



Scope of Work

For

External Doors Review and Replacement

At

National Oceanography Centre, Southampton, Waterfront Campus, European Way SO13 3ZH

for

National Oceanography Centre, Southampton

William Attwell & Associates St Clement's House, 27 Clement's Lane, London EC4N 7AE Tel: 020 3319 1725 www.williamattwell.co.uk

Registered in England and Wales, No. 4520800

# Table of Contents

1.	INTRODUCTION	3
2.	SITE SURVEY AND REPORT	4
3.	DESCRIPTION OF EXISTING INSTALLATION ON SITE	5
4.	PROPOSED WORKS	6
Z	1 Objectives	6
Z	2 Specific Requirements	8
5.	PROGRAMME	20
6.	PRICING	22
7.	APPENDICES	22
A	ppendix A – Site Survey Report	22
A	ppendix B – Manufacturers Specification Data Sheets	22
A	ppendix C – Site Submittals – NOC Policies and Permits	22
ŀ	ppendix D - Drawing	22

# 1. INTRODUCTION

National Oceanography Centre (NOC) has a requirement to refurbish all external steel and timber doors located on level 1 of the Southampton site. The need to undertake this project was recommended during a site condition survey undertaken by NOC in 2016

Tenders are invited from suitably qualified and experience Principal Contractors to undertake and complete the works detailed as part of this Scope of Works.

Site Plan reference



# 2. SITE SURVEY AND REPORT

The scope of this survey is to check the condition of the external doors located on the level 1 of the Science Building, Workshop Building, A1, A3, A5, A6, A7, A9, A10 building of the Southampton site, and to give recommendations for repair or replacement as appropriate. The survey was carried out by representatives of William Attwell & Associates on 31<sup>st</sup> October 2017.

At level 1 No. 94 door has been surveyed;

- No. 50 are located in the Science Building
- No. 24 are located in the Workshop Building
- No. 2 are located in the A1 Building
- No. 2 are located in the A3 Building
- No. 7 are located in the A5 Building
- No. 4 are located in the A6 Building
- No. 1 are located in the A7 Building
- No. 3 are located in the A9 Building
- No. 1 are located in the A10 Building

All parts of the doors have been rated, using the following (RICS) Condition Rating:

NI - Not Inspected

1 - No repair is currently needed. The property must be maintained in the normal way.

2 – Defects that need repairing or replacing but are not considered to be either serious or urgent. The property must be maintained in the normal way.

3 – Defects that are serious and/or need to be repaired, replaced or investigated urgently.

Full survey report attached as Appendix A.

# 3. DESCRIPTION OF EXISTING INSTALLATION ON SITE

All the doors have been subject to a visual inspection, each door part has been surveyed and rated following the RICS standards.

As expected the front sea doors have been found to be in poor condition, characterised by corrosion, scratches and finish deterioration. Door replacement is recommended for cost efficiency.

In areas of high traffic (busy areas), the doors have been found to be in acceptable condition, however maintenance is highly recommended to preserve the doors operation and appearance.

The remaining external doors have been found to be in acceptable condition, however maintenance is highly recommended to preserve the doors operation and appearance.

#### **Rated Doors Parts**

- ➤ Hinges
- Kick Plate (or Armour Plate)
- > Lock
- Door Closer
- ➤ Glass
- ➤ Finishes
- > Finger Plate
- > Handle
- > Material (door panel material, eg. Metal, timber)
- Finishes (door finishes, eg, paint, powder coated)
- > Wire (eg, cables, sensors, electric keypad, magnet lock, etc.)

# 4. PROPOSED WORKS

# 4.1 Objectives

## 4.1.1

NOC are seeking to engage the services of a suitably qualified and experienced contractor to undertake the role and responsibilities of Project Principal Contractor, to facilitate the completion of this project under the requirements of CDM 2015.

## 4.1.2

The Principal Contractor must:

- Prepare a Construction Phase Plan for the project
- The Principal Contractor will be required to liaise with the Lead Consultant/Principal Designer and the client to finalise the project brief.
- Make sure the client is aware of the client duties under CDM 2015 before any work Starts.
- Plan, manage and monitor all work carried out by themselves, their workers, sub-contractors (as applicable), taking into account the risks to anyone who might be affected by it (including members of the public) and the measures needed to protect them.
- Check that all workers they employ or appoint have the skills, knowledge, training and experience to carry out the work, or are in the process of obtaining them
- Make sure that all workers under their control have a suitable, site-specific induction, unless this has already been provided by the Principal Contractor
- Provide appropriate supervision, information and instructions to workers under their control
- Ensure they do not start work on site unless reasonable steps have been taken to prevent unauthorised access
- Ensure suitable welfare facilities are provided from the start for workers under their control, and maintain them throughout the work
- Coordinate their work with the work of others in the project team
- Comply with directions given by the Principal Designer and/or the client
- Comply with parts of the Construction Phase Plan relevant to their work

Principal Contractor must have a Public Liability Certificate of £10,000,000.00 and Professional Indemnity Certificate of £5,000,000.00 to operate on NOCS site.

#### 4.1.3

The project must follow the Construction (Design and Management) Regulations 2015, and NEC3 contract terms and conditions.

#### 4.1.4

The Principal Contractor appointment document, and that of any other appointed contractors or sub-contractors, will be NEC3 Engineering and Construction Contract (ECC).

# 4.1.5

The Principal Contractor must attend a post-tender meeting with the Principal Designer and NOC Estates, to review and establish the meeting agenda for the project. That agenda must include, as a minimum, fortnightly meetings with Lead Consultant, and monthly meetings with Principal Designer/Client, where records to demonstrate cost updates and progress must be produced.

# 4.1.6

As the Client, NOC is required to ensure all Consultants and Contractors include sustainability procurement within the scope of works, which implies that the market has been tested to provide sustainable options for (all) products, with a focus on whole life costs for long-term utility, energy consumption and waste production. The Principal Contractor must ensure that any proposed alternative materials and methods of working take full account of this requirement.

# 4.1.7

Energy performance for the works must be demonstrated by practicable measures. This may include, for example, validation of thermal performance by thermography, with before/after photographs to be included in O+M Manuals – to ensure that energy performance for the project as a whole is maintained or improved upon.

# 4.1.8 Material Specifications

The material specifications are attached as Appendix B – Manufacturers Specification Data Sheets.

Contractor materials procurement must satisfy the BREEAM criteria summary, and must take the existing location of the doors in a marine environment into consideration, for all alternative or equivalent products - against the consultant recommendations noted above.

# The Principal contractor must take into consideration the procurement lead time as an identifiable risk to timescales.

# 4.1.9

The materials suggested by the Lead Consultant are indicated on the following manufacturer's data sheets as part of Appendix B. Any alterations proposed by the Contractor must be at least an equivalent in terms of performance, properties, sustainability and energy efficiency – <u>and must be approved by the Lead Consultant before use.</u>

# 4.1.10

The materials must conform to applicable structural materials ASTM codes, specifications and publications; which is to be approved & signed off by the lead consultant before goods procurement by the Principal Contractor.

# 4.1.11

The contractor is required to ensure that all related parts, necessary accessories, devices, anchors etc. for the following requirements have been included in the pricing submittal as part of the tender.

# 4.1.12

Contractor to duly allow for any access equipment requirements as part of pricing submittal, as part of the tender.

# 4.2 Specific Requirements

# 4.2.1

The Principal Contractor must ensure that they carry Third Party/Public Liability Insurance Certification of £10,000,000, in order to operate on NOCS site.

# 4.2.2

The Principal Contractor must provide all necessary information for inclusion in the Construction Phase Plan – taking into account the site-specific difficulties due to the wide variance of operations on the NOC site.

# 4.2.3

The Principal Contractor must provide all necessary information to facilitate HSE notification for the project (if appropriate).

# 4.2.4

The Principal Contractor must ensure that all current connected services are recorded, with details of the locations and routes of all gases, domestic water installations, extract systems and fans, as well as drainage systems, and that all services are maintained wherever possible, throughout the works.

# 4.2.5

Principal Contractor to submit a project waste carrier certificate, and complete the client supplied site waste management plan as part of the O&M handover documentation.

# 4.2.6

The Principal Contractor and all associated contractors and sub-contractors must comply with NOC Estates Guidance for contractor works on site. Those guidelines are found as part of Appendix C, which include MEDA Access Permit, Hot works permit, waste management protocols, BMS/DMS guidelines as well as general site layouts etc.

# 4.2.7

The Principal Contractor must hold a post contract award meeting with the Lead Consultant/Principal Designer & the client (At least one meeting to be included).

# 4.2.8

The Principal Contractor must hold meetings with consultant at stages during ordering and manufacturing process (At least two meetings to be included, and subject to client discretion). You are required to give data to the consultant for preparation of project progress reports.

# 4.2.9

The Principal Contractor must coordinate communication and information with the lead consultant during the design and procurement lead times and process.

# 4.2.10

Principal Contractor is to ensure a site supervisor is present on site at all times during project works, and to allow for continuation in case of annual leave, sickness etc. Site supervisor is the primary point of contact on site between contractor personnel and client.

# 4.2.11

The Principal Contractor must liaise with the consultant to resolve the snagging list developed during project final phase, for each wall section before handover.

# 4.2.12

The Principal Contractor must undertake defects snagging during the defects liability period (Three visits to be included)

# 4.2.13

The Principal Contractor must attend all site meetings as set out in the Meeting Agenda.

# 4.2.14

The Principal Contractor must allow for consultation with building controls as would be required to ensure compliance under BS9990:2015, BS9999:2017; Regulatory Reform (Fire Safety) Order 2005; as well as industry guidelines such as ASFP guidelines and recommendations, which is available for review by the public, consultants and contractors. Any certifications on the project would require review and compliance under these guidelines. Any fire control dampers and associated products installed within the project – as part of passive fire protection measures, have to be compiled in the O&M handover documentation to be handed over to NOC Estates.

# 4.2.15

During the works, the site will remain in operation and the Contractor must ensure full cooperation with NOC Estates in order to minimise any possible disruption to those ongoing operations.

# 4.2.16

The works programme (Section 4) must be adhered to, as far as is possible, so that the onsite management of the doors operation and maintenance, and access to/from any part of the buildings, can be properly controlled by the NOC Estates – in order to minimise any disruption.

# NB: The site will remain occupied and in use throughout the works!

## 4.2.17

Upon successful completion of the works, the Principal Contractor must ensure that the following documents are completed and form part of the handover information passed to the Client:

- Site Waste Management Plan
- Health and Safety File
- O&M Manual
- Updated CAD Drawings for the area for review and sign-off by the lead consultant. All drawings must be made available in AUTOCAD 2015 version. (if required)

#### 4.2.18 - Paint Specifications

#### Metal doors;

Due to the Coastal location with high salinity levels <u>C5M Environment category must be</u> <u>assumed</u>

(BS EN ISO 12944 and ISO 9223) Standard corrosion protection systems for buildings. Recommended coating system <u>E-C5-A</u>

#### Timber Doors;

Due to the Coastal location with high salinity levels Risk class 4 Marine (BS 5268-5)

Use Class **3uc** Doors and Door Frames - Desired Life **15 years** 

#### 4.2.19 - External Door Specifications:

#### Conservation of fuel and power

The conservation of fuel and power, and in particular the importance on the thermal efficiency of buildings. The table below shows the standards for thermal efficiency, expressed in terms of U-values, for various replacement windows and doors in non-domestic buildings:

Fitting standard	
Windows, roof windows and glazed rooflights	1.8 W/m <sup>2</sup> K for whole unit
Plastic rooflight	1.8 W/m <sup>2</sup> K
Pedestrian doors where the door has more than 50% of its internal face area glazed	1.8 W/m <sup>2</sup> K
High-usage entrance doors for people	3.5 W/m <sup>2</sup> K
Vehicle access and similar large doors	1.5 W/m <sup>2</sup> K
Other doors	1.8 W/m <sup>2</sup> K
Roof ventilators (including smoke extract ventilators)	3.5 W/m <sup>2</sup> K

#### Door plate reference



Mop Plate Up to 8"h x 48"w



Kick Plate 6" to 12"h x 48\*w



Stretcher Plate 6" to 12"h x up to 48" w



Armor Plate Up to 48\*h x 48\*w

## <u>Locks</u>

The building's external doors should be fitted with <u>VACHETTE RADIAL SI type 207/107166</u> or <u>equivalent</u> cylinders.

The locks on these doors should remain the property of the Commission and all keys must be returned to the Commission official responsible; in the event of a breach of this condition, the lock fittings concerned must be replaced at the contractor's expense.

Locks should carry a ten-year guarantee against manufacturing defects or malfunctions. For protected cylinders with non-duplicable keys the supplier must present a certificate from the manufacturer confirming that:

- the keys will not be duplicable for a period of at least 15 years, certified by an international guarantee;
- rotors and stators contain steel or tungsten carbide inserts or plates protecting the cylinder against drilling;
- some of the pins are of the mushroom type to enhance resistance to lock picking.

Locks should be of the reversible mortise type with a sheet-metal casing at least 2 mm thick and a steel faceplate and strike plate. They should be fitted with a plug reinforced by a steel ring to prevent abrasion of the plug and the sheet metal casing; the plug should have a diameter of 8 mm. All the locks will have the same dimensions in terms of casing, faceplate, keyway and length from end to end, so that they can be interchanged without the leaf of the door being altered. The casing of the lock should be pierced through from one side to the other at the level of the plug and cylinder hole (European type) to allow the rose of the door handle or a finger plate to be fitted by means of a transverse screw and socket. Wherever there are metal splays there should also be double locks.

- Specimen External Key Chart

BUILDING master (5 keys)

Main entrance:	(if there is a vestibule with several doors, the same cylinder version should be used for each door, with 15 keys in total.)
Contactors for indoor car parks:	external doors: 3 key internal doors (caretaker's cabin): 3 keys
Emergency exits:	one version for external locks: 3 keys one version for internal locks: 5 keys
Other access points:	3 keys per cylinder

## **Handles**

These should be U-shaped with a diameter of 20 mm, a length of approximately 135 mm and a projection of 70 mm. They should be attached by means of pressure screws and mounted on two circular rosettes. Locks fitted with devices indicating "vacant/occupied" should be of the same diameter and should be equipped with a knob on the inside for operating the red and white disc indicator visible on the outside of the door; provision must be made for unlocking these doors from the outside with an emergency key or coin.

#### Polyamide

Door handles should be made of coloured nylon material and reinforced along their full length. The nylon should have a smooth, non-porous surface resistant to oil, detergent, acid and disinfectant and should be non-flammable and non-combustible. A selection of colours should be available so that door fittings can be harmonised with the colours of other fittings and the doors themselves, although there should be a contrast for visually-impaired people.

#### Metal

These fittings should be made of stainless steel or of a light metal with a high magnesium content; they should not be susceptible to scratches or cracks and should be free of corrosive materials. Zamak zinc alloy and other less robust alloys must be avoided.

#### Hydraulic or Mechanic overhead closers

Overhead closers should have the following characteristics: invisible fixing, the body should be made of oxidised extruded aluminium with high corrosion-resistance; the device should be lightweight, compact and should protrude to a minimum. Overhead closers should also be reversible (enabling them to be opened in either direction by pushing or pulling the right or left door leaf) and should allow doors to open up to an angle of 180°. It should be possible to adjust closers without removing the fitting. They should carry a minimum two-year guarantee.

In addition to the specifications set out in current regulations, overhead closers should be fitted on doors to archive rooms, access doors to toilets, washroom areas, kitchenettes and photocopier rooms, and emergency doors equipped with alarm devices. In the case of double doors each leaf should be fitted with its own overhead closer, and a priority selector should also be installed. The doors of kitchenettes and photocopy rooms are equipped with a magnetic device connected to the fire detection system.

#### **Door-blocking devices**

Access doors should be fitted with a device allowing them to be automatically blocked open at a 90° angle if necessary.

#### Emergency exit door-bars

All emergency exit doors must meet the following standards:

Emergency doors (in particular external access doors) should be preferably constructed of a solid material and frames should comply with the following security standards:

ENV 1627 (1999) and ENV 1630 (1999), class 5.

Emergency doors should be equipped with safety hinges reinforced with anti-rising mechanisms.

There should be no external means of opening emergency doors. Emergency doors must facilitate evacuation of the building without allowing entry from the outside.

Emergency exit bars (panic-bars) should be fitted to allow emergency doors to be opened from the inside in the event of an evacuation. Panic bars should have a three-point locking mechanism or be equipped with a mortise lock. They must meet building standard EN 1125:1997, amended by A1:2011 (building hardware - panic exit devices operated by a horizontal bar – requirements and test methods).

In order to protect occupants, emergency exit doors must close automatically.

Emergency exit doors must remain closed at all times and should be connected to the intruder alarm system.

#### Locks on cupboard doors

A duplicable master key should be provided for all cupboard locks. Three keys should be supplied with each lock, together with three pass keys. Locks and keys should be numbered in an identical manner.

#### Boiler room

The boiler must be housed in a separate room, if possible in the roof area, which contains no other equipment.

The legal requirements relating to the fire resistance of the walls and doors of the boiler room are those laid down in Article 52.7 of the RGPT and standard NBN B 61-001. The door to the access bay for the boiler room must be an automatically closing fire door (RF1/2) compliant with standard NBN 713.020. The door should open in the direction of evacuation.

The boiler room should have low level ventilation (external air intake) and high-level ventilation (exit of vitiated air), as defined in standard NBN B 61.001.

#### <u>Tank room</u>

The room must be ventilated direct from outside. A room housing one or more tanks must be equipped with a fire door with fire resistance of at least 30 minutes (in accordance with standard NBN 713.020).

#### High-voltage substation

The doors at the entrance to the transformer room which give access to interior corridors must have a fire resistance of 30 minutes, in accordance with standard NBN 713.020. The doors should open in the direction of evacuation and it must be possible at all times to open them from the inside.

#### Rooms for stationary batteries

Walls, floors and ceilings must be made of masonry or concrete, with fire resistance of one hour. The doors which separate the room from the rest of the building must have a fire resistance of at least 30 minutes. The door must open in the direction of evacuation and must be equipped with an automatic closer device and a panic lock.

#### Generator Room

The walls, floors and ceilings of rooms containing emergency generators must be made of masonry or concrete, with fire resistance of one hour. The only openings allowed are for the purposes of access, ventilation and evacuation of combustion gases.

Doors must have fire resistance of at least 30 minutes. They must close automatically.

#### 4.2.20 - Door Signs Specifications:

Every escape route (other than those in ordinary use) should be distinctively and conspicuously marked by emergency exit sign(s) of adequate size complying with the Health and Safety (Safety Signs and Signals) Regulations 1996 (2015 updated). In general, signs containing symbols or pictograms which conform to BS 5499-1:2002, satisfy these regulations.

#### **General Signs**

This type of sign has been designed to indicate the location of appliances and/or specific premises such as:

- toilets (men's and women's toilets, toilets for persons of reduced mobility), on doors and on double-sided signs hung from above. For toilets for persons of reduced mobility, the signs must be visible from the lift lobby,
- showers, on doors,
- utility sink, on doors,
- meeting rooms, on doors,
- cafeterias, on doors and on double-sided signs hung from above,
- lifts, in corridors and on double-sided signs hung above the entrance,
- registries and archives, on doors,
- technical areas, on doors,
- firefighter lift, at the evacuation level and in the lift,
- lift for persons of reduced mobility, at the evacuation level and in the lift,
- lift numbering at the evacuation level, on the landings and in the lift cars,
- pictograms indicating directions to these areas may be needed to guide staff and/or visitors.

General signs must be used to give instructions and information relating to health and safety:

- switch on headlights (indoor car parks),
- lift out of order/repairs in progress/lift closed,
- WC closed;
- prohibition signs: 'No [...]';
- no entry for unauthorised persons.

By indicating the location of particular facilities, general signs help the occupants to find their bearings. In particular, they provide information on the purpose and content of a room or area, which sometimes serve as an invitation to users of the building to show due consideration for the requirements of such premises, for example:

- by refraining from smoking in a printshop or file registry or in archives,
- by not blocking doorways but keeping doors closed in file registries and archives, in paper supply stores, etc.

Wherever possible, general signs must avoid the use of text and words, but like warning notices should display signs, symbols and pictograms which are simple, unambiguous and universally understood. General signs must avoid colours, shapes or symbols which are used in safety signs and might give rise to confusion, except where the indication relates to a health or safety requirement or to emergency drills.

Where unambiguous communication through symbols or pictograms is difficult and it is impossible to avoid a written message, the problem is which language(s) to use. If it is not possible to communicate in all EU official languages, the text must be displayed in two languages wherever possible.

#### Pictorial Safety Symbols

Permanent safety messages are mainly conveyed by means of pictograms. Sirens, PA systems and lighting must be reserved for messages of an occasional nature.

#### General principles

Colour codes for safety messages Under Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work, and subsequent amendments, all safety notices, except those relating to vessels and pipework, must use the following colour code:

Colour	Meaning or purpose	Information
Red RAL 3000	Prohibition sign Danger alarm Firefighting equipment	Dangerous behaviour Stop, shutdown, evacuation Identification and location
Yellow Amber RAL 1003	Warning sign	Be careful Take precautions
Blue RAL 5005	Mandatory sign	Specific behaviour or action Wear personal protective equipment
Green RAL 6032	Emergency escape, first-aid sign	Doors, exits, routes, equipment, facilities
	No danger	Return to normal

#### Minimum specifications for signboards

Intrinsic characteristics - Signboards must be made of a material offering resistance to the shocks, climatic conditions and stresses associated with their surroundings.

The dimensions, colour and design of the signboards must be selected to guarantee that they can be easily seen and understood.

#### Conditions of use and installation

Signboards must be installed at an appropriate height, taking into account any obstacles, either at the access to an area in the case of a general hazard or in the immediate vicinity of a specific hazard or of the object to be indicated, and in a well-lit and easily accessible place.

In poor lighting conditions, luminous colours and reflective materials must be used.

Emergency lighting may supplement the signs. These provisions are to be applied primarily in the following cases:

- signposting of escape routes in the basement, and
- signposting in maintenance areas, indoor car parks, computer centres and warehouses.

#### Size of pictograms

The size of pictograms must take into account the distance at which they must be visible, based on the following formula:

A >  $L^2/2000$ , where A is the area of the sign in m<sup>2</sup> and L the distance in metres at which it must be visible.

#### Design Rules for Different Types of Sign

#### **Prohibition signs**

- round,
- black pictogram on white background,
- red border and diagonal band.

The colour red must cover at least 35% of the surface area of the sign.

#### Warning signs

- triangular,
- black pictogram on yellow background, black border.

The colour yellow must cover at least 50% of the surface area of the sign.

#### Mandatory signs

- round,
- white pictogram on blue background.

The colour blue must cover at least 50% of the surface area of the sign.

#### Emergency exit or first-aid signs

- rectangular or square,
- white pictogram on green background.

The colour green must cover at least 50% of the surface area of the sign. Signs relating to firefighting equipment

- rectangular or square,
- white pictogram on red background.

#### Signposting of Escape Routes

#### General principles

Pictograms indicating escape routes, especially in office areas, must be displayed in a way that makes them easily visible and guides the flow of occupants to the emergency exit nearest their place of work.

The term 'emergency exit' in this context refers to a door or an equivalent protected passage leading to:

- an emergency stairway,
- a foyer (insulated from the rest of the building),
- an exit leading directly, or by a safe route, to the public highway,
- a terrace or flat roof designed as an escape route leading directly or indirectly to the public highway.

#### Positioning of signs

Pictograms must not be placed too high (range of view) and could usefully be backed up by other pictograms displayed on the lower part of the external or internal walls of the escape route. Where technically feasible, pictograms should be placed at skirting board level indicating the route to be followed. In such cases the paint and the medium must be highly resistant to heat, handling, abrasion and cleaning materials.

An evacuation sign no more than 15 m away must be visible from any point. Pictograms may be wall-mounted or suspended (single or double-sided).

At each change of direction (turns in corridors), at least one pictogram must be displayed on the cladding of the external wall or on the internal wall facing staff who are following the escape route. Pictograms must also be displayed at the intersections of corridors.

Where a corridor has a stairway at both ends, which is normally the case, two escape routes must be indicated symmetrically from the midpoint of the corridor, one leading to each of the stairway access doors.

Emergency exits located along a corridor must be indicated by pictograms suspended from the ceiling, back to back, at right angles to the longitudinal axis of the corridor indicating the location of the door.

Internal stairways, as the vertical escape routes, must be signposted with pictograms displayed on each landing in such a manner as to be visible to people already on the stair and to those entering the stairwell. The floors must be identified in the stairwells in such a way that people on the staircase can see the floor letter, even if the door to the stairway is open. The floors must be labelled from A to Z and the pictograms indicating the direction of the emergency exit must be displayed alongside.

On the evacuation level, the 'emergency exit' pictogram must be displayed where it can easily be seen by people ascending and/or descending the stairway. It is recommended that one sign be affixed to the exit door itself and another above or beside the door.

Where an escape route crosses an internal courtyard, indoor car park, terrace or flat roof, the signs must be positioned to make the route extremely obvious, eliminating any risk of deviation, especially at any point where the route changes direction.

Signs must be positioned in the best-lit areas and close to emergency lighting, if there is any. In the lobby approaches protecting stairways, the two doors giving consecutive access to the stairways must be painted green on the side leading towards the emergency exit. The floor letters in the lift lobbies must be the same as those in the stairwells.

#### 4.2.21 - Comments

Upon delivery of the premises the Commission must be given a reserve of locks and fittings equivalent to 10% of those installed in the building.

All key charts, master keys and other keys must be given to the Commission representative in charge one week before the building is occupied. Key registration numbers should be recorded door by door on a comprehensive plan mapping each storey and each door, including the basement and attic areas.

A complete set of technical records documenting the above installations as well as windows, garage doors, motorised devices, window frames (including mechanisms and bolts) and all sun screens must be submitted to the Commission.

This documentation must list in particular:

- makes and models;
- names and addresses of fitters;
- names and addresses of suppliers;
- warranty periods;
- electrical circuit diagrams;
- colours and dimensions;
- thickness, types and colours of glazing.

Door design and installation must avoid any influx of polluted air or penetration by insects without creating maintenance difficulties or hindering cleaning of the premises they serve. Spring-loaded swing doors (non-latching, with a porthole and protection against collisions by trolleys and from floor cleaning by a stainless-steel plate at the bottom of the door 90 cm above ground level) must be used.

# 5. **PROGRAMME**

5.1

The programme for the works is as shown on the following page.

5.2

The Contractor must adhere to the programme sequencing so that the live and ongoing site activities can be managed by NOC Estates. The site will be occupied at all times!

													2018																		
	November 2017							December 2017										January 2018													
Activity	01 02 03 06 0	30 01 04 05 06 07 08 11 12 13 14 15 18 19 20 21 22 25 26 27 28 29													8 29 01 02 03 04 05 08 09 10 11 12 15 16 17 18 19 22 23 24 25 26 29 3																
Prepare Scope of Work		Prepare	Scope of Work																												
Issue Tender							Issue																								
Tender Period									Tende	er Perio	d																				
Contractor Appointment													Cont. A	ppointn	ment																
Christmas Holiday																Chris	tmas H	lolida	ys												
Procure Replacement Doors																	Procure Replacement Doors														
Install Replacement Doors																															
Refurbish/Repaint Remaining																											Refu	irbish/	Repai	int Ren	naining
Snagging, H&S File, O+M																															
william attwell associates consulting engineers	project: client: date: projectnumber	External Doors R Replacement NOC Southamptr November 2017 2207	eview and	Pr W Is: Te	repare Sc lork sue Tend ender Per	ope of er iod		Contra Appoin Christr Procur Replac Doors	actor Intment trnas Holidays ure acement s			Install Replacement Doors Refurbish/Repaint Remaining Doors				Snagg O+M	jing, H	&S,													



# 6. PRICING

See AW5.2 Pricing Schedule.

# 7. APPENDICES

Appendix A – Site Survey Report Appendix B – Manufacturers Specification Data Sheets Appendix C – Site Submittals – NOC Policies and Permits Appendix D - Drawing