

SPECIFICATION FOR THE MODERNISATION OF 2 X ELECTRIC TRACTION PASSENGER LIFTS



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2 X ELECTRIC TRACTION PASSENGER LIFTS**

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1.0 SCOPE OF WORKS

The scope of this contract shall, where applicable, include:

The complete design, supply and execution of the installation including removal of all existing redundant lift components.

The design, supply and installation of new lift components detailed in this specification;

The design shall include; design drawings, contract drawings and record drawings, and all other information required by members of the professional team to allow proper integration of the installations within the building, including the provision of information and comments for the scheme design, required by building control;

All labour, materials, tools and equipment required for the supply of and installation of the new lift components as detailed in this specification and for the testing, commissioning and setting to work of the installation together with the production of record drawings and operating and maintenance manuals;

Liaison with the Employer, their representatives, the engineering services lead co-ordinator and all other contractors as necessary, to allow proper integration of the installations within the building;

The complete contract shall comprise of TWO number of lifts.

Lift 2 had a machine replacement in 2010 – This machine shall be retained.

Following modernisation, the lifts shall comply to BS EN81-20, BS EN81-70, EN81-71 (CAT2) BS EN81-28, BS EN81-73, EN81-58 and EN81-21 where applicable.

The new lift cars, entrances and control stations shall comply with EN81 – 71 (Category 2) vandal resistance.

The works will be programmed so that one lift remains in service during the refurbishment. Following the commissioning of the first lift there shall be one weeks running in period before the second lift is removed from service and works carried out.

2.0 CONTRACTUAL TERMS & CONDITIONS

2.1 Tender

Every Tender received shall be deemed to have been made subject to these Conditions unless the Client/Engineer has previously expressed/agreed in writing to the contrary. Any alternative terms or conditions offered on behalf of a tender shall be deemed to have been rejected by the Client/Engineer unless expressly accepted by them in writing.

2.2 Preparation of tender

Tenderers must obtain for themselves at their own responsibility and expense all information necessary for the preparation of their tenders.

Information supplied to tenderers by the Engineer or Client or, other staff, or, information contained in the publications supplied to the tenderer is supplied only for general guidance in the preparation of the tender.

Tenderers must satisfy themselves by their own investigations with regard to the accuracy of any such information and no responsibility is accepted by the Engineer or Client for any loss or damage of whatever kind and howsoever caused arising from the use by Tenderers of such information.

The Client/Engineer may make an express waiver or variation of any of these conditions in writing. Otherwise, no other servant or agent of the Client has authority to vary or waive any of these Conditions on behalf of the Client.

2.3 Canvassing

Any Tenderer who directly or indirectly canvasses any Member, or Official of the Client organisation concerning the award of the Contract for the provision of the Services, or who directly, or indirectly obtains information from any such Member or Officer, or employee concerning any other Tender, or proposed Tender for the Services shall be disqualified

2.4 Confidentiality of Tender Information

All information supplied by the Client/Engineer in, or in, connection with this Invitation to Tender shall be regarded as confidential to the Client/Engineer.

This Invitation to Tender and its accompanying documents and publications are, and shall remain the property of the Client/Engineer and must be returned upon demand at the cost of the tenderer.

2.5 Collusive Tendering

Any Tenderer who:

- fixes, or adjusts the amount of this Tender by, or in accordance with any agreement or arrangement with any other person; or;
- communicates to any person other than the Client/Engineer the amount, or approximate amount of his proposed Tender (except where such disclosure is made in confidence in order to obtain quotation necessary for the preparation of the Tender for insurance or a Contract guarantee bond), or;
- enters into an agreement, or arrangement with any other person that he shall refrain from tendering, or as to the amount of any tender to be submitted; or;
- offers, or agrees to pay, or does pay, or gives any sum of money, inducement, or valuable consideration directly, or indirectly to any person for doing, or having done, or causing, or having caused to be done in relation to any other tender, or proposed tender for the Services;

Shall be disqualified (without prejudice to any other civil remedies available to the Client/Engineer and without prejudice to any criminal liability, which such conduct by a Tenderer may attract).

2.6 Complete Tender

Tenderers shall submit a bid for the complete Specification. Partial bids shall not be accepted.

2.7 Pricing of Tenders

Tenders shall be priced at a fixed sum for specified Services for the Contract period

2.8 The Tender Bid

Tenders must be submitted on the Form of Tender included in this Specification or on the Form of Tender provided by the Client/Engineer, and shall include the documentation therein scheduled

The form of Tender and accompanying documents must be fully completed.

Any Tender containing gaps or omissions may be rejected.

2.9 Accompanying Documentation

Tenders must be accompanied by;

- The tenderers Health and Safety Policy

2.10 Tendering Time

The Form of Tender and accompanying documents, shall be, all duly completed and signed, in accordance with the stated date on this Specification.

The Client or Contract Administrator may, in his own absolute discretion, extend the closing date and time specified for the return of the tender bid.

2.11 Inspection of Site

Every person submitting a Tender must give the Engineer or his representatives, 24 hours' notice of their intention to inspect any premises proposed by the Tenderer to be used for, or in connection with the provision of the Services. Access shall be arranged through LECS UK.

Tenders shall not be considered unless the lift contractor has carried out a detailed survey.

2.12 Acceptance

The Engineer or Client is not bound to accept the lowest or any Tender

2.13 Definitions

In applying these General Conditions and the Specification, the following words shall have the meanings assigned to them unless there is something in the subject matter, or context inconsistent with such construction:

“Client” shall mean	BCP Council
“Contract Administrator” shall mean	LECS (UK) Ltd
“Engineer” shall mean	LECS (UK) Ltd
“Principle Contractor” shall mean	The Lift Contractor
“Principle Designer” shall mean	CDM Coordinator (TBC)

“Check” shall mean	To make a thorough inspection for damage and wear, and ensure that the plant or equipment is properly adjusted and maintained, to conform to the correct standard, and manufacturers information and instructions
“Examine” shall mean	To make a visual examination and ensure that the plant or equipment is in efficient and safe working order and free from obvious defect
“Test” shall mean	To operate the plant or equipment and/or use the appropriate testing instruments to ensure the plant or equipment is functioning correctly
“Site” shall mean	The actual place or places where work shall be carried out by the Contractor
“Specification” shall mean	The Specification on which the tender is based
“Tender” shall mean	The returned document on which the Contractor declares his/her price for the specified works
“Works” shall mean	All works done by the Contractor under the Contract and shall include all labour, materials, tools, equipment, plant, haulage and crange.
“Client/Engineer” shall mean	The Client separately, the Engineer separately or the Client and Engineer jointly.

2.14 Smoking

Smoking is not permitted anywhere on the site.

2.15 Confidentiality

The Contractor and the Contractor’s staff shall regard as confidential and shall not disclose to any person other than a person authorised by the Client/Engineer any information acquired by the Contractor, or the Contractor’s staff in connection with the provision of the Services concerning the Client, its staff or business

2.16 Assignment or Sub Contracting

The Contractor shall not transfer, or assign this Contract, or any part thereof without the prior written consent of the Client/Engineer.

All the requirements of this document shall apply to any sub-Contractor. It shall be the Contractors responsibility to ensure that any sub-Contractor has a copy of this document in full and complies in full with the requirements of this document.

2.17 Indemnity to Client

The Contractor shall be liable for and shall indemnify the Client, its Officers, Servants, Employees and Agents against any liability loss claim, or proceedings howsoever arising under the statute, or common law in respect of :-

- any damage to property, real, or personal, including any infringement of their party patents, copyrights and registered designs; and
- injury to persons, including injury resulting in death; arising out of, or in the course of, or in connection with the provision of the Services, or by the use of the Contractor or his staff of the Clients premises; except in so far as such damage or injury shall be due to any act or neglect of the Client its Officers, Servants, Employees and Agents

2.18 Insurance

The insurance in respect of the claims for personal injury or the death of any person under the Contract of Service with the Contractor and arising out of and in the course of such person's employment shall comply with the Employer's liability (Compulsory Insurance) Act 1969 and any statutory order made there under, or any amendment, or re-enactment thereof.

The Contractor shall maintain Employers Liability insurance throughout the Contract with cover for each and every claim.

The Contractor shall maintain Public Liability insurance throughout the Contract with a cover in excess of £10,000,000 for each and every claim.

The Contractor shall take out and maintain Design Liability Insurance with a minimum cover of £1,000,000

Should the Contractor make default in insuring, or in continuing to insure as provided in this Specification, the Client may itself insure against any risk in respect of which such default has occurred and may charge the cost of such insurance together with an administration charge equal to 5% of the cost of insurance, or £100, whichever is the greater to the Contractor.

The Contractor shall not employ any Subcontractor in connection with the Services, unless previously agreed with the Engineer (as previously stated) unless the Subcontractor has also effected insurance's on the terms set out in this Specification and the requirements of this Contract, in relation to assignment and subletting have been met prior to Subcontractor's deployment

2.19 Inducements

If the Contractor shall have offered or given or agreed to give or agreed to give any person any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or having done or forborne to do any action in relation to the obtaining of the Contract or of any other Contract with the Client or for showing or bearing to show favour or disfavour to any person in relation to this Contract or any other Contract with the Client, or if the like acts shall have been done by any person employed by the Contractor or acting on the Contractor's behalf (whether with or without the knowledge of the Contractor) or if in relation to this Contract or any other Contract with the Client. The Client shall be entitled to terminate/cancel this Contract and to recover from the Contractor the amount of any loss resulting from such termination

2.20 Default

If the Contractor shall fail to provide to the Specification of this Contract, any part of the Services at any time when the same ought to have been provided under the terms of this Contract then, without prejudice to any other right or remedy which the Client may possess in respect of such failure, the Client may:-

- require the Contractor to remedy such default within such time as may be specified by the Client/Engineer by providing or providing again (as the case may be) without further charge to the Client such part of the Services to the Specification and/or;
- Without terminating/cancelling this Contract in whole or in part, itself provide or procure the provision of such part in the Services until such time as the Contractor shall have proved to the reasonable satisfaction of the Client/Engineer that such part of the Services will once more be provided by the Contractor to the Specification or, at the Client's Option, until such later time as the Client/Engineer may specify as being reasonable notice in all the circumstances that the Contractor will once more so provide such part of the Services; and
- Without terminating/cancelling the whole of this Contract, terminate/cancel this Contract in respect of such part of the Services only and thereafter itself provide or procure the provision of such part of the Services.

The remedies of the Client under this requirement may be exercised successively in respect of any given default by the Contractor.

The Client may charge the cost of any Services provided or procured by it under these requirements together with an administration charge equal to 10% of the cost of such Services, or £100, whichever is the greater, to the Contractor

2.21 Termination

The Client may at any time by notice in writing summarily terminate/cancel the Contract without compensation to the Contractor in any of the following events, that is to say:

- If the Contractor, being an individual, or where the Contractor is a firm, shall at any time become bankrupt, or shall have a receiving order or administration order made against him or shall make any composition or arrangement with or for the benefit of his creditors, or shall purport to do so, or if in Scotland he shall become insolvent or notour bankrupt, or any application shall be made under any Bankruptcy Act for the time being in force for sequestration of his estate, or a trust deed shall be granted by him on behalf of his creditors, or
- If the Contractor, being a company, shall pass a resolution, or if the Court shall make an order that the company shall be wound up, or if the Contractor shall make an arrangement with his creditors or if a receiver or manager on behalf of a creditor shall be appointed, or if circumstances shall arise which entitle the Court or a creditor to appoint a receiver or manager or which entitle the Court to make a winding-up order.

Provided always that such termination/cancellation shall not prejudice or affect any right of action or remedy, which shall have accrued or shall accrue thereafter to the Client.

On the Client terminating/cancelling the Contract under this condition it shall be at liberty forthwith to act as provided in these requirements hereof and to hold and retain all moneys then or thereafter to become due to the Contractor or those claiming under him by the Contract, and to make good so far as it may suffice, any loss that may arise from the termination/cancellation of this Contract as aforesaid.

2.22 Default by the Contractor

If the Contractor;

- fails to carry out any work (or supply of labour, materials, tools, equipment, plant, haulage and crantage) ordered within the time for completion stated in the Order
- delays or suspends the execution of any work (or supply) ordered so that in the judgement of the Client/Engineer he will be unable to secure completion of the work, (or supply) by the time for completion; or
- fails to carry out any work, (or supply) to the satisfaction of the Client/Engineer; or

- having been given by the Client/Engineer a notice in writing to make good or replace any defective work (or supply) or a notice in writing that work (or supply) is being performed in an inefficient or otherwise improper manner, fails to comply with the requirements of such notice for a period of seven days; or
- commits a breach of his obligations.

The Client/Engineer may make such arrangements as he may think proper for the purpose of carrying out, replacing, rectifying, reconstructing, making good, reinstating or completing any such work, loss or damage or of obtaining such labour or materials as the Contractor has failed to perform or to supply and the Client/Engineer may give effect to any such purpose as aforesaid by using labour or materials which are available to the Client or by entering into any agreement with any person for any such purpose to be affected by some other person and upon such terms as the Client/Engineer may think proper.

Any extra expense reasonably incurred and falling on the Client by reason of any arrangements made by the Client/Engineer under the requirement of this Condition shall be recoverable from the Contractor and where such arrangements have involved the use of labour or material available to the Client, such expenses shall include the cost of labour or materials and an additional charge consisting of such percentage of that cost to cover establishment and superintendence charges as may be determined by the Client/Engineer, whose decision as to the making of such an additional charge and as to the amount thereof shall be final and conclusive.

Nothing contained in this Condition or in any reference to it in any other of the Conditions shall be construed as prejudicing or affecting the exercise by the Client of any rights or remedies of the Client in respect of any failure of the Contractor to carry out any work or to supply day labour or materials or in respect of any other breach by the Contractor of his obligations under this Contract as it would be entitled to exercise if this Condition were not contained herein.

Should the Contractor be proved of default then the Client/Engineer shall serve one month's notice for termination of the Contract.

Should the Contractor terminate the Contract then the Engineer shall be given full explanation in writing with a minimum of one month's notice

If the Contract is not renewed or an alternative selected, then all records, documentation, drawings, etc. shall be handed back to the Client/Engineer by the Contractor

2.23 Deductions

Whenever under this Contract any sum of money shall be recoverable from, or payable by the Contractor, the same may be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the Client.

2.24 Variation of Conditions

The Services shall be supplied in accordance with these Conditions and any Conditions, expressed or implied, which in any way add to, vary, modify or are in contradiction to these Conditions, which the Contractor may seek to impose, shall be excluded and not form part of the Contract, unless each of such conditions has been specifically agreed to in writing by the Client/Engineer.

The Client/Engineer may, upon giving the Contractor not less than one month's notice of the proposed variation:-

Add to, delete from, or otherwise amend in any way whatsoever the provisions contained in the Contract and attachments to this Contract.

No variation required by the Client or Engineer shall vitiate this Contract

The sum payable for the provision of the Services when any such variation takes effect shall be adjusted as a consequence of any such variation by such sum as represents the same proportion of the Contract sum as the variation represents as a proportion of the Contract Services. In default of Contract the decision of the Client/Engineer on the adjustment to the Sum shall be final and binding on the Contractor.

2.25 Law

This Contract shall be governed by and construed according to the law of England and Wales.

2.26 Arbitration

Any dispute, difference or question between the parties to this Contract with respect to any matter or thing arising out of or relating to this Contract which cannot be resolved by negotiation and except insofar as may be otherwise provided in this Contract shall be referred to Arbitration under the provisions of the Arbitration Acts relevant at the time of the Contract or any statutory modifications or re-enactment thereof by a single arbitrator to be appointed by agreement between the parties or in default of agreement by the Chairman for the time being of the Chartered Institute of Arbitrators.

2.27 Examination of Accounts

The Client/Engineer reserves the right to examine the Contractor's financial records immediately prior to the award of Contract, and at any time during the period of Contract, if it so desires.

2.28 Manner of Execution

All materials supplied and all work to be done under the Contract shall be manufactured and executed in the manner set out in the Specification to the satisfaction of the Client/Engineer

The Contractor shall proceed with the works in accordance with the instructions contained in the Specification

The Contractor shall acquaint himself with the general arrangement of all Services and ensure that in maintaining the equipment they shall not obstruct the fixing or future maintenance of any other Services

The Contractor shall, during the progress of the works, remove from site rubbish created by the works including redundant components at the Contractors cost.

The Contractor shall before leaving the works, each working day, secure all plant and shall immediately report any losses to the Engineer.

2.29 Trade Custom

The Contractor shall be responsible, throughout the Contract, for ensuring that the trade custom and local practice is followed in the employment of the appropriate grades of operatives. The Contractor shall ensure that he provides an adequate number of operatives to carry out any work which, for whatever reason, requires more than one person present at each visit. Not more than one apprentice or semi-skilled mate shall be employed for each full rate tradesman.

2.30 Hours of Working

Working hours shall be limited to between 08.00 to 18.00 hours Monday to Friday.

Weekend works shall be allowed if agreed with the client beforehand.

Emergency entrapments and all other call outs shall be covered 24 hours a day, 7 days per week and the cost of this allowed for in the tender price.

2.31 Regulations

All electrical work shall comply with the current edition of The Regulations for Electrical Equipment of Buildings issued by the Institute of Electrical Engineers and requirements of the local Electricity Board.

2.32 Existing Services

The Contractor shall arrange with the Client/Engineer when work affecting existing Services shall be carried out.

2.33 Contractors Equipment

Unless specific arrangements be made to the Contract, the Contractor shall at his own expense, provide all materials, labour, haulage, cramage, tools, tackle and apparatus necessary to execute and complete the works

2.34 Electricity

The Contractor shall be entitled to use such supplies of electricity as may be available on site for the purpose of the works and shall, at his own expense, provide any apparatus necessary for such use.

Electric welding equipment shall not be connected to the electricity supply without consent of the Client/Engineer

2.35 Hot Works

All hot works including naked lights shall be permitted only with the agreement of the Client/Engineer.

2.36 Specification

The Services shall be of the quality described and equal in all respects to the Specification, which forms, part of the Contract or is otherwise relevant for the purpose of the Contract.

Timely service shall be deemed to be the essence of the Contract, and the Client/Engineer shall have absolute authority to terminate/cancel the Contract. The Contractor will be required to respond to requests for service as specified

2.37 Conduct of Contractors Employees

The Contractor's employees shall be required to carry a form of identity for the period during which they are working on the site(s) named in this Specification and they shall be required to produce the form of identity on demand to any of the Clients or Engineer officers or servants.

All of the Contractor's staff shall wear overalls, work shirts, overall trousers (no jeans) safety shoes, harnesses, and hard hats where necessary. All overalls and shirts shall carry the identifying logo of the Contractor and wearers shall be clearly identifiable as the Contractor's staff.

The Contractor's work people, servants and agents shall not trespass on the Client's property, but shall confine themselves to the locality of their work, and shall cause as little interference as possible with the personnel, Client, visitors and work proceeding in and around the Clients premises

The Contractor shall draw the attention of his work people, servants and agents employed in connection with the Contract to the particular vulnerability of the premises in the event of fire and shall instruct them to take all precautions to obviate fire risks, particularly the risks arising from the careless disposal of matches, etc. and to conform with all "No Smoking" rules applicable on the Client's premises

The Contractor's employees shall refrain from shouting in machine rooms or lift wells. The Contractor shall supply their employees with two way radios where necessary.

If in the opinion of the Client or Engineer any of the Contractor's work people, servants or agents employed in connection with the Contract shall misconduct himself or be incapable of efficiently performing his duties, or for the purpose of the public interest for any person to be employed or engaged by the Contractor in connection with the Contract, the Contractor shall remove such person, servant or agent forthwith on being required by the Client or Engineer to do so and such person shall not be again employed by the Contractor upon the Client or Engineers business without the written permission of the Engineer or Client.

2.38 Health & Safety

The Contractor is to comply with all aspects of the Health and Safety at Work etc. Act 1974 as applicable to the Conditions of Engagement and to all subordinate legislation as applies to the site and work.

The Contractor and his employees are to report to the Client/Engineer any potential hazards they may come upon - in such a case Services in areas affected are to cease until all is made safe.

If, whilst in the normal course of their duties, the Contractor encounters any extraordinary circumstances, e.g. a heavy or awkward lifting situation, work in hot or confined spaces, working at heights etc., then a full risk assessment must be carried out and an appropriate method statement issued to the Client/Engineer and Contractor's employees.

Any of the Contractor's employees undertaking lone working, shall maintain contact with their supervisor/office on a frequent and regular basis.

In addition, any of the Contractor's employees undertaking lone working, shall carry a non movement alarm.

The Contractor shall allow within his costs for an annual audit of his risk assessments and re-issuing of the same or amended assessments. Should new assessments be needed earlier than annually, these will be conducted at the Contractor's cost and be re-audited at the annual audit.

The Contractor shall submit with his tender a copy of his health and safety policy.

2.39 Accidents & Damage

The Contractor shall be responsible for any damage or injury however caused arising out of the performance of the Contract, and shall indemnify the Client against all actions, claims, damage and expenses arising out of any act, neglect or default of the Contractor, his servants or workman.

2.40 Contract Charges

The Contract charges will remain firm throughout the Contract period

The Client shall pay the Contractor for the provision of Services in accordance with the following:

All quotations made by the Lift Contractor are strictly net cash unless otherwise stated and are exclusive of Value Added Tax or any similar or other taxes, levies or duties.

Payments shall become due to the Lift Contractor as follows;

All quotations made by the Lift Contractor are strictly net cash unless otherwise stated and are exclusive of Value Added Tax or any similar or other taxes, levies or duties.

Payments shall become due to the Lift Contractor as follows:

- 30% of payment on placement of order
- 30% payment on delivery of goods
- 20% stage payments as the project progresses
- 17.5% on practical completion
- 2.5% on handover certified by the Engineer (LECS UK)

The only sums payable by the Client for the provision of the Services shall be the sums identified in this Contract. All other costs, charges, fees and expenses of whatever kind for or arising out of or in connection with the provision of the Services shall be paid by the Contractor.

If the Services provided under this Contract are reduced for any reason whatsoever, payment for such Services will be as agreed between the Contractor and the Client/Engineer.

2.41 Parking

Parking is available for 1 vehicle.

2.42 Tax or Duty

In all cases where the Services or any of them shall be or become liable to any tax or duty and such tax or duty shall be increased, decreased or imposed during the currency of the Contract, the price to be paid for such Services shall be increased or decreased (as the case may require) by the amount of any alteration in the tax or duty and the Contractor shall forthwith inform the Client of any alteration in price occasioned by the matters referred to in this condition. Where the Services or any of them are liable for tax or duty at the date of the tender the Contractor shall show the tax or duty as a separate figure in the tender.

2.43 Contract Term

To be advised

2.44 Date of Commencement 2021

2.45 Date of Completion 2021 / 2022

2.46 Welfare

Welfare facilities will be made available on site.

No televisions or radios shall be allowed on site during the works.

Smoking is strictly forbidden on site.

2.47 Information Provided

The accuracy and sufficiency of the information provided is not guaranteed by the Client or Engineer and the Contractor must ascertain for himself the information required to guarantee the safety of persons and works.

2.48 Lift Contractor

The lift Contractor is to be a registered member of LEIA (Lift & Escalator Industry Association) and be compliant with ISO 9001 certification for the design, installation, test and servicing of goods/passenger lifts.

2.49 Schedule of Works

The Client gives no commitment or guarantee that these works will proceed either in total or in part.

2.50 Noisy works

Drilling, cutting or otherwise of the building fabric shall be programmed between 0900 & 1700 hours.

Normal working hours are Monday to Friday 8:00 to 18:00.

Local council requirements must be upheld.

2.51 Storage

Storage to be made available in the existing machine rooms and behind hoardings.

3.0 SCHEDULE OF LIFT(S) TO BE INSTALLED

The following schedule details the expectations of the lift(s):

Quantity of Lifts	2
Lift Function	Passenger / Goods Lift
Lift Type	Electric Traction
Drive System	Geared Motor
Design	Top Drive (1:1 Rope arrangement)
Minimum Design Life	25 Years
Rated Contract Load	13 Person / 1000 Kg
Rated Speed	0.75 m/s
Drive System	Gearless VVVF Closed Loop (Encoder)
Rated Hourly Starts	180 off/Hour
Controller Location:	Machine Room above
Machine Location:	Machine Room above
Levels served	6 (1,3,5,7,9,11)
Number of Ldg Entrances	6 off
Number of Car Entrances	1 off
Lift Travel	14m approx.
Lift Shaft Construction	Reinforced Concrete
Pit Depth	1800mm
Headroom	4150mm
Well Dimensions	2400W x 2300D
Lift Cabin Dimensions:	1450W x 1650D x 2200H
Call Handling System	Full Collective
Guide Rails	Retained
Guide Arrangement	Retained
Car shoes	High Quality, Silent in Operation
Lubrication	Self Lubricating
Cwt shoes	High Quality, Silent in Operation
Lubrication	Self Lubricating
Car Frame Type	Independent
Suspension	Steel Rope
Unintended Movement	Protection According to BS EN 81-20
Car Frame Type	Suspended 1:1
CAR ENTRANCE EQUIPMENT	
Door Arrangement	Automatic 2 - Panel Centre Opening
Clear width	800mm
Opening height	2000mm
Door material	Patterned Stainless Steel (5WL) 316 Grade

Sill Material	Bronze
Door Drive	Variable Voltage Variable Frequency
Door Coupling	Collapsible Skate
Door Safety Device	Full Height Infrared (Minimum 40 Beams)
Additional Features	Nudging Operation
LANDING ENTRANCE EQUIPMENT	
Door Arrangement	Automatic 2 - Panel Centre Opening.
Clear width	800mm
Opening height	2000mm
Full depth architraves	Patterned Stainless Steel (5WL) 316 Grade
Door Material	Patterned Stainless Steel (5WL) 316 Grade
Sill Material	Bronze
Fire Rating	EN81-58 compliant (120 Minutes)
CONTROL EQUIPMENT	
Grouping	Duplex
Parking Protocol	Main Floor
Positioning System	Silent Wear-free Type
USER CONTROLS, INDICATIONS AND ALARMS	
No. of Control Stations (COP)	1 off
Type	Full Height
Type of Fixation	Secret/Hidden Fixings
Pushbutton type	In Accordance with BS EN 81-70
Model	Dewhurst US100
Features	Raised Tactile Symbols Illumination (White LED)
Floor Pushbuttons	2 Pushbutton per Level
Door Control Pushbuttons	Door Open and Close Pushbuttons
Alarm Pushbutton	Amber
Audible Indications	Call Acceptance buzz
Car indicator	Dewhurst Emotive TFT
Display features	Lift Position Next Direction of Travel – Fixed Actual Direction of Travel – Scrolling
Visual Indications	Call Acceptance Lift Overloaded Alarm Initiated and Alarm Registered
Audible Indications	Call Acceptance Lift Overloaded
Voice Announcements	Lift Position, Door Cycles, Next Direction
Car Operator Markings	Engraved and Back-filled Load, Vendor, Serial, Year and CE Marking

2-way Communication System Instructions
Inductive Loop Symbol
No Smoking Pictogram – NO SMOKING

Additional Features

Key-operated Car Preference

Additional Features

Alarm Pushbutton Lit on Power Failure
Door Open Pushbutton Lit During Door Closing

LANDING CONTROL STATIONS

Number of Risers

2 off

Type

Flush mounted

Location

Front wall

Type of Fixation

Face plates subject to approval

Pushbutton type

In Accordance with BS EN 81-70

Model

US95 Micro movement – Bronze Colour

Features

Raised Tactile Symbols

Dual illumination (White LED)

Control Pushbuttons

▲ and ▼ Legends

Visual Indications

Call Acceptance illuminate

Audible Indications

Call Acceptance buzz

Lift Isolation Key Switch

Located at Ground Floor Landing

LANDING INDICATIONS

Locations

All Levels – Above Entrance

Indications type

Dewhurst Emotive TFT

Features

Arrows Integrated within Display

Lift Position

Next Direction of Travel – Fixed

Actual Direction of Travel – Scrolling

Audible Indications

Bi-directional Arrival Chime

Mounting Location

As per BS EN 81-70

Additional Features

Surface mount angled box's

2-WAY COMMUNICATION/REASSURANCE SOUNDER

2-way Communications

As per BS EN 81-20, -28 and -70

Make/Model

Safeline

Call Point Locations

Lift Car, Top of Car, Pit Wall

Induction Loop

Required

Reassurance Sounder

Audible from Key Locations within Premises

WARRANTY, SERVICING AND RESPONSE

Warranty Period

12 Months

Number of Service Visits

12 off/Annum

Level of Cover

Fully Comprehensive (24 Hr/7 Days)

Response

Normal

240 Minutes

Entrapment

60 Minutes

3.1 SUMMARY OF EQUIPMENT TO BE INSTALLED

This is a summary of works required and should be read in conjunction with the technical specification.

DESCRIPTION	NEW	OVERHAUL	MODIFY	RETAIN	N/A	COMMENTS
Control Panel	X					UK Supported Controller
Handwind buzzer & Indicator	X					
Wiring Diagrams	X					
Shaft Switches	X					
Car Top Control	X					
Lift Position System	X					
Machine	X					Sassi – Geared (Lift 2 Only)
Machine Steelwork	X					
Brake	X					
Traction Sheave	X					
Ropes or Belts	X					
Compensation Ropes					X	
Machine Steelwork	X					
Divertor Pulleys					X	
Overhead Pulleys					X	
Machine Guarding	X					
Guides				X		Check alignment and secure fixings. Finish score marks & clean
Guide Brackets				X		Re-align throughout & clean
Oil pots	X					
Oil Catchment Trays	X					
Counterweight		X		X		De dust / Replace Guide Shoes / Paint Yellow / Clamp fillers
Counterweight Screen	X					Paint Orange
Counterweight Pulley					X	
Lift Car Sling	X					
Lift Car Pulleys					X	
Lift Car Enclosure	X					EN81-71 CAT 2
Lift Car Isolation	X					
Overspeed Governor	X					
Return Pulley	X					
Unintended movement	X					
Safety Gear	X					Bidirectional - VG Safety Gear
Load Weighing	X					Car top strain gauge
Guide Shoes	X					T305 Guide Shoes

DESCRIPTION	NEW	OVERHAUL	MODIFY	RETAIN	N/A	COMMENTS
Car Top Safety Rail	X					Car top equipment to be fixed to the car top balustrade to maximise standing space on the car top.
Car Apron	X					
Buffers	X					
Landing Door Frames	X					
Landing Top Tracks	X					
Landing Sills	X					
Landing Doors	X					
Landing Locks	X					
Landing Door Closers	X					
Landing Architraves	X					316 Grade Stainless Steel. Pattern 5WL.
Car Door Operator	X					GAL MOVFR
Car Door Panels	X					
Car Door Top Track	X					
Car Sill	X					Bronze
Car Door Lock	X					
Car Door Protection	X					
Lift Car Controls	X					
Car Operating Panel	X					
Car Indicator	X					TFT
Alarm	X					
Auto Dialler	X					
Voice Synthesiser	X					
Induction Loop	X					
Pit & Car Top Communication	X					
Internal Car Finishes	X					As per client requirement and approval
Ventilation	X					
Mirrors	X					Vandal resistant
Lift Car Lighting	X					LED lighting required / Emergency + ECO function
Lift Car Flooring	X					
Landing Controls	X					
Landing Indicators	X					
Fire recall switch					X	Interfaced with fire alarm to EN81-73. Remove existing
Lift Isolation Key Switch	X					Located at Ground Floor landing
Trunking & Tubing	X					
Cables & Wiring	X					
Trailing Cables	X					
Stop Switches	X					

DESCRIPTION	NEW	OVERHAUL	MODIFY	RETAIN	N/A	COMMENTS
Builders Work	X					See section 4.0
Hoardings	X					See section 4.0
Lifting Beams/Eyes	X					Supply / Test as required
Mains TP&N				X		Retain – Contractor to confirm suitability following survey
Mains Isolator				X		Retain – Contractor to confirm suitability following survey
Single Phase				X		Retain – Contractor to confirm suitability following survey
Consumer Unit	X					
Machine Space Lighting	X					LED + Emergency Function
Machine Space Sockets	X					
Machine Room Ventilation				X		
Lift Well Lighting & Socket	X					LED + Emergency Function
Telephone Line				X		
Rubber Mats	X					
Tool Board	X					
Special Tools	X					
Notices	X					
Machine Space Door Lock				X		
Guard Rails		X				Paint Back
Access Ladders					X	
Access Trapdoor			X			Provide counterweight
Pit Ladder	X					
Pit Prop					X	
Remote Monitoring					X	
Fire Alarm Interface				X		Interface provided by the client. Lift control to meet BS EN81-73.
Lift well Division Screens					X	
Shaft Painting	X					2 coats of white emulsion
Pit Painting	X					Tile Red
Machine room Painting	X					2 coats of white emulsion / Tile Red Flooring
Steel Work Painting					X	
Maintenance Safety Barrier					X	
Car Entrance Surrounds	X					316 Grade Stainless Steel. Pattern 5WL.
Clean Down	X					Degreasing & full clean down
Landing Fascia's	X					

3.2 SCHEDULE OF FINISHES

Lift contractor to coordinate with the design team regarding lift car finish requirements. Drawings and samples to be submitted for approval.

CAR INTERIOR	FINISHES
Left Hand Wall	Patterned Stainless Steel (5WL) 316 Grade – Anti drumming to rear - Vertical panel joints to have 5mm TNK Trovidor strips, colour Black.
Right Hand Wall	Patterned Stainless Steel (5WL) 316 Grade – Anti drumming to rear - Vertical panel joints to have 5mm TNK Trovidor strips, colour Black.
Front Entrance Surround	Patterned Stainless Steel (5WL) 316 Grade
Car Door Panels	Patterned Stainless Steel (5WL) 316 Grade
Ceiling	25mm Plywood faced with - Pattern Stainless Steel (Linen) 316 Grade
Lighting	LED downlight + 3-Hr Emergency Lighting - EN81-71 – Vandal resistant housing
Car Operating Panel	2mm Brushed Stainless Steel - 316 Grade - Released from Car top. Suitably hinged
Handrail	Tubular – Satin Stainless Steel
Lower Skirting Trim	Pattern Stainless Steel (Linen)
Midtrial Trim	Pattern Stainless Steel (Linen)
Mirror	Rear Wall – Upper - Mirror polished stainless steel backed with 6mm plywood
Flooring & Skirting	6mm Resin with coving - 25mm WBP Marine Ply – 16swg Galvanised Fire break sheet.
Car Base	Galvanised folded, fully welded
Car Sill (door running track)	Bronze
Landing Architraves	Patterned Stainless Steel (5WL) 316 Grade
CCTV	EN81-71 – Vandal resistant housing

4.0 SCHEDULE OF BUILDERS WORK

The lift contractor will provide to the client and/or their representatives, at the pricing stage, all requirements including building works that the lift contractor cannot provide to complete this project. Any items that are not listed will be deemed to be included in the lift contractor's price.

Removal of old and/or redundant materials (Existing redundant lift equipment)

Where materials or equipment are required to be dismantled, they shall be disposed of by the lift contractor unless otherwise instructed by the client and/or their representatives. Any materials or equipment requiring removal shall be removed in total.

Disposal of this material or equipment shall be included in the lift contractors' costs and shall be in full compliance with the Acts and Regulations governing waste.

The client and/or their representatives will require evidence of the method of disposal compliant with all relevant safe disposal regulations (WEEE) and contaminated waste regulations (COSHH).

Protection of Building Fabric

It shall be the responsibility of the lift contractor to protect all fabric against damage including, but not exclusively, carpets, floors, walls and ceilings.

Any damage caused by these works shall be made good at the lift contractors' expense.

Dilapidation photographs should be taken by the contractor before works commence.

Protection of Equipment

The lift contractor is to ensure all equipment and installations are adequately protected.

The lift contractor is to provide all necessary temporary hoardings or other barriers to protect all users of the building from the works, even those not legitimately there.

The hoardings or other barriers must meet the approval of the client and/or their representatives and the planning supervisor as applicable.

Temporary Protection after Installation

After installation and prior to general use, that is, the period between practical completion and occupation of the building, including any caretaker maintenance period, the lift contractor shall provide robust protection to the lift car, doors and architraves.

The lift contractor shall also include removing the temporary protection and set to work the installations for occupation of the building, at the time required by the client and/or their representatives.

Builders Work Information

Builders work information means drawings and/or schedules, prepared at a scale of not greater than 1:100 showing architectural and/or structural work required as necessary to facilitate the execution of these Works and their integration into the remainder of the works.

Machine Room

Lift machine rooms shall be provided with a safe means of access with stairs or ladders in accordance with EN81-20.

Enclosed lighting shall be provided with an illumination level of 200lux at floor level and at the equipment and working areas with emergency lighting to enable safe emergency release to be carried out.

An RCD socket outlet shall be provided in the machinery space.

Where there are different levels greater than 500mm, steps, ladders and guardrails shall be provided.

The floor surfaces shall be made smooth and be treated with non-slip materials.

Where voids exist in the motor room floor these shall be made smooth or covered with tread plate or similar fixed in position.

Lifting beams shall be tested and marked with safe working load.

Wherever there is reduced headroom the lifting beams shall be fitted with head protection marked with yellow and black stripes.

Where a pulley room or sub floor is provided, rope hole kerbs and noise baffles shall be fitted.

An enclosed light with an emergency light shall be provided, operated by a switch adjacent to the access door as part of the well lighting system.

An RCD socket outlet shall be provided and an emergency stop switch shall be fitted adjacent to the access door with additional switches accessible from the working area if the stop near the door cannot be reached from any work area.

(Supply and fix a permanent label on each machine / unit, each controller, each main switch, on all machine room, associated lift equipment, above each car / landing lift entrance indicating the Lift identification concerned.

Labels where specified shall be of the Trafolyte type, or equivalent to be approved, fixed with screws or rivets.

Lighting

Control system lighting shall be installed to comply with BS EN81

Emergency Lighting

Emergency lighting shall be installed to achieve compliance with BS 7255.

Access

The lift contractor shall identify the minimum access dimensions required for the installation of the new equipment.

Machine Room Access

Machine room access doors shall be fitted with a lock that can be locked from the outside using a key and opened from the inside without a key.

Builders Work

Any omitted builders work shall be made clear in the tender return. Omitted builders work shall be offered as an additional cost if not included in the tender sum.

The **lift contractor** shall be responsible for:

- Redundant lift component removal
- Forming of openings required for pushes/indicators and cables
- All well fascias and toe guards
- Pit painting (Pliolite masonry paint in RAL 8004 Terracotta)
- Machine room floor painting (Pliolite masonry paint in RAL 8004 Terracotta)
- Supply and testing of lifting facilities
- Secure storage provision for equipment associated with the lift installation
- Power supplies
- Scaffolding as required
- The provision of structural support for landing entrances
- Making good around architraves, sills, pushbuttons and indicators etc. on each of the landings
- Making good of redundant openings in lift well and existing machine room
- Protective hoardings
- Safety barriers
- Lift shaft & Machine room painting (White Emulsion)
- Assistance with unloading distribution and handling of goods and materials to point of storage and final position.
- Provision of welfare and sanitary facilities.
- Making safe any hazardous conditions, including asbestos material
- Suitable protection to lift equipment against adverse environmental conditions and damage by other trades
- Fire-stopping of entrances
- Formation of holes

Hoardings

Hoardings to be fixed off existing building fabric with a minimum of four fixings utilising Fishes 510 RS 115 frame fixings or equivalent. Hardboard floor protection shall be provided within the area of each hoarding.

The access doors shall be fitted with suitable key protected lock's (other than types FB1 FB2 and FB4), the door's shall be capable of being re-closed and relocked without a key.

A metal plate shall be fixed to the edge of the access door over the lock bolt area to prevent interference of the lock between door and slam.

A multi-purpose safety sign with hazard warning symbol "DANGER LIFT WELL" combined with prohibition symbol and "NO UNAUTHORISED ACCESS" shall be mounted on each hoarding access door size 250 mm x 300 mm.

5.0 SCHEDULE OF ELECTRICAL WORKS

The lift contractor shall be responsible for the complete electrical installation from the main isolators provided in the machine room or termination point to include power, small power and lighting.

The lift contractor will provide to the client and/or their representatives, at the pricing stage, all requirements including electrical works that the lift contractor cannot provide to complete this project. Any items that are not listed will be deemed to be included in the lift contractor's price.

The lift contractor shall inspect and test the power supply to ensure sufficient cable sizing and condition for the power supply required for this programme of works. If he should find that it is not adequate, he shall allow for providing a new cable and show the cost for this in the appropriate part of the Fixed Price Summary.

All works are to be carried out and completed in full compliance with the current edition of BS7671 the IEE Regulations and the Electricity at Work Act.

All cables shall be Low Smoke Fume (LSF) of a manufacturer approved by the Project Manager and shall be BASEC approved. All cables shall have stranded copper conductors.

Electrical Mains Supply

New electricity supplies will be 400V +10% -6% with an allowance of 3% for lighting and 5% (other) volt drop from the intake room to the termination point, 3 phase 50Hz + 1% terminating in a fused main isolating switch provided in the position required by the Contractor. The separate car light supply will be 230V line/neutral terminating in a 6 amp type B MCB within a dedicated lift services distribution board in the position required. All necessary wiring, conduit, trunking and fittings from this point shall be provided and installed by the Contractor.

Consumer Unit

The Lift Contractor shall provide a suitably sized consumer unit fed from a separate single-phase supply. Should the main supply not be adequate, a separate suitably rated single phase supply shall be run from the intake room to feed this board. The existing circuits to be diverted and fed from the consumer unit are:

- Car lighting
- Machine room lighting
- Machine room sockets
- Shaft lighting
- Shaft sockets

Each sub-circuit shall be identified with an engraved label and protected by an MCB and an RCD designed to operate at a maximum of 30mA.

The lift contractor will provide:

- A 3 phase, 4 wire, 400 volt, lockable in the 'off' position, 50 Hz supply terminating in a switch isolator for the lift.
- Provision of fused spur units (where applicable) for wiring.
- Car lighting.
- Ancillary power supplies / alarm systems.

Cables are to be sized accordingly throughout the installation.

Minimum cables sizes shall be a minimum of 0.75 mm² throughout the installation

Electro Magnetic Compatibility

All systems related to the lift shall not affect or be affected by other electrical systems.

Compliance and certification with current standards, which are listed elsewhere in this specification, is essential.

Noise Output, Vibration, Acceleration, Deceleration, Jerk

The working noise output and vibration of the equipment shall be kept to a minimum.

The lift contractor shall state the noise output and vibration of any equipment proposed.

Isolation shall be provided as necessary to the satisfaction of the client and/or their representatives.

Particular attention shall be paid to the ride quality and comfort of passengers in the lift car.

The end product shall utilise CIBSE guide D and in particular, but not exclusively, section 12 as the minimum level to be achieved. The lift contractor shall note that he will be required to provide measurements for the above.

Cables and Conductors

All wiring, including trailing flexes, shall be insulated with low smoke zero halogen insulation, in compliance with BS 7211:1998 and IEC 332-1 and shall be rated according to the minimum functional requirements of the individual core concerned.

All cables shall be protected against overload and/or short circuit.

All cables shall be suitable for the environment in which they are installed.

All wiring shall be undertaken in accordance with statutory regulations.

All cables shall be suitable protected where necessary against mechanical damage.

Conduit and Trunking

Conduits and trunking shall be galvanised steel.

Galvanised conduits and trunking shall not be painted.

Flexible conduit may be used where runs are less than 500 mm.

No trunking or conduit runs shall be at floor levels. They shall be wall or ceiling mounted. Any deviation from this must be agreed with the client and/or their representatives in advance.

Electrical Notices

All equipment shall be identified as to its function by signs or engraving.

Signs, if used, may be affixed to the component and shall be of a good durable quality to be approved by the client and/or their representatives. The signs shall have a life expectancy equal to that of the equipment being identified.

Handwritten signs will not be accepted.

6.0 TECHNICAL SPECIFICATION

General

All related works as above and as necessary to make a fully operational system to satisfy the requirements of the specification of works and terms and conditions of contract are to be included in the costs.

All equipment when fitted shall comply with BS EN81, the Lifts Regulations 2016, part M of the Building Regulations and the Equality act 2010 as standard, in addition to any British or European Standards that apply to the equipment specifically.

Periodic Thorough Examination

Upon completion of the works specified in this specification a thorough examination in accordance with The Lifting Operations & Lifting Equipment Regulations 1998 shall be undertaken by the client and/or their representatives or another and a certificate shall be issued by the engineer or another.

Any defects noted as part of this inspection shall be rectified in a timely manner by the lift contractor.

Commissioning and Testing

The lift shall be fully tested in accordance with current standards by the lift contractor and test certification issued to the client and/or their representatives

The lift contractor shall undertake commissioning and make any adjustments required for the lift to enter service prior to the client and/or their representatives attending the site to undertake an examination and issue a defects list.

At least one week's notice will be given by the lift contractor to the client and/or their representatives for the acceptance examination.

The lift contractor is to provide all necessary instruments and recorders to monitor and test the lift installation, during commissioning and performance testing.

Commissioning shall be to the BS8486 as appropriate.

The entire installation shall be tested and inspected to ensure:

- That it meets the requirements of this specification and the standards, codes of practice, statutory instruments, local authority by laws, directives and regulations associated with it.
- That all Equipment is secure and that it is not visibly damaged.

Record Drawings and Operation and Maintenance Manuals

Record drawings and operation and maintenance manuals shall be supplied upon completion and shall incorporate a complete list of components forming the lift works, their maintenance requirements and replacement source.

The manuals shall incorporate a complete set of electrical drawings for the project.

The manuals shall also incorporate:

- An index;
- A detailed description of the basis of design, intended method of operation, interrelated systems, any limitations on future use;
- Lubrication schedules for the lubricated items of plant and equipment;
- A list of normal consumable items;
- A list of recommended “running spares” required, being those items subject to wear or deterioration and which may involve the employer in extended deliveries when replacements are required at some future date. Reference numbers are also to be supplied for all spare items;
- Procedures for fault finding;
- Emergency procedures;
- Start-up procedures;
- Shut down procedures;
- Detailed daily, weekly, monthly and annual maintenance procedures;
- Installation drawings;
- Manufacturers technical literature and plant data schedules;
- Manufacturers warranties and guarantees;
- Fault finding and rectification procedures;
- Drawing schedule;
- Copy of commissioning certificate.

The following number of copies of manuals shall be supplied:

- Hard Copies – Two;
- Electronic Copies – One;
- Electronic copies shall be supplied in a PDF format.

Maintenance During Defects Liability Period

The tender sum shall include 12 months fully comprehensive maintenance cover to start upon practical completion as issued by the client and/or their representatives, quantity surveyor or contract administrator.

Maintenance standards, requirements and terms and conditions are detailed elsewhere in this specification.

The maintenance during the defect’s liability period includes response to breakdowns and entrapments at no cost to the client.

Site Visits

Visits to survey the site are to be arranged via LECS UK. The lift contractor is to ascertain the nature of the site and all local conditions and restrictions likely to affect the execution of the works. Prior to starting on site, the lift contractor shall be responsible to ensure that the shaft dimensions are correct.

Technical Queries

The lift contractor shall resolve any technical queries with the client and/or their representatives prior to submission of the tender.

Ancillary Equipment

Any ancillary equipment that requires installation to meet this specification must be included in the lift contractor's price.

Suppliers

The lift contractor will submit, with this tender, a list of proposed suppliers, manufacturers and installers of all equipment, plant, products and services, including items for which the choice is not specified or is discretionary.

Where manufacturers, suppliers or installers are identified by name, use these exclusively. Discuss any objection to a stated supplier, installer, or product with the client and/or their representatives prior to tender.

Where manufacturers, suppliers or Installer are not identified by name select products that comply with the requirements and, when requested, demonstrate such compliance.

Where manufacturers, suppliers or installers are identified by name but states that an approved alternative or alternatives may be used, obtain approval from the client and/or their representatives prior to tender.

Any proposed alternatives must comply with the relevant British Standards and/or European Standards, subject to approval by the client and/or their representatives. It must be equivalent or better in operation, in its physical requirements in terms of size, weight and space and/or electrical requirements, maintenance requirements, compatibility with other equipment and in quality than those proposed and specified by name.

You must be able to demonstrate that any proposed alternative is fully equivalent or better than the item specified by name.

Alternatives which will cause significant changes, alterations or amendments will not be considered.

Site Dimensions

Where installations are dependent upon site dimensions ensure these are available before proceeding with the Works. No warranty or representation is given by the client and/or their representatives to the accuracy, ability to build or adequacy of drawing dimensions and details. The lift contractor shall be deemed to have checked in terms of all regulations, codes of practice and performance the site dimensions. The lift contractor will undertake full responsibility for all detail and design.

Security

The lift contractor shall be responsible for the security of all equipment.

Supervision

The lift contractor shall ensure that the work is inspected during its progress by a competent supervisor.

Notices

All notices shall comply with the Safety Signs and Signals Regulations 1996 and with BS7255.

All other statutory or local authority or fire authority notices required shall be fitted where applicable:

- Machine Room Door notices shall be rigid plastic
- Control panel notices shall be rigid plastic
- Any notices within the well, shall be rigid plastic
- Reduced head room and deep pit signs shall be rigid plastic
- Any notices within the car shall be stainless steel
- Any notices external car shall be rigid plastic or steel
- All other notices shall be suitably encapsulated to ensure a life expectancy of at least 10 years
- A safety notice advising of the correct treatment of a person having received an electric shock shall be posted in the machine room or adjacent to control equipment
- A hand winding or hand lowering notice appropriate to the equipment installed shall be provided
- Where necessary wear hard hat notice shall be fitted on the control panel or machine room door externally and/or other appropriate location
- The contractor shall attach to the lift undergoing maintenance, suitable notices informing passengers that the lift is out of service. These notices shall be fitted on all floors serviced by that lift

Compliant Standards and Legislation

The lift works shall be undertaken in accordance with all current recognised standards, codes of practice, directives, ACOP's, guidelines and statutory instruments. Compliance with CDM, EMC, Local Authority By Laws, IET Regulations, Electricity, Gas, Water Authority requirements, Clients Insurers Requirements and any notifications necessary shall be a requirement of the contract.

Particular attention is drawn to:

- The Health & Safety at Work etc. Act 1974
- The Management of Health & Safety at Work Regulations 1999
- Provision & Use of Work Equipment Regulations 1998
- The Lifting operations and Lifting Equipment Regulations 1998
- The Construction (Design & Management) Regulations 2015 and revisions
- The Work at Height Regulations 2005
- Electricity at Work Regulations 1989
- The Building Regulations
- (COSHH) Control of Substances Hazardous to Health Regulations 2002
- The Workplace (Health, Safety and Welfare) Regulations 1992
- The Construction (Health, Safety and Welfare) Regulations 1996
- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995
- The Lifts Regulations 2016
- BS EN81 group of standards as applicable
- BS 8300
- BS 9999
- BS5655 group of standards as applicable
- BS7255
- IET Regulations 2018 and associated amendments
- BS7671
- BS EN 13015:2001
- EN12015
- EN12016
- SAFed Lift Guidance 1
- HSE Guidance note PM26
- Equality Act 2010

All equipment required under The Lift Regulations or Supply of Machinery Regulations shall have CE markings and certification as applicable.

7.0 CONTROL AND DRIVE EQUIPMENT

CONTROL EQUIPMENT

The control system manufacturer and type shall be identified in the summary of equipment to be supplied by the lift contractor. The control system shall be mounted in a location agreed with the client and/or their representatives but must maintain the BS EN minimum clearances for safe working.

The control system components shall be housed in a sheet steel cabinet or product specific cabinet, which shall be adequately ventilated and the door of which shall be hinged and lockable.

A Danger High Voltage notice shall be fitted on the door with black lettering on a yellow background.

A second warning notice shall also be displayed inside the panel. All Safety Signs/Notices are to comply with the Safety Signs and Signals Regulations.

All control system components shall have their function clearly indicated by permanent engraved labels.

The control circuits shall be individually protected by HRC cartridge fuses and/or an MCB's.

A safety mat to BS921 shall be fitted in front of the control system or supplied with the control system and be readily available and easily accessible. If not fitted permanently then the control system should incorporate a sign stating the system is not to be worked on until the safety mat is in position and the correct position shall be clearly identified.

The controller shall incorporate the following features:

- Double Journey timer
- Position selector automatically reset at terminal floors as a minimum
- Car top control facility
- Microprocessor based
- Homing facility to any selected floor
- Hand winding signal & buzzer with hand winding audible and visual warning device
- Call handling features shall be: As selected
- Anti-quick reversal delay
- Weight switch control
- Comprehensive labelling of all components
- Thermistor protection
- Fireman's/Fire Fighting Control
- Phase failure and/or reversal protection
- Plastic encapsulated electrical drawings shall be supplied with the controller
- A Plastic encapsulated component nomenclature shall be supplied with the controller
- All drawings, nomenclatures and manuals shall be in the English Language

DRIVE

Electronic Drive Unit

All drive units shall run without appreciable noise or hum. It shall be specifically designed for heavy-duty lift service, capable of frequent reversals and smoothly driving varying loads up to the maximum specified duty in both hauling and overhauling modes. The drive unit shall be capable of a minimum 240 starts per hour.

The complete drive unit shall be accurately aligned and supported by an integral cast bedplate or separate fabricated steel bedplate. All mounting surfaces shall be accurately machined necessitating minimal use of shimming.

The bedplate shall be supported on a structural steel support stand and separate machine raft if located in the motor room. The Lift Contractor shall supply, finally position and fix the machine support stand and raft including all necessary drilling and fixing.

Clearances in accordance with EN81-20 should be allowed when sitting the lift machine, especially for maintenance around the motor and gear unit, handwinding and above the top of the driving sheave.

The Lift Contractor shall provide and install absorbent isolation pads of suitable density to prevent the transmission of sound and vibration from the machine and supporting steelwork to the building structure.

The noise level from the machine shall not exceed 80 dB measured at 1 metre from the machinery and on the landings and in the accommodation, it shall not exceed NR38. Rope hole kerbs and noise baffles shall be provided to prevent the transmission of noise into the lift well from the motor room if provided.

A stop switch shall be mounted within one metre of the lift machine in a position agreed with the Lift Consultant.

Motors

The drive motor shall be of a synchronous or asynchronous type with built in means of temperature protection specially designed and constructed for variable speed lift operation. It shall be suitable for a 400V, 3 phase, 50 hertz supply and shall have a speed not exceeding 1500 rpm.

Motor manufacturers test certificates shall be submitted to the Lift Consultant for approval before it is delivered to site. Compliance with this clause does not relieve the Lift Contractor from the responsibility of installing equipment which will meet the commissioning tests and normal operating requirements of the installation.

A clearly engraved permanent data plate shall be fixed to the motor stating the manufacturers name, the type/frame size and full relevant technical data.

Motors shall be provided with a means of handwinding in accordance with BS EN81-20.

A suitably positioned handwinding instruction notice shall be provided.

The motor shall be protected by thermistors embedded in the motor windings and by an overload relay in the control panel.

Any motor protection device shall be arranged to allow the lift to stop at a landing prior to shut down, to allow passengers to leave the lift car.

Brake Unit

This brake on its own shall be capable of stopping the machine when the car is travelling downward at rated speed and with the rated load plus 25 %.

The drive unit shall incorporate a drum or calliper disc brake that shall be readily accessible for inspection and adjustment but enclosed to comply with the Workplace Regulations 1992.

The brake shall be of the double acting electro mechanical type complying fully with the requirements of EN81-20 having duplication of its braking elements including the brake coil.

The machine shall be capable of having the brake released by a continuous manual operation. The operation can be mechanical (e.g. lever) or electrical powered by an automatically rechargeable emergency supply.

The emergency supply shall be sufficient to move the car to a landing taking into consideration other equipment connected to this supply and the time taken to respond to emergency situations.

Sheaves and Pulleys

The pitch diameter of the sheave shall not be less than 40 times the nominal diameter of the hoist ropes. The traction sheave shall be secured to the drive spider by means of flanged /spigot joint and fitted bolts or to the drive shaft by at least two fitted keys located at 90o to each other.

All sheaves shall be flanged both sides and necessary provision made to avoid:

- the suspension ropes leaving the sheave
- the introduction of objects between the ropes and grooves.
- persons coming into contact with the sheave or pulley.
- devices used to meet the above requirements shall be so constructed that they do not hinder inspection or maintenance.

Diverter sheave and pulleys if provided shall comply with the requirements of the traction sheave and should be mounted to supporting steels or rafts. All diverter sheave mounting supports including the drilling and fixing of it shall be provided by the Lift Contractor. The Lift Contractor shall give full consideration the fixed height in the machine room and well and the accessibility of the equipment for maintenance.

Handwinding / Lowering Facility

The handwinding arrangement shall comply with EN81-20.

Electrical means shall comply with the following:

- 1) the power supply shall be able to move the car with any load to an adjacent landing within 1 h after a breakdown;
- 2) the speed shall be not greater than 0,30 m/s.

A visual and audible device, having a loud arresting tone, shall be installed in the controller. This device shall sound when the car reaches a floor level in the handwinding mode. The handwinding audible device shall be energised by a trickle charge battery pack having a 3-hour operating capacity. The audible and visual signals shall be accompanied by car position indication.

The Lift Contractor shall provide and fix permanent notices in prominent positions close to the handwinding position. The notices shall clearly state that handwinding must only be carried out by authorised personnel and set out precise instructions for carrying out the handwinding procedure..

Suspension Ropes

The rope type shall be of the correct size and type to suit the diverting sheave(s).

The ropes shall be correctly adjusted to ensure longevity of life of the ropes and sheave(s).

The ropes shall be adjusted to ensure equal pressure on the sheave(s) and equal tension on the ropes.

Any devices required to ensure this condition shall be considered ancillary equipment as above.

A copy of rope certificates shall be issued to the client and/or their representatives.

A data plate shall be fixed to the cross head giving the details of the suspension ropes type, construction, diameter, length and car weight; expressed in metric terms.

Levelling Accuracy

Levelling accuracy shall be a maximum of + or – 6mm, or less if specified in British or European Standards.

Guarding

Guarding shall be installed to comply with the Provision and Use of Work Equipment Regulations 1998 and British and European Standards relating to segregation, separation, isolation, strength, materials and dimensions, to the client and/or their representatives satisfaction.

The client and/or their representatives shall have full discretion on the adequacy of guarding but compliance with the above will be considered adequate.

8.0 LIFT WELL

General

All related works as above and as necessary to make a fully operational system to satisfy the requirements of the specification of works and terms and conditions of contract are to be included in the costs.

All equipment when fitted shall comply with BS EN81, the Lifts Regulations 2016, part M of the Building Regulations and the Equality act 2010 as standard, in addition to any British or European Standards that apply to the equipment specifically.

The Lift contractor is to ensure that the existing well structure including any nibs supporting the landing sills are sound and suitable for their purpose and the lift contractor is to take this into account when submitting his tender.

The lift contractor shall ensure that any new equipment is suitable for the installation and use within the existing structure, headroom and pit depth.

Well Cleanliness

On completion the well shall be degreased, cleaned and all excess detritus shall be removed.

Decoration

The pit shall be cleaned and painted using a propriety floor paint, to the satisfaction of the client and/or their representatives. The paint shall extend to 300mm above pit floor level.

If applicable the machine room shall be decorated, including painting walls with two coats of white emulsion, sealing floor with oil based floor paint colour red.

Guide Rails and Brackets (retained)

Guides that are re-used shall be checked for alignment, DBG accuracy, re-aligned, for security.

Supply, and install any new supportive steels / guide brackets, that are necessary to comply with the relevant BS

The car guides shall be so jointed and fixed to their brackets so that they do not deflect by more than 1.0mm under normal operating conditions.

All guide clips must be examined and checked to ensure each clip is correctly fitted and secure. Any shims shall be of steel. The thickness of any shimming/packing to obtain proper alignment of the guides shall not exceed 25mm.

The guide rails will be re-linished, plumbed and re-aligned throughout the shaft and documentary evidence of the DBG and any deviations recorded.

All necessary rail clips, brackets, sole plates and buffer supports shall be provided and fixed by the Lift Contractor. Drilling of all steelwork, concrete and brickwork required to secure the guides and lift equipment to the building structure shall be carried out by the Lift Contractor.

Lighting and Small Power

The lift contractor shall be responsible for the complete electrical installation from the main isolators provided in the machine room or termination point for the installation of the new equipment (to include power, small power and lighting).

- Well lighting shall meet current standards
- Well lighting shall be weatherproof
- The lighting shall be LED energy efficient type
- The lighting shall incorporate 3-hour non-maintained emergency lighting (LED)
- It shall incorporate 3 way switching. From the machine room or control equipment panel, from the pit and from the car top control unit
- Small power supplies must be run independently to lift system cabling
- A 13A socket outlet, RCD protected, shall be installed in the pit area

Counterweights (retained)

Where, in the case the contractor is to install new counterweights and or utilise the existing counterweight for the purpose of the new installation. He must ensure the counterweight is fit for purpose.

The counterweight shall be wire brushed, coated with red oxide and painted with two coats of yellow approved paint.

Filler weights shall be suitably secured and not be able to move or become dislodged during travel or in the event of the car or counterweight buffering.

The counterweight shall be suitably rated to provide maximum energy efficiency but maintain the critical traction ratio requirements specified in EN81-20.

At mid point in the shaft the suspended weight of the counterweight shall equal the suspended weight of the car plus 45%-50% of the contract load.

Counterweight Screen

A counterweight screen shall be provided in the lift pit. The screen shall be constructed of 10mm square, heavy gauge, galvanised steel in a galvanised mild steel frame. The screen shall be easily removable and shall extend the full width of the counterweight and from 150mm above the pit floor to a height of 2.5m. The screen shall be painted warning orange.

A sign is to be fitted to the counterweight screen giving the dimensions of counterweight to the buffer when in normal operation.

Pit Ladders

The contractor shall supply, install a permanently fixed galvanised pit access ladder. It shall comprise of flat steel steps, a handrail and shall be easily accessible from the lowest terminal landing. The ladder / hand-rail shall be suitably earthed and bonded. In the absence of adequate space, the contractor may / shall install a removal pit ladder.

Buffers

Energy accumulation or energy dissipation type buffers complying with EN81 as appropriate shall be installed beneath the car within the pit.

Energy dissipation oil buffers shall be used for rated speeds above 1m/sec. They shall have been tested in accordance with Appendix F5 of EN81 and bear the type approval mark.

Steel buffer striking plates of ample proportions shall be fitted to the car sling and to ensure that buffer impact loads are evenly distributed.

With the car on the fully compressed buffers there must be adequate clearance and man clearance between the lowest part of the car and pit.

Limit Switches

The lift will have terminal slow down switch or shaft limits to slow down or stop the lift in a controlled manner at each terminal floor, in the event of a circuitry or selector malfunction.

An "UP" limit is to be incorporated in the control circuit so that when the Test Switch is in the "TEST" position and "UP" button depressed, the car shall stop high enough to facilitate inspection and maintenance of any equipment at the top of the lift shaft but low enough to ensure that escape is possible from the top floor entrance.

All limits and switches shall be tested and CE marked.

The terminal, slowing, stopping and final limit switches shall be complete with all necessary fabricated brackets which shall be pinned after final positioning.

9.0 LIFT CAR

General

All related works as above and as necessary to make a fully operational system to satisfy the requirements of the specification of works and terms and conditions of contract are to be included in the costs.

All equipment when fitted shall comply with the Lifts Regulations 1997, part M of the Building Regulations and the Equality act 2010 as standard, in addition to any British or European Standards that apply to the equipment specifically.

All car interior signs shall be of stainless steel and must be approved prior to fitting.

Car Enclosure

The car enclosure shall be constructed in compliance with EN81-71 CAT 2.

Special attention shall be given to the elimination of vibration and transmission of noise to the car enclosure. High density oil resistant pads shall be fitted as required between the enclosure and the supporting sling. The external surfaces of the enclosure shall be fire retardant and treated with anti-drumming compound or pads as necessary.

The car bodywork shall be formed from equal width panels not more than 250 mm wide, with all four edges of each panel being folded back in a return bend, and bolted together to form a rigid construction.

The slam post of the car entrance shall be manufactured in Satin Stainless Steel Grade 316, not less than 1.6 mm, reinforced with three separate straps of 3mm thick Zintec plate secured by 8-mm diameter fixing bolts, be so designed to afford protection around the safety edge.

Ventilation

The ventilation shall consist of slots totalling 1.5% of the total car floor area with robust masking plates to the shaft side of the car. The design of the vents shall be such that it shall

be impossible for persons travelling in the car to touch any fixed or moving equipment in the lift shaft by means of inserting objects through the vents.

Car Roof

The car roof shall be rigidly constructed and be able to support the weight of two persons and resist a vertical force of 2000N at any position without permanent deformation. All components mounted on the car roof shall be located in one position to enable a safe means of access to the roof to be achieved.

Car Operating Panel

A car operating panel shall be located in the lift car in accordance with BS EN81-70, with side opening doors on the closed jamb sidewall.

The push buttons shall be installed at a height of between 900mm & 1100mm from the finished car floor and positioned on the side wall 400mm from the front return.

Where applicable a CE marking and notified body identification number shall be displayed in a position to be agreed by the engineer.

Where called for the following will be provided:

- Manufactures name and serial number
- The rated load in kg and persons
- A call button corresponding to each floor served with half illumination
- Main floor button to be green and proud of COP by 5mm
- Car preference key switch (key only to be removable in the Normal position)
- Door open button
- Door close button
- Alarm button
- Telephone activated indicators
- Flush mounted speaker / microphone grille
- Car position and direction digital indicator
- Overload warning indicator
- An induction loop with the appropriate symbol for the emergency passenger alarm
- A No Smoking pictogram 100 dia. Shall be engraved on the car control station with the wording "NO SMOKING" in 10mm high RED letters engraved below.

Car Push Buttons

The car push buttons shall be of micro movement design with raised tactile facility and shall have both audible and visual call registration indication.

The push buttons shall have dual LED illumination and their presells shall be in contrast to their surroundings.

A single operation of the push buttons shall register a call on the lift control system, whilst subsequent operation of the push shall initiate quick close of the doors.

The main exit floor push button shall be green in colour and project from the car operating panel by 5mm.

Alarm Button

The alarm button shall be permanently illuminated and yellow in colour and shall incorporate a tactile bell shape symbol. It shall be fully illuminated during power failure.

Door Open Push

A door open push shall be provided with LED illuminated halo which shall be activated during the door closing cycle.

Door Close Push

Operation of the 'door close' button shall reduce the door dwell time.

Car indicator (TFT)

A digital indicator shall be located in the car station having clear and legible characters not less than 50mm high complying with EN81-70.

The car station shall incorporate a position indicator that shall clearly identify car position, direction of travel and the scrolling messages: -

- Lift Out of Service
- Lift on Maintenance control
- Lift on Car Preference
- Lift Overloaded
- Lift Returning to Ground floor

Unless specified otherwise car position indicators shall be positioned such that their centre line is not more than 1600mm and not more than 1800 mm above the car floor level.

Voice Synthesiser

The Tenderer shall provide voice synthesisers which shall be digital quality and provide for the following messages, each of which shall be easily disabled from the machine room without the requirement to reprogram the unit: -

- Floor identification
- Direction of travel
- Doors opening/Doors closing
- Lift overloaded

Volume adjustment is required to adjust for site conditions.

Emergency Alarm/Auto dialler Telecommunication System

An emergency alarm shall be fitted in the lift car, operated by a push button within the car push station. This shall be linked with an emergency auto-dialler telecommunication system, which allows the occupant to call for help in the event of a lift malfunction. The system should be replicated for the engineer's car top control and lift pit.

The voice communication shall be clearly audible and without distortion or interference, the microphone and speaker volumes shall be adjustable to account for environmental conditions.

Car Lighting & Emergency Light

This is an LED flat panel unit.

The car lighting shall comply with BS EN81-20 LUX levels. An LED emergency light shall be incorporated; this shall be at least 3 hours non-maintained.

Passenger Protection

The device shall detect any type of obstruction in the path of the doors when closing. It shall provide a minimum protection zone of 50mm in front of the leading edge of each panel and the extent of this zone shall be adjustable. Upon detecting an obstruction, the doors will stop before striking the obstruction and reverse to the fully open position. Pressure operated door reversal devices, mechanical type retractable shoes or safety edges are not acceptable. The detection device shall not be susceptible to dust or sunlight.

10.0 LIFT CAR EXTERNAL EQUIPMENT

GENERAL

All related works as above and as necessary to make a fully operational system to satisfy the requirements of the specification of works and terms and conditions of contract are to be included in the costs.

All equipment when fitted shall comply with BS EN81, the Lifts Regulations 2016, part M of the Building Regulations and the Equality Act 2010 as standard, in addition to any British or European Standards that apply to the equipment specifically.

Car Sling

The car sling shall consist of a steel frame and platform fabricated from rolled steel angle and channel sections, suitably braced and stiffened, incorporating the safety gear below the platforms.

The platform shall be effectively isolated from the frame by means of oil retardant isolation rubber pads of suitable resistance and density.

The car sling shall be of a strength and rigidity to withstand forces resulting from the operation of the safety gear, or buffer impact in accordance with EN81.

Data plates shall be fitted to the crossheads clearly engraved with the static car mass, the size, construction and length of the suspension ropes and car weights.

Car Doors

The car door equipment shall be quiet and smooth in operation driven by an electronically controlled VVVF drive and interlinked with the existing landing door equipment via a collapsible skate or retractable clutch mechanism. The skate/clutch mechanism shall ensure accurate alignment between the car and landing door panels, car front returns, and the landing architrave verticals with the doors in the fully open position.

Drive of the doors shall be torque limited to avoid crushing and to ensure that the energy/force requirements outlined in BS EN 81-20 are adhered to.

It shall be possible to adjust high/low door speeds, door forces, torque settings, and the acceleration/deceleration profiles in the both opening and closing cycles.

The door dwell time shall also be adjustable at least between the limits of 2 and 60 seconds without the need for special tools. Unless stipulated otherwise by the Particular Specification this shall initially be set to 5 seconds.

During operation, the car and landing doors shall be solidly locked together to ensure aligned simultaneous movement and shall be cushioned at both limits of travel.

Doors shall park in the closed position. With power supplied to the lift and with the lift idle the doors shall be fully closed, systems that allow the landing door panels to relax to whatever degree will not be accepted.

Door operator

The electric door operator shall be of high speed, heavy-duty construction suitable for medium levels of traffic duty. The motor will have a VVVF drive.

The opening and closing speed of the door operator shall be easily adjusted to suit operating conditions and shall be initially set to the times shown in the schedules.

The interval of time that the doors are in the fully open position shall be easily adjustable, to a maximum period of 30 seconds to allow for particular needs of the building, but shall initially be set at eight (8) seconds

Trailing Flexes

Trailing flexes may be Flatform or round. Mixed type flexes are not permitted.

The cables shall be PVC insulated and sheathed with a fire resisting compound finish having a maximum of twelve separately identified cores per flex and shall allow for 10% spare cores total.

They shall have no intermediate termination points and each wire used shall have only two terminal connections.

Trailing cables serving the car light, car top light/power, door operator motor and associated circuit protective conductors shall be entirely separate from other circuit cables.

The cables shall incorporate a separate way for the lift car communication system. Flatform PVC sheathed and insulated cables shall be provided.

The trailing cables shall be anchored on a halfway point in the liftwell and on the underside of the lift car with purpose made wedge anchorages.

Car Top Emergency Lighting

A maintenance emergency light shall be installed at an agreed position on the car top to ensure maintenance personnel have adequate lighting during a power failure.

Car Top Control

New car top controls shall be installed to comply with the latest edition of BS7255

The car top up or down buttons shall only operate in conjunction with a third button, such that two buttons have to be pressed at the same time to initiate car movement.

An alarm button and intercom system shall be fitted in proximity or to the car top controller.

An additional switch shall be fitted to provide three-way switching of the shaft lights.

Safety Gear

A new VG bi-directional 'progressive acting' CE marked safety gear shall be installed beneath the Lift car carried within the bottom channel section of the car frame assembly forming part of the lift car sling arrangement.

The safety gear shall be mounted under the car and be of the progressive type. Designed such that the safety gear will release by driving or pump the lift car in the upwards direction of travel and reset, without the engineer needing to enter the lift shaft. Wired into the main safety circuit shall be a suitably rated and purpose designed switch having its contacts "normally closed". When the safety gear is actuated, the switch shall operate and interrupt the safety circuit removing the lift from service.

Guide Shoes

Sprung type sliding guide shoes shall be provided for the car, and new renewable fixed sliding guide shoes shall be provided for the counterweight guides.

All guide shoes shall be fitted with automatic heavy-duty oil lubrication.

Drip trays shall be provided for all guides.

Static Balancing

The new lift car/s shall include for static balancing as required.

The static balance of the lift car shall be achieved by arranging securely fixed weights under the car platform where necessary to equalise the pressure on the individual shoes, front to back and side to side. Provisions are to be made for a suitable frame to support the weights beneath the lift car.

The weights shall be keyed into purpose made support trays, pinned to avoid possible displacement / movement.

11.0 LANDING EQUIPMENT

General

All related works as above and as necessary to make a fully operational system to satisfy the requirements of the specification of works and terms and conditions of contract are to be included in the costs.

All equipment when fitted shall comply with BS EN81, the Lifts Regulations 2016, part M of the Building Regulations and the Disability Discrimination Act 1995 as standard, in addition to any British or European Standards that apply to the equipment specifically.

Landing Door Frame

The entrance shall comply with BS EN 81-58 (E Value 120 minutes) to provide certified 2 hour fire integrity.

A copy of the fire certificate shall be enclosed within the Operation and Maintenance Manual.

The landing entrance frames (uprights, top track fixing section and sill carrier) shall be fabricated from rolled steel members, or equivalently constructed plate steel sections.

The Lift Contractor shall make full allowance to fix the landing entrance frame to the shaft fabric with fixing anchors as approved. The fixings shall not be accessible or visible from the landing or the lift car.

Landing Doors

The landing doors shall be constructed to be rigid and withstand the forces given in EN81.

At the bottom shoes shall be provided which fully engage the landing threshold so they cannot be forced out. Emergency guidance shall be provided to guide the doors should the running surfaces wear out.

Gravity or spring closers shall be fitted to automatically close the doors.

The landing entrance assembly shall be fire rated to 120 minutes and meet BS EN81-58.

The landing door shall be provided with electro-mechanical interlocks, which will prevent operation of the lift under any circumstances, unless all doors are in the closed position, and locked both electrically and mechanically.

The key, in accordance with BS EN 81- Annex B, shall be of steel section or cast materials and the access to each lock shall be restricted to this key. The force necessary to operate and release the door will be such that unauthorised use of the release mechanism (by the use of screwdriver, pliers etc) will not be possible.

All locks shall be fully in accordance with BS EN 81 and CE marked.

Landing Indicators

The Lift Contractor shall include for a car position indicator at all floors. The indicator shall be compatible with the control equipment.

The indicators shall incorporate scrolling car direction arrows at all floor levels, with audible indication, that shall sound just prior to the lift arriving at a floor.

The faceplates shall be located above the landing entrances.

The faceplates shall be provided with tamper resistant fixing.

Landing Indicator finishes shall be agreed with the client.

Landing Push Stations

Push buttons shall have both illuminated and audible integral call registered indication.

The push stations shall be installed at a height that ensures a minimum dimension of 900mm above FFL to the centreline of any push and a maximum of 1100mm above FFL to the centreline of the highest push.

The faceplates shall be provided with tamper resistant fixing.

Landing push station finishes shall be agreed with the client.

Safety Barriers

The lift contractor shall supply a safety barrier to prevent access to the lift and shaft by the public during engineering operations. The barrier shall comply with BS7255.

Architraves

A full depth 'Stone Henge' type architrave shall be provided and fixed at each entrance.

The Contractor shall be responsible for ensuring that all architrave's are correctly positioned.

The cavity behind the architrave's is filled with concrete. The sole use of dry-packing will not be acceptable.

The landing thresholds directly in front / between the landing entrances must be aesthetically matched.

The architraves shall be constructed from Patterned Stainless Steel (5WL) 316 Grade.

12.0 MAINTENANCE

LIFT MAINTENANCE

Definition

The definition of Maintenance shall be as defined in Section 3 of BS EN13015:2001.

Risk Assessment

Before commencement of maintenance works, the lift contractor shall carry out a full risk assessment for every working area and for every task to be undertaken as part of normal maintenance duties, in accordance with BS EN 13015:2001, and provide written copies to the client and/or their representatives.

Maintenance Personnel

All maintenance work carried out under this contract shall be by suitably qualified personnel as defined in section 3.3 of BS EN 13015:2001. If necessary, maintenance personnel may be assisted by an apprentice or assistant. No more than one assistant per qualified person.

Frequency of Inspection/Maintenance Visits

Maintenance visits shall be carried out once every month, totalling 4 visits per year. Service visits shall be planned to be within a specified week each month. The lift contractor shall notify the Client accordingly. Call outs and repairs as defined in section 3.1a(non-maintenance operations) of BS EN 13015:2001 shall not be considered part of the planned maintenance schedule.

Maintenance during the 12-month warranty period shall be fully comprehensive

The terms and conditions of the maintenance during the warranty period shall be as per the client standard terms and conditions.

Time Allocated per Site

The lift contractor will be expected to allocate a minimum of one hour to the maintenance of the lift (not including travel time to or from site). During this time a minimum maintenance schedule (This shall be based on Annex A.1 Electric Lifts and/or A.2 Hydraulic Lifts of BS EN 13015:2001) should be followed, with additional time being allowed to complete repairs. Repairs outside of section 3.1e of BS EN 13015:2001 shall not be part of maintenance site times. These repairs shall be planned in conjunction with the client and a log of repairs shall be retained on site.

Sign In/Out

Upon arriving on site, the lift contractor will be required to sign a contractor's book with their time of arrival. This will be repeated before the lift contractor leaves the site, again the time being recorded. Non-signature shall be logged as a missed visit, and the cost deducted from the contract sum.

Log Cards

A contractor's log card, detailing the time and purpose of all visits, and a brief description of any work carried out, shall be provided by the contractor, and remain in the machine room in

a suitable protective holder. The contractor will be responsible for recording each visit in the log card.

Notices

The contractor shall attach to any lift undergoing maintenance, suitable notices informing passengers that the lift is out of service. These notices shall be fitted on all floors serviced by that lift.

Safety Barriers

Any work by the contractor which may involve exposed shaft entrances, shall be carried out behind a protective safety barrier, which shall prevent any member of the public from entering the work area. The contractor shall carry appropriate barriers at all times.

Spare

All spare parts used to maintain the lifts shall be new and to the specification of the original unless otherwise agreed with the client and/or their representatives. A supply of regularly used spare components shall be stored on site to facilitate the maintenance and repair of the lifts. This shall exclude oils and flammable or hazardous substances that are subject to control by Health and Safety Regulations.

Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)

The Contractor will be required to carry out all repair work identified by the surveyor during any undertaken LOLER inspection and recorded in the LOLER report forms.

Maintenance Audits

The lift may undergo maintenance audits by the client and/or their representatives at six monthly intervals. The contractor shall be required to carry out all repair work identified by the reports during any such audit.

Returning Lifts to Service

Following the completion of each visit, the lift shall be left in a safe and satisfactory operating condition. In the event of a lift being withdrawn from service for a longer period, suitable notices shall be fixed by the qualified person to the doors of the lift informing passengers of the lift being out of service. The contractor shall notify the clients of the status of the lift with immediate effect, or if the event occurs after hours or on a weekend, then no later than 0900hrs on the following working day. A timeframe shall be given by the contractor for the necessary repair and return to service of the lift.

BREAKDOWNS AND ENTRAPMENTS

Call out Personnel

All work carried out under this contract shall be by suitably qualified personnel as defined in section 3.3 of BS EN 13015:2001. If necessary, call out personnel may be assisted by an apprentice or assistant. No more than one assistant per qualified person.

Hours of Working

A 24 hour manned service shall be available to respond to entrapments and other call outs.

Response Times

All reported breakdowns shall be responded to within 2 hours of the call being made.

Entrapments shall be given priority service and shall be responded to within 60mins of being reported.

REPAIRS

Definition

These shall be repairs outside of section 3.1e of BS EN 13015:2001 These repairs shall be planned in conjunction with the client and a log of repairs shall be retained on site.

Scheduled Repairs

Any scheduled repair, which is likely to take longer than 2 hours, must have prior approval by the client.

Unscheduled Repairs

Where unscheduled repair work is required due to equipment failure, the client shall be notified as to the expected duration of the repair work. Where this is anticipated to be more than 2 hours, the client shall be given a written forecast of the expected duration of works.

ADDITIONAL REQUIREMENTS

Lift Release Training

Shall not be allowed for on this contract.

Access for Other Services

The Contractor shall submit an hourly labour rate to provide access to the lift for the maintenance and repair of services other than those already described. A day rate and hourly rate shall be provided by the contractor.