

**Basement Impact
Assessment Audit**

NCP Saffron Hill, 14 St Cross
Street, London EC1N 8UN

For
London Borough of Camden

Project No.
14006-75

Date
October 2024

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1.0 NON-TECHNICAL SUMMARY

- 1.1 CampbellReith was instructed by London Borough of Camden, (LBC) to carry out an audit on the Basement Impact Assessment submitted as part of the Planning Submission documentation for NCP Saffron Hill, 14 St Cross Street, London, EC1N 8UN (planning reference 2024/1364/P). The basement is considered to fall within Category C as defined by the Terms of Reference.
- 1.2 The audit reviewed the Basement Impact Assessment for potential impact on land stability and local ground and surface water conditions arising from basement development in accordance with LBC's policies and technical procedures.
- 1.3 CampbellReith was able to access LBC's Planning Portal and gain access to the latest revision of submitted documentation and reviewed it against an agreed audit checklist.
- 1.4 The Basement Impact Assessment (BIA) has been prepared by A2 Site Investigation Ltd (A2). The qualifications of the authors and reviewers of the BIA are in accordance with LBC guidance.
- 1.5 The LBC Instruction to proceed with the audit confirms that the basement proposal does not involve with, or is adjacent to, any listed buildings.
- 1.6 The site is currently occupied by an eight-storey building with a lower ground floor that houses a multi-storey car park and office space across the top two floors. The structure is supported by piled foundations.
- 1.7 The proposed scheme involves the demolition of the existing structure to allow construction of a new nine-storey building with a lower ground floor and basement. The basement will be founded on a new raft foundation with the existing piles being reused where possible.
- 1.8 The updated BIA confirms that the basement will extend to a maximum depth of 9.23m below ground level (bgl).
- 1.9 The land stability screening responses have been updated to consider the Mail Rail Tunnel running beneath Saffron Hill as referenced in the Structural Feasibility Report.
- 1.10 Geotechnical parameters for retaining wall design and outline design calculations have been provided.
- 1.11 The presence of neighbouring foundations has been included in the assessment of subterranean flow. It is accepted that the development will not have a significant impact on the hydrogeology of the area.
- 1.12 It is accepted that the proposed development will not adversely affect the hydrology of the local or wider environment. The proposals may require approval by the LLFA and Thames Water.
- 1.13 The BIA has assumed a bottom-up basement construction sequence; however, this should be confirmed as part of a Basement Construction Plan (BCP) along with confirmation of the pile lengths and the results of the footing investigation.

- 1.14 A Ground Movement Assessment and a building damage assessment have been undertaken. The results of the assessments indicate that neighbouring structures will experience a maximum of Burland Category 1 damage (Very Slight) however, assumptions made in the assessment should be confirmed within a BCP.
- 1.15 A monitoring strategy is recommended in the BIA and should be provided as part of a BCP.
- 1.16 Considering the additional information presented, it can be confirmed that the BIA complies with the requirements of CPG: Basements and the Principles for Audit set out in the Basement Impact Assessment (BIA) Audit Service Terms of Reference & Audit Process, subject to the satisfactory completion of a BCP.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 10th May 2024 to carry out a Category C audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for NCP Saffron Hill, 14 St Cross Street, London, EC1N 8UN (planning reference 2024/1364/P).

2.2 The audit was carried out in accordance with the Terms of Reference set by LBC. It reviewed the Basement Impact Assessment for potential impact on land stability and local ground and surface water conditions arising from basement development.

2.3 A BIA is required for all planning applications with basements in Camden in general accordance with policies and technical procedures contained within

- Camden Local Plan 2017 - Policy A5 Basements.
- Camden Planning Guidance (CPG): Basements. January 2021.
- Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.

2.4 The BIA should demonstrate that schemes:

- a) maintain the structural stability of the building and neighbouring properties;
- b) avoid adversely affecting drainage and run off or causing other damage to the water environment;
- c) avoid cumulative impacts upon structural stability or the water environment in the local area;

and evaluate the impacts of the proposed basement considering the issues of hydrology, hydrogeology and land stability via the process described by the GSD and to make recommendations for the detailed design.

2.5 LBC's Audit Instruction described the planning proposal as "*Demolition of existing car park and offices, and erection of a new 8 storey building for use as office (Class E); with ground floor cafe unit and affordable workspace in basement. Proposed servicing facilities, cycle and refuse storage and associated landscaping along St Cross Street.*"

2.6 The Audit Instruction confirmed NCP Saffron Hill, 14 St Cross Street, London, EC1N 8UN does not involve, and is not a neighbour to, listed buildings.

2.7 CampbellReith accessed LBC's Planning Portal on 20th May 2024 and gained access to the following relevant documents for audit purposes:

- Phase I Desk Study issued by A2 Site Investigation, dated April 2024, ref. 38823-A2SI-XX-XX-RP-Y-0001-01
- Factual Report issued by A2 Site Investigation, dated April 2024, ref. 38823-A2SI-XX-XX-RP-X-0001-01

- Flood Risk Assessment and Drainage Strategy Report issued by Heyne Tillet Steel, dated February 2024, ref. 2929, rev. 02
- Design and Access Statement issued by Allford Hall Monaghan Morris, dated April 2024, ref. 22068 R01, revision P00
- Drawings provided by Allford Hall Monaghan Morris
- Consultation Responses

2.7.2 The following additional documents were provided to CampbellReith in September and October 2024, to address the queries raised in the D1 audit:

- Basement Impact Assessment Report (BIA) issued by A2 Site Investigation, fourth issue, dated June 2024, ref. 38823-A2SI-XX-XX-RP-Y-0004-03.
- Interpretive Report issued by A2 Site Investigation, dated 25 June 2024, ref 38823-A2SI-XX-XX-RP-Y-0003-03,
- Building Damage Ground Movement Assessment issued by A2 Site Investigation, rev 02, dated 01 October 2024, ref. 38823-A2SI-XX-XX-RP-Y-0005-02.
- Additional drawings by Allford Hall Monaghan Morris comprising:
 - 22068-AHMM-ZZ-1-DR-A-PL009, revision P00, dated February 2024,
 - 22068-AHMM-ZZ-1-DR-A-PL209, revision, P00, dated February 2024,
 - 22068-AHMM-ZZ-GF-DR-A-PL100, revision P01, dated June 2024.
- TP02 & TP02A Plan View Sketch, issued by A2 Site Investigation, dated November 2023, ref. 38823-A2SI-XX-XX-DR-Y-0003-00.
- Trial pit photographs, issued by A2 Site Investigation (undated and unreferenced).

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	
Is data required by Cl.233 of the GSD presented?	Yes	
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	
Are suitable plan/maps included?	Yes	
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Section 4.0 of the BIA.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Section 4.0 of the BIA
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Section 4.0 of the BIA
Is a conceptual model presented?	Yes	Section 8.0 of the BIA.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 5.0 of the BIA.

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Is factual ground investigation data provided?	Yes	Factual report provided under a separate cover.
Is monitoring data presented?	Yes	Included within the factual report
Is the ground investigation informed by a desk study?	Yes	
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	
Is a geotechnical interpretation presented?	Yes	Included in the GMA (Appendix C of the BIA).
Does the geotechnical interpretation include information on retaining wall design?	Yes	
Are reports on other investigations required by screening and scoping presented?	Yes	
Are the baseline conditions described, based on the GSD?	Yes	However, confirmation of the foundation depth of the neighbouring building at 77-79 Farringdon Road should be provided as part of the BCP.
Do the baseline conditions consider adjacent or nearby basements?	Yes	

Item	Yes/No/NA	Comment
Is an Impact Assessment provided?	Yes	Section 8.0 of the BIA.
Are estimates of ground movement and structural impact presented?	Yes	
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	Yes	
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	However, confirmation of the proposed construction scheme is required as part of a BCP.
Has the need for monitoring during construction been considered?	Yes	
Have the residual (after mitigation) impacts been clearly identified?	Yes	
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

- 4.1 The Basement Impact Assessment (BIA) has been prepared by A2 Site Investigation Ltd (A2). The qualifications of the authors and reviewers of the BIA are in accordance with LBC guidance.
- 4.2 The LBC Instruction to proceed with the audit confirms that the basement proposal does not involve with, or is adjacent to, any listed buildings.
- 4.3 The site is currently occupied by an eight-storey building with a lower ground floor that houses a multi-storey car park and office space across the top two floors. The structure is supported by piled foundations.
- 4.4 Saffron Street and St Cross Street are adjacent to the site's north and south boundaries respectively. Another multi storey car park with office space lies directly east with a multi-storey residential building to the west.
- 4.5 The proposed scheme involves the demolition of the existing structure to allow construction of a new nine-storey building with a lower ground floor and basement. The new lower ground floor level, which occupies the full building footprint, will be deepened and the proposed basement footprint will occupy the centre of the site only. The basement will be formed using a secant pile wall and founded on a new raft foundation. The deepening of the lower ground floor will be undertaken using a secant pile wall and underpinning. A small amount of excavation in open cut is proposed to form the ground floor level in the southeast corner. The existing pile foundation will be reused where possible although some new piles may also be required.
- 4.6 The updated BIA confirms that the basement will extend to a maximum depth of 9.23m below ground level (bgl). The drawings provided indicate that the basement floor level will be 5.27m OD with a small area deepened to 4.27m OD for the lift shaft. The existing lower ground floor is proposed to be lowered from 12.46m OD to 9.85m OD with a new upper ground floor at 15.15m OD. Due to the sloped ground around the site the ground level varies; Section 1 (East – West) indicates ground level at Saffron Hill to be c. 15m OD.
- 4.7 An intrusive ground investigation was undertaken in April 2019. The investigation identified the site to be underlain by Made Ground (maximum depth of 4.00m bgl) overlying Weathered London Clay (maximum depth of 5.00m bgl), London Clay (maximum depth of 12.95m bgl) and the Lambeth Group (to the base of the exploratory holes to a maximum depth of 25.00m bgl). The BIA states that the geological map records suggest the site is underlain by deposits of the Hackney Gravel Member however, the investigation determined that the Made Ground is directly underlain by London Clay. It is assumed that all new substructure elements will be founded in the London Clay Formation.
- 4.8 Two seepages were recorded in BH02 at 9.30m and 10.30m bgl. Groundwater was struck in the same borehole at 13.30m bgl. Groundwater monitoring of three boreholes (installed

between 1.45m and 4.00m bgl) were all recorded to be dry on three separate monitoring visits.

- 4.9 Pile integrity testing indicates that the existing piles are 16.30m in length.
- 4.10 The screening is presented in Section 4.0 of the BIA and the responses have been informed by desktop study information provided in the Phase I Desk Study report produced by A2.
- 4.11 The screening responses identify that, although the Hackney Gravel Member is mapped across the area of site, the intrusive ground investigation findings suggest that Made Ground (beneath the existing structure) is directly underlain by the London Clay Formation. The land stability screening therefore assumes London Clay to be the shallowest stratum. This has been brought through to scoping which includes consideration of the possible impacts caused from seasonal shrinking and swelling. The BIA confirms that the basement raft foundations will be placed at depth thus limiting the impacts of shrink swell movement.
- 4.12 The updated screening responses now include consideration of the Mail Group Rail Tunnel (owned by London Post Office) that runs beneath Saffron Hill. It is also recognised in the screening that the basement will increase the differential depth of foundations to neighbouring properties. This has been brought through to scoping and a Ground Movement Assessment (GMA) undertaken to determine the anticipated impacts.
- 4.13 The screening assumes that the Made Ground is directly underlain by the London Clay Formation therefore, the hydrogeology screening responses state the site is not underlain by an aquifer as London Clay is unproductive.
- 4.14 The hydrogeology screening identifies that the site is within 25m of a lost river.
- 4.15 The updated scoping responses highlights that existing basements are anticipated to be present beneath the neighbouring properties and that the site is underlain by London Clay (which is classified as an unproductive aquifer) therefore, negligible impact to the hydrogeology of the surrounding area is expected.
- 4.16 Due to the existing building covering the full extent of site, there will be no change to the amount of hard surfacing and the scheme will maintain existing surface water discharge conditions.
- 4.17 A Flood Risk Assessment and Drainage Strategy has been provided. The report concludes that the site is at low risk from all sources of flooding. A below ground attenuation tank is proposed as part of the scheme, to be situated beneath the lower ground raft foundation. This tank will discharge into the Thames Water system via gravity at a controlled rate.
- 4.18 It is accepted that the proposed development will not adversely affect the hydrology of the local or wider environment. The drainage proposals will need to be approved by the LLFA and Thames Water.
- 4.19 Section 8.0 of the updated BIA outlines a suggested construction sequence for the basement. The existing building will be demolished and the lower ground floor backfilled to create a level development platform. Following this, the embedded secant pile retaining walls will be constructed. Underpinning will also be undertaken along the north and part of the eastern

boundaries. A layout of the proposed embedded pile retaining walls and underpinning is included in Figure 2.2 of the BIA. The construction sequence confirms temporary propping will be used in the short term to help mitigate ground movement. The BIA states that a bottom-up basement construction has been assumed. It is noted that the GMA has assumed that the internal piled walls, running along the north and south edges of the basement, will be constructed following completion of the boundary wall and underpinning.

- 4.20 The underpinning will be constructed using a traditional hit and miss method with each section up to 1m wide. The BIA assumes that two lifts of underpinning are proposed to 5.50m bgl. The layout of the underpinning is to be finalised following confirmation of the slab depths of the existing host building and the neighbouring building at 77-79 Farringdon Road (as shown in the documents included in Appendix 3). The foundations of 77-79 Farringdon Road are currently assumed to be at 9.17m OD.
- 4.21 The embedded piled retaining walls are proposed to be constructed with a 450mm diameter secant pile wall with secondary piles at 600mm spacing. A Wallap analysis carried out as part of the BIA assumes the toe of the piles to be at 5.50m OD along the perimeter of the lower ground floor and at 0.00m OD around the deeper basement situated in the centre of the building. With ground levels assumed to be at 11.53m OD the pile lengths are indicated to be 6.03m and 11.53m respectively.
- 4.22 The southeastern corner of the ground floor will be constructed by open excavation. The updated BIA outlines that the excavation will be battered back to 45 degrees with a temporary sheet piled wall installed along the southern edge to control movements from the excavation.
- 4.23 It is noted that the Structural Feasibility Report discusses other possible construction sequences that have not been considered in the BIA. The final construction sequence will need to be confirmed within a Basement Construction Plan (BCP); should this sequence or any of the assumptions made (specifically regarding the pile lengths or foundation depths of the neighbouring properties) be altered or significantly different to the assumptions made, additional assessment will likely be required.
- 4.24 Geotechnical parameters for retaining wall design and outline design calculations are provided in Table 5.2 of the interpretive report.
- 4.25 The Structural Feasibility Report confirms that the anticipated loads of the building applied to the raft foundation exceeds the expected heave pressures therefore, no tension piles are deemed necessary to prevent global uplift. The report also confirms that an Approval in Principle will be needed for the support to the adjacent highway structures on Saffron Street, Saffron Hill and St Cross Street.
- 4.26 The BIA confirms that groundwater is not anticipated to be encountered during excavation through the London Clay and any perched water present can be suitably mitigated using localised pumping.
- 4.27 An updated GMA and a damage assessment have been provided to demonstrate that ground movements and consequential damage to neighbouring properties will comply with LBC's policy requirements. In total, 79 façades of the neighbouring buildings have been considered

in addition to an assessment of the impact that the proposed development will have on the adjacent highways.

- 4.28 The GMA and damage assessments analyses were carried out using the Oasys programmes PDisp and XDisp. PDisp has been used to model vertical movements due to basement excavation (short-term unloading) and excavation and building loading (long-term unloading and loading). XDisp has been used to estimate movements due to underpinning and construction of the secant piled wall (including the basement excavation) and the resulting building damage category anticipated for neighbouring structures.
- 4.29 Section 4.1 of the GMA recognises that XDisp uses soil movement relationships that have been derived for embedded retaining walls and that there is limited published data for ground movements due to underpinning. The analysis has therefore applied modified curves for diaphragm walls. The anticipated horizontal and vertical movements of 10mm for the installation of the underpins and excavation are considered to be suitable for the proposed two lifts of underpinning. The GMA also assumes that the neighbouring foundations are at ground level which is accepted to be suitably conservative.
- 4.30 Section 4.1 of the BIA references that the curves for contiguous embedded piled walls have been used to predict movement caused by the installation of the secant embedded piled retaining walls. Justification for the application of the curve for contiguous embedded piled walls is accepted in this case. Trigger values should be established on the movements anticipated from the GMA and a full monitoring specification and details of mitigation measures will need to be provided in the BCP.
- 4.31 Horizontal and vertical movements of 4mm are anticipated from the secant wall installation with a further 8mm to 12mm from the excavation of the lower ground floor (increasing to 13mm to 16mm for the basement excavation).
- 4.32 The damage assessment concluded that the damage to neighbouring buildings can be limited to Category 1 (Very Slight). It is recognised that Category 2 (Slight) damage was identified for one façade at 77-79 Farringdon Road. The damage category was downgraded based on justification provided in Section 5.2 of the GMA, which includes structural information that suggests the neighbouring foundation is located 4.50m bgl. The GMA states this assumption is still to be confirmed by a footing investigation. The results of the footing investigation should be presented as part of the BCP to justify the assumptions in the BIA. Should the footing investigation determine the assumptions of the GMA to be incorrect, additional assessment will be required and should form part of the BCP.
- 4.33 The BIA indicates that a monitoring strategy will be developed at a later stage. As aforementioned, this will be required as part of a BCP.
- 4.34 A non-technical summary of the BIA is provided in Section 1.0.

5.0 CONCLUSIONS

- 5.1 The Basement Impact Assessment (BIA) has been prepared by A2 Site Investigation Ltd (A2). The qualifications of the authors and reviewers of the BIA are in accordance with LBC guidance.
- 5.2 The LBC Instruction to proceed with the audit confirms that the basement proposal does not involve with, or is adjacent to, any listed buildings.
- 5.3 The site is currently occupied by an eight-storey building with a lower ground floor that houses a multi-storey car park and office space across the top two floors. The structure is supported by piled foundations.
- 5.4 The proposed scheme involves the demolition of the existing structure to allow construction of a new nine-storey building with a lower ground floor and basement. The basement will be founded on a new raft foundation with the existing piles being reused where possible.
- 5.5 The updated BIA confirms that the basement will extend to a maximum depth of 9.23m below ground level (bgl). The land stability screening responses have been updated to consider the Mail Rail Tunnel running beneath Saffron Hill as referenced in the Structural Feasibility Report.
- 5.6 The presence of neighbouring basements has been included in the assessment of subterranean flow. It is accepted that the proposed development will not adversely affect the hydrogeology of the local or wider environment.
- 5.7 A Flood Risk Assessment and Drainage Strategy has been provided. It is accepted that the development will not impact the hydrology of the area. The drainage proposals may require approval by the LLFA and Thames Water.
- 5.8 Geotechnical parameters for retaining wall design and outline design calculations have been provided.
- 5.9 The BIA has assumed a bottom-up basement construction sequence and that depth of the secant embedded piled retaining walls will be between 6.03m and 11.53m bgl, with the depth of the underpinning to 5.50m bgl. The construction sequence and pile lengths should be confirmed as part of a Basement Construction Plan (BCP) to confirm the assumptions made in the BIA or update the GMA as needed.
- 5.10 A Ground Movement Assessment and a building damage assessment have been undertaken. The results of the assessment indicate that a maximum of Burland Category 1 damage (Very Slight) can be achieved, however, assumptions made in the assessment relating to the neighbouring building foundation depths should be confirmed within a BCP once the footings investigation has been completed.
- 5.11 The BIA indicates that a monitoring strategy will be developed at a later stage. This should be presented as part of the BCP to identify appropriate trigger level values that reflect any

updates to the GMA once the construction sequence, pile length and footing investigation have been confirmed.

- 5.12 Considering the additional information presented, it is confirmed that the BIA complies with the requirements of CPG: Basements and the Principles for Audit set out in the Basement Impact Assessment (BIA) Audit Service Terms of Reference & Audit Process, subject to the satisfactory completion of a BCP.

Appendix 1

Consultation Responses

None

Appendix 2

Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Qualifications	Provide confirmation that suitable experience and qualifications for the groundwater flow (hydrogeological) assessment are held by the authors in accordance with CPG.	Closed – 4.1	16/09/2024
2	BIA report	Ensure the depths provided in the BIA are correct and consistent throughout.	Closed – 4.6	16/09/2024
3	Land stability	Include consideration of the Mail Rail Tunnel beneath Saffron Hill within the screening and, if required, take through to scoping.	Closed – 4.12	16/09/2024
4	Subterranean Flow	Confirm the presence of basements beneath the neighbouring properties and provide clarification of the impacts that the proposed basement may cause to the subterranean flow.	Closed – 4.15	16/09/2024
5	Land stability	Provide a construction sequence of the underpinning and confirm the depth(s) of the proposed secant retaining walls and underpinning. Prove construction sequence for the open cut area.	Closed – 4.20 and 4.22	07/10/2024
6	Land stability	Provide geotechnical parameters and outline calculations of the proposed retaining walls.	Closed – 4.21	16/09/2024
7	Land stability	Update the GMA to consider suitably conservative movement curves based on standard industry guidance.	Closed – 4.27 to 4.28	07/10/2024

Appendix 3

Supplementary Supporting Documents

Structural engineer email and amended
drawings

[REDACTED]

From: [REDACTED]
Sent: 08 October 2024 11:27
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: 2024/1364/P - NCP Saffron Hill, London, EC1N 8UN Basement Audit
Attachments: 2929-SK062-066 North - East Elevations Clarification Pack.pdf

Hi George,

Response is as follows and I've attached some clarification sketches as well.

North Elevation/Wall Underpinning

The north elevation wall underpinning is mass concrete to transfer the vertical load to the level of the new LGF. The proposed retaining wall is then formed in front with WRC. The existing wall is propped, as indicated on the demolition drawing SH-HTS-00-00-DR-S-1100, but the existing footing details to the wall has not been confirmed yet as trial pits are due to be undertaken in Stage 3 to confirm depth. An assumed depth has been taken to the underside of the known slab in this area.

Based on the heights noted on section 1 on drawing SH-HTS-00-ZZ-DR-S-3690, it is not expected that this will require two stage pinning, as the working room for mass pins is less than traditional RC pins. This will ultimately be determined by the contractor though. If two stage pins are deemed necessary, an additional line of horizontal propping would be installed in the same sequence as stage 4 noted on SK061.

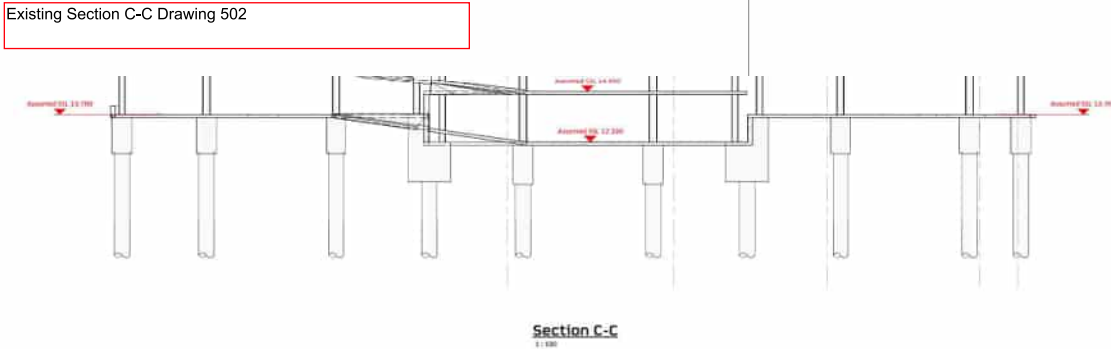
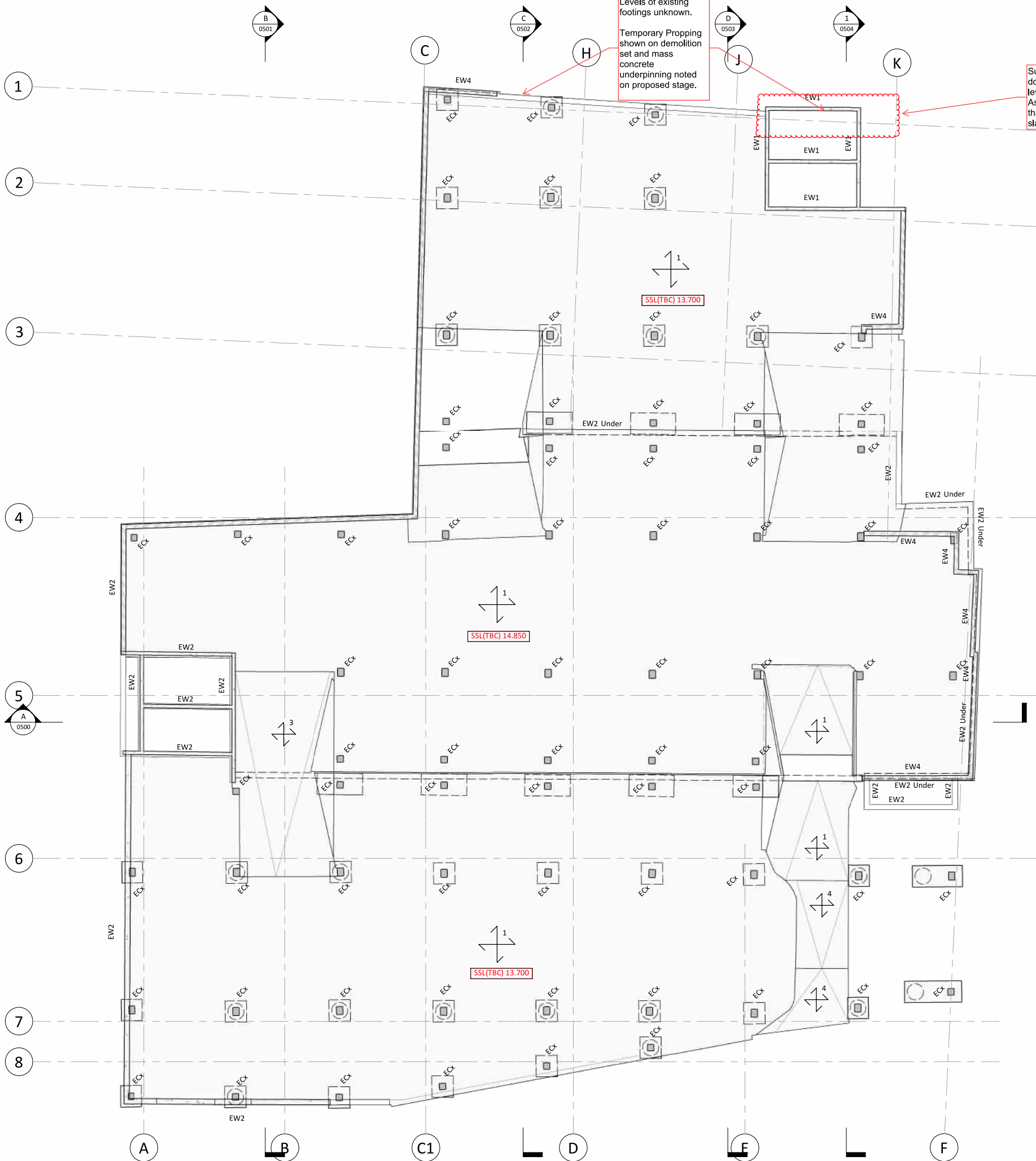
East Elevation

In terms of the east elevation, detail sections are noted on SH-HTS-00-ZZ-DR-S-3690, sections 2 and 5. No underpinning is not in these sections, although with the existing footings to 77-79 Farringdon Road, these are TBC and based on planning information. This will need a trial pit to confirm but it does not change the philosophy on the basement formation in these sections.

Regards

[REDACTED]

[REDACTED]



100mm @ A1 (50mm @ A3)

- This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
- Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm long

NOTE:
All existing details shown are based on archive drawings and limited opening up works. Assumptions have been made regarding existing construction. Materials, construction, framing and spans of existing slabs and walls to be confirmed by site investigations.

Slab levels shown in red have been derived from assumed finishes and are to be confirmed by site investigations.

Extg Walls		Extg Floors	
Ref	Description	Ref	Thickness and Type
EW1	160 thk RC Wall	1	150 Existing RC slab
EW2	250 thk RC Wall	2	180 Existing RC slab
EW3	100 thk Blockwork	3	190 Existing RC slab
EW4	215 thk Bricwork	4	200 Existing RC slab
		5	50 Existing RC slab

Extg legend

	Existing structural walls
	Existing structure below
	Existing padstone, TBC on site

ECx - Existing Precast concrete column base of survey information approx 300 x 300sq TBC on Site

SK062 - North/East Clarification Pack

Rev	Date	By	Eng	Amendment
P3	26.02.24	RF	MGS	Stage 2 Issue
P2	14.02.24	RF	MGS	Stage 2 Planning Issue
P1	18.12.23	RF	MGS	Stage 2 Draft

**HEYNE
TILLET
STEEL**

STRUCTURAL &
CIVIL ENGINEERS

<http://hts.uk.com/>

Job Name
Saffron Hill

Drawing Title
**Existing
Ground Floor Plan**











Purpose of Issue **Preliminary** Scale at A1 **1 : 100**

Drg No **SH-HTS-00-00-DR-S-0100**

HTS Job No **2929** Suitability **S1** Rev **P3**

Proposed RC Cols			B9	RHS450x250x8
Ref	Size / Dia (mm)	Type		
CC1	600 x 600	C40		

Ref	Thickness and Type
1	280 thk CLT slab
2	200 thk PC Hollow Core slab
3	250 thk RC slab
4	300 thk RC slab
5	280 thk PC slab with CLT Veneer (200 PC and 80 CLT)

Legend	
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Red dimension TBC by architect
	Connection Strengthening
	Moment connection
B1 [25mm]	Pre-camber
	Crank
	Splice
	Thermal Break
	Break in beam

P5	26.02.24	RF	MGS	Stage 2 Issue
P4	14.02.24	RF	MGS	Stage 2 Planning Issue
P3	18.12.23	RF	MGS	Stage 2 Draft
P2	06.12.23	RF	MGS	WIP Coordination Issue
P1	14.11.23	RF	MGS	WIP Coordination Issue
Rev	Date	By	Eng	Amendment

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Job Name
Saffron Hill

Drawing Title

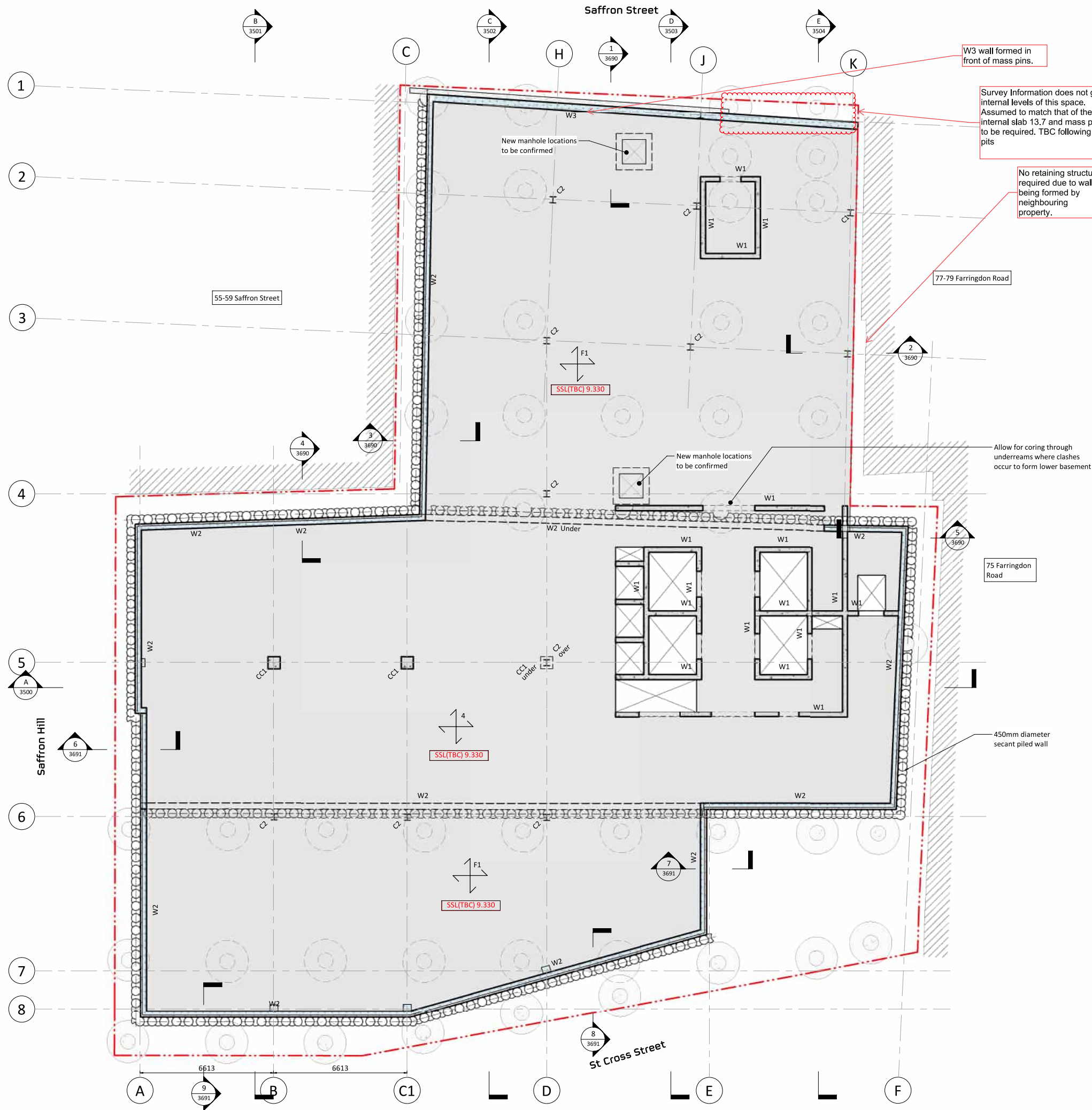
Proposed

Lower Ground Floor Plan

Purpose of Issue	Scale at A1	1 : 100
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Org No **SH-HTS-00-00-DR-S-3095**

ITS Job No 2929 Suitability Rev P5





100mm @ A1 (50mm @ A3)

- This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
- Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm long
- All demolition drawings are to be read in conjunction with proposed plans
- Assume all edges of RC are to be disc-cut UNO
Where edges of slab are to be demolished, floors are to be disc cut to face of nearest beam if applicable.
- Care to be taken not to cut / adversely affect existing retained beams / columns while demolition is taking place. Contractor to undertake careful exploratory works and submit appropriate method statement to ensure retained structure is not damaged undertaking areas of demolition
- Treat all cut concrete faces with Ronabond concrete repair system by Ronacrete, or similar concrete repair system
- Temporary bracing required prior to demolition of existing stability cores and until the new stability structure is in place prior to construction of new stability structure. Contractor to submit full temporary works and sequencing proposal to the CA for review prior to commencing work
- The foundations of the existing structure must not be undermined. Upon exposing the retained structures the contractor should identify if any proposed excavation levels are deeper than the existing founding levels and notify the engineer accordingly

The existing structural information shown on these drawings is based on visual inspection of the building, limited opening up works and relevant archive information. All details of the existing construction are subject to confirmation by the Contractor during the works on site. No materials are to be ordered until the relevant details and conditions are confirmed by the Contractor on site. Should the contractor discover any discrepancies between the assumed existing structure and what is found on site they should notify the engineer immediately, and await further instruction

Demolition legend

<div></div>	Area of floor to be demolished
<div></div>	Beam demolished / removed
<div></div>	Column demolished / removed
<div></div>	RC / Masonry wall demolished

SK064 - North/East Clarification Pack

P3	26.02.24	RF	MGS	Stage 2 Issue
P2	14.02.24	RF	MGS	Stage 2 Planning Issue
P1	18.12.23	RF	MGS	Stage 2 Draft
Rev	Date	By	Eng	Amendment

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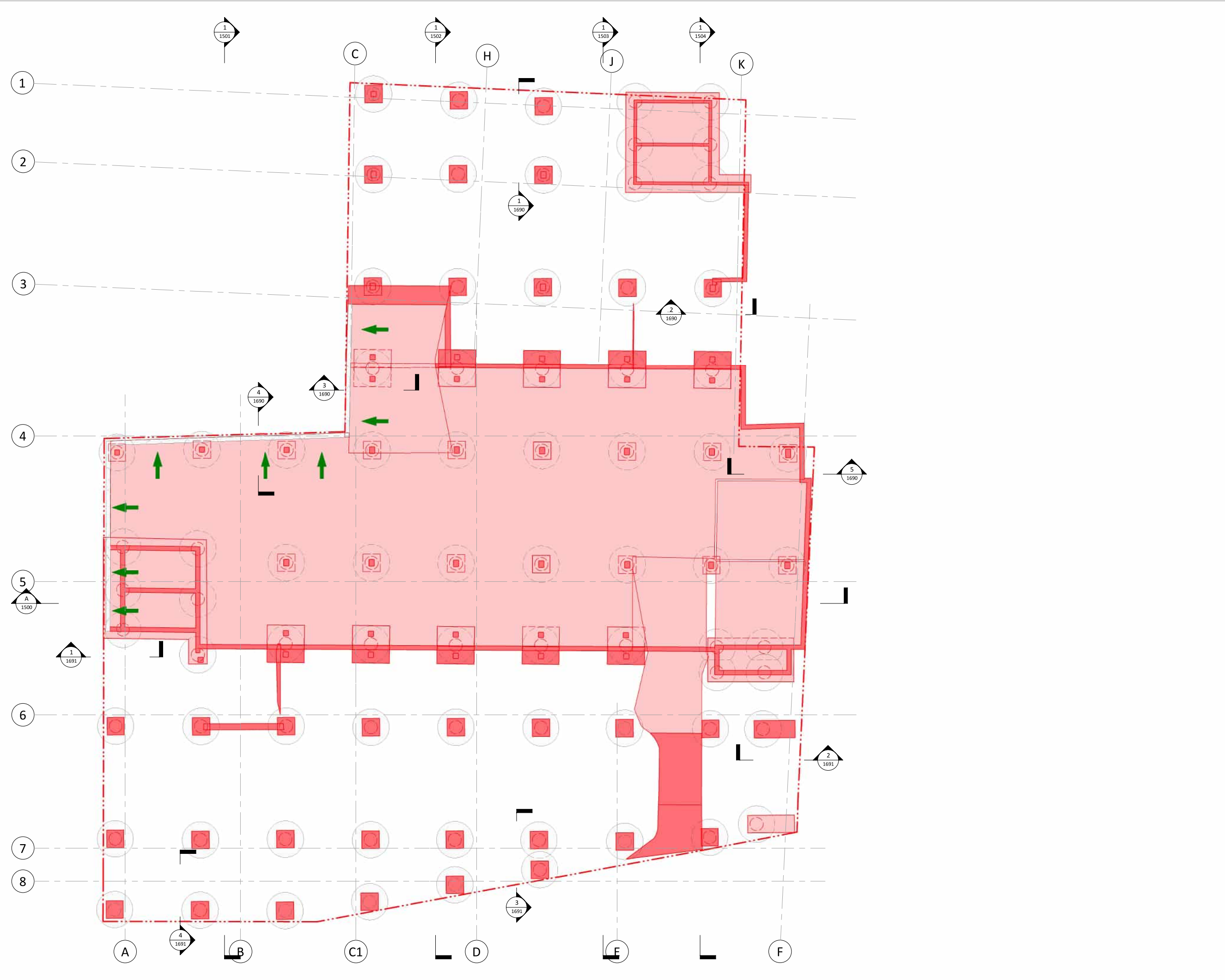
Job Name
Saffron Hill

Drawing Title
**Demolition
Ground Floor Plan**

Purpose of Issue **Preliminary** Scale at A1 **1 : 100**

Drg No **SH-HTS-00-00-DR-S-1100**

HTS Job No **2929** Suitability **S1** Rev **P3**



- 100mm @ A1 (50mm @ A3)
- 1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
 - 2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm long
 - 3 All demolition drawings are to be read in conjunction with proposed plans
 - 4 Assume all edges of RC are to be disc-cut UNO
Where edges of slab are to be demolished, floors are to be disc cut to face of nearest beam if applicable.
 - 5 Care to be taken not to cut / adversely affect existing retained beams / columns while demolition is taking place. Contractor to undertake careful exploratory works and submit appropriate method statement to ensure retained structure is not damaged undertaking areas of demolition
 - 6 Treat all cut concrete faces with Ronabond concrete repair system by Ronacrete, or similar concrete repair system
 - 7 Temporary bracing required prior to demolition of existing stability cores and until the new stability structure is in place prior to construction of new stability structure. Contractor to submit full temporary works and sequencing proposal to the CA for review prior to commencing work
 - 8 The foundations of the existing structure must not be undermined. Upon exposing the retained structures the contractor should identify if any proposed excavation levels are deeper than the existing founding levels and notify the engineer accordingly

The existing structural information shown on these drawings is based on visual inspection of the building, limited opening up works and relevant archive information. All details of the existing construction are subject to confirmation by the Contractor during the works on site. No materials are to be ordered until the relevant details and conditions are confirmed by the Contractor on site. Should the contractor discover any discrepancies between the assumed existing structure and what is found on site they should notify the engineer immediately, and await further instruction

Demolition legend	
	Area of floor to be demolished
	Beam demolished / removed
	Column demolished / removed
	RC / Masonry wall demolished

SK065 - North/East Clarification Pack

P3	26.02.24	RF	MGS	Stage 2 Issue	
P2	14.02.24	RF	MGS	Stage 2 Planning Issue	
P1	18.12.23	RF	MGS	Stage 2 Draft	
Rev	Date	By	Eng	Amendment	

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Job Name
Saffron Hill

Drawing Title
Demolition
Lower Ground Floor Plan

Purpose of Issue **Preliminary** Scale at A1 **1 : 100**

Drg No **SH-HTS-00-00-DR-S-1090**

HTS Job No **2929** Suitability **S1** Rev **P3**

3090	1 : 50
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3090	1 : 50
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3090	1 : 50
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3090	1 : 50
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3090	1 : 50
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Proposed Steel Cols		Proposed Steel Beams	
Ref	Type	Ref	Type
C1	UC305x305x97	B1	2No. UB356x171x45 with 12mm thk plate welded to bottom flange
C2	UC305x305x118		
C3	UC254x254x89	B2	RHS450x250x8 with plate
C4	UC203x203x60	B3	10x150 plate
C5	UC254x254x73	B4	2No. UB475x191x106 with 12mm thk plate welded to bottom flange
C6	UC305x305x179	B5	UB305x102x28
C7	RHS150x100x10	B6	UB406x140x39
C8	UC254x254x107	B7	L200x100x12
C9	UC305x305x107	B8	UC305x305x118
C10	UC305x305x129	B9	RHS450x250x8
C11	UC305x305x202		
C12	CHS114.3x5		
C13	RHS200x100x12.5		
C14	CHS193.7x10		

Proposed Walls		
Ref	Thickness and Type	Comment
W1	250 RC	
W2	300 WRC	200 WRC wall + 100 tolerance
W3	350 WRC	

Ref	Thickness and Type
1	280 thk CLT slab
2	200 thk PC Hollow Core slab
3	250 thk RC slab
4	300 thk RC slab
5	280 thk PC slab with CLT Veneer (200 PC and 80 CLT)

Legend

	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Red dimension TBC by architect
 	<p>Connection Strengthening</p> <p>Moment connection</p>
   	<p>C Crank</p> <p>S Splice</p> <p>TB Thermal Break</p> <p>BR</p>

SK066 - North/East Clarification Pack

P4	26.02.24	RF	MGS	Stage 2 Issue
P3	14.02.24	RF	MGS	Stage 2 Planning Issue
P2	18.12.23	RF	MGS	Stage 2 Draft
P1	06.12.23	RF	MGS	WIP Coordination Issue
Rev	Date	By	Eng	Amendment

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Job Name
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Drawing Title

Proposed

Basement Sections

Sheet 1

Purpose of Issue	Scale at A1	1 : 50
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Org No SH-HTS-00-ZZ-DR-S-3690

ITS Job No **2929** Suitability Rev **P4**

Suitability Rev **P4**

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