

VOLUME 2

SECTION E. SPECIFICATION AND DECLARATIONS FOR PRODUCT AND SERVICE

E1. SPECIFICATION FOR PRODUCT AND SERVICE

E1.1 Introduction

It is in your interest to read and consider the whole of this Offer Document before preparing your offer.

For definitions of terms used in this Section see Section A.

This Section E1 sets out the LHC technical and performance requirements for this framework arrangement.

E1.2 Applications for which the framework arrangement component will be used

The framework arrangement component will be required for use in all types of public sector new housing and sheltered accommodation, and also for estates modernizations, conversions, rehabilitation and small replacement work, as well as in other types of Public Authority and Housing Association buildings, including schools, colleges and universities.

E1.3 Scope of LHC requirements

Companies shall offer products and services set out within this Offer Document which conform to the Essential Requirements listed within Section E1.

E1.3.1 The design, supply and installation of external doorset products together with the design, supply and delivery of external doorset products to various building and refurbishment projects for local authorities, tenant management organisations, housing associations and other public sector bodies throughout the United Kingdom.

E1.3.2 Products to be offered under this arrangement would be external door assemblies including composite doorsets as covered within the scope of PAS 23-1 and BS 8529 together with other doorset products as set out in this Section E1.

E1.4 Regulations and standards

The products and services offered shall be capable of complying, as a minimum, with all relevant International, European and British regulations and standards, or equal and approved European standards.

The references made within this Offer Document refer to the requirements of the Building Regulations for England and Wales. For projects to be undertaken in Scotland, the applicable requirements of the Building (Scotland) Regulations shall be satisfied.

Unless specifically stated otherwise, any reference in this Offer Document to any Regulation or British or European Standard shall be read as referring to the most recent edition including all amendments current at the date of submission of offers. Attention is drawn to the following:

Statutory Instruments:

HM Government Building Regulations –

| | |
|----------------------|--------------------------------|
| Approved Document A: | Structural safety |
| Approved Document B: | Fire safety |
| Approved Document F: | Ventilation |
| Approved Document J: | Heat producing appliances |
| Approved Document K: | Protection from falling |
| Approved Document L: | Conservation of fuel and power |
| Approved Document M: | Access to and use of buildings |
| Approved Document N: | Glazing safety |

The Building (Scotland) Regulations –

Technical Handbooks –

| | |
|------------|-----------|
| Section 0: | General |
| Section 1: | Structure |

- Section 2: Fire
- Section 3: Environment
- Section 4: Safety
- Section 5: Noise
- Section 6: Energy

Appendices

International, European and British Standards:

Attention is drawn to the following, which is not exhaustive:

| | |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BS EN ISO 9000 | Quality management systems. Fundamentals and vocabulary |
| BS EN ISO 9001 | Quality management systems. Requirements |
| BS 952-1 | Glass for glazing Part 1: Classification |
| BS 952-2 | Glass for glazing Part 2: Terminology for work on glass |
| BS 5588 (all parts) | Fire precautions in the design, construction and use of buildings |
| BS 6100 | Glossary of building and civil engineering terms |
| BS 6206 | Specification for impact performance requirements for flat safety glass and safety plastics for use in buildings |
| BS 6262 (all parts) | Glazing for buildings |
| BS 6262-4 | Glazing for buildings. Code of practice for safety related to human impact |
| BS 6375-1 | Performance of windows and doors. Classification for weathertightness and guidance on selection and specification |
| BS 6375-2 | Performance of windows. Specification for operation and strength characteristics and guidance on selection and specification |
| BS 6375-3 | Performance of windows and doors. Classification for additional performance characteristics and guidance on selection and specification |
| BS 6399-2 | Loading for buildings. Code of practice for wind loads |
| BS 7950 | Specification for enhanced security performance of windows for domestic applications |
| BS 8000-7 | Workmanship on building sites – Code of practice for glazing |
| BS 8000-16 | Workmanship on building sites – Code of practice for sealing joints in buildings using sealants |
| BS 8213-1 | Windows, doors and rooflights – Design for safety in use and during cleaning of windows, including door-height windows and roof windows – Code of practice |
| BS 8213-4 | Windows, doors and rooflights – Code of practice for the survey and installation of windows and external doorsets |
| BS 8214 | Code of practice for fire door assemblies |
| BS 8220-1 | Guide for security of buildings against crime. Dwellings |
| BS EN 755 (all parts) | Aluminium and aluminium alloys. Extruded rod/bar, tube and profiles |
| BS EN 942 | Timber in joinery – General requirements |
| BS EN 951 | Door leaves – Method of measurement of height, width, thickness and squareness |
| BS EN 952 | Door leaves. General and local flatness. Measurement method |
| BS EN 1026 | Windows and doors. Air permeability. Test method |
| BS EN 1027 | Windows and doors. Watertightness. Test method |
| BS EN 1096 (all parts) | Glass in building. Coated glass |
| BS EN 1279 (all parts) | Glass in buildings. Insulating glass units |
| BS EN 1627 (in draft) | Pedestrian doorsets, windows, curtain walling, grilles and shutters. Burglar resistance. Requirements and classification |

| | |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BS EN 1628 (in draft) | Pedestrian doorsets, windows, curtain walling, grilles and shutters. Burglar resistance. Test method for the determination of resistance under static loading |
| BS EN 1629 (in draft) | Pedestrian doorsets, windows, curtain walling, grilles and shutters. Burglar resistance. Test method for the determination of resistance under dynamic loading |
| BS EN 1630 (in draft) | Pedestrian doorsets, windows, curtain walling, grilles and shutters. Burglar resistance. Test method for the determination of resistance to manual burglary attempts |
| BS EN 1670 | Building hardware. Corrosion resistance. Requirements and test methods |
| BS EN 1863 Parts 1 and 2 | Glass in buildings. Heat strengthened soda lime silicate glass |
| BS EN 1935 | Building hardware. Single-axis hinges. Requirements and test methods |
| BS EN 12150 Parts 1 and 2 | Glass in building. Thermally toughened soda lime silicate safety glass |
| BS EN ISO 9227 | Corrosion tests in artificial atmospheres. Salt spray tests |
| BS EN ISO 10077 | Thermal performance of windows, doors and shutters. Calculation of thermal transmittance. General |
| BS EN 12020 Parts 1 and 2 | Aluminium and aluminium alloys. Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 |
| BS EN 12207 | Windows and doors. Air permeability. Classification |
| BS EN 12208 | Windows and doors. Watertightness. Classification |
| BS EN 12210 | Windows and doors. Resistance to wind load. Classification |
| BS EN 12211 | Windows and doors. Resistance to wind load. Test method |
| BS EN 12337 Parts 1 and 2 | Glass in building. Chemically strengthened soda lime silicate glass |
| BS EN 12365 (all parts) | Building hardware – Gasket and weatherstripping for doors, window, shutters and curtain walling |
| BS EN 12373 (all parts) | Aluminium and aluminium alloys. Anodizing |
| BS EN 12488 (in draft) | Glass in building. Glazing requirements. Assembly rules |
| BS EN 12519 | Windows and pedestrian doorsets - Terminology |
| BS EN 12600 | Glass in building. Pendulum test. Impact test method and classification for flat glass |
| BS EN 12608 | Unplasticised polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors. Classification, requirements and test methods |
| BS EN 13126 (all parts) | Building hardware. Requirements and test methods for windows and doors height windows |
| BS EN 14178 Parts 1 and 2 | Glass in building. Basic alkaline earth silicate glass. Float glass |
| BS EN 14179 Parts 1 and 2 | Glass in building. Heat-soaked thermally-toughened soda lime silicate safety glass |
| BS EN 14220 | Timber and wood based materials in external windows, external door leaves and external doorframes – Requirements and specifications |
| BS EN 14321 Parts 1 and 2 | Glass in building. Thermally toughened alkaline earth silicate safety glass |
| BS EN 14351-1 | Windows and doors. Product standard, performance characteristics. Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics |
| BS EN 14374 | Timber structures – Structural laminated veneer lumber - Requirements |
| BS EN 14449 | Glass in building. Laminated glass and laminated safety glass. Evaluation of conformity/product standard |
| PAS 23-1 | General performance requirements for door assemblies. Single leaf, external door assemblies to dwellings |
| PAS 24 | Enhanced security performance requirements for door assemblies. Single and double leaf, hinged external door assemblies to dwellings |

E1.5 Evaluation of products and services offered

E1.5.1 Products

The evaluation of products will be carried out on the basis of responses given by tenderers in Sections E2 and E3 and the result of the inspection of submitted samples as set out in E3.3.

The Sponsoring Officer may, at his discretion, reject any or all of the products offered by a company if evaluation and any subsequent testing of representative specimens of the products offered by the company shows that any product fails to conform to the requirements of Section E.

The Sponsoring Officer reserves the right to request the application of other evaluation procedures and the submission of other specimens, performance verification and third party accreditation, if necessary, to verify the requirements of any products and services offered in your submission.

E1.5.2 Services

The evaluation of services will be carried out on the basis of responses given by tenderers in Sections E2 and E3.

E1.6 Permitted modifications to meet LHC requirements

Tenderers are recommended to study carefully the requirements of this Section E1 and to decide whether any modifications to their products will be necessary in order for them to comply.

The selected company may be permitted to make minor modifications to any offered item in the light of the Sponsoring Officer's evaluation, if this is found to be necessary to ensure that the item will comply with LHC requirements and if the modification can be satisfactorily incorporated prior to the start of the framework arrangement period but such modification may be made only with the Sponsoring Officer's approval and without alteration to the price offered for that item in Section F of this document.

E1.7 Maintaining the agreed specification

Throughout the framework period, the framework arrangement components and services must satisfy the performance requirements set out in this Section E. The products must be consistent in quality and appearance, must be obtained from reliable sources and must conform with the specification as agreed between the Sponsoring Officer and the appointed company. Deviations from this specification will be permitted only after written approval from the Sponsoring Officer, who at his sole discretion, may require additional testing; the cost of which is to be borne by the appointed company if a characteristic of major importance is likely to be affected.

In Section E2.3 you are required to give your formal acceptance of these terms and conditions.

E1.8 Consistency of project delivery

It is essential that you, the tenderer, fully recognizes the importance of being able to provide and maintain a fully compliant (with this Section E1) project delivery service consistently throughout all areas you have applied to service.

Please note that any failure to maintain this required consistency whilst servicing the framework arrangement may result in your company's suspension or exclusion from it.

In Section E2.5.1, you will be asked to confirm your ability to undertake this requirement.

E1.9 Changes during the framework arrangement period

The appointed company will be required to give reasonable notice to the Sponsoring Officer of the introduction or withdrawal of any product, material or service. A reasonable period must also be allowed between the time when no further orders are accepted for a particular item and the time when that item ceases to be available, in order to give adequate continuity on projects for which that item has already been ordered.

In Section E2.4 you are required to give periods of notice of changes which may occur during the arrangement.

E1.10 Updating of product accreditation

During the course of this arrangement, it is likely there will be the publication of relevant new product, testing and specification standards together with the revision and withdrawal of existing, which will affect the range of products falling within the scope of this Section E1. These will

comprise both national (BS) and European (EN) standards. Likewise, existing third party accreditation schemes will be updated and new ones introduced.

It will be a condition of this arrangement that appointed companies shall undertake to update all conformity and third party accreditation within a reasonable period of time following implementation, as determined by the Sponsoring Officer.

- E1.10.1** BS 8529 was published in April 2010 as a replacement to relevant parts of PAS 23-1. It references both BS EN 14351-1 and BS 6375. LHC recognizes that a period of transition may still be applicable therefore the requirements of Section E1 for composite doorsets will relate substantially to PAS 23-1. However, updated references and requirements relating to BS 8529 have still been made wherever practicable. Third party accreditation schemes are being considered and the condition of E1.9 shall apply.
- E1.10.2** BS EN 14351-1 is the first part of a series of 3 European Product Standards for windows and doors and relates to performance characteristics. From February 2010 products may be CE marked to the standard although (at present) this is not mandatory within the UK. The specifications for materials, requirements for design and requirements for workmanship for the manufacture of doorsets applicable to the UK, are given in BS 8529 and PAS 23-1.
- E1.10.3** BS 6375 is the national application document for the UK and gives performance requirements and guidance for the selection of appropriate classes of performance drawn from BS EN 14351-1.
- E1.10.4** BS ENs 1627 to BS EN 1630 have been published and LHC recognizes a period of transition is still applicable with regard to PAS 24 and BS 7950.
- E1.10.5** It is also likely that revisions to the Building Regulations will be implemented during the life of this arrangement. Appointed companies shall be expected to have exercised sufficient preparations to enable full conformity when any revisions come into effect.

E1.11 Product, performance and specification requirements

The provision of LHC evaluated external doorsets is a mandatory requirement for this proposed arrangement.

All external doorset products offered, including their constituent materials and parts, shall satisfy the requirements set out in this Section E1 and shall have characteristics of mechanical strength, dimensional stability and durability appropriate for their intended use.

E1.11 Specification for product //////////////////////////////////////////////////////////////////

E1.11.1 Product requirements and conformity

The external doorsets products offered, including their constituent materials, parts and manufacture, shall specifically meet the requirements set out in this Section E1.

- E1.11.1.1** All external doorset products shall meet the requirements relevant to that product within PAS 23-1^{Note 1} and be third party accredited for compliance to the Product Assessment Specification.

- E1.11.1.2** Doorsets that fall within the scope of BS 8529^{Note 1} shall meet the requirements of that standard.

- E1.11.1.3** Single and double leaf hinged external door assemblies providing enhanced security shall meet the requirements of PAS 24.

- E1.11.1.4** Doorsets shall be designated Secured by Design or equal equivalent approved, where applicable.

Note 1 – See Clause E1.10

E1.11.2 Weather performance

Doorsets offered will need to meet a minimum 800 Exposure Category as classified in BS 6375-1: 2009, Table 1, which is reproduced below:

| Exposure Category | | | |
|-------------------|------------------|-----------------|--------------------|
| | Air permeability | Water tightness | Resistance to wind |
| 800 U | Class 0 | Class 0 | Class A2 |
| *800 X | Class 1 | Class 2A | Class A2 |
| 800 | Class 2 | Class 3A | Class A2 |
| 1200 | Class 2 | Class 3A | Class A3 |

*For door assemblies with accessible (low) thresholds

The exposure categories of doorsets offered shall be declared where appropriate in Section E2. This declaration shall be supported by UKAS accredited third party certification.

The LHC C6 Arrangement will allow users the opportunity of selecting higher levels of specification and performance when required. To meet the requirements of Part M of the Building Regulations, appointed companies are requested to consider the special exposure category for level threshold access at principal entrance doors, which may be generally as Category 800X.

E1.11.3 With reference to the updating of standards, your attention is drawn to the requirements of Clause E1.10.

E1.11.4 Third party (UKAS accredited) product and performance accreditation (eg Kitemarking, BM TRADA) certifying conformity to the standards mentioned E1.11.1 will be required and full schedules are to be enclosed with your offer.

E1.11.5 References are made within Sections E1 and E2 to Building Regulations conformity. Whilst these are taken from requirements within the Building Regulations for England and Wales, companies tendering to service this arrangement in Scotland should ensure the equivalent conformity to the requirements within the Building (Scotland) Regulations, where appropriate.

E1.11.6 Energy efficiency

For applicable situations, as a minimum requirement, all doorsets shall be able to meet the energy efficiency provisions of the Building Regulations Part L / The Building (Scotland) Regulations Section 6 for both existing and new buildings

FENSA registration or an alternative approved form of Building Regulation compliance self-certification scheme will be required of all appointed companies in order to demonstrate their competence to manufacture and install door assemblies in compliance with the Building Regulations.

E1.11.7 Enhanced security

External doorset applications will almost exclusively demand enhanced security options and will require PAS 24 / Secured by Design accreditation. For any applications where enhanced security is not a requirement (eg storage or utility outbuildings), alternative specifications will be accepted upon the client's approval.

E1.12 Scope and requirements of products to be offered

E1.12.1 You may offer one or more door leaf construction systems that fall within the scope of PAS 23-1. Within E2.7, you are asked to list the range of products offered for consideration.

Your principal product, however, should be available in the minimum range of door patterns and colours shown in E1.12.3.

All products offered shall include the option of sidelights and fanlights.

Fire rated door assemblies of at least FD30 designation and smoke check door assemblies for external locations or for entrances to corridor access flats shall be offered.

In all cases, the core material shall be as such to provide the chosen specification requirements of strength, stability, durability, thermal performance and fire rating.

External doorsets will be required to be unglazed or glazed with insulating glass units (IGUs) all meeting the Building Regulations requirements for Part L.

E1.12.2 Composite construction

Door facings used in composite doorsets may be of the following materials:

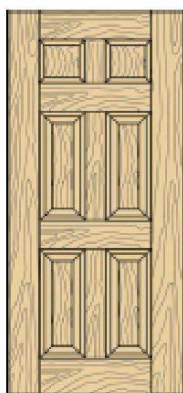
- Thermoplastic
- Fibre-reinforced thermoset (FRT)
- Steel
- Aluminium

The door carcass material used may be of:

- Unplasticized polyvinyl chloride (PVC-U)
- Aluminium,
- Steel sheet or box section
- Solid timber
- Engineered timber

E1.12.3 Door leaf patterns and colours

The minimum range of door leaf patterns shall be as illustrated below (Types A to G).



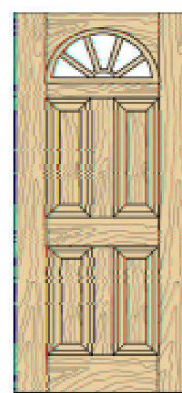
Type A



Type B



Type C



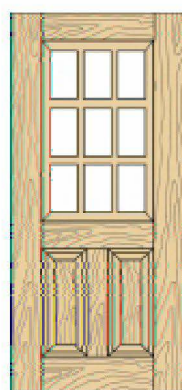
Type D



Type E



Type F



Type G

In all products, facings shall be through-coloured to include white, red, blue and green as a minimum option.

E1.12.4 Product source

External doorsets offered should be those manufactured by the tendering company and meet the requirements set out in this Section E1.

E1.12.5 Product accountability

Full details of the doorset products must be submitted with this tender and the appointed company will be ultimately responsible for the supply of the product. If the product is selected by the LHC, the manufacturer will be bound to the maximum agreed prices and level of specification. These may only be changed during the course of the arrangement with the prior approval of the Sponsoring Officer. If this requirement is not observed, LHC selection of the product will be deemed to have been automatically withdrawn.

You are required to declare the range and details of products you are offering in Section E2.

You should ensure you fully understand the pricing criteria and method of scoring set out in Sections F1 and F2 when preparing your submission for products to be considered.

E1.13 Materials and components

E1.13.1 General

This offer shall be for external doorsets as specified in Section E1. Similarly, all accessories and ancillary products shall be as specified in Section E1 although these may be of other materials provided they meet the general performance requirements given.

E1.13.2 Consistency of product

Throughout the framework arrangement period all products, materials and parts supplied by an appointed company shall be consistent in quality and appearance, shall be obtained from reliable sources, and shall conform with the product specification as agreed between the Sponsoring Officer and the appointed company. Deviations from this specification will be permitted only after written approval from the Sponsoring Officer, who at his sole discretion, may require additional testing, the cost of which is to be borne by the system manufacturer and/or appointed company, if a characteristic of major importance is likely to be affected.

E1.13.3 Conformity

As a minimum requirement, conformity to the relevant British and European standards will be stipulated. Tests for those essential product accreditation requirements set out in E1 will need to have been undertaken in accordance with the relevant British Standard or Product Assessment Scheme and by a UKAS (United Kingdom Accreditation Service) approved testing body.

In Section E2, you will be asked to substantiate such conformity with supporting information such as third party accreditation where applicable.

E1.13.4 Timber sourcing and sustainability

Softwood and hardwood will not be permitted in any offered product, including wood based panel products, unless it is shown to be from sources currently certified by the Forest Stewardship Council (FSC) as sustainably managed sources.

In E2.15 you are requested to provide evidence of sourcing and FSC certification.

E1.14 Detailed product requirements

E1.14.1 Door frame and door carcass materials

The materials used in the construction of the door frames and door carcass should conform to the appropriate product standards listed in Sections 5.1 (Door frame) and 5.2 (Door carcass) of BS 8529.

E1.14.2 Wood based panels

Wood based panels on or in door leaves should conform to the appropriate requirements of:

- BS EN 300, for oriented strand board;
- BS EN 312, for particleboard;
- BS EN 622, for fibreboard;
- BS EN 635, for plywood.

E1.14.3 Door leaf

In all cases (whichever construction systems are offered) the door leaf shall comply with the relevant section(s) of PAS 23-1 in every aspect applicable.

When positioned, the leaf should move freely and smoothly without hindrance throughout its intended range of movements.

E1.14.4 Glass and glazing

Doorsets shall be glazed in accordance with the recommendations given in the relevant parts of BS 6262-4 and BS 8000-7.

E1.14.4.1 Glazing units

This offer shall include for doors glazed with hermetically sealed insulating glass units (IGUs) complying with the Construction Products Directive requirements, BS EN 1279 and requirements of BS 6262. A third party certification system shall also be in operation to ensure full conformity with the requirements of BS EN 1279, including where IGUs are gas filled.

E1.14.4.2 Glass types

Glass in door leaves, sidelights and fanlights shall meet the performance requirements for thermal insulation and impact safety, relevant to the location of the glass, set out in Approved Documents L and N of The Building Regulations. This will include the need for safety glass to be impact tested (see E1.14.4.3).

Glass in fire door assemblies including any sidelights and fanlights shall meet the relevant requirements of Approved Document B of The Building Regulations in respect of FD30S (and if offered) FD60S doors.

Glazing providing enhanced security to PAS 24 and Secured by Design requirements should be available.

'Low E' glass will be required to achieve the U-value requirements contained in Part L of the Building Regulations in doors and screens.

E1.14.4.3 Safety glass

To comply with the Building Regulations Part N regarding glazing in hazardous locations, all safety glass used shall conform, and be third party accredited, to the following:

- BS EN 12150 for toughened safety glass
- BS EN 14449 for laminated safety glass
- BS EN 12600 for the pendulum impact test method

Glass shall be indelibly marked with the details of the accredited conformity so that the marking is clearly visible after installation.

E1.15 Hardware specifications – General

E1.15.1 Doorsets shall be supplied with all necessary hardware to ensure they operate satisfactorily and in accordance with the performance requirements set out within this Section E1. Where such accessories are to be supplied loose for site fixing, fixing instructions shall be provided for each individual item supplied. Hardware shall also be replaceable without removing the outer frame from the structure of the building. Hardware which will be exposed during site storage and installation shall be wrapped for protection.

E1.15.2 Unless specifically requested by the client/specifier, all visible items of hardware supplied shall match in style, colour and shading for each individual doorset supplied.

E1.15.3 The choice of hardware is left to the manufacturer's discretion but must conform to the requirements of BS 8529 / PAS 23-1. In particular, all hardware shall have at least the equivalent corrosion resistance of BS EN 1670 grade (class) 3 (96h) when subjected to a neutral salt spray test as specified in BS EN ISO 9227.

E1.15.4 The classification for performance, operation and strength characteristics of the doorsets shall be as set out in BS 6375-2. Each specified application should be assessed and the performance characteristics satisfy the categories of use for the UK as illustrated in Table 3 of the standard.

E1.15.5 For fire rated doors, the guidance on essential and non-essential hardware contained in Annex A of BS 8214 should be followed.

E1.15.5 The method of fixing all items of hardware shall be in accordance with the manufacturer's specification and instructions so as to achieve optimum performance and durability. Compliance with BS 8529 shall also be achieved on composite door products.

- E1.15.6** Appointed companies shall have the ability to provide a range of hardware to assist people with special needs.
- E1.16 Hardware specifications – Detailed**
- E1.16.1 Handles**
Handles should be lever/pad or lever/lever complying with the requirements of BS EN 1906 in all relevant aspects.
For enhanced security, conformity and third party accreditation to PAS 24-1 should be achieved and Secured by Design accreditation where stipulated by the client.
- E1.16.2 Cylinder locks**
Cylinders should meet the requirements of BS EN 1303 in all relevant aspects. For enhanced security, conformity and third party accreditation to PAS 24-1 should be achieved and Secured by Design accreditation where stipulated by the client.
- E1.16.3 Hinges**
Hinges shall meet the requirements of PAS 23-1 and BS EN 1670 corrosion resistance as specified in E1.15.3 and be able to conform to the operational durability and strength characteristics set out in E1.15.4.
- E1.16.4 Letter plates**
The size and design of letter plates (with particular reference to the aperture and any internal protector or limiter) should satisfy the enhanced security requirements of PAS 24 / Secured by Design.
The installation of letter plates in fire doors is not always endorsed by Fire Officers and specialist fire consultancies. However, should it be a client's requirement, full acceptance by the fire authority, compliance with BS 8214 and third party testing accreditation should be provided.
- E1.16.5 Door viewer and chain**
Unless specifically requested otherwise by the specifier or client, each front door shall be provided with a wide angle of vision (min 70°), have a maximum diameter of 19mm, and shall be C.P. Brass, Aluminium, white powder coated or as specified by the client / specifier. The viewer shall be fitted with an internal swivel cover to prevent light emission and viewing from outside. The door viewer shall be positioned at a height to suit the occupant's requirements. Special consideration should be given to occupants with visual impairments.
Unless specifically requested by the specifier / client, all front doors are to be fitted with a security chain, with fixings to be strictly in accordance with the manufacturer's instructions. Chains are to be fixed at 1440mm from the bottom of the door.
- E1.17 Hardware – other requirements**
- E1.17.1 Handover instructions**
The appointed company will be required to provide the client / resident with a set of clear operating instructions and these must explain the key locking process in simple terms together with a diagram illustrating the locking process. In particular means of escape and security facilities must be emphasised prior to handover.
- E1.17.2 Hardware suppliers**
All components should be supplied by a manufacturer complying with BS EN 9001:2000 accredited quality system, or similar proven quality management system, and be covered by the manufacturer's 10 Year Audited Warranty Scheme. A warranty certificate is to be issued by the hardware manufacturer on completion of the project.
- E1.17.3 Adaptions for disabilities**
Components such as handles and locking mechanisms are to be capable of offering adaptations in accordance with the Disability Discrimination Act Part 3 2005 and the housing providers Disability Equality Duty 2006.

E1.17.3 Security

Doorsets offered will be required to achieve enhanced security performance (unless specifically requested otherwise by the client) which shall be tested and classified in accordance with PAS 24 by third party accreditation.

Certification of conformity to Secured by Design is commonly required by LHC clients and is therefore considered preferential in the offer of this arrangement.

Reference should also be made to the recommendations of BS 8220-1 – 'Guide for security against crime' – and BS 6375-3

Note: BS ENs 1627 to BS EN 1630 have recently been published and LHC recognizes a period of transition is still applicable with regard to PAS 24 and BS 7950 (see E1.10). However, conformity to the requirements of these standards will be required during the period of this arrangement.

E1.17.4 Specialist hardware

Hardware for specialist applications such as on emergency escape routes and for residents with impaired mobility will be required.

For escape route hardware, the requirements of BS 6375-3 (and its referenced standards) should be followed.

For impaired mobility hardware, the guidance given in BS 8300 – 'Design of buildings and their approaches to meet the needs of disabled people. Code of practice' – should be followed.

E1.18 Manufacturing tolerances for door leaves and frames

E1.18.1 For composite doorsets, the requirements set out in BS 8529 shall apply. For other door leaf construction types, the requirements of PAS 23-1 shall apply.

E1.18.2 Notwithstanding E1.18.1, when measured in accordance with BS EN 951 the overall height and width of the door leaf shall be within ± 3 mm, and the thickness shall be within ± 1 mm, of the nominal dimension.

When measured in accordance with BS EN 952 the deviation from flatness of the door leaf shall not exceed 4 mm for bow and twist, and 2 mm for cup.

Frames, with or without sidelights or fanlights, shall be capable of being installed with a maximum difference of 4 mm in the dimensions of the diagonals.

E1.19 Appearance and finish

E1.19.1 For composite doorsets, and as parameters for other forms of doorsets construction, the guidance for appearance and finish – including visual assessment, measurement and allowable variation – as set out in BS 8529, shall be applied. The stipulation for consistency of hardware finish and appearance set out in Clause E1.15.2 shall also be noted.

E1.20 Cills, trims and other ancillary products

A range of ancillary products such as cills, trims, cover strips, etc will be expected to be included as part of the product package. The appearance, performance and life expectancy shall be the same as the doorset product they form part of.

Trims should be either colour matched or to the client's specification. Cellular PVC-U trims should conform to BS 7619.

E1.21 Level entry door thresholds

Level entry door thresholds must be provided on products to facilitate the requirements of Building Regulations Part 'M'.

E1.22 Safety in case fire

E1.22.1 Doorsets incorporating design features necessary to accommodate the requirements of Building Regulations Part B shall be offered as part of the product range.

The operation of doors shall take account of, and be able to satisfy, the relevant parts of BS 5588, 'Fire precautions in the design, construction and use of buildings' and BS 9999.

Fire doors shall be rated, identified and tested as set out in BS 8214 – 'Code of practice for fire door assemblies'.

E1.22.2 In E2 you will be asked to detail the range of fire doors and screens you will offer – for FD30/FD30S and FD60/FD60S ratings. These should be supported by direct third party

accreditation relating specifically to the testing and rating of that product in all aspects of pattern, size, construction and hardware.

It is acknowledged that products are sometimes rated as “assessed” in respect of their expected fire rating. This assumes the product will be fabricated and installed in accordance with declared modifications to similar previously tested doorsets. These may only be used and declared with the clear understanding and acceptance from the client; who may, in turn, wish to consult with the area Fire Officer or chosen fire professional. It may also be a requirement for additional tests to be carried out and the responsibility for fees and charges for such tests shall be agreed with the client prior to any commencement of testing.

E1.22.3 It is critical that the fixing of fire doors ensures the performance of the product will not be impaired or lessened in any way from its certified rating. To that end, the guidance given in BS 8214 should be followed.

E1.22.4 The Sponsoring Officer reserves the right not to accept hardware that he may consider difficult to operate by some users under circumstances of duress in the event of a fire.

E1.23 Thermal performance

E1.23.1 All door assemblies, including any sidelights and fanlights, must achieve the U-value requirements of the applicable Part L (L1 and/or L2) of the Building Regulations.

It is likely that there will be further revisions to Part L within the life of this arrangement and conformity to these will be a requirement when applicable (see E1.10.5).

E1.23.2 Appointed companies will be required to provide, on request, the data and calculations to verify that a door assembly for a particular project will satisfy the thermal performance requirements of the applicable Approved Document Part L of the Building Regulations.

E1.23.3 All appointed companies providing an installation service shall be members of an existing competent persons scheme (see E1.28) in order to demonstrate their competence to install door assemblies in compliance with the requirements of Approved Document L of the Building Regulations.

E1.24 Manufacturing tolerances

The manufacturing tolerances of the door leaf and frame shall be as set out in the product's respective Annex within PAS 23-1. For doors of composite construction, the manufacturing tolerances stated within BS 8529 should be achieved.

E1.25 Installation and fixing

E1.25.1 Specification for site operations

This part of Section E1 sets out the requirements for the service which users will expect from an LHC appointed company and describes the LHC requirements for the measurement, installation and fixing of doorsets in those cases where the appointed company is employed as a sub-contractor or main contractor.

The survey and installation of doorsets under this arrangement shall be carried out in accordance with the appropriate clauses of BS 8213-4, 'Code of practice for the survey and installation of windows and external doorsets'. The guidance contained within the code of practice shall be applicable in both new build and replacement situations.

The installation of fire door assemblies shall be in accordance with the guidance given in BS 8214.

The LHC requirements for the installation and fixing of replacement doorsets are, in a number of cases, in excess of, at variance with, or more precise than those in BS 8213-4. Such requirements are stated below. You should take careful note of these requirements since your prices in Section F are required to allow for full compliance, unless qualification is made in Section E2.

Notwithstanding BS 8213-4, the specifier will normally have assessed the condition of a structure which is to receive replacement or new doorsets and will provide the appointed company with adequate details at the time of the enquiry. Where such assessment has not been carried out by the user, the appointed company shall indicate this fact in the project quotation.

Over and above conformity to BS 8213-4, preference will be given to companies who have achieved Kitemarking as an additional third party accreditation.

Requirements relating to project administration, supervision and support services expected to be offered by appointed companies are detailed in E1.29.

E1.25.2 Survey and pre-installation requirements

E1.25.2.1 Design of doorsets

The edge profile of the doorset and screen assemblies (if applicable) shall be so designed as to permit satisfactory installation into the structural opening. The doorsets offered for this arrangement shall be able to cater for the wide variety of building forms likely to be encountered on projects making use of LHC components. Circumstances may arise where the offered components will require adaptations and where special trims and extension profiles will have to be used. Any adaptations to the doorsets offered shall not affect the performance of the components and, if the performance is likely to be affected, the appointed company shall inform the specifier in writing at the time of submitting a project quotation.

The appointed company may be required, on any projects, to submit to the specifier design proposals at budget stage and detail drawings for approval once an order has been placed, but the specifier must be ultimately responsible for the choice and detailed specification of doorsets.

E1.25.2.2 Measuring for production purposes

With particular regard to replacement doorsets installations, the responsibility for the taking of site measurements for production purposes shall be clearly defined on each project and will be identified in project quotations. Normally the appointed company will be expected to take full responsibility for site measurements on a project.

Where the appointed company is responsible for the taking of site sizes, this shall be done as a separate operation from the taking of site measurements for estimating purposes.

E1.25.2.3 Planning the work

The installation of replacement doorsets is often undertaken when the property is occupied. For this reason it is important that the appointed company works closely with the specifier (or specifier's representative) to plan the work so that the occupants will be subjected to the minimum of inconvenience. This is particularly important with regard to the preparation of the property where the resident may, for example, have impaired mobility.

The guidance contained in BS 8213-4, Clause 7.1 should be followed.

E1.25.2.4 Transportation, storage and protection of products

Doorsets shall be secured during transportation and delivered to site undamaged. Units shall be carefully handled during unloading and distribution on site to avoid any racking or twisting of the frame and damage such as scraping caused by dragging along the ground.

Units shall be kept secure and under cover, preferably in an enclosed area such as a storage container. They shall be kept clean at all times avoiding excessive wetting and splashing with mud, plaster or cement. Components and materials shall not be left unattended for long periods of time – eg overnight – where they may be subjected to damage or theft.

The guidance contained in BS 8213-4, Clause 7.1 should be followed.

E1.25.2.5 Instructions for handling, storage, installation, operation, cleaning and maintenance

Companies will be required to submit to users and main contractors, in a format suitable for use on building sites, detailed recommendations and instructions, covering the following points:

- Unloading
- Site handling
- Storage and protection
- Installation
- Accommodation of building inaccuracies
- Operation
- Cleaning
- Maintenance

E1.25.2.6 Safety on site

A significant proportion of projects carried out under this LHC framework arrangement will involve dwellings occupied by elderly residents such as residential homes and sheltered accommodation, or schools and colleges occupied during term time by children and young people. It is therefore

important that the appointed company pays particular attention to the safety aspects of site performance.

Installers must be sympathetic to any impaired mobility of residents and lack of awareness of children, and not obstruct walkways and access areas or present any possible hazards during work.

The appointed company shall demonstrate a planned approach, including full resident and client liaison. The company's representatives and operative shall also have visible means of identification.

Current health and safety at work legislation in respect of site practices shall be followed at all times. In particular, the appointed company will be legally responsible for conforming to the requirements of the Construction (Design and Management) Regulations 2007 including the notification of a project (F10), where required. Your attention is also drawn to your responsibility on site in respect of risk assessments which might identify a need for increased levels of protection in certain situations.

Site operatives shall have the necessary training in the safe use of tools and have the full complement of personal protective equipment at all times.

The guidance contained in BS 8213-4, clause 7.2 should be followed.

E1.25.2.7 Supervision of work

Effective site supervision is considered to be a key factor in the execution of a successful project. The appointed company must ensure in every case that the components supplied are consistent with the product specification agreed with the Sponsoring Officer and that the installation is carried out in accordance with these LHC requirements and with the details agreed with the specifier. However, ultimately it is the specifier's responsibility to ensure that the doorsets on a project and the methods of installation employed by the appointed company comply with the project specification and are satisfactory for their intended use.

Note:

LHC's preference is for the completion of a 'pilot' unit to be fitted so that agreement can be obtained from the specifier as to the suitability of product (including all hardware) and the standard of installation. An LHC Technical Officer may also be present to ensure conformity with the arrangement specification and client requirements.

All projects will require permanent attendance on site of a qualified site supervisor employed by the appointed company. For larger programmes, and those requiring more specialist site management skills (eg residential care homes, schools or colleges), the site supervisor would need to have a proven competence in managing all aspects of the project including programming, site performance and client liaison. On smaller projects this may be a nominated competent installer empowered to make prompt decisions on behalf of the company and inform the specifier of any difficulties arising which may require instructions to be issued. In such cases, the appointed company will be expected to employ a contracts (or sites liaison) manager who shall have overall responsibility for the delivery and quality of installation on these sites. To do this effectively, regular visits by the contracts manager of at least once a week would be considered necessary as well as on-going progress updates.

E1.25.2.8 Site liaison with LHC

LHC provides a site liaison service for the client to ensure the products delivered to site and the installation works undertaken are compliant with the framework arrangement specification. This service also helps identify any technical issues that may need addressing and provides additional feedback, which is often useful to the appointed company. Each site visit (by an LHC Technical Officer) results in the preparation of a report made available to both the client and supplier.

In respect of this service, the appointed company will be expected to nominate a senior manager who will be a direct contact for the Technical Officers. This person should be in a position to report on the progress of LHC projects and have the authority to quickly and positively address any site or contractual issues that may arise.

E1.25.2.9 Preparation of property

On each project, unless the appointed company is instructed to remove furniture and fittings from areas where they might be damaged during installation, this will be arranged by the specifier. However, moving furniture within a room to prevent damage shall be deemed to be part of the general installation operation and the appointed company shall ensure that such moving is carried out carefully and to the satisfaction of the occupant.

Sufficient protection using clean dust sheets or other protective covering should be used to avoid needless dirtying or damage to floor coverings and decorations. These should be taped down to prevent any trip hazard. In addition, all furniture, fittings, and curtains which remain in the work area shall be protected by the appointed company.

E1.25.3 Removal and installation

E1.25.3.1 Removal of existing doorsets

This shall be in accordance with BS 8213-4, Clause 7. Every effort shall be made to minimize inconvenience to the resident or building user.

Old doorsets shall be taken directly to the outside of the building, utilising a safe working platform as necessary. On no account should broken or damaged glass be allowed to cause a hazard to residents or the general public.

Materials should be prepared for re-cycling wherever possible.

E1.25.3.2 Preparation of structural opening

The structural opening shall be cleared of all dust and debris. If the removal of the doorset has damaged the damp proof membrane and loss of weathertightness is likely, the final detail shall be considered and, if necessary, appropriate remedial work carried out to ensure the resistance to the passage of moisture has not been compromised.

Any loose or damaged masonry should be repaired and made suitable to receive the replacement frame.

E1.25.3.3 Position of new doorset in the structural opening

The position of the new units within the structural openings will be a matter of discussion for each project between the specifier and the appointed company. Generally, the frame should be positioned centrally within the aperture, plumb and square without twist, racking or distortion.

However, and notwithstanding the varied nature of the work likely to be undertaken, the guidelines contained in BS 8213-4, Clauses 8.7 and 8.8 shall be followed.

E1.25.3.4 Fixing the doorsets

Fixing of doorsets shall be in accordance with BS 8213-4, Clause 8. In particular, the following specific requirements should be noted:

- Doorsets, when fixed directly into the structural openings, or when fitted into new surrounds, shall be secure against applied loadings. The fixings shall be of a material and diameter related to the loading. Wherever practicable, all four sides should be secured.
- Fixings shall not be more than 600mm apart and corner fixings shall be between 150mm and 250mm from the external corner. There should be a minimum of four fixings on each jamb
- Head fixings can sometimes prove problematical with the presence of pre-cast concrete or steel lintels and the use of expanded polyurethane foam is permitted on frame widths up to 1200mm. However, foam fixings shall never be used as the sole method of fixing the entire frame into the reveal. The guidance given in BS 8213-4 should be followed.
- Installation packers that have been designed for the purpose shall be used adjacent to fixing positions to prevent distortion of the outer frame during installation. Guidance given in BS 8213-4, Clause 8.7.5 should be followed.
- Temporary wedges should be used to set the door frames in the structural openings and be removed when the fixings are secure.
- Other fixing devices, such as lugs, may be used where appropriate but these must be fit for purpose and endorsed by the system supplier.
- Door frames shall be secured with expanding bolts or other high grip devices which have a minimum penetration of 50mm into sound material.
- Fixings shall not be left protruding from the face of the frame member and shall be fully engaged with the sleeve.
- To minimise possible distortion of the frame, fixings shall not be over-tightened.

E1.25.3.5 Mechanical frame fixings

All materials used, together with the method of fixing, shall comply with the requirements set out in BS 8213-4. Fixings shall be at least as corrosion resistant as Grade 3 within BS EN 1670.

All fixings shall be of a material compatible with other materials they come into contact with and unlikely to cause electrolytic or any other bi-metallic reaction.

E1.25.3.6 Foam fixing and filling

Where foam is used it shall be self-expanding polyurethane. The use of foam for fixing and filling on the installation shall be carried out in a manner identical in all respects with the requirements of the BS 8213-4 noting that foam fixing should under no circumstances be used as the sole method of fixing the entire frame into the reveal.

Expanding polyurethane should be used as necessary to provide a suitable backing material for the perimeter sealant allowing the correct curing time before application of the sealant. Care should be taken to avoid distortion of the outer frame members as described in BS 8213-4.

For fire doors installation, the use of intumescent (fire check) foam should be considered taking account of the guidance given in BS 8214 and advice of the area officer or chosen fire professional.

E1.25.3.7 Glazing

All glazing shall be in accordance with BS 6262, using the methods and materials specified in this Offer Document. See also BS 8213-4, Clause 8.9.2 and BS 8000-7.

Manufacturers and installers need to be fully aware of the requirements of the Manual Handling Operations Regulations 1992 (as amended 2002) when offering factory glazed products.

Attention is also drawn to the glazing safety recommendations of BS 6262-4, particularly the requirements for marking the glass.

E1.25.4 Finishing works

E1.25.4.1 Making good

The removal of existing doorsets and the installation of new ones shall be undertaken with sufficient care and attention to minimise the amount of internal and external making good required. If asked to advise, the LHC will not support claims for additional cost when it is apparent that sufficient care had not been taken.

Unless the specifier issues instructions requiring making good to be carried out by others, the appointed company shall make good structural openings and plaster and render disturbed by the work done, including immediately adjacent redecoration or the use of coverstrips.

Note:

Doorsets installation base prices shall allow for a suitable external sealant, with backer material if necessary, and a suitable internal sealant in accordance with the guidance contained within BS 8213-4, clause 8.10. Alternative methods of making good will be priced separately but the actual work required on each site shall be confirmed with the specifier before work commences and a price agreed based on tendered rates.

E1.25.4.2 Perimeter sealing to the structural opening

This shall be in accordance with BS 8213-4, Clause 8.10. Reference should also be made to BS 8000-16, 'Workmanship on building sites – Code of practice for sealing joints in buildings using sealants'.

For external finishing, the sealant to be used in conjunction with doorsets and surrounds shall be one-part, low modulus, neutral curing silicone to BS EN ISO 11600.

The sealant should be applied against a firm backing so that it is forced against the sides of the joint during application.

The internal finish shall be neat and tidy, preferably finished with a one-part water-based acrylic sealant or silicone where appropriate, used in accordance with the manufacturer's instructions. The use of decorator's caulk is not encouraged due to the risk of both impact and thermal movement of the frame.

Plastics cover moulds and beads should also be used as necessary and fitted in accordance with the manufacturer's instructions.

E1.25.4.3 Site clearance

On completion, the products should be cleaned and checked. In addition the appointed company will be responsible for the clearance of all debris arising from the removal or installation processes.

E1.25.5 Completion and handover

E1.25.5.1 Completion of works

The acceptable execution and completion of all works to the client's satisfaction is paramount to the service offered by LHC. In serving this arrangement, it is expected the appointed company will share that commitment and this will include completion of projects with minimal or zero snags and carrying out any necessary remedial works within a reasonable or pre-agreed defects liability period.

Attention is drawn to Clause E1.25.2.8 with particular regard to the involvement of the LHC Technical Officers in the completion of any reported remedial actions.

E1.25.5.2 Final inspection

The appointed company shall check and ensure that all products function correctly in accordance with BS 8213-4, Clause 8.11, making particular reference to Annex A.

E1.26 Operating and maintenance instructions

E1.26.1 Operating instructions

On completion the appointed company shall ensure that the resident/building user is fully aware of the means of operating the door hardware, and issue an appropriate leaflet. This is particularly important in the case of egress and security.

E1.26.2 Maintenance instructions

The appointed company shall also advise on suitable materials for the cleaning and maintenance of the doorsets and hardware and the recommended frequency of cleaning.

E1.27 Guarantees, warranties and maintenance

E1.27.1 Guarantees

LHC requires that an independent 10-year guarantee on all elements of the doorsets be offered to users where units have been supplied and fitted. This is considered to be an Essential Requirement to the arrangement.

Note:

The cost of the guarantee should be included in the prices offered under Section F of this document.

Guarantees for longer periods may also be offered at the appointed company's discretion and insurance backing made available to the customer, if requested.

E1.27.2 Performance warranties

Notwithstanding the guarantees offered, all items shall be covered by warranty effective for at least 12 months after the date of final signing-off or practical completion.

E1.27.3 Availability of parts

A guarantee of availability of parts for a period of at least 10 years shall be provided in respect of all items offered.

E1.27.4 Maintenance services

The availability of an ongoing maintenance service to LHC Network customers would be desirable. This could be operated in-house, via a third party company under the control of the appointed company or through Mila Window and Door Maintenance Division.

E1.28 Building Regulations Self-Certification

The appointed company should be registered with one or more of the existing competent persons schemes for replacement windows and doors as approved by the Department for Communities and Local Government (currently FENSA, BSI, BM TRADA and CERTASS Ltd).

E1.29 Administration procedures and support services

E1.29.1

Experience suggests that the smooth running of a project depends on good liaison between the specifier, the supplier's representative and the supplier's commercial department.

Effective and efficient procedures for all operations from project enquiry receipt through to the storage of records for guarantees and future maintenance will be expected to be in established operation. These will include processes for:

- project registration and recording
- project tracking
- preparation of quotations
- client and Resident liaison
- Residents' choice exercises
- manufacturing process including progress tracking
- installation programming including Resident and client communication
- dispatch procedures
- keeping of project records including for guarantees and future maintenance

With the recognition that site performance is a key element to the operation of this arrangement, attention will also be paid during the assessment to the procedures in place for:

- office to site communication and reporting including progress updates, project supervision and dealing with specific site issues
- correcting delivery shortfalls or errors, including timescales
- signing off / handover inspections and procedures
- collection of KPIs and satisfaction feedback information

E1.29.2 Notice for deliveries / attending site

It is envisaged that users of this arrangement will require doorsets to be delivered and installed:

- in single consignments, if the site allows enough space for a compound, or more usually
- in split consignments, if the site is spread over a large area or for contractual or programming reasons, not less than one dwelling-lot

The periods of notice in working days from the receipt of written order or agreement of final drawings and details, whichever is the later, required in relation to any project for:

| | |
|---------------------------------------------------|---------|
| Attending site to take manufacturing sizes | 7 days |
| Delivery/fixing in one consignment | 30 days |
| First delivery/fixing of a split consignment | 30 days |
| Postponement of deliveries/fixing | 10 days |
| Change of rate of call-off (increase or decrease) | 20 days |

E1.29.3 Sales and service

Quotations for projects shall be provided on request in accordance with the terms, conditions and pricing structure agreed between the appointed company and the Sponsoring Officer as the basis of the framework arrangement. The period of time required to issue a quotation from receipt of initial enquiry shall be within 3 weeks provided that the user's brief adequately describes the work required.

E1.29.4 Measured Term Contract

Occasionally, some users operate a Measured Term Contract for maintenance and repair requiring either the 'supply only' or 'supply and fix' of a small number of doorsets within a short time period.

E1.29.5 Technical and design assistance

E1.29.5.1 Technical advice and project support from the LHC Appointed Companies are major considerations for most customers, particularly where they are not able to commit full services of their own. Successful Appointed Companies will be required to offer reasonable technical support and advice free of charge to all LHC customers and in E2.19 you are asked to confirm that you will offer such support on LHC projects.

The following categories of service from Suppliers' representatives will be important:

- Establishing a brief and interpreting client requirements
- Presentation of alternative solutions
- Provision of alternative budget costings and assistance in 'Value Engineering' to achieve cost efficiencies

- Providing technical advice and solutions on Building Regulations and other regulatory requirements
- Monitoring progress on site and reporting to the client in order to achieve agreed targets
- Representatives' skill and experience, quantity and quality of information provided and effectiveness of communication between representative, client and factory will be key criteria
- Provision of support for Residents' choice exercises
- Provision of samples, putting on presentations at Residents' meetings etc should be accepted as part of the LHC appointed company's service

E1.29.5.2 The Appointed Companies shall be able to provide supportive design and technical advice on issues such as:

- Planning and Resident / Leaseholder consultations
- The performance and operation of doorsets (including thermal, security, egress, access for the disabled, glazing safety)
- Interpretation and conformity to Statutory Requirements
- Design advice and solutions on the use of doorsets (including safety in use)

E1.29.5.3 Project quotations

Project quotations issued to LHC clients under this arrangement will be expected to be informative, fulsome and without ambiguity.

The criteria expected of LHC appointed companies' tender responses in quotations would be:

- Accurate interpretation of the specification requirements
- Transparency in possible additional costs including whether inclusive of management charges, site logistics etc.
- Overall clarity of information without ambiguity or possible additional cost implications
- Fully itemised descriptions of all components including schedules and details of hardware options, finishes and glazing
- Illustrations showing door types including patterns and finishes
- Informative as to technical options and solutions
- Informative as to regulatory requirements and proposals for conformity
- Accuracy in formulating and presenting the final total contract sum

E1.30 Safety

E1.30.1 Doorsets, screens (where applicable), their materials and component parts shall be inherently safe for the user. The Sponsoring Officer will not accept door designs incorporating sharp edges or features which may be dangerous for the user.

All doorsets offered shall comply with the requirements for safety given in BS 8529, BS 6375-2 and BS 6375-3.

All areas of glazing design and application shall comply with the requirements of BS 6262 and its associated parts.

Compliance must also be achieved with the Building Regulations Part B: Fire safety and Part N: Glazing safety.

E1.30.2 Safety in case fire

Refer to Clause E1.22

E1.30.3 Safety glass

Refer to Clause E1.14.4.3

E1.31 Durability

The doorsets offered shall have a minimum service life of 30 years as referred to in BS 7543 – 'Guide to durability of buildings and building elements, products and components'.

The Sponsoring Officer accepts that depending on the level of specification, use and exposure, some component parts may need to be replaced during the service life period (see also Clause E1.27 – 'Guarantees, warranties and maintenance').

With regard to doorsets hardware, as a guide, 'standard' fittings should be capable of 15,000 operations in conditions simulating actual use without sign of excessive wear and those items

offered as 'higher performance' should be capable of 30,000 cycles in conditions simulating actual use.

E1.32 Marking

All composite doorsets shall be marked in accordance with the requirements of BS 8529.

Additional marking confirming conformity with PAS 23-1 for doors, may also be included.

Fire doors conforming to the requirements of BS 8214 shall be marked in accordance with Section 5 of the standard.

Glass shall be indelibly marked with the details of the accredited conformity so that the marking is clearly visible after installation.

Enhanced security products shall be marked to the requirements of PAS 24 and (where applicable) Secured by Design.

E1.33 Warranties and guarantees

LHC requires that an independent 10-year guarantee on all elements of the doorsets offered to users where units have been supplied and fitted. This is considered to be an Essential Requirement to the arrangement.

Note:

The cost of the guarantee should be included in the prices offered under Section F of this document.

E1.34 Product evaluation

E1.34.1 With reference to the requirements stated in this Section E1, tenderers will be asked to deliver a sample composite doorset to the LHC offices for an assessment of the quality of materials and components, workmanship, construction, finish and operation, as part of the tender evaluation.

Note

You are NOT required to submit the samples with these tender documents.

The sample will be of such a pattern to facilitate a cut away where appropriate showing sections through the door leaf and glazing system.

The sample should also illustrate and include the following –

- Frame construction including a top corner of the frame, and any seals
- Glazing system mounted in leaf
- Letter plate mounted in leaf
- Two hinges attaching leaf to frame – the sample should enable the swing of the leaf, and any adjustability on the hinges, to be demonstrated
- Standard threshold – the sample should include sill and part door leaf to enable the effectiveness of any threshold seal to be demonstrated

E1.34.2 The following attributes will be evaluated by the LHC Team and scored with equal weighting in Annex B, Schedule B1.

- Quality of appearance and finish
- General robustness of construction
- Scratch resistance and adhesion of finishes
- Fixing and operation of hardware
- Adjustability of hinges
- Quality and installation of weatherseals and gaskets

E1.35 Pricing

In Section F2 you will be asked to submit prices for products being offered, which will then be evaluated and ranked for Best Value.