Technical Report

Title: Impact testing of Barracuda Brick Slip System (Un-Mortared)

Report No: N950-24-18684

Technical Report

Title: Impact Testing of Barracuda Brick Slip System (Un-Mortared).

Customer: James & Taylor Ltd,
Sixty-Two, Barwell Business Park,
Leatherhead Road, Chessington, Surrey KT9 2NY.

Issue date: 4 March 2024

VTC job no.: TR0220-3WK2

Author(s): S. Bahera – Assistant Engineer

Checked by: N. McDonald – Manager

Authorised by: S. R. Moxon – Operations Director

Distribution: 1 copy to James & Taylor
(confidential) 1 copy to project file

UKAS TESTING
0057

VINCI Technology Centre UK Limited,
Stanbridge Road, Leighton Buzzard, Bedfordshire, LU7 4QH

Registered Office, Watford. Registered No. 05640885 England.

Tel. 0333 5669000
email info@technology-centre.co.uk
web www.technology-centre.co.uk

CONTENTS

1 INTRODUCTION

This certificate of test describes impact tests carried out at the request of James & Taylor Ltd. on 12th September 2023 at VINCI Technology Centre, Leighton Buzzard.

The test was carried out in accordance with CWCT TN75/76.

The test was witnessed by:

John Champion - James & Taylor Ltd.

This test report relates only to the actual sample as tested and described herein.

The results are valid only for sample(s) tested and the conditions under which the tests were conducted.

The long-term durability of the façade system is not assessed by these test methods.

VINCI Technology Centre UK Limited is accredited to ISO/IEC 17025:2017 by the United Kingdom Accreditation Service as UKAS Testing Laboratory No. 0057 for a schedule of tests. Tests listed above and marked with an asterisk are not on our schedule.

VINCI Technology Centre UK Limited is Approved Body No. 1766.

VINCI Technology Centre UK Limited is certified by BSI for:

- ISO 9001 Quality Management System,
- ISO 14001 Environmental Management System,
- ISO 45001 Occupational Health and Safety Management System.

2 SUMMARY AND CLASSIFICATION OF TEST RESULTS

Impact testing has been carried out for safety impacts only, serviceability impacts have not been carried out.

Soft body impacts

500 J Safety
Negligible risk

Hard body impacts

10 J Safety
Low Risk

3 IMPACT CLASSES

Note: Tables 1 is taken from CWCT TN76.

Table 1 - Classes for safety performance

Class	Explanation/examples
Negligible risk	No material dislodged during test, and No damage likely to lead to materials falling subsequent to test, and No sharp edges produced that would be likely to cause severe injury to a person during impact, and Cladding not penetrated by impactor.
Low risk	Maximum mass of falling particle 50 g, and Maximum mass of particle that may fall subsequent to impact 50 g, and No sharp edges produced that would be likely to cause severe injury during impact.
Moderate risk	Maximum mass of falling particle less than 500 g, and Maximum mass of particle that may fall subsequent to impact less than 500 g, and Cladding not penetrated by impact, and No sharp edges produced that would be likely to cause severe injury during impact.
High risk	Maximum mass of falling particle greater than 500 g, or Cladding penetrated by impact, or Sharp edges produced that would be likely to cause severe injury during impact.

4 DESCRIPTION OF TEST SAMPLE

The sample was mounted to a solid steel frame which was fixed to a concrete slab as shown in the photograph below.

PHOTO IMG-5655

TEST SAMPLE

PHOTO IMG-5358

SUPPORT BRACKET

PHOTO IMG_5352

CLOSE UP OF BRICK SLIPS

5 TEST EQUIPMENT

The soft body impactor comprised a canvas spherical/conical bag 400 mm in diameter filled with 3 mm diameter glass spheres with a total mass of 50 kg suspended from a cord at least 3 m long.

The hard body impactor was solid steel ball of 62.5 mm diameter and mass of 1.0 kg.

6 TEST PROCEDURE

6.1 SOFT BODY

The impactor almost touched the face of the sample when at rest. It was swung in a pendular movement to hit the sample normal to its face.

The test was performed at the locations shown in Figure 1.

The impact energies were 500 J for safety.

6.2 HARD BODY

The impactor almost touched the face of the sample when at rest. It was swung in a pendular movement to hit the sample normal to its face.

The test was performed at the locations shown in Figure 2.

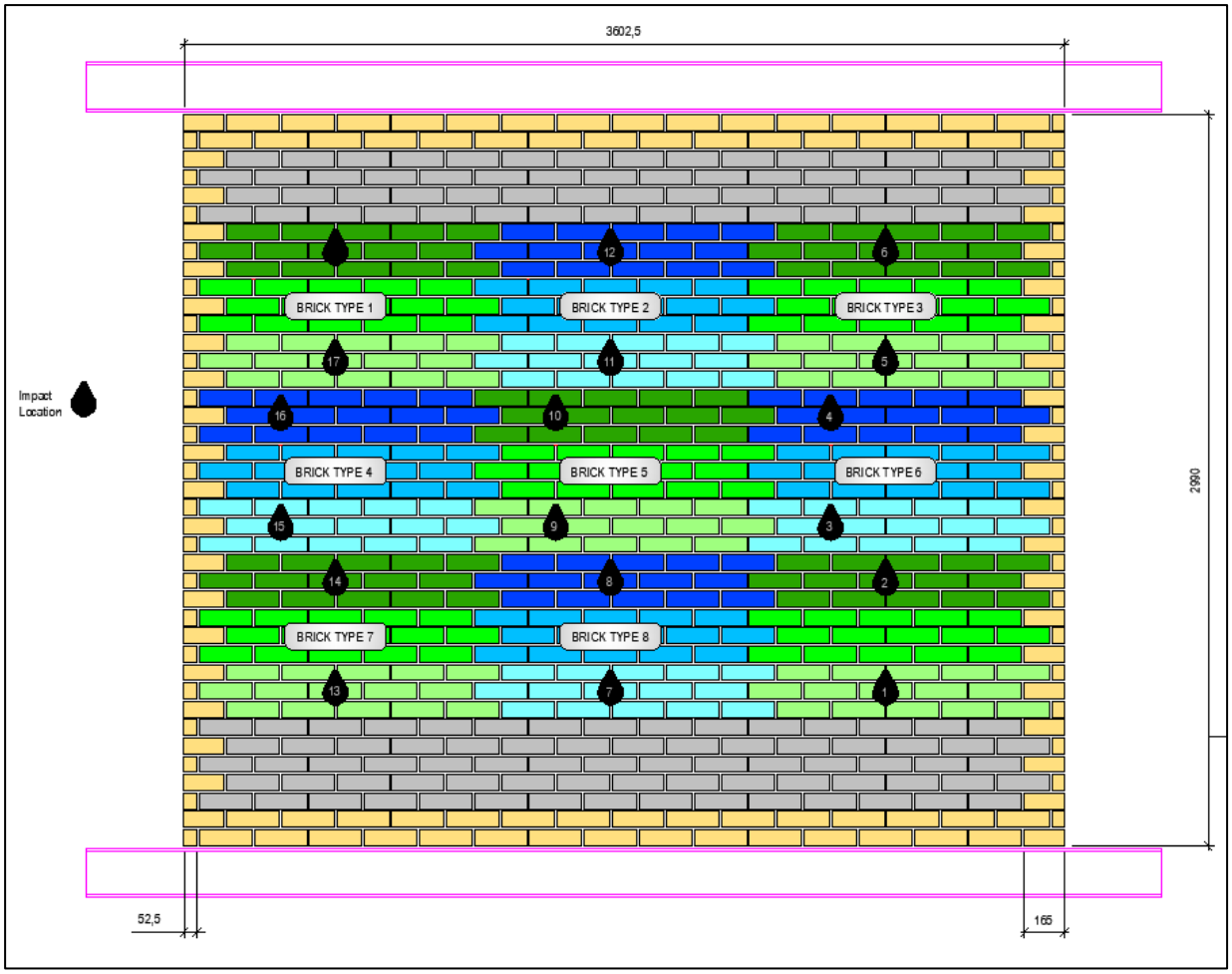
The impact energies were 10 J.

7 TEST RESULTS

Test Date: 14th September 2023

Ambient temperature = 20 °C

FIGURE 1



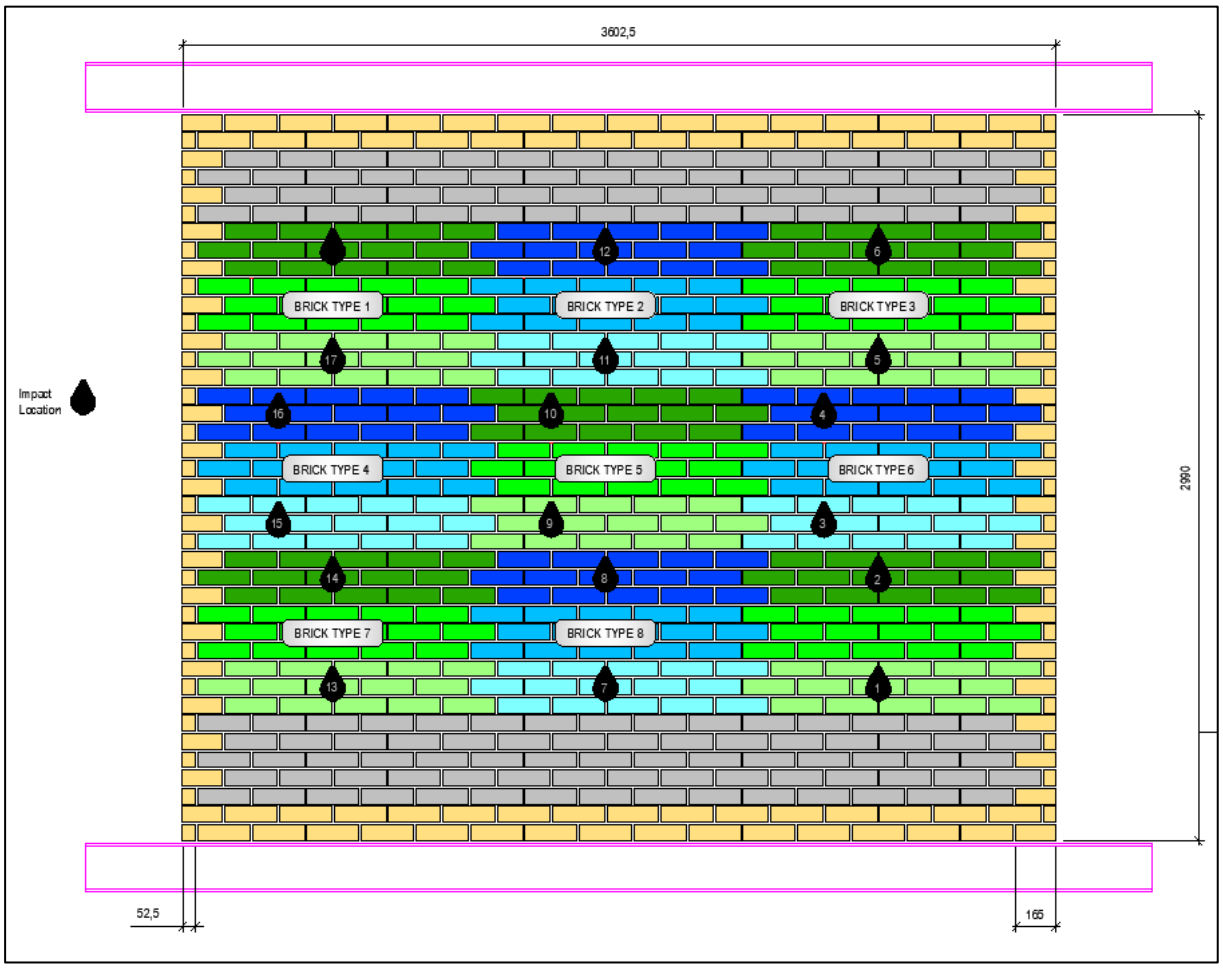
SOFT BODY IMPACT LOCATIONS

TABLE 3

SOFT BODY IMPACT TEST RESULTS

Location	Impact energy (J)	Observations	Classification
1	500	No damage observed	Negligible risk
2	500	No damage observed	Negligible risk
3	500	No damage observed	Negligible risk
4	500	No damage observed	Negligible risk
5	500	No damage observed	Negligible risk
6	500	No damage observed	Negligible risk
7	500	No damage observed	Negligible risk
8	500	No damage observed	Negligible risk
9	500	No damage observed	Negligible risk
10	500	No damage observed	Negligible risk
11	500	No damage observed	Negligible risk
12	500	No damage observed	Negligible risk
13	500	No damage observed	Negligible risk
14	500	No damage observed	Negligible risk
15	500	No damage observed	Negligible risk
16	500	No damage observed	Negligible risk
17	500	No damage observed	Negligible risk
18	500	No damage observed	Negligible risk

FIGURE 2



HARD BODY IMPACT LOCATIONS

TABLE 4

HARD BODY IMPACT TEST RESULTS

Location	Impact energy (J)	Observations	Classification
1	10	Crack through full height of tile	Low risk
2	10	Crack through full height of tile	Low risk
3	10	Crack through full height of tile. Small chip to corner of brick	Low risk
4	10	Minor indent	Negligible risk
5	10	Crack through full height of tile	Low risk
6	10	Crack through full height of tile	Low risk
7	10	Crack through full height of tile	Low risk
8	10	Crack through full height of tile. Small chip to corner of brick (4 g)	Low risk
9	10	Crack through full height of tile	Low risk
10	10	Minor indent	Negligible risk
11	10	Crack through full height of tile	Low risk
12	10	Crack through full height of tile	Low risk
13	10	Crack through full height of tile	Low risk
14	10	Crack through full height of tile	Low risk
15	10	Crack through full height of tile	Low risk
16	10	Crack through full height of tile	Low risk
17	10	Crack through full height of tile. Small chip to corner of brick	Low risk
18	10	Crack through full height of tile. Small chip to corner of brick (4 g)	Low risk

PHOTO IMG_9288

SOFT BODY IMPACTOR

PHOTO IMG_9311

HARD BODY IMPACTOR

PHOTO IMG_9310

IMPACT LOCATION 1

PHOTO IMG_9312

IMPACT LOCATION 2

PHOTO IMG_9314

IMPACT LOCATION 3

PHOTO IMG_9316

IMPACT LOCATION 5

PHOTO IMG_9319

IMPACT LOCATION 6

PHOTO 9321

IMPACT LOCATION 7

PHOTO IMG_9323

IMPACT LOCATION 8

PHOTO IMG_9325

IMPACT LOCATION 9

PHOTO IMG_9329

IMPACT LOCATION 9

PHOTO IMG_9331

IMPACT LOCATION 11

PHOTO IMG_9336

IMPACT LOCATION 12

PHOTO IMG_9338

IMPACT LOCATION 13

PHOTO IMG_9340

IMPACT LOCATION 14

PHOTO IMG_9342

IMPACT LOCATION 15

PHOTO IMG_9344

IMPACT LOCATION 16

PHOTO IMG_9349

IMPACT LOCATION 17

PHOTO IMG_9354

IMPACT LOCATION 18

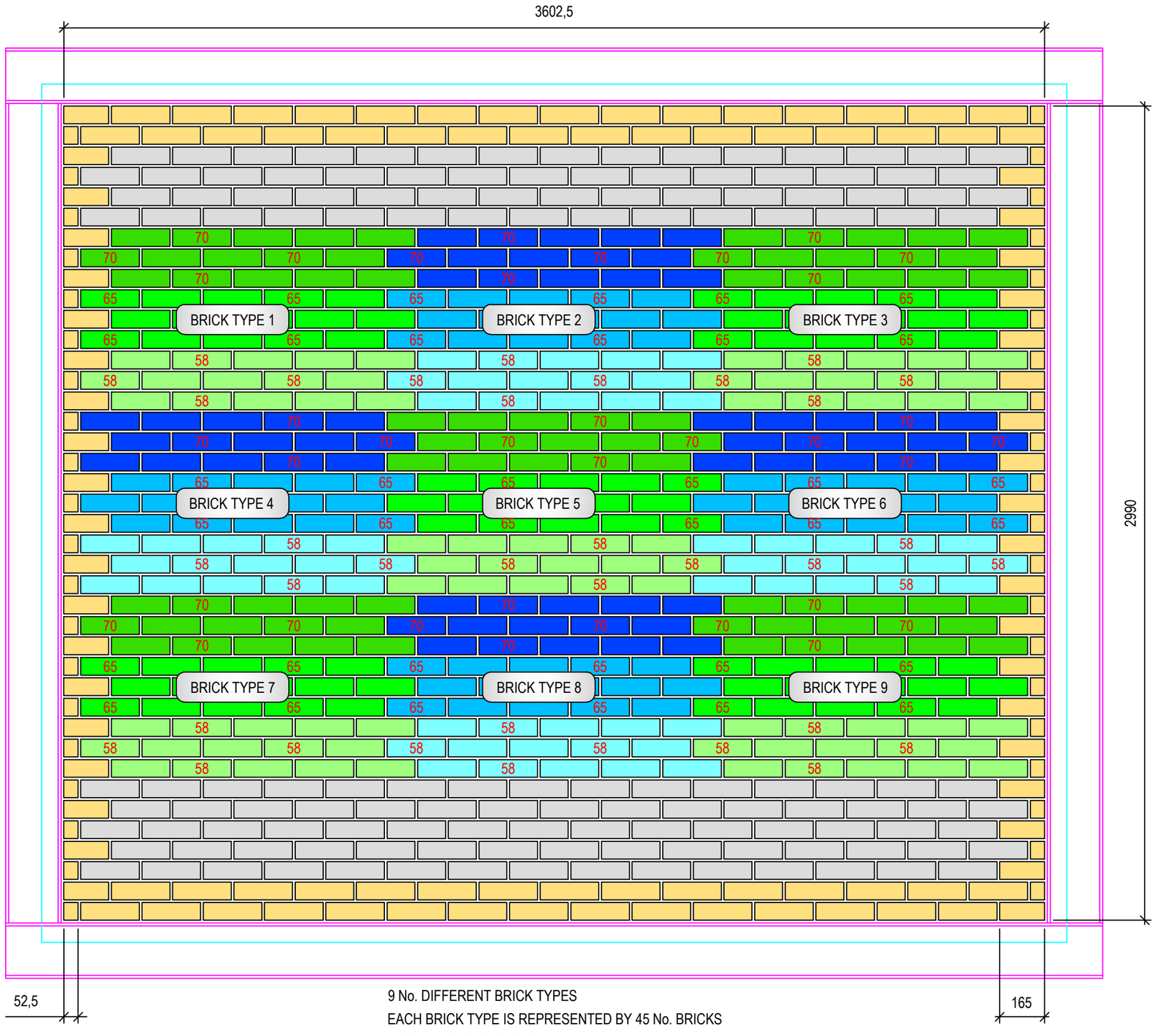
8 APPENDIX - DRAWINGS

The following 4 unnumbered pages are copies of James & Taylor Limited drawings numbered:

- BSS-TRB-GA-001
- BSS-TRB-GA-002
- BSS-TRB-GA-003
- BSS-TRA-T1

END OF REPORT

TEST RIG TYPE A - TEST 1 [UNMORTARED BRICK PULL]



9 No. DIFFERENT BRICK TYPES

EACH BRICK TYPE IS REPRESENTED BY 45 No. BRICKS

MEDIAN HEIGHT BRICKS = 15 No.

SMALL BRICKS = 4 No. 58mm HIGH AND 11 No. MEDIAN HEIGHT [26.66%]

LARGE BRICKS = 4 No. 70mm HIGH AND 11 No. MEDIAN HEIGHT [26.66%]

JAMES &TAYLOR

SIXTY TWO, Barwell Business Park, Leatherhead Road,
Chessington, Surrey KT9 2NY
T. 020 8942 3688 F. 020 8336 2036 E. info@jamesandtaylor.co.uk
www.jamesandtaylor.co.uk

GENERAL NOTES:

DO NOT SCALE FROM THIS DRAWING.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT JAMES & TAYLOR, ARCHITECT'S AND ENGINEER'S DRAWINGS.

= BLOCKLEY WINDERMERE GREY SOLID

215mm LONG 'STANDARD' SLIPS = 135 No.

= WIENERBERGER STAFFORDSHIRE SMOOTH CREAM

215mm LONG 'STANDARD' SLIPS = 30 No.

165mm LONG 'STANDARD' SLIPS = 38 No.

52mm LONG 'STANDARD' SLIPS = 38 No.

215mm LONG SLIPS WITH 'TOP' REBATE = 15 No.

215mm LONG SLIPS WITH 'BOTTOM' REBATE = 15 No.

165mm LONG SLIPS WITH 'TOP' REBATE = 1 No.

165mm LONG SLIPS WITH 'BOTTOM' REBATE = 1 No.

52mm LONG SLIPS WITH 'TOP' REBATE = 1 No.

52mm LONG SLIPS WITH 'BOTTOM' REBATE = 1 No.

REVISIONS: DATE:

CLIENT:
JAMES & TAYLOR LTD

PROJECT:
BRICK SLIP SYSTEM

TITLE:
TEST RIG TYPE A - TEST 1
UNMORTARED BRICK PULL

DATE:
04/12/2021

DRAWN BY: JSC

CHECKED BY: JSC

SCALE: 1:16

PLOT SIZE: A3

DRAWING NUMBER: BSS-TRA-T1

REVISION:

PLOT DATE:
December 5, 2021 5:38 PM

TEST RIG TYPE B
STEEL FRAMING (TO BE PROVIDED BY TECHNOLOGY CENTRE)

JAMES &TAYLOR
SIXTY TWO, Barwell Business Park, Leatherhead Road,
Chessington, Surrey KT9 2NY
T. 020 8942 3688 F. 020 8336 2036 E. info@jamesandtaylor.co.uk
www.jamesandtaylor.co.uk

GENERAL NOTES:

DO NOT SCALE FROM THIS DRAWING.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT JAMES & TAYLOR, ARCHITECT'S AND ENGINEER'S DRAWINGS.

STEEL FRAMING REQUIREMENT

203x203x46 UC (AS DRAWN)
60x60x6 RSA (AS DRAWN)

REVISIONS: DATE:

CLIENT:
JAMES & TAYLOR LTD

PROJECT:
BRICK SLIP SYSTEM

TITLE:
TEST RIG TYPE B
GENERAL ARRANGEMENT

DATE:
03/12/2021

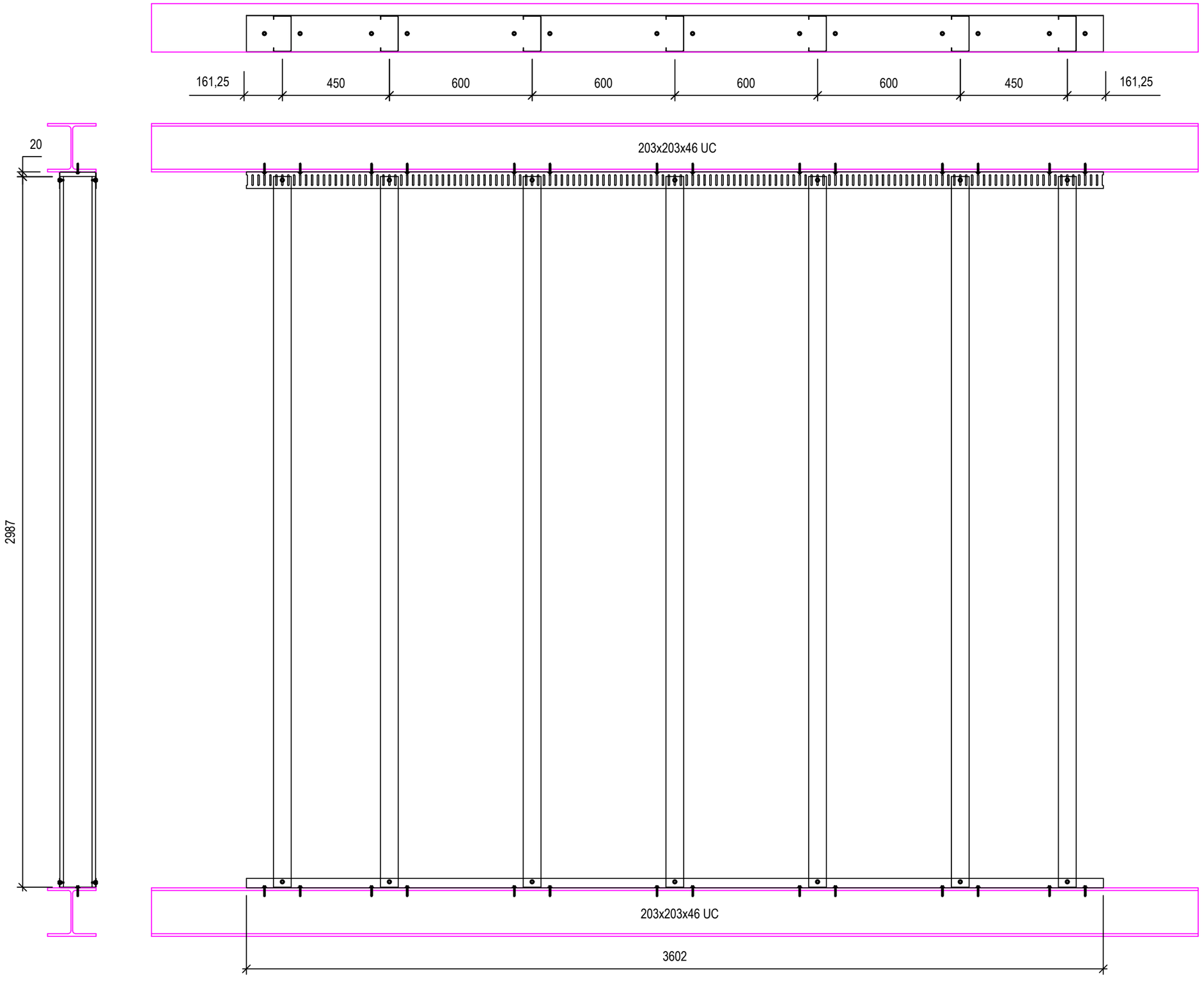
DRAWN BY: JSC
CHECKED BY: JSC

SCALE: 1:16
PLOT SIZE: A3

DRAWING NUMBER: BSS-TRB-GA-001
REVISION:

PLOT DATE:
December 5, 2021 5:40 PM

TEST RIG TYPE B
METSEC BACKING WALL; STUDWORK, BASE, AND HEAD TRACK SETTING OUT/CONFIGURATION



JAMES &TAYLOR
SIXTY TWO, Barwell Business Park, Leatherhead Road,
Chessington, Surrey KT9 2NY
T. 020 8942 3688 F. 020 8336 2036 E. info@jamesandtaylor.co.uk
www.jamesandtaylor.co.uk

GENERAL NOTES:

DO NOT SCALE FROM THIS DRAWING.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT JAMES & TAYLOR, ARCHITECT'S AND ENGINEER'S DRAWINGS.

METSEC REQUIREMENT

VERTICAL STUDS
150M12-75 (THEORETICAL LENGTH 2987mm) = 7 No.

BASE TRACK
154M12-40 (THEORETICAL LENGTH 3602mm) = 1 No.

HEAD TRACK
154M16-70s (THEORETICAL LENGTH 3602mm) = 1 No.

REVISIONS: DATE:

CLIENT:
JAMES & TAYLOR LTD

PROJECT:
BRICK SLIP SYSTEM

TITLE:
TEST RIG TYPE B
GENERAL ARRANGEMENT

DATE:
03/12/2021

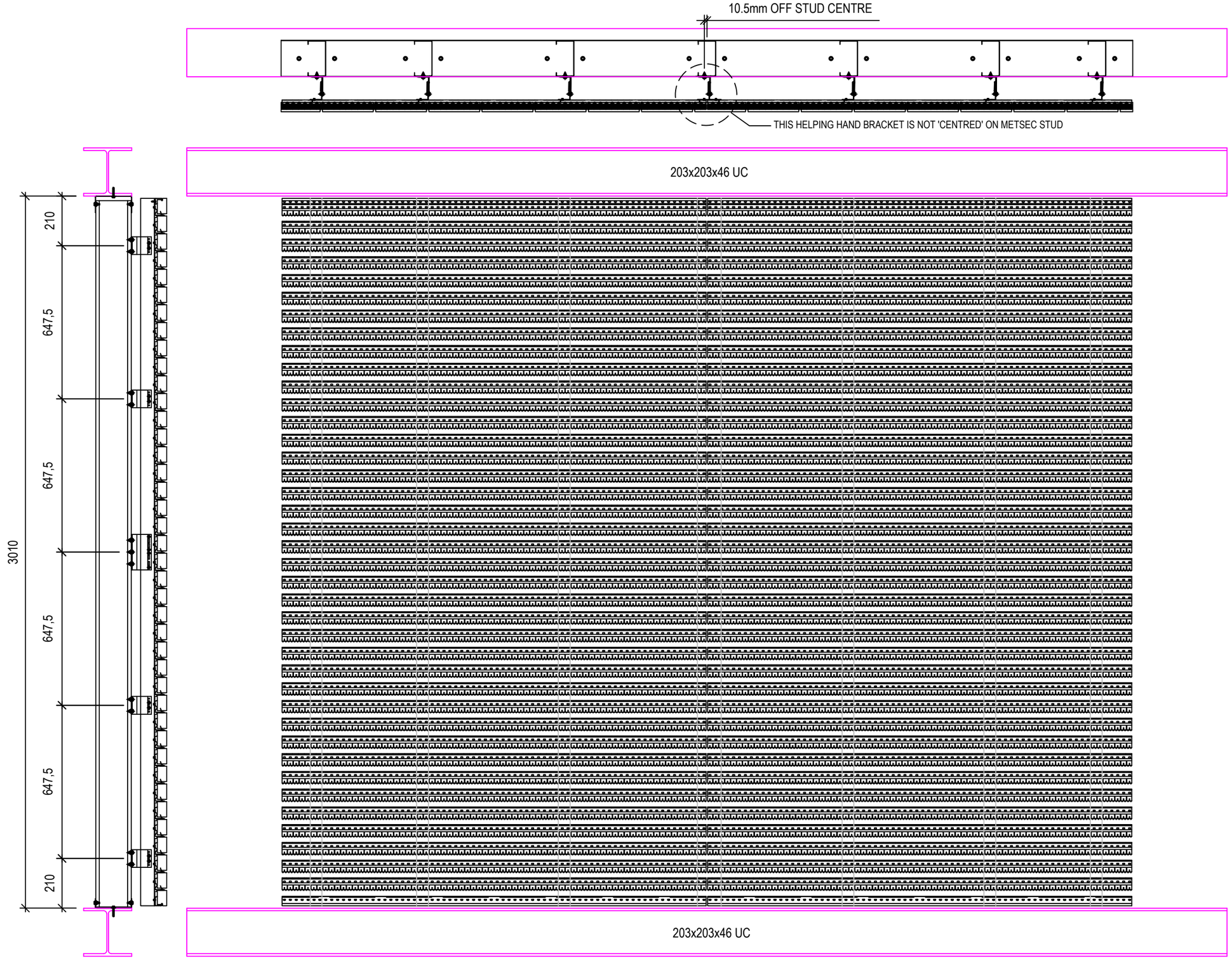
DRAWN BY: JSC
CHECKED BY: JSC

SCALE: 1:16
PLOT SIZE: A3

DRAWING NUMBER: BSS-TRB-GA-002
REVISION:

PLOT DATE:
December 5, 2021 5:42 PM

TEST RIG TYPE B
'HELPING HAND' BRACKET, VERTICAL SUB-STRUCTURE AND BARRACUDA RAIL SETTING OUT/CONFIGURATION



JAMES &TAYLOR
SIXTY TWO, Barwell Business Park, Leatherhead Road,
Chessington, Surrey KT9 2NY
T. 020 8942 3688 F. 020 8336 2036 E. info@jamesandtaylor.co.uk
www.jamesandtaylor.co.uk

GENERAL NOTES:

DO NOT SCALE FROM THIS DRAWING.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT JAMES & TAYLOR, ARCHITECT'S AND ENGINEER'S DRAWINGS.

BARRACUDA HORIZONTAL RAIL REQUIREMENT

BAR-R1-1800 = 78 No.
BAR-R2-1800 = 2 No.
BAR-R3-1800 = 2 No.

BARRACUDA VERTICAL RAIL REQUIREMENT

BAR-VL1-2990 = 6 No.
BAR-VT1-2990 = 1 No.

'HELPING HAND' BRACKET REQUIREMENT
Nvelope 90 (ADJUSTMENT RANGE 92mm TO 132mm)

VERTICAL LOAD BEARING HELPING HAND = 7 No.
RESTRAIN HELPING HAND = 28 No.

REVISIONS: DATE:

CLIENT:
JAMES & TAYLOR LTD

PROJECT:
BRICK SLIP SYSTEM

TITLE:
TEST RIG TYPE B
GENERAL ARRANGEMENT

DATE:
03/12/2021

DRAWN BY: JSC
CHECKED BY: JSC

SCALE: 1:16
PLOT SIZE: A3

DRAWING NUMBER: BSS-TRB-GA-003
REVISION:

PLOT DATE:
December 5, 2021 5:45 PM

VINCI Technology Centre UK Limited
Stanbridge Road
Leighton Buzzard
Bedfordshire
LU7 4QH
UK

0333 5669000

info@technology-centre.co.uk

www.technology-centre.co.uk