



Co. Reg. No 3140928

VAT Reg. No. 732 4887 15

SUB SURFACE CONSULTANTS

GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS

Our ref: 7355D



Reg. Office

**SUB SURFACE CONSULTANTS LTD
3 PEEL STREET
PRESTON
PR2 2QS**

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www.subsurface.co.uk

28th May 2024

KMM Group
239 Mossley Road
Ashton-under-Lyne
Manchester
OL6 6LN

For the attention of Mark McClarty

**RE: RESIDENTIAL DEVELOPMENT AT LAND TO THE REAR OF 408 OLDHAM ROAD,
MIDDLETON, M24 2FA**

Dear Sirs,

This letter report has been prepared in accordance with your emailed instruction, dated 21st May 2024, and comprises a signed statement undertaken to comply with condition 6 (b) (coal mining) on planning permission 21/00265/FUL, as required by Rochdale Borough Council and given below:

The development should not be occupied until a signed statement or declaration prepared by a suitably competent person confirming that the site is, or has been made, safe and stable for the approved development shall be submitted to and approved in writing by the Local Planning Authority. This document shall confirm the methods and findings of the intrusive site investigations and the completion of any remedial works and/or mitigation necessary to address the risks posed by past coal mining activity.

We have issued the following reports for this site which should be read in conjunction with this report:

- Phase I Desk Study Report for this site, ref. 7355 dated November 2021, which included a preliminary coal mining risk assessment.
- Phase II Ground Investigation Report, ref. 7355A dated April 2022, which included a rotary investigation of shallow coal mining beneath the site.

Introduction

The site is located at land to the rear of 408 Oldham Road, Middleton, Greater Manchester, M24 2FA, as indicated on Figure 1. The approximate National Grid Reference of the centre of the site is 388289, 405991. As shown on Figure 2, the site forms an irregular shaped area of approximately 0.44ha comprising a plot of brownfield land, bound by a Tesco supermarket carpark and the rear of properties off Oldham Road to the north, a community centre to the east, a school field to the south east, 23 Tregaer Fold to the south and the rear of houses off Monmouth Street to the west. An access road extends from the central north of the site to Oldham Road.

As indicated in Figure 3, the site has been developed with sixteen residential properties, comprising six three-storey semi-detached houses (Plots 6 to 11), four two-storey semi-detached houses (Plots 1,2,12 and 13), and two terraces of three two-storey townhouses (Plots 3-5 and 14-16). Pile general arrangement and foundations plans provided by the Client for each plot, are appended.

Summary of Previous Investigations (ref. 7355 & 7355A)

Geological & Mining Appraisal

The natural strata underlying the site was determined as Glacial Till, anticipated to comprise sandy silty clays with variable layers of sand and gravel, overlying Pennine Lower Coal Measures bedrock. From previous investigations in the area drift deposits were anticipated to depths ranging from 12.00m to 25.50m. Coal Measures strata was anticipated to comprise interbedded mudstones, siltstones and subordinate sandstones with occasional mineral seams of coal and ironstone. The bedded strata were anticipated to dip to the south west at 13° to 16°. No significant geological faults were identified in significant proximity to the site.

Based on BGS surveys, previous investigations and old coal mineshaft records from the surrounding area, it was anticipated that the site was underlain by a sequence of coal seams dipping to the south west. The uppermost coal seam was anticipated to be the <2.0m thick Oldham Great Mine coal, which is shown to outcrop to the north east of the site on the most recent BGS geological survey (1:50,000). Given the shallow dip to the south west the Oldham Great Mine coal is expected to underlie the site at relatively shallow depths, becoming increasingly deeper to the south west. The BGS survey indicated the Oldham Great Mine coal is underlain at a further 29m by the <0.6m thick Little Mine coal which is underlain by a further 15m by the <1.1m thick Black Mine Coal.

The mining appraisal indicated that according to the limited, and probably incomplete, Coal Authority records the site surface could be affected by underground mine workings in three seams of coal at 40m to 160m depth; the last mine workings being in 1857 and from which any associated ground movement should have stopped by now. In addition, the Coal Authority indicated that they believe there is coal at or close to the surface, which may have been worked at some time in the past, for which they have no record.

The detailed geological and mining appraisal indicated that the site was underlain by a sequence of potentially worked coal seams at shallow depths below rockhead. Consequently a rotary borehole investigation was undertaken to 40m depth followed by a ground stability assessment in order to determine whether remedial measures are required for the proposed development.

Ground Investigation Report 7335A

The ground investigation comprised nine cable percussive boreholes (BH5 to BH13) taken down to depths of between 15.30m and 23.25m. Five boreholes (BH5, BH6, BH7, BH8 and BH11) were subsequently extended as rotary boreholes (R5, R6, R7, R8 and R11) to a depth of 45.00m. An additional five rotary boreholes (R14, R14A, R14B, R15 and R16) were put down from ground level to respective depths of 30.00m, 25.00m, 45.00m, 30.00m and 28.00m. Borehole locations are shown on Figure 4.

The ground investigation found made ground to highly variable depths ranging from 0.80m to 9.00m underlain by predominantly granular drift deposits locally interbedded with clays sands and clays. Rockhead was encountered at depths ranging from 13.50m to greater than 20.00m, generally to the east, and comprised Coal Measures strata consisting of a sequence of interbedded mudstones, sandstones and siltstones.

A 0.80m to 1.00m thick coal seam was encountered in boreholes R8, R11, R7, R6, R14B and R5 at respective depths of 26.30m, 28.00m, 36.10m, 38.50m, 38.90m and 43.10m. The alignment of these boreholes ran across the site from north east to south west and indicated the seam becomes progressively deeper in this direction correlating to the anticipated dip of the strata. The coal seam in R5 in the south west of the site was approximately 16m deeper than R8 in the north east of the site, giving an apparent dip of approximately 11°, although the true dip could be slightly steeper.

No voids, broken ground, loose drilling or loss of flush, which may indicate coal workings were recorded in the rotary boreholes.

The findings of the investigation indicate that an approximately 1.0m thick unworked coal seam underlies the site at depths below ground level ranging from around 26m in the north east to 43m in the south west. Based on the geological appraisal the coal seam was identified as the Oldham Great Mine coal, evidently unworked in this area.

Given the above it was concluded no ground stabilisation measures or precautions needed to be considered in relation to mine workings. However as a precaution against potential undetected mine workings it was recommended that any proposed pile foundations were terminated in strata sufficiently above the Oldham Great Mine coal seam to provide a 10m thickness of solid strata, or the equivalent in high strength/ dense to very dense drift deposits (we would consider approximately twice the thickness of competent drift strata to be equivalent to solid strata).

Conclusion

Pile Record Sheets provided by the Client, and appended, indicate the piling works were undertaken by Total Piling Ltd between 13/04/2024 and 26/04/2024.

The maximum depth of piles in each plot location, and recorded depths of drift, rock cover and, where applicable drift cover, are summarised in Table 1.

TABLE 1 PILE/ STRATA DEPTH SUMMARY

Plot Nos.	BH No. (7355A)	Maximum Pile Depth (mbgl)	Depth of Oldham Great Mine (mbgl)	Recorded Depth to Rockhead (mbgl)	Thickness of Rock Strata Cover (m)	Thickness of Competent Drift Cover (m)
1-2	R8	10.4	26.3	21.8	4.5	11.4
3-5	R11	11.4	28.0	21.3	6.7	9.9
6-7	R6*	9.3	>38.5	21.3	>17.2	N/A
8-9	R6*	8.5	>38.5	21.3	>17.2	N/A
10-11	R6*	8.6	>38.5	21.3	>17.2	N/A
12-13	R5	12.1	43.1	19.0	24.1	N/A
14-16	R6*	12.2	>38.5	21.3	>17.2	N/A

*Borehole R6 is located to the north east of Plots 6-16. Due to the dip of the strata to the south west, the coal seam in these locations is expected at >38.50m below ground level.

In conclusion, based on the Pile Record Sheets provided, we would consider there to be a sufficient cover of competent strata between the base of the piles and any potential mineworkings within the >1.0m thick coal seam encountered in the ground investigation at depths of between 26.30m and 43.10m, and identified as the probable Oldham Great Mine coal. Consequently in our opinion, no additional ground stabilisation measures or precautions need be considered in relation to mine workings.

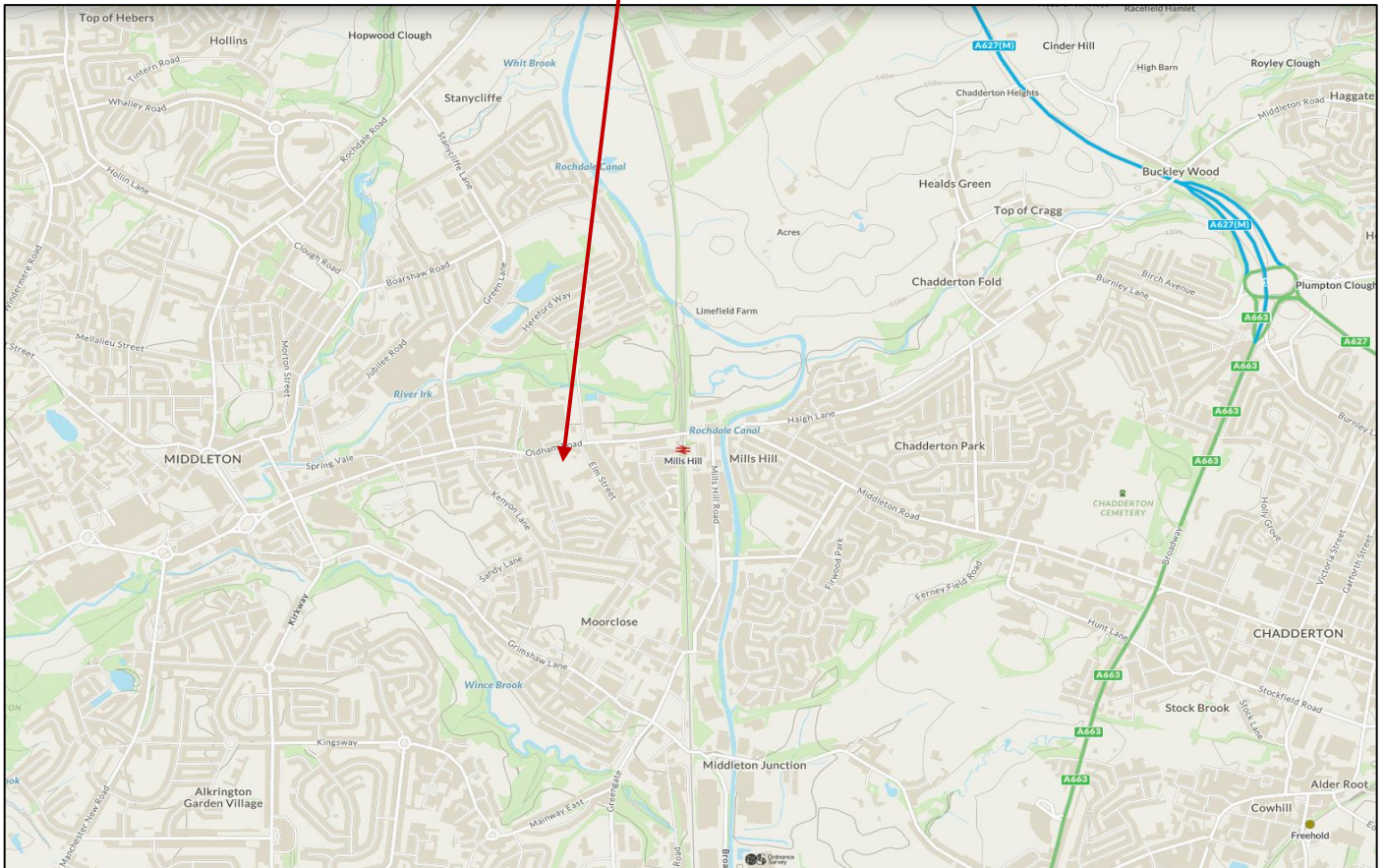
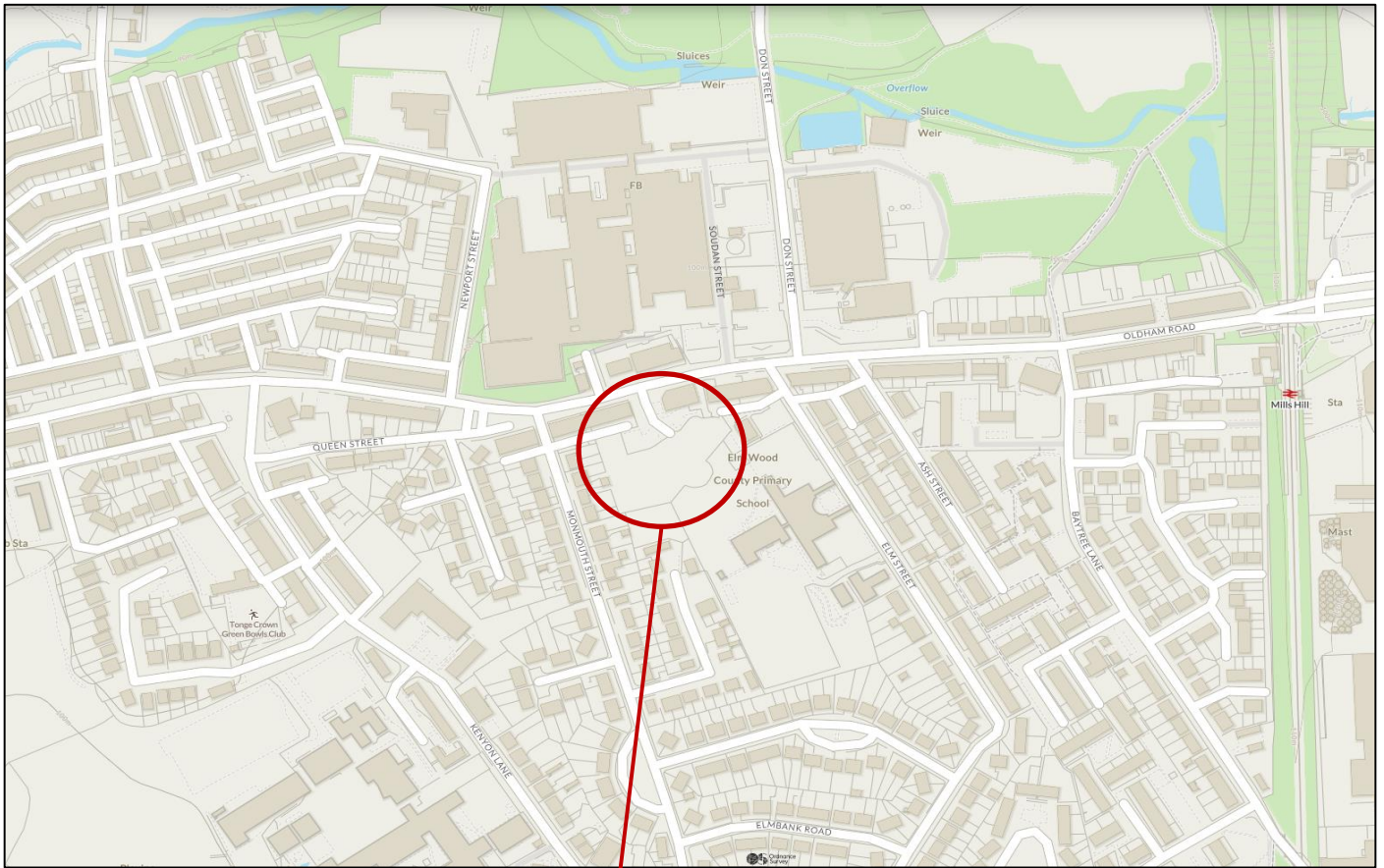
We trust that this letter report fulfils your present requirements but if you have any queries or we can be of further assistance please contact the undersigned or Miss Anna Marsden at our Preston office.

Your faithfully

A handwritten signature in black ink, appearing to be 'T. Plum', with a long horizontal flourish extending to the right.

T. Plum B.Sc.(Hons.), M.Sc., F.G.S.
Principal Geotechnical Engineer
For and on behalf of
Sub Surface Consultants Limited

FIGURES



SUB SURFACE

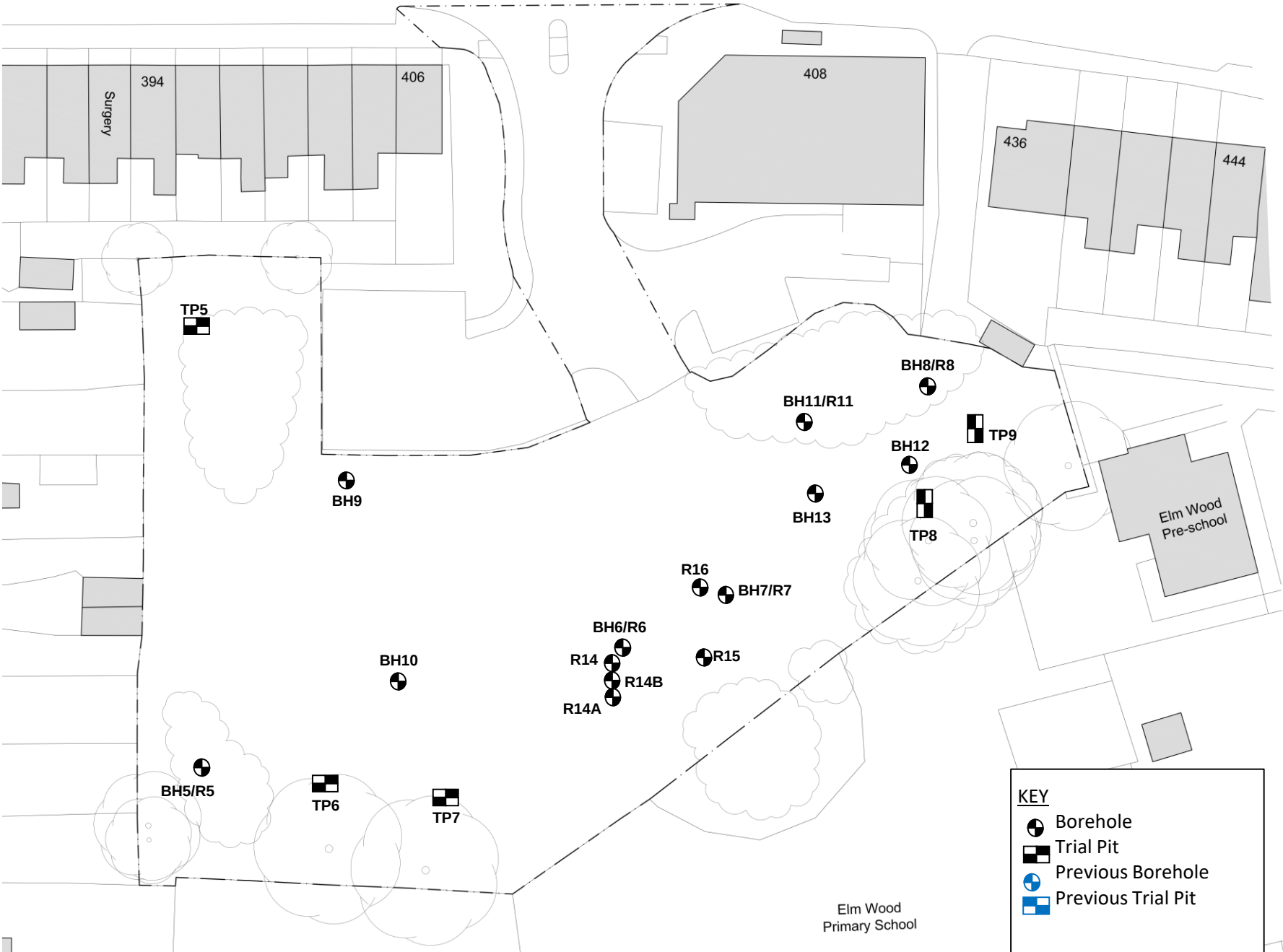
SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS
3 Peel Street, Preston, PR2 2QS. Tel. (01772) 561135 Fax (01772) 204907

Site
LAND REAR OF 408 OLDHAM ROAD, MIDDLETON,
GREATER MANCHESTER

Client
SOCIAL VALUE HOUSING LTD

General Site Location

Date Drawn 29-May-24	Date Checked	Orientation 	Job No. 7355D
Drawn By TP	Checked By	Scale —	Figure No. 1



KEY

-  Borehole
-  Trial Pit
-  Previous Borehole
-  Previous Trial Pit



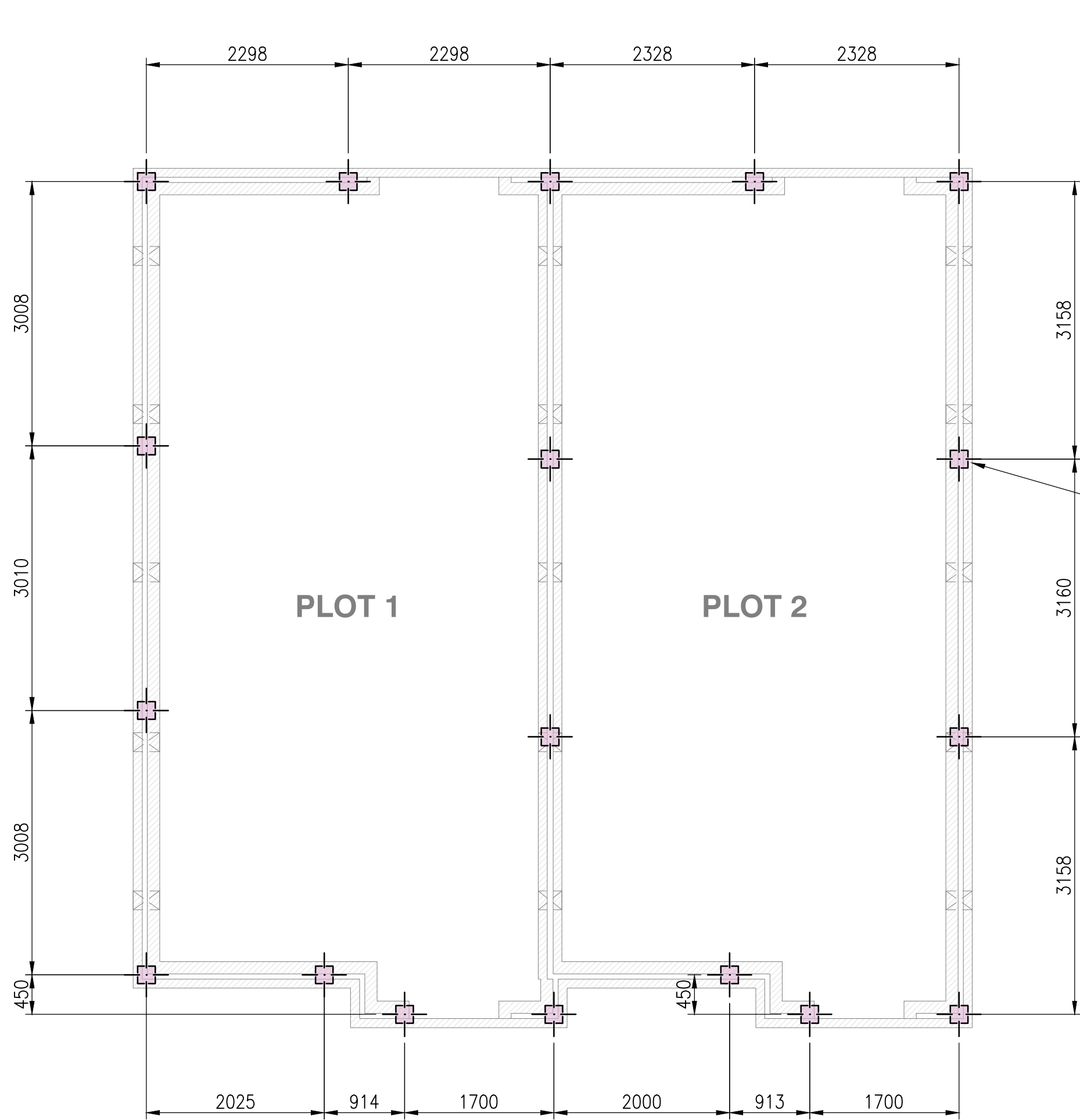
SUB SURFACE

SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS
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Exploratory Hole Location Plan

Site	LAND REAR OF 408 OLDHAM ROAD, MIDDLETON, GREATER MANCHESTER			
Date Drawn	29-May-24	Date Checked		Job No.
Client	SOCIAL VALUE HOUSING LTD			
Drawn By	TP	Checked By		7355D
		Scale	—	Figure No.
				4

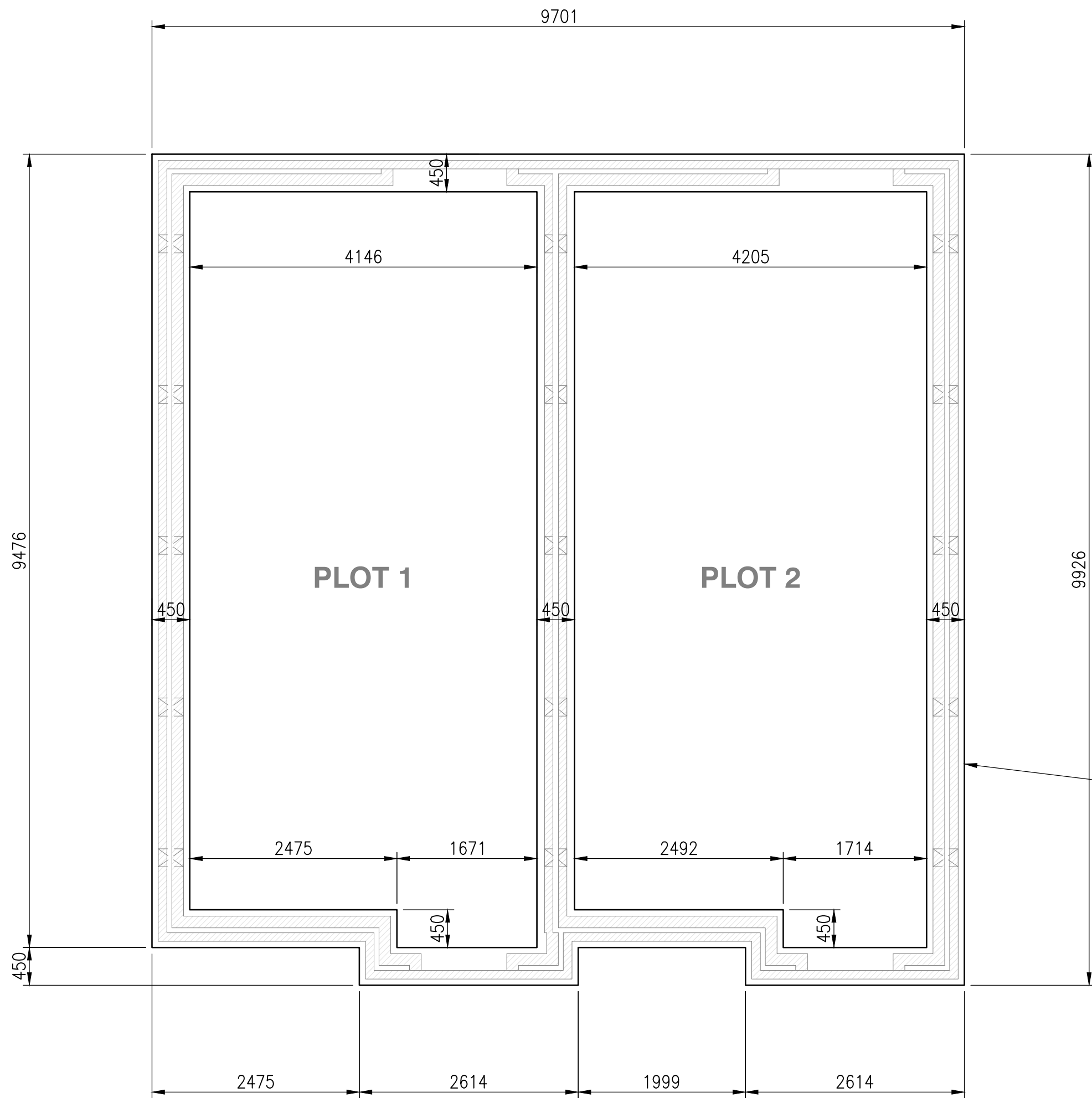
**PILE GENERAL ARRANGEMENT
& FOUNDATION PLANS**



PILE G.A.
SCALE 1:50

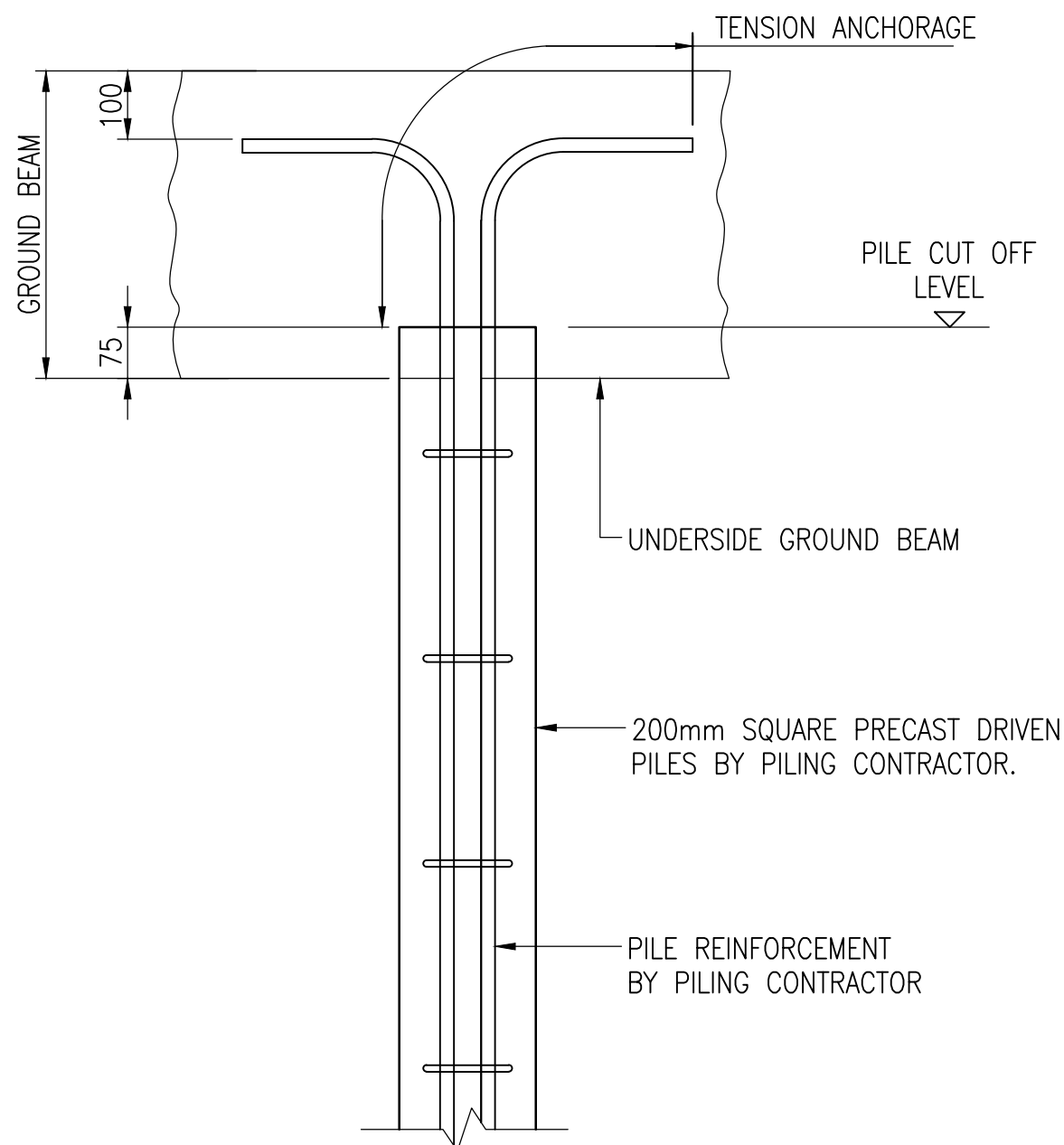
SETTING OUT OF HOUSES
TO ARCHITECTS CO-ORDINATES

PILE CUTOFF LVL = 102.750m LVL



FOUNDATION G.A.
SCALE 1:50

TOC = 103.125m LVL



TYPICAL PILE HEAD TO FOUNDATION
SCALE 1:10

PILING NOTES

- ALL LEVELS ARE IN METRES ALL DIMENSIONS ARE IN MILLIMETRES.
- THE CONTRACTOR IS TO DESIGN THE PILES USING THE SOIL PARAMETERS CONTAINED IN SUB SURFACE GROUND INVESTIGATION REPORT 7355A (APRIL 2022).
- PILE DESIGN TO ALLOW FOR NEGATIVE SKIN FRICTION.
- PILE TYPE INSTALLATION PROCEDURE SHALL BE SELECTED TO MINIMIZE THE LIKELIHOOD OF ANY DAMAGE OCCURRING TO ADJACENT STRUCTURES OR UNDERGROUND SERVICES.
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- PILING CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING OUT OF THE PILES. MAXIMUM ALLOWABLE DEVIATION FROM CENTRE OF PILE FROM SETTING OUT POINT SHALL BE 75mm. MAXIMUM ALLOWABLE DEVIATION OF A PILE FROM THE VERTICAL IS 1 IN 75.
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- PRIOR TO COMMENCING INSTALLATION OF THE PILES, THE PILING CONTRACTOR SHALL MAKE ALL NECESSARY ENQUIRIES TO LOCATE UNDERGROUND SERVICES LOCAL TO THE AREA WHERE THE PILES ARE INSTALLED. THE PILING CONTRACTOR SHALL ALSO CARRY OUT A DILAPIDATION SURVEY OF ADJACENT STRUCTURES AND PROVIDE ENGINEERS WITH PHOTOGRAPHIC EVIDENCE OF SUCH DAMAGE, PRIOR TO COMMENCING INSTALLATION OF THE PILES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS REQUIRED AS A RESULT OF THE PILING OPERATIONS.
- NOISE CONTROL SHALL BE IN ACCORDANCE WITH BS.5228

NOTES

- REFER TO GENERAL NOTES DRAWING GK3879-S-001.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE STRUCTURAL CALCULATION PACKAGE PREPARED BY GWK STRUCTURAL SOLUTIONS LTD FOR BUILDING REGULATIONS APPROVAL.
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- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE DIMENSIONS OF ALL STRUCTURAL ELEMENTS PRIOR TO ORDERING AND OR FABRICATING TO AVOID MISTAKES.

0	30.03.23	IH	GWK	ISSUED FOR CONSTRUCTION
No	DATE	DRAWN	REV'D ENG.	AMENDMENT



GWK STRUCTURAL SOLUTIONS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
37 ANGLESEY DRIVE, POYNTON STOCKPORT SK12 1BU
Email: gareth@gwkss.co.uk
Web: gwksstructuralolutions.co.uk

CLIENT KMM HOMES LIMITED

PROJECT
OLDHAM ROAD
MIDDLETON

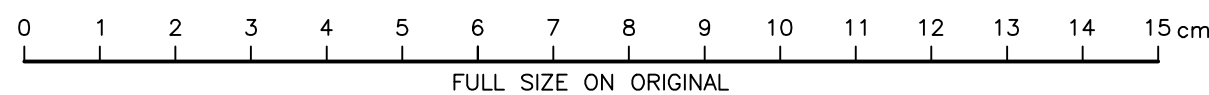
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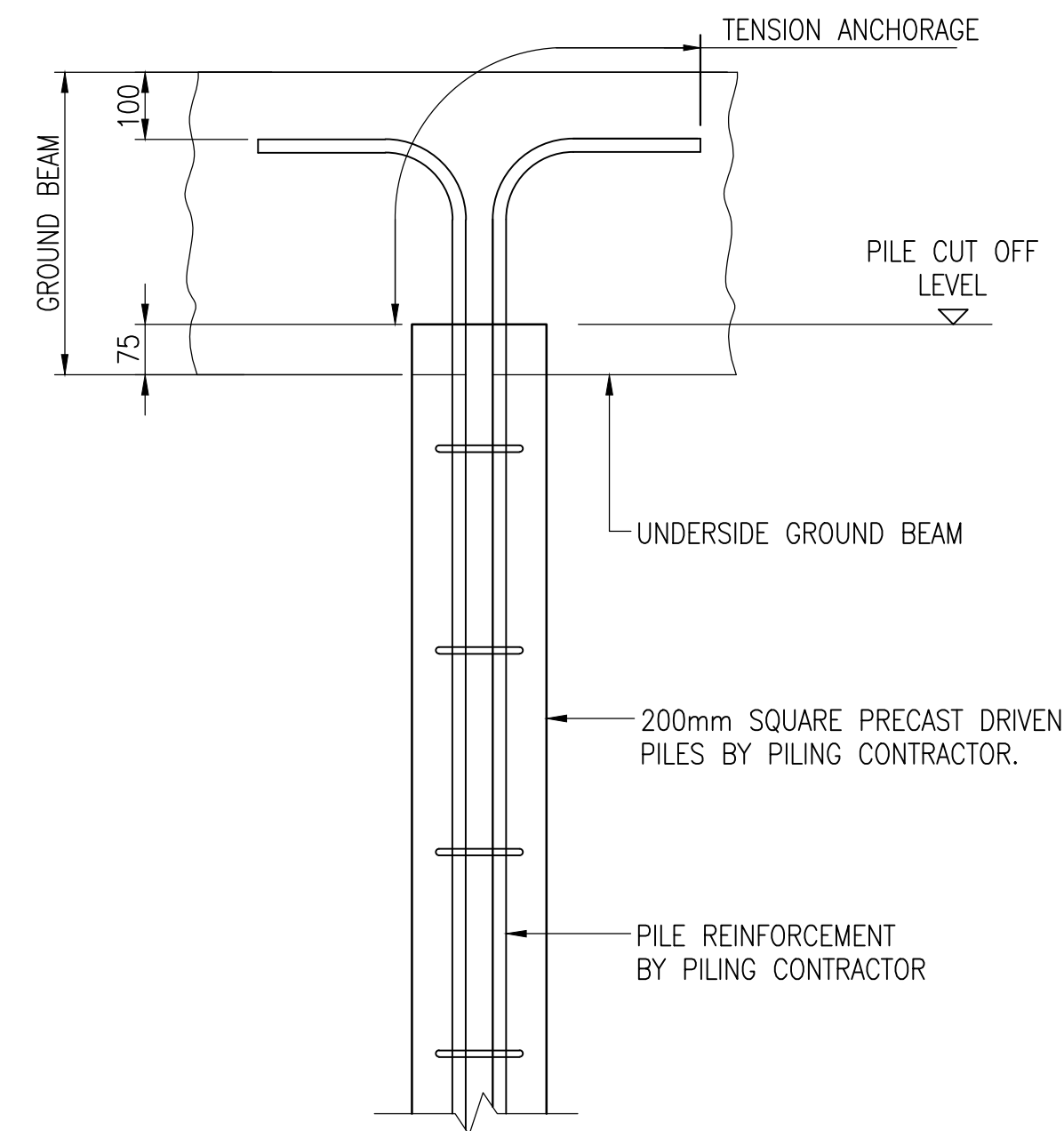
TITLE
PLOT 1 & 2
PILE G.A. &
FOUNDATION PLAN

SCALE 1:50	DRAWING No GK3879-S-002	DATE MAR '23	AMDT 0
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THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015:

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY ALL POTENTIAL HAZARDS THAT MAY BE PRESENT DURING THE PROPOSED WORKS AND PREPARE A PROJECT SPECIFIC HEALTH & SAFETY PLAN.





PIILING NOTES

1. ALL LEVELS ARE IN METRES ALL DIMENSIONS ARE IN MILLIMETRES.
2. THE CONTRACTOR IS TO DESIGN THE PILES USING THE SOIL PARAMETERS CONTAINED IN SUB SURFACE GROUND INVESTIGATION REPORT 7355A (APRIL 2022).
3. PILE DESIGN TO ALLOW FOR NEGATIVE SKIN FRICTION.
4. PILE TYPE INSTALLATION PROCEDURE SHALL BE SELECTED TO MINIMIZE THE LIKELIHOOD OF ANY DAMAGE OCCURRING TO ADJACENT STRUCTURES OR UNDERGROUND SERVICES.
5. PILING CONTRACTOR IS RESPONSIBLE FOR TESTING OF PILES WITH 1No. STATIC LOAD TESTS, DYNAMIC PILE INTEGRITY TESTING OF ALL PILES. TEST LOCATIONS TO BE AGREED ON SITE.
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9. NOISE CONTROL SHALL BE IN ACCORDANCE WITH BS.5228

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ENG. | AMENDMENT |



GWK STRUCTURAL SOLUTIONS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
37 ANGLESEY DRIVE, POYNTON STOCKPORT SK12 1BU
Email: gareth@gwkss.co.uk
Web: gwkstructuralsolutions.co.uk

CLIENT	KMM HOMES LIMITED
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PROJECT	OLDHAM ROAD MIDDLETON
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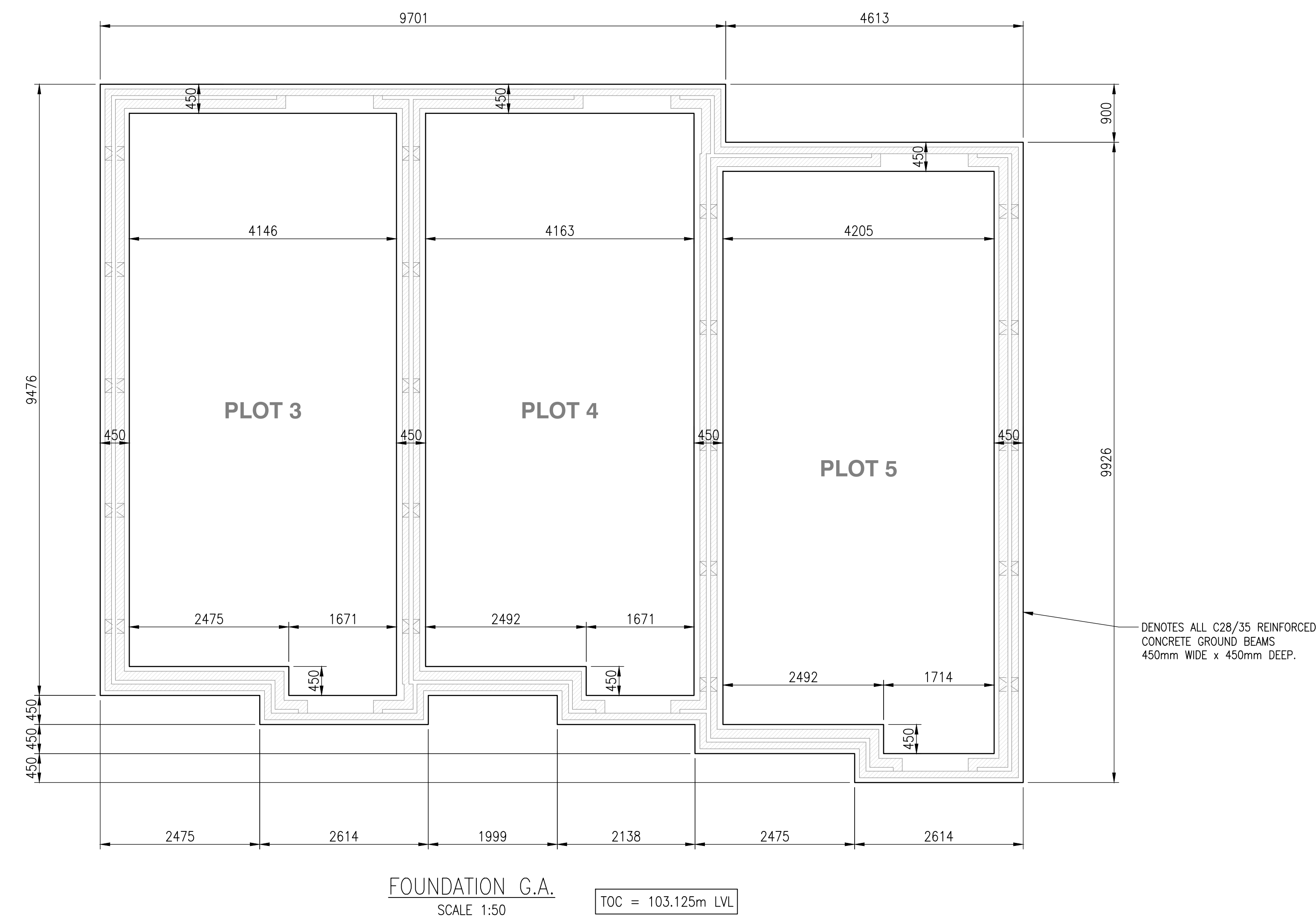
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TITLE PLOT 3, 4 & 5
PILE G.A. &
FOUNDATION PLAN

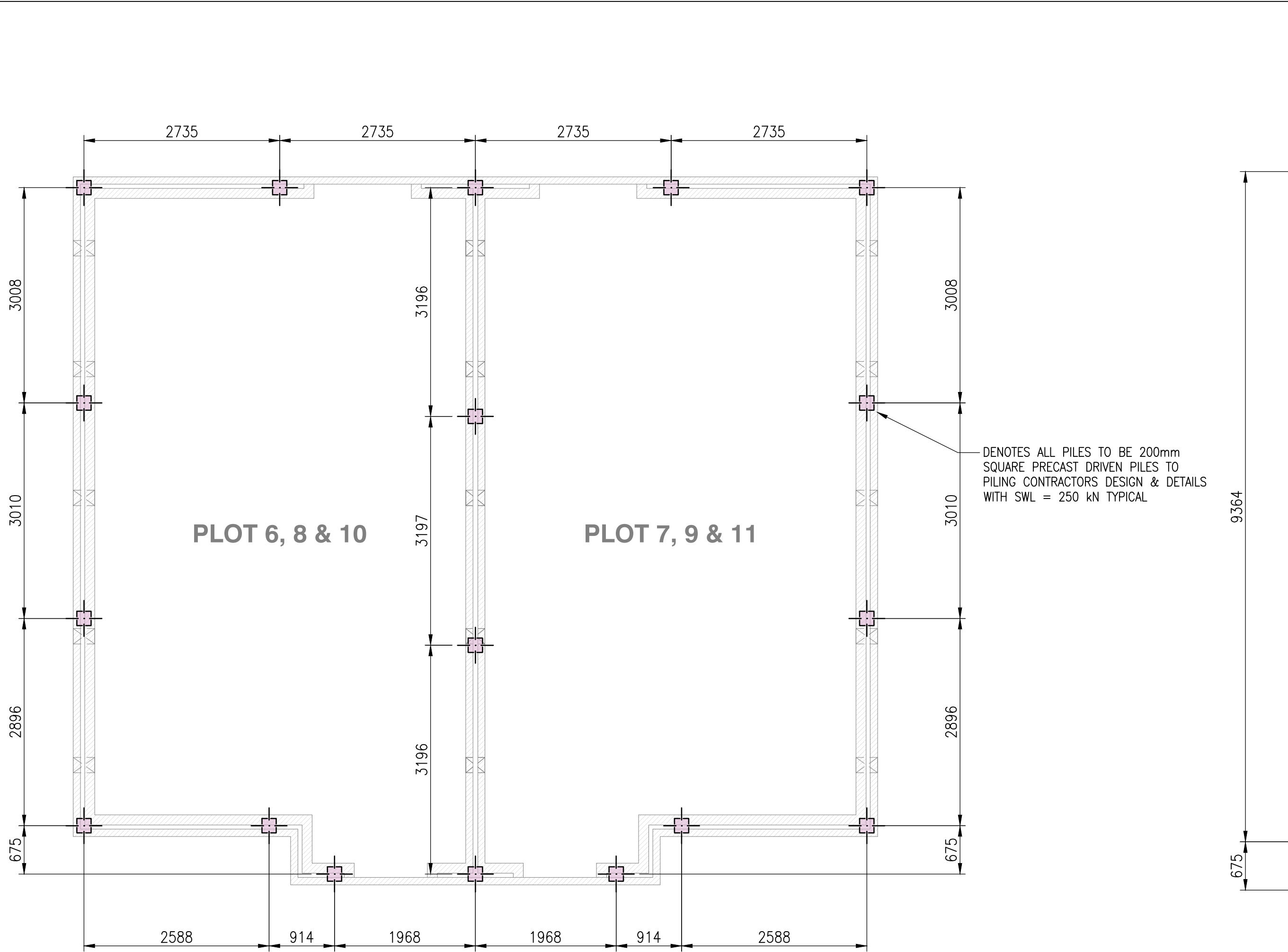
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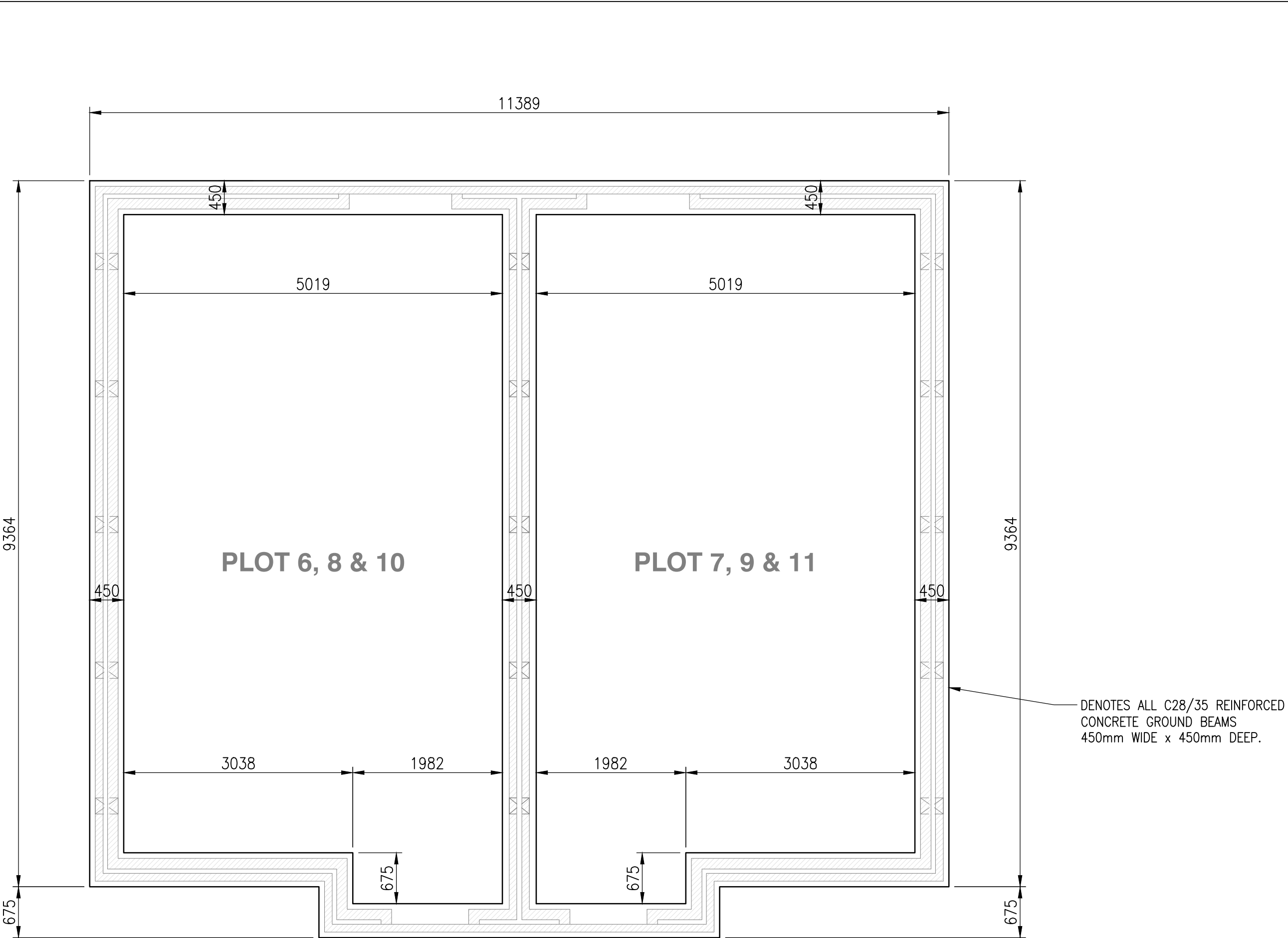
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PILE G.A.
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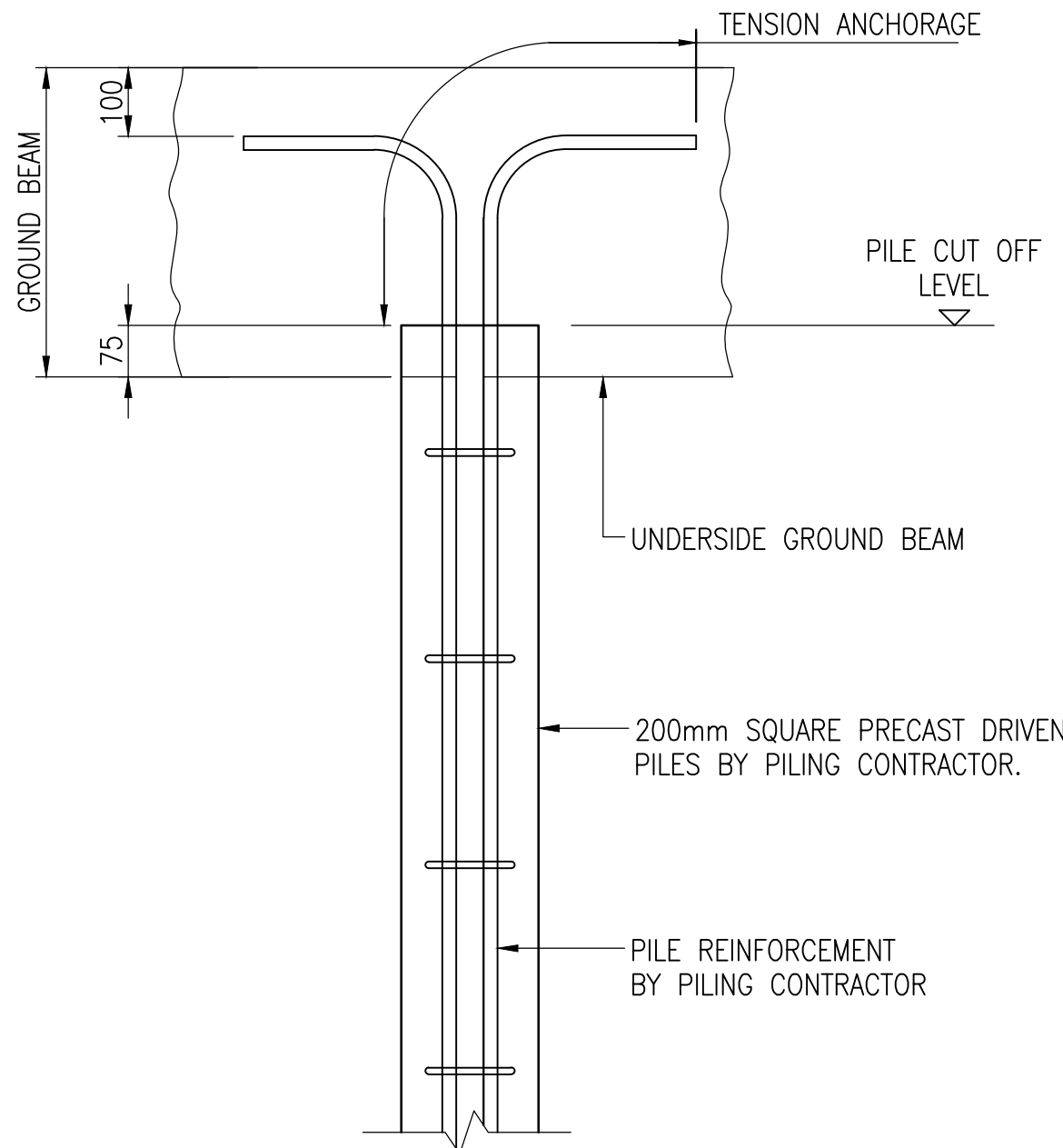
SETTING OUT OF HOUSES
TO ARCHITECTS CO-ORDINATES

PILE CUTOFF LVL = 102.900m LVL



FOUNDATION G.A.
SCALE 1:50

TOC = 103.275m LVL



TYPICAL PILE HEAD TO FOUNDATION
SCALE 1:10

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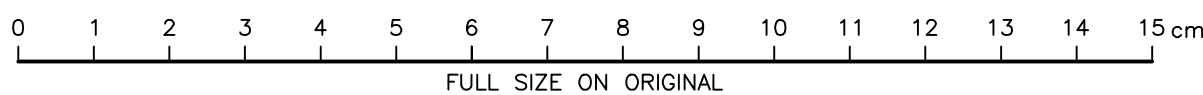
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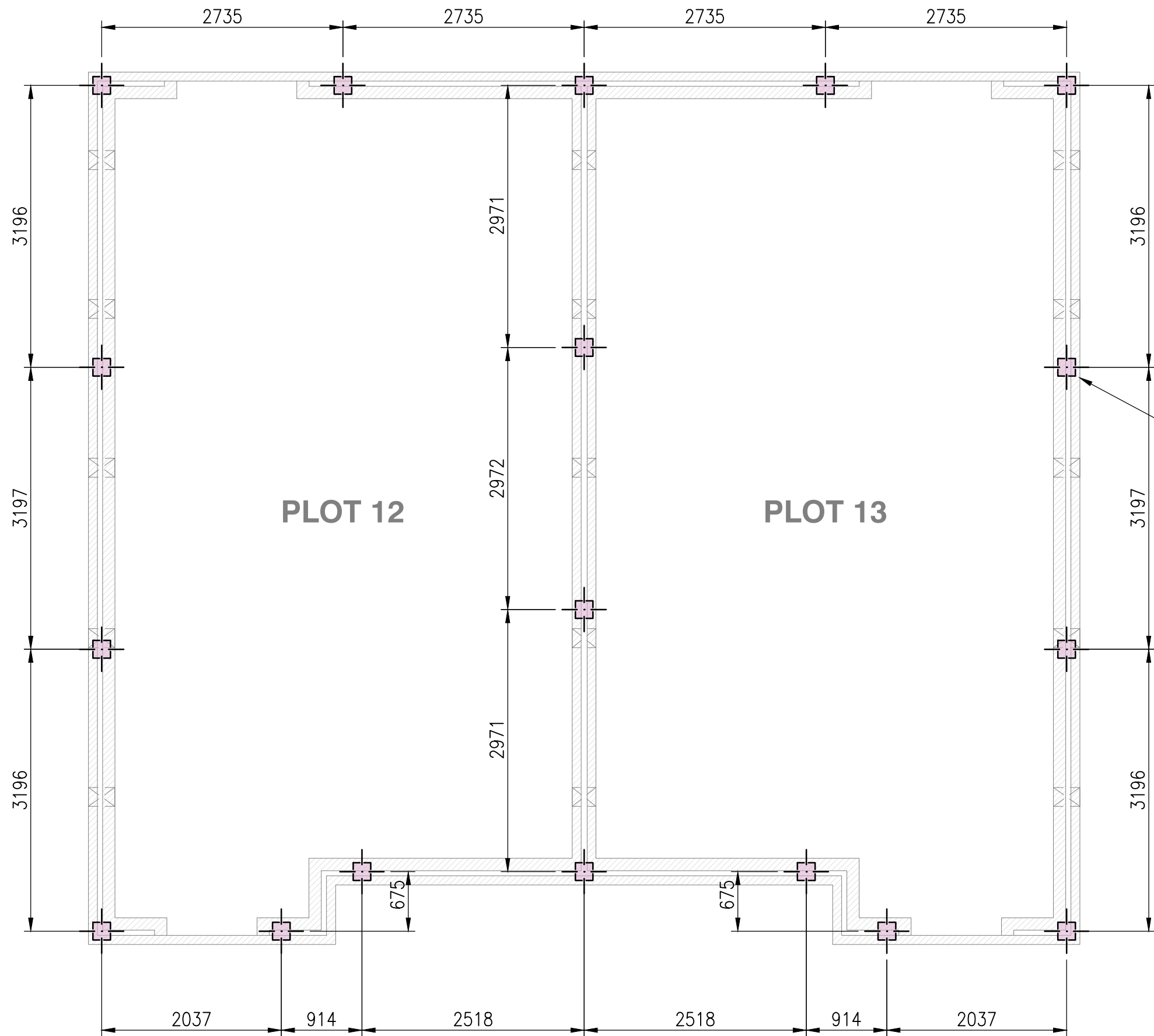
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TITLE
PLOT 6-7, 8-9, 10-11
PILE G.A. & FOUNDATION PLAN

SCALE 1:50	DRAWING No GK3879-S-004	DATE MAR '23	AMDT 0
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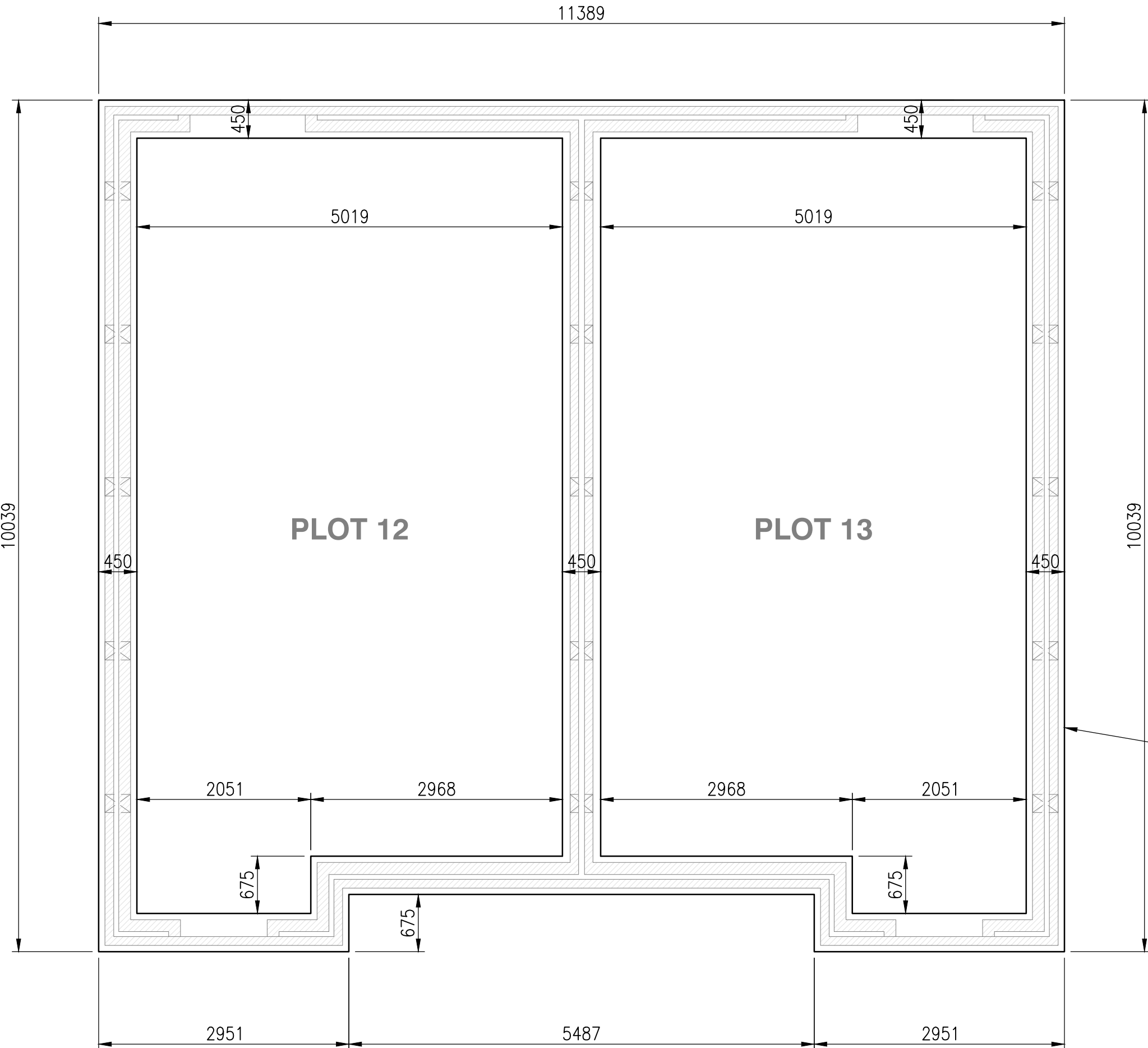




PILE G.A.
SCALE 1:50

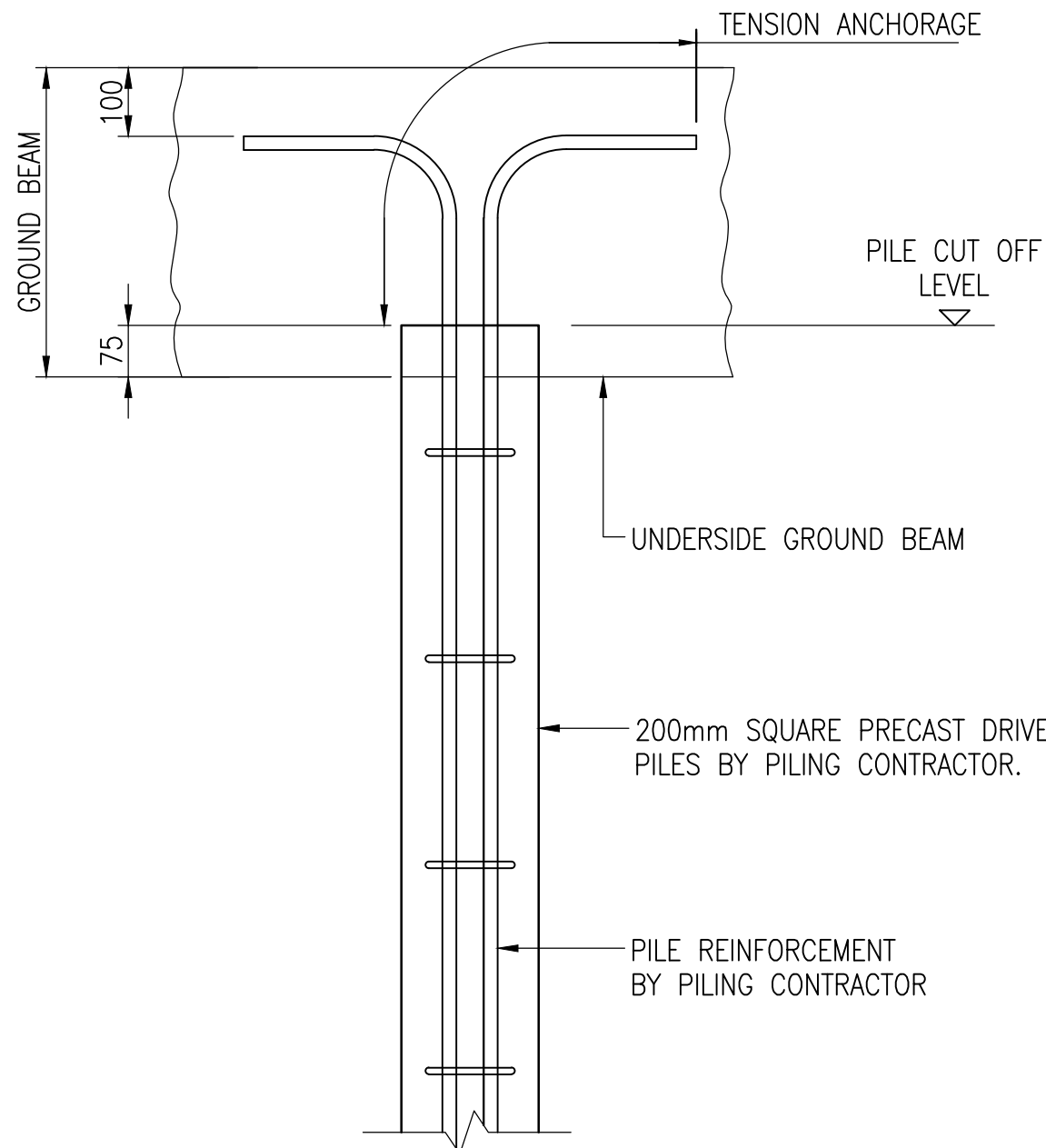
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- PILING CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING OUT OF THE PILES. MAXIMUM ALLOWABLE DEVIATION FROM CENTRE OF PILE FROM SETTING OUT POINT SHALL BE 75mm. MAXIMUM ALLOWABLE DEVIATION OF A PILE FROM THE VERTICAL IS 1 IN 75.
- INSTALLATION RECORDS SHALL BE ISSUED TO ENGINEER FOR ALL PILES.
- PRIOR TO COMMENCING INSTALLATION OF THE PILES, THE PILING CONTRACTOR SHALL MAKE ALL NECESSARY ENQUIRIES TO LOCATE UNDERGROUND SERVICES LOCAL TO THE AREA WHERE THE PILES ARE INSTALLED. THE PILING CONTRACTOR SHALL ALSO CARRY OUT A DILAPIDATION SURVEY OF ADJACENT STRUCTURES AND PROVIDE ENGINEERS WITH PHOTOGRAPHIC EVIDENCE OF SUCH DAMAGE, PRIOR TO COMMENCING INSTALLATION OF THE PILES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS REQUIRED AS A RESULT OF THE PILING OPERATIONS.
- NOISE CONTROL SHALL BE IN ACCORDANCE WITH BS.5228

NOTES

- REFER TO GENERAL NOTES DRAWING GK3879-S-001.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE STRUCTURAL CALCULATION PACKAGE PREPARED BY GWK STRUCTURAL SOLUTIONS LTD FOR BUILDING REGULATIONS APPROVAL.
- ALL DIMENSIONS ARE IN MILLIMETRES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF ALL DIMENSIONS AND LEVELS AND FOR THE CORRECT SETTING OUT OF THE WORK ON SITE IN ACCORDANCE WITH THE ARCHITECTS LATEST DRAWINGS UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL ENSURE ALL NECESSARY PRECAUTIONS ARE TAKEN TO PROTECT ALL EXISTING LIVE SERVICES DURING THE WORKS.
- THE CONTRACTOR SHALL ENSURE THAT ALL STEELWORK SHALL BE CE MARKED IN ACCORDANCE WITH BS EN 1090-1 AND BS EN 1090-2 AND SHALL HAVE THE EXECUTION CLASS EXC2 UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL ENSURE THAT ALL APPROPRIATE INSPECTIONS BY THE BUILDING INSPECTOR ARE UNDERTAKEN FOR BUILDING REGULATION APPROVAL.
- ALL TEMPORARY WORKS DESIGN AND SPECIFICATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO UNDERTAKE PRIOR TO THE RELEVANT WORK COMMENCING ON SITE.
- IT IS THE RESPONSIBILITY OF THE CLIENT AND OR CONTRACTOR TO ENSURE THAT ANY PARTY WALL AGREEMENTS REQUIRED SHALL BE APPROVED PRIOR TO COMMENCING WORK.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE DIMENSIONS OF ALL STRUCTURAL ELEMENTS PRIOR TO ORDERING AND OR FABRICATING TO AVOID MISTAKES.

0	31.03.23	IH	GWK	ISSUED FOR CONSTRUCTION
No	DATE	DRAWN	REV'D ENG.	AMENDMENT



GWK STRUCTURAL SOLUTIONS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
37 ANGLESEY DRIVE, POYNTON STOCKPORT SK12 1BU
Email: gareth@gwkss.co.uk
Web: gwksstructuralolutions.co.uk

CLIENT KMM HOMES LIMITED

PROJECT
OLDHAM ROAD
MIDDLETON

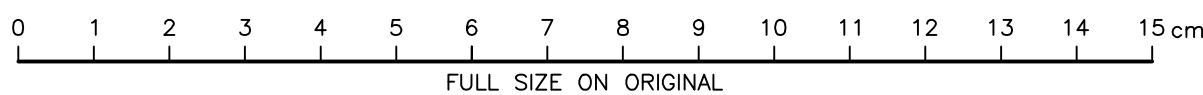
DRAFTER SCP ENGINEER GWK

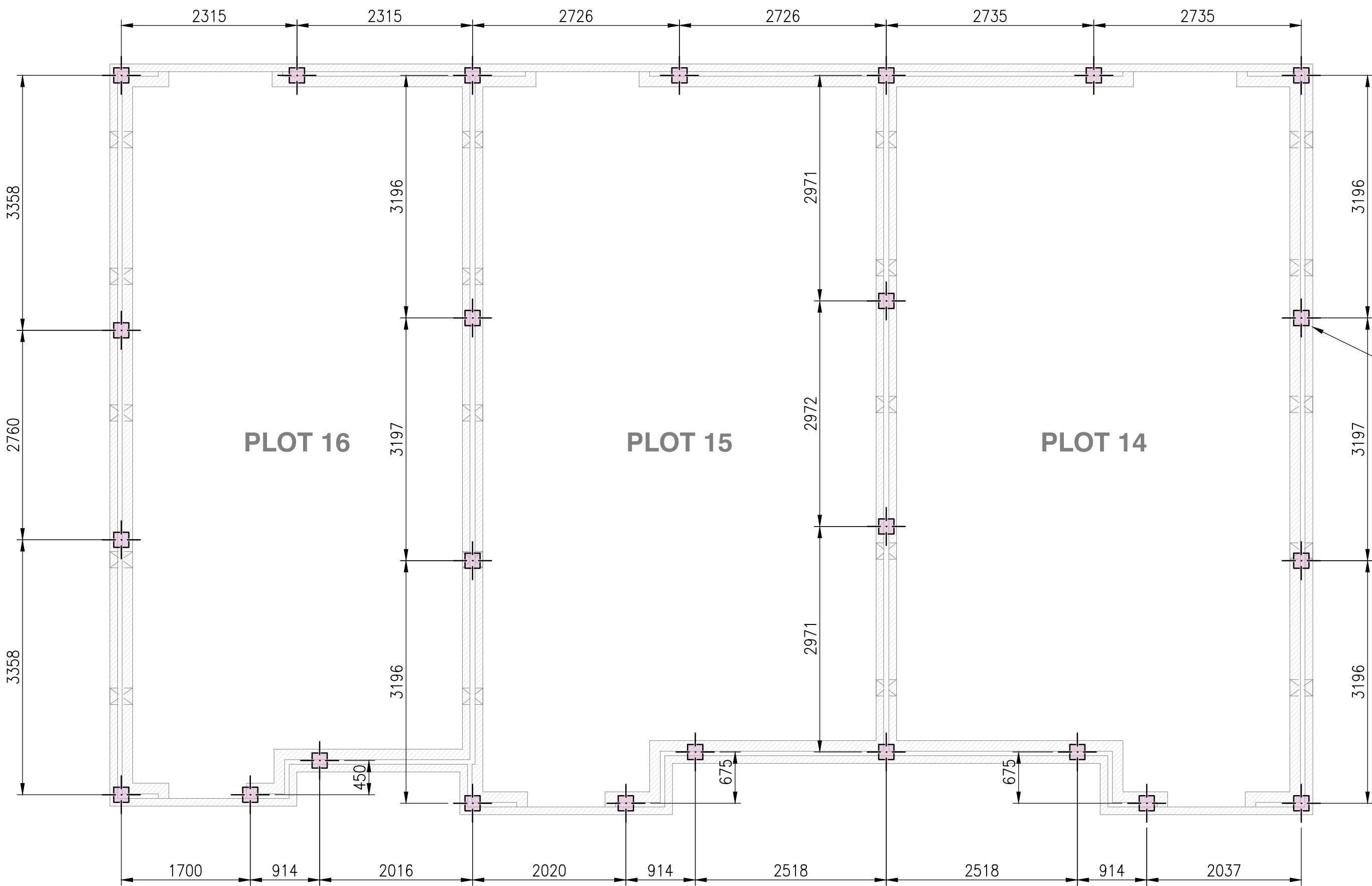
TITLE
PLOT 12 & 13
PILE G.A. &
FOUNDATION PLAN

SCALE 1:50	DRAWING No GK3879-S-005	DATE MAR '23	AMDT 0
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THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015:

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY ALL POTENTIAL HAZARDS THAT MAY BE PRESENT DURING THE PROPOSED WORKS AND PREPARE A PROJECT SPECIFIC HEALTH & SAFETY PLAN.

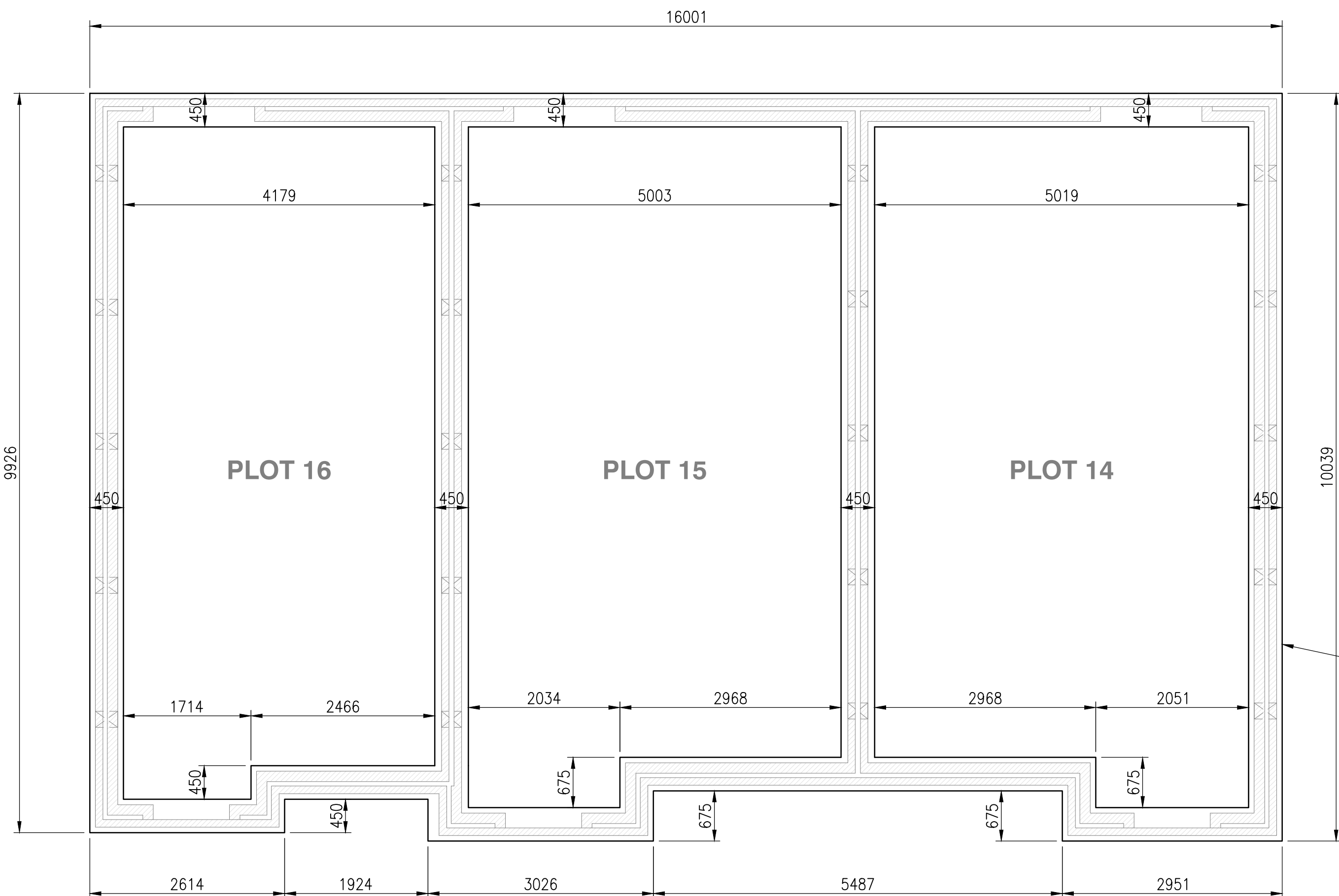




PILE G.A.
SCALE 1:50

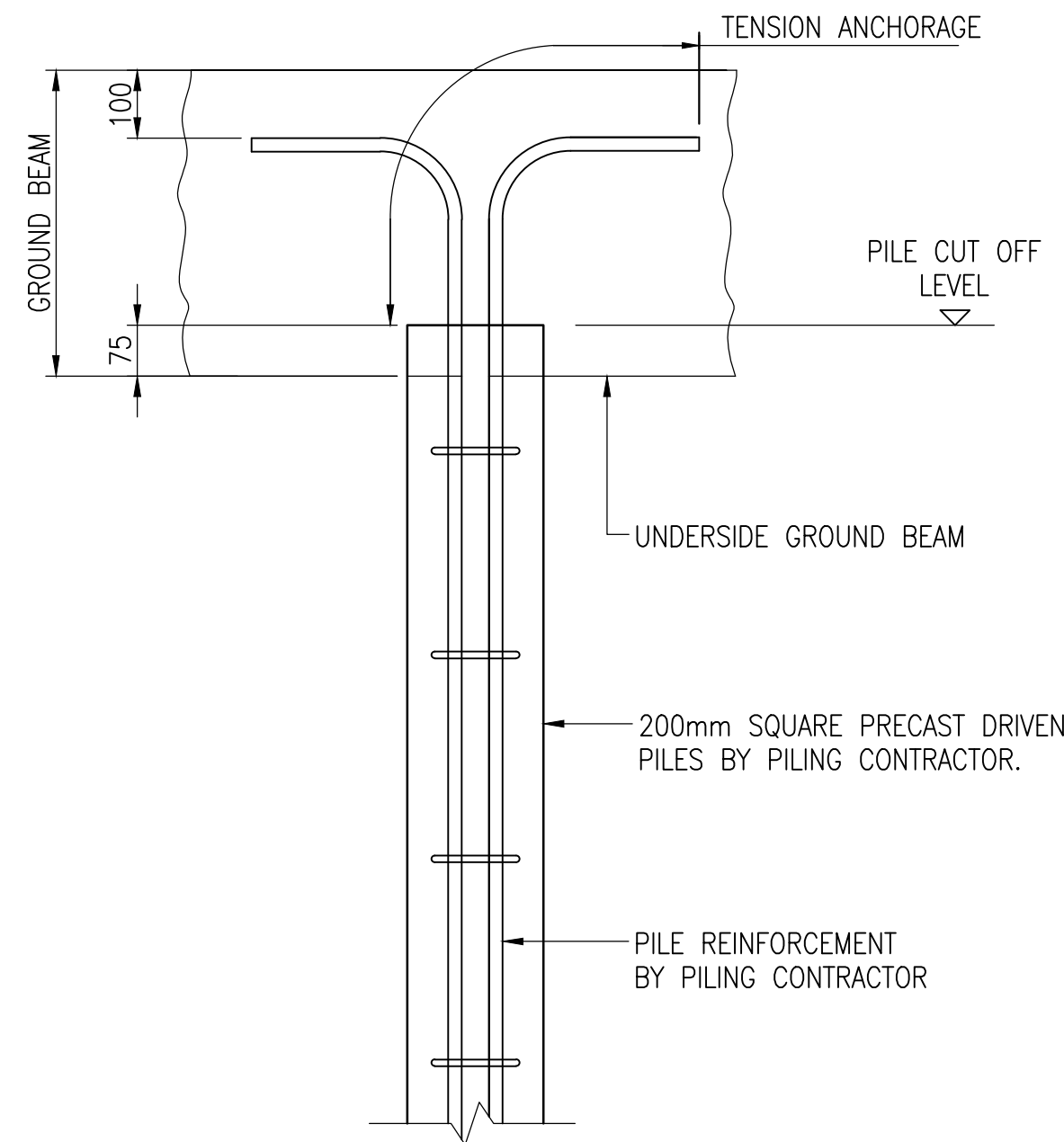
SETTING OUT OF HOUSES
TO ARCHITECTS CO-ORDINATES

PILE CUTOFF LVL = 102.750m LVL



FOUNDATION G.A.
SCALE 1:50

TOC = 103.125m LVL



TYPICAL PILE HEAD TO FOUNDATION
SCALE 1:10

PILING NOTES

- ALL LEVELS ARE IN METRES ALL DIMENSIONS ARE IN MILLIMETRES.
- THE CONTRACTOR IS TO DESIGN THE PILES USING THE SOIL PARAMETERS CONTAINED IN SUB SURFACE GROUND INVESTIGATION REPORT 7355A (APRIL 2022).
- PILE DESIGN TO ALLOW FOR NEGATIVE SKIN FRICTION.
- PILE TYPE INSTALLATION PROCEDURE SHALL BE SELECTED TO MINIMIZE THE LIKELIHOOD OF ANY DAMAGE OCCURRING TO ADJACENT STRUCTURES OR UNDERGROUND SERVICES.
- PILING CONTRACTOR IS RESPONSIBLE FOR TESTING OF PILES WITH 1No. STATIC LOAD TESTS, DYNAMIC PILE INTEGRITY TESTING OF ALL PILES. TEST LOCATIONS TO BE AGREED ON SITE.
- PILING CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING OUT OF THE PILES. MAXIMUM ALLOWABLE DEVIATION FROM CENTRE OF PILE FROM SETTING OUT POINT SHALL BE 75mm. MAXIMUM ALLOWABLE DEVIATION OF A PILE FROM THE VERTICAL IS 1 IN 75.
- INSTALLATION RECORDS SHALL BE ISSUED TO ENGINEER FOR ALL PILES.
- PRIOR TO COMMENCING INSTALLATION OF THE PILES, THE PILING CONTRACTOR SHALL MAKE ALL NECESSARY ENQUIRIES TO LOCATE UNDERGROUND SERVICES LOCAL TO THE AREA WHERE THE PILES ARE INSTALLED. THE PILING CONTRACTOR SHALL ALSO CARRY OUT A DILAPIDATION SURVEY OF ADJACENT STRUCTURES AND PROVIDE ENGINEERS WITH PHOTOGRAPHIC EVIDENCE OF SUCH DAMAGE, PRIOR TO COMMENCING INSTALLATION OF THE PILES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS REQUIRED AS A RESULT OF THE PILING OPERATIONS.
- NOISE CONTROL SHALL BE IN ACCORDANCE WITH BS.5228

THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015:

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY ALL POTENTIAL HAZARDS THAT MAY BE PRESENT DURING THE PROPOSED WORKS AND PREPARE A PROJECT SPECIFIC HEALTH & SAFETY PLAN.

NOTES

- REFER TO GENERAL NOTES DRAWING GK3879-S-001.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE STRUCTURAL CALCULATION PACKAGE PREPARED BY GWK STRUCTURAL SOLUTIONS LTD FOR BUILDING REGULATIONS APPROVAL.
- ALL DIMENSIONS ARE IN MILLIMETRES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF ALL DIMENSIONS AND LEVELS AND FOR THE CORRECT SETTING OUT OF THE WORK ON SITE IN ACCORDANCE WITH THE ARCHITECTS LATEST DRAWINGS UNLESS NOTED OTHERWISE.
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- THE CONTRACTOR SHALL ENSURE THAT ALL STEELWORK SHALL BE CE MARKED IN ACCORDANCE WITH BS EN 1090-1 AND BS EN 1090-2 AND SHALL HAVE THE EXECUTION CLASS EXC2 UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL ENSURE THAT ALL APPROPRIATE INSPECTIONS BY THE BUILDING INSPECTOR ARE UNDERTAKEN FOR BUILDING REGULATION APPROVAL.
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- IT IS THE RESPONSIBILITY OF THE CLIENT AND OR CONTRACTOR TO ENSURE THAT ANY PARTY WALL AGREEMENTS REQUIRED SHALL BE APPROVED PRIOR TO COMMENCING WORK.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE DIMENSIONS OF ALL STRUCTURAL ELEMENTS PRIOR TO ORDERING AND OR FABRICATING TO AVOID MISTAKES.

0	30.03.23	IH	GWK	ISSUED FOR CONSTRUCTION
No	DATE	DRAWN	REV'D ENG.	AMENDMENT



GWK STRUCTURAL SOLUTIONS LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
37 ANGLESEY DRIVE, POYNTON STOCKPORT SK12 1BU
Email: gareth@gwkss.co.uk
Web: gwksstructuralolutions.co.uk

CLIENT	KMM HOMES LIMITED		
PROJECT	OLDHAM ROAD MIDDLETON		
DRAFTER	SCP	ENGINEER	GWK
TITLE	PLOT 14, 15 & 16 PILE G.A. & FOUNDATION PLAN		
SCALE	DRAWING No	DATE	AMDT
1:50	GK3879-S-006	MAR '23	0

PILE RECORD SHEETS

TOTAL PILING LTD

PILE RECORD SHEET

08351


 Site kmm homes
Middleton

 Plot 1-2, 3-5
6-7, 10-11
12-13, 8-9

 Type PC
Hammer 2T

 Date 13-4-23
Rig TPC 02

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											Plot 1-2		
2	12						12	9.2	250	UR	Probe Pile		
3											Plot 3-5		
4	1						12	9.9	250	UR			
5	25						12	12	250	UR	Probe Pile		
6											Plot 6-7		
7	5						12	8.5	250	UR			
8											Plot 10-11		
9	12						12	8.8	250	UR	Probe Pile		
10											Plot 12-13		
11	5						10	9.9	250	UR			
12	9						10	8.5	250	27/100			
13											Plot 8-9		
14	1						10	8.2	250	35			
15													
16											Vibration		
17											M- 4.5		
18											D- 5.2		
19											A- 4.8		
20													
21											Noise		
22											M- 104.2		
23											D- 110.1		
24											A- 103.7		
25													
26													
27													
28													
29													
30													
31													
32													

Completed by

Foreman

S. Haggerty

Date:

24-4-23

Verified by

Client

M. McNamee

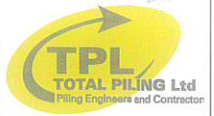
Date:

26/04/23

TOTAL PILING LTD

PILE RECORD SHEET

08352

Site *Kinn Hoves
Middleton*Plot *14-16
1-2*Type *PC*
Hammer *2T*Date *14-4-23*
Rig *TPL 01*

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											Plot 14-16		
2	<i>3</i>						<i>12</i>	<i>12</i>	<i>250</i>	<i>VR</i>	Probe Pile		
3	<i>5</i>						<i>12</i>	<i>11.5</i>	<i>250</i>	<i>VR</i>			
4	<i>20</i>						<i>12</i>	<i>10.2</i>	<i>250</i>	<i>VR</i>			
5											Plot 1-2		
6	<i>1</i>						<i>10</i>	<i>9</i>	<i>250</i>	<i>30</i>			
7	<i>6</i>						<i>9</i>	<i>9.4</i>	<i>250</i>	<i>VR</i>			
8	<i>9</i>						<i>9</i>	<i>9.3</i>	<i>250</i>	<i>VR</i>			
9	<i>2</i>						<i>10</i>	<i>9.6</i>	<i>250</i>	<i>28</i>			
10	<i>3</i>						<i>10</i>	<i>9.8</i>	<i>250</i>	<i>27</i>	<i>LS on 17-4-23 2 blows 25mm</i>		
11	<i>4</i>						<i>10</i>	<i>9.2</i>	<i>250</i>	<i>36</i>			
12	<i>5</i>						<i>10</i>	<i>10.3</i>	<i>250</i>	<i>31</i>			
13	<i>13</i>						<i>10</i>	<i>9.2</i>	<i>250</i>	<i>31</i>			
14	<i>14</i>						<i>10</i>	<i>9.3</i>	<i>250</i>	<i>VR</i>			
15													
16											vibration		
17											M - 5.04		
18											P - 4.09		
19											A - 4.23		
20													
21											Noise		
22											M - 107.1		
23											D - 103.5		
24											A - 104.2		
25													
26													
27													
28													
29													
30													
31													
32													

Completed by

Foreman

S. Haggerty

Date:

24-4-23

Verified by

Client

M. McCarty

Date:

26/04/23

TOTAL PILING LTD

PILE RECORD SHEET

08353


 Site *Ann Jones*
Middleton
Plot *1-2, 3-5*Type *PC*Date *17-4-23*Hammer *2T*Rig *TPL 01*

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											<i>Plot 1-2</i>		
2	<i>15</i>						<i>10</i>	<i>9.3</i>	<i>250</i>	<i>23</i>			
3	<i>16</i>						<i>10</i>	<i>9.6</i>	<i>250</i>	<i>29</i>			
4	<i>17</i>						<i>10</i>	<i>9.6</i>	<i>250</i>	<i>20</i>			
5	<i>18</i>						<i>10</i>	<i>9.9</i>	<i>250</i>	<i>30</i>			
6	<i>10</i>						<i>10</i>	<i>9.6</i>	<i>250</i>	<i>UN</i>			
7	<i>7</i>						<i>10</i>	<i>9.6</i>	<i>250</i>	<i>30</i>			
8	<i>11</i>						<i>10</i>	<i>9.8</i>	<i>250</i>	<i>27</i>			
9	<i>8</i>						<i>10</i>	<i>10.4</i>	<i>250</i>	<i>30</i>			
10											<i>Plot 3-5</i>		
11	<i>8</i>						<i>11</i>	<i>10</i>	<i>250</i>	<i>UN</i>			
12	<i>12</i>						<i>11</i>	<i>10.1</i>	<i>250</i>	<i>30</i>			
13	<i>16</i>						<i>11</i>	<i>10.2</i>	<i>250</i>	<i>UN</i>			
14	<i>2</i>						<i>11</i>	<i>10.8</i>	<i>250</i>	<i>25</i>			
15	<i>3</i>						<i>12</i>	<i>11.1</i>	<i>250</i>	<i>27</i>	<i>NS 18-4-23</i> <i>2 blows = 6mm</i>		
16	<i>4</i>						<i>12</i>	<i>11</i>	<i>250</i>	<i>27</i>			
17	<i>5</i>						<i>12</i>	<i>10.4</i>	<i>250</i>	<i>UN</i>			
18	<i>6</i>						<i>11</i>	<i>10.5</i>	<i>250</i>	<i>UN</i>			
19	<i>7</i>						<i>11</i>	<i>10.6</i>	<i>250</i>	<i>27</i>			
20	<i>11</i>						<i>12</i>	<i>11</i>	<i>250</i>	<i>UN</i>			
21	<i>15</i>						<i>12</i>	<i>11.3</i>	<i>250</i>	<i>UN</i>			
22											<i>Vibration</i>		
23											<i>M - 4.78</i>		
24											<i>D - 5.09</i>		
25											<i>A - 4.87</i>		
26													
27											<i>Noise</i>		
28											<i>M - 106.4</i>		
29											<i>D - 102.3</i>		
30											<i>A - 101.9</i>		
31													
32													

Completed by

Foreman

Date:

24-4-23

Verified by

Client

Date:

26/04/23

TOTAL PILING LTD

PILE RECORD SHEET

08354



Site <i>Kinn Home5 Middleton</i>	Plot <i>3-5 12-13</i>	Type <i>PC</i>	Date <i>18-4-23</i>
		Hammer <i>25</i>	Rig <i>TPL 01</i>

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											<i>Plot 3-5</i>		
2	<i>9</i>						<i>11</i>	<i>10.6</i>	<i>250</i>	<i>VR</i>			
3	<i>13</i>						<i>11</i>	<i>10.6</i>	<i>250</i>	<i>27</i>			
4	<i>10</i>						<i>12</i>	<i>10.3</i>	<i>250</i>	<i>30</i>			
5	<i>14</i>						<i>12</i>	<i>10.8</i>	<i>250</i>	<i>VR</i>			
6	<i>17</i>						<i>10</i>	<i>10</i>	<i>250</i>	<i>26</i>			
7	<i>18</i>						<i>10</i>	<i>10.1</i>	<i>250</i>	<i>25</i>			
8	<i>19</i>						<i>11</i>	<i>10.5</i>	<i>250</i>	<i>29</i>			
9	<i>20</i>						<i>11</i>	<i>10.6</i>	<i>250</i>	<i>33</i>			
10	<i>21</i>						<i>11</i>	<i>10.6</i>	<i>250</i>	<i>29</i>			
11	<i>22</i>						<i>11</i>	<i>11</i>	<i>250</i>	<i>23</i>			
12	<i>23</i>						<i>12</i>	<i>11.4</i>	<i>250</i>	<i>VR</i>			
13	<i>24</i>						<i>12</i>	<i>11.4</i>	<i>250</i>	<i>VR</i>			
14											<i>Plot 12-13</i>		
15	<i>8</i>						<i>8</i>	<i>7.8</i>	<i>250</i>	<i>30</i>			
16	<i>7</i>						<i>8</i>	<i>7.9</i>	<i>250</i>	<i>21</i>			
17													
18											<i>Vibration</i>		
19										<i>M -</i>	<i>3.92</i>		
20										<i>D -</i>	<i>5.09</i>		
21										<i>A -</i>	<i>4.63</i>		
22													
23											<i>Noise</i>		
24										<i>M -</i>	<i>102.0</i>		
25										<i>D -</i>	<i>88.6</i>		
26										<i>A -</i>	<i>91.4</i>		
27													
28													
29													
30													
31													
32													

Completed by Foreman *J. Hagerby* Date: *24-4-23*

Verified by Client *M. McArthur* Date: *26/04/23*

TOTAL PILING LTD

PILE RECORD SHEET

08355



Site	Kinn House Middleton	Plot	10-11 8-9, 6-7	Type	PC	Date	24-4-23
				Hammer	2t	Rig	TPL 02

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											Plot 10-11		
2	6						9	8	250	27			
3	9						9	8.3	250	29			
4											Plot 8-9		
5	8						9	8.2	250	30			
6	11						9	8.2	250	33			
7	10						9	7.6	250	UN			
8	9						9	8.2	250	28			
9	7						9	8.1	250	27			
10	6						9	7.9	250	27			
11											Plot 6-7		
12	8						9	8	250	30			
13	11						9	8.2	250	33			
14	18						9	8	250	UN			
15	4						8	7.9	250	21			
16	3						8	8	250	27			
17	2						9	8.5	250	29	NS on 25-4-23 2 blows = 5mm		
18	1						9	8.8	250	29			
19	8						9	8.9	250	27			
20	9						9	8.5	250	29			
21	12						9	9.3	250	28			
22	7						9	8.6	250	31			
23	10						9	8.6	250	30			
24	13						9	8.1	250	37			
25	14						9	8.5	250	31			
26											Vibration		
27										M -	1.15		
28										W -	1.03		
29										A -	1.01		
30											Noise		
31										M -	78.4		
32										W -	79.3		
										A -	73.7		
Completed by	Foreman	J. Haggerty							Date:	25-4-23			
Verified by	Client	M. McQuarrie							Date:	26/04/23			

TOTAL PILING LTD

PILE RECORD SHEET

08356



Site timan homes middleton	Plot 12-13 10-11	Type PC	Date 19-4-23
		Hammer 2T	Rig TPL 01

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											Plot 12-13		
2	4						8	8.3	280	26	NS on 20-4-23 2 blows = 4mm		
3	3						9	8.8	280	25			
4	2						9	8.5	250	26			
5	1						9	8.6	280	27			
6	6						9	9	250	23			
7	11						9	9	250	26			
8	10						9	9.3	250	20			
9	18						14	12.1	250	VR			
10											Plot 10-11		
11	5						9	8.3	250	32			
12	4						9	8.1	250	35			
13													
14											Vibration		
15											M - 2.32		
16											D - 2.46		
17											A - 2.18		
18													
19											Noise		
20											M - 81.4		
21											D - 86.3		
22											A - 8.7		
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													

Completed by Foreman **J. Haggard** Date: **24-4-23**

Verified by Client **M. McQuarrie** Date: **26/04/2023**

TOTAL PILING LTD

PILE RECORD SHEET

08357



Site	kmm homes Middleton	Plot	12-13 10-11	Type	PC	Date	20-4-23
				Hammer	2T	Rig	TPL 01

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											Plot 12-13		
2	17						9	8.2	250	26	NS		
3	16						9	8.5	250	20	NS on 21-4-23 2 blocks = 4mm		
4	15						9	9	250	20			
5	14						9	8.2	250	27			
6	13						9	8.2	250	27			
7	12						9	8.4	250	27			
8											Plot 10-11		
9	18						9	8.3	250	26			
10	17						9	8.4	250	27			
11	16						9	8.5	250	26			
12	15						9		250		Pile obstructed		
13	13						9	8.5	250	27			
14	14						9	8.5	250	27			
15	11						9	8.6	250	27			
16	8						9	8.6	250	30			
17	2						9	8.3	250	30			
18	1						9	8.4	250	28			
19													
20											Vibration		
21										M-	3.27		
22										D-	2.58		
23										A-	1.95		
24													
25											Noise		
26										M-	77.4		
27										D-	79.3		
28										A-	75.6		
29													
30													
31													
32													

Completed by Foreman S. Maggery Date: 24-4-23

Verified by Client M. McCarthy Date: 26/04/2023

TOTAL PILING LTD

PILE RECORD SHEET

08358



Site	kmn homes Middleton	Plot	8-9 10-11	Type	pc	Date	21-4-23
				Hammer	2T	Rig	TPL 01

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											Plot 8-9		
2	5						9	8.5	250	25			
3	4						9	8.5	250	25			
4	3						9	8.3	250	26			
5	2						9	8.3	250	25			
6	18						9	8.1	250	30			
7	17						9	8.2	250	30			
8	16						9	8.2	250	30			
9	15						9	8.3	250	27			
10	14						9	8.4	280	27			
11	13						9	8.3	250	28			
12	12						9	8.4	250	28			
13											Plot 10-11		
14	15A						9	8.2	150	25			
15	15B						9	8.2	150	25			
16	10						9	8.4	250	27			
17	7						9	8.5	250	30			
18	3						9	8.6	250	31			
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													

Completed by	Foreman	J. Magerty	Date:	24-4-23
Verified by	Client	M. McArthur	Date:	26/04/2023

TOTAL PILING LTD

PILE RECORD SHEET

08353



Site KMM Homes Middletown	Plot 6-7 14-16	Type PC	Date 25-4-23
		Hammer 2T	Rig TPC02

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1											Plot 6-7		
2	15						9	8.4	250	26			
3	16						9	8.4	250	28			
4	17						9	8.4	250	27			
5													
6											Plot 14-16		
7	7						12	11.6	250	VR			
8	6						12	11.4	250	VR			
9	11						12	8.2	250	VR			
10	15						12	11.4	250	VR			
11	29						12	12.2	250	VR			
12	24						12	10.2	250	VR			
13													
14											Vibration		
15										Mn	1.05		
16										D-	2.63		
17										A-	2.58		
18													
19													
20											Noise		
21										Mn	68.7		
22										D-	81.3		
23										A-	83.5		
24													
25													
26													
27													
28													
29													
30													
31													
32													

Completed by Foreman J. Hayslip Date: 26-4-23

Verified by Client M. McCarty Date: 26/04/2023

TOTAL PILING LTD

PILE RECORD SHEET

08360



Site	kmm HomeS middleton	Plot	14-16	Type	PC	Date	26-4-23
				Hammer	2T	Rig	TPL 02

	Pile Nr.	Length (1)	Length (2)	Length (3)	Length (4)	Length (5)	Total m Pitched	Depth driven	Pile Load	Set /100mm	Comments	R/S date	R/S set
1	4						12	8.9	250	VR			
2	2						12	10.3	250	VR			
3	1						12	11.2	250	VR			
4	8						12	11.6	250	VR			
5	12						12	11.3	250	VR			
6	16						12	11	250	VR			
7	17						12	9	250	VR			
8	18						12	9.2	250	VR			
9	19						12	9.5	250	VR			
10	9						12	9.6	250	VR			
11	13						12	8.9	250	VR			
12	21						12	9.6	250	VR			
13	10						12	9.8	250	VR			
14	14						12	10.1	250	VR			
15	22						12	10.1	250	VR			
16	23						12	10.4	250	VR			
17													
18											Vibration		
19											M - 5.32		
20											D - 4.91		
21											A - 4.86		
22													
23											Noise		
24											M - 93.1		
25											D - 90.5		
26											A - 89.3		
27													
28													
29													
30													
31													
32													

Completed by

Foreman

J. Hayes

Date:

26-4-23

Verified by

Client

M. McElarney

Date:

26/04/2023