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Agrément Certificate  
07/4446 (ES3)

**ENHANCED SECURITY TO PAS 24 FOR PRODUCT SHEET 3****NORDAN VILLA REVERSIBLE WINDOWS**

This Enhanced Security sheet is not valid in isolation and must be read in conjunction with Product Sheet 3 of this Certificate. The information in this sheet supplements the details given in Product Sheet 3, section 9 *Unauthorised access*.

- The details in this sheet are only relevant to windows fabricated by NorDan UK Ltd and meeting the specification defined in section 2 Scope of approval.
- It is essential that the windows are installed in accordance with the recommendations contained in Product Sheet 3 and in the manufacturer's instructions to achieve the standard of enhanced security defined in this sheet.

**1 General**

Selected windows from the NorDan Villa Topswing (TY and TG) and Side-swing (TD) Reversible Windows covered by Product Sheet 3, were tested in accordance with PAS 24 : 2012 Annex C *Specification for enhanced security performance of windows* and met the requirements with a classification W KT.

**2 Scope of approval**

2.1 The specification for the windows considered to offer enhanced security comprise windows with either 92 mm frames glazed with 26 mm double-glazed units or 105 mm frames glazed with 44 mm triple-glazed units, all fabricated from components as listed in Table 1 and Figure 1, and in accordance with the recommendations contained in the Certificate holder's reference manual.

2.2 The scope of the test programme does not cover glass breakage as a means of entry. In locations where this is considered to be a significant risk, the use of laminated glass or other suitable glazing material may be necessary or required by Secured by Design (SbD) Schemes.

**3 Design features**

Externally fitted aluminium glazing beads can be removed by manipulation but the subsequent removal of the glass unit without breakage and noise is extremely difficult due to the glazing being additionally secured by polyurethane adhesive sealant.

**4 Design considerations**

4.1 Only the specification of windows referred to in Table 1 and Figure 1 can be considered to meet the requirements. Any design variations to the frame profiles, reversible hinges, locking mechanisms, handles, keeps, striker plates, hinge protectors or associated fasteners, will require the window to be retested.

4.2 To ensure the level of resistance to intrusion indicated by the tests is achieved, installation must be carried out in accordance with the recommendations contained in Product Sheet 3 and the manufacturer's instructions. For example, correct glass packing and fixing of the window into the opening are critical.

4.3 Windows assessed for enhanced security are designed to resist attempts to forced entry by the opportunist intruder using basic hand tools. However, the scope of assessment does not extend to an assurance of absolute security. In addition, window security must be considered in the context of the overall security of the building, taking into account such factors as vulnerability of individual windows and the security of doors.

The BBA has awarded this Agrément Certificate for Enhanced Security to PAS 24 : 2012 to the company named above for the window system detailed herein, provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Third issue: 4 April 2018

John Albon — Head of Approvals

Claire Curtis-Thomas

Originally certificated on 18 June 2007

Constructions Products

Chief Executive

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at [www.bbacerts.co.uk](http://www.bbacerts.co.uk)

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.


**Table 1 NorDan Villa Top-swing (TY and TG) and Side-swing (TD) Reversible Windows — list of components**

Application	Manufacturer's designation <sup>(1)</sup>		
	TY	TG	TD
Reversible hinges	0401410 to 0401421	0401885 to 0401889	0400029 to 0400048
	—	0401750 to 0401763	—
Hinge protector	—	—	401567
Hinge swivel plates	0401556	0401967	—
Top glider frames	0401554 0401555	0401906 0401907 0401747 0401748	—
Restrictor	—	—	0401022 to 0401025
Restrictor fixing plate (sash)	—	—	0400718
Shootbolt	0400097 to 0400113		
Shootbolt locking cam	—	—	0401631
Lockcase	0400096	—	0400096
Shootbolt striker keeps (frame)	0401543 0401544	—	0401538 0401539
Shootbolt locking cam keeps (frame)	—	—	0401546
Shootbolt striker keeps (sash)	0401540	—	0401541 0401542
Reversible handle			
key locking	0400269 0400277	—	0400269 0400277
non key locking	0400268 0400276	—	0400268 0400276

(1) These items may be unmarked and it is recommended that, if in doubt, the purchaser seeks written assurance of the component specifications from the Certificate holder.

**Figure 1 Typical horizontal section (showing aluminium cladding present)**
