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HAMPSTEAD  
LONDON, NW3 7HL**

**CAMDEN GEOLOGICAL, HYDROGEOLOGICAL AND HYDROLOGICAL STUDY EXTRACTS**

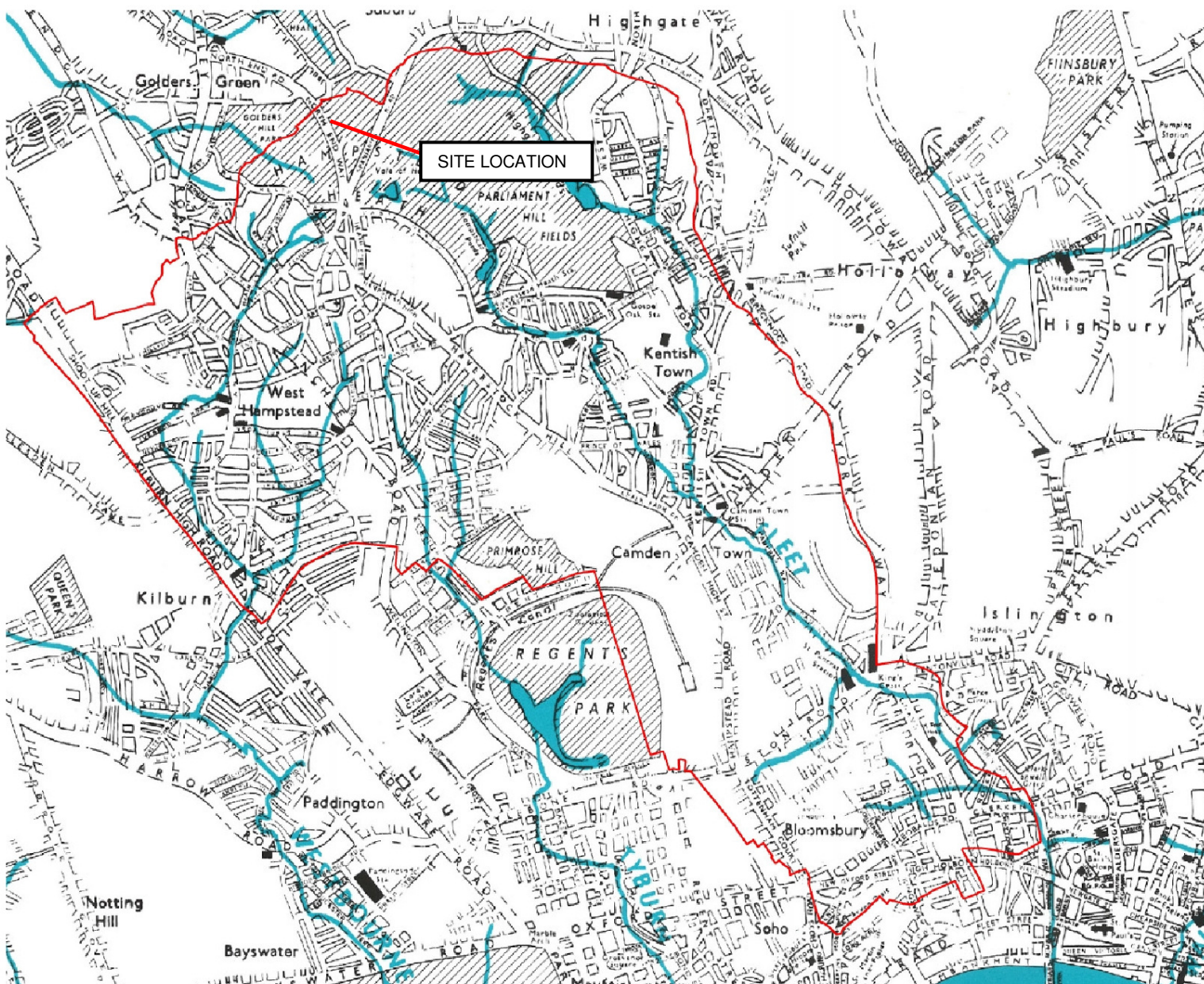
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**Camden Geological, Hydrogeological  
and Hydrological Study  
Watercourses**



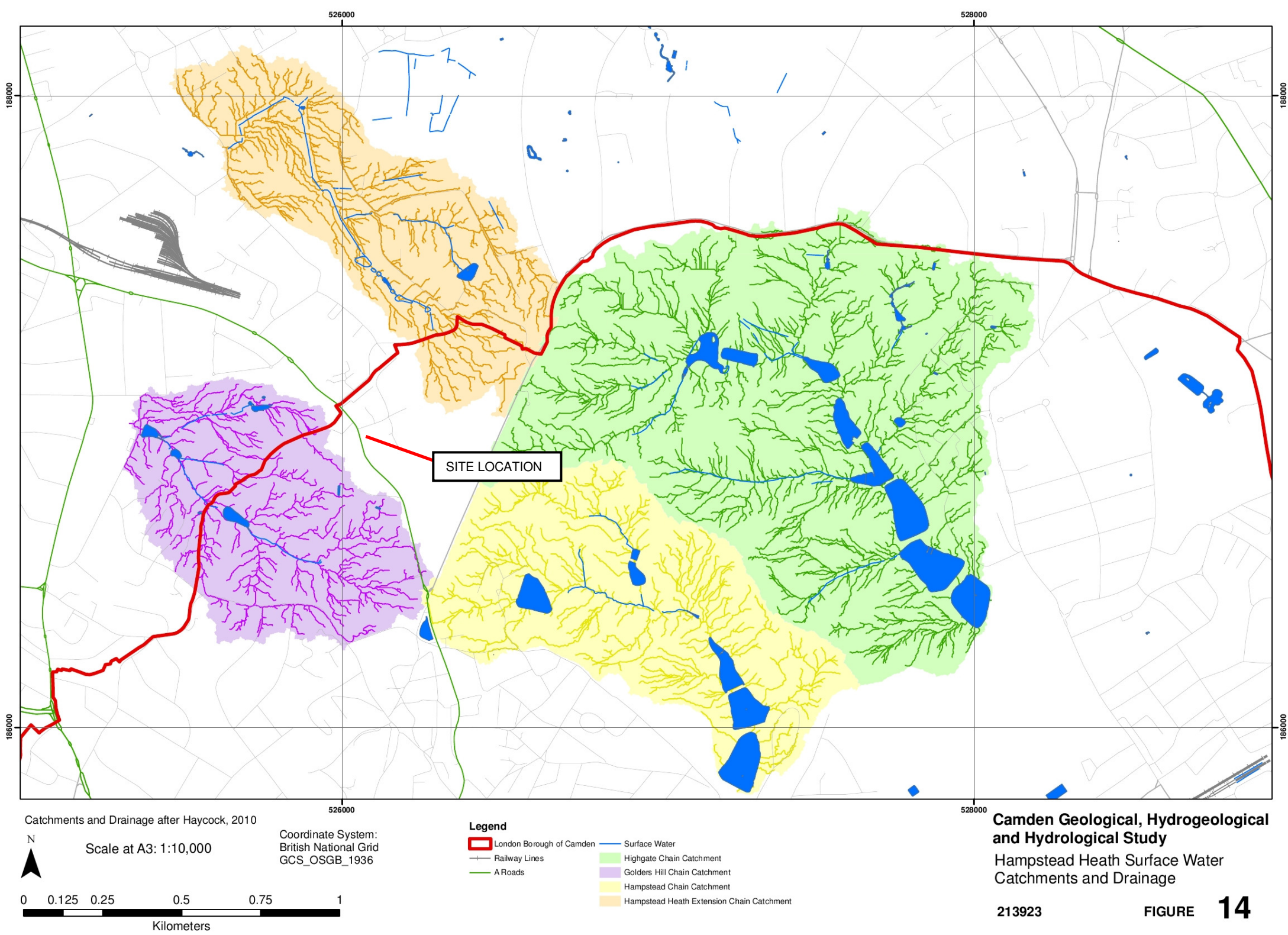
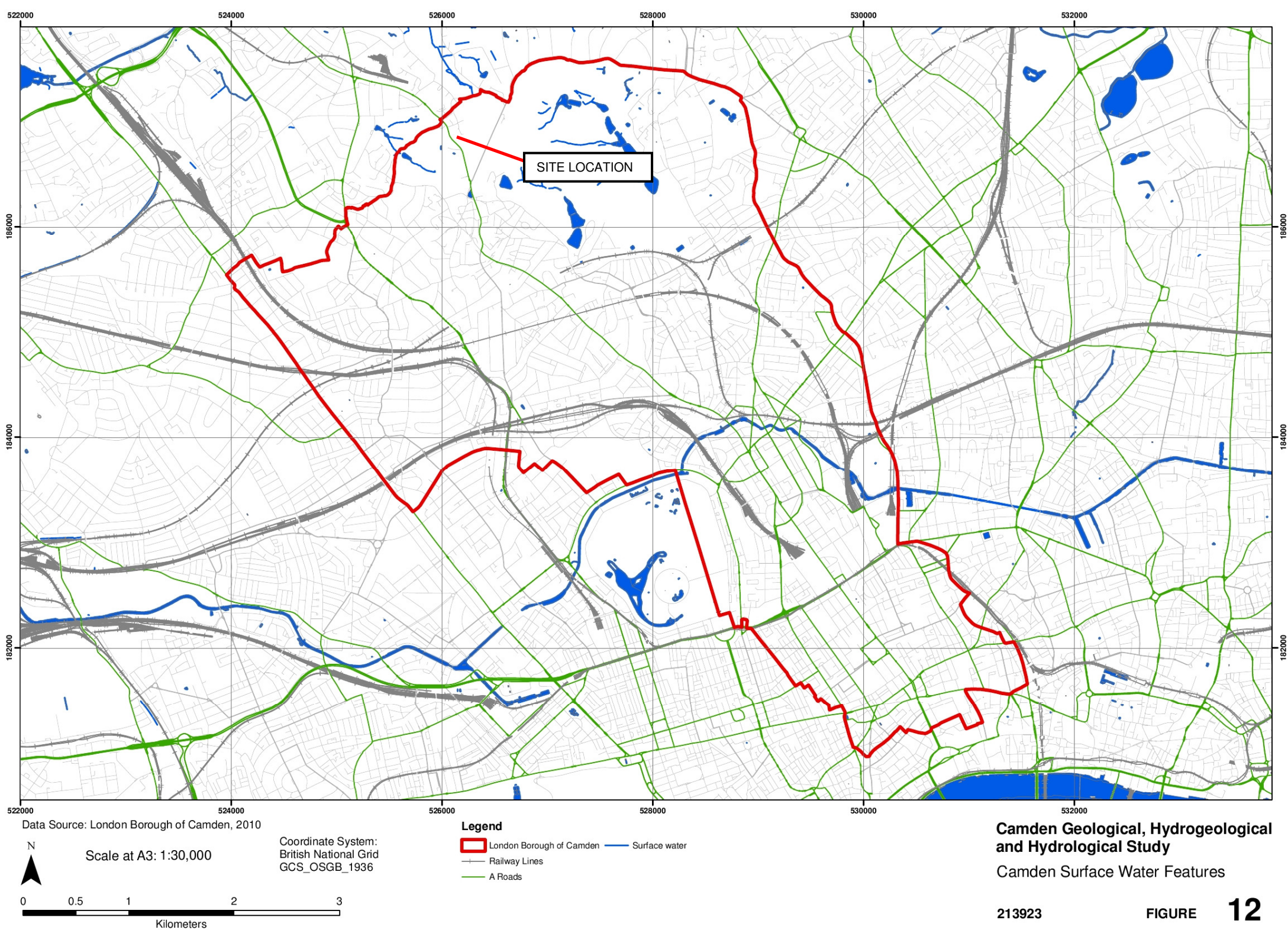




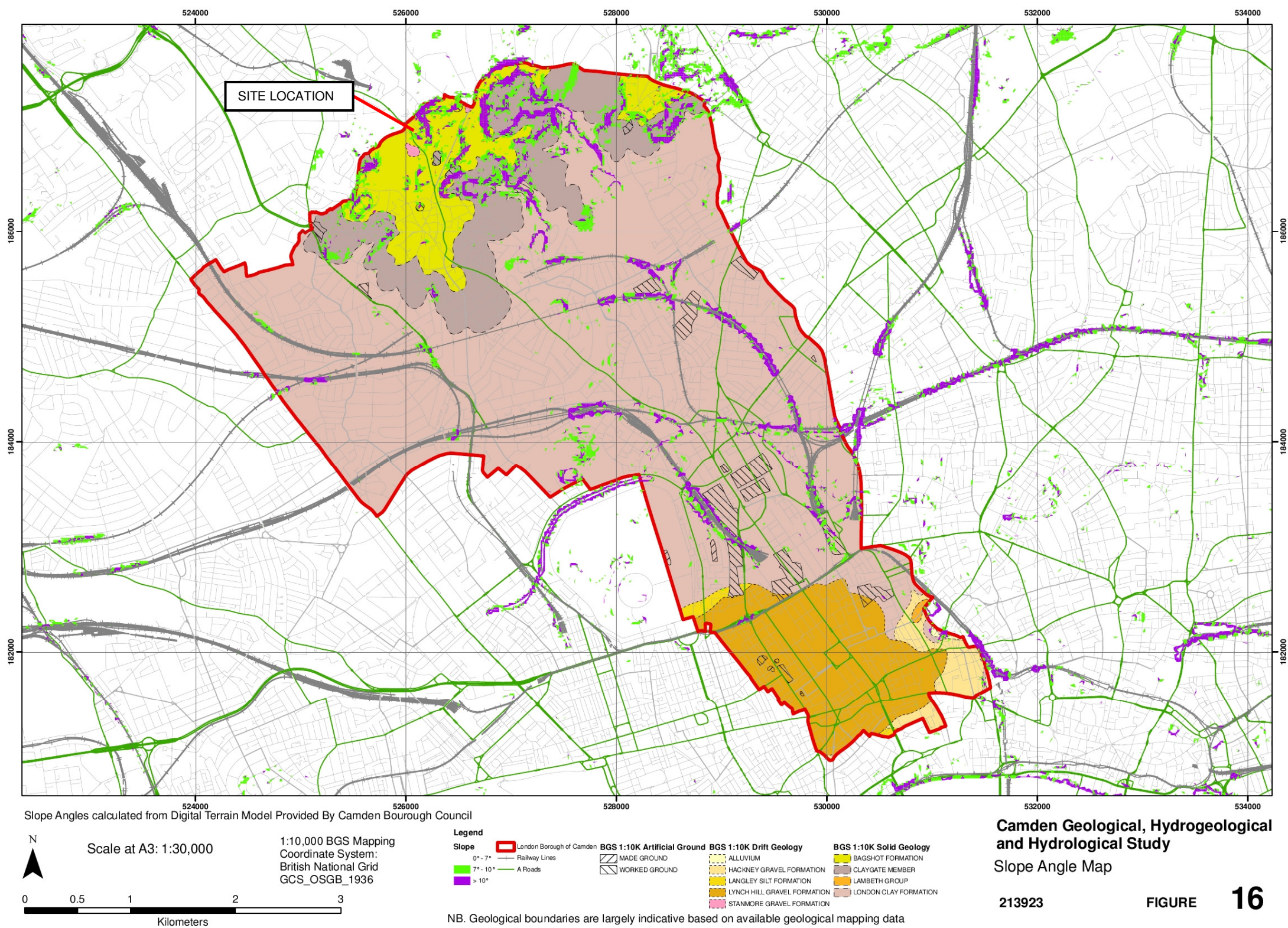


Figure 5 from Core Strategy, London Borough of Camden

## Camden Geological, Hydrogeological and Hydrological Study Flood Map

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FIGURE 15





## INTRODUCTION

The works to be carried out involve the Demolition of the Existing 2 storey residential house which is constructed from brick and timber floors/roof and has a concrete ground floor.

The proposal is to construct of 2 semi detached buildings consisting of 4 residential houses with a basement below over 4 levels. The new works involve the installation of sheet piles and propping to allow the basement to be excavated and the installation of the watertight RC basement slab and retaining walls with a RC concrete ground floor slab. The floors above are to be brick/blockwalls with timber or concrete floors and a steel framed roof.

The construction of the building is to be an open excavation construction basement suitable propped at the required levels to allow for bottom up sequence of construction

The Main Contractor will be required to make particular reference to the Pre-contract Health and Safety Plan which summarises all salient points.

The designer's hazard identification sheets as contained within this document are generic to the site but also to a degree similar for all types of structural work undertaken.

Where possible unusual risks have been highlighted, it will be the Main Contractor's responsibility however to highlight any areas of the design which they feel could be improved upon with regard to safe construction and for themselves to become fully aware of the building and its environment and ask questions with regard to any health and safety aspects which are not clear, either within the pre-contract health and safety plan or within the contract documents.

LOCATION/PROCESS	HAZARD	RISK	CONTROLS/ACTION
Generic risks	<ul style="list-style-type: none"><li>Contractor competence</li><li>Inadequate site supervision</li><li>Inadequate contact programme</li></ul>	<ul style="list-style-type: none"><li>Building stability</li><li>Damage to site and adjoining properties</li><li>Contract period overrun</li><li></li></ul>	<ul style="list-style-type: none"><li>Competent tender process</li><li>Contractor to have proven track record of similar projects.</li><li>Contractor to have experienced site supervision team and experienced sub-contractors</li><li>Contractor to provide CV's of site management personnel</li><li>Contractor to provide Method statements &amp; risk assessments</li><li>All works to be carried out to the agreed programme and sequence of phasing. Any changes to be adequately programmed and agreed prior to be carried out</li><li>Site monitoring and supervision</li><li>Removal of temporary propping scheme phased to coincide with bottom up construction of RC structure and removed only upon confirmation of required concrete design strength achieved and permission to be given by Project Engineer.</li></ul>
Working on a shared site and adjacent to: Other Public & Residential Buildings Public Footpaths and Roads	<ul style="list-style-type: none"><li>Conflict with other contractors and subcontractors sharing the site.</li><li>Conflict with others site and building users</li><li>Conflict with others outside the site boundary.</li></ul>	<ul style="list-style-type: none"><li>Personal injury.</li><li>Damage to property.</li></ul>	<ul style="list-style-type: none"><li>Clear warning signs.</li><li>Safe routes for traffic and pedestrians.</li><li>Close liaison with other site users.</li><li>Appoint a Neighbour liaison Officer</li><li>Keep Local Neighbours informed of works on site that may effect them</li><li>Temporary hoarding.</li><li>Temporary crash deck and safety netting/bags</li></ul>
Cranes, Heavy lifting machinery	<ul style="list-style-type: none"><li>Heavy machinery.</li><li>Falling debris.</li><li>Lifting and lowering of heavy loads near people / public.</li></ul>	<ul style="list-style-type: none"><li>Being struck by machinery.</li><li>Machinery failure.</li></ul>	<ul style="list-style-type: none"><li>Look-out in attendance.</li><li>Certified operators and certificates of maintenance for machinery.</li><li>Monitoring wind conditions.</li><li>Adequate outrigger spreaders to distribute loads</li></ul>

LOCATION/PROCESS	HAZARD	RISK	CONTROLS/ACTION
Demolition works to exiting structure	<ul style="list-style-type: none"><li>Falls.</li><li>Falling debris.</li><li>Falling materials.</li><li>Noise.</li><li>Dust.</li><li>Live services.</li><li>Asbestos/cement roof sheets.</li><li>Out of plumb walls.</li><li>Stability of walls.</li><li>Cutting and removing existing steelwork.</li><li>Removing timber floor.</li><li>Collapse of enveloping walls.</li><li>Fire/explosion.</li><li>Demolishing walls.</li><li>Debris, walls falling, falling objects onto adjoining property.</li><li>Working adjacent to footpaths and publicly accessible areas.</li></ul>	<ul style="list-style-type: none"><li>Injury to operatives from falling debris.</li><li>Shock and injuries from live services.</li><li>Noise/hearing damage.</li><li>Contaminated material ingestion, eye/skin irritation.</li><li>Dust inhalation.</li><li>Fire/explosion.</li><li>Flammable materials and gases.</li><li>Confined spaces.</li><li>Vibration.</li><li>Collapse.</li></ul>	<ul style="list-style-type: none"><li>Contractor to check and survey for any live services.</li><li>Contractor to prepare method statements.</li><li>Contractor to provide all appropriate and necessary temporary works and support.</li><li>Provide protection from falling debris and materials.</li><li>Contractor to provide all necessary and appropriate PPE.</li><li>Refer to Code of Practice – Demolition BS6187 latest edition.</li><li>Provide all scaffolding, access to works, including guardrails, toe boards – all erected, regularly checked and inspected by competent persons.</li><li>Dust to be kept to a minimum – damp down.</li><li>Noise to be controlled – refer to BS5228 – Noise, latest edition. Provide baffling screens to reduce noise</li><li>Dispose of waste safely to an approved source.</li><li>Check for asbestos/refer to asbestos survey.</li><li>Restrict personnel access in vicinity of demolition.</li><li>Vibration to be minimised.</li><li>Provide temporary shoring and propping to existing walls where required.</li></ul>
Sheet Piling	<ul style="list-style-type: none"><li>Heavy machinery.</li><li>Deep shafts.</li><li>Site traffic.</li><li>Manoeuvring of large loads</li></ul>	<ul style="list-style-type: none"><li>Being struck by machinery.</li><li>Falling down shaft.</li><li>Trip hazards</li><li>Machinery failure.</li><li>Aligning sheet piles</li><li>Danger to public and operatives when delivering ready mixed concrete.</li></ul>	<ul style="list-style-type: none"><li>Look-out in attendance.</li><li>Open shafts to be covered over and clearly marked or cordoned off.</li><li>Provision of adequate access ramp and pile mat.</li></ul>

LOCATION/PROCESS	HAZARD	RISK	CONTROLS/ACTION
Excavations for Basement, Building Foundations. Drainage, Services,	<ul style="list-style-type: none"><li>Stability of excavations.</li><li>Heavy rain fall</li><li>Confined spaces.</li><li>Falls into excavations.</li><li>Underground services.</li><li>Fire/explosion</li><li>Contaminated soils.</li><li>Depth of excavation.</li><li>Underground drainage</li><li>Water in excavation.</li><li>Breaking out obstructions.</li><li>Noise from plant.</li><li>Contaminated water</li></ul>	<ul style="list-style-type: none"><li>Injury to persons from collapsing excavations.</li><li>Damage to surrounding properties from excessive ground movement</li><li>Injury/illness of site operatives/ personnel, eye/skin irritation.</li><li>Injury or electrocution from services.</li><li>Flying materials and debris from breaking out.</li><li>Gas/fuel pipes/tanks/methane.</li><li>Falls.</li><li>Hearing damage.</li><li>Dust inhalation &amp; ingestion.</li><li>Giardiasis Syndrome (Wells Disease etc.)</li></ul>	<ul style="list-style-type: none"><li>Adequate provision of suitable temporary propping scheme / permanent works to support excavations.</li><li>Monitoring of ground movement by installation of movement and vibration sensor monitoring points on site and surrounding buildings</li><li>Properly sequenced phasing of excavation and propping</li><li>Installation of Ground Water well points to control Water ingress within excavated Basement</li><li>Leave soil formation 500mm above final excavation prior to excavation to final formation level</li><li>Refer CIRIA reports.</li><li>HSE guidance notes.</li><li>Undertake survey to determine location of existing underground services crossing site and those within immediate vicinity.</li><li>Check with statutory authorities for underground services and drainage.</li><li>Protective barriers to be provided around all excavations.</li><li>Provision of all PPE.</li><li>Provision of pumps etc. to remove excess water.</li><li>Check for contaminated subsoil's in excavations.</li><li>Disposal of contaminated materials to licensed tip.</li><li>COSHH assessment of materials.</li><li>Safe access to be provided with all necessary safety rails, harness, etc.</li><li>Investigate adjacent structures/ foundations.</li><li>Testing manholes, contaminated ground, etc for gas/methane.</li><li>Provide adequate personal cleaning facilities on site.</li></ul>

LOCATION/PROCESS	HAZARD	RISK	CONTROLS/ACTION
Concrete works.	<ul style="list-style-type: none"><li>Collapse of formwork/ shuttering/props.</li><li>Stability of framework.</li><li>Falls from heights.</li><li>Handling reinforcement.</li><li>Sharp edges.</li><li>Spillage of materials.</li><li>Falling objects/debris.</li><li>Overhead working.</li><li>Projecting reinforcement.</li><li>Cement/concrete.</li><li>Weight of wet materials.</li><li>Delivery of ready mixed concrete.</li></ul>	<ul style="list-style-type: none"><li>Tripping.</li><li>Injury from collapsing formwork, shuttering/frames.</li><li>Manual handling/muscular- skeletal injuries.</li><li>Injury/illness/skin irritation/inhalation/ingestion.</li><li>Falls.</li><li>Fixing reinforcement.</li><li>Danger to public and operatives when delivering ready mixed concrete.</li></ul>	<ul style="list-style-type: none"><li>Properly sequenced phasing of RC frame structure construction and removal of temporary propping scheme phased to coincide with bottom up construction of RC structure and removed only upon confirmation of required concrete design strength achieved</li><li>Allow for concrete in fluid state.</li><li>Provision of all PPE.</li><li>Adequate design and specification of temporary works and supervision and installation.</li><li>Adequate design and specification for formwork, propping and adequate supervision and checking of installation.</li><li>COSHH assessment of materials.</li><li>Refer to HSE guidelines/notes.</li><li>Provision of guardrails and barriers.</li><li>Refer to building advisory services publications.</li><li>Provision of adequate lifting facilities.</li><li>Provision of off-street standing ready mixed concrete lorries.</li></ul>
Construction of brick and block work.	<ul style="list-style-type: none"><li>Stability of walls during construction.</li><li>Weights of materials and components.</li><li>Falls.</li><li>Falling objects, debris.</li><li>Cement.</li><li>Off-loading.</li><li>Manoeuvring blocks in position.</li><li>Dust, debris, drilling when cutting &amp; chasing.</li><li>Projecting ties.</li><li>Sharp edges.</li><li>Noise.</li></ul>	<ul style="list-style-type: none"><li>Falling walls – injury to personnel.</li><li>Manual handling/muscular-skeletal injuries.</li><li>Falling components and debris.</li><li>Control of off-loading.</li><li>Illness/injury/skin irritation/ inhalation/ingestion/ cuts/hearing damage.</li><li>Falls.</li></ul>	<ul style="list-style-type: none"><li>Walls to be temporarily supported laterally during construction.</li><li>Provision of adequate and suitable lifting facilities.</li><li>Provision of adequate scaffold, scaffold access towers, ladders with appropriate guardrails, toe boards, etc. all to be checked and inspected regularly by competent person.</li><li>Mechanical sawing and cutting of block and bricks to size and cutting chases.</li><li>Provision of all appropriate PPE.</li><li>COSHH assessment of materials.</li><li>Protect ends of projecting ties.</li></ul>

LOCATION/PROCESS	HAZARD	RISK	CONTROLS/ACTION
Steelwork Erection	<ul style="list-style-type: none"><li>Weight of materials.</li><li>Sharp edges.</li><li>Raising and lifting material.</li><li>Site welding.</li><li>Site bolting.</li><li>Overhead working.</li><li>Cutting steelwork.</li><li>Falls from heights.</li><li>Manoeuvring steelwork into position.</li><li>Off/unloading materials.</li></ul>	<ul style="list-style-type: none"><li>Control of off-loading materials, danger to operatives and general public.</li><li>Fire and explosion.</li><li>Falling materials, components, debris.</li><li>Manual handling/musculo-skeletal injuries.</li></ul>	<ul style="list-style-type: none"><li>Refer to specification.</li><li>Protection against falling materials and components.</li><li>Protection from falling objects and debris.</li><li>Adequate and proper lifting facilities.</li><li>Hot work permits.</li><li>Adequate scaffolding, scaffold towers, including edge guards and guardrails.</li><li>Provision of all PPE.</li><li>Refer to British Standards and/or Codes of Practice for assembly and erection of steelwork.</li><li>Refer to HSE guidance notes and building advisory service publications.</li><li>COSHH assessment of paint and materials used for fire protection.</li><li>Provision of safety netting, harness, safety lines for erection of steelwork.</li></ul>
Construction and erection of timber framing.	<ul style="list-style-type: none"><li>Stability of floors and walls during construction.</li><li>Power Tools/ cables</li><li>Weight of materials.</li><li>Falling objects, debris.</li><li>Sharp edges.</li><li>Raising and lifting material.</li><li>Dust, debris, drilling when cutting &amp; chasing.</li><li>Site bolting/fixing.</li><li>Overhead working.</li><li>Cutting timber.</li><li>Falls from heights.</li><li>Manoeuvring timber into position.</li><li>Off/unloading materials.</li></ul>	<ul style="list-style-type: none"><li>Falling walls – injury to personnel</li><li>Electrocution/ trip hazards</li><li>Control of off-loading materials, danger to operatives and general public.</li><li>Fire.</li><li>Falling materials, components, debris.</li><li>Illness/injury/skin irritation/ inhalation/ingestion/ cuts/hearing damage</li><li>Manual handling/musculo-skeletal injuries.</li><li>Falls/ Tripping</li></ul>	<ul style="list-style-type: none"><li>Refer to specification.</li><li>Protection against falling materials and components.</li><li>Protection from falling objects and debris.</li><li>Adequate and proper lifting facilities.</li><li>Adequate scaffolding, scaffold towers, including edge guards and guardrails.</li><li>Provision of all PPE.</li><li>Refer to British Standards and/or Codes of Practice for assembly and erection of steelwork.</li><li>Refer to HSE guidance notes and building advisory service publications.</li><li>COSHH assessment of paint and materials used for fire protection.</li><li>Provision of safety netting, harness, safety lines for erection of timber.</li></ul>

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