

Our Reference: NA250909

Level 8,
55 Market Street,
Sydney NSW 2000

21/05/2025

PO Box Q577
Queen Victoria Building NSW 1230

Amandah Smith
C/- Michael Bell Architects
C3 / 372 – 428 Wattle Street
ULTIMO NSW 2007

T 02 9438 5098

Attention: Attention Mr Michael Bell

Dear Michael,

Re: 47 East Crescent Street, Lavender Bay, Proposed Alterations and Additions

Further to our engagement by yourself, the writer visited the above property on the 17th April 2025 to assess the structural engineering constraints for the proposed alterations and additions as shown on the pre-DA drawings prepared by Michael Bell Architects.

During our visit, we met with your Architect, Michelle Bull, a builder, Tony Viscomi and a Geotechnical engineer, Ben Sheppard, from JK Geotechnics. The site visit revealed sandstone in the sub floor space, subsequently classified as very low strength sandstone, refer to the Geotechnical report (37572Srpt by JK Geotechnics).

Part of the proposed works will comprise of the excavation and western extension of the existing basement to create a new casual living, bathroom and wine cellar which would open out to a new courtyard. The existing basement floor level will be lowered by approximately 950mm, whereupon low strength sandstone bedrock will be exposed. To achieve the desired basement, traditional mass brick or concrete underpinning of the existing party will be required in a hit and miss methodology, refer to Section A / SK01, attached.

To create the new external courtyard, a removal of the existing courtyard pavers and an excavation of approximately 3.5m deep will be required. Prior to any excavation, a permanent shoring wall will be required, such as a contiguous piled cantilevered wall immediately adjacent to the Waiwera Street boundary, refer to Section B / SK01. Underpinning of the existing Bay window, down to bedrock will also be required prior to excavation, refer to Section C / SK01.

Excavation will progress through sandy fill material before encountering sandstone at approx. 900mm below the existing courtyard pavers. Excavation into rock will continue, leaving a column of rock under the existing house walls that are to be extended down, Refer to Section C / SK01. The wall extension will be using traditional underpinning techniques in a hit and miss fashion.

The underpinning and excavation works will be complex and there are risks of movement, if the correct procedures and monitoring regimes by the Geotechnical and Structural Engineers are not followed. The work is typically tedious, slow and time-consuming and it is essential that it is completed by Project Managers and tradespersons who are familiar with this type of work.

ACOR Consultants and JK Geotechnics have recently successfully completed two similar projects at 11 Holbrook Avenue, Kirribilli and 12 Bertha Road, Cremorne.

We have attached some photographs showing typical underpinning techniques and supporting structures required.

We trust the above meet your requirements at present. Please contact the undersigned if you require any further clarification.

Yours faithfully,

ACOR CONSULTANTS PTY LTD

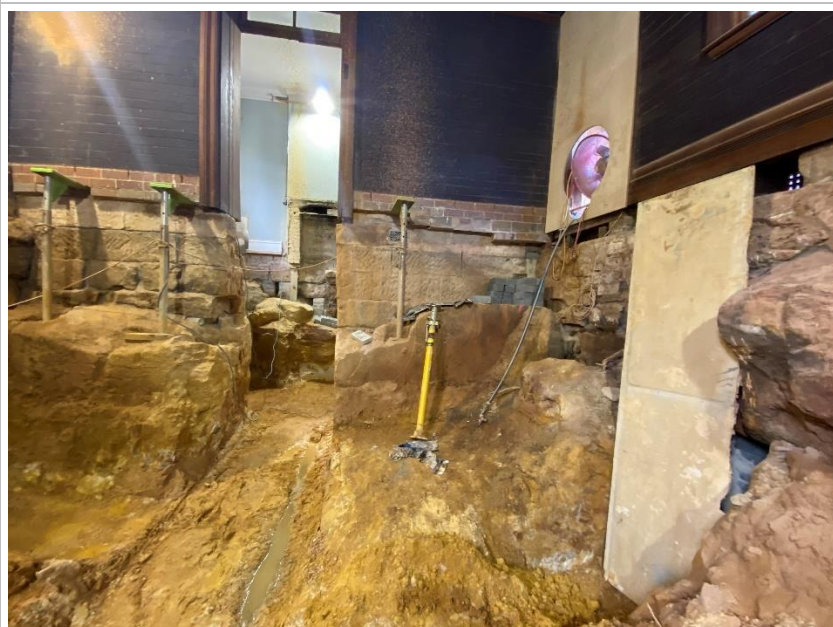


Christopher Rowse
Senior Principal Engineer - Structural



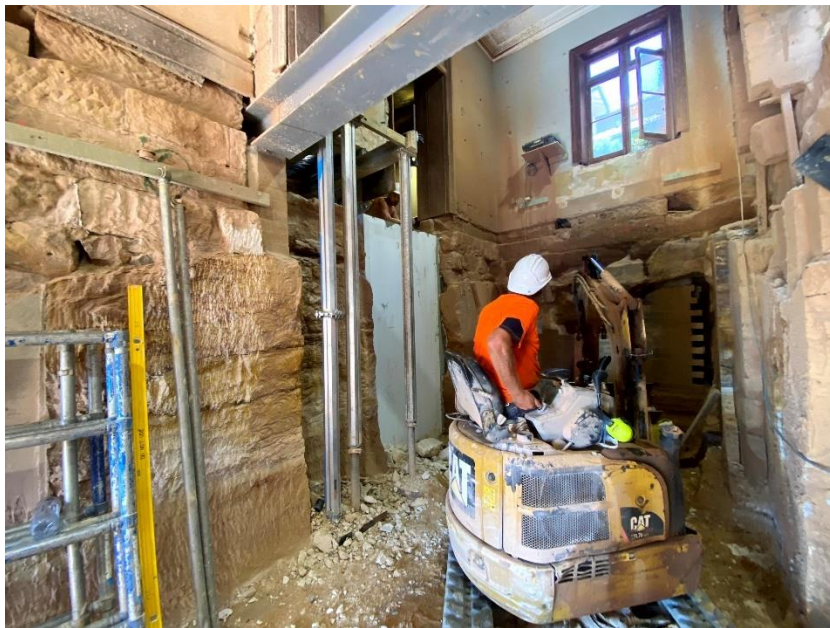
Photograph 1

11 Holbrook Ave, Kirribilli



Photograph 2

11 Holbrook Ave, Kirribilli



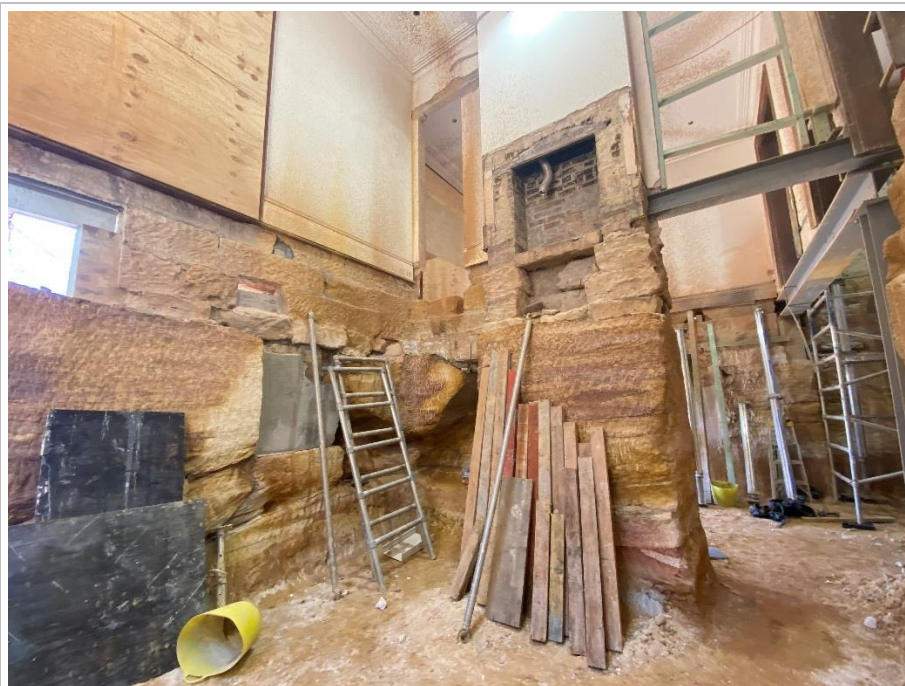
Photograph 3

11 Holbrook Ave, Kirribilli



Photograph 4

11 Holbrook Ave, Kirribilli



Photograph 5

11 Holbrook Ave, Kirribilli



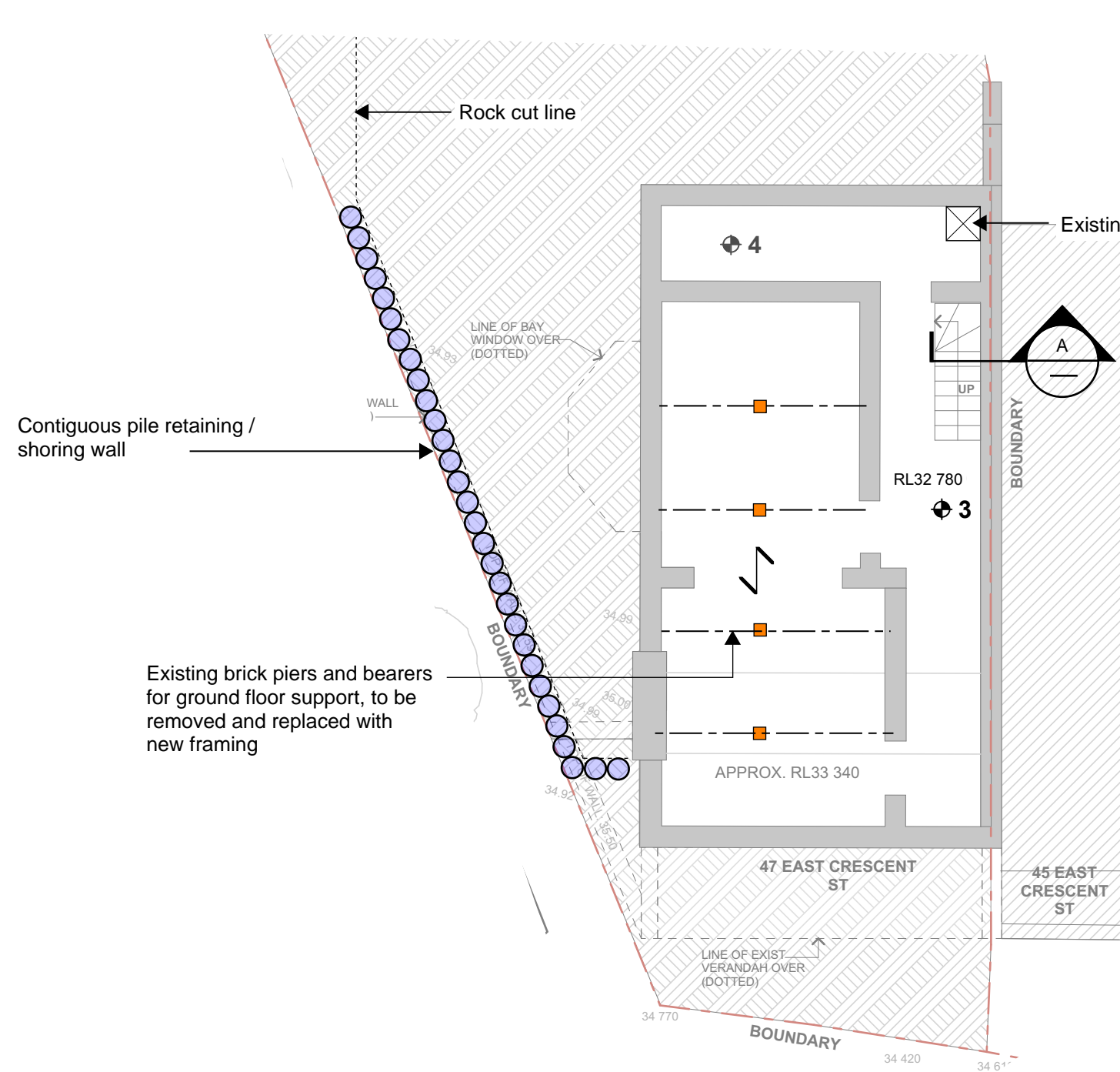
Photograph 6

12 Bertha Road, Cremorne



Photograph 7

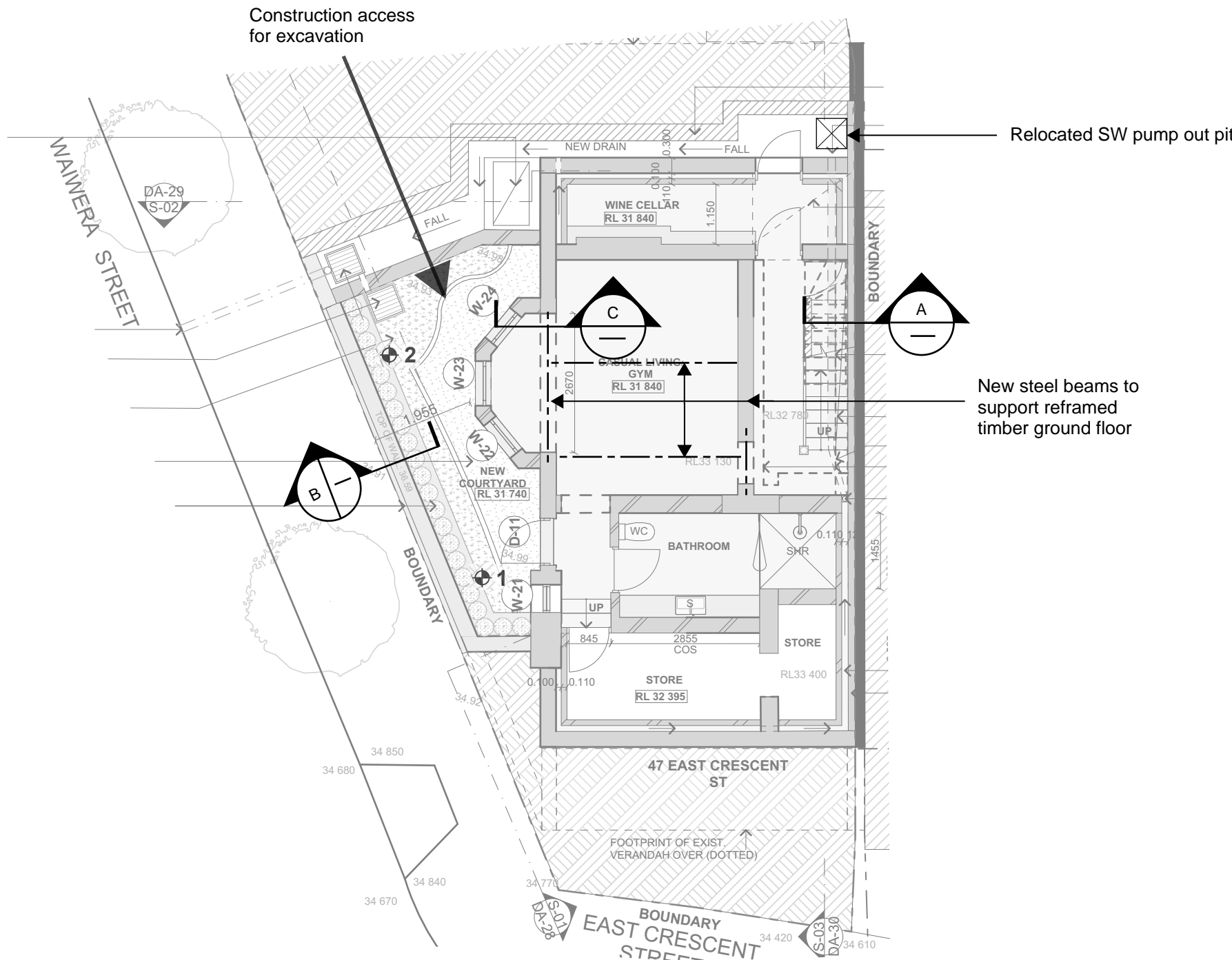
12 Bertha Road, Cremorne



Existing Basement Floor Plan

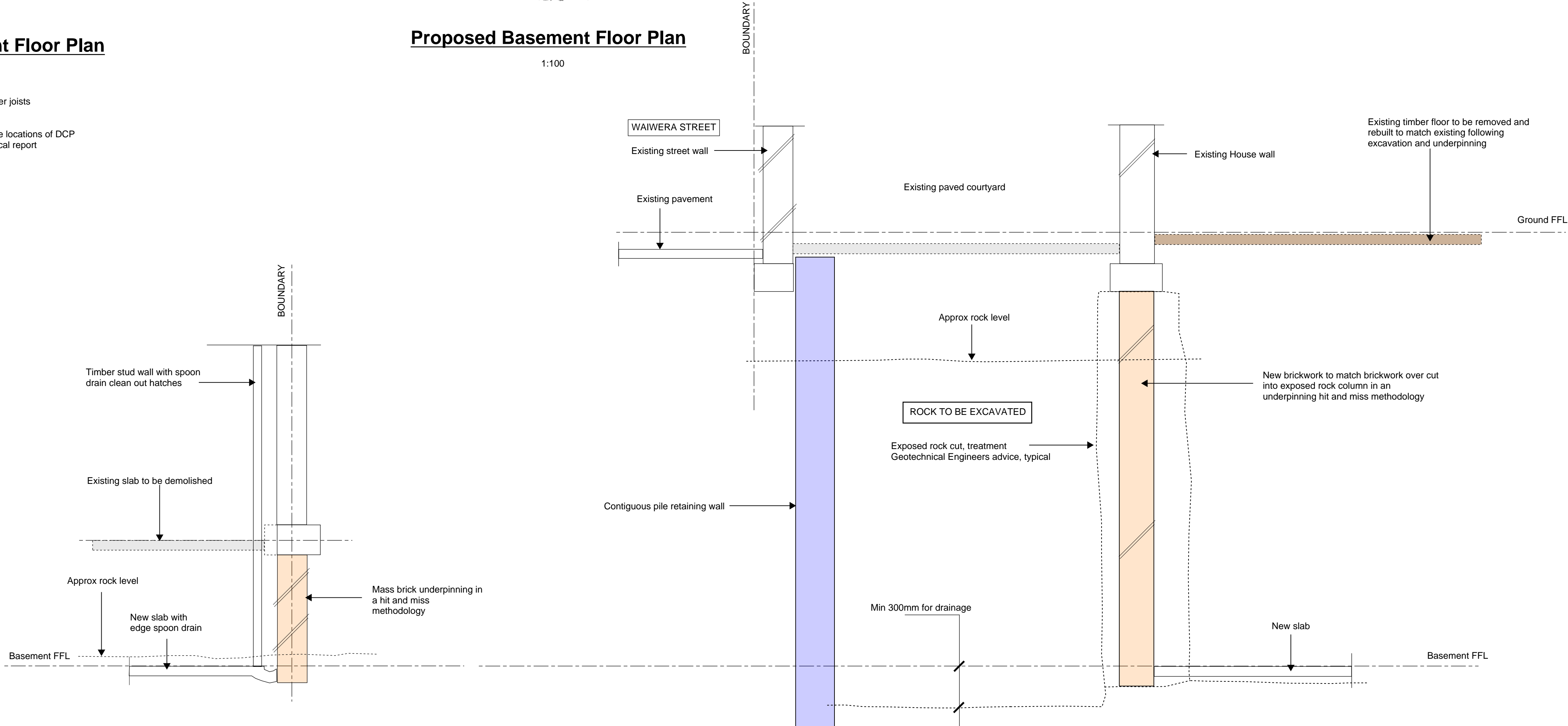
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- Span of existing timber joists
- Indicates approximate locations of DCP tests from Geotechnical report



Proposed Basement Floor Plan

1:100



Typical Party wall underpinning detail

Section A

1:20

Section B

1:20

Section C

1:20

Project North					Scale					Client					Architect					ACOR Consultants Pty Ltd					Project					Drawing Title				
13.05.25					13.05.25					AMANDA SMITH					MICHAEL BELL ARCHITECTS PTY LTD					Suite 2, Level 1, 33 Herbert Street					47 EAST CRESCENT, LAVENDER BAY					STRUCTURAL SERVICES				
13.05.25					13.05.25					AMANDA SMITH					C3 / 372 - 428 WATTLE STREET ULTIMO NSW 2007					St Leonards NSW 2065					ALTERATIONS & ADDITIONS					CONCEPT CONSTRUCTION METHODOLOGY				
13.05.25					13.05.25					AMANDA SMITH					TEL 02 9512 0425 FAX 02 9512 0322					T: +61 2 9438 5098										Drawn				
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PRELIMINARY ISSUE