John Farquharson Partnership
Consulting Structural Engineers *Est. 1922*

REPORT ON PROPOSED EXTERNAL SERVICE MACHINE REPLACEMENT AT

BARCLAYS BANK

2-6 High Street, Salisbury, SP1 2NP

JULY 2023

Job No 9460

rev A - August 2023 - ATM Pit added

1. INSTRUCTIONS

1.1. We are instructed by ISG Ltd on behalf of the Barclays Bank to undertake a site survey and prepare a report, with strengthening details if required, in connection with the replacement of an external service ATM machine.

1.2 We are also to advise in connection with the removal and delivery route for existing and proposed machines providing temporary propping details where required.

2. LIMITATION

2.1. This report is prepared for the sole benefit of the Client by whom it is commissioned and we have no liability or duty to any other parties in respect of the contents or opinions expressed.

3. INSPECTION

3.1. An inspection was undertaken on the 19th July 2023 and related to the area around the replacement machinery at basement and ground floor only.

4. DESCRIPTION

4.1. The Bank occupies the basement, ground, 1st and possibly the 2nd floor of a three storey building (excluding basement) on the corner of the High Street and Bridge Street in Salisbury. The bank also occupies the neighbouring building on the High Street which is also 3 storeys high but of a much lesser overall height. There is a ground floor level difference between the two section of the bank of around 510mm.

4.2. The main larger building is of traditional brick masonry construction with an ornate stand stone facade. The smaller neighbouring building is also of brick masonry construction but has a painted render finish.

4.2. The main building has a stepped entrance on the corner of High Street and Bridge Street. There is an internal ramp and steps up to the higher ground floor level towards the rear of the banking hall. The neighbouring building on the High Street has a level access with an internal ramp. There is an internal structural opening in the party wall linking the two buildings where a short ramp is located.

4.2. The basement is extensive and occupies the entire footprint on the main corner building on the High Street. It is accessed via a fixed stair to the rear of the back office and houses two strong rooms and a large open plan store room.

5. PROPOSED ALTERATIONS.

5.1. There are two external service Diebold 562R machines which are to be removed and replaced with one Diebold DN450 ATM.

5.2. The new ATM is to be positioned within a new 350mm deep ATM pit formed above the basement.

6. MACHINE WEIGHTS.

6.1. The existing Diebold 562R machines weigh 532kg each.

6.2. The new Diebold DN450 ATM weighs 812kg.

7. CONSTRUCTION.

7.1. The basement slab is of concrete construction and is assumed to be a ground bearing slab.

7.2. The suspended ground floor is of Filler Joist construction with an overall thickness of between 360mm to 225mm above the central store room. (Note: The basement floor level is uneven and varies by approx 80mm). The filler joists span parallel with the High Street elevation and are supported on a series of steel down-stand beams. These beams are in turn supported on the basement walls and either cast iron columns or brick piers in the basement.

7.3. The external and internal basement walls are all of brick masonry construction.

7.4. There is existing strengthening in place under the external service machines in the form of 3 brick piers and a local slab thickening.

7.5. In addition there is further strengthening in place under the internal ACS machines in the form of a series of SHS posts and steel cross beams.

8. DESIGN CONSIDERATIONS.

8.1. The new ATM is 252kg lighter than the combined weight of the machines it is replacing. The new ATM is to be supported on a new 225mm thick Pit slab; the existing floor slab will need to be trimmed and re-supported.

9. MACHINE REMOVAL AND DELIVERY ROUTES.

8.1. The removal route for the existing machine is backwards in to the banking hall and then down and out through the stepped entrance onto the High Street. This will traverse the 225mm thick filler joist slab construction above the large store room.

8.2. The delivery route for the new ATM is the reverse of the above.

9. CONCLUSIONS.

9.1. The new ATM is to be supported on a new 225mm thick concrete pit slab formed from Holorib-metal decking supported on a new load bearing block wall in the basement.

9.2. The transport route has also been considered and given the un-reinforced nature of filler joist slab construction and presence of existing strengthening temporary propping will be provided along the transport route.

Please refer to Sketch 9460-SK01 for temporary propping details and SK10 & SK11 for the new Pit Slab construction details.

10. RECOMMENDATIONS.

10.1. The Main Contractor is to prepare, or arrange for the preparation of, Method Statements and Risk Assessments for the removal and transportation of the existing / proposed machines and for the formation of the new suspended pit slab.

10.2. Any anomalies relating to the existing structure or the proposed works are to be referred to the Project Manager or the Project Engineer as appropriate.

10.3. Isolate / adjust any services affected by the works then drill pilot holes through suspended ground floor slab as required to allow setting out for new pit slab and supporting wall in the basement.

10.4. Install temporary propping as Shown on Sketch 9460-SK01 and remove the two external service machines; temporarily infill the wall apertures.

10.5. Set out new block support wall and construct 215mm thick wall with 7.3 N/mm2 blocks laid flat in 1:1:6 mortar to a level to suit the proposed new 225mm thick Holorib concrete slab. **The bottom two courses are to be laid transverse to the wall to form a 440mm wide by 220mm high foundation bearing onto the existing basement floor slab.**

10.6. Build up the level of the return wall to support the existing down stand beam and install concrete bad stone under existing beam. Note: The section of this beam which fouls the pit slab will be cut back (see Item 10.7)

10.7. Construct a crash deck under the new ATM pit and carefully break out the concrete infill between the filler joists for the width of the new PIT slab; remove all debris. Once the concrete infill has been removed carefully cut back all filler joists and the supporting beam in the pit area ensuring the floor is still temporarily supported.

10.9. Carefully reduce the level of the existing 3No piers under the existing external machines.

10.10. Install the RSA support angle then install the Holorib metal decking and mid-span props. Then lay 6mm diameter rebar to all troughs (50mm cover) and 1 layer A393 mesh top (25mm cover).

10.11. Form the edge shutter then cast the concrete slab and allow to cure.

10.12. Construct infill block and dry pack edge of new slab tight to underside of existing slab and allow to cure.

10.13. Make good cut edges of the existing slab with epoxy mortar.

10.14. Adapt 1No aperture and infill 1No aperture.

10.15. Construct timber step within the pit, install balustrade then make good / install finishes.

10.16. Deliver and install the new ATM.

10.17. Remove all temporary propping on completion of the works.

11. PHOTOGRAPHS.









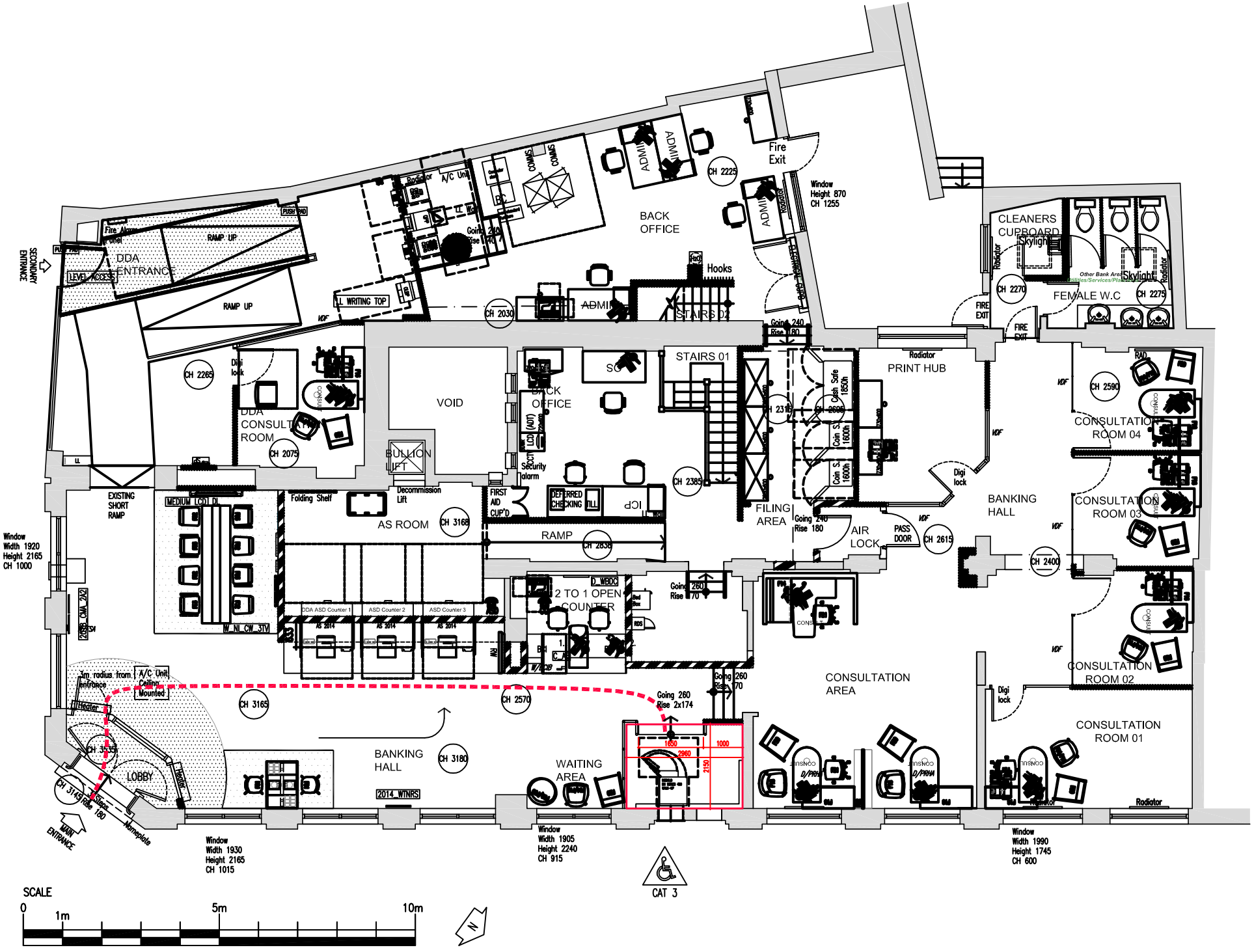
We trust that the foregoing is of assistance to you and we will be pleased to discuss further any points you may wish to raise in connection with this project.

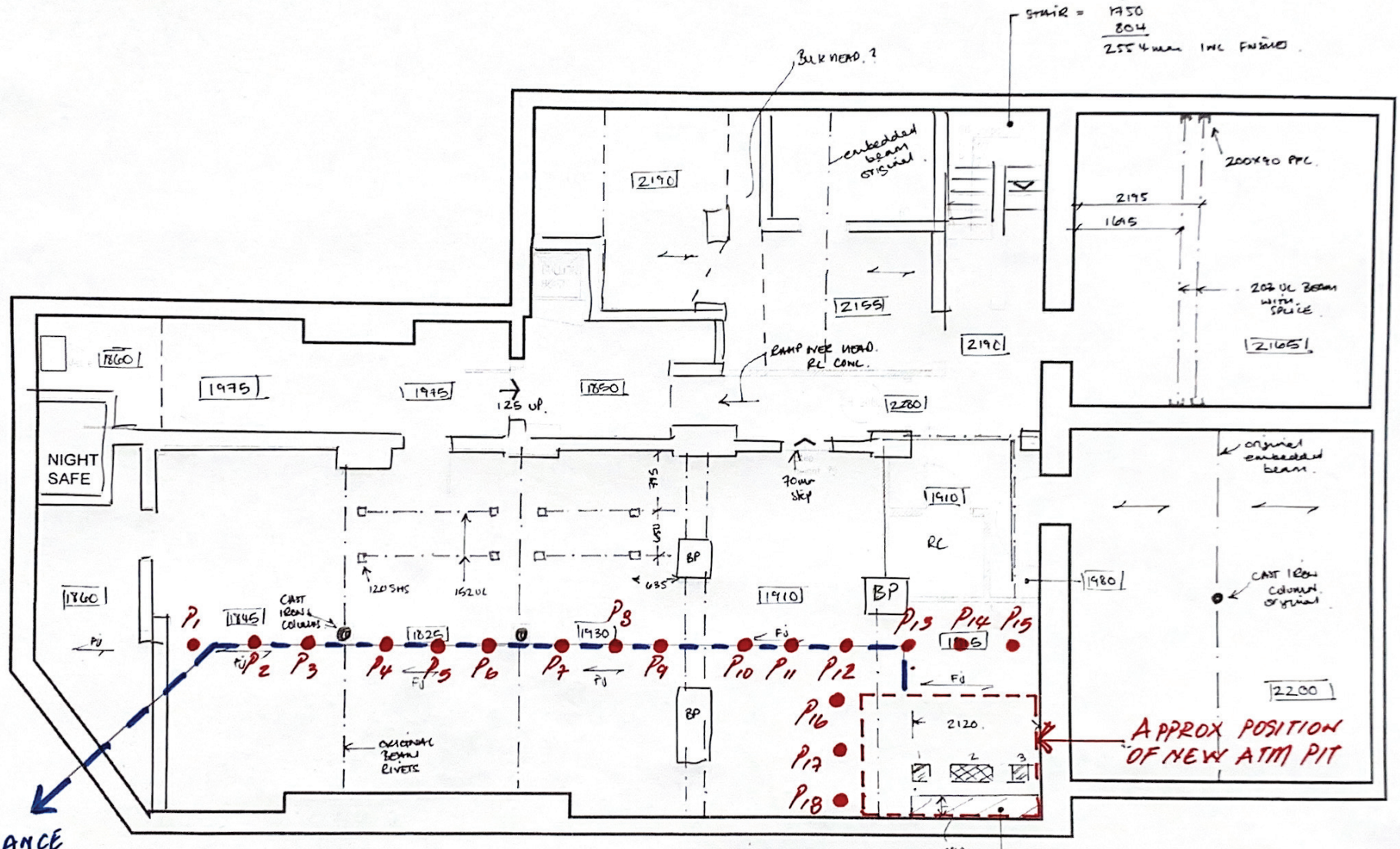
Ref: 9460/ RSS revA

John Farquharson Partners Ltd, 6 Hare Hall Lane, Romford, Essex, RM2 6BD

Date 27 July 2023.

revA - 17 August 2023


SECONDARY ENTRANCE
DDA ENTRANCE
LEVEL ACCESS
RAMP UP
RAMP UP
LL WRITING TOP
BACK OFFICE
ADMIN
ADMIN
ADMIN
COMMS
COMMS
Radiator
A/C Unit
Fire Exit
Window Height 870 CH 1255
Hooks
STAIRS 02
CH 2225
CH 2030
CLEANERS CUPBOARD
Skylight
Skylight
FEMALE W.C
CH 2270
CH 2275
FIRE EXIT
FIRE EXIT
Going 240 Rise 180
STAIRS 01
PRINT HUB
Radiator
CH 2265
Digi lock
DDA CONSULTANCY ROOM
CH 2075
VOID
BACK OFFICE
BULLION LIFT
Security alarm
CH 2385
CH 2315
Cash Safe 1850h
Coin SA 1600h
Coin SA 1600h
Digi lock
CH 2590
CONSULTATION ROOM 04
CONSULTATION ROOM 03
CONSULTATION ROOM 02
CONSULTATION ROOM 01
EXISTING SHORT RAMP
MEDIUM LCD1 DL
Folding Shelf
Decommission Lift
AS ROOM
CH 3168
FIRST AID CUP'D
DEFERRED CHECKING
TILL
ICP
RAMP
CH 2838
FILING AREA
Going 240 Rise 180
AIR LOCK
PASS DOOR
CH 2615
BANKING HALL
CH 2400
Window Width 1920 Height 2165 CH 1000
2 TO 1 OPEN COUNTER
D_WBDC
Going 260 Rise 170
ASD Counter 1
ASD Counter 2
ASD Counter 3
3m radius from entrance
A/C Unit Ceiling Mounted
Heater
CH 3165
CH 2570
Going 260 Rise 2x174
CONSULTATION AREA
BANKING HALL
CH 3180
WAITING AREA
LOBBY
CH 3145
Signs
Rise 180
Nameplate
MAIN ENTRANCE
2014_WTNRS
1650
1000
2960
2150
Window Width 1930 Height 2165 CH 1015
Window Width 1905 Height 2240 CH 915
CAT 3
Window Width 1990 Height 1745 CH 600
SCALE
0
1m
5m
10m
N



1/3 = 330 sq Brick Pier

2 = 670x440 Brick Pier

BP = Brick Pier

SALISBURY BARCLAYS

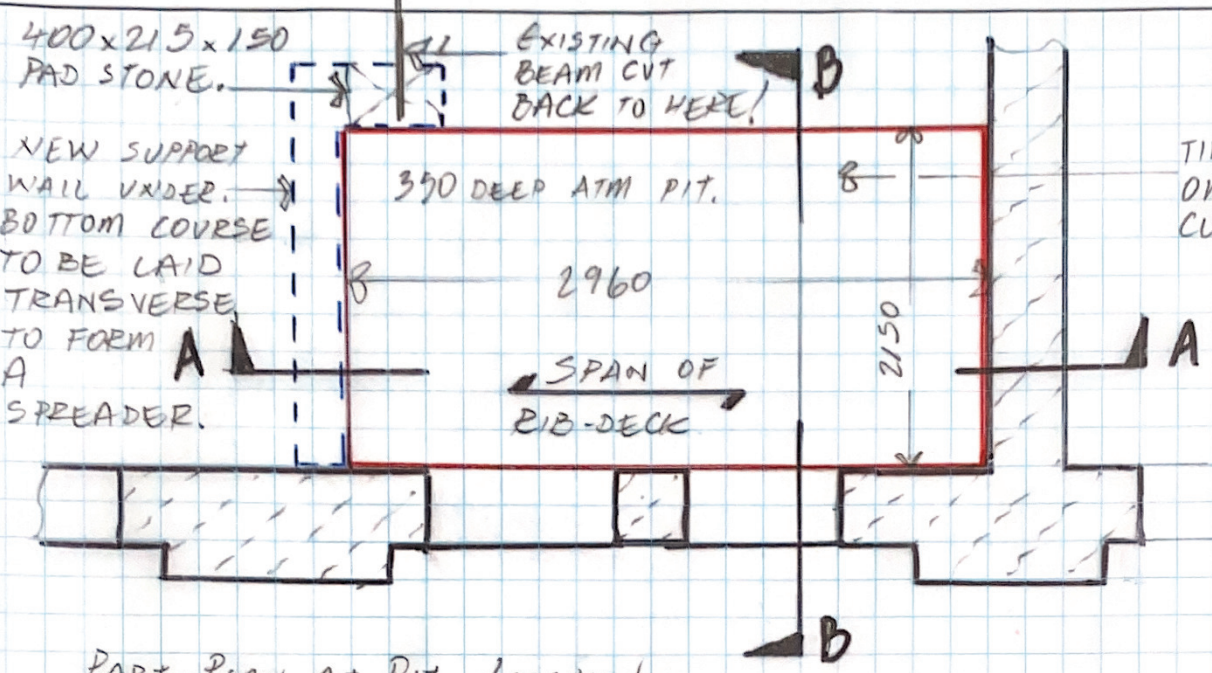
19.07.23 - BASEMENT

BARCLAYS SALISBURY

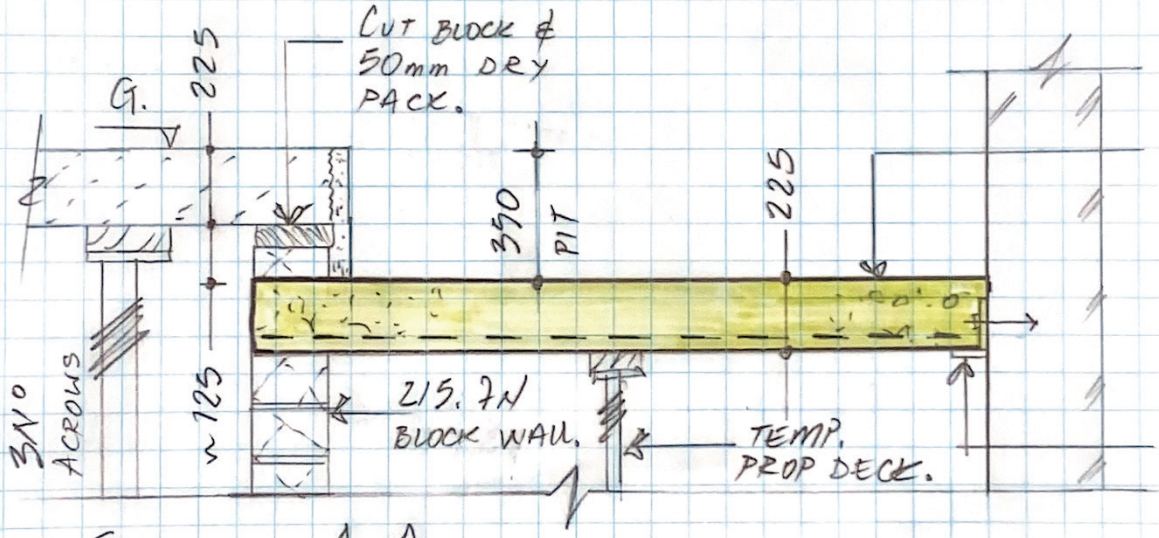
BASEMENT PLAN SHOWING TEMPORARY WORKS

9460 - SK01

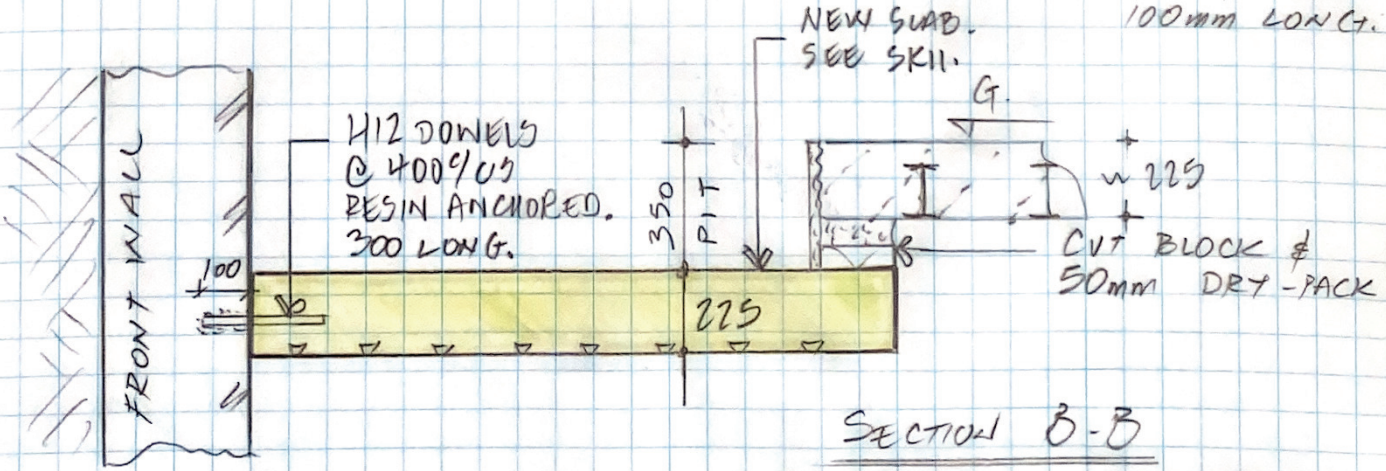
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PART PLAN AT PIT LOCATION.
N.T.S



SECTION A-A



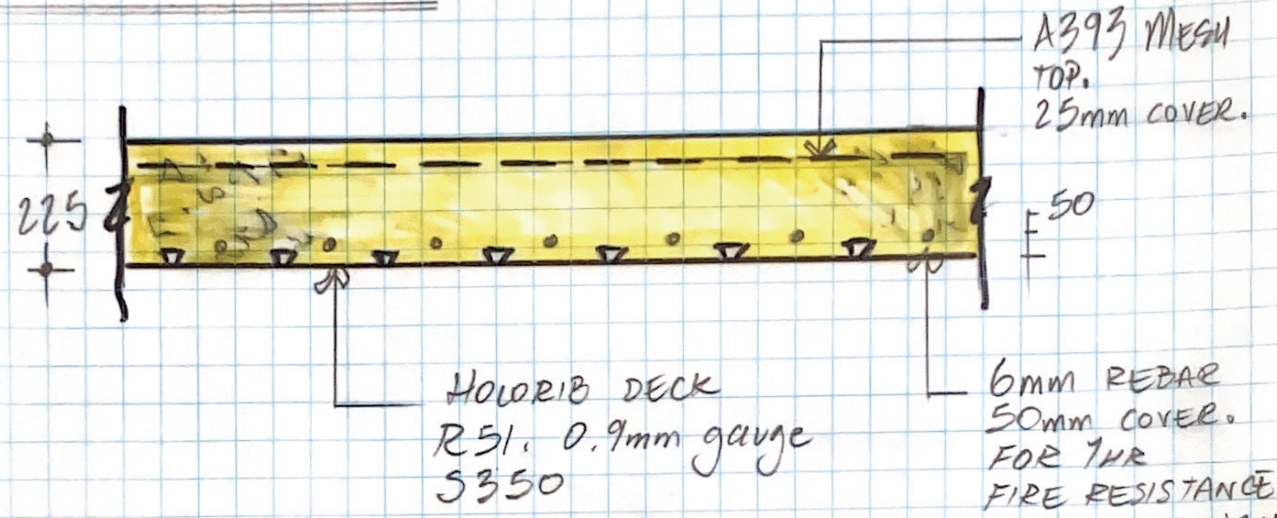
SECTION B-B

BARCLAYS SALISBURY	NEW ATM PIT. Date AUG. 2023	Calcn. Sketch No. 9460 - SK10

N2 Visual Communications Tel: 01992 440333

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ATM PIT SLAB DETAILS.



CONCRETE GRADE - RC30

SLAB PROVIDES 1HR FIRE RESISTANCE.

BARCLAYS SALISBURY	ATM PIT SLAB DETAIL Date AUG. 2023	Calcn. Sketch No 9460 - SK11

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