

BAE SYSTEMS

Waterlooville

Utilities Appraisal Report

Project Ref: 26365-010

Doc Ref: V3

June 2012

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For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
1	12/06/12	First Draft Issue	SW	AD	PS
2	15/06/12	Client Issue	SW	AD	PS
3	21/06/12	Masterplan boundary updated	SW	AD	PS

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1 Introduction

Peter Brett Associates LLP (PBA) has been commissioned by BAE Systems, 'the client' to prepare a Utilities Appraisal Report to support the outline planning application for the redevelopment of an existing site at Systems Technology Park, Brambles Industrial Estate, Waterlooville, Hampshire.

Investigations, information and conclusions relating to the surface water drainage strategy are addressed separately within the Flood Risk Assessment (FRA) also prepared by PBA.

The BAE Systems Technology Park is located at Elettra Avenue within the Brambles Farm Industrial Estate on the western edge of Waterlooville. The Park is surrounded by Elettra Avenue to the north and west, Silverthorne Way to the south and the B2150 Hambledon Road to the east. The whole complex covers 5.6 hectares (ha); however, the site red line boundary encompasses only 4.5 ha.

The site currently comprises office buildings and a restaurant building in the eastern half while the western half of the site comprises car parking.

The location of the site is shown on Figure 1 and can be viewed in [Appendix A](#).

BAE Systems is seeking outline planning permission to redevelop the site with the following mix of uses:

- Buildings for Class B uses in the western part of the site (around 8,500m² of floor area).
- A 60-bedroom hotel in the south-east of the site.
- A restaurant with drive-through facility in the north-east of the development.
- A car showroom and forecourt to the east of the access from Elettra Avenue from the north.
- Associated access and parking provisions.

The proposed Masterplan is included in [Appendix A](#).

This report has been prepared to assess the impact on the various utilities (electricity, gas, telecoms and water) within and in the immediate vicinity of the site. Assessments have been based on a total development quantum and mix as described above. It has been prepared to support an outline planning application for the redevelopment. In this respect the report is structured as follows:

- **Section 2:** Reviews the existing utility infrastructure in and around the site.
- **Section 3:** Sets out any potential diversionary works to the existing utility infrastructure.
- **Section 4:** Sets out the proposed utility infrastructure to support the development.
- **Section 5:** Provides conclusions to the report.

2 Existing Utility Infrastructure

The following statutory undertakers have been approached for record drawings of their existing utility infrastructure.

Utility Medium	Statutory Undertaker	Infrastructure within Site
Electricity	Scottish & Southern Energy	Yes
Electricity	National Grid	No
Gas	Southern Gas Networks	No
Telecoms	British Telecoms	Yes
Potable Water	Portsmouth Water	No
Drainage	Southern Water	Yes
Other	Linesearch	No
Other	Site Finder (Mobile Masts)	No

Table 1: Existing Utility Infrastructure

An existing utility infrastructure constraints plan (Drawing 26365/010/001) has been prepared showing the extent of the existing utility infrastructure within and adjacent to the site and is contained within **Appendix A**.

2.1 Electricity

Scottish and Southern Energy (SSE) is the distribution network operator responsible for the electricity supply to the Waterlooville area. Initial contact has been made with both their mapping centre and their local office to obtain available information. Their records indicate a large amount of low voltage and high voltage electricity infrastructure is present within all roads surrounding the site with a small amount within the site boundary. An existing substation is placed within the site to the north corner of Block E, where underground 11kV cables are present from the substation to Silverthorne Way.

2.2 Gas

Southern Gas Networks (SGN) is the gas transporter responsible for the gas supply to the Waterlooville area. Initial contact has been made with their land enquiry team to obtain existing utility information. Their record mapping indicates the surrounding area is well served with gas delivered at low pressure with a small amount of medium pressure mains to the north of the site in the northern footpath on Elettra Avenue. A low pressure main exists just outside the boundary in the northern footway on Silverthorne Way with a small amount feeding into the site opposite to Relay Road.

2.3 Telecommunications

Openreach BT (BT) is the primary telecommunications provider responsible for the telecommunications supply to the Waterlooville area. Their record mapping indicates underground BT apparatus is present within all roads surrounding the site. A small amount of underground cabling is present within the site surrounding the main building to the east of the site.

C&W (Cable and Wireless) infrastructure is present in the Western footpath of Hambledon Road just on the outside of the site boundary line.

2.4 Potable Water

Portsmouth Water (PW) is the statutory undertaker responsible for the potable water supply to the Waterlooville area. Initial contact has been made with their developer services team

to obtain information. SEW record mapping indicates that a main is present within all the surrounding roads. There are no water mains present within the site itself.

2.5 Foul Water

Southern Water (SW) is the statutory undertaker responsible for the foul water drainage to the Waterlooville area. Initial contact has been made with their developer services team to obtain information. There are foul water sewers present within almost all roads surrounding the site. All of these sewers are fed to a pumping station on Silverthorne Way to the south of the site where they are then pumped eastwards to a main within Hambledon Road (B2150).

2.6 Mobile Telecommunications Masts

There are no mobile phone masts apparent within the site boundary; however, there is one Orange radio transmitter on Hambledon Road, which is to the North of the site.

3 Diversionary Works to Existing Utility Infrastructure

3.1 Overview

Initial consideration has been given as to the need to divert and/or protect any existing utility infrastructure within the site boundary to allow development to proceed whilst maintaining the integrity of the existing utility networks.

3.2 Electricity

There are no diversionary works anticipated to any existing electricity infrastructure.

3.3 Gas

There are no diversionary works anticipated to any existing gas infrastructure.

3.4 Telecommunications

There are no diversionary works anticipated to any telecoms infrastructure.

3.5 Potable Water

There are no diversionary works anticipated to any existing water infrastructure.

3.6 Foul Water

There are no diversionary works anticipated to any existing foul water infrastructure.

3.7 Mobile Telecommunications Masts

There are no diversionary works required as no mobile masts are present within the site.

4 Proposed Utility Infrastructure

4.1 Introduction

PBA has undertaken a preliminary load assessment based on :

- Buildings for Class B uses in the western part of the site (around 8,500m² of floor area).
- A 60-bedroom hotel in the south-east of the site.
- A restaurant with drive-through facility in the north-east of the development.
- A car showroom and forecourt to the east of the access from Elettra Avenue from the north.
- Associated access and parking provisions

After the load assessment was carried out we then contacted the incumbent suppliers requesting that they confirm if the proposed scope of development could be served from their existing utility supply infrastructure.

4.2 Electricity

SSE have confirmed that a new sub-station may be needed within the site to be able to sustain the additional load requirements from the proposed development. At this stage they have requested a payment to be able to progress with their investigations into the existing network capacity to confirm if the new sub-station is necessary.

4.3 Gas

SGN have confirmed that the proposed development could be served from their existing network. They also confirmed that the point of connection into the existing mains would be on Silverthorne Way into the 8" low pressure steel main within the northern footpath.

4.4 Telecommunications

BT cable ducts, chambers, lines and poles are present in all the public highways around the site and as such, BT should be able to extend their network in to the site to suit the proposed masterplan.

All civils works will be undertaken by the developer using free issue BT ducts and BT specified duct boxes to BT's confirmed design. BT will then pull cables through the newly installed ducts as and when required.

BT normally undertake to provide telephone and broadband services to all new developments free of charge with the end user ultimately paying for connection costs. However, in certain circumstances where offsite reinforcement works are required, Openreach BT allow up to £3400 per plot for any new infrastructure that needs to be laid from the telephone exchange to the development before charging the developer for any reinforcement costs.

4.5 Potable Water

PW has confirmed that the proposed development could be accommodated by their existing network as long as the connections are standard domestic/commercial.

4.6 Foul Water

SW have confirmed that the proposed development could be connected into the existing surrounding network. They have also confirmed that the location of the connection could be into the last manhole before the pumping station – MH 5702.

5 Conclusions

5.1 Diversionary Works

From our initial review of the existing utility infrastructure, it is apparent that no diversionary works need to be carried out within the site.

5.2 New Supply Infrastructure

Having reviewed the available utility information and liaised with the incumbent utility providers in the area it would appear that the proposed development site can be adequately supplied from the existing/surrounding utility infrastructure network, albeit that some local reinforcements may be required.

5.3 Summary

In summary the study has identified that, subject to detailed design, the Waterlooville site can be adequately supplied with both utility and foul drainage services thus enabling the development site to be taken forward.

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Appendix A: Figures and Drawings

- Figure 1: Location Plan
- Proposed Masterplan
- Drawing 26365/010/001: Existing Utility Infrastructure Constraints Plan

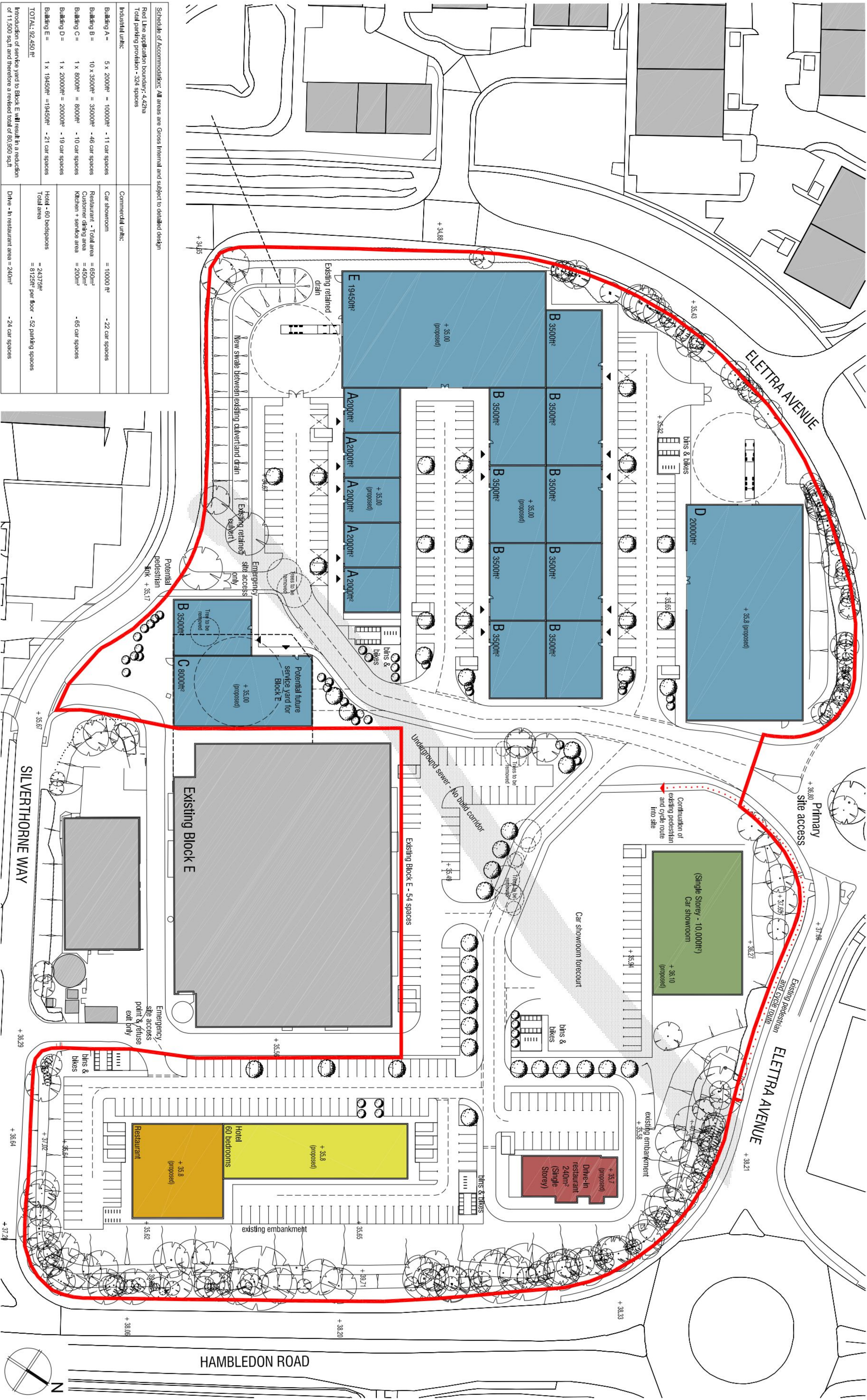
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BAE Systems
Waterlooville
Location Plan

Scale: 1:20,000 @ A4





Schedule of Accommodation: All areas are Gross Internal and subject to detailed design

Red Line application boundary: 4.42ha	
Total parking provision - 324 spaces	
Industrial units:	
Building A = 5 x 2000m² = 10000m²	• 11 car spaces
Building B = 10 x 3500m² = 35000m²	• 46 car spaces
Building C = 1 x 8000m² = 8000m²	• 10 car spaces
Building D = 1 x 20000m² = 20000m²	• 19 car spaces
Building E = 1 x 19450m² = 19450m²	• 21 car spaces
TOTAL: 92,450 m²	
Introduction of service yard to Block E will result in a reduction of 11,500 sqft and therefore a revised total of 80,950 sqft	

Commercial units:	
Car showroom = 10000 m²	• 22 car spaces
Restaurant - Total area = 6500m²	
Customer dining area = 4500m²	
Kitchen + service area = 2000m²	• 65 car spaces
Hotel - 60 bedspaces	
Total area = 24375m²	
= 8125m² per floor	• 52 parking spaces
Dive - In restaurant area = 240m²	
	• 24 car spaces



- NOTES**
1. ABANDONED SERVICES MAY NOT BE SHOWN ON THIS PLAN.
 2. TRUE POSITION OF THE SERVICES MAY BE DIFFERENT TO THAT SHOWN ON THIS PLAN WHICH IS INTENDED FOR GENERAL GUIDANCE ONLY. NO GUARANTEE CAN BE GIVEN TO ITS ACCURACY AND IT SHOULD NOT BE RELIED UPON WHEN EXCAVATING IN THE VICINITY.
 3. THESE SERVICES MAY NOT RUN IN A STRAIGHT LINE EITHER HORIZONTALLY OR VERTICALLY BECAUSE OF GROUND CONDITIONS, OBSTACLES AND OTHER REASONS.
 4. BURIED SERVICES MAY EXIST AT VARIOUS DEPTHS AS GROUND LEVEL MAY HAVE BEEN ALTERED SINCE THE UTILITY APPARATUS WAS LAID.
- BEFORE EXCAVATING OR GROUND WORKS**
5. ANY SITE INVESTIGATION OR GROUND PENETRATING ACTIVITY SHALL COMPLY WITH THE REQUIREMENTS OF HSE GUIDANCE DOCUMENT HSG 47 'AVOIDING DANGER FROM UNDERGROUND SERVICES'.
 6. ALL UNDERGROUND SERVICES i.e. CABLES, PIPES, DUCTS SHOULD BE LOCATED USING THE FOLLOWING TECHNIQUES:
 - a. REFERENCE TO DETAILED LARGER SCALE DRAWINGS AND CABLE ROUTE PROFILES. THESE WILL NEED TO BE REQUESTED FROM THE SERVICE PROVIDER AND REFERRED TO DURING THE DESIGN STAGE AND MADE AVAILABLE ON SITE TO SITE OPERATIVES PRIOR TO THE COMMENCEMENT OF ANY GROUNDWORKS.
 - b. SUITABLE INSTRUMENTS i.e. GROUND PENETRATING RADAR, CABLE LOCATING DEVICES WILL NEED TO BE USED TO DETERMINE THE LOCATION AND PRESENCE OF UNDERGROUND SERVICES/OBSTACLES BEFORE EXCAVATION WORKS PROCEED.
 - c. SAFE DIGGING TECHNIQUES (HAND EXCAVATION) AS DETAILED IN HSG 47 WILL BE NECESSARY TO DETERMINE THE EXACT POSITION OF BURIED SERVICES AND OBSTRUCTIONS BEFORE WORK CAN PROCEED.
 7. ALL APPARATUS FOUND SHOULD BE CROSS REFERENCED WITH THE DETAILED RECORD PLANS. ANY ABNORMALITIES SHOULD BE REPORTED TO THE PROJECT MANAGER.
 8. INFORMATION CONCERNING THE POSITION OF EXISTING UTILITY INFRASTRUCTURE HAS BEEN EXTRACTED FROM RECORD MAPPING OBTAINED FROM THE FOLLOWING STATUTORY UNDERTAKERS:
- | STATUTORY UNDERTAKERS | MAPPING RECEIVED |
|------------------------------|------------------|
| SCOTTISH AND SOUTHERN ENERGY | 19/04/2012 |
| SOUTHERN GAS NETWORKS | 17/04/2012 |
| OPENREACH BT | 13/04/2012 |
| SOUTHERN WATER | 30/01/2012 |
| PORTSMOUTH WATER | 03/04/2012 |

- KEY**
- EXISTING LOW VOLTAGE ELECTRIC DUCTS
 - EXISTING 11kV ELECTRIC DUCTS
 - EXISTING LOW PRESSURE GAS MAINS
 - EXISTING MEDIUM PRESSURE GAS MAINS
 - EXISTING BT DUCTS AND CHAMBERS
 - EXISTING CABLE & WIRELESS DUCTS AND CHAMBERS
 - EXISTING POTABLE WATER MAINS
 - EXISTING FOUL DRAINAGE SEWER
 - EXISTING FOUL DRAINAGE RISING MAIN
 - EXISTING FOUL DRAINAGE PUMPING STATION
 - EXISTING SURFACE WATER SEWERS
 - SITE BOUNDARY

Mark	Revision	Drawn	Date	Chkd

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.
 UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty is made in expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake its own investigation where the position of any existing sewers, services, plant or apparatus may affect the operations.

Drawing Issue Status

WATERLOOVILLE

EXISTING UTILITY INFRASTRUCTURE CONSTRAINTS PLAN

Client		Offices throughout the UK, continental Europe, Africa and Asia www.peterbrett.com Peter Brett Associates LLP TAUNTON Tel: 01823 445150 Fax: 01823 445151
Date of Issue	Drawn by	
A1 Scale	Checked by	
Drawing Number	Revision	
26365/010/001		