56		
Requested by: Ms Christina Elliott		Plans generated by DigsAFE Pro® software provided by Linesearchbeforelding.				
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1. The position of the apparatus shown on this drawing is believed to be correct but the original may vary due to the location of the apparatus as installed.
2. The exact location of the apparatus should be verified using approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity provision systems may be installed and it is your responsibility to identify them.
8. Please do not use the information provided for the purpose of excavation without the permission of the Eastern Region via this service. If you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.

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6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.

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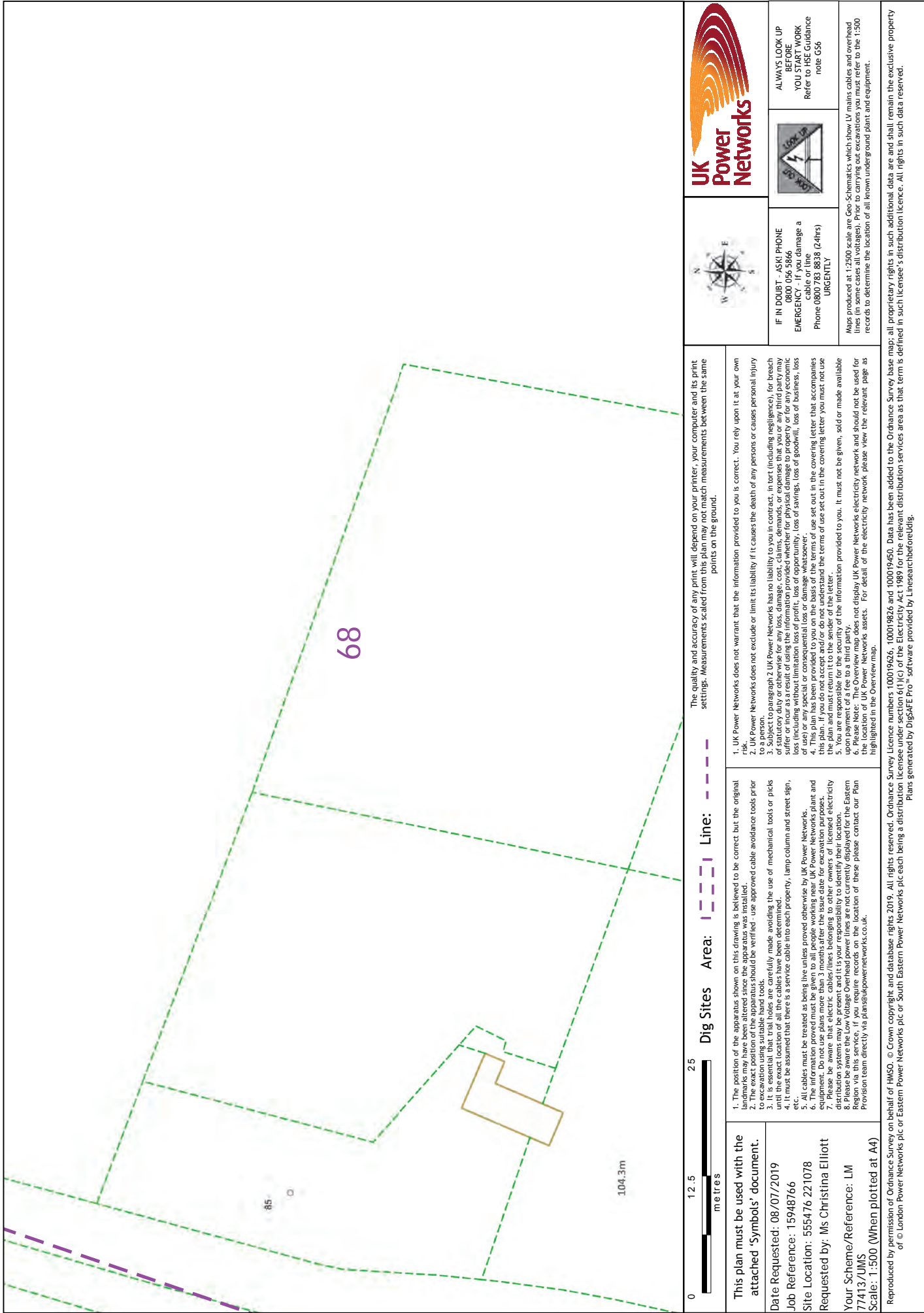
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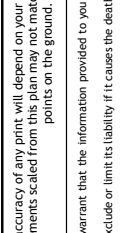
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Date Requested: 08/07/2019
Job Reference: 15948766
Site Location: 555476 221078
Requested by: Ms Christina Elliott
Your Scheme/Reference: LM 77413/UWS
Scale: 1:500 (When plotted at A4)

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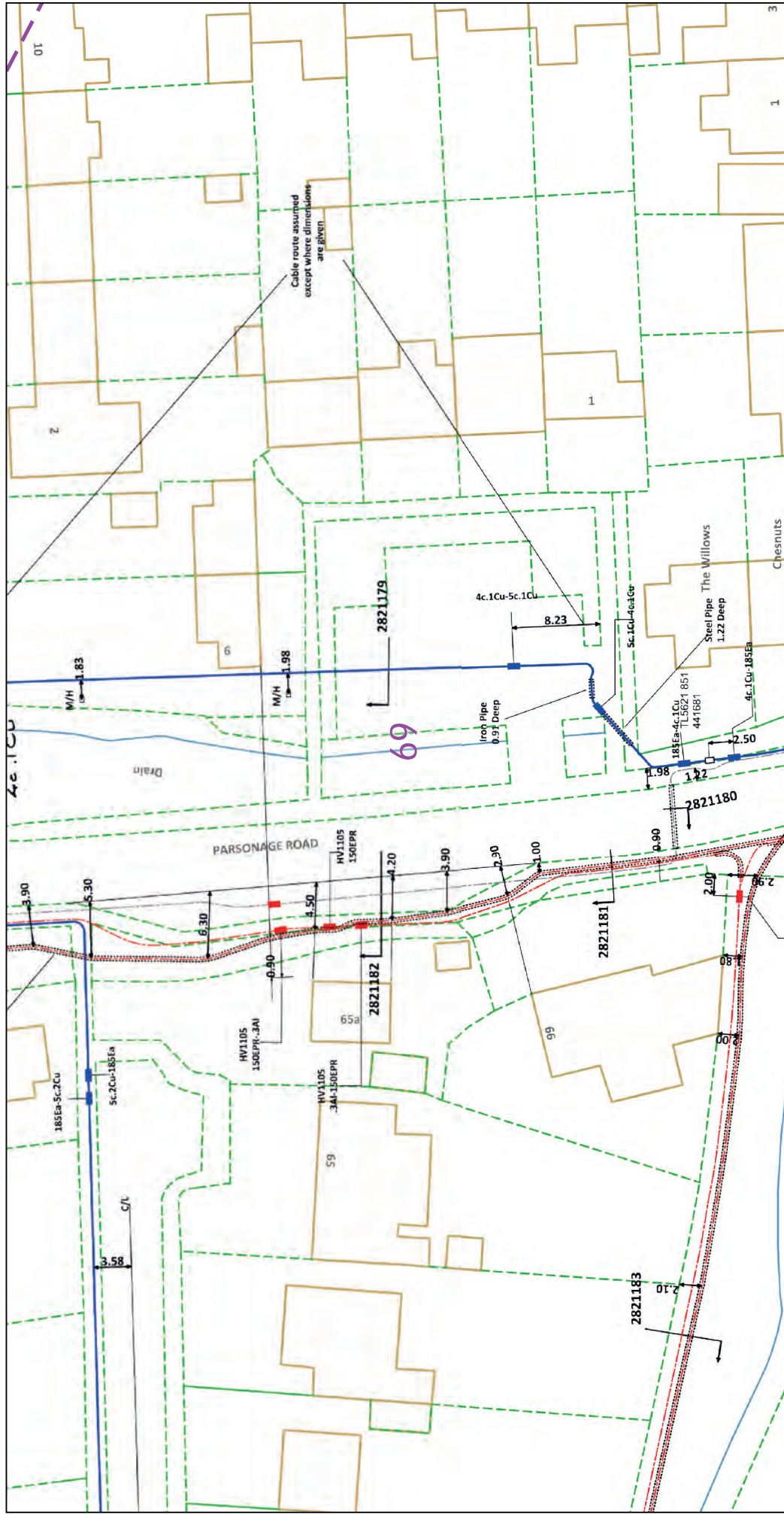


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4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies the plan and must return it to the sender of the information provided to you. It must not be given, sold or made available to any other person without the prior written consent of UK Power Networks.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any other person without the prior written consent of UK Power Networks.
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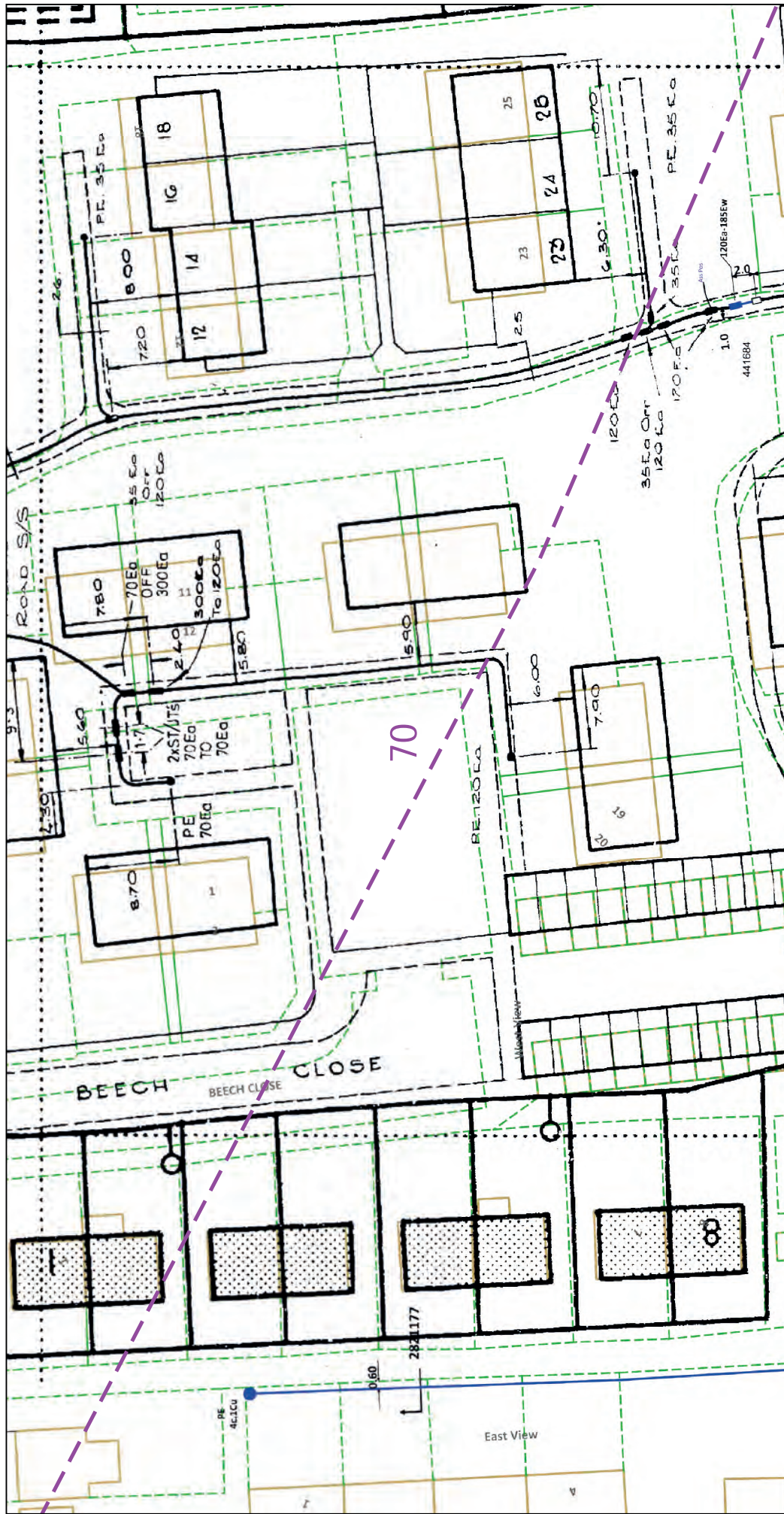
Dig Sites Area:  **Line:** 

1. The position of the apparatus shown on this drawing is believed to be correct but the original drawings may be located elsewhere and the apparatus may be installed.
2. The exact position of the apparatus should be verified using approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be installed and it is your responsibility to identify them.
8. Please see the relevant page of the Dig Sites Overview map for details of the Dig Sites for the Eastern Region via this service. If you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.



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Date Requested: 08/07/2019
Job Reference: 15948766
Site Location: 555476 221078
Requested by: Ms Christina Elliott
Your Scheme/Reference: LM 77413/UMS
Scale: 1:500 (When plotted at A4)

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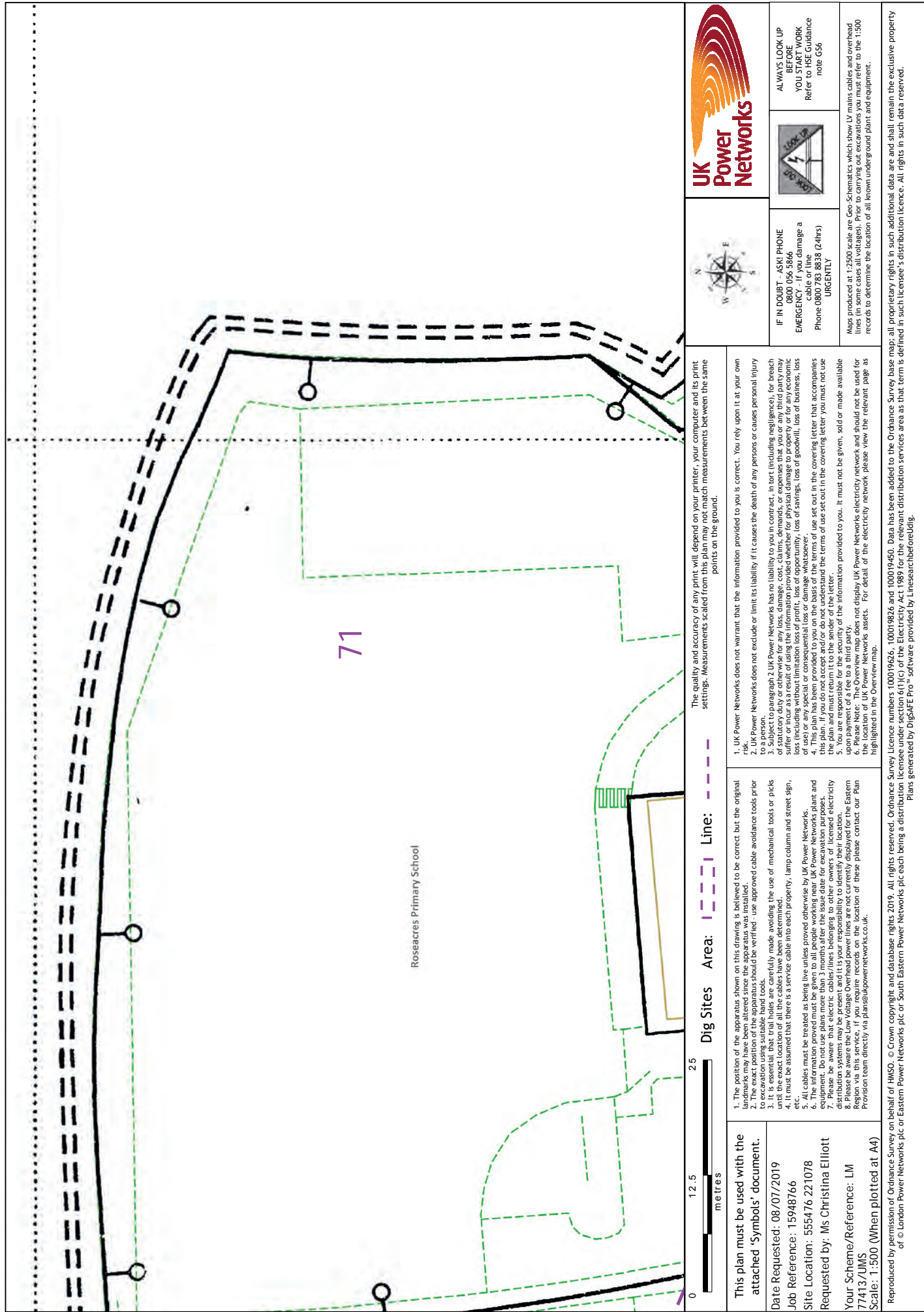
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4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the information provided to you.
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2. The exact position of the apparatus should be verified by use of approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity equipment may be present in the area and it is your responsibility to identify them.
8. Please contact your local Electricity Distribution Company (EDC) for the location of the Eastern Region via this service. If you require records on the location of these please contact our Plan Provision team directly via plans@ukpowernetworks.co.uk.

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Date Requested: 08/07/2019
Job Reference: 15948766
Site Location: 555476 221078
Requested by: Ms Christina Elliott
Your Scheme/Reference: LM 77413/UMS
Scale: 1:500 (When plotted at A4)

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Date Requested: 08/07/2019

Job Reference: 15948766

Site location: 555476 221078

Requested by: Ms Christina Elliott

Requested by: Mr. Cunningham

Your Schem

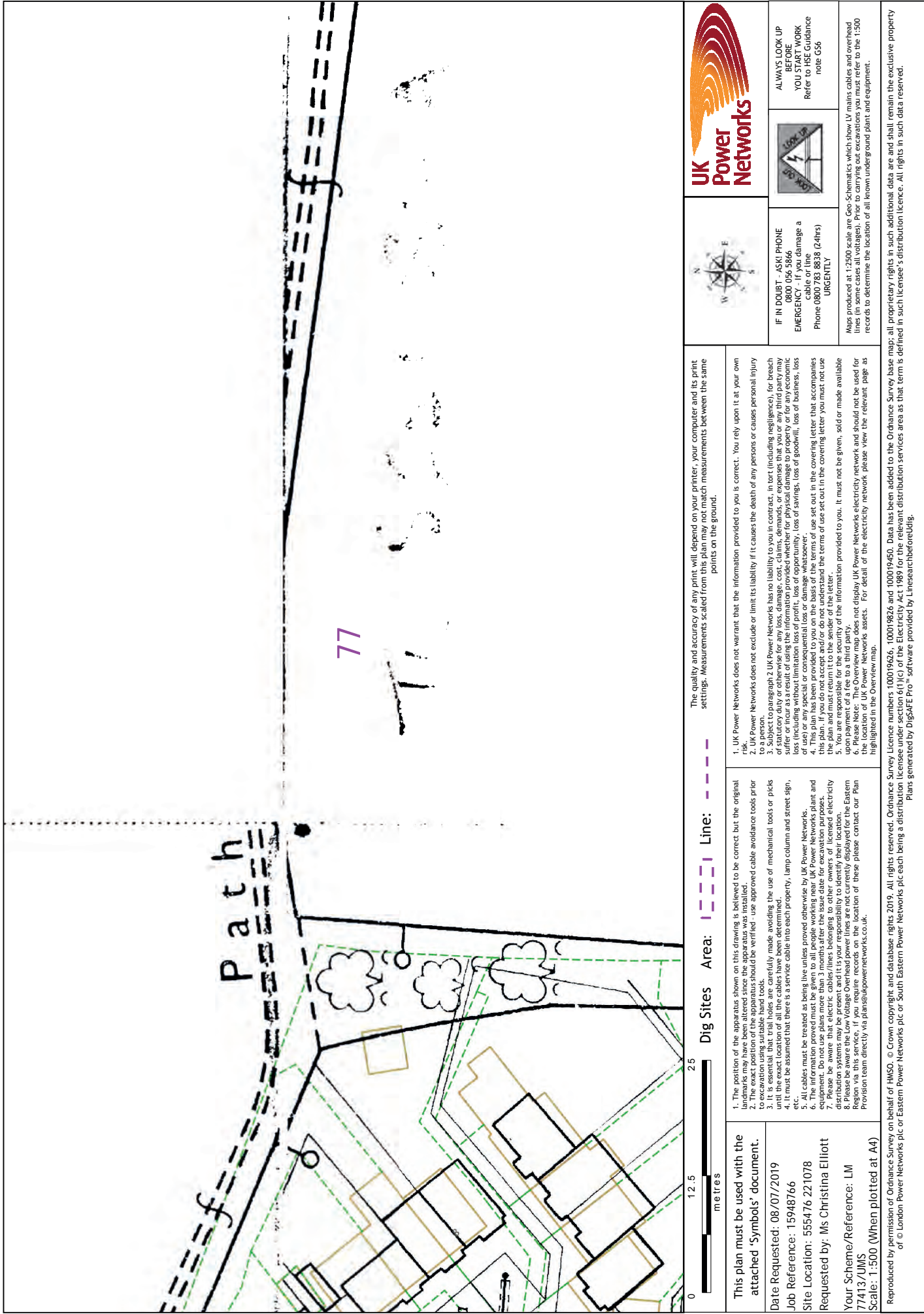
77413/UMS
Scale: 1:500 (When plotted at M)

1. The position of the apparatus shown on this drawing is believed to be correct but the original location of the apparatus should be verified. Use approved cable avoidance tools prior to excavation using suitable hand tools.
2. The exact position of the apparatus should be verified. Use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plants more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.
8. Please be aware the Low Voltage Overhead power lines are not currently displayed for the Eastern Region. Via this service you can require records on the location of these displayed on our Plan and map.

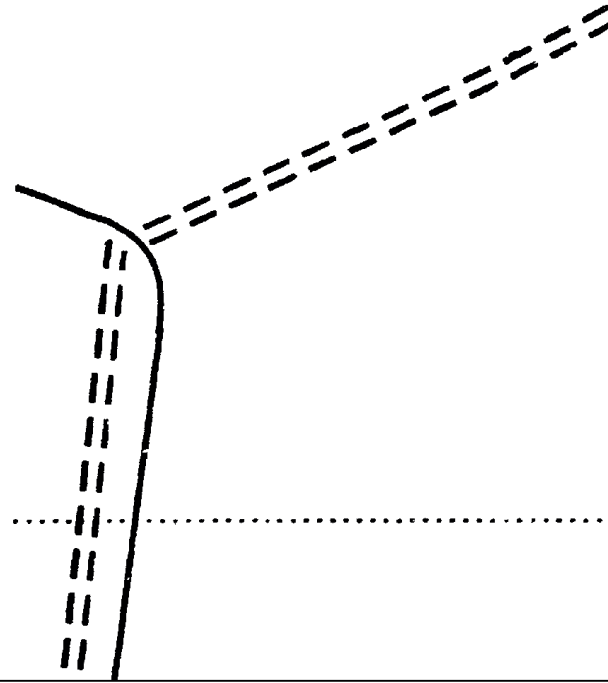
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4. UK Power Networks does not accept any liability for any loss or damage suffered by you or any party to whom you are related as a result of using the information provided whether for physical damage to property or for economic loss.
5. UK Power Networks does not accept any liability for any loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
6. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. You do not need to read and/or understand the terms of use set out in the covering letter that accompanies this plan.
7. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any person on payment of a fee to a third party.
8. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For details of the electricity network please view the relevant page as set out in the Overview map.

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Site Location: 555476 221078	Requested by: Ms Christina Elliott	2. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk. 3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss or any special or consequential loss or damage whatsoever. 4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter. 5. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any other person without the express written permission of UK Power Networks. 6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.	
Your Scheme/Reference: LM 77413/UIMS	Scale: 1:500 (When plotted at A4)	1. IF IN DOUBT - ASK! PHONE 0800 056 5866 EMERGENCY - If you damage a cable or line Phone 0800 781 8636 (24hrs) URGENTLY	
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		Map produced at 1:2500 scale are Gas Schematics which show LV main cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.	
		ALWAYS LOOK UP BEFORE YOU START WORK Refer to DSE Guidance note G56	



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[illegible]



The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

Dig Sites Area: Line: - - - - -

This plan must be used with the attached 'Symbols' document.

Date Requested: 08/07/2019

Job Reference: 15948766

Site Location: 555476 221078
Requested by: Ms Christina Elliott

Your Schema/Difference: IM

77413/UMS
Scale: 1:500 (When plotted at A4)

1. The position of the apparatus shown on this drawing is believed to be correct but the original layout should be checked.
2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information proved must be given to all people working near UK Power Networks plant and equipment. Do not use plants more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables (lines) belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.
8. Please be aware the Low Voltage Overhead power lines are not currently displayed for the Eastern Region.
9. Please visit www.ukpowernetworks.co.uk for more information on these products or Plan Provision team directly via low.voltage@ukpowernetworks.co.uk

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.
3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of duty or otherwise, whether caused by negligence or otherwise, in respect of any claim for economic loss suffered or incurred as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies the plan and must remain to be used in accordance with those terms.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.
6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for navigation purposes. The Overview map displays other roads and landmarks. For details of the electricity network please see highlighted in the Overview map.



IF IN DOUBT - ASK! PHONE
0800 056 5866
EMERGENCY - If you damage a
cable or line
Phone 0800 783 8838 (24hrs)
URGENTLY

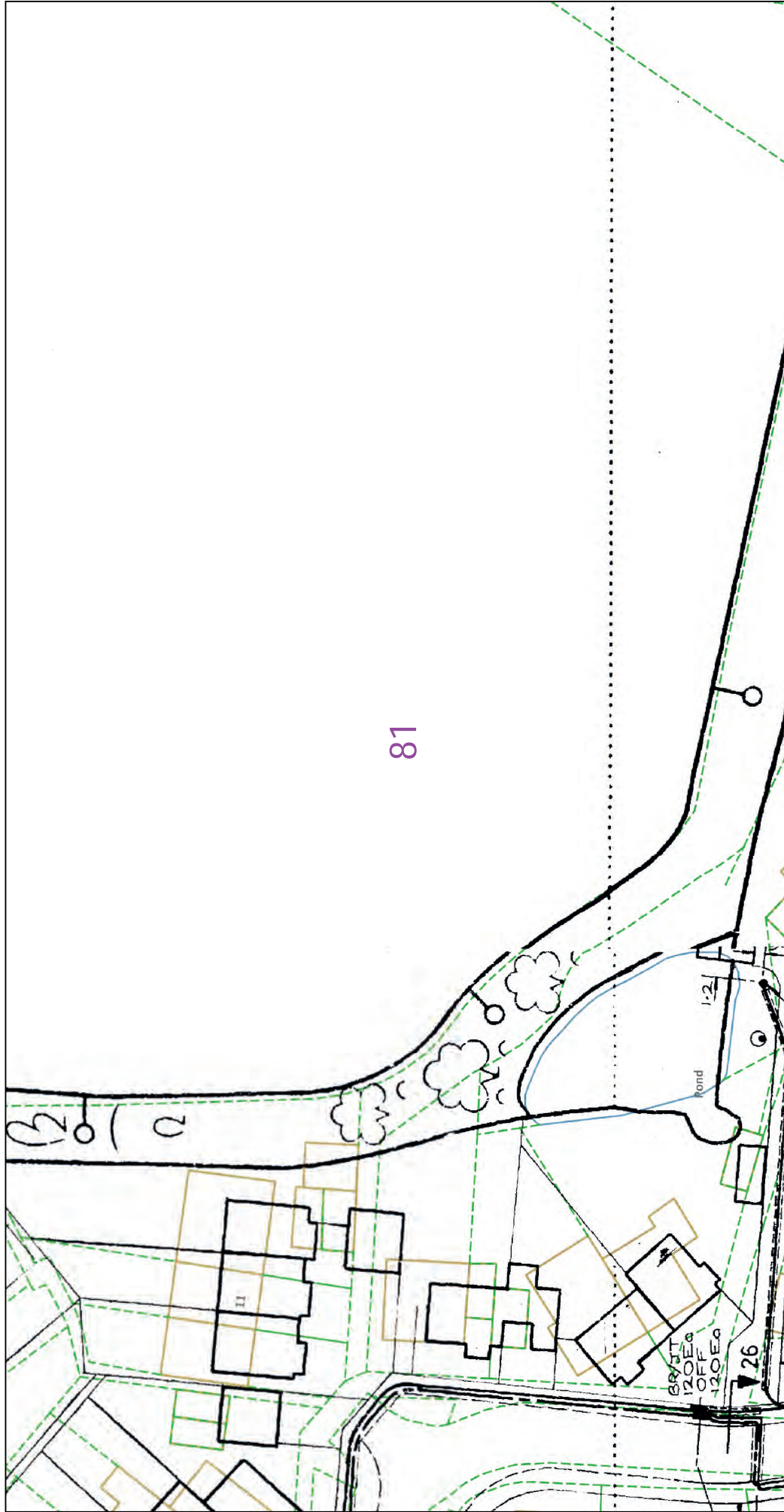


**ALWAYS LOOK UP
BEFORE
YOU START WORK**
Refer to HSE Guidance
note GS6



Maps produced at 1:2500 scale are Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

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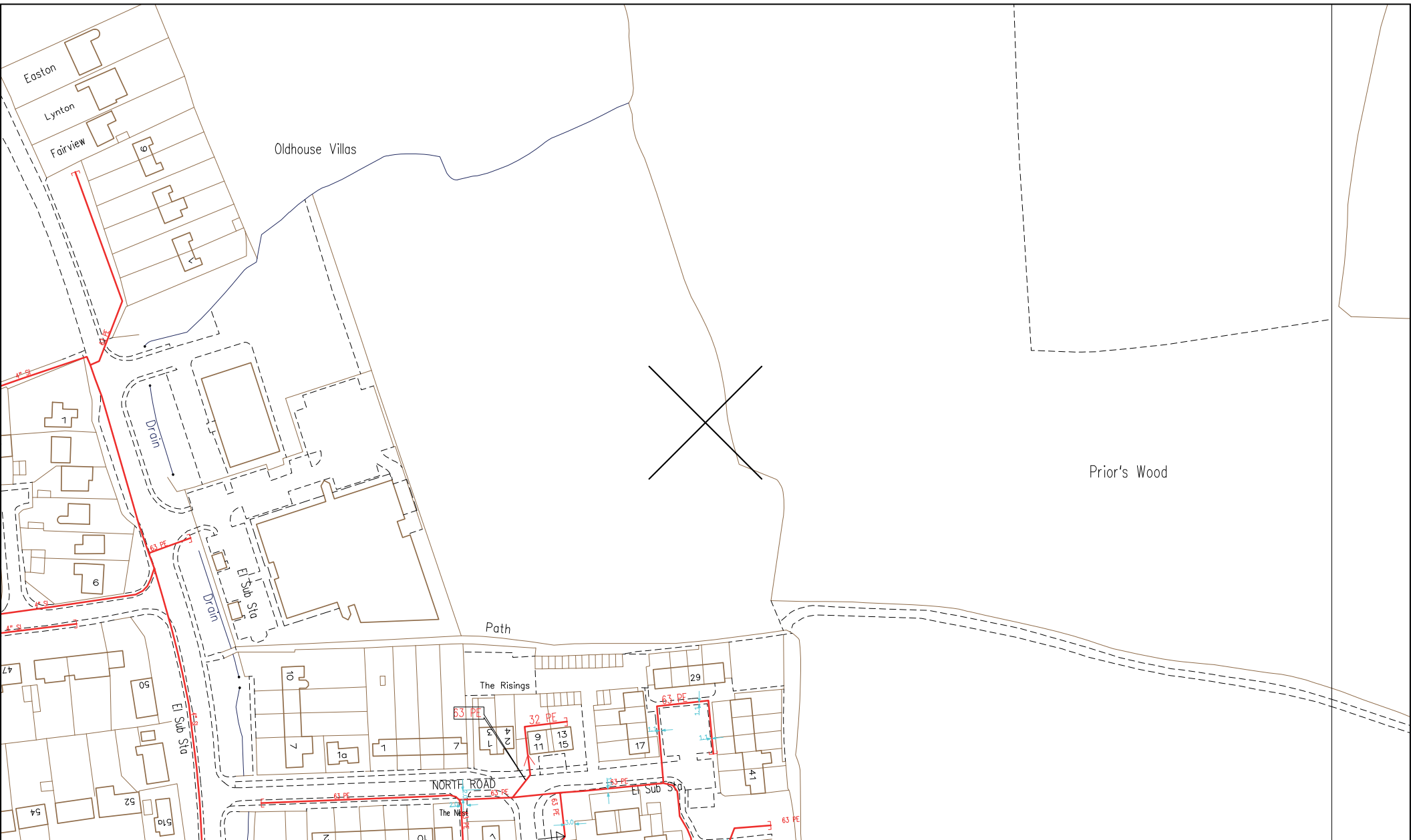
81

<p>This plan must be used with the attached 'Symbols' document.</p> <p>Date Requested: 08/07/2019</p> <p>Job Reference: 15948766</p> <p>Site Location: 555476 221078</p> <p>Requested by: Ms Christina Elliott</p> <p>Your Scheme/Reference: LM 77413/UIMS</p> <p>Scale: 1:500 (When plotted at A4)</p>		<p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>		<p>1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.</p> <p>2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.</p> <p>3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including loss of profits, loss of business, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.</p> <p>4. This plan has been provided to you on the basis of the terms of the use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.</p> <p>5. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any third party without the prior written consent of UK Power Networks.</p> <p>6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.</p>		<p>IF IN DOUBT - ASK! PHONE 0800 056 5866</p> <p>EMERGENCY - If you damage a cable or line Phone 0800 81 8636 (24hrs) URGENTLY</p>		<p>UK Power Networks</p>		<p>ALWAYS LOOK UP BEFORE YOU START WORK</p> <p>Refer to ISE Guidance note G56</p>		<p>Maps produced at 1:2500 scale are Gas Schematics which show LV main cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.</p>	
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<p>This plan must be used with the attached 'Symbols' document.</p> <p>Date Requested: 08/07/2019</p> <p>Job Reference: 15948766</p> <p>Site Location: 555476 221078</p> <p>Requested by: Ms Christina Elliott</p> <p>Your Scheme/Reference: LM 77413/UIMS</p> <p>Scale: 1:500 (When plotted at A4)</p>		<p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>		<p>1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.</p> <p>2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.</p> <p>3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including loss of profits, loss of business, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.</p> <p>4. This plan has been provided to you on the basis of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.</p> <p>5. You are responsible for the security of the information provided to you. It must not be given, sold or made available to any third party without the prior written consent of UK Power Networks.</p> <p>6. Please Note: The Overview map does not display UK Power Networks electricity network and should not be used for the location of UK Power Networks assets. For detail of the electricity network, please view the relevant page as highlighted in the Overview map.</p>		<p>IF IN DOUBT - ASK! PHONE 0800 056 5866</p> <p>EMERGENCY - If you damage a cable or line Phone 0800 81 8636 (24hrs) URGENTLY</p>		<p>UK Power Networks</p>		<p>ALWAYS LOOK UP BEFORE YOU START WORK</p> <p>Refer to ISE Guidance note G56</p>	
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Appendix B – Gas Supply – Existing Network – Cadent



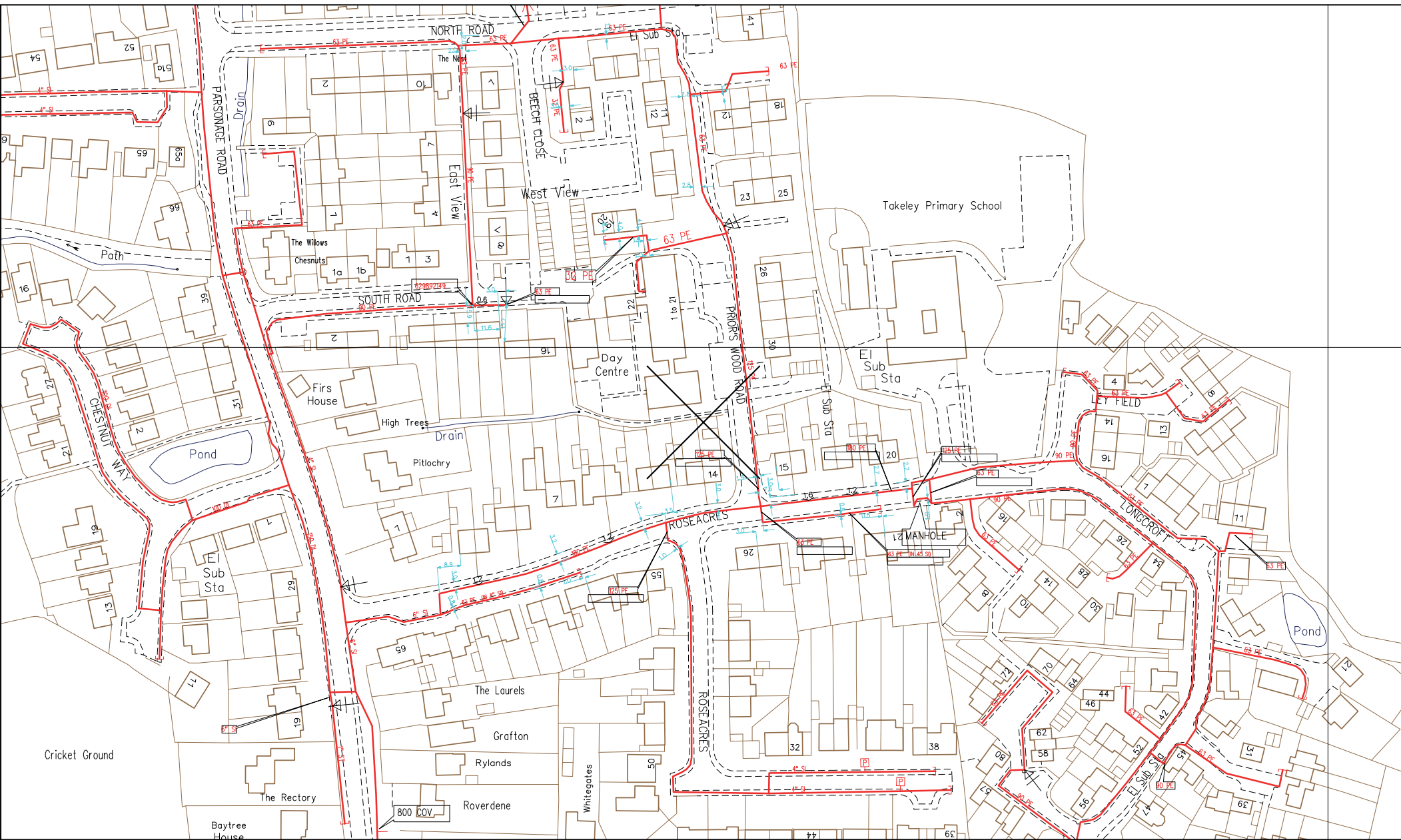
SCALE: 1 : 1250	LP MAINS	
USER ID: BTJY4610	MP MAINS	
DATE: 22/07/2019	IP MAINS	
EXTRACT DATE: 10/06/2019	LHP MAINS	
MAP REF: TL5621		
CENTRE: 556267, 221753		

Some examples of Plant Items:

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

This plan shows those pipes owned by Cadent Gas Ltd in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Ltd or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue. Further information on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (9am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate.

MAPS Viewer Version 5.8.0.1
Local Machine
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SCALE: 1 : 1250	LP MAINS	
USER ID: BTJY4610	MP MAINS	
DATE: 22/07/2019	IP MAINS	
EXTRACT DATE: 10/06/2019	LHP MAINS	
MAP REF: TL5621		
CENTRE: 556267, 221472		

Some examples of Plant Items:

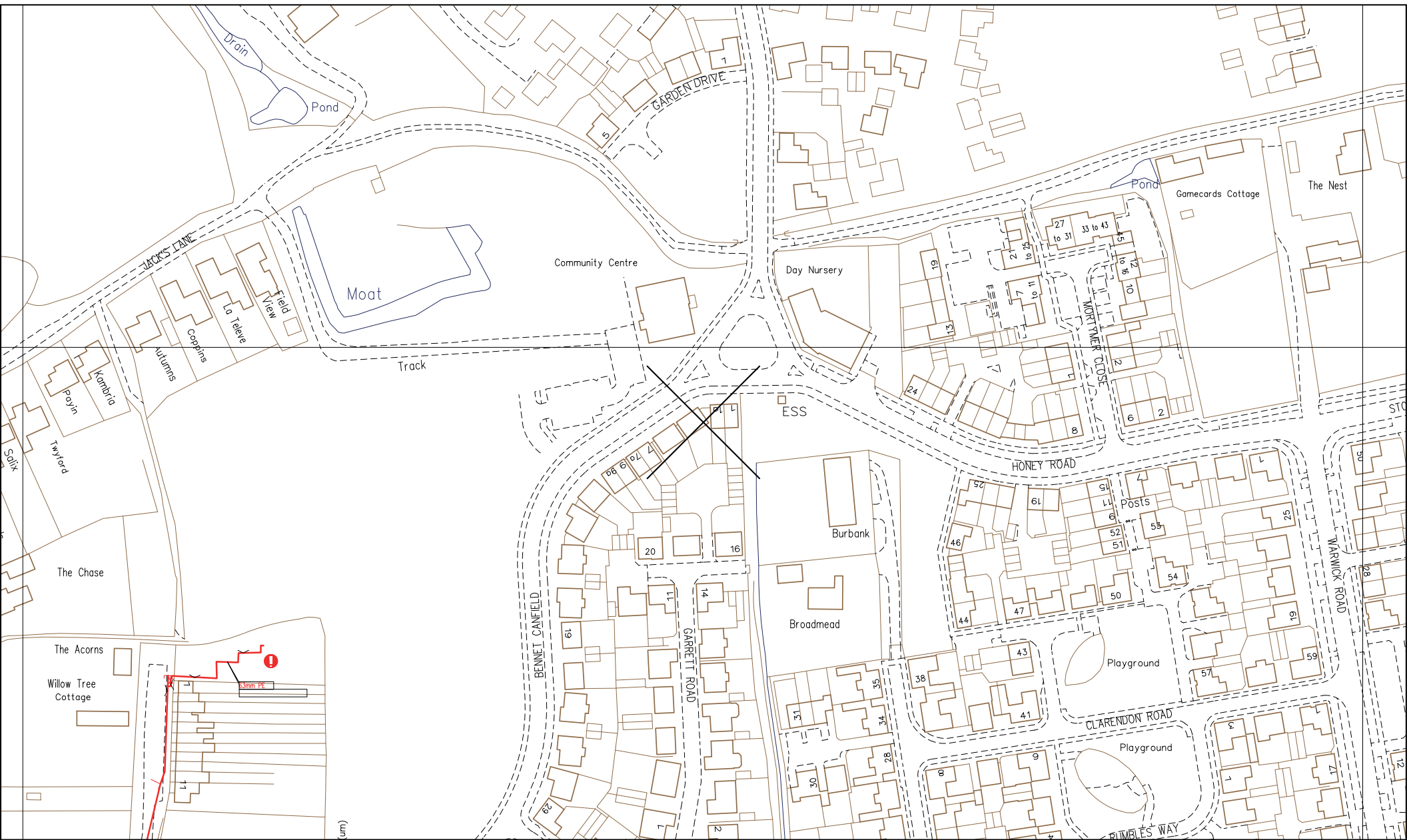
Valve	Depth of Cover	Syphon	Diameter Change	Material Change	Out of Standard Service

This plan shows those pipes owned by Cadent Gas Ltd in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Ltd or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue. Further information on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (9am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate.

MAPS Viewer Version 5.8.0.1

Local Machine

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SCALE: 1 : 1250	LP MAINS	---
USER ID: BTJY4610	MP MAINS	---
DATE: 22/07/2019	IP MAINS	---
EXTRACT DATE: 10/06/2019	LHP MAINS	---
MAP REF: TL5721		
CENTRE: 557254, 221472		

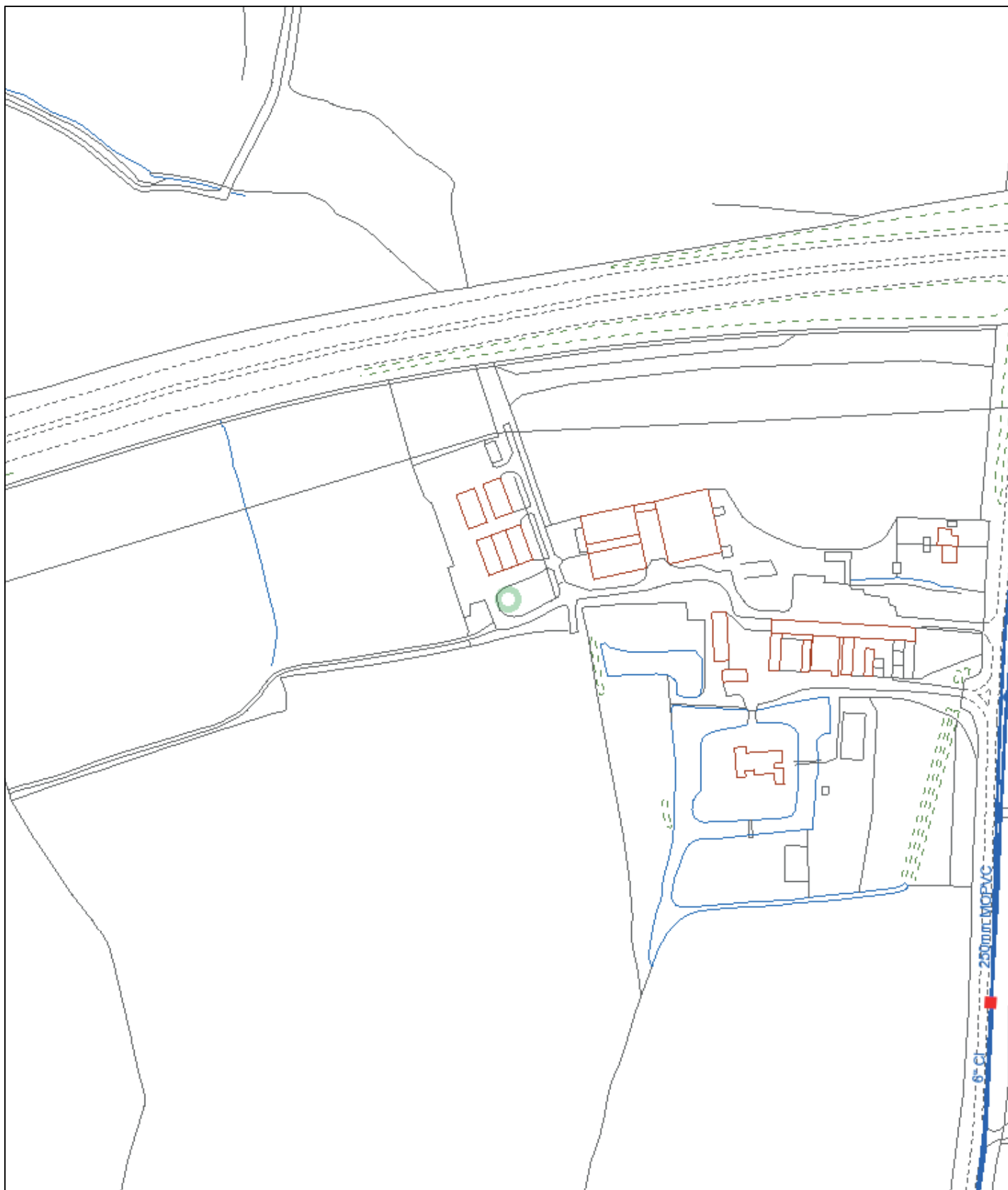
Some examples of Plant Items:

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

This plan shows those pipes owned by Cadent Gas Ltd in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Ltd or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue. Further information on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (9am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate.

MAPS Viewer Version 5.8.0.1
Local Machine
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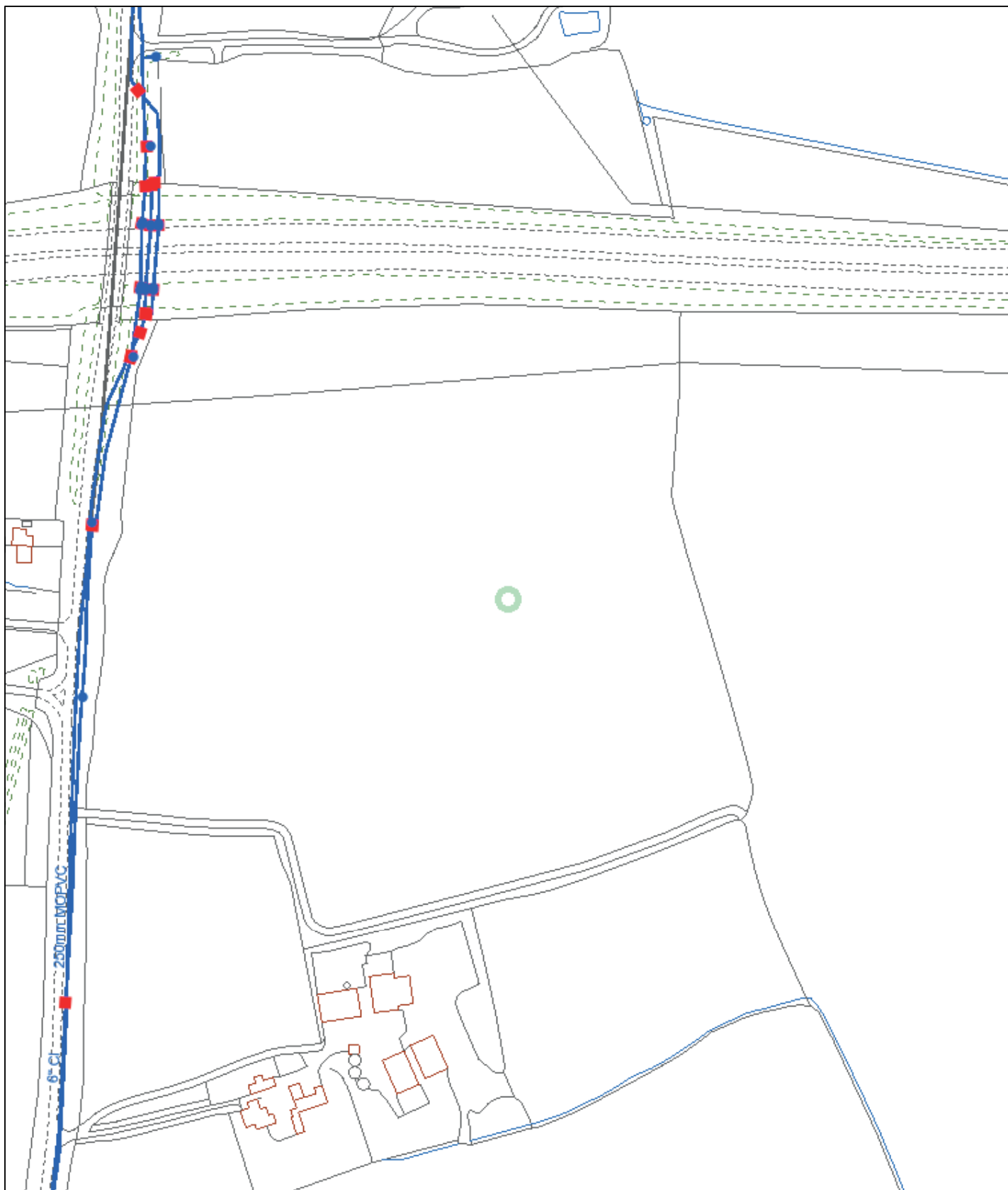
Appendix C – Water Supply – Existing Network – Affinity Water



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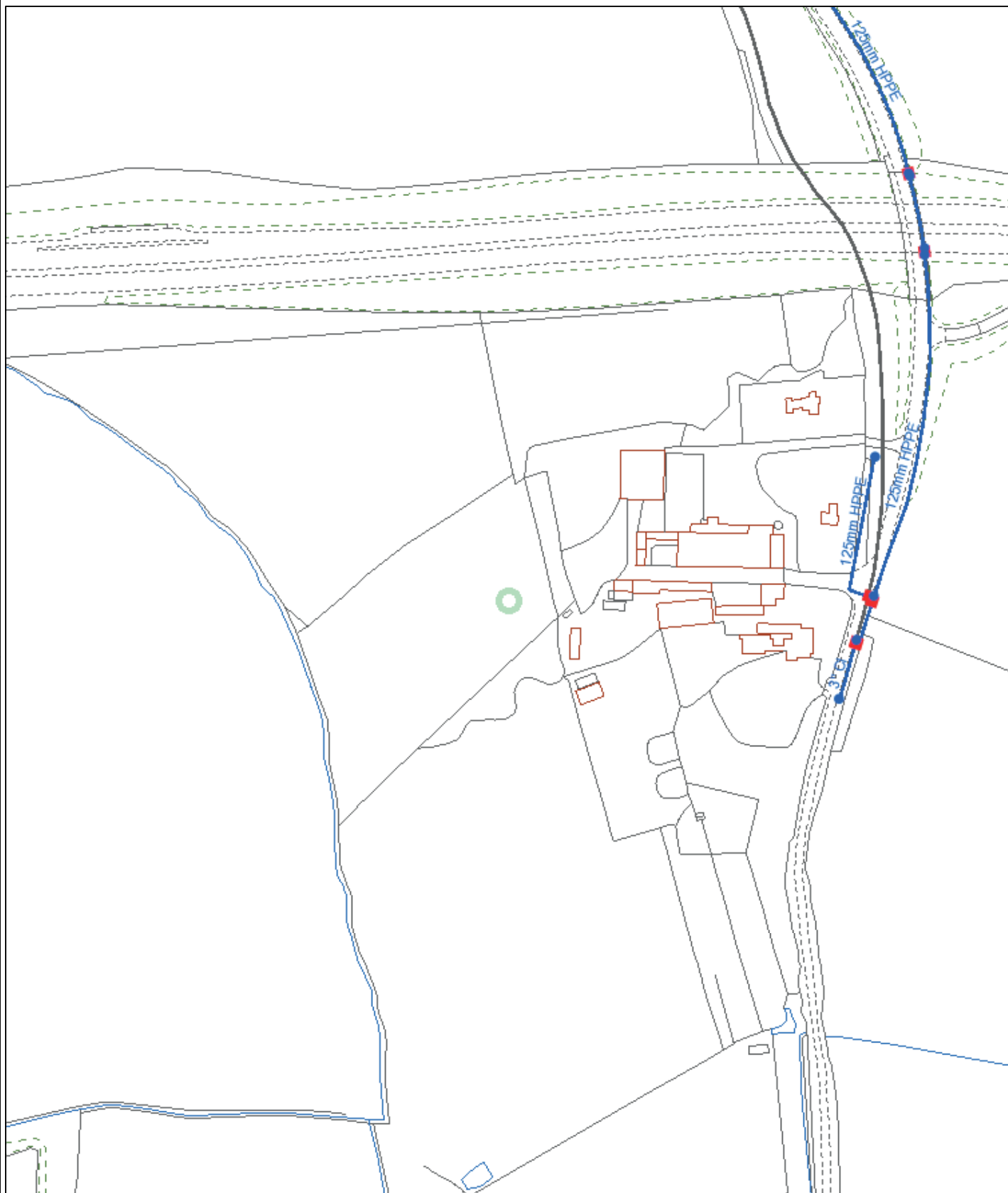
	Distribution Main		Hydrant
	Asbestos Distribution Main		Fitting
	Abandoned Main		Easement
	Asbestos Abandoned Main		Company Boundary
	Adit / Tunnel		
	Cable		
	Searched Location		



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	Distribution Main		Hydrant
	Asbestos Distribution Main		Fitting
	Abandoned Main		Easement
	Asbestos Abandoned Main		Company Boundary
	Adit / Tunnel		
	Cable		
	Searched Location		



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1:2,500

	Distribution Main		Hydrant
	Asbestos Distribution Main		Fitting
	Abandoned Main		Easement
	Asbestos Abandoned Main		Company Boundary
	Adit / Tunnel		
	Cable		
	Searched Location		

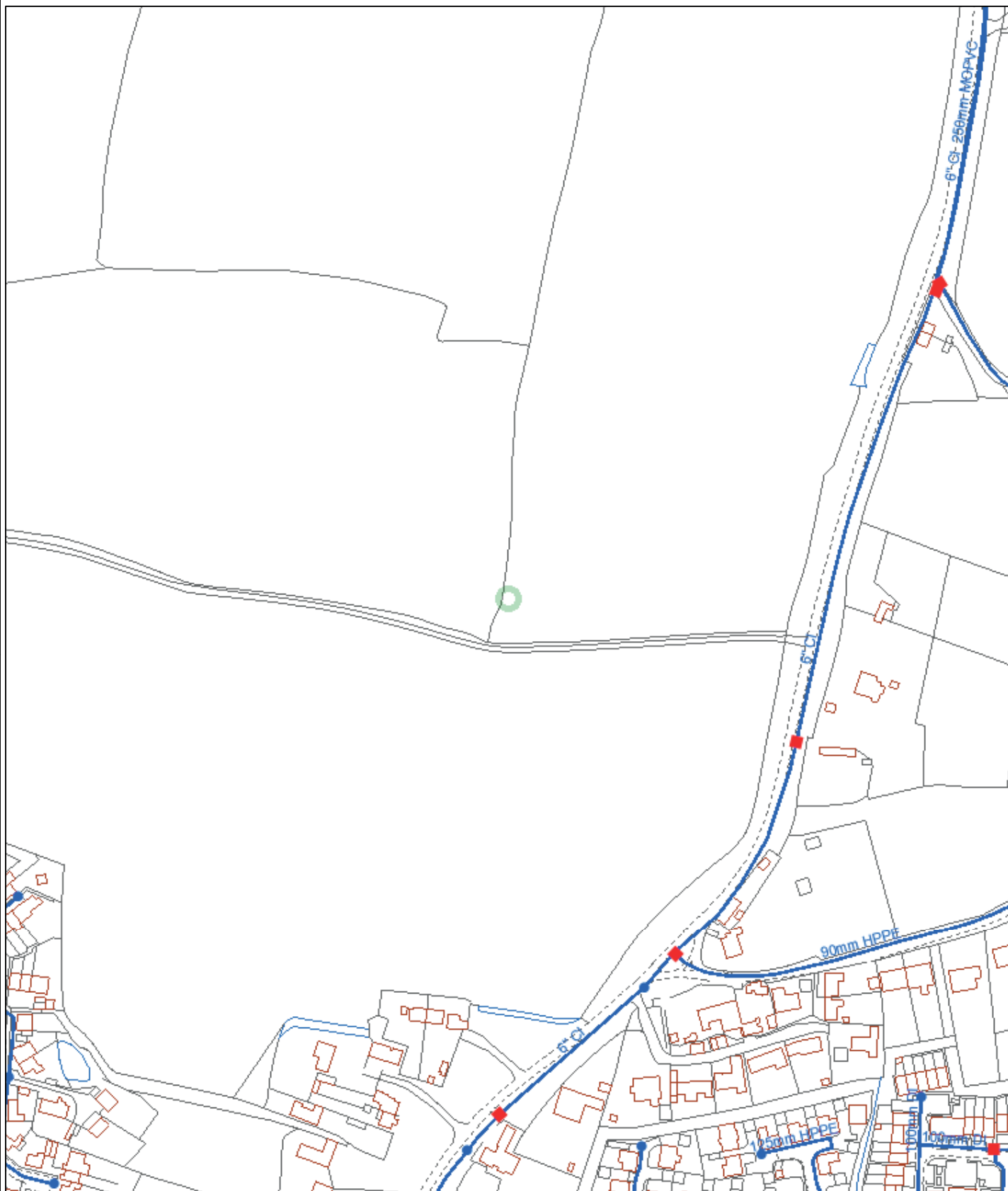


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1:2,500

	Distribution Main		Hydrant
	Asbestos Distribution Main		Fitting
	Abandoned Main		Easement
	Asbestos Abandoned Main		Company Boundary
	Adit / Tunnel		
	Cable		
	Searched Location		



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1:2,500

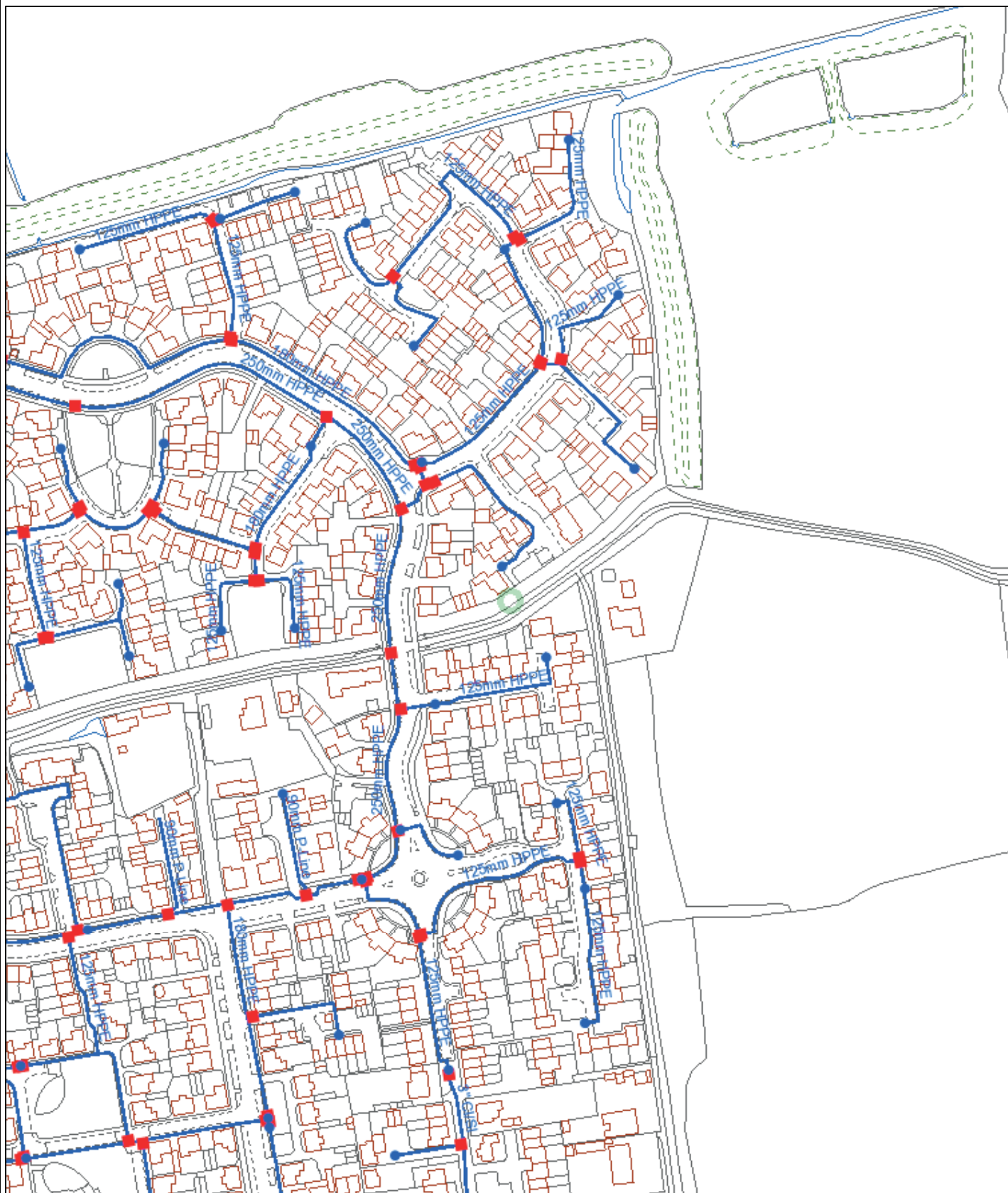
	Distribution Main		Hydrant
	Asbestos Distribution Main		Fitting
	Abandoned Main		Easement
	Asbestos Abandoned Main		Company Boundary
	Adit / Tunnel		
	Cable		
	Searched Location		



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	Distribution Main		Hydrant
	Asbestos Distribution Main		Fitting
	Abandoned Main		Easement
	Asbestos Abandoned Main		Company Boundary
	Adit / Tunnel		
	Cable		
	Searched Location		



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1:2,500

	Distribution Main		Hydrant
	Asbestos Distribution Main		Fitting
	Abandoned Main		Easement
	Asbestos Abandoned Main		Company Boundary
	Adit / Tunnel		
	Cable		
	Searched Location		

Appendix D – Telecommunications – Existing Network – BT

Maps by email Plant Information Reply



IMPORTANT WARNING

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

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



openreach

CLICK BEFORE YOU DIG

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

email cbyd@openreach.co.uk

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

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : QRG12428U

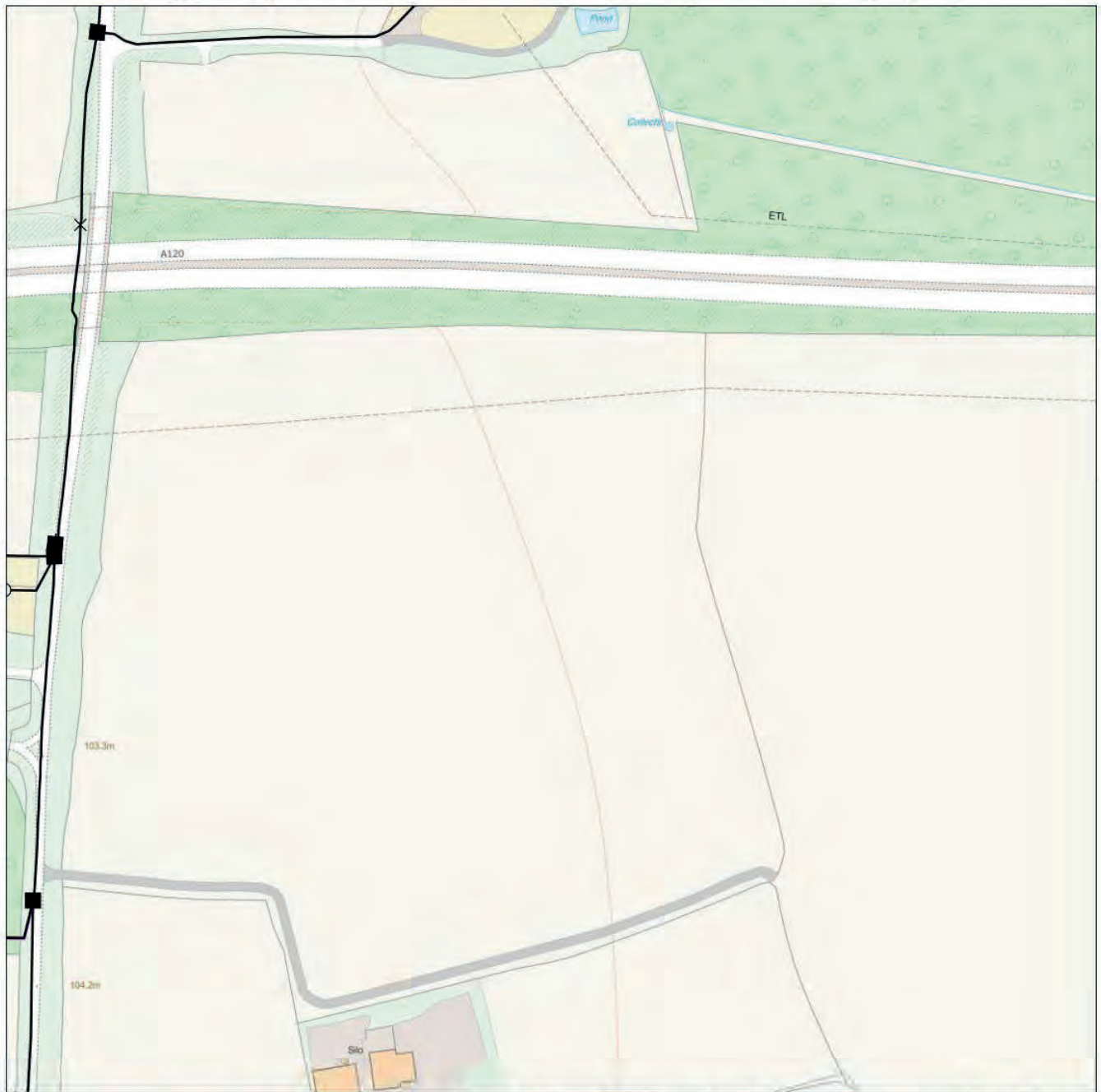
Map Reference : (centre) TL5671722222

Easting/Northing : (centre) 556717,222222

Issued : 05/07/2019 12:42:22

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

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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CLICK BEFORE YOU DIG

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

email cbyd@openreach.co.uk

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

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : LCL12426Y

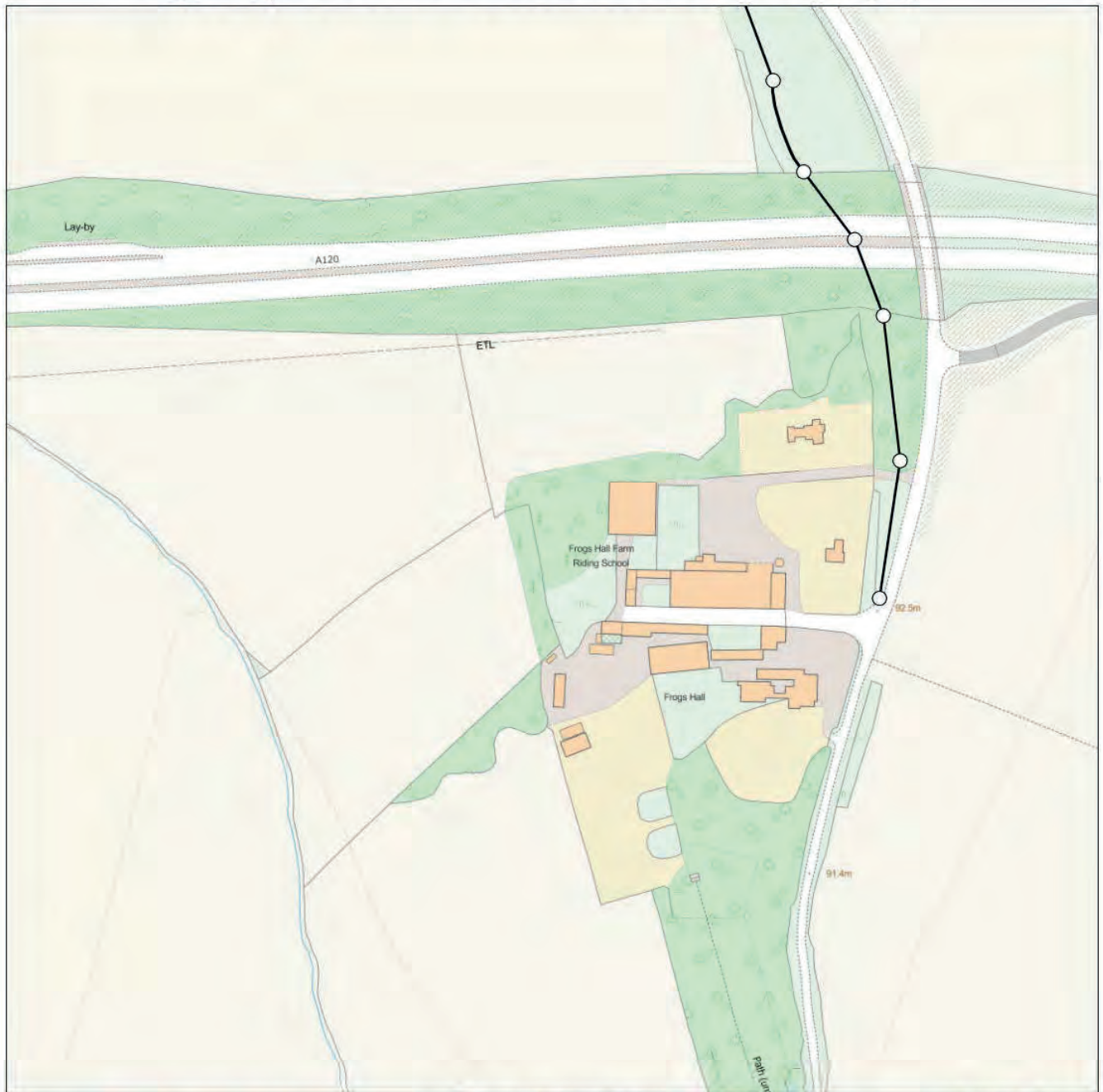
Map Reference : (centre) TL5718122222

Easting/Northing : (centre) 557181,222222

Issued : 05/07/2019 12:42:34

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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

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : OOX124240

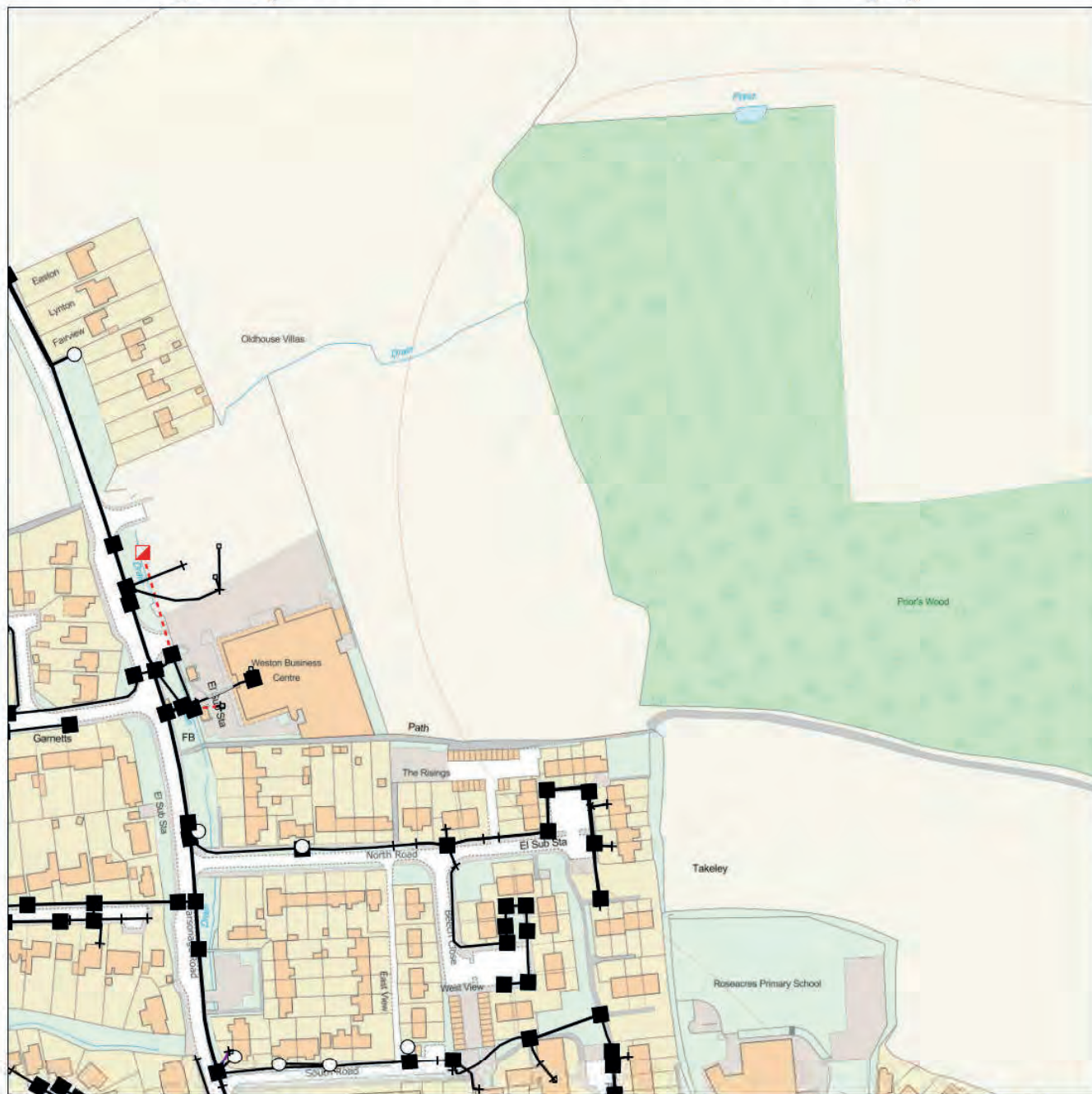
Map Reference : (centre) TL5811122222

Easting/Northing : (centre) 558111,222222

Issued : 05/07/2019 12:42:34

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : RDZ12421X

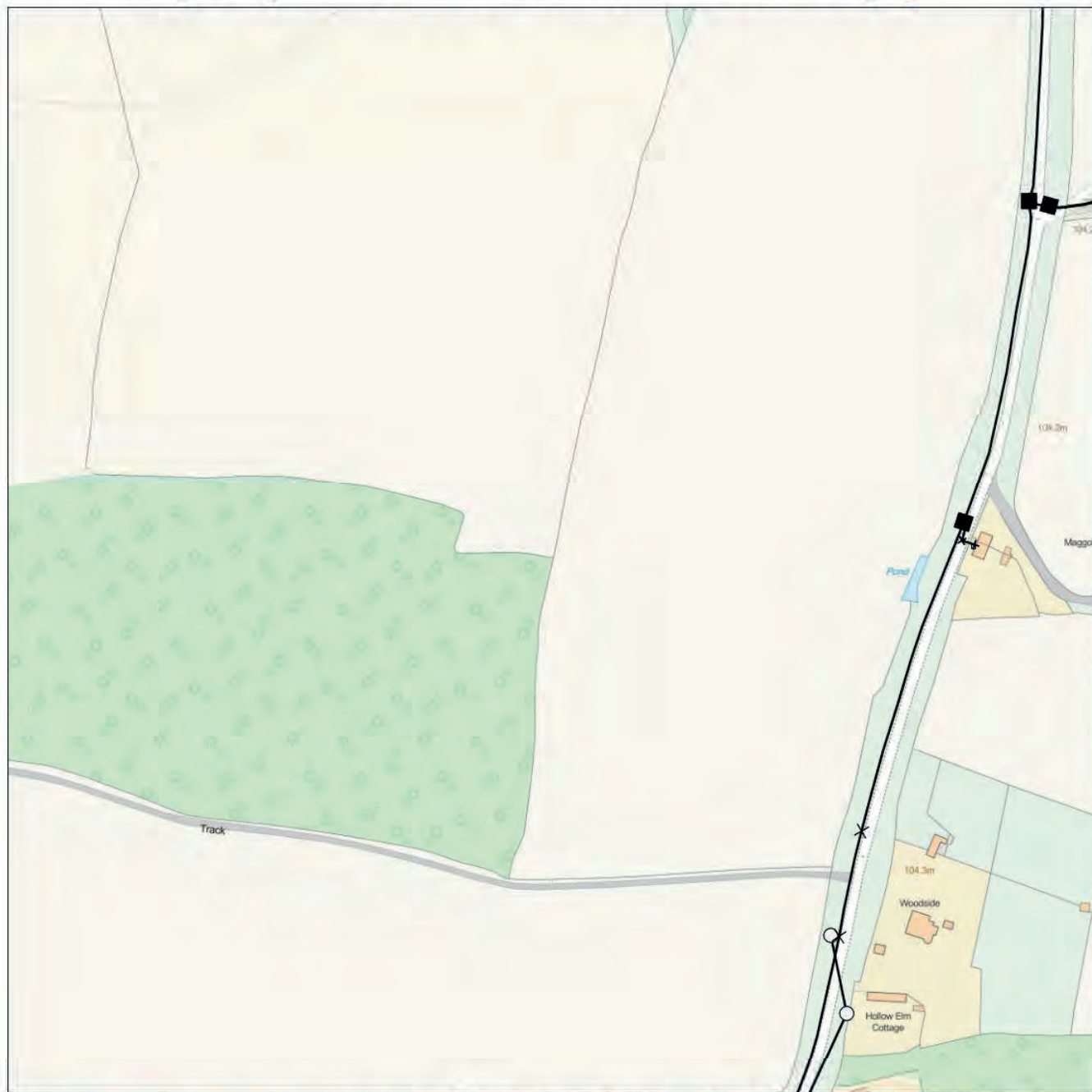
Map Reference : (centre) TL5625221757

Easting/Northing : (centre) 556252,221757

Issued : 05/07/2019 12:42:40

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : ZUI12423G

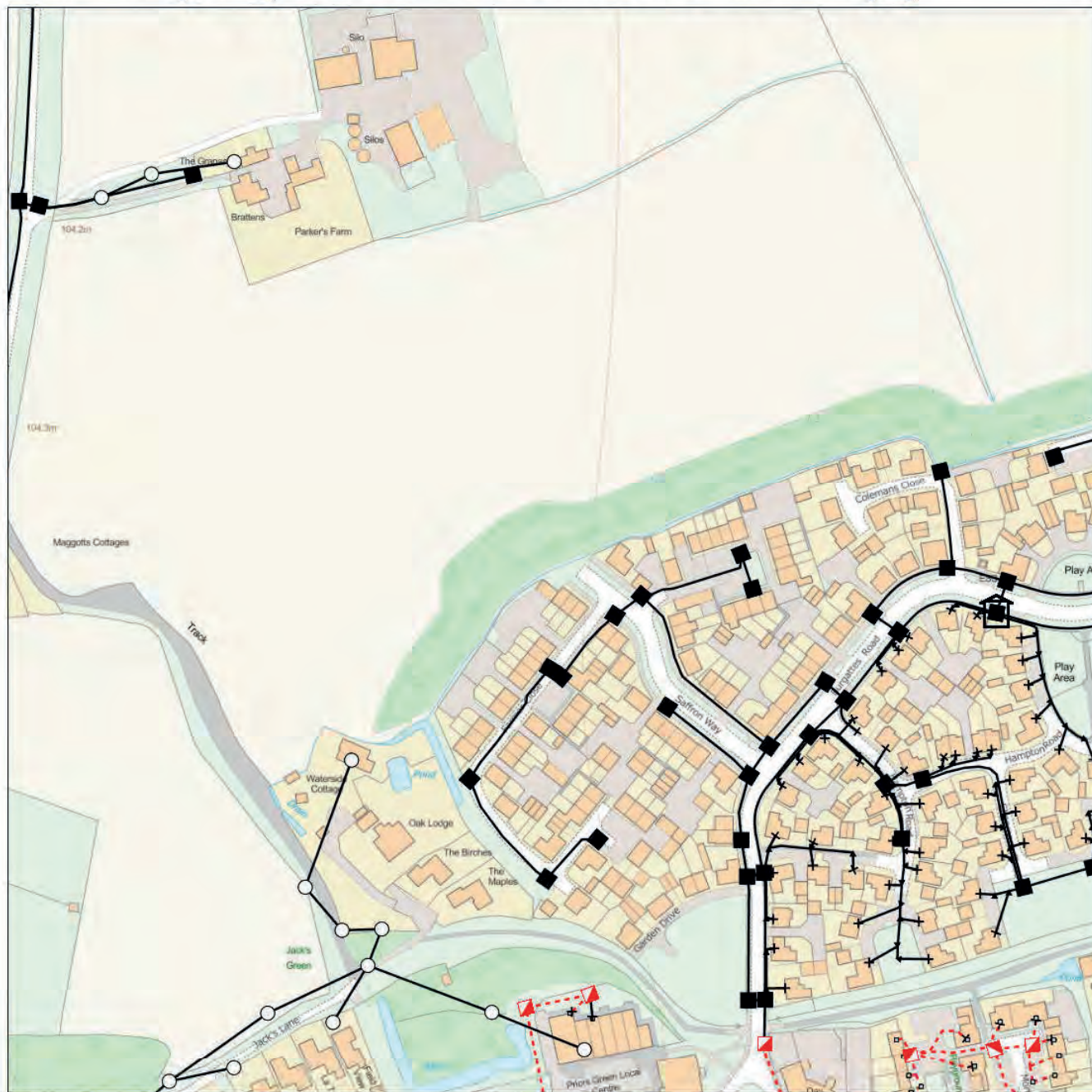
Map Reference : (centre) TL5671721757

Easting/Northing : (centre) 556717,221757

Issued : 05/07/2019 12:42:41

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : SVR12427L

Map Reference : (centre) TL5718121757

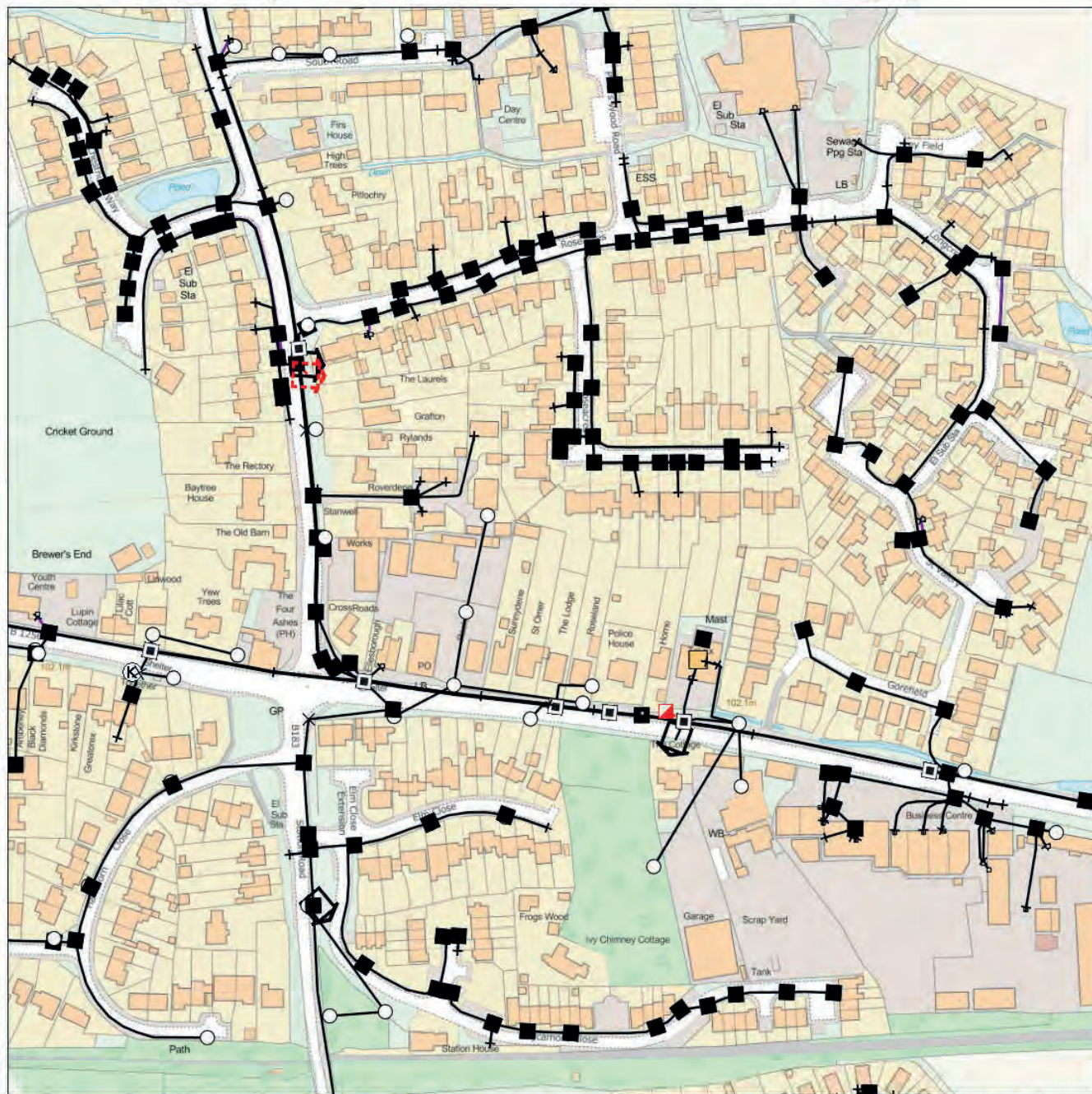
Easting/Northing : (centre) 557181,221757

Issued : 05/07/2019 12:42:45

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Maps by email Plant Information Reply



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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : VOL12426A

Map Reference : (centre) TL5625221293

Easting/Northing : (centre) 556252,221293

Issued : 05/07/2019 12:42:53

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling		Built	
Pole			Duct Tee		Planned	
Box			Building		Inferred	
Manhole			Kiosk		Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : MA012424V

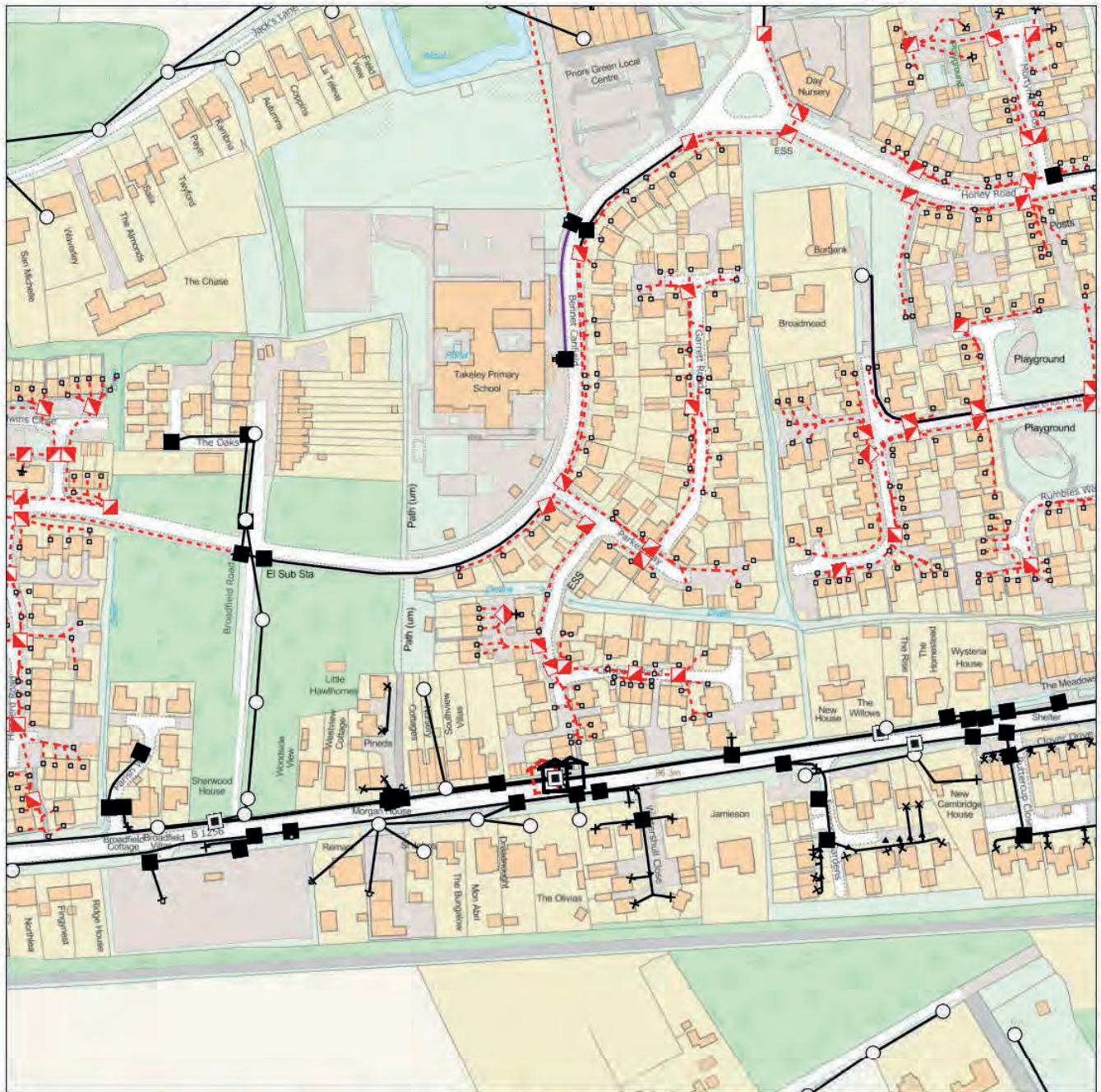
Map Reference : (centre) TL567172 1293

Easting/Northing : (centre) 556717,221293

Issued : 05/07/2019 12:42:56

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KEY TO BT SYMBOLS

	Planned	Live	State	Split Coupling	Built	Change Of State
PCP			Duct Tee		Planned	
Pole			Building		Inferred	
Box			Kiosk		Duct	
Manhole			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
Cabinet						
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : PHT12422S

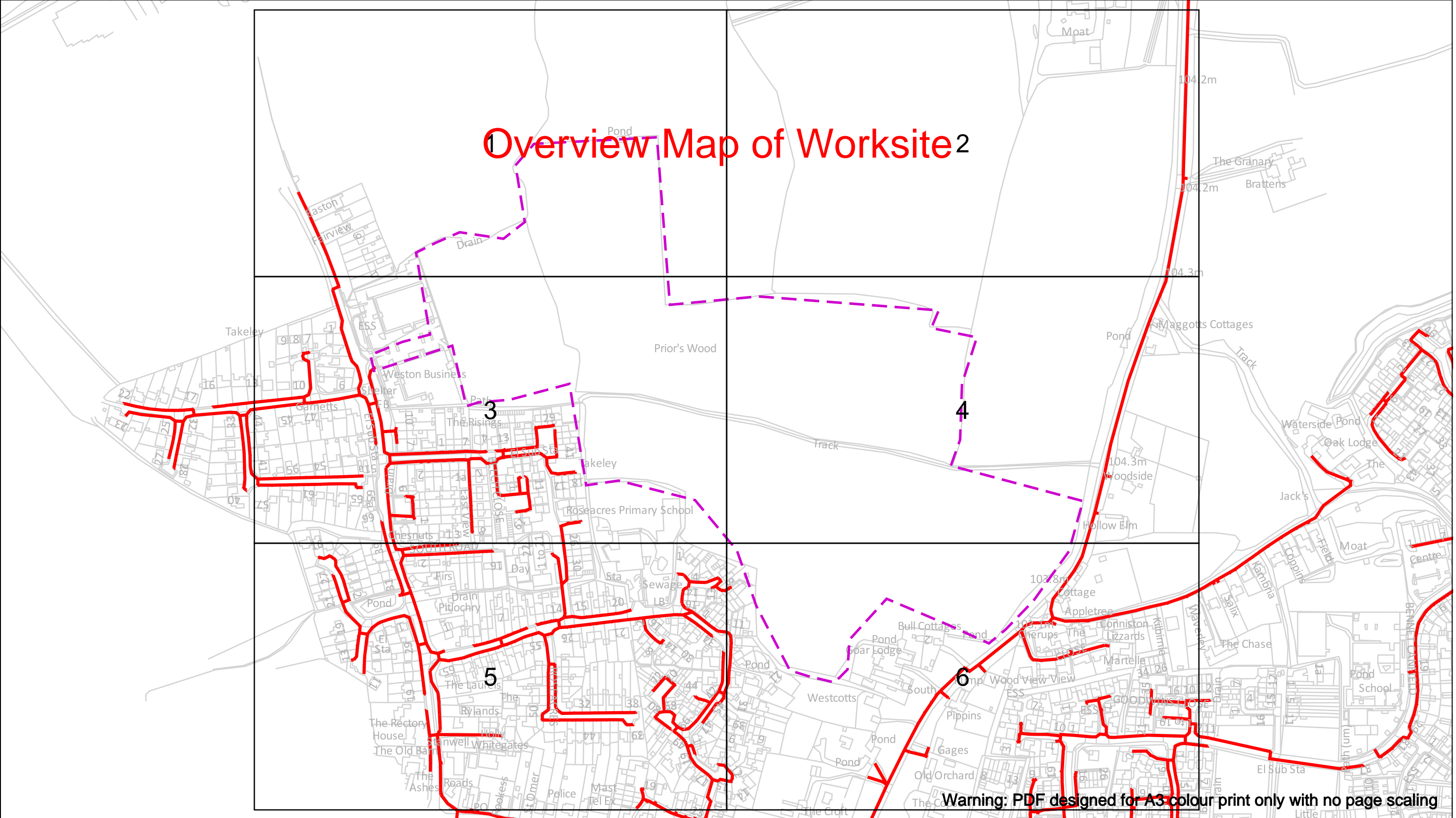
Map Reference : (centre) TL5718121293

Easting/Northing : (centre) 557181,221293

Issued : 05/07/2019 12:43:02

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Appendix E – Broadband – Existing Network - Gigaclear



Overview Map of Worksite 2

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Dig Sites Area: Line:

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Gigaclear
Ultrafast Fibre Broadband

Date Requested: 18/06/2021
Job Reference: 22444245
Site Location: 555856 221218
Requested by:
Mrs Lynn Rusling

Your Scheme/Reference:
UTT/21/1987/FUL

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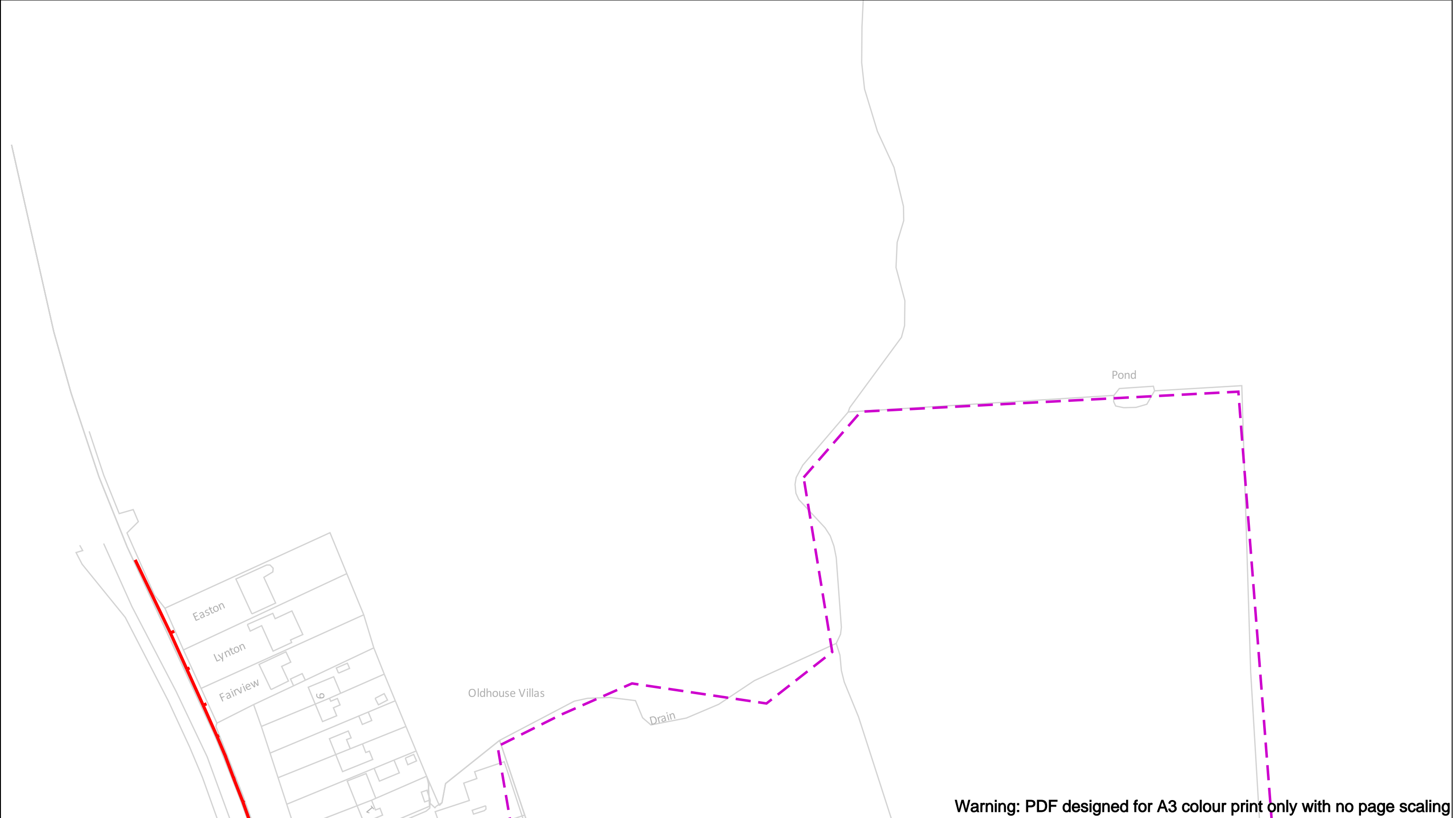
 Gigaclear Route




In Emergency Call: 01865 59 11 21

Gigaclear Ltd,
Building 1, Wyndyke Furlong,
Abingdon,
OX14 1UQ

T: 01865 59 11 21
diversions@Gigaclear.com

Scale: 1:3844 (When plotted at A3)



<p>0 100 m</p> <p>Dig Sites Area: [dashed purple line] Line: [dashed purple line]</p> <p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>		 
<p>Date Requested: 18/06/2021 Job Reference: 22444245 Site Location: 555856 221218 Requested by: Mrs Lynn Rusling</p> <p>Your Scheme/Reference: UTT/21/1987/FUL</p> <p>Scale: 1:1250 (When plotted at A3)</p>	<p>The information on this document is proprietary and shall not be used, copied, reproduced or disclosed in whole or in part without written consent of Gigaclear Ltd. The location of Gigaclear's apparatus is indicated on the plan for general guidance but the exact location may vary from that shown. Gigaclear Ltd cannot guarantee the accuracy of this document and Safe Digging Practices should always be used to identify the exact location of any utility's plant. Gigaclear Ltd accept no liability for any errors or omissions.</p> <p> Gigaclear Route</p> <p>In Emergency Call: 01865 59 11 21</p>	



0100 m

Dig Sites

Area: Line:

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Job Reference: 22444245
Site Location: 555856 221218
Requested by:
Mrs Lynn Rusling

Your Scheme/Reference:
UTT/21/1987/FUL

Scale: 1:1250 (When plotted at A3)

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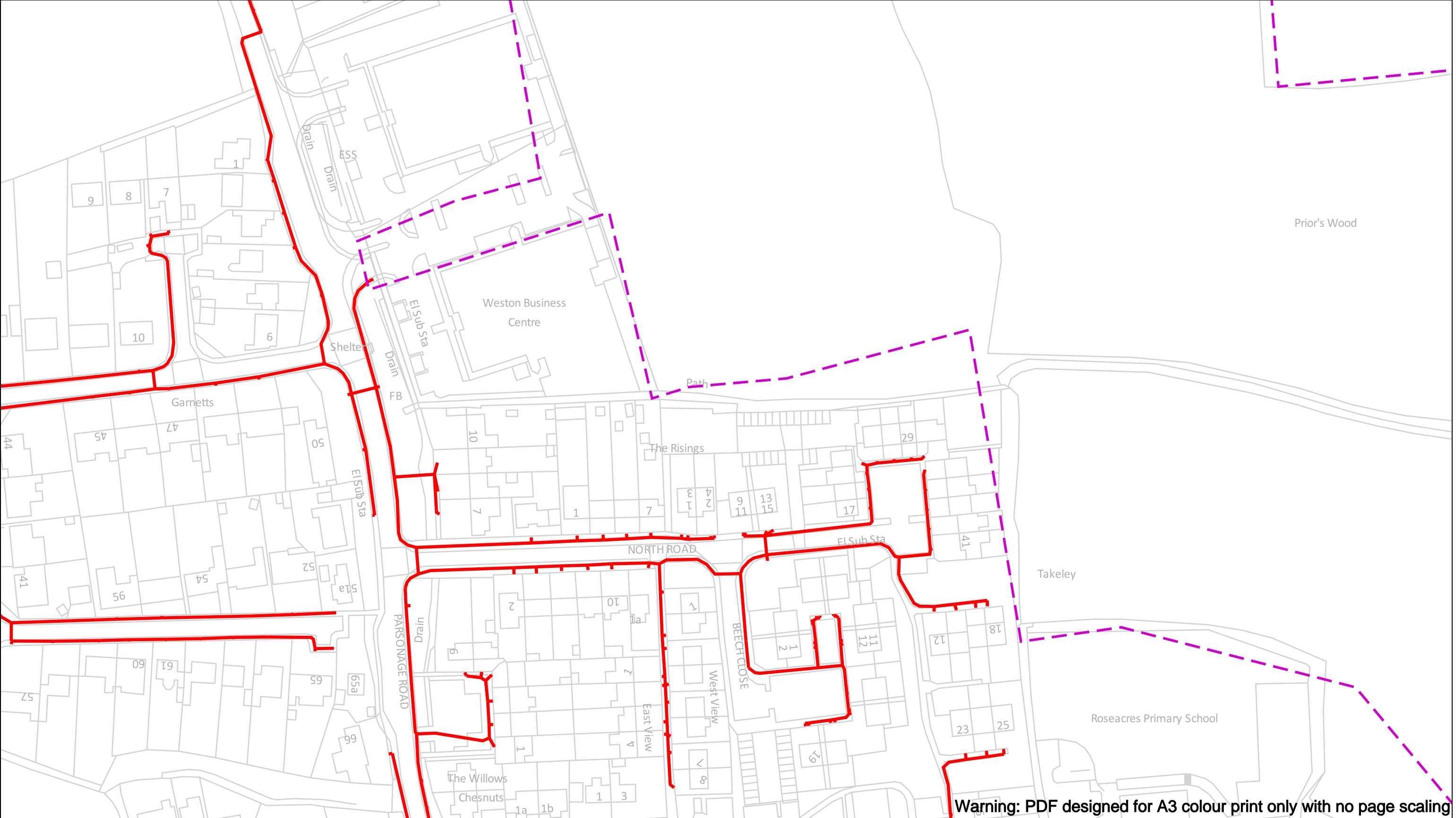
In Emergency Call: 01865 59 11 21



Gigaclear Ltd,
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Abingdon,
OX14 1UQ

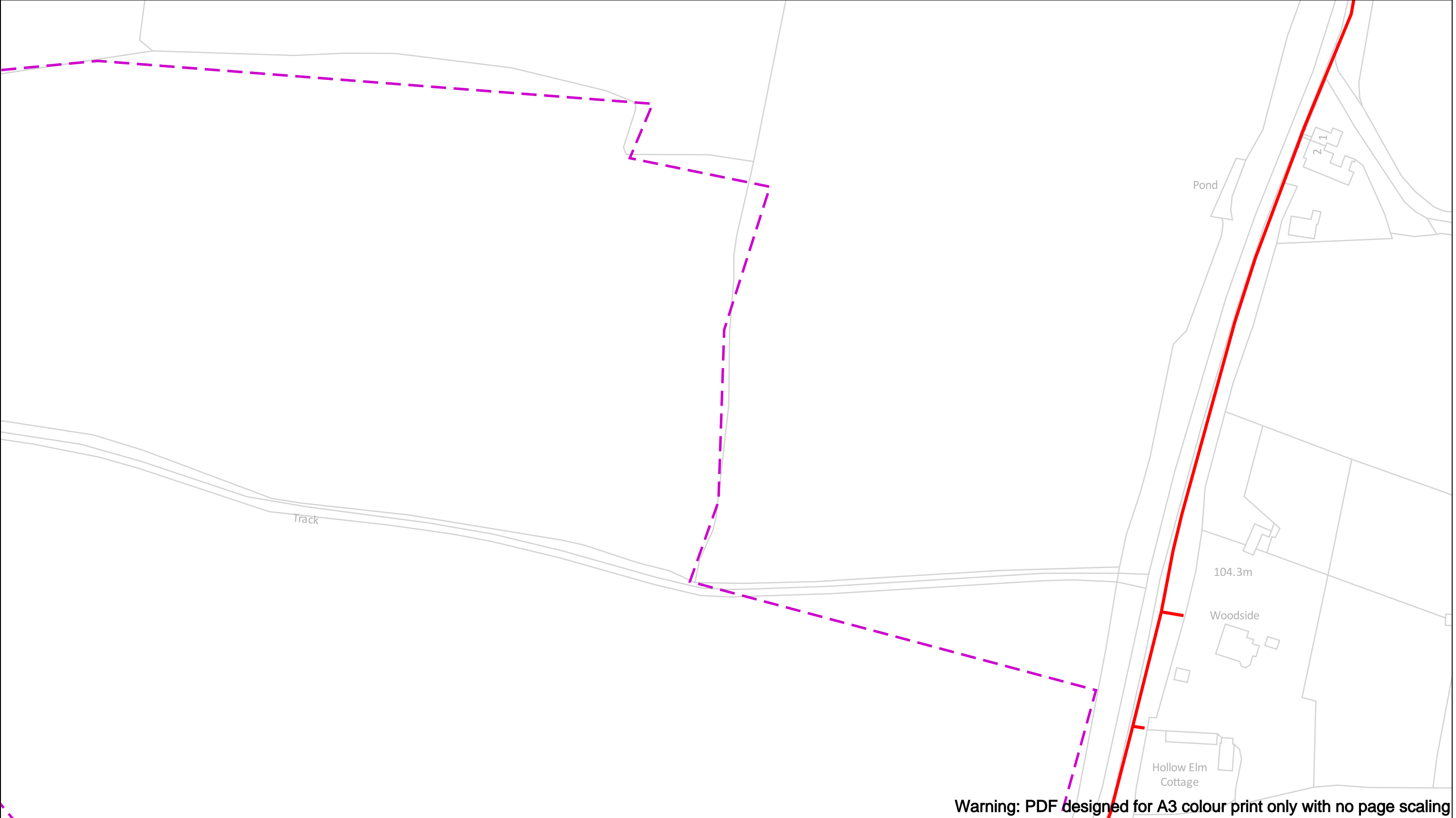
T: 01865 59 11 21
diversions@Gigaclear.com

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(Page 2)

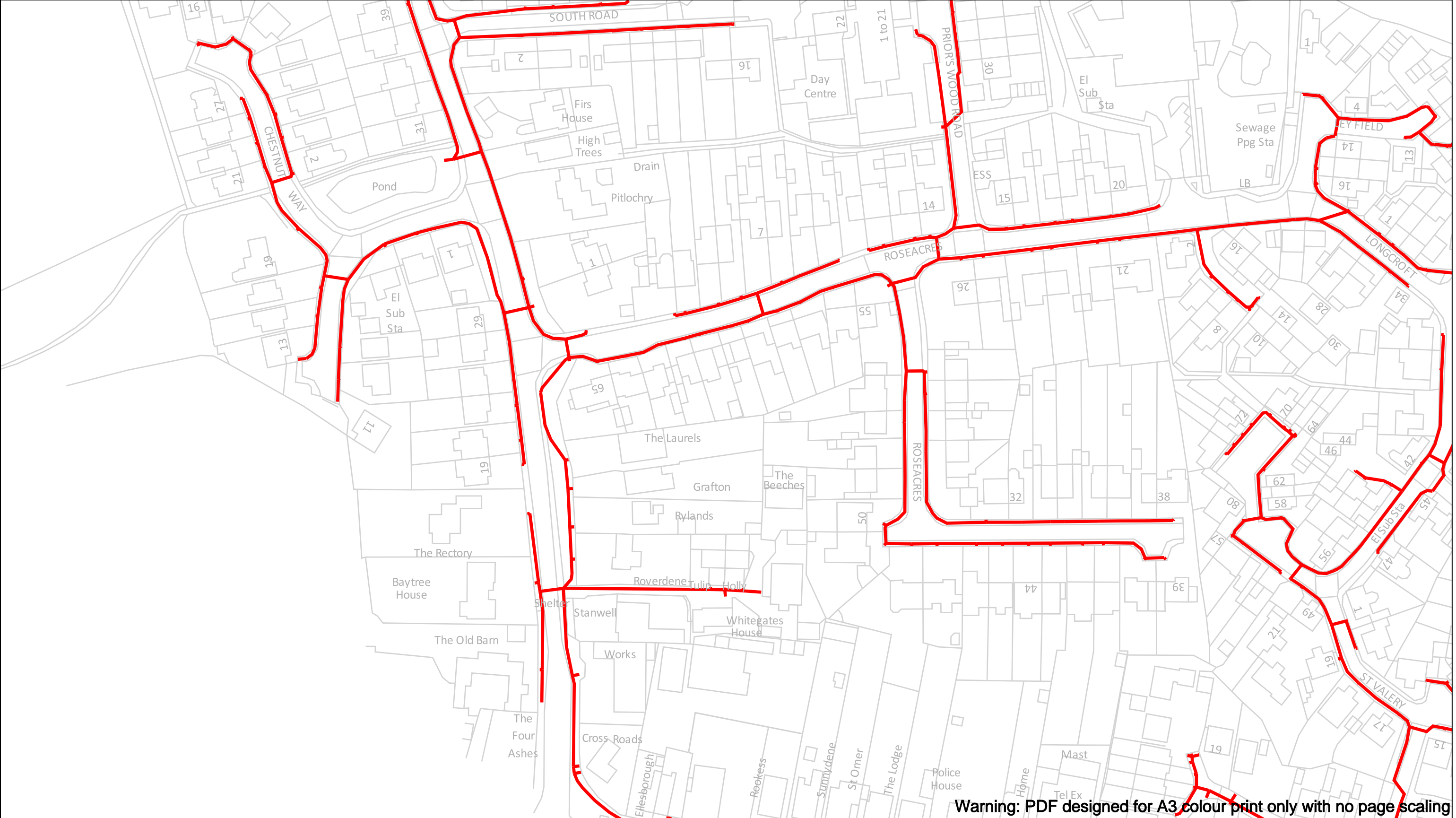


<p>0 100 m</p> <p>Dig Sites Area: --- Line: ---</p> <p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>		 
<p>Date Requested: 18/06/2021 Job Reference: 22444245 Site Location: 555856 221218 Requested by: Mrs Lynn Rusling</p> <p>Your Scheme/Reference: UTT/21/1987/FUL</p> <p>Scale: 1:1250 (When plotted at A3)</p>	<p>The information on this document is proprietary and shall not be used, copied, reproduced or disclosed in whole or in part without written consent of Gigaclear Ltd. The location of Gigaclear's apparatus is indicated on the plan for general guidance but the exact location may vary from that shown. Gigaclear Ltd cannot guarantee the accuracy of this document and Safe Digging Practices should always be used to identify the exact location of any utility's plant. Gigaclear Ltd accept no liability for any errors or omissions.</p> <p>————— Gigaclear Route</p>	









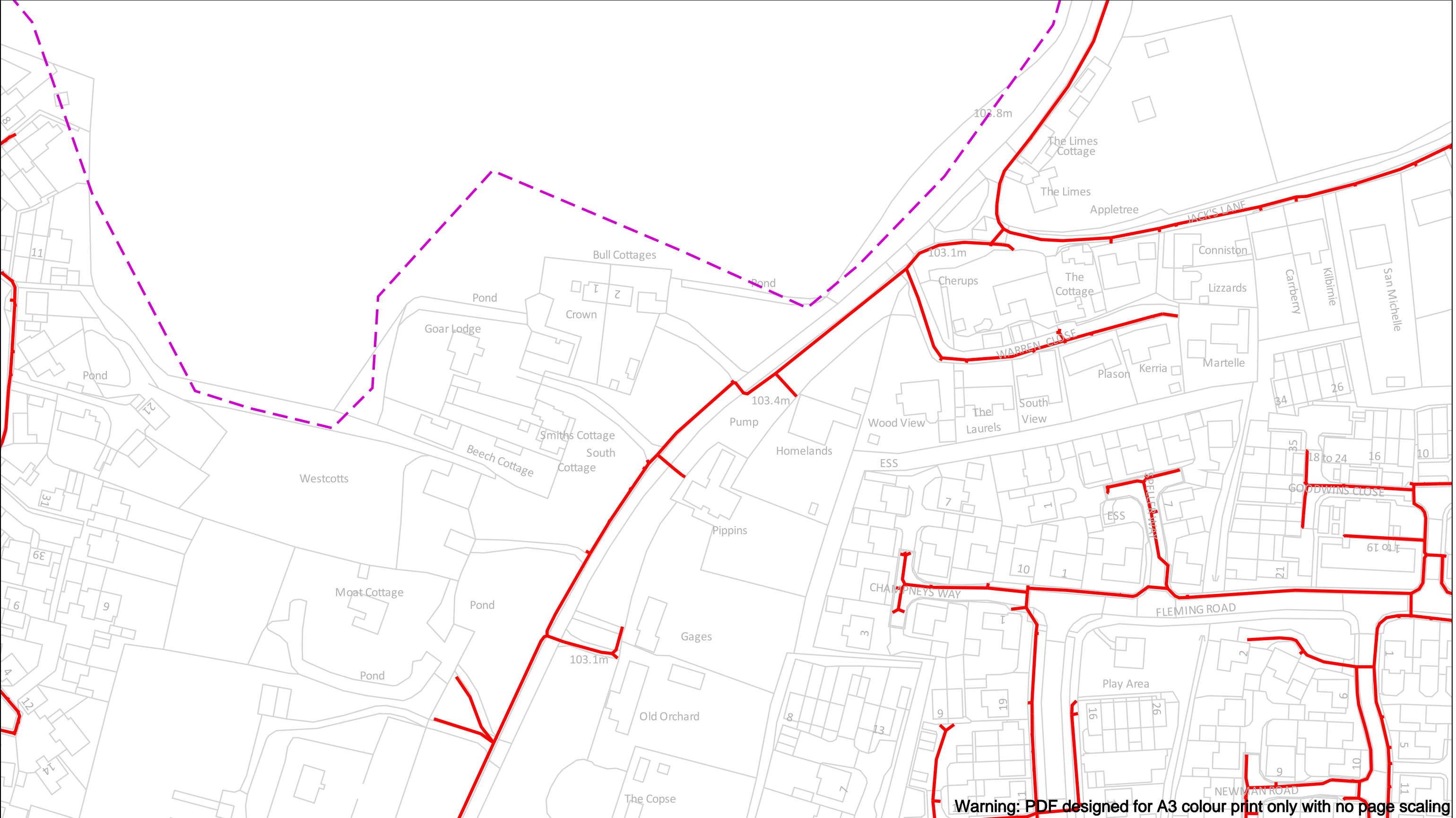
Warning: PDF designed for A3 colour print only with no page scaling

<div>0 100 m</div> <div>Dig Sites Area: Line:</div> <div>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</div>		<div></div> <div></div>
<div>Date Requested: 18/06/2021 Job Reference: 22444245 Site Location: 555856 221218 Requested by: Mrs Lynn Rusling Your Scheme/Reference: UTT/21/1987/FUL</div>	<div>The information on this document is proprietary and shall not be used, copied, reproduced or disclosed in whole or in part without written consent of Gigaclear Ltd. The location of Gigaclear’s apparatus is indicated on the plan for general guidance but the exact location may vary from that shown. Gigaclear Ltd cannot guarantee the accuracy of this document and Safe Digging Practices should always be used to identify the exact location of any utility’s plant. Gigaclear Ltd accept no liability for any errors or omissions.</div>	
<div>Scale: 1:1250 (When plotted at A3)</div>	<div> Gigaclear Route</div>	<div>In Emergency Call: 01865 59 11 21</div>



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<p>0  100 m</p> <p>Dig Sites Area:  Line: </p> <p>The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.</p>		  Gigaclear Ltd, Building 1, Wyndyke Furlong, Abingdon, OX14 1UQ T: 01865 59 11 21 diversions@Gigaclear.com
<p>Date Requested: 18/06/2021 Job Reference: 22444245 Site Location: 555856 221218 Requested by: Mrs Lynn Rusling</p> <p>Your Scheme/Reference: UTT/21/1987/FUL</p>	<p>The information on this document is proprietary and shall not be used, copied, reproduced or disclosed in whole or in part without written consent of Gigaclear Ltd. The location of Gigaclear's apparatus is indicated on the plan for general guidance but the exact location may vary from that shown. Gigaclear Ltd cannot guarantee the accuracy of this document and Safe Digging Practices should always be used to identify the exact location of any utility's plant. Gigaclear Ltd accept no liability for any errors or omissions.</p>	
<p>Scale: 1:1250 (When plotted at A3)</p>	<p> Gigaclear Route</p>	<p>In Emergency Call: 01865 59 11 21</p>



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0

100 m

Dig Sites

Area: Line:

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N

W

E

S

Gigaclear

Ultrafast Fibre Broadband

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Building 1, Wyndyke Furlong,
Abingdon,
OX14 1UQ

T: 01865 59 11 21
diversions@Gigaclear.com

Date Requested: 18/06/2021

Job Reference: 22444245

Site Location: 555856 221218

Requested by:
Mrs Lynn Rusling

Your Scheme/Reference:
UTT/21/1987/FUL

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Gigaclear Route

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Scale: 1:1250 (When plotted at A3)

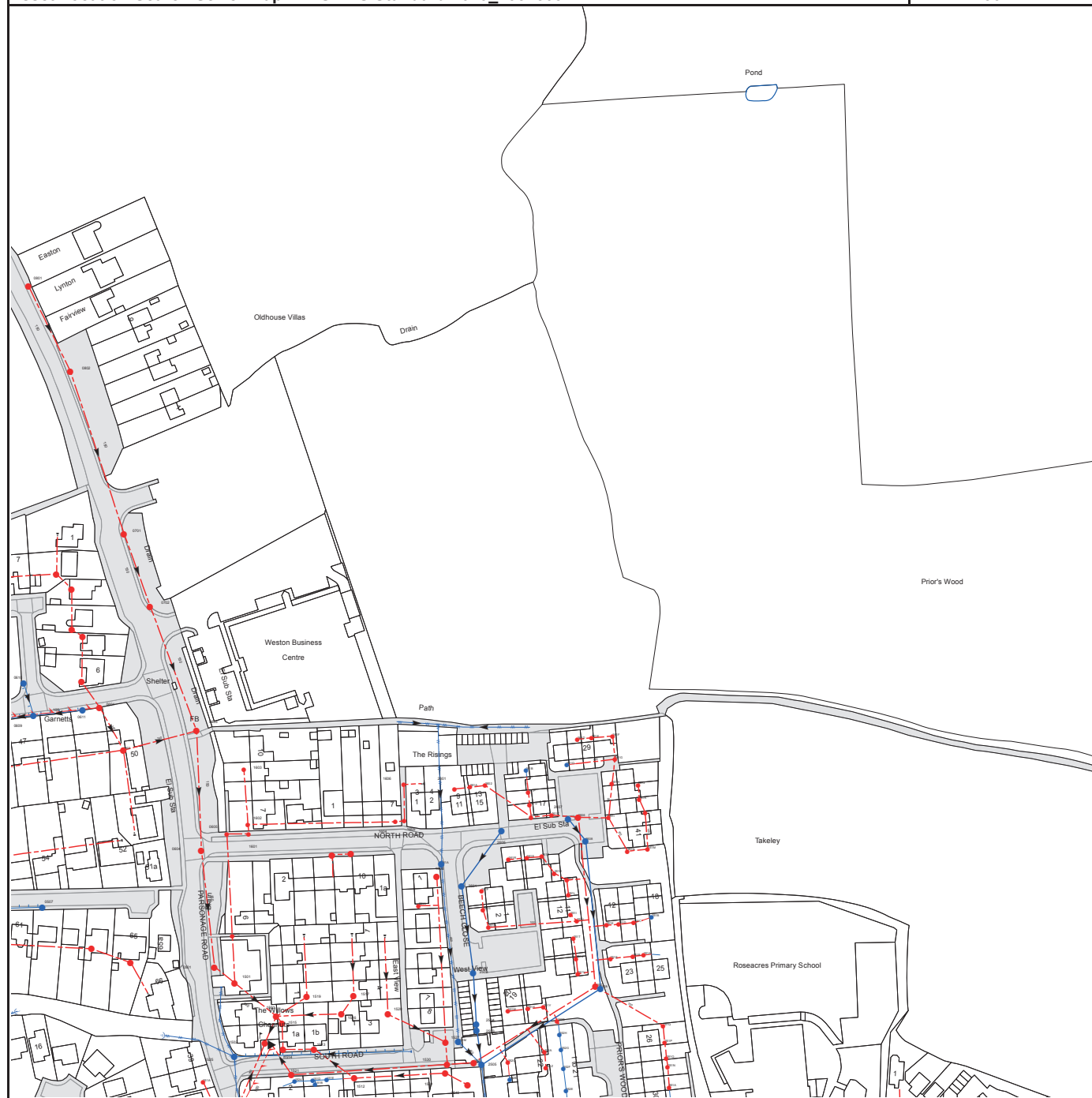
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Appendix F – Wastewater – Capacity Correspondence – Thames Water



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 556250,221750

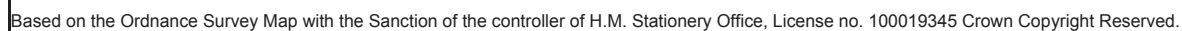
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

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NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
251K	n/a	n/a
261U	n/a	n/a
261R	n/a	n/a
261S	n/a	n/a
261T	n/a	n/a
261N	n/a	n/a
261M	n/a	n/a
2608	n/a	n/a
2605	n/a	n/a
2607	n/a	n/a
261I	n/a	n/a
2606	n/a	n/a
2603	n/a	n/a
261C	n/a	n/a
261L	n/a	n/a
261Q	n/a	n/a
261K	n/a	n/a
261P	n/a	n/a
2602	n/a	n/a
261J	n/a	n/a
261H	n/a	n/a
261B	n/a	n/a
261O	n/a	n/a
261G	n/a	n/a
261D	n/a	n/a
261E	n/a	n/a
261F	n/a	n/a
252E	n/a	n/a
351A	n/a	n/a
252B	n/a	n/a
251N	n/a	n/a
252F	n/a	n/a
251Z	n/a	n/a
2505	n/a	n/a
2509	n/a	n/a
252C	n/a	n/a
251O	n/a	n/a
252A	n/a	n/a
252G	n/a	n/a
251P	n/a	n/a
252H	n/a	n/a
2503	n/a	n/a
251Q	n/a	n/a
2504	n/a	n/a
252D	n/a	n/a
251W	n/a	n/a
251X	n/a	n/a
251Y	n/a	n/a
2508	n/a	n/a
2507	n/a	n/a
251V	n/a	n/a
2502	n/a	n/a
251S	n/a	n/a
251U	n/a	n/a
251R	n/a	n/a
251A	n/a	n/a
251T	n/a	n/a
251H	n/a	n/a
251E	n/a	n/a
251D	n/a	n/a
251C	n/a	n/a
251J	n/a	n/a
251B	n/a	n/a
251I	n/a	n/a
251G	n/a	n/a
251L	n/a	n/a
251F	n/a	n/a
1515	n/a	n/a
1514	n/a	n/a
1521	n/a	n/a
1524	n/a	n/a
1519	n/a	n/a
151D	n/a	n/a
1513	n/a	n/a
151B	n/a	n/a
151E	n/a	n/a
1609	n/a	n/a
1516	n/a	n/a
1517	n/a	n/a
1512	n/a	n/a
1528	n/a	n/a
151A	n/a	n/a
1608	n/a	n/a
161A	n/a	n/a
1531	n/a	n/a
1527	n/a	n/a
1530	n/a	n/a
251M	n/a	n/a
2501	n/a	n/a
2510	n/a	n/a
1610	n/a	n/a

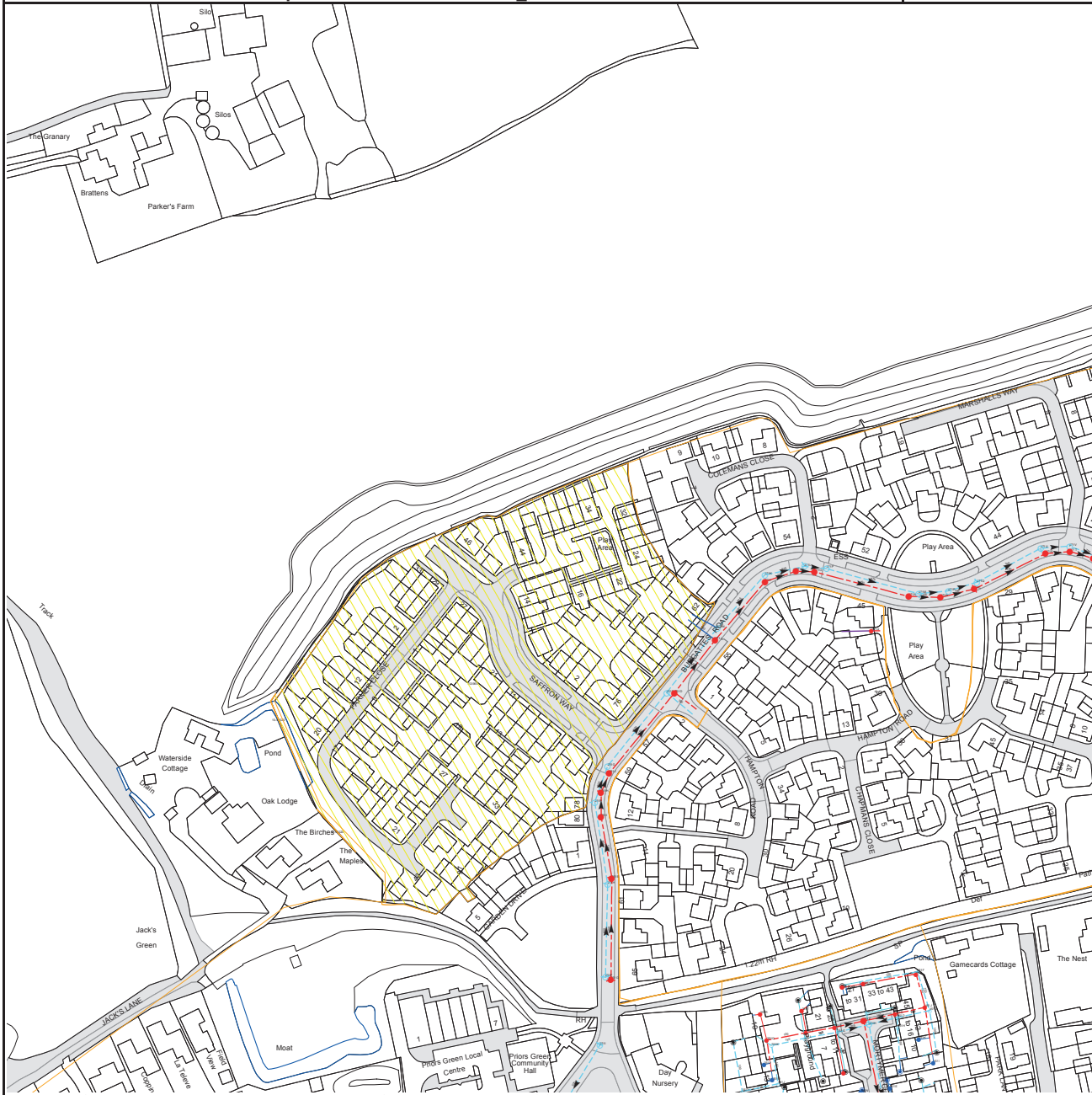
Manhole Reference	Manhole Cover Level	Manhole Invert Level
0604	97.73	94.59
0605	n/a	n/a
1601	n/a	n/a
1602	n/a	n/a
1604	n/a	n/a
1605	n/a	n/a
2601	n/a	n/a
261A	n/a	n/a
1606	n/a	n/a
1603	n/a	n/a
0602	97.86	95.96
0603	98.94	94.86
0609	n/a	n/a
0611	n/a	n/a
0601	97.85	96.16
0610	n/a	n/a
0606	n/a	n/a
0703	n/a	n/a
0704	n/a	n/a
0702	98.86	95.18
0705	n/a	n/a
0706	n/a	n/a
0701	98.22	95.35
0802	97.09	95.77
0801	96.73	96
0507	n/a	n/a
0504	n/a	n/a
0505	n/a	n/a
051A	n/a	n/a
0501	95.73	94.2
151C	n/a	n/a
1525	n/a	n/a
1501	96.09	94.15
1502	95.94	93.88
1503	96.18	93.98
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NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
921C	99.648	97.6
921Q	n/a	n/a
921F	99.538	97.767
921M	n/a	n/a
921W	n/a	n/a
921G	99.451	97.494
921J	99.628	97.369
921V	n/a	n/a
921Z	n/a	n/a
921P	n/a	n/a
921T	n/a	n/a
931I	99.65	96.91
911A	n/a	n/a
931E	99.667	n/a
9102	98.83	97
931A	101.086	n/a
931D	99.642	n/a
831J	101.557	99.532
831E	101.216	n/a
931H	99.68	96.38
931B	100.082	n/a
931J	99.575	97.734
831I	101.443	99.69
831O	n/a	n/a
831L	101.438	100.075
831V	n/a	n/a
831S	n/a	n/a
831R	n/a	n/a
931O	99.547	97.51
931K	99.53	97.918
831H	101.703	100
931L	99.781	98.085
931P	99.835	97.68
931M	100.785	99.175
831K	101.844	100.485
931Q	100.765	98.74
831P	n/a	n/a
831T	n/a	n/a
931N	100.797	99.333
931R	100.721	99.04
932H	n/a	n/a
932G	n/a	n/a
821G	101.34	98.819
821A	101.278	n/a
831B	101.832	n/a
811A	100.596	n/a
831M	101.683	98.734
831C	101.688	n/a
831D	101.71	n/a
821I	n/a	n/a
821F	100.42	97.799
821E	100.419	98.004
921S	n/a	n/a
921R	n/a	n/a
921E	100.04	97.937
921H	100	97.686
921L	n/a	n/a
9101	99.59	97.57
921N	n/a	n/a
921X	n/a	n/a
931C	101.221	n/a
921Y	n/a	n/a
921D	99.827	97.461
921O	n/a	n/a
921K	99.856	97.227
921U	n/a	n/a
931G	99.96	96.856
921A	99.521	97.99
921B	99.467	97.662
5101	102.87	101.15
5102	102.7	100.4
6101	102.44	99.88
7101	102.05	99.45
731D	n/a	n/a
731E	n/a	n/a
731A	102.523	101.13
731C	102.547	100.6
721A	101.82	100.119
731F	n/a	n/a
731B	102.276	97.709
831Q	n/a	n/a
831N	n/a	n/a
831F	102.063	98.722
831W	n/a	n/a
831G	102.06	97.957
8101	100.79	98.87
821C	101.285	n/a
821D	101.301	n/a
831A	101.837	n/a
821B	101.147	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 557250,221750

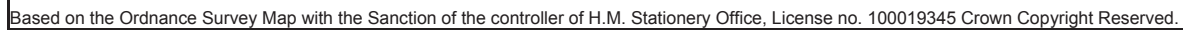
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Manhole Reference	Manhole Cover Level	Manhole Invert Level
261H	99.243	96.212
261J	99.182	96.128
261G	99.17	94.36
361E	98.358	94.234
361D	98.263	95.573
371J	97.65	95.229
371N	97.547	94.008
371I	97.13	94.867
371K	97.112	93.462
351T	98.65	97.95
451G	98.05	97.1
451J	98.025	96.85
351M	n/a	n/a
351N	n/a	n/a
451L	98.3	97.3
451F	98.25	97.45
371Q	n/a	n/a
471R	95.894	93.882
471N	96.125	94.082
471M	96.071	91.901
471P	95.837	91.891
471L	95.661	93.655
471Q	95.671	91.886
371O	96.747	94.473
371M	96.927	94.681
371P	96.684	92.983
371L	97.534	93.204
471O	95.184	93.145
471S	95.291	93.335
471T	95.215	93.226
471U	95.328	91.803
471V	95.216	91.788
341N	n/a	n/a
451E	97.96	97.1
351J	98.7	97.775
351O	n/a	n/a
351U	n/a	n/a
451I	n/a	n/a
451K	n/a	n/a
351L	98.35	97.275
351S	98.5	97.1
351G	98.275	97.1
451H	98.25	97
351E	98.275	96.9
351H	n/a	96.725
351F	n/a	96.425
451D	98.255	96.91
451C	98.27	96.65
351V	98.45	97.1
351I	98.8	97.945
351P	n/a	n/a
351K	98.7	97.585
251I	99.991	n/a
351Q	98.65	97.6
351R	n/a	n/a
251G	98.719	97.055
251F	98.715	94.871
251H	99.328	94.73
251E	99.329	96.651
261I	99.318	96.31
261F	99.256	94.47
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TL5621SW

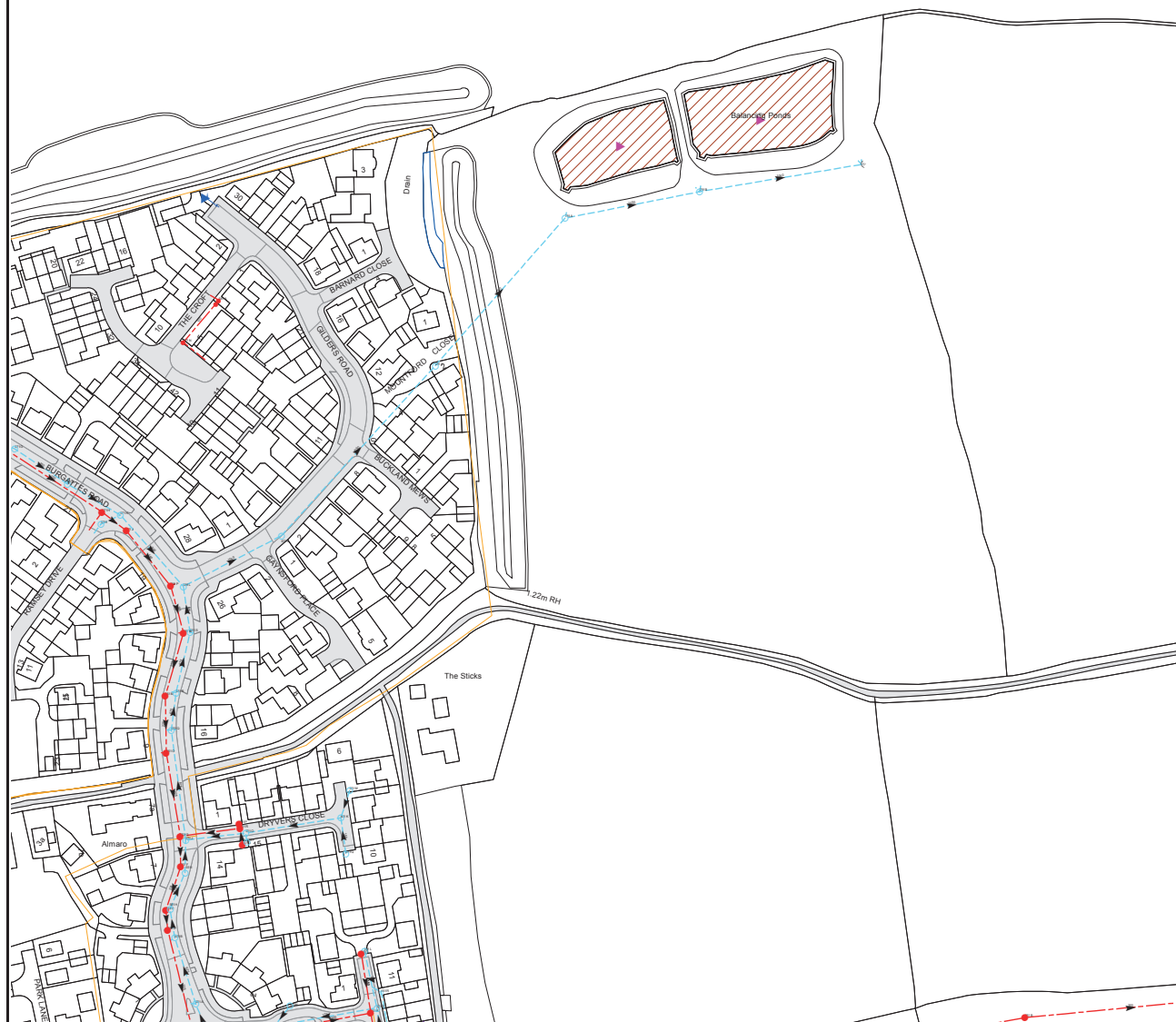


NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
4206	n/a	n/a
421C	n/a	n/a
421A	n/a	n/a
4310	102.08	101.03
4311	n/a	n/a
4312	n/a	n/a
4301	n/a	n/a
4302	101.25	99.68
431D	n/a	n/a
431F	n/a	n/a
4101	102.71	100.84
4303	101.24	100
4201	n/a	n/a
4215	n/a	97.86
431C	n/a	n/a
4202	101.56	99.93
4214	n/a	97.84
431A	n/a	n/a
4212	n/a	n/a
4207	n/a	100.49
4208	n/a	100.87
4204	n/a	n/a
4211	n/a	100.41
4203	102.03	100.25
4304	101.78	101.06
4305	n/a	n/a
421D	n/a	n/a
421E	n/a	n/a
4306	101.79	100.77
4308	n/a	n/a
4309	102.2	101.24
421B	n/a	n/a
4205	102	100.75
4003	n/a	n/a
341B	n/a	n/a
3413	n/a	n/a
3401	99.25	n/a
341A	n/a	n/a
3402	99.61	97.94
3403	99.73	97.78
3301	99.98	n/a
3404	100.01	98.38
3302	n/a	n/a
3405	100.02	98.18
3406	100.1	97.65
4401	100.44	98.87
4402	100.54	97.48
4403	100.79	99.4
441A	n/a	n/a
4404	100.85	97.13
4405	100.72	99.25
4406	101	99.48
4407	101.78	99.96
4408	101.64	100.35
4307	101.82	100
4409	101.65	99.57
2201	101.24	100.06
2203	n/a	n/a
2106	n/a	n/a
221B	n/a	n/a
2302	n/a	n/a
2303	n/a	n/a
2104	n/a	n/a
2105	n/a	n/a
2304	n/a	n/a
2308	n/a	n/a
221A	n/a	n/a
2306	n/a	n/a
2309	n/a	n/a
2202	n/a	n/a
2307	n/a	n/a
3313	n/a	n/a
3201	102.3	100.61
311C	n/a	n/a
311B	n/a	n/a
3219	n/a	100.49
3218	n/a	99.85
3217	n/a	99.69
3303	n/a	n/a
3304	n/a	n/a
3305	n/a	n/a
3306	100.95	99.23
4216	n/a	97.91
3008	n/a	n/a
4001	n/a	n/a
2004	n/a	n/a
2005	n/a	n/a
201A	n/a	n/a
201C	n/a	n/a
201B	n/a	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
201D	n/a	n/a
2003	n/a	n/a
301I	n/a	n/a
3006	n/a	n/a
301H	n/a	n/a
301G	n/a	n/a
301F	n/a	n/a
301E	n/a	n/a
301D	n/a	n/a
301C	n/a	n/a
301B	n/a	n/a
301A	n/a	n/a
211E	n/a	n/a
211D	n/a	n/a
211C	n/a	n/a
211B	n/a	n/a
211A	n/a	n/a
2103	n/a	n/a
2102	n/a	n/a
311A	n/a	n/a
2301	n/a	n/a
2305	n/a	n/a
2409	n/a	n/a
2415	n/a	n/a
2405	n/a	n/a
2411	n/a	n/a
2412	n/a	n/a
2414	n/a	n/a
2416	n/a	n/a
2413	n/a	n/a
2403	n/a	n/a
2410	n/a	n/a
241A	n/a	n/a
241B	n/a	n/a
1102	n/a	n/a
1110	n/a	n/a
1107	n/a	n/a
1109	n/a	n/a
1108	n/a	n/a
111A	n/a	n/a
1003	103.97	101.5
111B	n/a	n/a
1103	n/a	n/a
1104	n/a	n/a
111C	n/a	n/a
1106	n/a	n/a
1005	n/a	n/a
1105	n/a	n/a
111D	n/a	n/a
1006	n/a	n/a
111E	n/a	n/a
111F	n/a	n/a
111G	n/a	n/a
111H	n/a	n/a
111I	n/a	n/a
2002	n/a	n/a
2101	n/a	n/a
2107	n/a	n/a
1403	97.4	95.44
141B	n/a	n/a
141C	n/a	n/a
141D	n/a	n/a
0401	n/a	n/a
0402	n/a	n/a
0403	n/a	n/a
0404	n/a	n/a
0405	n/a	n/a
0410	n/a	n/a
0406	n/a	n/a
0407	n/a	n/a
0411	n/a	n/a
0408	n/a	n/a
0409	n/a	n/a
0414	n/a	n/a
1405	n/a	n/a
1401	95.69	94.25
1402	n/a	n/a
0117	n/a	n/a
0205	n/a	n/a
1207	n/a	n/a
1203	n/a	n/a
1208	n/a	n/a
1204	n/a	n/a
1205	n/a	n/a
0203	n/a	n/a
1206	n/a	n/a
0202	n/a	n/a
1201	101.38	99.5
0204	n/a	n/a
121F	n/a	n/a
0206	n/a	n/a
121E	n/a	n/a
121D	n/a	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
0201	102.31	99.05
1202	101.18	99.84
131C	n/a	n/a
1301	100.84	98.79
1407	n/a	n/a
1404	97.97	95.93
0109	n/a	n/a
0112	n/a	n/a
0113	n/a	n/a
0114	n/a	n/a
0002	n/a	n/a
0115	n/a	n/a
0110	n/a	n/a
0116	n/a	n/a
0101	n/a	n/a
0111	n/a	n/a
0102	n/a	n/a
0103	n/a	n/a
0105	n/a	n/a
0106	n/a	n/a
0003	102.98	101.03
0107	n/a	n/a
1001	n/a	n/a
1002	102.93	101.38
1101	102.95	101.32
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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 557750,221750

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Manhole Reference	Manhole Cover Level	Manhole Invert Level
551D	96.775	91.49
551C	96.756	91.419
551H	96.771	92.127
551B	96.651	92.133
551I	96.641	92.108
551A	96.267	92.199
651N	n/a	93.626
651J	95.89	92.539
651L	95.89	93.131
651A	96.208	89.628
651O	95.93	92.824
651R	n/a	n/a
951B	91.012	88.344
551F	96.678	91.599
651Q	n/a	93.752
551Q	n/a	93.322
651P	n/a	93.529
551J	96.57	92.05
551G	96.58	91.701
551O	n/a	92.502
551R	n/a	91.904
551P	n/a	92.304
651K	n/a	n/a
651M	n/a	94.425
561O	96.272	91.847
561Q	96.259	92.006
561M	96.201	91.952
561R	96.201	91.945
561N	95.861	92.085
561S	95.861	91.845
561L	95.708	91.446
561P	95.843	92.461
671A	94.919	91.279
571J	95.689	92.68
571K	95.571	91.575
681A	92.98	90.293
571N	n/a	n/a
581A	n/a	n/a
781A	91.315	89.24
781B	91.113	89.133
571I	n/a	n/a
571H	95.503	92.798
571L	95.435	91.663
571G	95.25	91.772

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Manhole Reference	Manhole Cover Level	Manhole Invert Level
051B 051C	89.437 88.76	87.673 87.089
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0 45 90 180 270 360
Meters

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Scale: 1:7158
Width: 2000m
Printed By: G1KANAGA
Print Date: 10/07/2019
Map Centre: 557057,221872
Grid Reference: TL5721NW

Comments:



ALS Sewer Map Key

Public Sewer Types (Operated & Maintained by Thames Water)

	Foul: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
	Surface Water: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
	Combined: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
	Trunk Surface Water
	Trunk Foul
	Storm Relief
	Trunk Combined
	Bio-solids (Sludge)
	Vent Pipe
	Proposed Thames Surface Water Sewer
	Proposed Thames Foul Sewer
	Gallery
	Foul Rising Main
	Surface Water Rising Main
	Combined Rising Main
	Sludge Rising Main
	Proposed Thames Water Rising Main
	Vacuum

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plans are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
- 5) 'na' or '0' on a manhole level indicates that data is unavailable.

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

	Air Valve
	Dam Chase
	Fitting
	Meter
	Vent Column

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

	Control Valve
	Drop Pipe
	Ancillary
	Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol. Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

	Outfall
	Undefined End
	Inlet

- 6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimetres. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology present on the plan, please contact a member of Property Insight on 0845 070 9148.

Other Symbols

Symbols used on maps which do not fall under other general categories

	Public/Private Pumping Station
	Change of characteristic indicator (C.O.C.I.)
	Invert Level
	Summit

Areas

Lines denoting areas of underground surveys, etc.

	Agreement
	Operational Site
	Chamber
	Tunnel
	Conduit Bridge

Other Sewer Types (Not Operated or Maintained by Thames Water)

	Foul Sewer
	Surface Water Sewer
	Combined Sewer
	Gully
	Proposed
	Culverted Watercourse
	Abandoned Sewer



Miss L Wade
EAS
Unit 23 The Maltings
Roydon Road Stanstead Abbots
SG12 8HG



Our ref: DS6084619



0800 009 3921
Monday to Friday, 8am to 5pm

31st May 2021

Pre-planning enquiry: Wastewater Capacity check

Dear Miss Wade

Thank you for providing details of your development with the Pre-Planning application dated 25th May 21 for development @ Warish Hall Farm site Takeley CM22 6PU

Greenfield site developed to { 191 dwellings + Business site with 13 units } as detailed in your above application.

We have completed the current assessment of the foul water flows & surface water discharges based on the information submitted in your application with the purpose of assessing sewerage capacity within the existing Thames Water sewer network, in liaison with TW Asset Planners.

Foul

If your proposals progress in line with the details you've provided as above, we're pleased to confirm that there will be sufficient sewerage capacity in the adjacent TW foul sewer network to serve your foul discharges from your proposed development, as detailed in your application, provided its by gravity.

This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, to a maximum of three years.

You'll need to keep us informed of any changes to your design – for example, an increase in the number or density of homes. Such changes could mean there is no longer sufficient capacity and has to be investigated again.

Surface Water

In accordance with the Building Act 2000 Clause H3.3, positive connection of surface water to a public sewer will only be consented when it can be demonstrated that the hierarchy of disposal methods have been examined and proven to be impracticable. Before we can consider your surface water needs, you'll need written approval from the lead local flood authority that you have followed the sequential approach to the disposal of surface water and considered all practical means.

When developing a site, policy SI 13 of the London Plan states “Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible. There should also be a preference for green over grey features, in line with the following drainage hierarchy:

The disposal hierarchy being:

1. store rainwater for later use.
2. use infiltration techniques where possible.
3. attenuate rainwater in ponds or open water features for gradual release.
4. attenuate rainwater by storing in tanks or sealed water features for gradual release.
5. discharge rainwater direct to a watercourse.;; *and if above cannot be achieved*
6. discharge rainwater to a surface water sewer/drain.
7. discharge rainwater to the combined sewer.

Where connection to the public sewerage network is still required after examining the hierarchy {1-5} to manage surface water flows we will accept these flows at a discharge rate in line with ***CIRIA's best practice guide on SuDS or that stated within the sites planning approval.***

Please note that , we will need you to provide LLFA/LA approval for surface water discharges prior to TW accepting flows in the TW sewer network, if applicable.
However we note that you are discharging surfacecwater by Infiltration techniques which is encouraged.

Please see the attached ‘Planning your wastewater’ leaflet for additional information. At the appropriate time, you will have to apply for a S106 connection application to DS Connection team

Source Protection Zone

Please check whether your development falls within a Source Protection Zone for groundwater abstraction. These zones may be at particular risk from polluting activities on or below the land surface. To prevent pollution, the Environment Agency and Thames Water (or other local water undertaker) will use a tiered, risk-based approach to regulate activities that may impact groundwater resources. The applicant is encouraged to read the Environment Agency’s approach to groundwater protection (available at <https://www.gov.uk/government/publications/groundwater-protection-position-statements>) and may wish to discuss the implications for their development with a suitably qualified environmental consultant.

This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, to a maximum of three years.

Please note that you must keep us informed of any changes to your design – for example, an increase in the number or density of homes. Such changes could mean there is no longer sufficient sewerage capacity.

What happens next?

Please make sure you submit your connection application, when you are ready, giving us at least 21 days' notice of the date you wish to make your new connection/s.

If you've any further questions, please contact me.

Yours sincerely

Sgd: *Siva, sivarajan*

Siva Sivarajan

Developer Services- Wastewater Adoptions Engineer

Office: 0203 577 7752 Mobile: 07747842608

siva.sivarajan@thameswater.co.uk

Thames Water Utilities Ltd, Clearwater Court, Vastern Road, Reading, Berkshire, RG1 8DB

Find us online at developers.thameswater.co.uk



DS6084619

TW Int ref ;; DTS31745

Warish Hall Farm, CM22 6PU - Your Ref: DS 6084619

Barrie Quin <barrie.quin@weston-homes.com>

27 May 2022 at 14:59

To: Natalya Collins <natalya.collins@thameswater.co.uk>

Cc: David Poole <david.poole@weston-homes.com>, Stephen Adams <stephen.adams@eastp.co.uk>

Natalya

Further to our telephone conversation earlier today, I attach the letter our Flood Risk Consultants, EAS, received from Thames Water on 31 May 2021.

As discussed, Siva confirmed at the time that there is capacity in the foul sewer network for our scheme.

We can confirm that the point of connection is still planned to be in Parsonage Road, as shown on the attached plan, and we believe we can make the scheme work by gravity, i.e. without the need for pumping.


Regarding phasing of the scheme, we can also confirm that occupations are planned to start in July 2023, with last occupations in July 2025. So there is a 2 year buildout programme, with occupations evenly staggered throughout that period.

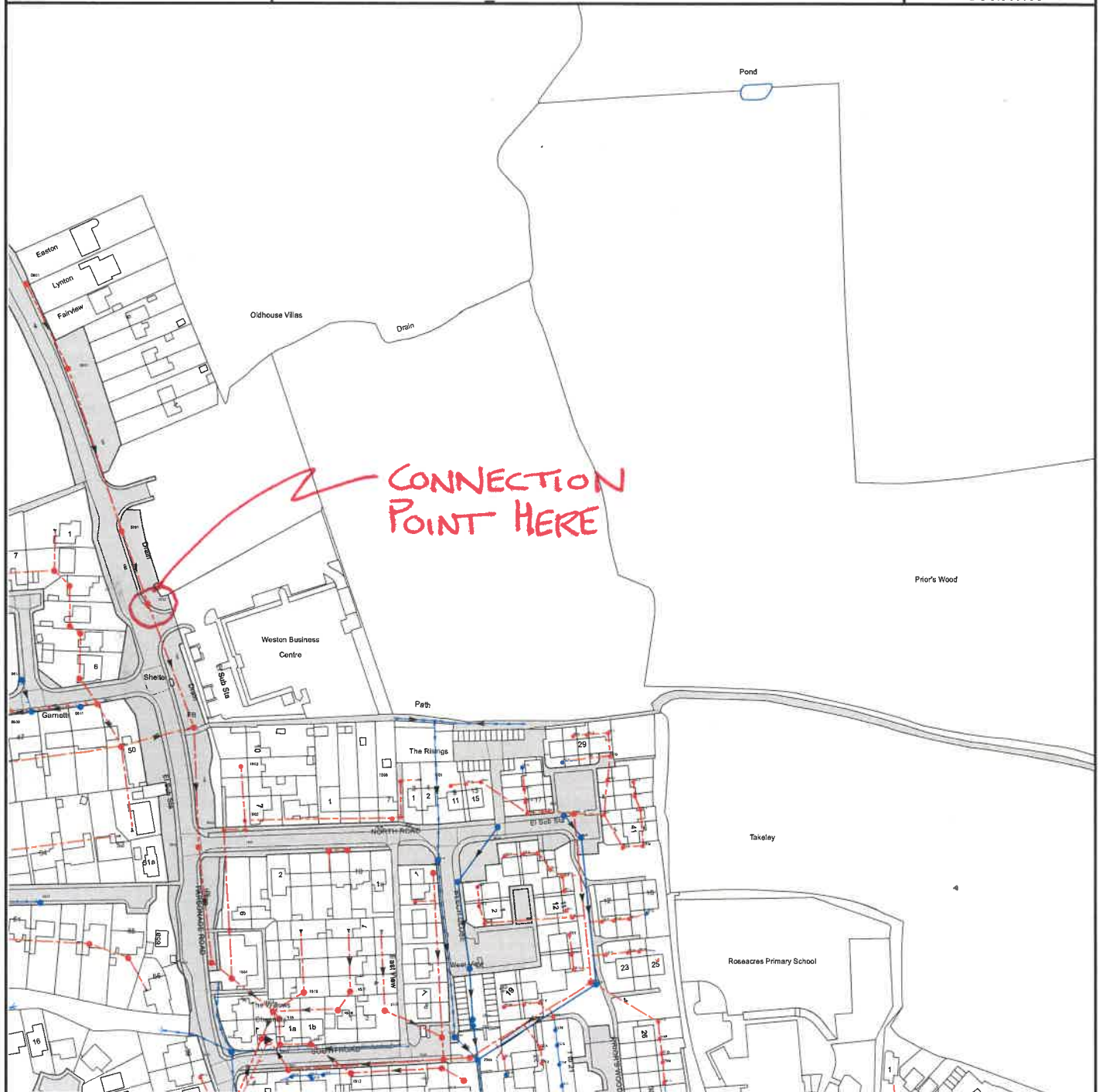
We trust this answers your queries, and that you can now respond positively to confirm that Thames Water's letter of 31 May 2021 still stands, that is - that there is indeed capacity in your foul sewer network for the scheme.

Thank you very much for your help with this matter.

Regards
Barrie Quin
Head of Engineering
Weston Homes

Direct: 01279 873 282**Mobile:** n/a**Office:** 01279 873333**Email:** barrie.quin@weston-homes.com**Visit:** www.weston-homes.com

2 attachments **50245318 DS6084619 CM22 6PU Warish Hall Farm (2).pdf**
240K **TW Records Showing Connection Point.pdf**
133K



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 556250,221750

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

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Warish Hall Farm, CM22 6PU - Your Ref: DS 6084619

Natalya Collins <natalya.collins@thameswater.co.uk>

27 May 2022 at 15:33

To: Barrie Quin <barrie.quin@weston-homes.com>

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Dear Barrie,

I confirm that the capacity Confirmation letter issued by Siva Sivarajan on 31 May 2021 is still valid (also attached).

In order to get the condition discharged please submit this letter to the local planning authorities with the proposed connection point, which I understand is planned to be in Parsonage Road, and the development phasing plan.

Please let me know if you have any further questions.

Kind regards

Natalya

Natalya Collins

Developer Services – Adoptions Engineer

Mobile: 07747 641 932

Helpdesk: 0800 009 3921

developer.services@thameswater.co.uk

Clearwater Court, Vastern Road, Reading, RG1 8DB

Find us online at developers.thameswater.co.uk

-

Get advice on making your sewer connection correctly at connectright.org.uk

Sewers for Adoption (SFA) was replaced by the new Code for Adoptions on 1st April 2020, please use this link to find the new national standards and documents. Any applications made prior to 1st April will continue to be assessed against SFA.



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Weston Homes PLC

The Weston Group Business Centre, Parsonage Road, Takeley, Essex, CM22 6PU.

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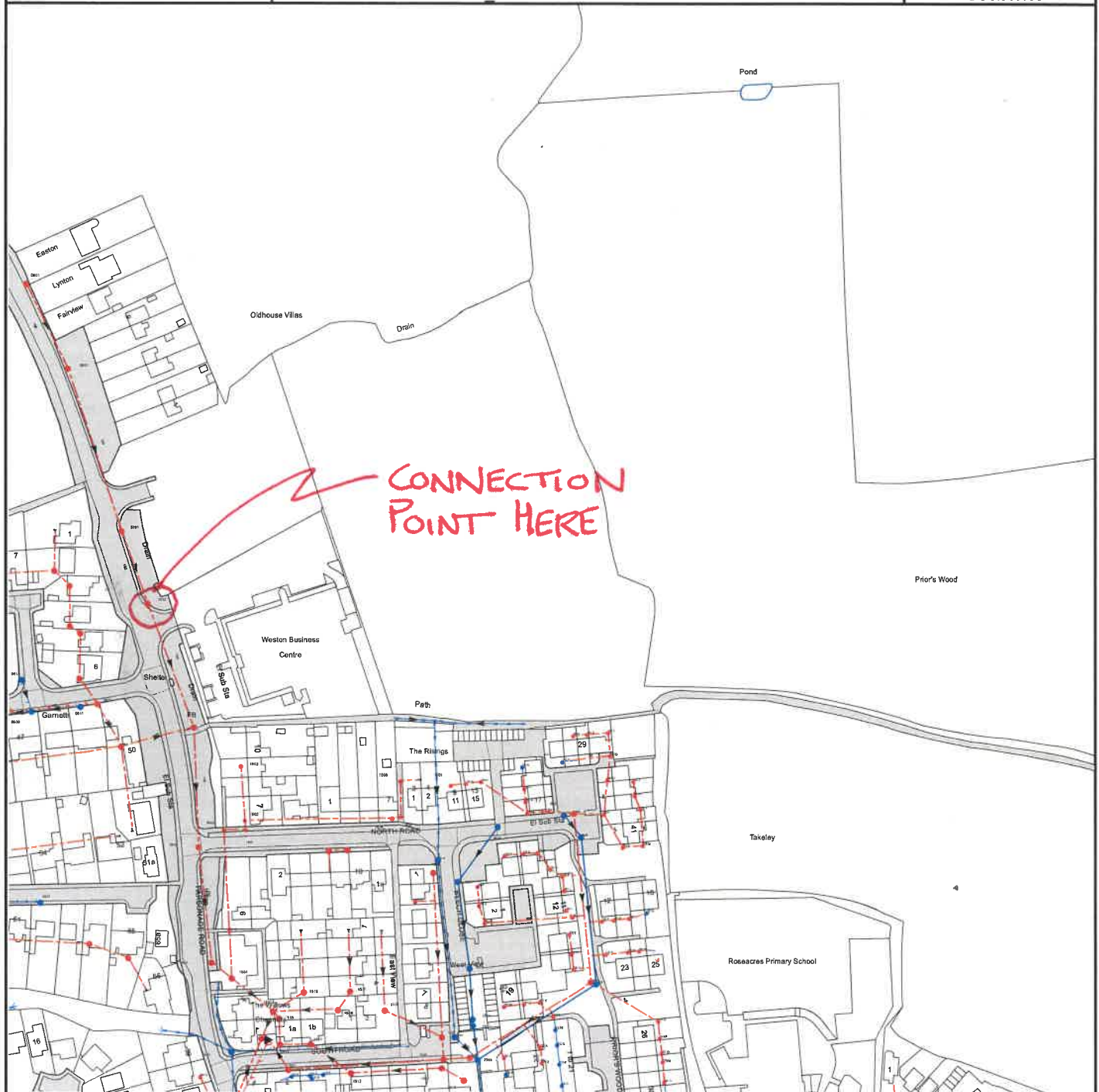
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