1.0 INTRODUCTION

This section of the report describes the structural work undertaken to support the planning application.

The information contained within this report is preliminary and subject to review and amendment during the following stages of design, a suitable cost contingency should thus be made for ongoing design developments plus the unknowns and risks associated with the project.

The site is currently occupied by a terrace of nine properties with an access road to the rear. It is proposed to redevelop the site by the construction of a residential scheme comprising of three independent blocks between 3 and 8 storeys high. The scheme will also include a double level basement for underground parking and plantrooms.

2.0 THE SITE

2.1 Location
The site is located within the Camden area of London. The National Grid Reference for the site is TQ 269 843. The site is bounded by Fellows Road to the north, Winchester Road to the west and residential housing to the east. A block of flats, at least twenty-five storeys high, is present to the south of the site.

2.2 Site Description
The site is an irregular shaped plot of land with an approximate area of 0.3 ha, the site is relatively level. The majority of the site is occupied by a three-storey terrace of buildings that front on to Winchester Road. Several tall, deciduous trees are present and line the western boundary of the site. The buildings have been developed as a parade of shops and include a video rental store and a launderette.

3.0 DESK STUDY

A desk study has been carried out to review historical and geological maps of the area, together with an appraisal of information from regulatory authorities and to provide an assessment of the ground conditions and the potential for contamination. Comments from the desk study are as follows,

3.1 Site History
The site history has been researched with reference to old editions of the County Series and National Grid Ordnance Survey Plans obtained from the British Library, London.

The earliest available published map shows the site to be undeveloped. The area to the west and south of the site had been developed and was mainly residential. Winchester Road was present to the west of the site at this time and a large building, indicated as a School for the Blind, was evident to the northwest of the site. By the end of the 19th century, a terrace of eight buildings had been built on the site, in positions similar to those of today. The buildings appear to have been residential, with rear gardens extending to the eastern site boundary. The surrounding area that had been undeveloped in the previous period had also been developed and Fellows Road formed the northern site boundary by this time.
Few changes took place on site and in the surrounding area until the period between 1955 and 1967, when it appears that No. 20 Winchester Road was demolished and, a large "Swimming Baths" had been constructed to the west of the site, on the opposite side of Winchester Road. By 1973, the site was redeveloped with the construction of the buildings that are present on the site today. No rear gardens are present on the map, although rear vehicular access is, indicating that the site was intentionally redeveloped as a shopping parade. To the south of the site, the large tower, at least twenty-five storeys in height and,

further south a hotel, had been constructed. Few changes have taken place on site and to the surrounding area, to the present day.

3.2 Appraisal of information from regulatory authorities

Enquiries were made to the Envirocheck Environmental Database, the Environment Agency Web site and the British Geological Survey regarding the site and surrounding area. Information obtained from these enquiries is summarised below.

The Envirocheck Environmental Database information indicates that there are no IPPC Part A Authorisations or IPC Part B Consents within 250 m of the site. There are no registered radioactive consents, or hazardous substance consents or enforcements within 250 m of the site.

There are no operational or non-operational landfills, waste handling facilities or scrap yards within 500 m of the site.

Contemporary Trade Directory entries indicate that there are no businesses within 250 m that are likely to impact upon the site.

There are no discharge consents within 250 m and one water abstraction within 1000 m. The abstraction is listed 920 m from the site and is not considered within influencing distance. Reference to the Groundwater Vulnerability Map of West London (Sheet 39) and the Environment Agency website indicates that the site is situated on a "non aquifer". The site does not lie within an indicative flood plain, as defined by the Agency.

Reference to the Building Research Establishment Document (1999) – Radon: Guidance on protective measures for new dwellings, indicates that the site does not lie within an area where any protection against the ingress of radon gas is required.

Borehole information provided by the British Geological Survey, relating to an area to the west of Winchester Road indicates firm to stiff brown clays to be present at shallow depth. With increasing depth, the strata generally comprise a slightly silty fissured clay, containing gypsum crystals. The data records the clay to become generally stiff below 2.5 m and increase in strength with depth.

3.3 Published Geology

Reference to the British Geological Survey 1:50,000 Scale Geology Sheet (No 256 – North London) indicates the site to be underlain by London Clay of the Eocene system. Superficial deposits are shown to be absent from the site.

3.4 Assessment of Ground Conditions

The historical maps indicate that there has been limited development on the site in the past and no evidence of industrial usage. It is likely that there will be buried foundations and services beneath the site, associated with the existing buildings. There is likely to be a limited thickness of Made Ground at the site but it is likely that this comprises mostly demolition rubble mixed with natural soils and limited ash. London Clay strata are shown to be present below the entire site.

On the basis of the historical and regulatory information and the anticipated ground conditions, it is considered that the proposed development should not be constrained by issues related to contaminated land or soil gases.

The proposed basement construction is likely to require the removal of materials from below the site to a suitably classified landfill. Made Ground materials removed from site are likely to be classified as "nonhazardous". It is probable that clean London Clay strata will be classified as 'inert' waste.

4.0 SUBSTRUCTURE

A proposed double storey basement extends under the residential building along Winchester Road (Block B) which is reduced to a single storey basement under the proposed buildings at the rear (Blocks A and C).

For the construction of the basement one of two options are considered,

- Permanent sheet piled walls, taken down into the London Clay strata, will be able to provide support and limit groundwater ingress, although they will require propping during construction.

- Contiguous bored piled walls. These will provide support to the excavation and may also support parts of the superstructure but will not provide a watertight seal. If contiguous bored piled walls are used there will be a requirement to provide a collector drain behind a blockwork wall, constructed within the basement. The water will then be required to be pumped to surface level and discharged into the surface water drainage system. A detailed comparative assessment of these and other options will be made at the next stage.

For foundations, it is recommended that bored pile foundations, taken down into the London Clay strata, are utilised for the 8 storey structure. For the areas of development that are limited to three storeys, piled foundations should be allowed but at the next stage the option of pads will be considered.

5.0 SUPERSTRUCTURE

The superstructure comprises of three independent blocks constructed as follows,

5.1 Block A - Affordable flats

The 5 storey residential block along Fellows Road uses a single insitu reinforced concrete core for both vertical support and lateral stability. A series of insitu walls and columns provide the remaining vertical support for a simple flat slab construction providing a quick and efficient method of construction.

5.2 Block B - Private residential with commercial at ground floor and basement carparking.

The 8 storey residential block along Winchester Road uses three insitu reinforced concrete cores up to level 6 for both the vertical and lateral stability and a continuation of the central core for the remaining levels for both the vertical and lateral stability. A series of insitu walls and columns provide the remaining vertical support up to level 5 limiting the spans to allow an economic flat slab construction providing a flat soffit suitable for a mixed floor layout.

Above level 6 a lightweight steel frame construction with insitu concrete slabs on permanent metal deck is used to enable level 7 and the roof to step in from the floor plates below and provide the penthouse apartments.

5.3 Block C - Affordable flats and townhouses

The 3/5 storey residential block to the rear of Block B uses a series of supporting insitu concrete walls with a single core to provide both vertical support and lateral stability. A simple one way spanning insitu concrete slab provides the floor construction.

6.0 NEXT STAGE

During the next stage of design it is intended to undertake an on site geotechnical investigation to confirm the ground conditions and provide the design parameters for the retaining wall and foundation design. As part of the design progression the scheme will be developed in further detail to enable the cost plan to be refined.

7.0 RISKS / UNKNOWNS

Confirmation of the ground conditions identified by the desk study - to be assessed by a geotechnical investigation during the next stage of design.

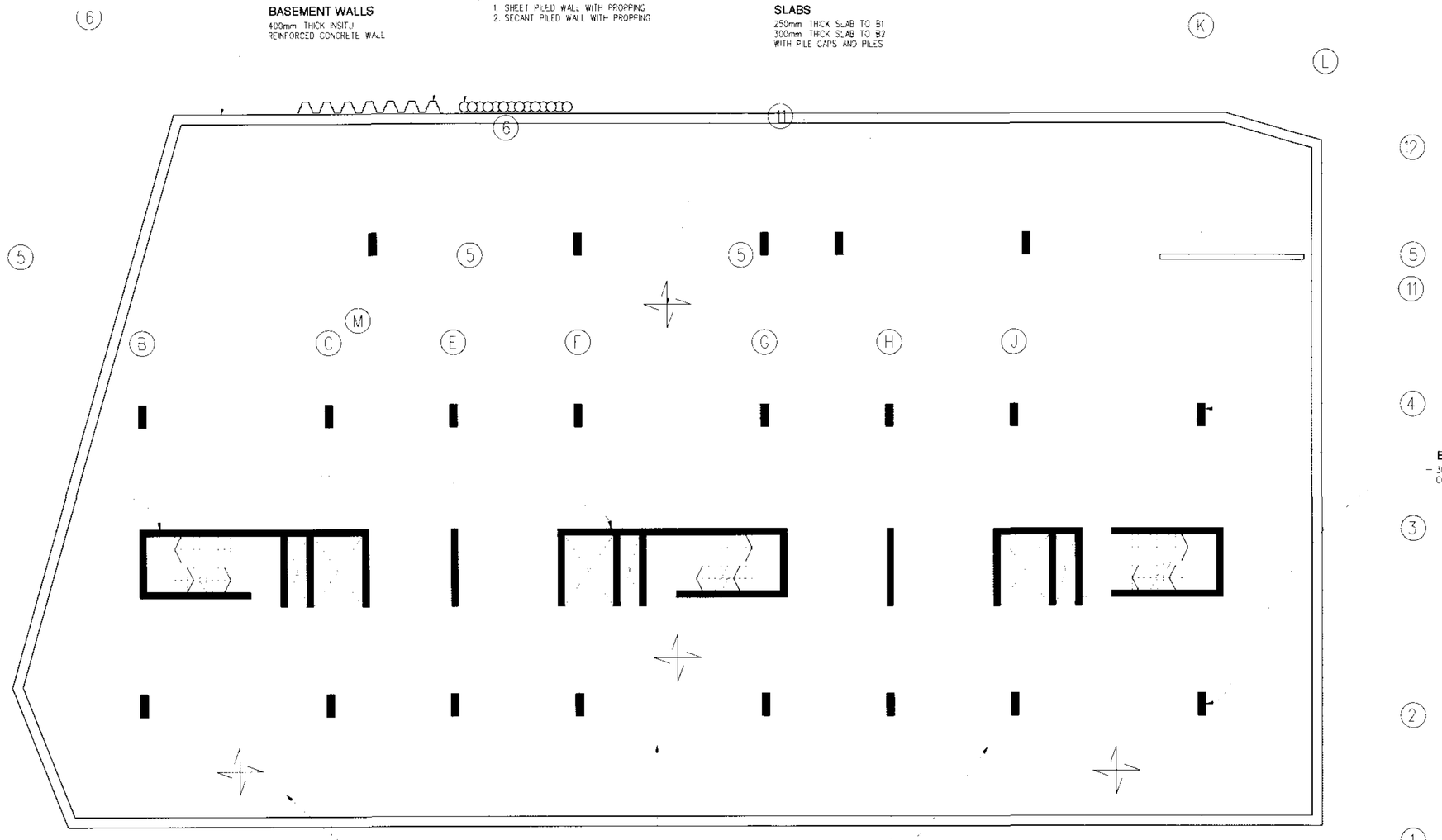
The extent of below ground obstructions in terms of existing foundations – to be assessed by on site trial pits adjacent to the existing buildings during the next stage of design.

NOTES

TEMPORARY RETAINING WALL
EITHER:
1. SHEET PILED WALL WITH PROPPING
2. SECANT PILED WALL WITH PROPPING

BASEMENT WALLS
400mm THICK INSITU REINFORCED CONCRETE WALL

SLABS
250mm THICK SLAB TO B1
300mm THICK SLAB TO B2
WITH PILE CAPS AND PILES



CORES
250mm THICK REINFORCED CONCRETE INSITU WALLS

ELONGATED COLUMNS
– 300mm x 900mm REINFORCED CONCRETE INSITU COLUMNS

SERVICES TO BE CO-ORDINATED WITH INTERNAL COLUMN LAYOUT

REV	DATE	DESCRIPTION	BY	CHECKED
P2	18.12.05	ISSUED FOR INFORMATION	BB	PS
P1	11.05.05	ISSUED FOR INFORMATION	BB	PS

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LONDON MERCHANT SECURITIES PLC

PROJECT
2 - 20 WINCHESTER ROAD

TITLE
BASEMENT LEVELS B - 2

DRAWN Billy B. | SCALE 1:100 | CAD FILENAME 2418-001.plt
DATE MAY 2005 | CHECKED | STATUS PRELIMINARY

PROJECT No. 2418 | DRAWING No. 001 | REVISION P2

PLOT DATE 19/12/2005 | BY Nigel

NOTES

SLABS
EITHER:
1. 300mm THICK REINFORCED CONCRETE INSITU FLAT SLAB USING COLUMNS & WALLS SHOWN THUS: ■
OR
2. 250mm THICK REINFORCED CONCRETE INSITU FLAT SLAB USING COLUMNS & WALLS SHOWN THUS: ■ AND □

WALLS
200mm THICK REINFORCED CONCRETE INSITU WALLS

CORES
250mm THICK REINFORCED CONCRETE INSITU WALLS

WALLS
200mm THICK REINFORCED CONCRETE INSITU WALLS

SLABS
250mm THICK REINFORCED CONCRETE INSITU FLAT SLAB

CORES
250mm THICK REINFORCED CONCRETE INSITU WALLS

CORES
250mm THICK REINFORCED CONCRETE INSITU WALLS

PERIMETER COLUMNS
450mm SQUARE REINFORCED CONCRETE INSITU COLUMNS AT PERIMETER

ELONGATED COLUMNS
300mm x 900mm REINFORCED CONCRETE INSITU COLUMNS

CANTILEVERED EDGE BEAMS

SLABS
250mm THICK REINFORCED CONCRETE INSITU FLAT SLAB

REV	DATE	DESCRIPTION	BY	CHECKED
P2	19.12.05	ISSUED FOR INFORMATION	BB	PS
P1	11.05.05	ISSUED FOR INFORMATION	BB	PS

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CLIENT
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PROJECT
2 - 20 WINCHESTER ROAD

TITLE
TYPICAL FLOOR PLAN

DRAWN	Billy.B.	SCALE	1:100
DATE	MAY 2005	CHECKED	PS
CAD FILENAME	2418-002.plt	STATUS	PRELIMINARY

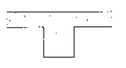
PROJECT No. 2418 DRAWING No. 002 REVISION P2

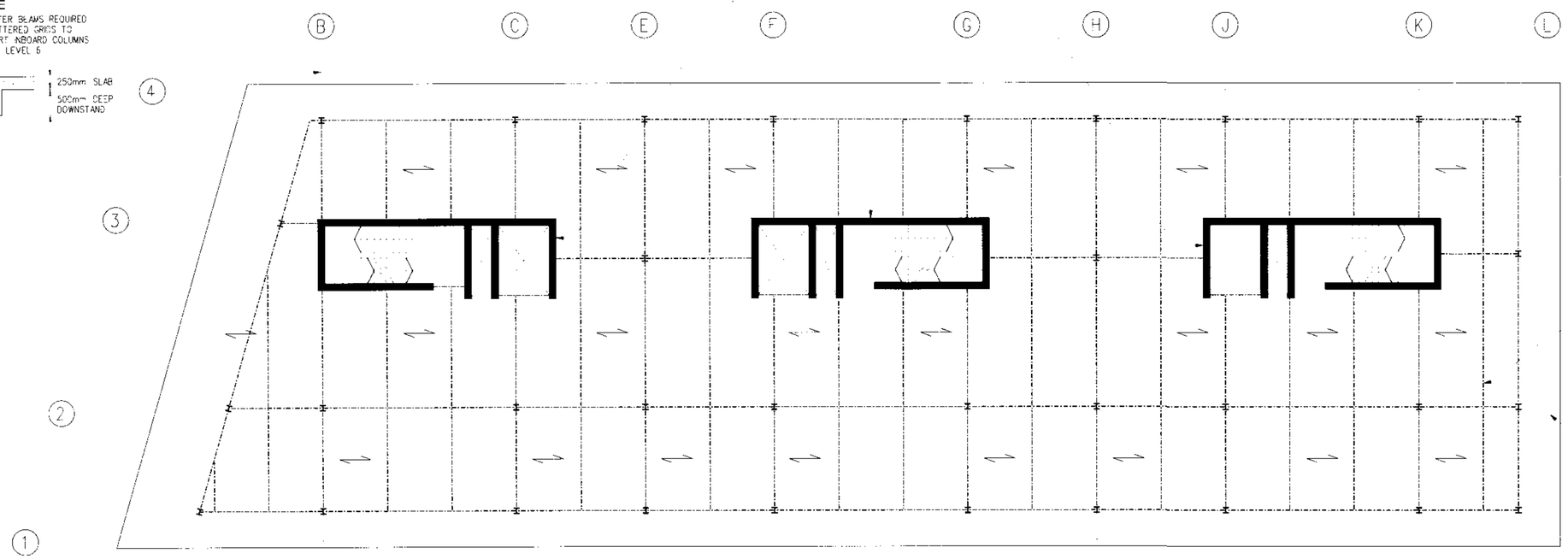
PLOT DATE 19/12/2005 BY Nigel

NOTES

CORES
250mm THICK REINFORCED CONCRETE INSITU WALLS

NOTE
TRANSFER BEAMS REQUIRED ON LETTERED GRIDS TO SUPPORT INBOARD COLUMNS BELOW LEVEL 6



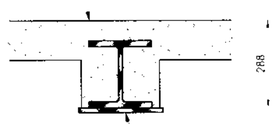


REFER TO FLOOR STRUCTURE OPTIONS SHOWN BELOW

INTERNAL LINE OF COLUMNS MAINTAINED TO LIMIT FLOOR DEPTH

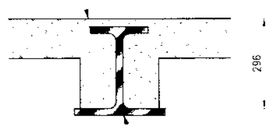
LEVEL 6 FLOOR PLAN
(UPPER FLOORS SIMILAR IN LAYOUT)

INSITU CONCRETE SLAB ON PERMANENT METAL DECK



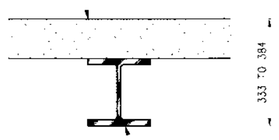
SLIMFLOR OPTION 1 1:10

INSITU CONCRETE SLAB ON PERMANENT METAL DECK



SLIMFLOR OPTION 2 1:10

130 INSITU CONCRETE SLAB ON PERMANENT METAL DECK



COMPOSITE SLAB & STEEL BEAM 1:10

REV	DATE	DESCRIPTION	BY	CHECKED
P2	19.10.05	ISSUED FOR INFORMATION	BB	PS
P1	11.05.05	ISSUED FOR INFORMATION	BB	PS

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CLIENT
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PROJECT
2 - 20 WINCHESTER ROAD

TITLE
LEVEL 6 FLOOR PLAN

DRAWN Bily.B. SCALE 1:100 CAD FILENAME 2418-003.plt
DATE MAY 2005 CHECKED STATUS PRELIMINARY
PROJECT No. 2418 DRAWING No. 003 REVISION P2
PLOT DATE 19/10/2005 BY Nigel