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Date: 03/04/2023
Ref: SDS1584 RP02

20 Crediton Hill – Structural Report for Planning

Introduction

The following report is intended to summarise the structural proposals regarding the demolition of the existing single storey dwelling and the construction of a three-storey dwelling, including a single-storey basement, within the footprint of the existing building at the northeast corner of 20 Crediton Hill. The report aim to highlight the sequencing of the works to allow for the safe construction process for the construction of the substructure and superstructure.

A Basement Impact Assessment has been completed for the planning application titled "2018_1012_P" for a smaller basement footprint. A revised Basement Impact Assessment has been carried out by Milvum Engineering Services to reflect the latest developments and basement extent.

Site Information

The site is bounded by the rear garden of No. 22 Crediton Hill to the north, a cricket grounds to the east, a communal garden for No.20 Crediton Hill to the south, a four-storey Edwardian building forming the main building at 20 Crediton Hill to the southwest, and a driveway with four garages to the west.

Immediately adjacent to the proposed development to the west, there is an existing basement to "Garage 4".

To the east, there is a change in elevation downward to the cricket grounds of approximately 2.5m.

Proposed Works

The proposed development is a three-storey dwelling including a single-storey basement. The proposed basement level is approximately 3.1m below the level of the existing driveway. The basement will consists of a reinforced concrete basement slab and retaining walls propped by the ground floor slab in the permanent case. To the north of the basement, the retaining wall will be formed with a piled wall solution or a RC retaining wall constructed in underpinning sequence.

Temporary Works and Sequence of Construction

It is anticipated that the ground will be battered back at a safe angle to the west towards driveway and to the south towards the communal garden for the breaking out and removal of existing footings and the construction of the basement. At the boundary with No.22 in the driveway, temporary props will likely be required at ground level to minimise ground movement in the neighbouring No.22 rear garden.

It is anticipated that the basement wall to the north adjacent to the No.22 rear garden will be formed with a contiguous piled wall and concrete lining wall. The contiguous piled wall will be set 0.5-1.0m away from the face of the existing boundary wall; this is to be confirmed by the pile arrangement and piling rig used by the contractor. The piled wall is to be designed as a cantilevered, linked

by a RC capping beam at the top. The piled wall is to be designed to support the surcharge load from the existing boundary wall and the lateral earth pressure. A RC lining wall is to be constructed on the inside of the piled wall to form the basement box.

Alternatively, the RC retaining wall along the boundary to No.22 rear garden is to be formed in an underpinning sequence. The existing boundary wall is to be underpinned with special reinforced concrete underpins constructed in max. 1m wide sections to resist the lateral earth pressure and to ensure that the existing boundary wall is not undermined by the construction of the basement. The proposal for a special RC underpin is subject to Party Wall approval.

The contractor is to provide trench protection to each pin and to retain a central soil mass to act as berm for propping of the formwork. The formwork design is to be carried out by the contractor's temporary works designer.

As there is already a basement to the adjacent Garage 4, underpinning might be required to achieve the required basement depth. The depth of the existing basement garage is to be confirmed by further investigation.

A preliminary sequence of works has been highlighted below:

1. Demolish the existing single-story building
2. Install contiguous piled wall with RC capping beam along boundary with No.22, or construct RC retaining wall along boundary with No.22 in underpinning sequence
3. Batter back to the west towards the driveway and to the south towards the communal garden
4. Break out and remove existing concrete footings during the excavation
5. Install temporary props along the boundary with No.22 as the excavation proceeds to the required depth
6. Install below ground drainage
7. Construct RC retaining wall and ground bearing RC slab with edge and internal thickenings
8. Underpin existing wall to Garage 4 if required in maximum 1m wide sections in 1-3-5-2-4 sequence
9. Construct ground floor RC suspended slab to form basement box
10. Remove props along boundary with No.22
11. Backfill to face of basement walls with well compacted granular material to ground level
12. Construct superstructure frame

Drainage Strategy

Refer to SDS1531 RP01 FRA & Drainage Strategy report

Appendices:

- A. Preliminary Structural Scheme (Piling to No.22)
- B. Preliminary Structural Scheme (Underpinning Sequence to No.22)

Yours Sincerely,

For and on behalf of SD Structures,



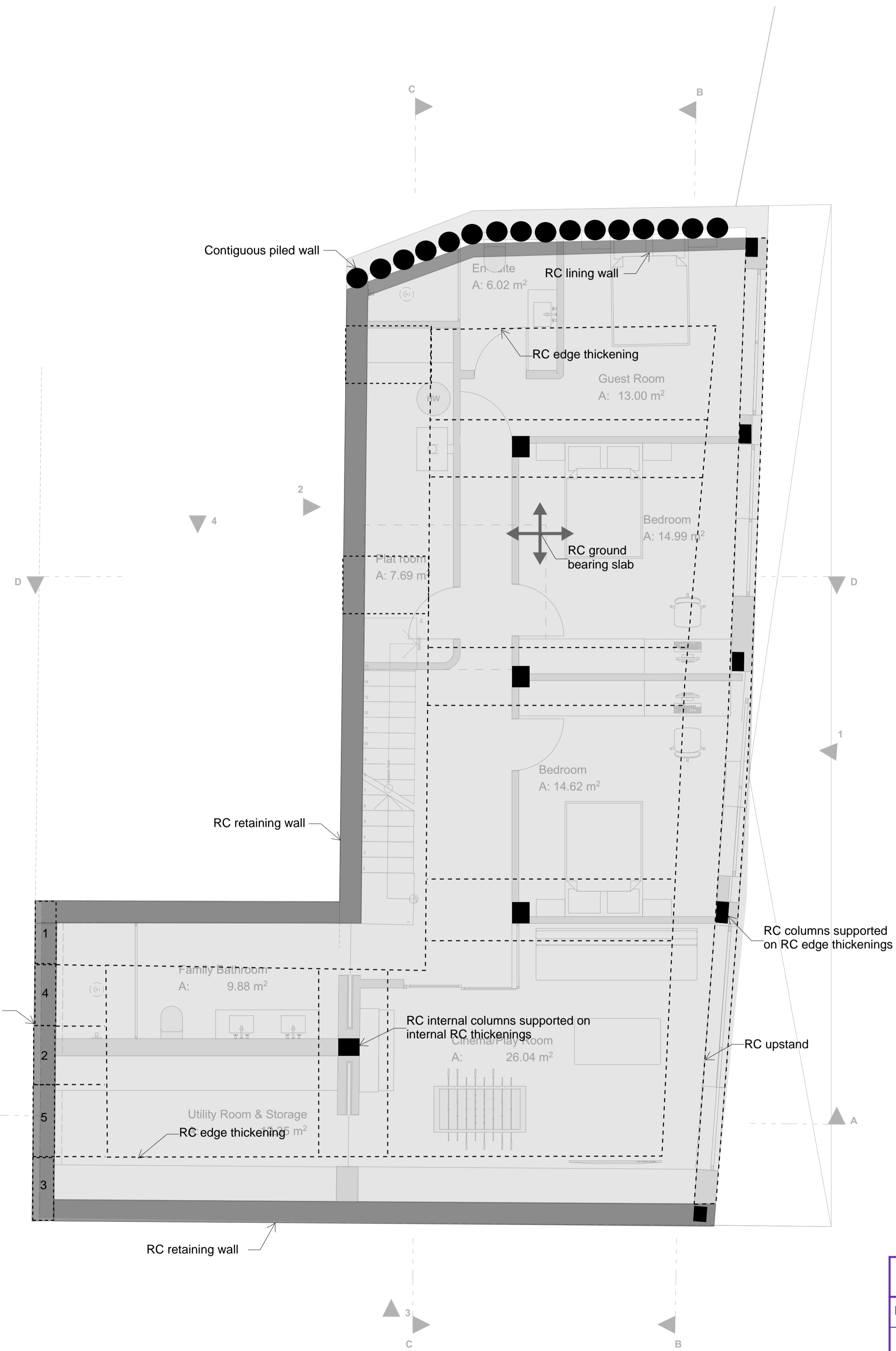
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Allow for extensive breaking out of existing deep concrete foundations

⚠ Allow for underpinning of existing garage wall constructed in underpinning sequence. TBC by depth of existing garage



| SD STRUCTURES | |
|--|--------------------------|
| PROJECT No. (Name) | SDS1584 20 Crediton Hill |
| SKETCH No. (Rev) | 1584-SDS-00-S-1000-P02 |
| SKETCH TITLE Basement Plan (Piling to No.22) | |
| DRAWN BY | JN |
| DATE | 03/04/2023 |
| STATUS | S1 Coordination |

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Project Name:
20 Crediton Hill

Client:
Sendi & Daniel Young

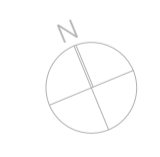
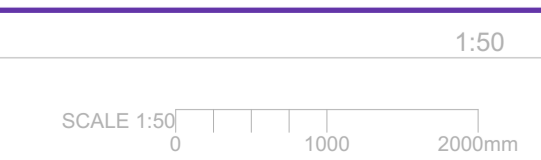
Site Location:
20 Crediton Hill, London NW6
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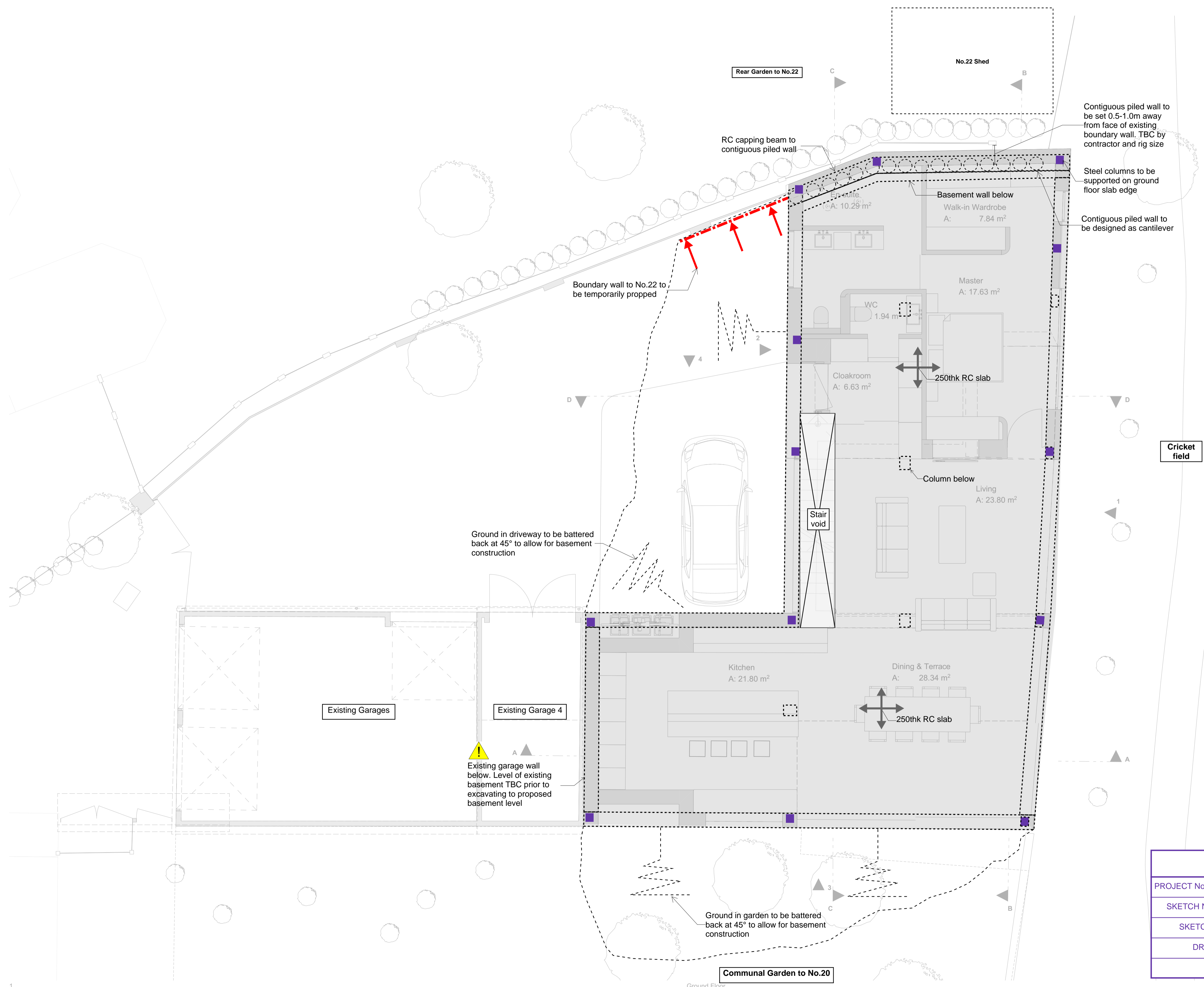
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Proposed Basement Floor Plan
Drawing Number
PR-A1.01



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Basement

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| PROJECT No. (Name) | SDS1584 20 Crediton Hill |
| SKETCH No. (Rev) | 1584-SDS-00-S-2000-P02 |
| SKETCH TITLE | Ground Floor Plan (Piling to No.22) |
| DRAWN BY | JN |
| DATE | 03/04/2023 |
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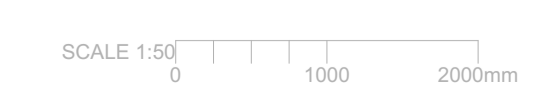
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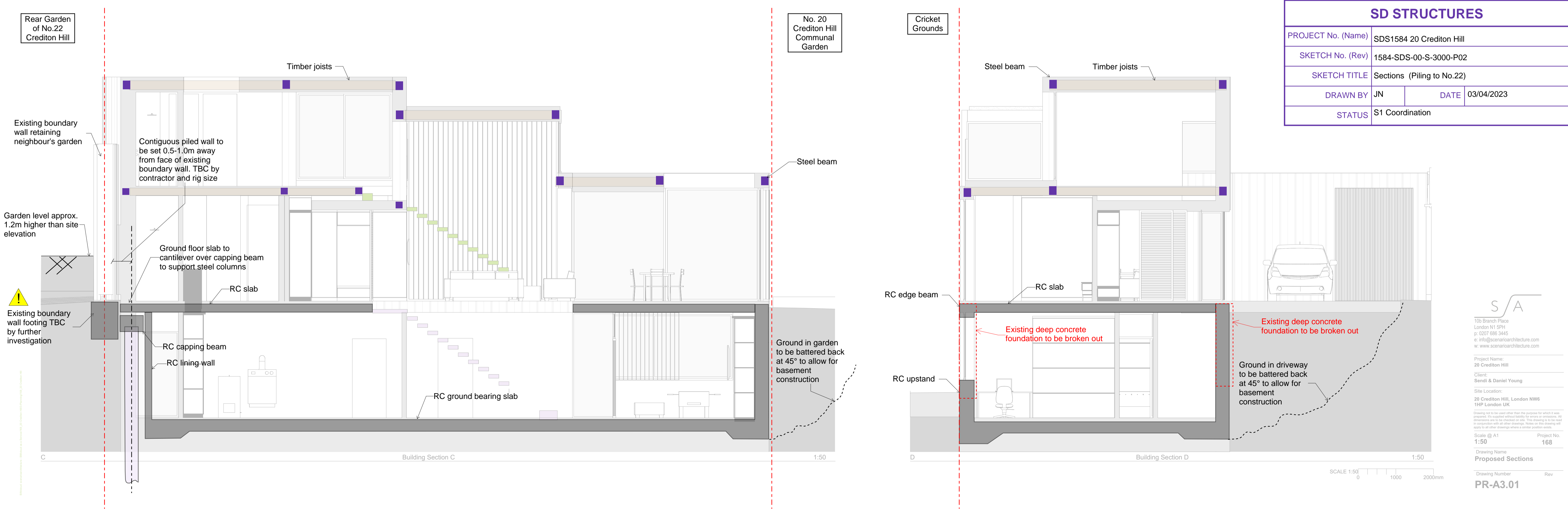
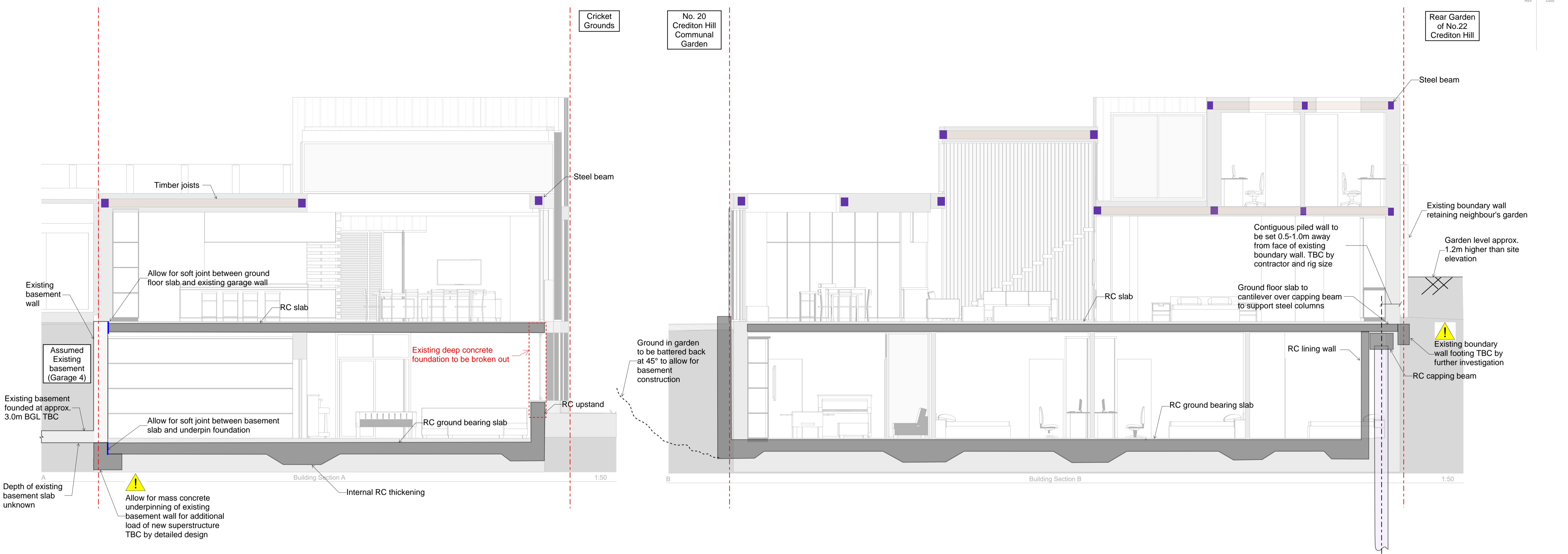
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Drawing Number
PR-A1.02

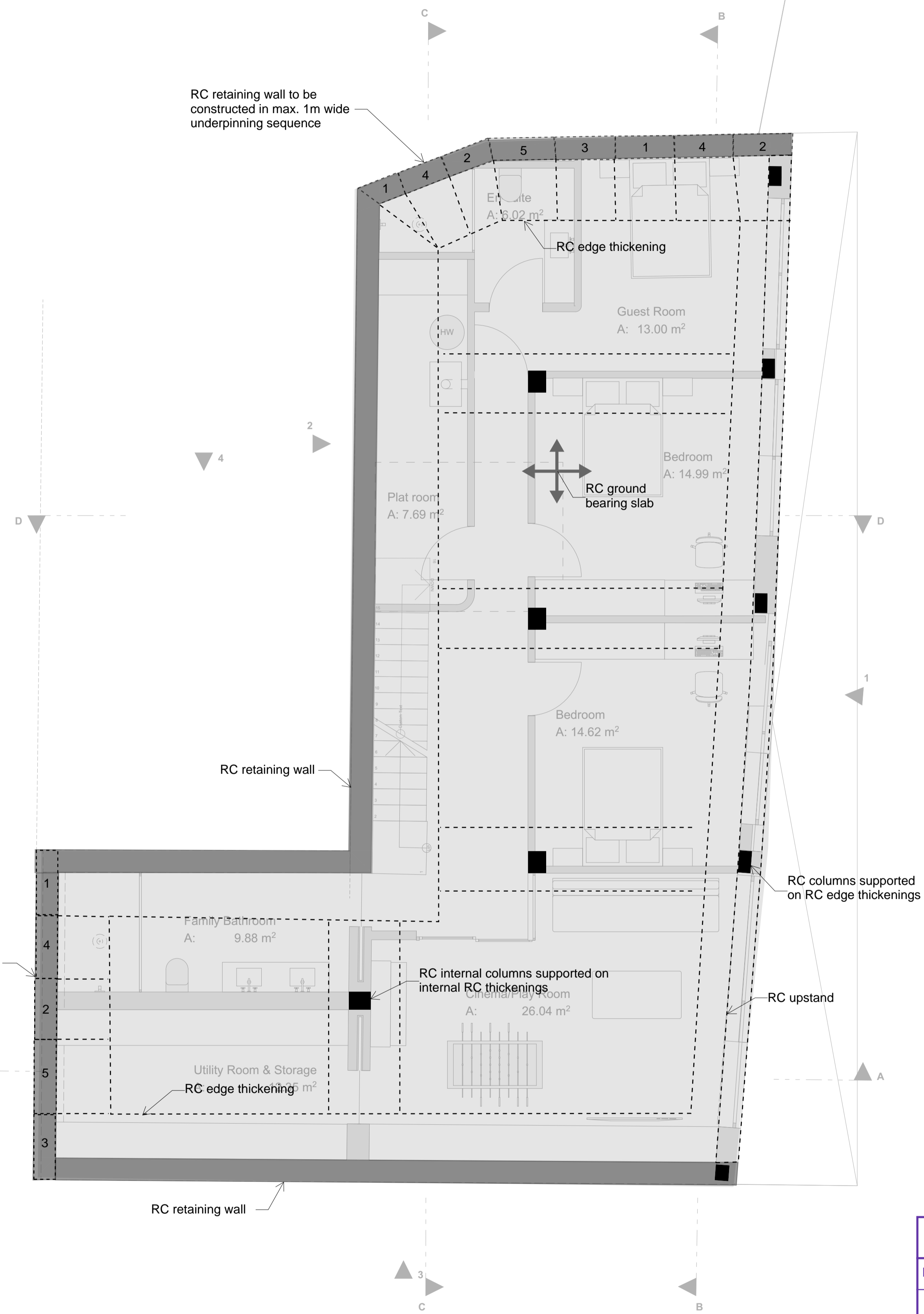




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| SKETCH TITLE | Sections (Piling to No.22) |
| DRAWN BY | JN |
| DATE | 03/04/2023 |
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Allow for extensive breaking out of existing deep concrete foundations

⚠ Allow for underpinning of existing garage wall constructed in underpinning sequence. TBC by depth of existing garage



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| PROJECT No. (Name) | SDS1584 20 Crediton Hill |
| SKETCH No. (Rev) | 1584-SDS-00-S-1000-P03 |
| SKETCH TITLE | Basement Plan (Underpinning sequence to No.22) |
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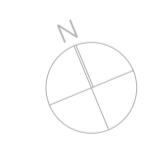
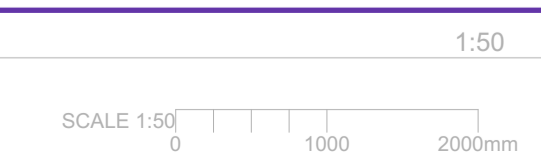
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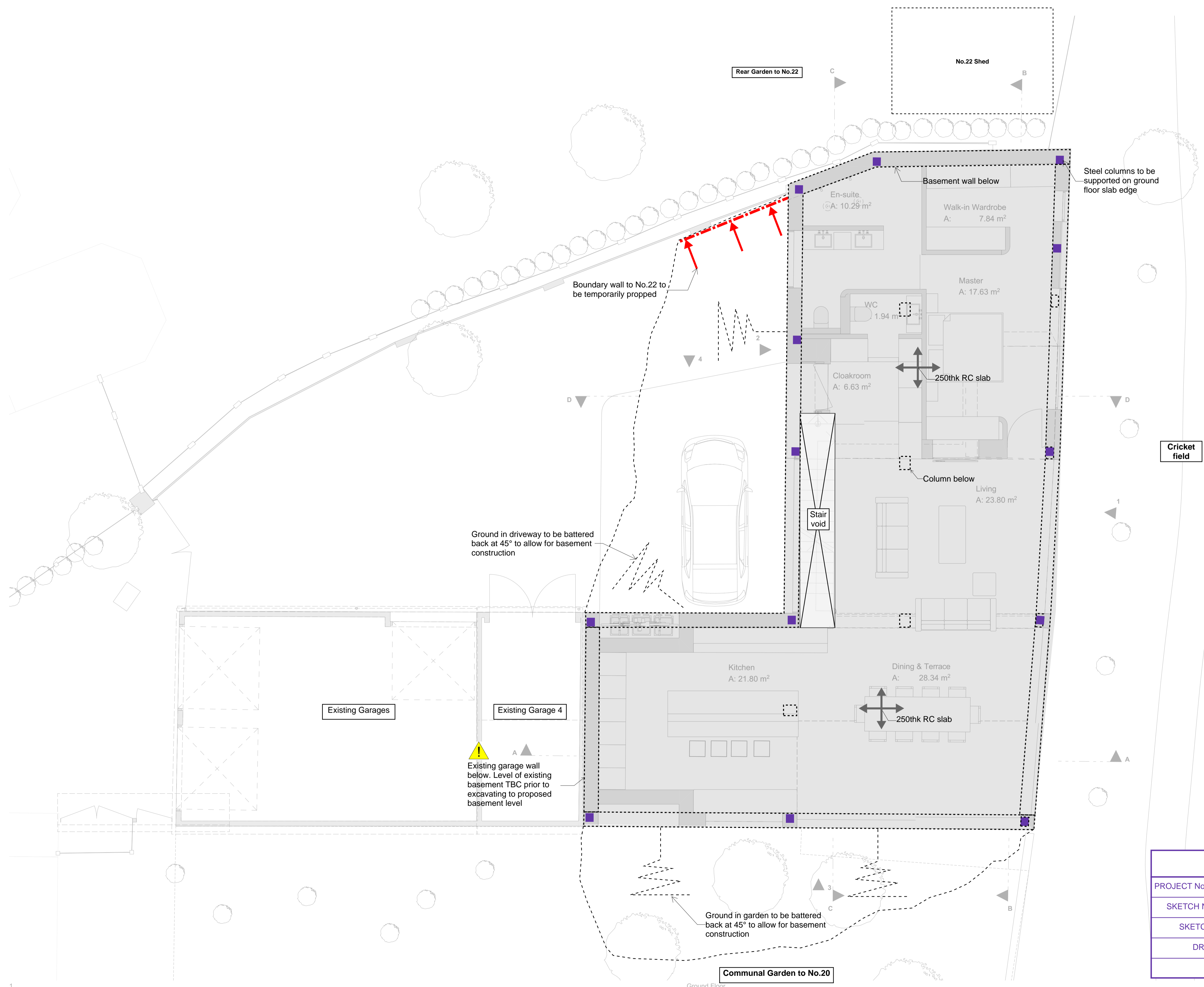
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| SKETCH No. (Rev) | 1584-SDS-00-S-2000-P03 |
| SKETCH TITLE | Ground Floor Plan (Underpinning sequence to No.22) |
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