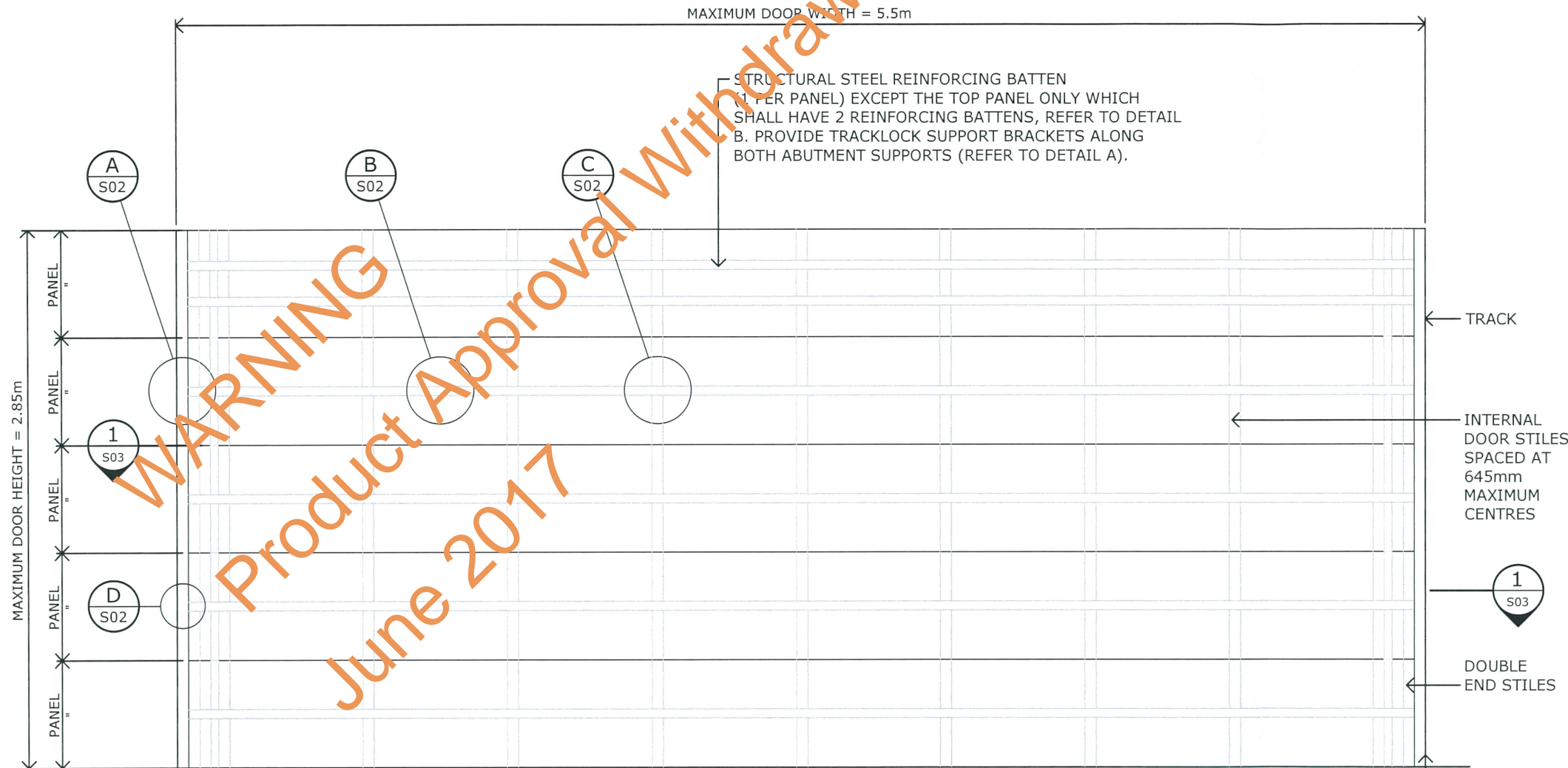


IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1), THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENTS P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA.



MAXIMUM DOOR WIDTH = 5.5m

MAXIMUM DOOR HEIGHT = 2.85m

STRUCTURAL STEEL REINFORCING BATTEN (1 PER PANEL) EXCEPT THE TOP PANEL ONLY WHICH SHALL HAVE 2 REINFORCING BATTENS, REFER TO DETAIL B. PROVIDE TRACKLOCK SUPPORT BRACKETS ALONG BOTH ABUTMENT SUPPORTS (REFER TO DETAIL A).

TRACK

INTERNAL DOOR STILES SPACED AT 645mm MAXIMUM CENTRES

DOUBLE END STILES

SPLAY TRACKLOCK FOR HOOK PLATE. EXTENT TO APPLY APPROXIMATELY ALONG THE WIDTH OF THE TOP PANEL ONLY TOP PANEL TRACKLOCK BRACKET PART NUMBER SD0045 (LH) AND SD0046 (RH), TOP PANEL HOOK PLATE PART NUMBER SD0043 (LH) AND SD0044(RH)

B&D STORM SHIELD HIGH WIND SECTIONAL DOOR - ELEVATION

MAXIMUM DOOR WIDTH = 5.5m

NOTE: DOOR WIDTH (SPAN) (L) = OPENING WIDTH + CURTAIN OVERLAPS
DOOR HEIGHT = OPENING HEIGHT + TOP PANEL OVERLAP
1:25

Product Name
B&D STORM SHIELD HIGH WIND SECTIONAL DOOR

Product Description
REINFORCED SECTIONAL DOOR WITH TRACKLOCK SYSTEM

Manufacturer's Name
B&D AUSTRALIA PTY LTD
34-36 MARIGOLD STREET, REVESBY NSW 2212 PH: 136 263

Design Criteria

- REGION C
- TERRAIN CATEGORY 2
- DOOR HEIGHT 2.85m MAX.
- BUILDING IMPORTANCE LEVEL 2
- REGION WINDSPEED VR = 69.3m/s
- DOORS ARE RATED UP TO AN ULTIMATE DESIGN WIND PRESSURE OF:
 - INWARD = 2.92 kPa
 - OUTWARD = 3.37 kPa (FOR DOOR SPANS < 4m)
 - OUTWARD = 3.04 kPa (FOR DOOR SPANS > 4m)
 FOR A MAXIMUM DOOR WIDTH OF 5.5m.
- AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS PART 2:WIND ACTIONS.
- AS/NZS 4505:2012 GARAGE DOORS & OTHER LARGE ACCESS DOORS.
- AS/NZS 1170.0:2002 STRUCTURAL DESIGN ACTIONS - PART 0:GENERAL PRINCIPLES.
- AS 4100:1998 STEEL STRUCTURES
- AS 3700-2001 MASONRY STRUCTURES
- AS/NZS 4600: 2005 COLD FORMED STRUCTURES
- AS/NZS 1170.1:2002 STRUCTURAL DESIGN ACTIONS - PART 1: PERMANENT, IMPOSED AND OTHER ACTIONS.

Limitations

- STRUCTURAL STEEL ABUTMENT POSTS TO BE 3mm (MIN.) IN THICKNESS WITH A MINIMUM STRESS GRADE OF G250 U.N.O. (REFER TO SECTION 1 ON DRAWING S03).
- CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF BLOCK WALL UNIT (f'_{uc}) = 15 MPa (MIN.).
- CORE FILLING OF BLOCKWALL (f'_c) = 15 MPa (MIN.).
- THE STRUCTURE TO WHICH THE DOOR IS ATTACHED SHALL BE ASSESSED AND CERTIFIED INDEPENDENTLY AS REQUIRED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER.
- ALTERNATIVE DESIGN PARAMETERS TO WHAT ARE SPECIFIED ON THESE DRAWINGS ALONG WITH ALTERNATIVE SITE SPECIFIC LOCAL PRESSURE FACTORS MAY BE ADOPTED PROVIDED THE CALCULATED SITE SPECIFIC ULTIMATE DESIGN WIND PRESSURES DO NOT EXCEED THE ULTIMATE DESIGN WIND PRESSURE RATINGS SPECIFIED IN THE DESIGN CRITERIA.
- THE STRUCTURAL ENGINEER IS TO CHECK THAT THE SITE SPECIFIC DESIGN WIND LOADINGS DO NOT EXCEED THE ULTIMATE DESIGN WIND PRESSURE RATINGS SPECIFIED IN THE DESIGN CRITERIA.
- DOORS MAY BE POSITIONED AT ANY LOCATION ALONG THE BUILDING ENVELOPE INCLUDING ALL LOCAL PRESSURE ZONES (ie. CORNERS OF BUILDINGS), PROVIDED THE CALCULATED SITE SPECIFIC ULTIMATE DESIGN WIND PRESSURES DO NOT EXCEED THE ULTIMATE DESIGN WIND PRESSURE RATINGS SPECIFIED IN THE DESIGN CRITERIA.

Accepted for Inclusion

DTCM ref: **M/823/01** DRAWING No. S01

Chairman's Signature:

Chairman's Name: **STEVEN J EURLICH**

Date of Approval: **8/06/2017** Expiry Date: **8/06/2022**

- ALL DOOR COMPONENTS TO BE IN ACCORDANCE WITH STANDARD B&D STORM SHIELD HIGH WIND SECTIONAL DOOR MANUFACTURING.
- DOOR INSTALLATION TO BE IN ACCORDANCE WITH STANDARD B&D STORM SHIELD HIGH WIND SECTIONAL DOOR INSTALLATION GUIDELINES.
- ALLTEK SCREW FASTENER MECHANICAL PROPERTIES ARE TO BE OF A MINIMUM CAPACITY AS GIVEN IN THE BUILDTEX FASTENERS TECHNICAL SPECIFICATION SECTION OF THE PRODUCT CATALOGUE.
- MECHANICAL ANKASCREW FASTENER CAPACITIES HAVE BEEN DERIVED FROM THE RAMSET SPECIFIERS RESOURCE BOOK

Notes covering basis of DTC (Relevant test reports etc)

- REPORT No. TS1026 Revision A DATED 19th JANUARY 2016 (CYCLONE TESTING STATION, SCHOOL OF ENGINEERING AND PHYSICAL SCIENCES, JAMES COOK UNIVERSITY).
- IN HOUSE TESTING CONDUCTED ON AUGUST 2015 AND DOCUMENTED ON THE 2nd DECEMBER 2015 (Report No. 2015-10-28)
- PRINCIPLES OF MECHANICS.

**Design Engineers Certification

Name: **JAMES ELLIS**

Registration Number: **47429ES**

Date: **07/12/16**

Signature:

registered as a structural engineer in **Australia

**Certifying Engineers Certification

Name: **ASSET SERVICES PTY LTD**

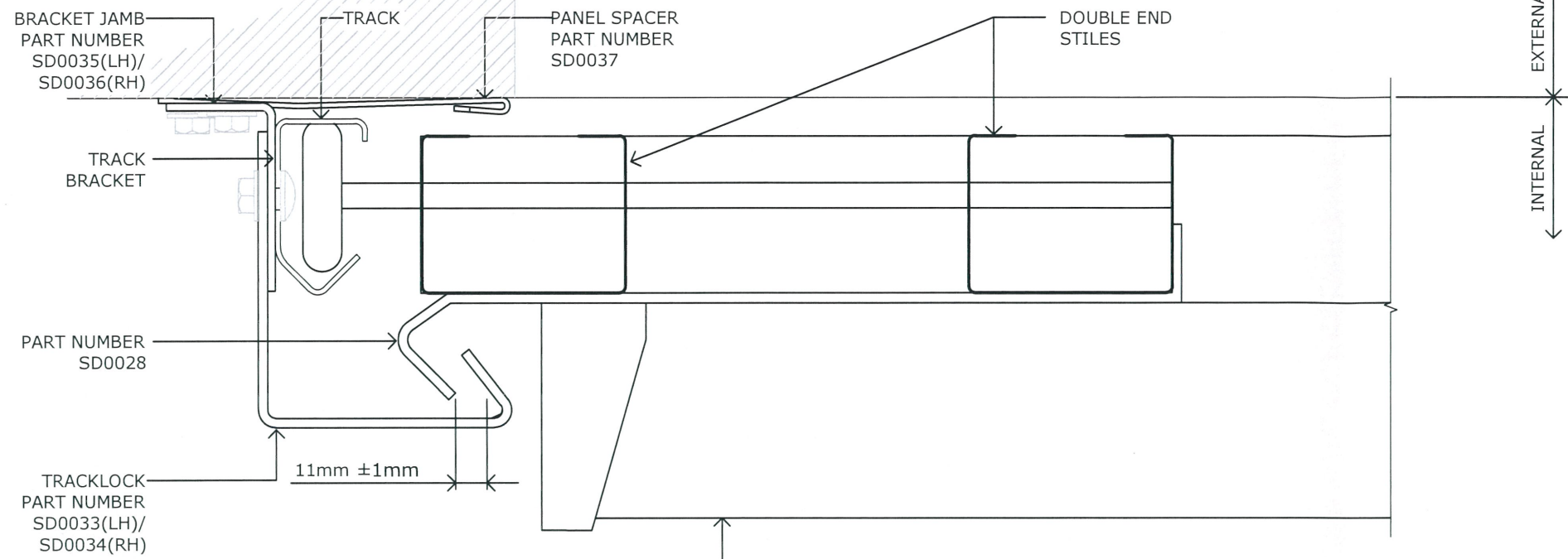
NT Registration Number: **152941ES**

Date: **07/12/16**

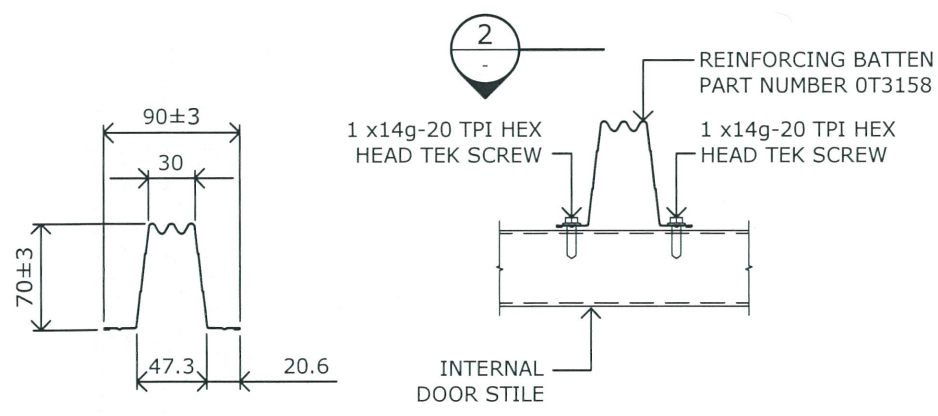
Signature:

registered as a structural engineer in **Northern Territory

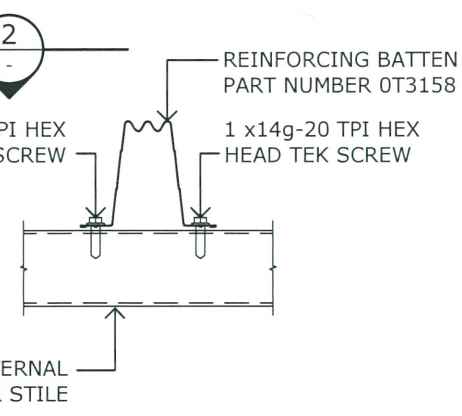
IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1), THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENTS P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA.



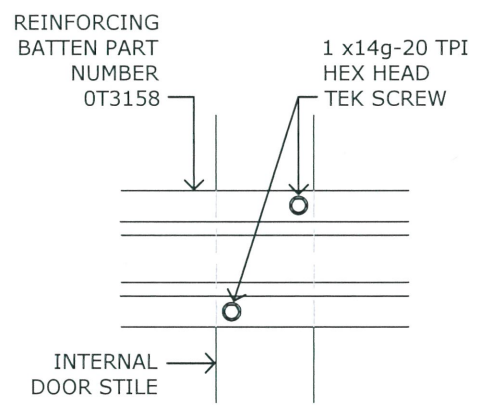
DETAIL A
1:2
TRACKLOCK SUPPORT BRACKET - PART PLAN (CROSS SECTION)
S.01



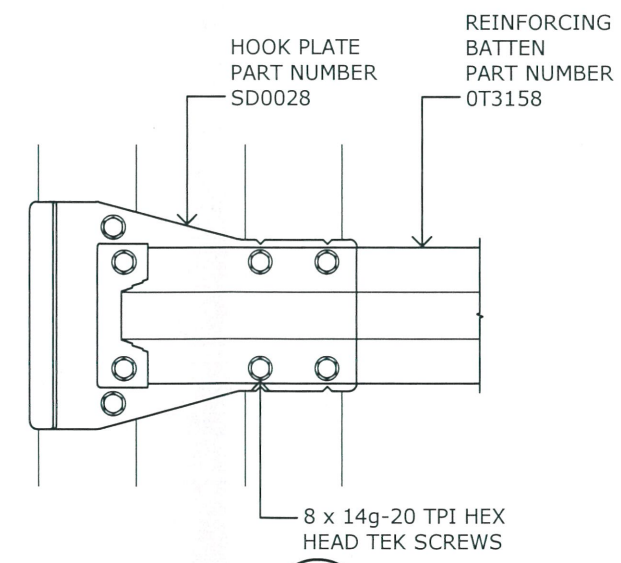
DETAIL B
1:5
TYPICAL STRUCTURAL STEEL REINFORCING BATTEN - (CROSS SECTION PROFILE) PART NUMBER OT3158 MATERIAL: 0.55mm G550 GALVABOND
S.01



DETAIL C
1:2
TYPICAL AT ALL INTERSECTIONS OF REINFORCING BATTENS AND INTERNAL DOOR STILES PART ELEVATION
S.01



SECTION 2
1:2
PART PLAN
-



DETAIL D
1:5
TYPICAL AT EACH ENDS OF REINFORCING BATTENS PART PLAN
S.01

Product Name
B&D STORM SHIELD HIGH WIND SECTIONAL DOOR

Product Description
REINFORCED SECTIONAL DOOR WITH TRACKLOCK SYSTEM

Manufacturer's Name
B&D AUSTRALIA PTY LTD
34-36 MARIGOLD STREET, REVESBY NSW 2212 PH: 136 263

Design Criteria

- REGION C
- TERRAIN CATEGORY 2
- DOOR HEIGHT 2.85m MAX.
- BUILDING IMPORTANCE LEVEL 2
- REGION WINDSPEED VR = 69.3m/s
- DOORS ARE RATED UP TO AN ULTIMATE DESIGN WIND PRESSURE OF:
 - INWARD = 2.92 kPa
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 FOR A MAXIMUM DOOR WIDTH OF 5.5m.
- AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS.
- AS/NZS 4505:2012 GARAGE DOORS & OTHER LARGE ACCESS DOORS.
- AS/NZS 1170.0:2002 STRUCTURAL DESIGN ACTIONS - PART 0: GENERAL PRINCIPLES.
- AS 4100:1998 STEEL STRUCTURES
- AS 3700-2001 MASONRY STRUCTURES
- AS/NZS 4600: 2005 COLD FORMED STRUCTURES
- AS/NZS 1170.1:2002 STRUCTURAL DESIGN ACTIONS - PART 1: PERMANENT, IMPOSED AND OTHER ACTIONS.

Limitations

- STRUCTURAL STEEL ABUTMENT POSTS TO BE 3mm (MIN.) IN THICKNESS WITH A MINIMUM STRESS GRADE OF G250 U.N.O. (REFER TO SECTION 1 ON DRAWING S03).
- CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF BLOCK WALL UNIT (f_{uc}) = 15 MPa (MIN.).
- CORE FILLING OF BLOCKWALL (f_c) = 15 MPa (MIN.).
- THE STRUCTURE TO WHICH THE DOOR IS ATTACHED SHALL BE ASSESSED AND CERTIFIED INDEPENDENTLY AS REQUIRED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER.
- ALTERNATIVE DESIGN PARAMETERS TO WHAT ARE SPECIFIED ON THESE DRAWINGS ALONG WITH ALTERNATIVE SITE SPECIFIC LOCAL PRESSURE FACTORS MAY BE ADOPTED PROVIDED THE CALCULATED SITE SPECIFIC ULTIMATE DESIGN WIND PRESSURES DO NOT EXCEED THE ULTIMATE DESIGN WIND PRESSURE RATINGS SPECIFIED IN THE DESIGN CRITERIA.
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- DOORS MAY BE POSITIONED AT ANY LOCATION ALONG THE BUILDING ENVELOPE INCLUDING ALL LOCAL PRESSURE ZONES (ie. CORNERS OF BUILDINGS), PROVIDED THE CALCULATED SITE SPECIFIC ULTIMATE DESIGN WIND PRESSURES DO NOT EXCEED THE ULTIMATE DESIGN WIND PRESSURE RATINGS SPECIFIED IN THE DESIGN CRITERIA.

Accepted for Inclusion

DTCM ref: M1823/02 DRAWING No. S02

Chairman's Signature:

Chairman's Name: STEVEN J EHRLICH

Date of Approval: 8/06/2017 **Expiry Date:** 8/06/2022

- ALL DOOR COMPONENTS TO BE IN ACCORDANCE WITH STANDARD B&D STORM SHIELD HIGH WIND SECTIONAL DOOR MANUFACTURING.
- DOOR INSTALLATION TO BE IN ACCORDANCE WITH STANDARD B&D STORM SHIELD HIGH WIND SECTIONAL DOOR INSTALLATION GUIDELINES.
- ALL TEK SCREW FASTENER MECHANICAL PROPERTIES ARE TO BE OF A MINIMUM CAPACITY AS GIVEN IN THE BUILDTEX FASTENERS TECHNICAL SPECIFICATION SECTION OF THE PRODUCT CATALOGUE.
- MECHANICAL ANKASCREW FASTENER CAPACITIES HAVE BEEN DERIVED FROM THE RAMSET SPECIFIERS RESOURCE BOOK

Notes covering basis of DTC (Relevant test reports etc)

- REPORT No. TS1026 Revision A DATED 19th JANUARY 2016 (CYCLONE TESTING STATION, SCHOOL OF ENGINEERING AND PHYSICAL SCIENCES, JAMES COOK UNIVERSITY).
- IN HOUSE TESTING CONDUCTED ON AUGUST 2015 AND DOCUMENTED ON THE 2nd DECEMBER 2015 (Report No. 2015-10-28)
- PRINCIPLES OF MECHANICS.

****Design Engineers Certification**

Name: JAMES ELLIS
 Registration Number: 47429ES
 Date: 07/12/16
 Signature:

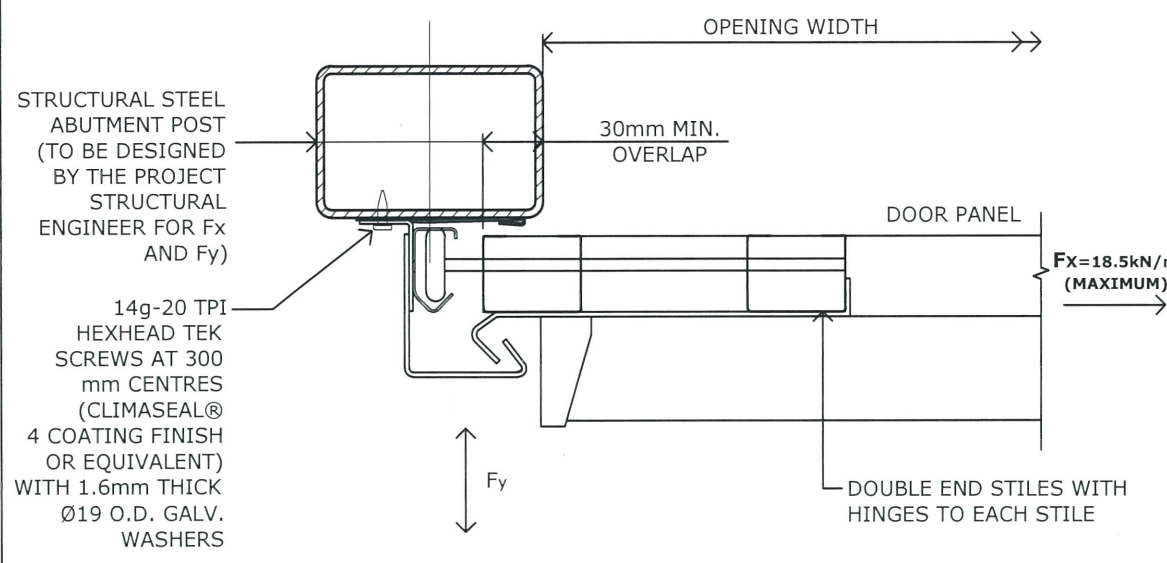
**registered as a structural engineer in Australia

****Certifying Engineers Certification**

Name: ASSET SERVICES PTY LTD
 NT Registration Number: 152941ES
 Date: 07/12/16
 Signature:

**registered as a structural engineer in Northern Territory

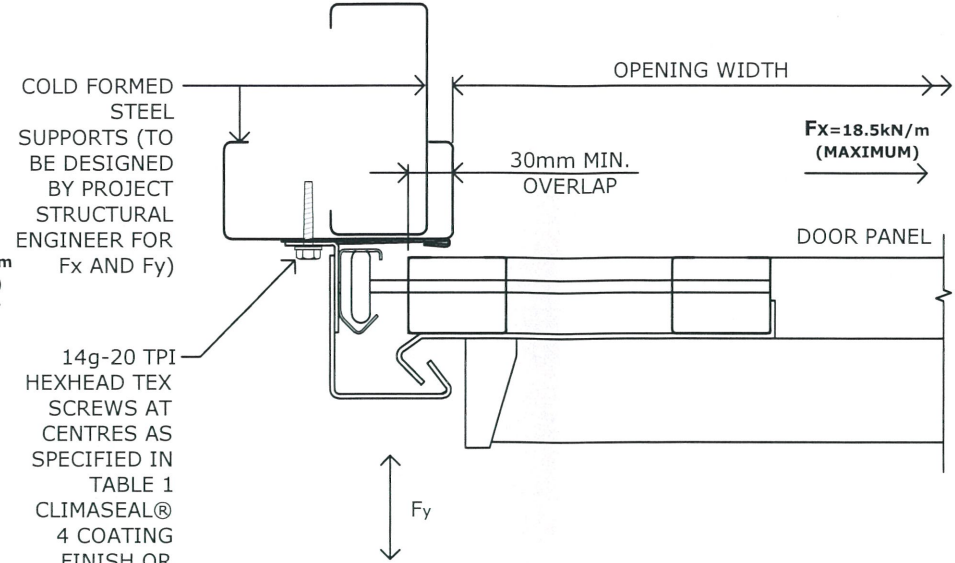
IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1), THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENTS P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA.



SECTION 1
S01

1:5
PLAN OF TRACK FIXING TO
STEEL ABUTMENT SUPPORT POST.
NOTE: THE MAXIMUM ULTIMATE
DESIGN ABUTMENT CATENARY FORCE
Fx = 18.5kN PER METRE HEIGHT OF DOOR
FOR ALL SPANS (DOOR WIDTHS) UP TO 5.5m.

NOTE:
 $F_y = \frac{W}{2}$
WHERE F_y = MAXIMUM OUT OF PLANE ULTIMATE
DESIGN ABUTMENT FORCE PER METRE
W = ULTIMATE DESIGN WIND PRESSURE (kPa)
L = DOOR WIDTH (SPAN) (m)



SECTION 1
S01

1:5
PLAN OF TRACK FIXING
TO COLD FORMED STEEL
ABUTMENT SUPPORTS.
NOTE: THE MAXIMUM ULTIMATE
DESIGN ABUTMENT CATENARY FORCE Fx = 18.5kN
PER METRE HEIGHT OF DOOR FOR ALL SPANS
(DOOR WIDTHS) UP TO 5.5m.

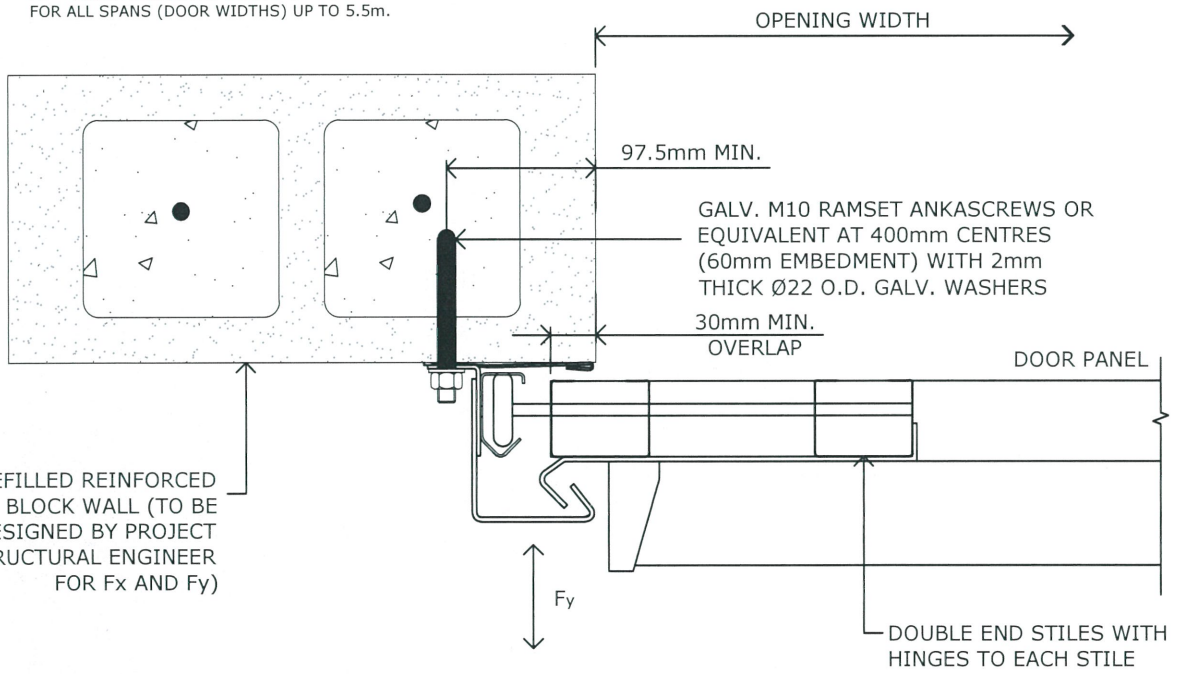
NOTE:
 $F_y = \frac{W}{2}$
WHERE F_y = MAXIMUM OUT OF
PLANE ULTIMATE DESIGN
ABUTMENT FORCE PER METRE
W = ULTIMATE DESIGN WIND
PRESSURE (kPa)
L = DOOR WIDTH (SPAN) (m)

TABLE 1

FASTENING SPECIFICATIONS ONTO COLD FORMED STEEL
ABUTMENT SUPPORTS COMPLYING WITH AS 1397-1993

MATERIAL THICKNESS (t)mm	GRADE	YIELD STRENGTH	TENSILE STRENGTH	SPACING (mm)
1mm	G550	550 MPa	550 MPa	125mm
1.2mm	G500	500 MPa	520 MPa	150mm
1.5mm	G450	450 MPa	480 MPa	200mm
1.9mm	G450	450 MPa	480 MPa	250mm

NOTE: ALL TEK SCREWS TO BE OF A CLIMASEAL®
4 COATING FINISH OR EQUIVALENT



SECTION 1
S01

1:10
PLAN OF TRACK FIXING TO
REINFORCED COREFILLED
BLOCKWORK ABUTMENT SUPPORTS.

NOTE:
 $F_y = \frac{W}{2}$
WHERE F_y = MAXIMUM OUT OF PLANE ULTIMATE DESIGN
ABUTMENT FORCE PER METRE
W = ULTIMATE DESIGN WIND PRESSURE (kPa)
L = DOOR WIDTH (SPAN) (m)

NOTE: THE MAXIMUM ULTIMATE
DESIGN ABUTMENT CATENARY FORCE Fx = 18.5kN PER
METRE HEIGHT OF DOOR FOR ALL SPANS (DOOR
WIDTHS) UP TO 5.5m.

- ALL DOOR COMPONENTS TO BE IN ACCORDANCE WITH STANDARD B&D STORM SHIELD HIGH WIND SECTIONAL DOOR MANUFACTURING.
- DOOR INSTALLATION TO BE IN ACCORDANCE WITH STANDARD B&D STORM SHIELD HIGH WIND SECTIONAL DOOR INSTALLATION GUIDELINES.
- ALL TEK SCREW FASTENER MECHANICAL PROPERTIES ARE TO BE OF A MINIMUM CAPACITY AS GIVEN IN THE BUILDDEX FASTENERS TECHNICAL SPECIFICATION SECTION OF THE PRODUCT CATALOGUE.
- MECHANICAL ANKASCREW FASTENER CAPACITIES HAVE BEEN DERIVED FROM THE RAMSET SPECIFIERS RESOURCE BOOK

Product Name
B&D STORM SHIELD HIGH WIND SECTIONAL DOOR

Product Description
REINFORCED SECTIONAL DOOR WITH TRACKLOCK SYSTEM

Manufacturer's Name
B&D AUSTRALIA PTY LTD
34-36 MARIGOLD STREET, REVESBY NSW 2212 PH: 136 263

- Design Criteria
- REGION C
 - TERRAIN CATEGORY 2
 - DOOR HEIGHT 2.85m MAX.
 - BUILDING IMPORTANCE LEVEL 2
 - REGION WINDSPEED VR = 69.3m/s
 - DOORS ARE RATED UP TO AN ULTIMATE DESIGN WIND PRESSURE OF:
 1. INWARD = 2.92 kPa
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- Limitations
- STRUCTURAL STEEL ABUTMENT POSTS TO BE 3mm (MIN.) IN THICKNESS WITH A MINIMUM STRESS GRADE OF G250 U.N.O. (REFER TO SECTION 1 ON DRAWING S03).
 - CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF BLOCK WALL UNIT (f'_{uc}) = 15 MPa (MIN.).
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Accepted for Inclusion

DTCM ref: **M/823/03** DRAWING No. S03

Chairman's Signature:

Chairman's Name: **STEVEN J BURLICH**

Date of Approval: **8/06/2017** Expiry Date: **8/06/2022**

Notes covering basis of DTC (Relevant test reports etc)

- REPORT No. TS1026 Revision A DATED 19th JANUARY 2016 (CYCLONE TESTING STATION, SCHOOL OF ENGINEERING AND PHYSICAL SCIENCES, JAMES COOK UNIVERSITY).
- IN HOUSE TESTING CONDUCTED ON AUGUST 2015 AND DOCUMENTED ON THE 2nd DECEMBER 2015 (Report No. 2015-10-28)
- PRINCIPLES OF MECHANICS.

**Design Engineers Certification

Name: **JAMES ELLIS**
Registration Number: **47429ES**
Date: **07/12/16**
Signature:

registered as a structural engineer in **Australia

**Certifying Engineers Certification

Name: **ASSET SERVICES PTY LTD**
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