



OPERATIONAL LIFT PLAN



Project Name	St Ann's
Site Address	St Ann's Road, London, N15 3TH

Prepared by	Date	Signature
Kathy Fawcett 40430536 expires End May 2025	December 2023	
Initial Lift Plan Approved by	Date	Signature

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1. Preface

The following **Lift Plan** outlines the methods and procedures to be adopted during the use of lifting appliances generally, but specifically during the use of the tower cranes initially deployed by **Hill Partnerships** for the build of new residential blocks which will include new residential units.

The tower crane will be utilised for the purposes of a New development consisting of RC frame and traditional build. General construction materials will be lifted as well as materials being off loaded / distributed, skip relocations, concrete placement and any other lifting applications undertaken within the parameters of this **Lift Plan** and included in the **Schedule of Common Lifts**.

In addition to this site specific plan document, with details of “common lifts”, individual lift assessments will be conducted for all non-typical lifts. Lift assessments will be completed with the aid and advice of the tower cranes manufacturer’s load/radii specification, with input from the tower crane operator and the Crane Supervisor, to confirm and ensure that both the tower cranes duties and available lifting equipment and tackle, are suitable for the planned lifting operations.

All slinging and banking operations will remain the responsibility of the hirer **Hill Partnerships** who undertake to provide trained and qualified personnel that are competent and familiar with the contents of this Lift Plan and the equipment being deployed.

2. Tower Cranes Details

The Tower Cranes described below as TC1, TC2 & TC3 which have been erected mounted on fixing style Steel foundation anchors, cast into reinforced concrete designed base, using a temporary works design prepared using foundation loadings obtained from the crane’s manufacturer, by a Structural Engineer, and then constructed by the Contractor in accordance with the design, and confirmed as having reached the required cube test strengths, with all the above facts being confirmed by the issue to the erection company of a base sign-off certificate for the tower crane and installation, before its installation commences.

It had previously been confirmed; following investigations by site management, using details and drawings provided by the Principal Contractor, there has been no requirement for any communication with Network Rail as there is no close proximity of any Network Rail asset.

The tower crane will be hired to **Hill Partnerships** from **London Tower Cranes** with the tower cranes having been, or subsequently being erected, and ultimately dismantled, by their owner / hire company, who will provide full Method Statements and Risk Assessments for each operation, in sufficient time for the user to check, and if necessary, query any unclear aspect of the provided documentation.

Note that the tower crane operational personnel (TC Operator, Slinger / Signallers and Crane Supervisor) should be included in any briefings and guidance document activities, particularly Tool Box Talks.

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Title	TC1 Tower Crane
Description	Saez Luffing Jib Tower Crane, model TLS65 10 SR. Hired to the Project by London Tower Cranes and is configured as detailed below.
Maximum Hook Radius	40 metres Out of Service Block Radius 3m
Maximum Safe Working Load (SWL)	SWL @ 40.0 metres hook radius (Reeved in 2 fall hoist rope configuration) will be 4.5t SWL through to 19.6 metres hook radius (Reeved in 2 fall hoist rope configuration) will be 10.0t
Mast Height	Above concrete base slab on which it is erected = 29.5 metres Made up of 2No. 'O' Sections 11.8m & 1No. 'O' Section 5.9m mast sections
Counter-jib Ballast Fitted	5No. 3.5t (10.5t)
Base Type	Foundation anchors (S70/8), cast in a reinforced concrete base, designed, independently checked, and installed by the Contractor.

DUTY CHART FOR TC1

45 m


10	15	19,53	25	30	35	40	45	m
10000	10000	10000	7609	6205	5212	4472	3900	Kg

40 m


10	15	19,83	25	30	35	40	m
10000	10000	10000	7653	6242	5243	4500	Kg

35 m


10	15	20,78	25	30	35	m
10000	10000	10000	8157	6659	5600	Kg

30 m


10	20	20,89	25	30	m
10000	10000	10000	8205	6700	Kg

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Title	TC2 Tower Crane
Description	Saez Luffing Jib Tower Crane, model TLS65 10 SR. Hired to the Project by London Tower Cranes and is configured as detailed below.
Maximum Hook Radius	40 metres Out of Service Block Radius 3m
Maximum Safe Working Load (SWL)	SWL @ 40.0 metres hook radius (Reeved in 2 fall hoist rope configuration) will be 4.5t SWL through to 19.6 metres hook radius (Reeved in 2 fall hoist rope configuration) will be 10.0t
Mast Height	Above concrete base slab on which it is erected = 47.2 metres Made up of 4No. 'O' Sections 11.8m & 1No. 'O' Section 5.9m mast sections
Counter-jib Ballast Fitted	5No. 3.5t (10.5t)
Base Type	Foundation anchors (S70/8), cast in a reinforced concrete base, designed, independently checked, and installed by the Contractor.

DUTY CHART FOR TC1

45 m


10	15	19,53	25	30	35	40	45	m
10000	10000	10000	7609	6205	5212	4472	3900	Kg

40 m


10	15	19,83	25	30	35	40	m
10000	10000	10000	7653	6242	5243	4500	Kg

35 m


10	15	20,78	25	30	35	m
10000	10000	10000	8157	6659	5600	Kg

30 m


10	20	20,89	25	30	m
10000	10000	10000	8205	6700	Kg

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Title	TC3 Tower Crane
Description	Saez Luffing Jib Tower Crane, model TLS65 10 SR. Hired to the Project by London Tower Cranes and is configured as detailed below.
Maximum Hook Radius	40 metres Out of Service Block Radius 3m
Maximum Safe Working Load (SWL)	SWL @ 40.0 metres hook radius (Reeved in 2 fall hoist rope configuration) will be 4.5t SWL through to 19.6 metres hook radius (Reeved in 2 fall hoist rope configuration) will be 10.0t
Mast Height	Above concrete base slab on which it is erected = 35.4 metres Made up of 3No. 'O' Sections 11.8m & 1No. 'O' Section 5.9m mast sections
Counter-jib Ballast Fitted	5No. 3.5t (10.5t)
Base Type	Foundation anchors (S70/8), cast in a reinforced concrete base, designed, independently checked, and installed by the Contractor.

DUTY CHART FOR TC1

45 m


10	15	19,53	25	30	35	40	45	m	
10000	10000	10000	7609	6205	5212	4472	3900	Kg	

40 m


10	15	19,83	25	30	35	40	m	
10000	10000	10000	7653	6242	5243	4500	Kg	

35 m

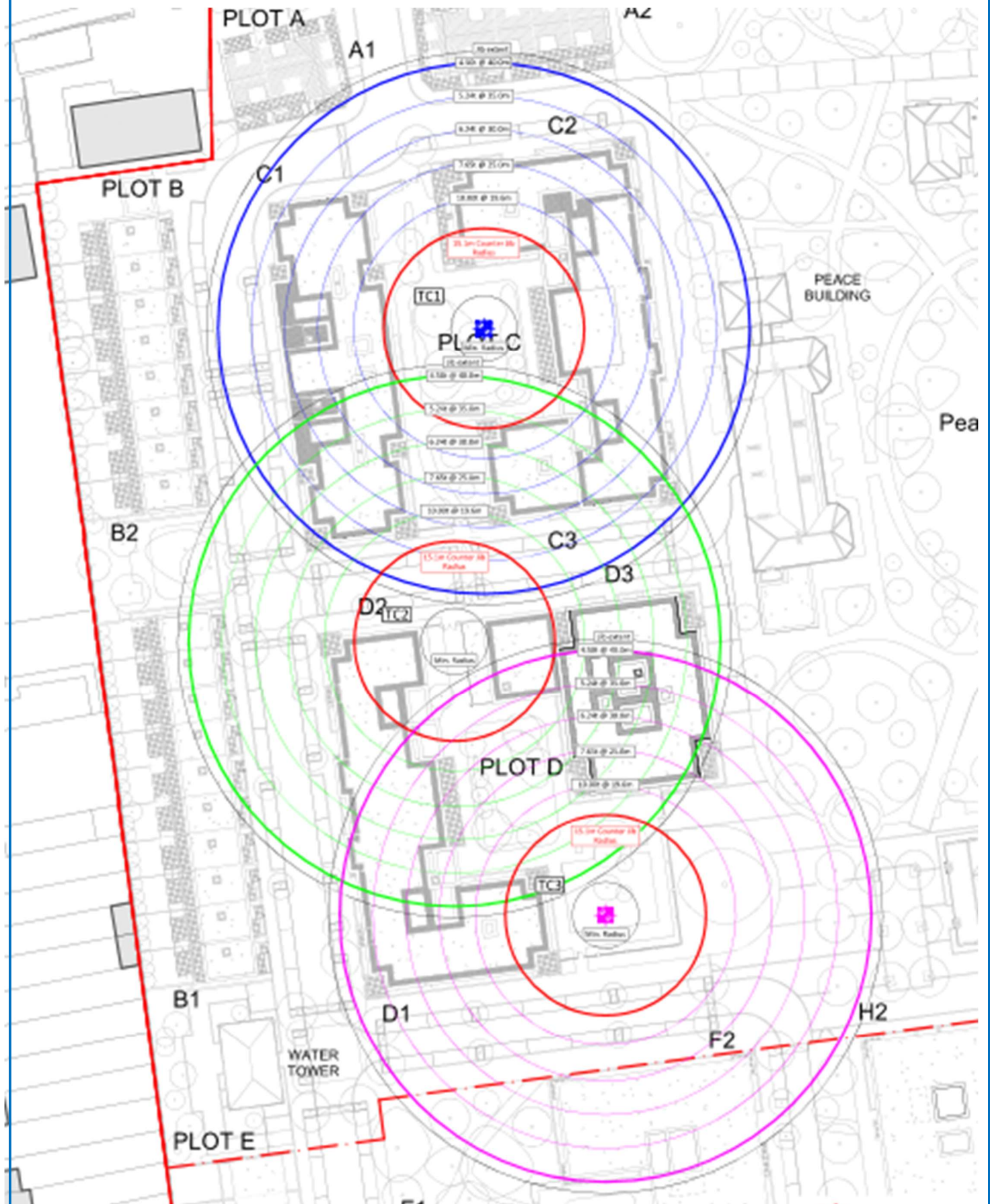

10	15	20,78	25	30	35	m	
10000	10000	10000	8157	6659	5600	Kg	

30 m

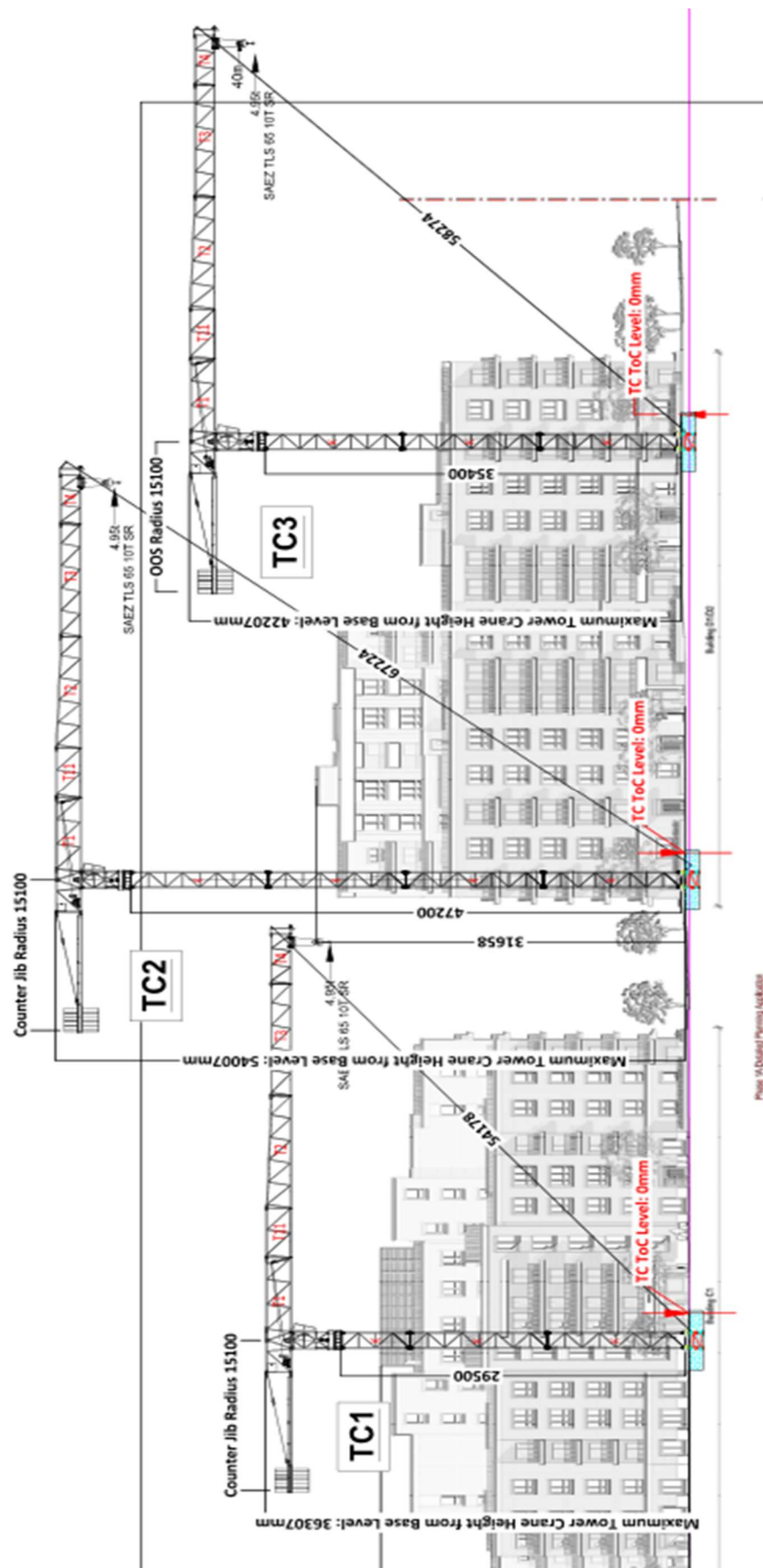

10	20	20,89	25	30	m	
10000	10000	10000	8205	6700	Kg	

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RADIUS DRAWING



ELEVATION DRAWING



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The tower crane will be deployed in accordance with the statutory requirements in regard to the Management of Cranes.

1. Design and Design checks to be carried out.
2. Photographic evidence to be retained showing base construction including rebar placing and concreting procedures.
3. Pre- delivery inspections, 100% visual inspections with additional load tests every 12 months.
4. Anemometer to be fitted at the highest fixed point on the crane, with 360 degree wind access being possible, with visual and audit warning.
5. Safety sign-off register for all tower cranes, for use daily at close of work to confirm the safety procedures including out of service radius and free slew procedures are in use, must be maintained in the Principal Contractors offices.
6. Ancillary equipment including illuminated signs, floodlights, AWB units, base boards, and anti-climb arrangements, should all be checked and confirmed as being of an acceptable level of structural integrity.
7. Aircraft Warning Beacons must be fitted at tip of main jib, (highest point of crane), plus the highest fixed point, (A frame). All AWB units will be at least 200 Candela medium intensity for this project

The Zoning System and anti-collision is required on this project.

3. Lifting tackle and accessories

The tower cranes will be mobilised with specific lifting tackle and accessories, with these to be listed in the main body of the Lift Plan Folder, to be revised by deleting/adding new items of lifting tackle or accessories, as the deployment proceeds. This Addendum will be used to assist in the compliance of the LOLER required weekly inspections and registers. The listings will be updated by the Lifting Supervisor as and when the need arises. Lifting accessories in service will have a visual inspection carried out at regular intervals, this should be carried out every seven days or sooner if circumstances dictate (i.e. alterations, servicing, maintenance etc). All lifting accessories will have a 6 month thorough examination which will be filed. If an accessory is new it may come with a "Declaration of Conformity", if this is the case, the "first day of use" should be noted on the sheet and the 6 months of use with that cert will commence from that date. On or before that date expires a visual thorough examination will be carried out or the item will either be disposed of or placed into quarantine.

The correct information on a thorough examination will consist of:

The date of the inspection

Unique Identification Number

Description of the Accessory

The due date of the next thorough examination (sometimes the last date is also noted)

Any faults or defects found (If none, state "In good working order")

Name of the person carrying out the report and who is authenticating that person.

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4. Post Erection procedures prior to tower crane commencing operations

It is assumed that the pre and post erection statutorily required procedures have all been correctly carried out, as evidenced by the documentation (available for inspection in the Project's lifting files) and regularly checked by the Project's Crane Supervisor and Non-Resident Appointed Person, the latter during regular monthly Audits.

For information purposes and to ensure the users have knowledge of the procedures carried out, they are detailed below:

Following the tower crane's erection to the above configuration, using the signed-off Method Statements, Risk Assessments, and COSHH Assessments, the tower crane must be subjected to a full pre-test examination / inspection by the erection supervisor, and if in order a safe working load at both maximum load, and maximum radius load, is carried out, followed by a 110% (for all previously used Falcon cranes), and 125% (for new Falcon cranes), over-load test at both radii.

This will be followed by the issue of a hand written test certificate issued by the erection supervisor, which will be followed by a formal test certificate issued to the project by the hire company within 3 days.

An independent LOLER required Thorough Examination will then have been carried out, by a suitably qualified independent Inspector, appointed by the hirer company and if all is in order he will issue a hand written draft Thorough Examination certificate, again being followed by a formal typed copy within 14 days.

It is a requirement that the induction / familiarisation of the TC Operator, to be utilised to operate the make and model of tower crane deployed, be organised as an integral part of the erection and hand over process of the tower cranes, with documentary evidence being provided to the Project by the hire company, to substantiate this induction, which will include confirming their abilities and competency to both operate, place out of service, carry out statutory daily and weekly checks, and complete any required lubrication etc.

It is also a requirement for the deployed TC Operator, whether provided through the hire company, or by the user, that a current and compliant CPCS card and medical certificate / letter be supplied and copies retained in the lifting file, confirming that they are suitably qualified and fit for the duties they will provide / perform, and that a make and model induction has been carried out by the hire company, with a copy of the document confirming this induction to be retained on site.

It should finally be recognised that the Lift Plan launch by the Project's non-resident Appointed Person, including the signing of the Lift Plan, by the Project's lifting team, must take place before operations commence.

Note that additional statutory Thorough Examinations, by an Independent Inspector, will be required every 6 months be organised by the use.

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5. Aircraft Warning Beacons (AWB) Units

The site has ensured that there are Aircraft Warning Lights fitted to this crane and they are Red Solar continuously illuminated AWB units. The CAA (Civil Aviation Authority) and local Airport Management have been informed that the tower crane will have AWB units fitted. These must be illuminated during the hours of darkness, at all times, as determined by the nationally published lights on/off times. These AWB units would be fitted to the highest points of the tower crane (considered to be the tip of the tower crane's main jib) and fitted to be visible through 360 degree arcs.

6. Tower Crane's – Zoning System

A Zoning System, that would prevent the tower crane from over-sailing the site boundary, will be fitted, with the tower crane operators being instructed not to over-sail the site boundary, and not to rely on the electronic system. The calibration certificate for each crane and a drawing showing the collision zones of each tower crane will be filed.

7. Tower Crane's – Anti Collision Systems

Where lifting within 5m of the site boundary is unavoidable:

- The operation is adequately risk assessed and all reasonably practicable measures are in place to protect the public
- Arrangements for controlling the load (i.e. tag lines) are in place
- Where required, arrangements are in place for controlling public access to the area outside the site boundary, i.e. closing footpaths/roads or marshalling the public

Arrangements are in place for correct and safe slinging of the loads, and for checking loads prior to lifting for loose items.

- Anti Collision to be provided by Bennetts and to be the AMCS system when more than one tower crane is installed.
- AMCS system is a permanent feature on site will remain in use unless strictly stated by the Principal Contractors site Project Manager. A letter of conformity signed by the Crane Operator will be placed on file as record of understanding this information
- Each crane operator and the crane supervisor will be in possession of a crash radio whereby each driver can communicate with each other and the crane coordinator in isolation of the sling/signaller radios. This will allow the operators to signal their movements to one another during slewing and reduce the chances of collision.
- In order to prevent that at any time, when in use, there will be no possible collision between cranes, the following control measures must be in place:
- The AMCS anti-clash system effectively stops at 6m away from any moving part of other crane preventing any collision between them. Every morning all crane operators will make sure that anti-collision system is checked if working and active as part of their daily checks.
- The crash radios provided to all crane operators and crane supervisor are to be used for every lift within red zone making sure that all crane operators and co-ordinators are aware of any potential movements within the red zone.

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8. Placing the Tower Cranes in Safe Out-of-Service condition

It should be recognised that no tower crane should be vacated, either overnight or at any other time, without adopting the following procedure:

- The crane must always be left in free slew when out of service.
- The crane must not have a load or lifting tackle left on the hook.
- The hook must be parked at the out of service hook radius (as defined specifically for the make and model of crane deployed).
- The crane operator must ensure that notification that the crane has been placed into the Out of Services Radius 8m after each working day is recorded.

All tower cranes (or visiting mobile crane or lifting devices) are to be removed from operation when either the defined out of service wind speed is recorded, which is 38mph, or as considered appropriate following a review between the Crane Operators and the Crane Supervisor.

If the tower crane is to be removed from service, either due to the excessive wind or the end of a shift / working day, the loads and lifting tackle must be removed from the hook, the hook block raised to its full height under hook and the crane set at its out of service hook radius, before being placed in free slew, as identified in the crane's operator instructions.

Upon reaching the crane's base the operator must switch off the crane and ensure the access door/gate or other anti-vandal arrangements, are locked preventing unauthorised access to the either tower crane or, if in the hours of darkness, ensure the AWB units are illuminated. If they are not Crane Supervisor and management must be immediately informed.

9. Mobile Crane Use during Tower Crane deployment

Should a requirement exist for mobile cranes to be utilised, to supplement the tower crane on site, reference should be made to a separate guidance note that would be issued to the project, and the following guidance also recognised and adhered to:

The mobile crane deployment should only be permitted following –

- An assessment of its planned location.
- Acceptance of all outrigger loadings and outrigger mats if necessary.
- Preparation of a specific method statement/risk assessment for its use.
- A review of the rigging and de-rigging method statements for the mobile crane.
- Satisfactory completion of all pre entry checks of the crane, the operator and the crane's lifting tackle.
- Checks made to ensure that no potential jib clashes can occur between the mobile crane, and the tower crane.

A slinger/signaller must be allocated to work with the mobile crane. This slinger/signaller must be issued with an anti-clash radio (on the same frequency as those issued to the tower cranes operators). The Lifting Supervisor must conduct a toolbox talk to all operators covering the anti-clash procedure. Following the toolbox talk all operators must sign a document to confirm they understand and will use the procedure. An additional detailed lift specific Lift Plan must be produced, unless the Lift Plan already in use covers these lifts.

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10. Responsibilities

Appointed Person

The Non-resident Appointed Person (AP) for the project is **Kathy Fawcett**, who will check the selection of personnel and their qualifications/experience. Additionally, the AP will ensure that all relevant personnel understand the Lift Plan and understand that there will be a Crane Supervisor for immediate issue resolution if required, recognising the Project AP will not be permanently resident on site.

The Appointed Person (AP) will nominate a Crane Supervisor who will be resident on site during all lifting operations and always communicate with the non-resident AP if operations are outside the scope of the Lift Plan or incidents or queries arise. The AP must possess CPCS categories A61 Lifting Operations”.

Tower Crane Operators

The tower crane will be manned by a designated operator who has been inducted in the make and model of tower crane being deployed and operated. This induction must be documented & copies of this documentation retained on site (in the tower crane file). The operator must possess a current CPCS (Construction Plant Competence Scheme) card for the tower crane type being operated (i.e. Luffing jib, top slew type). Additionally, the operator must provide documentation to confirm that he/she has undergone a medical to confirm their ‘fit for purpose’ status. Tower Crane Operator to possess CPCS category A04 B “tower crane – cab controlled saddle and luffing jib”.

Maximum period of operation time is 4 Hours

The name of the operator (and any relief operators where applicable), together with details of their qualifications, will be documented within this Lift Plan Folder with amendments being made should changes in personnel take place.

Crane Supervisor

Appointed to supervise the lifting operations. The CS must possess CPCS Category A62 “Crane Supervisor” and A40 “Slinger/Signaller – all types all duties”.

Ensure lifting operations are carried in accordance with the Project Lift Plan and Schedule of Common Lifts.

Assess any risks associated to any lifting operation from changed circumstances on site and to stop the operation if the risk becomes unacceptable and report it to the Appointed Person.

Slinger/Signallers

A Slinger/Signaller will be allocated to the tower crane, in the case of this project the Crane Supervisor is also the lead slinger. They will manage the tower crane’s lift operations and will ensure that the load details conform to those stated in the common lift schedule, or the load specific assessment.

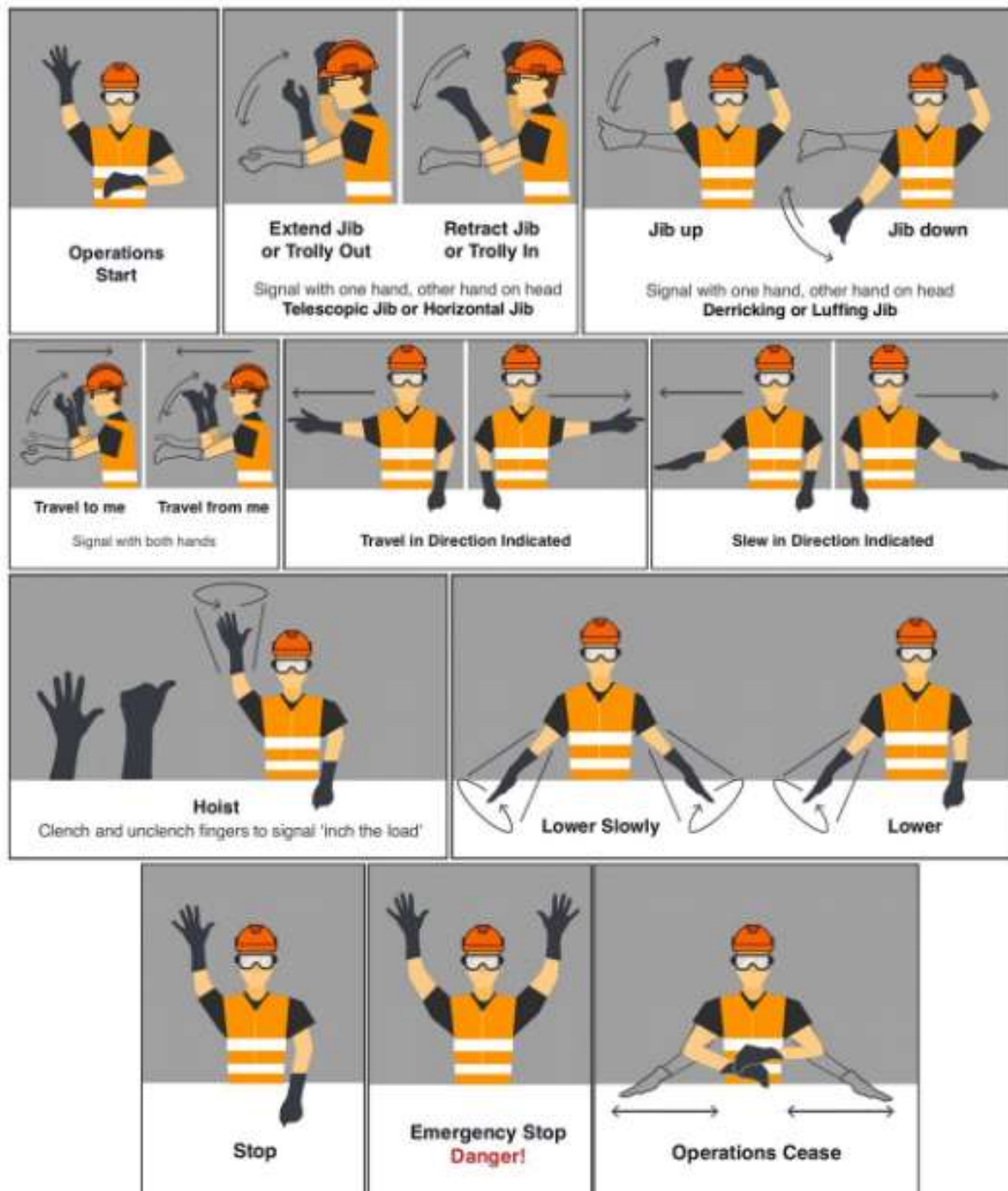
Ground control of the tower crane will be the responsibility of the designated Lead Slinger/Signaller only and he/she shall be identified by an orange, high-visibility vest and/or helmet (or another suitable means of identification which is easily recognisable).

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Where more than one slinger/signaller is required (one at high level and one at ground level, or due to distance, obstruction, or any other factor) an additional Slinger/Signaller will be appointed. It is the responsibility of the Lead Slinger/Signaller to inform the TC Operator of the change from one to the other specific Slinger/Signaller directing the lift (he/she may choose to introduce a radio call sign system). At no time should the TC Operator take instructions from more than one Slinger/Signaller at the same time.

Slinger/Signallers to possess CPCS Category A40 "slinger/signaller – all types static duties or "Slinger/Signaller – all types all duties".

Industry Standard Hand Signals



11. Maintenance and Inspections

All lifting appliances (Tower cranes and lifting tackle) will be thoroughly examined and re-certificated by an independent competent examiner with copies of all records/certificates being kept in the Tower Crane file.

In addition (as required by LOLER regulations) daily and weekly visual inspections will be carried out on the crane and all lifting equipment/accessories. A record of these inspections (together with details of any identified faults) will be entered on the LOLER Register. Any identified faults will be rectified & signed-off the register as having been rectified. This fault may include shock loading the tower crane, whereby the crane must be taken out of service until a thorough examination is carried out by London Tower Cranes Independent inspector with any defects rectified & signed-off prior to the crane being put back into service with Work Instructions being filed.

The Tower Crane will be serviced at regular intervals (ideally 8 weekly) by designated suitably trained/experienced personnel from the Tower Crane supplier. Records of maintenance/work carried out (with details of any findings following examination) will be left on site with the Crane Supervisor, who is responsible for - (a) following up on actions identified during the service activities (b) placing all associated work sheets in the appropriate Tower Crane's File.

The persons carrying out the inspections on this project are listed below:-

- Tower Crane Operator is responsible for inspection of the individual tower crane he is operating.
- The Tower Crane Supplier is responsible for the cranes 8 weekly inspections.
- The designated Crane Supervisor for the site is responsible for inspection of Chain Packs, Strops, Shackles, brick & block forks and nets, skips, etc., and any subsequent additions, for the cranes on the site.

The Crane Supervisor is responsible for ensuring that these inspections take place & that records of these inspections are kept up to date.

The persons identified above are responsible for reporting any defects or faults and for carrying out any routine maintenance, such as oiling/greasing. Should any defects or faults be found, then the lifting appliance/accessory will be taken out of service immediately and site management informed.

It is also a requirement that such defects are detailed on the site's LOLER register, with a second entry made to confirm when the items are again fit for purpose, and returned to use.

12. Chains and other Lifting Equipment

All chains used on this project will be fitted with hooks with spring loaded safety catches. When in use, the angles between sling legs must be less than 90 degrees. At angles greater than this the strain on each leg increases rapidly to a point where they could break. No lifts will take place if the sling legs are every above 120 degrees.

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13. Maximum Safe Working Load (SWL)

The Maximum SWL must be clearly stamped on all lifting equipment, together with a discreet identifying mark or number. This load must never be exceeded, under any circumstances. (It must also be remembered that the SWL of chains/ stops is drastically reduced if the angle between any two legs of the chains/strops exceeds 90 degrees. See Chains/Lifting equipment section).

14. Forbidden Operations

Tandem lifts are not permitted with tower and mobile crane. Tandem lifts will not be permitted for any lifting on this project.

Chandelier Lifts

Any load types not covered by the Schedule of Common Lifts

Lifting out of radius

Pulling of loads that could cause shock load to the crane (Crane to be taken out of service and inspected by Falcon before going back into service).

Lifting in a manner whereby any part of the load can over-sail a site boundary.

15. Use of Man Riders/Stretcher Carriers on Tower Cranes

In the event that, as part of the site's First Aid procedures, a Stretcher Carrier is retained on site, the following guidance should be noted.

The Man Rider/Stretcher Carrier is not to be used as a work platform or for lifting or carrying materials. It must have its identification markings and safe working load clearly identified and have been constructed in accordance with statutory guidance. A current test certificate must be retained on site.

In the event personnel are being raised or lowered using the Man Rider/Stretcher Carrier, they should be wearing suitable harnesses during the lift. These harnesses must be certificated and have been examined within the statutory period (with the register detailing these examinations being retained on site). All appropriate personnel should have been instructed in the use of the harness, with documentation detailing this instruction also be retained on site.

When the Man Rider/Stretcher Carrier is utilised the personnel involved must have connected the lanyard (which should be an integral part of the certificated harness they are wearing) to anchorage points strategically located and identified on the Man Rider/Stretcher Carrier, or the tower crane's hook.

Use of Man Riders/Stretcher Carriers should be undertaken in accordance with existing site lifting procedures, with care being taken to ensure the assembly is lowered onto a secure level area at the completion of the lift. Any recommendations in relation to variations in wind speed should be noted and adhered to.

It is very important to ensure that the wind conditions allow safe use of a Man Rider/Stretcher Carrier and that if considered necessary the lift is carried out using a tag line to ensure it is safe execution.

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16. Operator Recovery Arrangements

The emergency services must be used where appropriate, however, if necessary and to be Industry compliant, training for the use of proprietary recovery systems (with certificated evidence of competency being retained for future inspection) is to take place before deployment of the approved certificated system / equipment, (recognising the need for frequent refresher training courses at recommended or statutory intervals, at 6 month intervals).

This requirement is to be identified by the Project Manager, who will then liaise with the AP to put systems and training arrangements in place. The Crane Supervisor will maintain the appropriate documentation / certification, in relation to both the equipment and the training of the site recovery team members, in the Tower Crane Files. Documentation detailing Operator Recovery Arrangements can be requested from the Tower Cranes supplier and added to the Lift Plan before any training has taken place.

The agreed Recovery arrangements, for which training and subsequent certification, and 6 monthly refresher training has been implemented, will be recorded in a Published “**Rescue Plan**” that must contain photos of all deployed tower crane cabs, and include identification of the recovery system anchorage points.

17. Slinging of Loads

All proprietary plant and equipment will be fitted with lifting eyes or lifting points which must be used at all times.

Specific details of lifting points, of expected standard lifts, are shown in the schedule contained within this Lift Plan. These include machinery, False-work tables etc. Any lifts not covered in this schedule are to be clarified and documented before undertaken.

The standard method of slinging general loads (such as re-bar, timber and scaffold tube) will be with single choker, but if considered necessary (and at the discretion of the Lead Slinger/Signaller) the double choker will be used.

Blind Lifting

Extra precautions should be taken when blind lifting as Crane Operator cannot see path of load, obstruction or any other hazards.

Operator must never be instructed to hoist up in full speed.

Blind Lifting will only be done under the guidance of a competent slinger/signaller

Two way radios should be checked prior to lifting operations.

Communication should be maintained between slinger/signaller and crane operator at all times if communication is to breakdown for 3 seconds crane operator is to stop until communication has been established with slinger/signaller.

All blind lifts are to be assessed by Crane Supervisor prior to the lift being carried out.

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18. Working at Height from Trailers The approved method across the industry for fall prevention & access - Tightened ratchet straps through steel upright bars running down both sides of the trailer. Or an equivalent method that provides a handrail and prevents the possibility of falling from the trailer.



19. General Lifting – Considerations

- Ensure that the designated maximum permitted wind speed (38mph) is not being reached or exceeded and that the wind speed is appropriate for size of lift being organised. Note that the wind speed is displayed on a digital display within the Operator's cab.
- Ensure tag lines are being used to help control and stabilise large or awkward loads.
- Ensure that all loads are landed on timber battens to prevent any damage to slings and chains.
- Ensure that the angle between chain / sling legs is less than 90 degrees. Any angle greater than this could overload the leg of the lifting equipment.
- Ensure that all loads are stable with centre of crane's hook block being over centre of gravity of the lift being carried out.
- All Slinging will be carried out utilising double wrap and choke procedures, unless specific Lift approved RAMS, states otherwise

20. General Lifting Operations – Risk Assessment

In addition to the guidance and control measures detailed within this Project Lift Plan (recognising the requirement for all members of the Lifting Team to be qualified to perform the duties being undertaken) there is a need to define general Hazards, Risks, and Control Measures. All personnel should be continuously vigilant & recognise the need to identify (and take appropriate action in accordance with their training and experience). The importance of feedback (and reporting of dangerous occurrences) to management should also be noted.

Likely **Hazards** may be identified involving the following areas:

1. Plant and Machinery
2. Failures of Lifting equipment
3. Falling materials
4. Free falling loads
5. Heavy and abnormally shaped loads
6. High winds

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7. Unscheduled and non-assessed lifts
8. Close proximity of other lifting equipment, structures, and public amenities
9. Other lifting equipment, out of service or otherwise incapacitated

Likely **Risks** associated with the above Hazards:

1. Injury to personnel
2. Damage to structures, buildings, lifting or other equipment and injuries or fatalities to personnel
3. Failure of Lifting Equipment and/or Machinery
4. Instability and/or loss of control during lifting operations
5. Entanglement leading to loss of integrity of load
6. Collisions between cranes or other lifting appliances

Control measures that should contribute to the avoidance of the above events:

1. All plant and machinery to be inspected and serviced regularly, as per the POWER and LOLER Regulations and industry Best Practice Guides (copies can be provided if required).
2. All lifting tackle and equipment is to be certificated and inspected regularly, as per the LOLER Regulations.
3. All lifts are to be carried out by competent trained Slinger/Signallers, with a method statement having been prepared and risk assessment carried out if outside the scope of the generic details contained in this Lift Plan.
4. Daily inspections and checks are to be carried out by the Crane Operators, to ensure that the crane or other lifting appliance remains safe, fit for purpose and operable.
5. Visual assessments are to be carried out by the Crane Supervisor at regular intervals to ensure that
 - (a) the Slinger/Signallers are using the correct lifting tackle in the correct way, (b) tag lines are being used where necessary and (c) the lift expectations are within the capacity of the lifting equipment being deployed.
6. Wind speeds within the site (and at the level of the pick point and placement point) are being monitored to ensure that all lifting operations are being carried out, not only within the defined wind speed, but also at a speed dictated by the shape and wind attack areas of the items being lifted.
7. Regularly check that no unauthorised or unqualified persons are carrying out any lifting operations, by regularly checking their CSCS and/or CPCS cards for compliance (ensuring that cards are valid & have not expired).
8. Regularly check that safe systems of work continue to be used, ensuring that the risk of collision is eradicated, and that the Primary system of Anti Collision provisions involving Clash Radios remains in use, with the Electronic Secondary system, remaining as a back-up, as considered appropriate by the HSE.
9. Slinger/signallers to activate hand operated ball whistle to alert on site personnel that a lift is about to take place.

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21. Communication

Communication between Crane Supervisor and Crane Operator shall be maintained by means of:

Hand Signals	Yes: ☒ No: ☐	Two Way Radios	Yes: ☒ No: ☐
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Where the operator can see the Slinger/Signaller and **radio communication has failed**, then hand signals may be used to guide the crane operator to execute the lift safely.

22. Personnel Training

The personnel that have signed up to the Lift Plan Folder and its contents are all competent personnel with appropriate experience working with tower cranes. Training certificates are copied later in the Lift Plan folder.

23. Common Lifts

In addition to the lift plan itself, the lifting team is to work in accordance with the accompanying Schedule of Common Lifts. No lifts are allowed unless the load type is covered by the Schedule (or covered by an addendum provided by the Lift Plan author & approved by the Site Management & Crane Supervisor).

Pre-lift Information Needed	Pre-lift Requirements
Lift/load information – common lift or individual assessment	Certified Slinger/Signaller attendance confirmed
The radial distances at pick up & drop off points	Crane statutory test and inspection certification (copies in date & on file)
Crane lift/excavator specifications and load charts	Crane Operators CPCS certification (copy in date & on file)
Known weight of the lifting accessories and crane block, if appropriate	Crane Operators inspection register (copy up to date & on file)
Details of agreed method of signalling and direction	Crane Operators lifting accessories certification (copies in date & on file)

Any lifts required, that are not covered in the accompanying Schedule, require a separate Risk Assessment & Method Statement.

24. WEATHER

Monitoring

It is important that regular and reliable information is obtained regarding weather conditions and the possible impact that adverse weather conditions can have upon the safe operation of cranes.

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The Crane Supervisor will use daily updates as a means of determining what to anticipate. Internet sites such www.xcweather.co.uk will give predictive wind speeds but it must be noted that these websites give ground wind speed only and not at the height of most tower cranes, therefore this must be taken into consideration when predicting the future weather. The Crane Supervisor will use this information to ensure that this is in place before the day's lifts commence and plan the lifting activities around the projections.

This information should then be communicated as part of the daily lifting team briefing. Additional briefings may be required during the day should there be a change in the weather situation to determine what changes need to be made to any site operations. Details of any changes will be communicated to the lifting team.

ANEMOMETERS AND ALARM ACTION

Anemometers (wind speed meters) must always be fitted to all tower cranes. It must be set at a wind speed in accordance with the Manufacturer's recommendations for taking the crane out of service. No lifts will take place once this limit has been reached. The crane free slewing system will be put in place and the Crane Operator will leave and lock the cab.

An audible alarm (inside the cab only) will sound should the wind be monitored to be above 32mph, once the speed of the wind either by constant or gusts is reach at 38mph the audible alarm will be heard outside of the cab and a flashing light will be seen. At this point the crane will be blocked up and all lifting will cease.

During gusty conditions lifting operations are to cease if they reach 38mph. If gusts occur within the 15 minute period lifting operations will remain suspended and cannot continue until a 15 minute clear period has passed and suitable conditions for continuing the lift have been determined by appropriate members of the Lifting Team.

Should the winds reach 50mph the Crane Operator will be asked to vacate the cab and climb down.

LIGHTNING STORMS

It has been reported that if a lightning strike is detected 10 miles away, then the next strike can be at your location—regardless if it is raining or not due to electricity being present in the atmospheric pressure. Check Weather Reports – prior to and during any work that may be impacted by hazardous weather conditions. Watch for darkening clouds and increased wind speeds, which can indicate developing thunderstorms, and take action after hearing thunder/seeing lightning.

Shut the Crane Down – land the load, raise the block, (ensure that the chains are as high up as possible to avoid an arc to a building should the crane be struck) put the crane into its out of service radius - DO NOT LEAVE THE CAB (the safest place if lightning was to strike the crane is inside the cab and not a metal ladder ascending!)

Remain in this state for at least 45 minutes after hearing the last sound of thunder.

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CONSIDERATIONS

Ensure that the designated maximum permitted wind speed is not being reached or exceeded, and that the wind speed is appropriate for size of lift being organised. Note that the wind speed is displayed on a digital display within the Operator's cab. Tag lines should be used on all loads not just when it is windy.

Wind force*		Average windspeed**				Median of av. Windspeed			
Beaufort	Name	m/s	km/h	knots	miles/h	m/s	km/h	knots	miles/h
0	Calm	0-0,2	< 1	< 1	<1	0,0	0,0	0,0	0,0
1	Light air	0,3-1,5	1-5	1-3	1-3	0,8	3,0	1,6	1,9
2	Light breeze	1,6-3,3	6-11	4-6	4-7	2,4	8,5	4,6	5,3
3	Gentle breeze	3,4-5,4	12-19	7-10	8-11	4,3	15,6	8,4	9,7
4	Moderate breeze	5,5-7,9	20-28	11-16	13-18	6,7	24,1	13,0	15,0
5	Fresh breeze	8,0-10,7	29-38	17-21	19-24	9,3	33,6	18,2	20,9
6	Strong breeze	10,8-13,8	39-49	22-27	25-31	12,3	44,2	23,9	27,5
7	Near gale	13,9-17,1	50-61	28-33	32-38	15,5	55,7	30,1	34,6
8	Gale	17,2-20,7	62-74	34-40	39-46	18,9	68,1	36,8	42,3
9	Strong gale	20,8-24,4	75-88	41-47	47-54	22,6	81,3	43,9	50,5
10	Storm	24,5-28,4	89-102	48-55	55-63	26,4	95,2	51,4	59,1
11	Violent storm	28,5-32,6	103-117	56-63	64-74	30,5	109,8	59,3	68,2
12	Hurricane	>= 32,7	>= 118	>= 64	>=75	...	...	...	...

The Appointed Person or, in his absence, the Lift Supervisor, will ensure that the lifting operation only takes place if the weather conditions are within the limits recommended by the crane manufacturer and suitable for the loads to be lifted.

No work may continue when there is a lightning storm in the vicinity. Any storm in the distance must be monitored to decide if it may pose a threat within the time frame of the lifting operation. If there is any risk of lightening in the vicinity, the operator must leave the crane after applying the conditions set out above in unattended cranes.

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25. Statutory Legislation and Industry Codes of Practice

The Following documents have been considered in the preparation of this Lift Plan plus all other Construction Industry Guidelines:

- Health and Safety at Work Act 1974
- Lifting Operations and Lifting Equipment Regulation 1998 (LOLER)
- Provision and Use of Work Equipment Regulations 1998 (PUWER)
- BS7121 Parts 1 through 5 - Safe Use of Cranes
- CIRIA Stability of Cranes
- Working Time Directive
- Working at Height Directive

Site specific health, safety, and welfare issues are assumed to have been covered by the project's construction management or their sub contractor's management team.

26. Emergency Details

Nearest Hospital

St Ann's Hospital
St Ann's Road
London N15

Tel : 020 8702 3000

Lift Plan prepared & submitted by the Non-Resident Appointed Person, Kathy Fawcett, following a detailed site review with the Site Management representative, Lifting Manager, Tower Crane Operators and all Lead Slinger/Signallers (Project Lifting team members). All statutorily required documentation/certification has been checked, by site management, to establish that it is current and fit for purpose. The original documentation/certificates (or copies) are retained on site.

Signed by the Non-resident Appointed Person, confirming Lift Plan launch

Name	Signature	Date
Kathy Fawcett		

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27. Additional Notes

None Required at the time of writing this Lift Plan.

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