The Unicorn, 227 Camden Road, London NW1 9AA

**Construction Method Statement** 



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### INTRODUCTION 1.0

- 1.1.1 Conisbee have been asked by CGL Architects to prepare a construction methodology statement in line with the Camden Planning Guidance and the Local Plan Policy A5 for the proposed scheme for the Unicorn Pub.
- 1.1.2 A suggested construction sequence has been developed in order to demonstrate how the structural work will take place. This sequence demonstrates that the works can be implemented with minimal impact to adjacent buildings.
- 1.1.3 This report is to be read in conjunction with 'Basement Impact Assessment and Ground Investigation Report' by GEA (Ref. J22050 dated 24 June 2022) which will be referenced and quoted throughout.

### 2.0 THE SITE

### 2.1 Site Location

2.1.1 The site is located in the London Borough of Camden with Camden Road to the South East and Brecknock Road to the North East. There is a three-storey building to the North West and a private access lane to the South West.



Figure 1: Site Location Plan (Source: Google Maps)

### Site History 2.2

- 2.2.1 The existing Unicorn pub was likely built between 1850-1870, and was formally known as the Brecknock Arms,
- 2.2.2 From review of the 1945 bomb damage maps the building does not appear to have been damaged in the war.



Figure 2: Extract from 1945 Bomb Damage Maps

- Existing Building 2.3
- 2.3.1 The existing site contains a three-storey pub with an approximately 1.8m deep basement on the South eastern part of the site.
- 2.3.2 The building is assumed to be a load bearing masonry structure supported on brick corbels and concrete strip foundations. Trial pits have shown the foundations range from approx. 600mm to 1050mm below the existing ground floor.

2.3.3 The construction of the existing building is based on an inspection of the existing property. The structure is of traditional construction with external load bearing masonry walls. Internal floors are timber joists spanning onto the external walls and intermediate load bearing internal walls. The roof appears to be of timber construction. At ground floor there is transfer structure comprising a grillage of steel beams supporting the load bearing walls above.

#### 2.4 Site Constraints

- 2.4.1 The adjacent buildings are not understood to have basements.
- 2.4.2 There are no London Underground or Network Rail tunnels within the vicinity of the site. However two deep level tunnels have been identified from buried service information running beneath Camden Road. The two tunnels are the Fleet relief sewer and a national grid tunnel at 30m and >40m below ground level respectively.

### **GROUND CONDITIONS** 3.0

- 3.1 Geology
- 3.1.1 The geotechnical ground model is based on the findings of a site-specific desk study carried out by GEA and local British Geological Survey (BGS) records. Please refer to 'Basement Impact Assessment and Ground Investigation Report' by GEA (Ref. J22050 dated 24 June 2022) for further details.
- 3.1.2 The ground conditions can be summarised as follows:
  - 0.6m-1.10m made ground measured from ground level and 0.70m-0.75m measured from existing basement level.
  - Overlying London Clay

### 3.2 Hydrogeology

3.2.1 The GEA report confirms that a continuous ground water table is not present below the site. Therefore the proposed development will not have an impact on the hydrogeological setting.

### 3.3 Hydrology, Drainage and Flood risk

- 3.3.1 The site is located within a critical drainage area but not in a local flood risk zone as defined by the Environment Agency.
- 3.3.2 Information from the Environment Agency and local authority maps are included within the BIA and Ground Investigation Report by GEA.

### **Other Information** 3.4

3.4.1 The GEA investigation did not identify the presence of any contamination within the samples tested therefore no further action should be required. Should any evidence of contamination be identified during ground works further investigation will be carried out and the risk assessment reviewed. Refer to GEA report for further details.

# 4.0 PROPOSED DEVELOPMENT

# 4.1 Overview of scheme

- 4.1.1 The proposed scheme involves the retention of the South East and North East facades of the existing Unicorn Pub, with the demolition of the remaining building. A new 4 storey mixed use building is to be constructed around the retained facades with the existing basement deepened and extended across the full site footprint.
- 4.1.2 The new façade make-up is based on a brick outer leaf with block inner leaf. To be confirmed at the next design stage.

# 4.2 Superstructure

- 4.2.1 The initial superstructure scheme comprises a steel frame with composite floor slabs of 150mm depth.
- 4.2.2 Floor slabs will sit within the depth of the beams at ground floor and third floor where headroom is limited, with floor slabs sitting above the beams at first floor and second floor.
- 4.2.3 Column positions generally align vertically throughout the building with some local transfer structures at first floor level.
- 4.3 Stability
- 4.3.1 Stability will be achieved through a combination of steel bracing to the cores, additional braced bays, and portal frames.



Figure 3: Proposed second floor plan

# 4.4 Substructure

- 4.4.1 The sub-structure is comprised a single storey basement across the full building footprint which will be formed by deepening the existing basement on the south-eastern part of the site by 1.1m, and excavating up to 3.0m to extend the basement to the rear of the site.
- 4.4.2 A piled foundation solution is proposed to support the building loads with 300mm diameter piles assumed based on assumed parameters for the London clay and guidance from the London District Surveyors Association (LDSA). A deep borehole will be required at a later stage to confirm the strength of the London clay and anticipated safe working loads of the piles.
- 4.4.3 The basement excavation is proposed to be formed using a contiguous piled wall and also underpinning along the elevations up against existing structures. The piles will extend into the London Clay. The basement walls will need to be propped in the temporary conditon.
- 4.4.4 The basement floor slab will be suspended with the proposed column loads supported on piled foundations.



Figure 4: Proposed basement level floor plan

### SUGGESTED CONSTRUCTION SEQUENCE 5.0

## Install temporary & demolition

- Waler beams to be installed above the existing floor slabs and vertical steel sections to be thread through the existing structure. Base to temporary frame to be founded at same level as proposed under-pinning founding level to avoid over-loading the existing wall. Backfill excavations.
- Demolish existing building, retaining the South East and North East facades **Under-pinning**
- Excavate up against existing foundations for retained facades in underpinning sequence with sections not exceeding 1.0m in length.
- Each pin is to have a widening at its base to ensure the bearing strata is not • overburdened. Dry pack is to be installed to each pin to ensure the existing masonry footing above transfers the load fully to the new pin. Formwork to underpins will need to be braced and under-pins dowelled together.
- Backfill excavations •
- Mass concrete underpinning to neighbouring foundation. Each pin to have widening at its base to ensure the bearing strata is not overburdened.
- Install temporary props if required

# Excavation

- Backfill excavations •
- Excavate rear of site to existing basement level •

# **Pile Installation**

- Construct contiguous pile wall to basement from ground level •
- Form piling mat at existing basement level, install piles at column positions

# **Construct basement**

- Excavate basement to proposed formation level and break down piles supporting basement level
- Install basement waterproofing, slab, retaining wall and liner walls

# **Construct superstructure**

- Construct internal walls and columns •
- Install floor slabs sequentially ensuring they are tied to the retained ٠ façade

Refer Appendix B for more detailed construction sequence and plans



### **INSTALL TEMPORARY WORKS & DEMOLITION**

# PILE INSTALLATION

### IMPACT ON ADJACENT BUILDINGS AND INFRASTRUCTURE 6.0

6.1.1 GEA have undertaken a ground movement analysis and used the Burland scale to demonstrate the category of damage that is predicted to occur as a result of the proposed basement construction. The Burland scale quantifies damage as noted in Table 1.

Category of damage	Description of typical damage (ease of repair is underlined)	Approximate crack width (mm)	Limiting tensile strain, ε <sub>lim</sub> (%)
0 Negligible	Hairline cracks of less than about 0.1 mm are classed as negligible	<0.1	0.0 to 0.05
1 Very slight	Fine cracks that can easily be treated during normal decoration. Perhaps isolated slight fracture in building. Cracks in external brickwork visible on inspection	<1	0.05 to 0.075
2 Slight	Cracks easily filled. Redecoration probably required. Several slight fractures showing inside of building. Cracks are visible externally and some repointing may be required externally to ensure weathertightness. Doors and windows may stick slightly.	<5	0.075 to 0.15

# Table 1: Burland Scale

- 6.1.2 The predicted damage to No. 217 to 225 Camden Road is Category 0 'Negligible' and the predicted damage to No. 1 to No. 3 Brecknock Road is generally Category 0 - 'Negligible' with a limited section of Category 1 - 'Very Slight' damage to the frontage of No.1 Brecknock Road. These are within acceptable limits for Camden and movement monitoring will be conducted throughout the works
- 6.1.3 GEA have confirmed both the deep level sewer and National Grid tunnel located beneath Camden Road will be subject to minimal movements of up to a maximum of 0.037mm therefore will not be adversely affected by the proposed development and do not require further analysis.
- 6.1.4 A full description and the results from the ground movement analysis are provided within the GEA report.

#### Monitoring 6.2

- 6.2.1 An appropriate monitoring regime is to be implemented and is to include all adjacent properties, structures and facades which are to be retained. Condition surveys of the existing structures should be carried out before, during and after the proposed works
- 6.2.2 The precise monitoring strategy will be developed at a later stage alongside the owners of the adjacent properties and structures. Contingency measures will be implemented if movements of the adjacent structures exceed predefined trigger levels based on geotechnical advice. Both contingency measures and trigger levels are to be developed within a future monitoring specification for the works.

#### 6.3 Managing the Impact of Construction

Measures will be implemented to ensure that the potential impact of the works on local residents and 6.3.1 neighbours will be kept to a minimum. The Contractor shall undertake the works in such a way as to minimise noise, dust and vibration when working close to neighbouring buildings.

**APPENDIX A** 



# **INSTALL TEMPORARY WORKS & DEMOLITION**

# PILE INSTALLATION



	Status:
	Job No: 190527
	Scale: NTS
SECTION A-A	Date: 12/07/22
	Drawn: CD
<sup>Drg No.</sup> 190527-S-SK-0002	Checked: DR

# **INSTALL TEMPORARY WORKS & DEMOLITION**

### PILE INSTALLATION



	Status:
	Job No: 190527
	Scale: NTS
SECTION B-B	Date: 12/07/22
	Drawn: CD
<sup>Drg No.</sup> 190527-S-SK-0003	Checked: DR