MANDATORY

ENVIRONMENT HEALTH & SAFETY PLAN MANCHESTER NEW SQUARE MAIN WORKS



Environment Health & Safety Plan
Approval & Signatures

This EHS Plan should be reviewed and signed off below before construction works being undertaken by the PD/PM, EHS Manager and Client's representative (or Principal Designer)

	Project Environment Health & Safety Plan Sign Off		
Position	***Name***	***Signature***	***Date***
	This EHS Plan has been developed for project implementation and is fit for purpose as ready for review by the Client's representative to confirm acceptance for the construction works to commence		
Project Lead	Andrew Mather		
	The Client is aware of their duties under the Construction (Design & Management) Regulations: 2007 and is satisfied with the content of this plan for the construction works to commence		
Client	Urban & Civic Adam Brooks		
Restrictions / Constraints:			
	The Client (or his representative) has reviewed the welfare facilities on the site and satisfied they are suitable for the works to commence		
Principal Designer	Lend Lease Consulting	Chris Shaw	
Restrictions / Constraints:			

Revision Record

Revision No.	Document Reference	Change	Effective Date	Approval By
001	180227 EHS Plan	First draft	28/2/18	

Environment Health & Safety Plan
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Note: Sections that require completion with specific site details of the project. All of these sections are to be complete before the EHS PLAN can be signed off as adequate to proceed

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1.0 Description of Project
1.1 Project Description

Project Description	*Manchester New Square Project comprises of 3 new build apartment blocks on an existing 4 storey RC basement. The apartment buildings are constructed using post tensioned concrete frames, clad in UHPC cladding panels, with windows pre-installed in the factory. The Ground floor is divided into residential community spaces and retail areas [which are fitted out by others]* ***This EHS Plan has been written to cover the Enabling Works only, and will be revised for the Main works phase.***

Project Programme			
Start on Site Date:	12th March 2018	**Contract Period (weeks)**	
Phased Handovers:	Project is spilt into:	112 weeks 25th March 2020	Building 3 handover excluding basement
		130 weeks 2nd September 2020	Final completion
Final version of the F10 rev. to be displayed on site notice board.			

Client / Employer		Urban and Civic	53 Fountain Street Manchester M2 2AN 0161 233 7200
Client's PM	Adam Brooks – Project Manager	Urban and Civic	53 Fountain Street Manchester M2 2AN 0161 233 7200
Principal Designer	Chris Shaw	Lendlease Consulting	6th Floor, Quay West, Trafford Wharf Road, Manchester, M17 1HH
Architect	Simon Critchley	Simpson & Hough	Riverside 4 commercial street, Manchester M15 4RQ
Structural Engineer	Mike Newman	Roc Consulting	Commercial wharf, Commercial street, Manchester M15 4RQ
Principal Contractor		Lendlease	6th Floor, Quay West, Trafford Wharf Road, Manchester, M17 1HH
M&E Engineer	Simon Mc Kenzie	Ramboll	Kings Court 2-4 Exchange st Manchester M2 7HA
Other (Cost Consultant)	Matt Hardman	Faithful and Gould	Chadwick House Warrington road Birchwood Park, WA 6AE

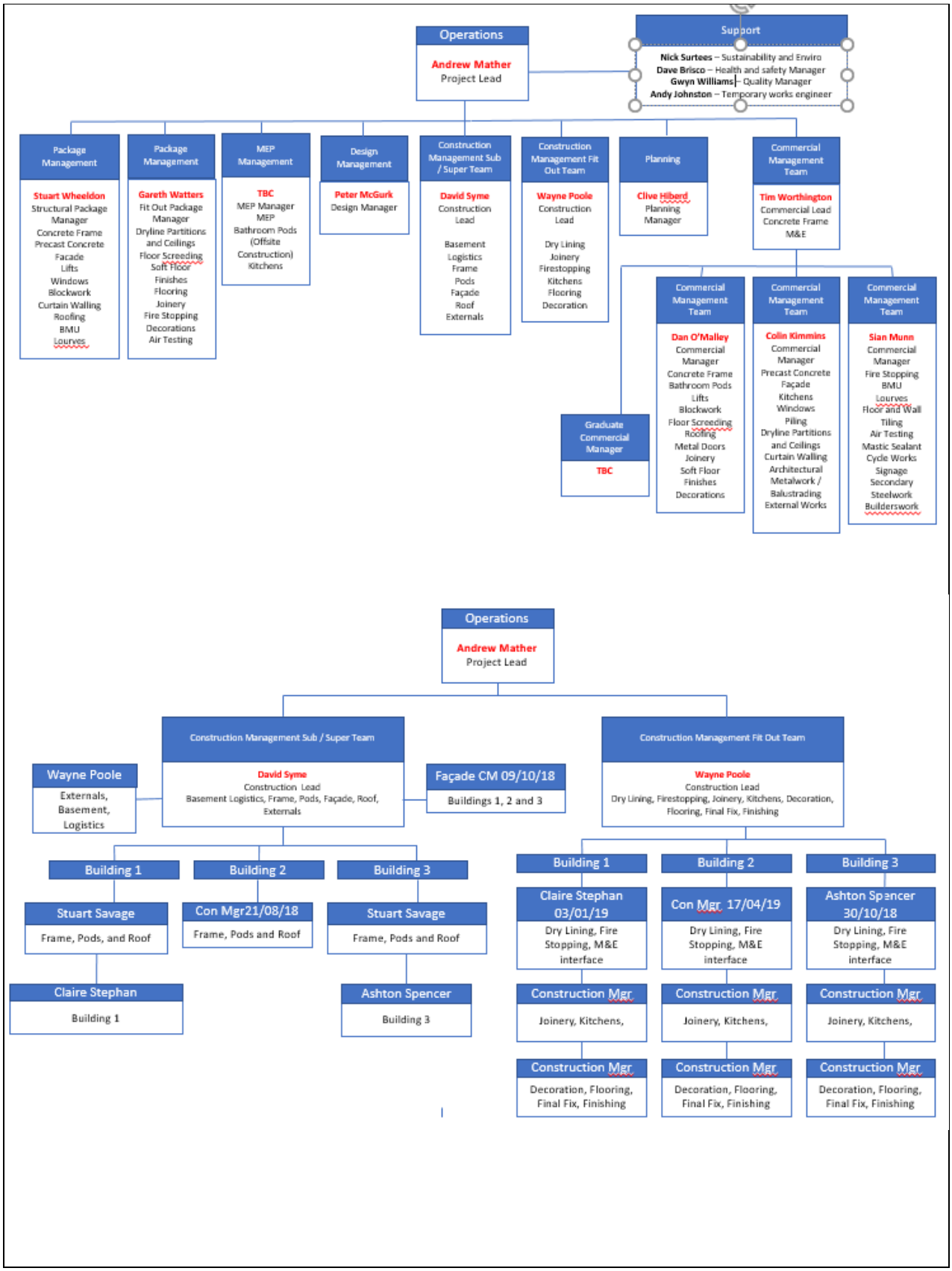
1.0 Description of Project
1.3 Pre-construction Information

[Record below all surveys, reports and other information needed for the effective planning and management of the works]

Description (Amend list as appropriate)	Date requested	Date received	Report Reference No.	Location / File Reference
Pre-Construction Information Pack	✓	03rd April 2017	*All documents held on the Project Shared Drive:* *Documents received as part of the enabling works which commenced June 2017*	
Asbestos survey / report(s)	✓	03rd April 2017		
Planning conditions / constraints	✓	03rd April 2017		
Geotechnical survey	✓	03rd April 2017		
Structural survey	✓	03rd April 2017		
Schedule of conditions	×			
Party wall survey / agreements	To be confirmed	Dimensional survey only received 3rd April 2017		
Noise survey	✓ SRL survey undertaken to inform Section 61 agreement	June 2017		
Archaeological survey	✓	03rd April 2017		
Ecology survey	✓	23rd May 2017		
BREEAM	Not required			
Environmental Impact Assessment	x (lendlease document)			
Underground Services	✓	03rd April 2017		
Others (specify)				

2.0 Management of Works
2.1 Project Organisation

[Please insert a copy of the project organisation chart]



2.1.1 Lend Lease Project Management Roles and Responsibilities

[Please refer to detailed list of project roles and responsibilities contained within the PEP. If required please copy and paste these into this section]

Please refer to the PEP for roles and responsibilities.

Lend Lease Project Management & Construction Staff:

Project lead:	Andy Mather
Project Manager(s):	Stuart Wheeldon
Senior Construction Manager(s):	Dave Syme, Wayne Poole
Construction Manager(s):	Stuart Savage, Ashton Spencer, Claire Stephan
Senior Commercial Manager(s):	Tim Worthington

Commercial Manager(s):	Sian Munn, Colin Kimmins, Dan O'Malley
Package Manager(s):	Gareth Watters
M&E Manager(s):	Dave Risebrow
Design Manager:	Peter McGurk
Others (specify) **Sustainability Manager** **EHS Manager** **Planning Manager** **Quality Manager**	 Nick Surtees Dave Brisco Emma Garner Gwyn Williams

2.0 Management of Works
2.1 Project Organisation

2.1.2 Project EHS Coordinators

[Each nominated Coordinator / deputy must read and understand their personal roles & responsibilities as indicated below]

Coordinator Role	Principal Coordinator	Deputy
Fall Prevention Coordinator	Dave Syme	Stuart Savage
Logistics Coordinator	Wayne Poole	Dave Syme
Fire and Emergency Coordinator	Claire Stephan	Ashton Spencer
Lifting Manager	Stuart Savage	Dave Syme
Electrical Coordinator	Dave Risebrow	
Temporary Works Coordinator	Wayne Poole	Ashton Spencer
Buried Services Coordinator	Ashton Spencer	Wayne Poole
Sustainability Coordinator	Claire Stephan	Tim Worthington
Other Project Specific (specify)		

2.0 Management of Works
2.2 Environment, Health & Safety Performance

2.2.1 EH&S Goals for the project

[Outline Client Goals and Project specific EHS standards include in this EHS Plan. Describe how IIF will be delivered on the project]

Water: 5.0m3 per £100,000 spend

Waste: 98% Diversion from Landfill; 3.4m3 per £100,000 spend

Energy: 1.35tCO2 per £100,000 spend

Timber: 100% FSC Certified

CCS: 40/50

Incident and Injury Free orientations will be delivered throughout the project duration. Delegates will receive orientations within 2 weeks of commencing work on site. Presenters will be organised via office manager on a rota basis. Front Line Leadership & Supervisor Skills Safe Start training will be arranged through the delivery team and the EHS managers.

2.2.2 Monitoring and Review

Regular monitoring of EHS performance throughout the duration of the project is essential to prevent incidents and meet company and legal requirements. Observations, inspections and audits are the methods employed for monitoring and Enablon is the IT platform used to record them.

[The monitoring schedule below provides guidance on the observations, inspections, and audits which need to be conducted, who should do them and how they should be recorded

Monitoring Type	Frequency	Carried out by	Monitoring Method	Recording Results *(See EH&S Operational Excellence*
Environment, Health & Safety Observations	*Daily*	*All staff*	*Individual Observation or part of EHS inspection*	*EHS Observations in Enablon*
Inspection of High Risk Activities *(EH&S Operational Excellence)*	*Daily*	*Lend Lease Construction Manager*	*Check / Inspection of Works (including permit review)*	*Safety Observations in Enablon*
Safe Start Verification	*Minimum Weekly*	*Lend Lease Construction Manager*	*Attend (and participate) in contractors' Safe Starts*	*Verbal feedback and Safety Observations in Enablon*
Weekly EHS Inspection	*Weekly*	*Lend Lease Construction & EHS Managers*	*Focus on conformance with/ European Delivery Requirements / EHS Regulations*	*Inspections and EHS Observations in Enablon*
Monthly Self-Assessment (MSA)	*Monthly (between 20th - 30th)*	*Project Manager & EHS Manager*	*High risk activity reviews*	*MSA in Enablon*
Project in Delivery (PiD) Reviews	*Every six weeks*	*To be identified by Business Unit*	*Full review of project performance*	*PiD Pack & meeting minutes*
Combined Independent EHS Audits	*As required*	*Lend Lease Independent EHS Auditors*	*In depth check of all EHS procedures*	*IEHS Audit Enablon*

Client reports	*Monthly*	*Lendlease Project Lead/manager*	*Project overview from H&S/Quality/programme/Cost*	*LTI/Critical Incident/Safety observation review*

2.0 Management of Works
2.3 Environment, Health & Safety Arrangements

2.3.1 Liaison Between Parties on Site

[Develop a schedule of key meetings through which EHS risk and compliance can be discussed and managed between the main stakeholders involved with the project

Populate the table below and review at regular intervals *[Adjust as needed]*

Meeting	Objective	Attendees	Frequency
Monthly Risk Review	Identify any issues from current works and look ahead to identify new risks and challenges, and agree actions and controls needed.	*LL Team EHS Manager*	*Monthly – or more frequently if needed.*
Supply Chain Partners Directors Engagement	To ensure that the supply chain Directors understand the risks going forward and are aware of any issues raised in the Month	*LL Project / Construction Director and supply chain directors*	*Monthly*
Monthly EHS Coordination	Detailed EHS planning and coordination of contractors' works. Review of likely Environment, Health & Safety risks and control measures	*Construction Managers EHS Managers Contractors' Managers Consultants*	*Monthly*
Weekly Coordination	Formal meeting to ensure all works for the following week are planned, communicated and the controls needed are understood by all relevant parties.	*Construction Managers Contractors' Managers Consultants*	*Weekly*
Daily Coordination	Informal meeting to coordinate works for the following day to avoid operations clashing and communicate who is doing what and the controls to be in place where.	*LL CMs, and/or Package Managers, Contractor Managers and/or Supervisors*	*Daily*

2.3.2 Consultation With the Workforce

[Outline project arrangements for engagement with the site workforce; select from list below]

- **Lend Lease Led**
  - Daily face to face safety observation conversation with site operatives
  - Feedback Cards and '<u>You</u>' said – <u>We</u> did' feedback boards
  - Regular co-ordination meetings including feedback from contractor supervisors
  - Regular Environment, Health & Safety Committee Meetings
  - Supervisor seminars
- **Contractor Led**
  - Daily Safe Start briefings
  - Employee Consultation meetings
  - Safety Representatives meeting (when requested)

- Weekly Toolbox Talks
- Monthly Environmental Toolbox Talks and briefings

2.3.3 The Exchange of Design Information (between client, designers, CDM co-ordinator and contractors)

Where LL has design responsibility the Lend Lease Risk and Opportunities at Design (ROAD) process shall be undertaken during design and planning. The ROAD process allows Lend Lease to interrogate the design with a view to redesigning details, materials or specification to reduce or eliminate risk; modular construction, prefabrication, switching from hot soldered pipework to a heatless/pressure connection (reduced hot works for instance).

Regular design team meetings will be scheduled throughout the contract period both prior to commencement on site and during construction. Minutes will be taken and actions attributed, with actions reviewed at the next meeting
[Outline specific arrangements for the exchange of design information for this project]

The Enabling works design is set, and scope will be agreed as contract. During the enabling works phase the design team will be novated to LL for the completion of stage 4/5 design. They will managed by the LL design manager & LL PCSA team.

The project will utilise Conject Project Control for the management and exchange of information: https://ljmu.intouchpcs.com/login.aspx

2.0 Management of Works
2.3 Environment, Health & Safety Arrangements

2.3.4 Handling of Design Changes of The Project

[Outline specific design management and change control procedures for the this project]

Design changes will be coordinated by the LL Project Manager in coordination with the Design Team and the Client's Project Manager. Design changes will then feature on drawing/specification updates and revisions via BIW.

Regular design team meetings will be held throughout the course of the pre-construction, enabling works and construction phase of the project activity with all relevant stakeholders attending as the programme dictates

2.3.5 The Selection of Contractors

[Outline specific project arrangements for the selection and control of subcontractors]
The internal Lend Lease procurement and pre-qualification process will be followed. Pre-qualification is completed dependant on value of package and risk using Achilles or SSIP accreditation process.

<table>
<tr><td rowspan="3">Package risk</td><td>High</td><td colspan="3" rowspan="2">Constructionline (with SSiP)</td><td rowspan="2">Building Confidence[2]</td></tr>
<tr><td>Medium</td></tr>
<tr><td>Low</td><td>SSiP</td><td colspan="3"></td></tr>
<tr><td colspan="2">Consultant</td><td>SSiP</td><td colspan="3">Constructionline (with SSiP)</td></tr>
<tr><td colspan="2"></td><td><£20k</td><td>£20-50K</td><td>£50k-£100k</td><td>>£100k</td></tr>
<tr><td colspan="2"></td><td colspan="4">Package value</td></tr>
</table>

After tenders are returned, Projects will select contractors paying due care to EH&S criteria.

2.3.6 The Exchange of Health and Safety Information Between Contractors

([Outline specific project arrangements for the exchange of information between contractors]

- **Supply chain** – Weekly coordination meetings with package contractors, Supply Chain EHS manager dialogue and dissemination to their workforce. Daily Coordination meetings with Black Hat supervisors where EHS alerts, lessons learnt are reviewed
- **UKCG** – Lend Lease Construction is a member of the UK Contractor Group. Any decisions, agenda points or directives pertinent to the project, its construction team or supply chain will be communicated from the UKCG to site via the company representative and the projects' EHS Manager.
- **Client** – Weekly coordination meetings with Client Project Manager, immediate update of any incident/accident, monthly update of EHS performance, working hours, RIDDOR incident etc
- **Other Contractors on site** – Attend all establishment coordination meetings with other contractors working on base with a view to avoiding high risk or high impact activity – deliveries, crane usage etc

2.3.7 Site Security

([Outline specific project arrangements for site security]

Security guard to be located at main site pedestrian entrance to control and manage entrance to site, public face and meet/greet visitors. All vehicle gates to have gate persons to control access/egress to site as per vehicle booking in system

This project has been identified as a medium risk location as such the project will have a security guard on site 24/7.

In order to track personnel access onto the project a HRS Biometric turnstile pod will be installed at the site entrance.

2.3.8 Site Induction

([Outline specific project arrangements for site safety inductions]

Project teams must ensure that site inductions are provided for all persons working on or visiting our sites to communicate key risks, emergency procedures, site rules and safety precautions to them.

2.3.9 On Site Training

([Outline specific project arrangements for training]

The project Training matrix is located in: the Health and safety Plan

S:\0500 Projects\0200 Current Projects\ManchesterNewProjects\H&SPLAN

LL have an in house EHS training department who are available to deliver our bespoke and accredited suite of courses on site using site facilities. These courses include:

AED/Defib. training	Asbestos awareness	Accident first responder	IOSH working safely	Incident & Injury Free Orientation
Fire Warden	Office Safety	SMSTS and SSSTS	IOSH managing safely	Supervisor Skills 'Safe Start' training

Weekly Tool Box Talks will be delivered by both supply chain and project management – topics to be pertinent to current works and the environment. One Tool Box Talk per month will cover environmental issues

2.3.10 Welfare Facilities

The welfare facilities will always exceed Schedule 2 of the CDM Regulations (2015) and be adjusted to meet the needs of the Project workforce during the Project.

The Enabling Works site accommodation has been procured through the basement remodelling package.

See logistics plan for details however the welfare will consist of:-

- Offices and meeting room/ induction room
- Canteen – seating, hot and cold water, a fridge and microwave will be provided.
- Drying rooms – sufficient facility will be provided with adequate numbers of lockers on hand
- Toilets – beyond compliance numbers of male and female WC facilities will be provided. It is also acknowledged that additional WC facilities will be required closer to the building
- Shower

2.0 Management of Works
2.3 Environment, Health & Safety Arrangements

2.3.11 The Reporting and Investigation of Accidents and Incidents Incl. Near Misses

All incidents must be reported to the nominated EHS coordinator / EHS Manager as soon as possible and recorded on the company electronic risk and compliance reporting system Enablon.

An appropriate level investigation will be conducted for incidents and near miss events to establish the root causes and immediate causes in order to avoid recurrence. The actions from which could include design or equipment change, education or even personnel change

Incidents will also be communicated to the Client's Project Manager at the client progress meeting or as directed.

2.3.12 First Aid Arrangements

First aid kits of sufficient size and stocked according to HSE guidance will be located at each work area and at guardhouses. These kits will be accessible, visible and be accompanied by a pictorial key to who the site first aiders are.

The project will also have an AED/Defibrillator, located at the main security point. The location will be determined by a suitable and sufficient first aid assessment - satellite emergency stations will be considered where first aid and emergency care can be sought within the building envelope.

First aid trained personnel will be provided from both Lend Lease Management and the supply chain. Such training will be provided by external training providers such as British Red Cross or St. John's Ambulance. AED/Defib training will be provided internally by our EHS training department.

The nearest A&E Hospital is located:

Accident & Emergency
Manchester Royal Infirmary
Oxford Road
Manchester

In case of emergency dial: 999 or 112

2.3.13 Site Rules Including Drug and Alcohol Policy

[Projects must develop suitable site rules as appropriate for their needs. As suggested list to start with this below]

Site Rules

- *Visitors* must report to Lend Lease site offices. Whilst on site visitors are to wear appropriate PPE.
- *Vehicle* drivers must wear a safety helmet, hi-vis jacket or vest and safety footwear at all times. Vehicles are not to be reversed in construction areas unless under the control of an authorised traffic marshal.
- Every incident (injury, near miss or environmental) event must be reported to Lend Lease.
- Any person found to be interfering or misusing fixtures, fittings or equipment provided in the interest of health, safety or welfare will be excluded from the site.
- No person may operate any mechanical plant or equipment unless they have been trained, have been certificated as competent and are authorised to do so.
- Site fire and emergency alarms, equipment and instructions are designed to protect life. They must be followed.
- Ladders are not to be used as work platforms unless approved by Lendlease and for tasks of short duration and only if no alternative means of access is readily available. Ladders must always be secured to a structure or securely 'footed' by another person whilst in use.
- The use of trestles and bandstands are prohibited
- Only *designated & qualified electrician*s may make an electrical connection / disconnection
- All personnel working on this project will attend an induction.
- All site personnel, for their own safety and for the safety of others, are required to fully comply with their employer's *task safe working method statement*
- All personnel are required to wear a *safety helmet, high visibility vest, safety footwear, gloves and appropriate eye protection.* Additional PPE, e.g. hearing protection, will be worn where appropriate.
- Mobile devices such as mobile telephones may only be used in designated safe zones
- The consumption of alcohol and drugs is prohibited.

2.3.14 Reward & Discipline

[Outline how the site will reward positive EH&S behaviours and provide consistent discipline to those breaking rules]

Reward [Lend Lease] - Lend Lease operates a global reward scheme. SteLLar is a computer based system where colleagues can nominate each other to receive SteLLar points. Points can then be spent online through partner retailers, converted to online vouchers or used to purchase *experience days* such as track days or spa breaks

Reward [supply chain] - Each month an observation card will be drawn randomly and a prize awarded – this is to encourage to reporting of unsafe acts or conditions. Site will also conduct a safe operative and safe contractor of the month award each month to encourage safe working. Across the Regions business there will also be opportunity to win the safe contractor of the year award also.

Discipline – Unsafe action will be correctly immediately upon discovery however should such infringements recur re-induction will mandatory for both the operative in question AND their supervisor or contracts manager. If such approach is not successful then the operative will be removed from site. Certain circumstances may lead to instant dismissal from site. These include the tethering of materials while working at height or working adjacent to leading edges.

Poor EHS performance is also reflected in the 'Supply Chain Solution' (SCS) performance scores – consistently low scoring contractors will be removed from the procurement list and not considered for future work

3.0 Arrangements for Controlling Significant Risks
3.1 Project EHS Risk Register & Risk Control Plans

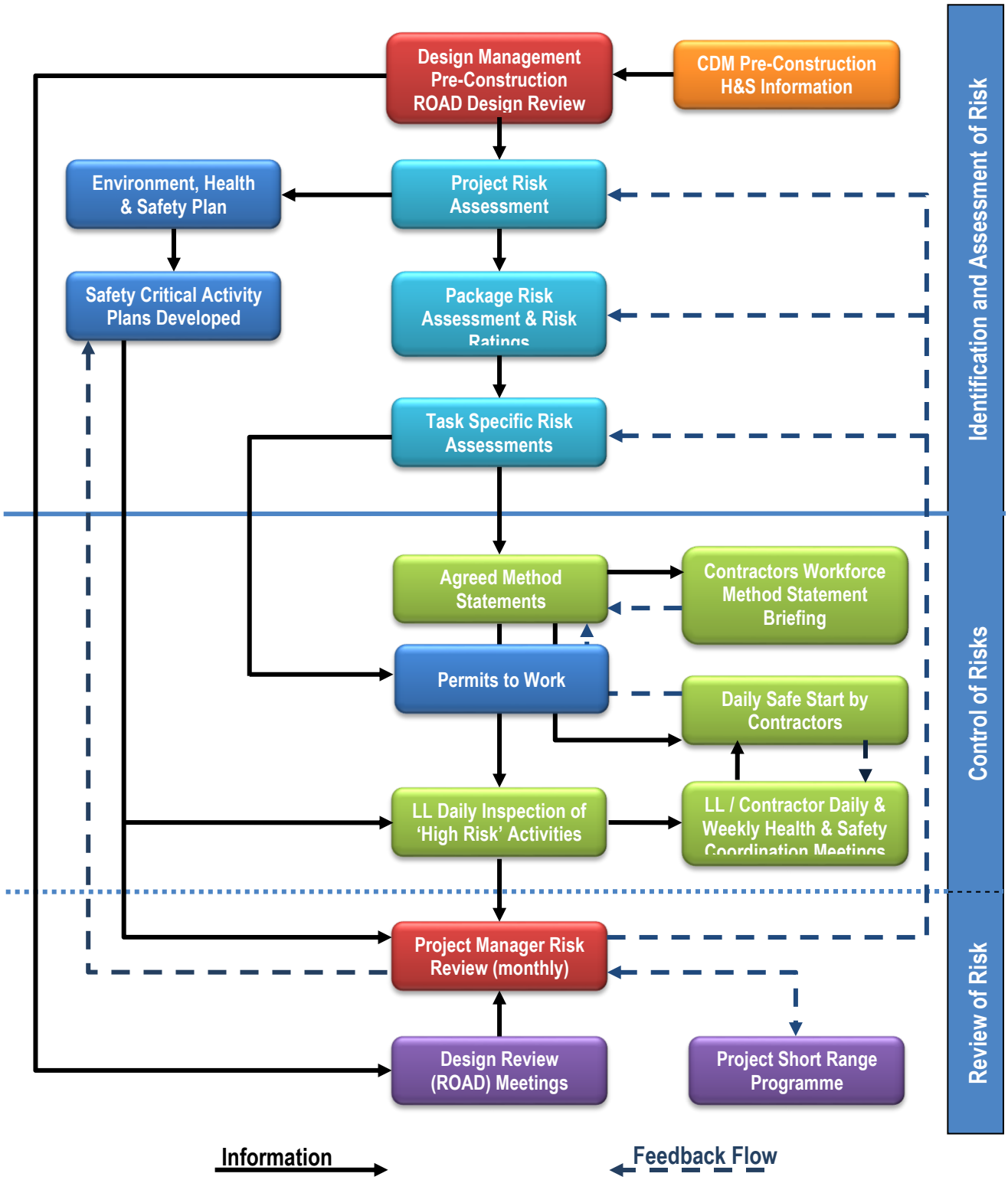
3.1.1 Project Risk Assessment

[Insert Project Risk Register with filters for Construction, EH&S and Design/ROAD fields only]

Project Risk assessment is located on Shared drive
S:\0500 Projects\Manchester New Square - Stage 2\0400 - Commercial\0422 - Risk Register

3.0 Arrangements for Controlling Significant Risks
3.1 Project EHS Risk Register & Risk Control Plans

3.1.2 Identification and Control of Risk



3.0 Arrangements for Controlling Significant Risks
3.1 Project EHS Risk Register & Risk Control Plans

3.1.3 Safety Critical Plans

Safety critical plans have been developed to control significant risks and are appended to this document. These are listed as follows:

a. Fall Prevention Plan – Appendix A
b. Logistics Plan – Appendix B
c. Fire & Emergency – Appendix C
d. Buried services – Appendix D
e. Lifting operations – Appendix E
f. Temporary electrics – Appendix F
g. Sustainability – Appendix G
h. Temporary Works – Appendix H
i. Asbestos management plan – Appendix I

3.1.4 Other Significant Risks

[Detail only significant risks not covered. Do not include risks that can be covered with and effective RAMS]

Public transportation – Project close to main bus routes on Princess street and Whitworth Street, traffic management plan has been developed to minimise impact

Security – Close to Canal Street part of the Manchester Gay village, this is a lively entertainment hub with many bars and clubs and hosts a number of festivals and street parties through out the year.

Public interface –Princess Street and Whitworth Street are main arterial routes in and around Manchester. The Project is located on the boundary of the University District, Gay Village and China Town and therefore the area is frequented by students, visitors, international visitors, party goers and general commuters [close to Oxford road and Piccadilly Train stations]. Site logistic and working at height plan to consider public interface especially those not familiar with the area.

3.1.5 Proactive Health & Wellbeing Management

[Explain how the Project resources occupational health & nursing care, safety critical workers & medicals, removing health hazards through design and procurement etc.]

Safety Critical Workers/Medicals – Lend Lease require that all safety critical workers; crane operators, telehandler and excavator operators for instance undergo a safety critical medical and where necessary operators will be removed from activity upon the advice of the medical's findings

Personnel Wellbeing – this is a cornerstone of LL values and as such all projects will conduct at least 1 health surveillance day supported by a qualified occupational health nurse.

Allow for a family fun day per year where the workforce can invite their family to site to look at what they are working on. Food / BBQ arranged and some entertainment.

Mental health –Lend Lease will ensure at least one Mental Health First Aider (MHFA) will be resident on site throughout the project. As with an emergency first aider, a mental health first aider will be available to help direct personnel to more appropriate professional advice or support All Lend Lease staff will attend a Mental Health Awareness workshop – this will be available to all personnel as appropriate.

Removing hazards – As part of the ROAD process and the project risk register risk to health will be removed or reduced. Manual handling, excessive noise and dust emissions, unnecessary vibrations through can all be controlled through risk assessment and mechanisation of process or handling

Drugs and Alcohol - Throughout the course of the project Lend Lease will operate drugs and alcohol testing. This will be on a random basis but also at any serious incident – to exclude substance impairment from causation

4.0 Arrangements for H&S File and information
4.1 H&S file and information gathering

4.1.1 Layout and format of H&S File

The layout and format of the Health and safety file will be developed in conjunction with the Principal Designer in line with the Clients requirements in the Pre-construction information.

4.1.2 Arrangements for collecting and gathering information

The Health and Safety Administrator will liaise with the Project Team and the Principal Designer to ensure that the agreed information is collected and issued to the Principal Designer; in the correct format and within sufficient time to allow the Principal Designer to collate the file and issue to the Client at handover.

Falls Prevention Plan

Project Name: Manchester New Square – Main works
Date of Issue: 12/03/2018

Revision No: 1



Appendix A
Falls & Prevention Plan

	Critical Control Plan Sign-off		
Position	**Name**	**Signature**	**Date**
Project Lead	Andy Mather		
Construction Manager	Wayne Poole		
Fall Prevention Co-ordinator	Dave Syme		
Deputy Fall Prevention Co-ordinator	Stuart Savage		

[Index page to be added]

1.0 Fall Prevention Co-ordinator Roles & Responsibilities

- Ensure a Fall Prevention plan is in place, is regularly reviewed and where necessary updated. The plan is to be based on the hierarchy of fall. Individual fall arrest equipment is the very last resort
- Ensure that the requirements of the fall prevention plan, together with any amendments, are communicated to all relevant parties
- Please refer to full co-ordinator responsibilities as detailed in the company operating procedures

2.0 Fall Prevention Arrangements overview

Detail how the lifting arrangements presented by the project location, structural composition, lifting capability and build programme will be procured, managed and controlled.

- **Overview of fall prevention explains minimisation of work at height** – wherever possible it is good practice to reduce on site work at height as much as possible or avoid altogether. Such measures on THE Manchester New Square Project include adopting a modular or off site fabrication solution to specific elements of the build, riser pipework etc.

  Each element of work at height will be subjected to risk assessment through the supply chain safe system of work and the lend lease RAMS review process with no work permitted to start until their documentation and work method has been approved and communicated.

- **Explain fall prevention methods & equipment to be used and rationale**

Formwork (including jump forms & slip forms)	✓	Mastclimbers (MCWP) (part of design (TBC Stage 3/4 design)	×
Edge protection – for main structure & excavations	✓	Access between floors (in this case scaffold and building interior)	✓
Steel frame erection	×	Rope Access	×
Shafts & risers	✓	Podiums & tower scaffolds	✓
General site scaffolding	✓	Loading bays	✓
BMUs part of permanent scheme	✓	Ladders, stepladders & hop-ups	✓
MEWPs (inc PAV – personal pop-ups)	✓	Harnesses & lanyards – as secondary means	✓

- Edge protection –
  Edge protection to the building will be as follows:
  Concrete frame construction - Slickguard will be used to the main working [wet] deck as part of a table formwork system. Upon completion of the floor slab the high risk elevations on whitworth Street, Princess street and Venice Street will have full height climbing screens from level 4 upwards, protecting the two levels of back propping and the working deck(s). The remaining elevations will be protected by full height slick guard and fans to the back propping levels and 1.8m slick guard to the working deck. As seen below in the sketch



Edge protection zones



Full height screen example


Full height Slick guard example

Following removal of the back propping a full height debris net will be installed 2m back from the slab edge at level 03 and above to create an exclusion zone on the perimeter of the building. The perimeter edge protection will be via a 1.2m high slick guard system [handrail and brick guard system] as per detail below, to allow installation of external precast cladding


Example of full height debris netting and edge protection



Slick guard and integrated handrail

- Shafts & risers
  On the project we do not have full voids to risers, penetrations to the slab are at service locations only and therefore are in discrete locations. All penetrations over 200x200mm are to be protected with GRP grating cast into the slab, which will then be covered by plywood to prevent fall of small material and debris. All internal openings will have a 50mm high concrete upstand to prevent water and debris spilling down the service opening
  Lift shafts will be protected with full height fall gates, which will be installed progressively with the jump form cores

Stair cases – the precast stairs and landings will be installed progressively with the jump form construction, and where possible will be installed with the permanent handrail to the internal edge. Alternatively a temporary handrail will be installed prior to lifting of the precast.

- Roof
  Please see attached separate sequence at the back of this plan
- General site scaffolding
  Scaffold protection screens will be installed to Princess Street to fully cover the pavement and provide a safe covered route for pedestrians. A 5m scaffold fan will be installed along Building 1 elevation over the canal at ground floor [in addition to the fans installed 2m below working deck during the concrete frame construction]
  A scaffold crash deck will be installed adjacent to the gate on Brazil street
  A scaffold crash deck will be required on building 1 over the basement car park ramp during the frame and blockwork wall construction
  A scaffold access platform will be required over Amazon House roof cantilevering out from level 6.
  Roof edge protection to be installed progressively in conjunction with the permanent system.
- MEWPs (inc PAV – personal pop-ups)
  External use for cladding / glazing works up to level 03
  Internal use for partition and M&E installation
- Vertical access
  Frame and initial fit out Access between floors (hoist & stairs)
  Fit out and commissioning - Access between floors will be by stair cases and beneficial.
- Podiums & tower scaffolds
  For internal fit out works
  External glazing and soffit installation
- Loading bays
  A cantilever platform loading bay will be set up at each level to receive goods from tower cranes.
  Upon completion of the cladding vertical material distribution will be via hoist.
- Ladders, stepladders & hop-ups
  Minimum use as hierarchy of falls – by LL approval
- Harnesses & lanyards
  Harnesses to be used as secondary means of protection in MEWP's during façade installation
  Not planned to be used as primary means – if required as Last Resort approval needs to be sort from Neil Martin
  Lanyards and tool tethers for use on materials and tools whilst working at height – Mandatory
- Other:

Protection of the Canal

The Canal elevations will be protected with a 6-meter scaffold fan to prevent objects falling onto or towards the Canal or the associated path areas. The fan will be cantilevered from the frame of the new MNSQ buildings.

Management of No Person zones – It is the responsibility of each Supply Chain Supervisor to ensure that their works are adequately segregated. It is especially important when working at height – anywhere an operative is working overhead they must establish an exclusion zone to ensure no operatives can access an area where dropped objects can cause injury. Exclusion zones must be large enough to protect against the risk of dropped objects bouncing outside of this exclusion zone. Exclusion Zone will be named no person zones or permit to access.

The exclusion zone is to be constructed using robust barriers or heras fencing with appropriate warning signs affixed. It must be secure and carry information about who is responsible for the zone and direct stakeholders to who to consult over access/coordination

Additionally, no person zone alarm system to be installed in high risk areas i.e. where operatives are working at height and can't observe the exclusion zone directly.

The fall prevention coordinator and the works package manager/construction manager will ensure that the exclusion zones are fit for purpose

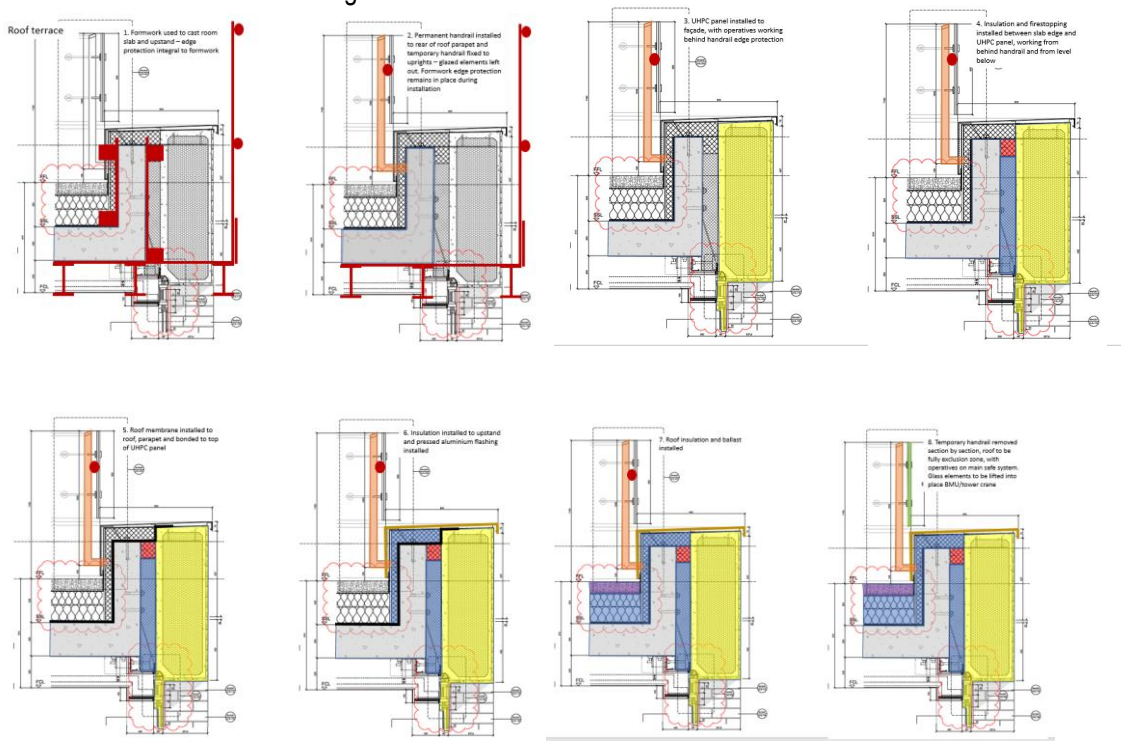


Prevention of fall of tools and materials – All tools used in work at height activities will be tethered; method statements and risk assessments will be reviewed with falling tools and materials in mind and will consider such issues as the quantity of tools taken to height over what is required to fulfil that task.

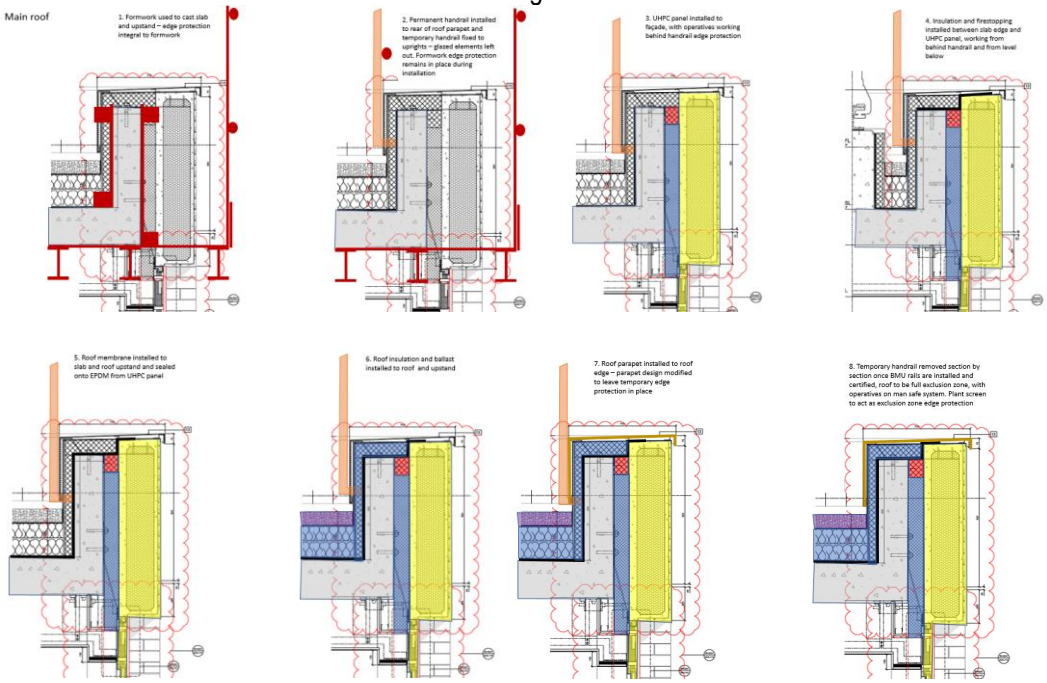
Working over the public – working over the public will not be tolerated. Should the situation arise the activity will be suspended and a review of the work method and programme will take place with a view to either altering the methodology; route for instance or the programme to achieve task when public are not so prevalent; out of hours for instance. When working *adjacent* to the public hoarding/segregation will be adopted to ensure the public are kept at a sufficient distance so as to avoid contact with falling or bouncing objects

A robust falls strategy will need to be implemented on Manchester New Square due to the location of the buildings relative to the footpaths on Princess Street and Whitworth Street and the floating barge on the Rochdale Canal.

Roof Protection
Residential roof Terraces Building 1 2 and 3



Main roof and non-residential roof terraces building 1 2 and 3



Appendix B

Logistics Plan

Project Name: Manchester New Square

Date of Issue: 12/03/2018

Revision No: 1



	Critical Control Plan Sign-off		
Position	**Name**	**Signature**	**Date**
Project Lead	Andy Mather		
Project Manager	Stuart Wheeldon		
Logistics Co-ordinator	Wayne Poole		
Deputy Logistics Co-ordinator	Dave Syme		

[Index page to be added]

1.0 Logistics Co-ordinator Roles & Responsibilities

- Segregated unloading and loading areas on site including exclusion zones where necessary
- Provision of adequate storage areas on site including segregation of HFL / HFG
- Planning and implementation of physically segregated traffic and pedestrian routes
- Planning and implementation of appropriate signage (in compliance with recognised pictograms and standard safety signage colours)
- Develop and regularly review a management plan for logistics, traffic and pedestrian management
- Adequate security / access control including provision and maintenance of hoardings and fencing

2.0 Logistic Arrangements Overview

[Detail how the logistical arrangement will be planned managed, managed and controlled]

- Access routes & public protection–
  Fast Fence solid ballasted Hoarding to perimeter of site with Client graphics installed to outside
  On the lane closure on Whitworth street the fencing will be Fast fence panel system installed on red and white barriers, the fence will be 50% solid 50% 50x50mm mesh with bulk head lights for traffic management.
  Closure notices in place on Venice, Whitworth and Princess street
  Pedestrian access will be via Princess Street in line with the under croft on building 2
  Vehicle access will be via gate 1 on Whitworth street, Gate 3 on Brazil Street and egress will be via gate 2 Venice Street and gate 4 Whitworth street. (as shown on the logistic plans)
- Road user protection (including cyclists)
  Road closure and traffic management has been agreed with Manchester City Council Highway department. Traffic signs and white lining has been amended. Gate locations have been planned to give clear sight lines and smooth access egress for all vehicles. Pavements have been closed to prevent dead ends and discourage inappropriate pedestrian routes around site.
  FORS and CLOCS schemes to be used by hauliers visiting site. Cycle awareness scheme to be implemented on site
  Mesh vehicle gates to all access and egress locations to be controlled by gate personnel and traffic marshals.
- Welfare provision.

Temporary self- contained welfare provision within building 2 footprint, for the first 20 weeks to facilitate the initial works

Main site accommodation will be located within the basement at B-1 with access gained down core 2

- Site security & fencing

  Fully site perimeter is protected by 2.4m high hoarding with mesh vehicle gates

  All tower crane locations will be protected with slab to soffit solid hoarding within the basement and a 3m high fence (1.2m solid and 1.8m 25x75mm anti climb mesh)

  24/7 security provision on site with manned guard at the site entrance during site operational hours (public face and visitor meet/greet)

- Delivery management

  Hauliers to be part of FORS (silver) and CLOCS schemes and be booked in via online delivery booking in system. All deliveries will be controlled by Gate Personnel and the sub-contractors traffic marshals. Deliveries to use designated traffic routes as laid out in the delivery management system (subject to arrival gate location) No off site parking allowed, one way system along Whitworth Street Sackville street and Princess street.

- Vehicle & pedestrian segregation

  Separate vehicle & pedestrian accesses to site provided

  Pedestrian – Princess Street from main pavement

  Vehicle – Whitworth Street lane closure and Brazil Street

- Traffic rules & vehicle marshalling

  Standard LL rules to be implemented. All vehicle movement under control of a trained banksman/traffic Marshall.

  All vehicles to access on designated traffic routes on either tarmac highway or concrete hardstanding, all routes to be kept clean and free from debris. Vehicles to be checked prior to leaving site from mud etc and compliance with CLOCS.

  Road sweeper to be implemented when needed in advance of large movements i.e. concrete pours and managed by LL team.

- Material storage

  All material storage by agreement of the logistics manager. Just in time deliveries to be implemented. Storage of materials in building in line with floor loading capacity.

- Material movement (vertical & horizontal)

  Vertical – via tower crane onto cantilever loading platforms, or dedicated hoist

  Horizontally – via forklift, pump trucks etc.. or tower crane

- Housekeeping arrangements

  Daily removal of rubbish from building and collected via waste compactor

- Site lighting

  Bulkhead lighting to hoarding

  Flood lights on PIRs to external

  Access lighting internal

  All lighting to be LED

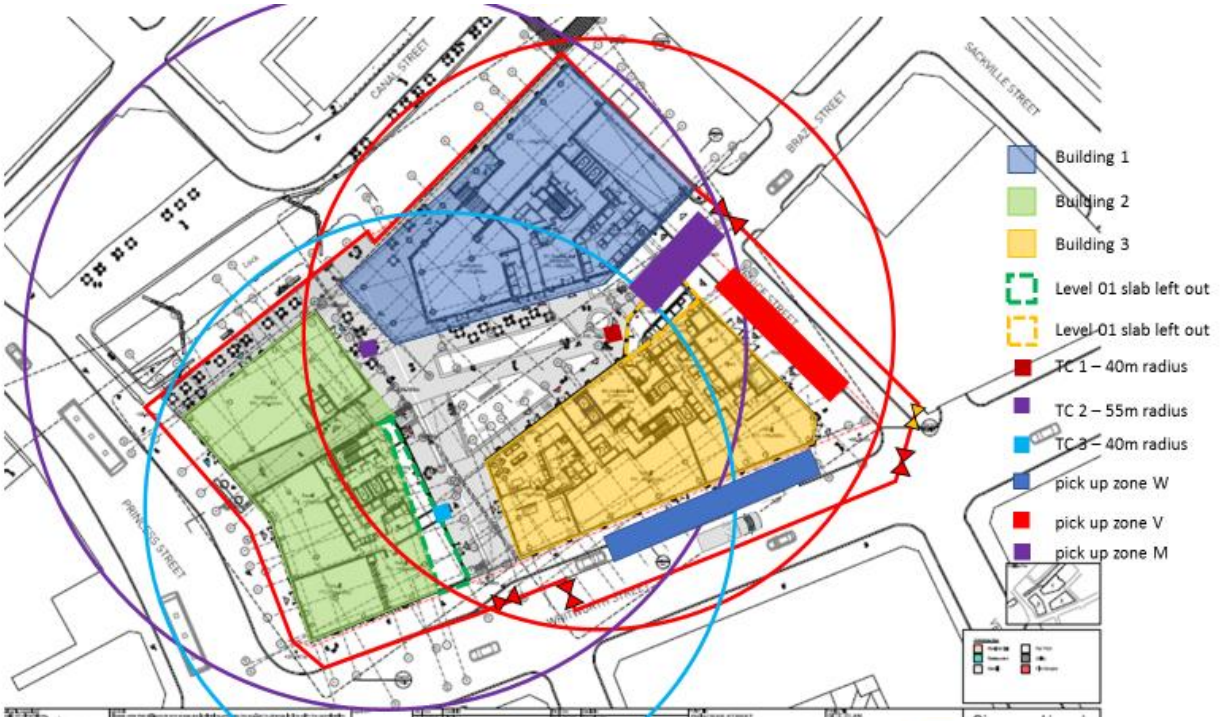
  Task lighting by subcontractors

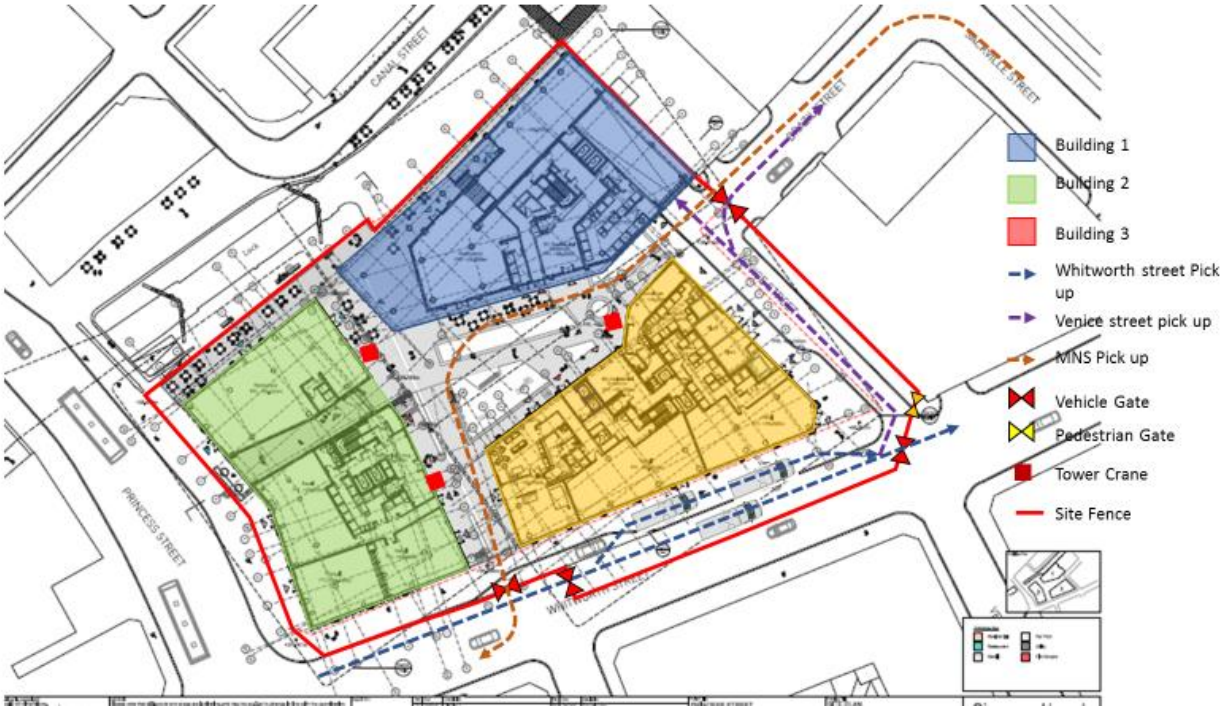
- Site power – See Electrical critical plan

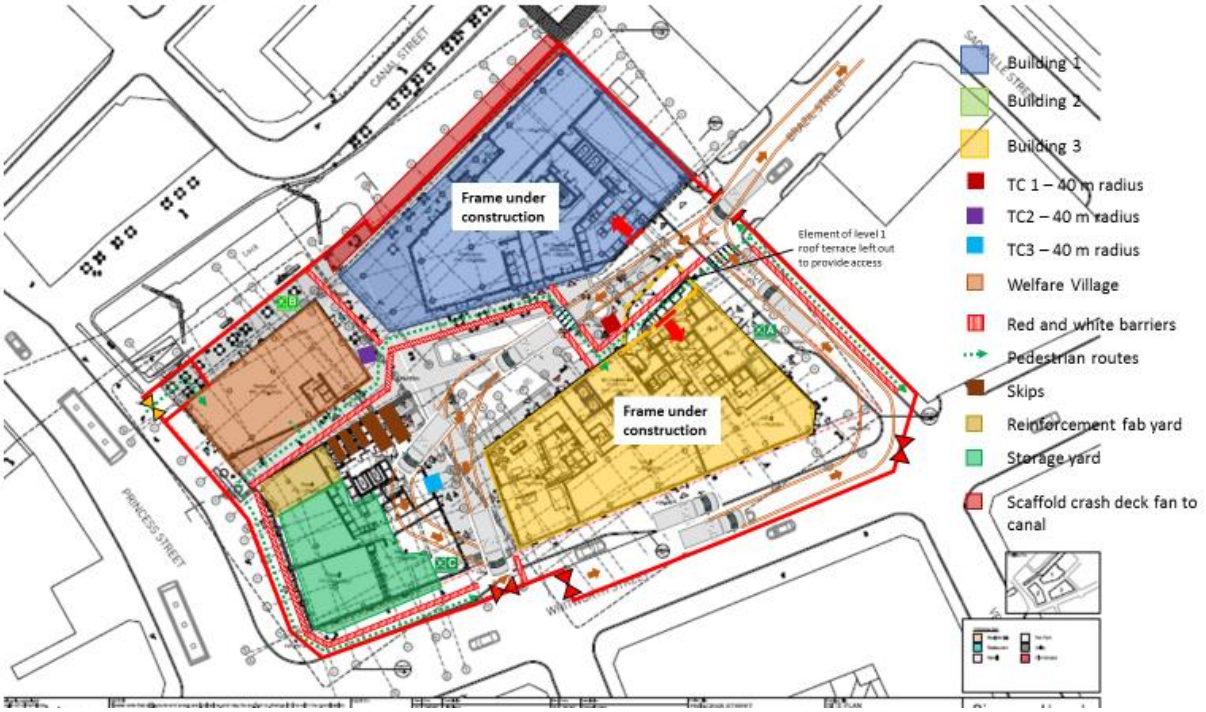
- Waste bin positions

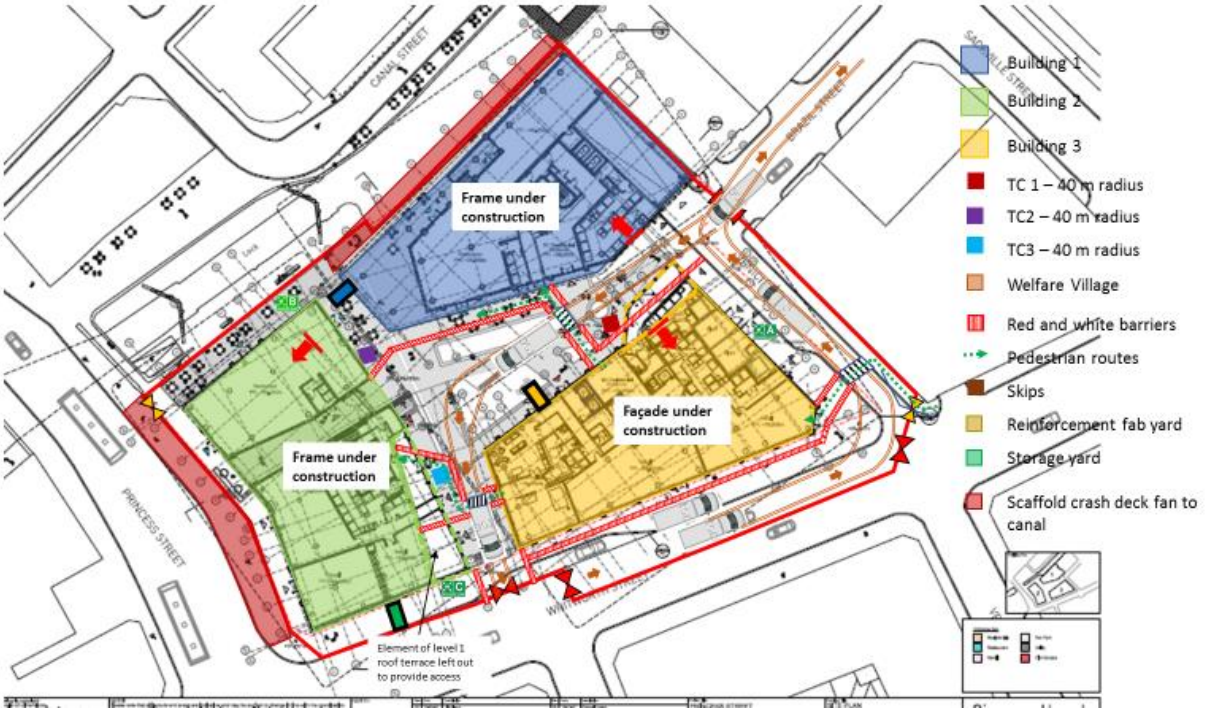
  Segregated bins to be distributed to floor plates as appropriate

  Recycling bins to welfare


CANAL STREET
SACKVILLE STREET
PRINCESS STREET
Building 1
Building 2
Building 3
Level 01 slab left out
Level 01 slab left out
TC 1 – 40m radius
TC 2 – 55m radius
TC 3 – 40m radius
pick up zone W
pick up zone V
pick up zone M


CANAL STREET
SACKVILLE STREET
PRINCESS STREET
Building 1
Building 2
Building 3
Whitworth street Pick up
Venice street pick up
MNS Pick up
Vehicle Gate
Pedestrian Gate
Tower Crane
Site Fence


Frame under construction
Element of level 1 roof terrace left out to provide access
Frame under construction
Building 1
Building 2
Building 3
TC 1 – 40 m radius
TC2 – 40 m radius
TC3 – 40 m radius
Welfare Village
Red and white barriers
Pedestrian routes
Skips
Reinforcement fab yard
Storage yard
Scaffold crash deck fan to canal


Frame under construction
Façade under construction
Frame under construction
Element of level 1 roof terrace left out to provide access
Building 1
Building 2
Building 3
TC 1 – 40 m radius
TC2 – 40 m radius
TC3 – 40 m radius
Welfare Village
Red and white barriers
Pedestrian routes
Skips
Reinforcement fab yard
Storage yard
Scaffold crash deck fan to canal

Fire and Emergency Plan

Project Name: Manchester New Square

Date of Issue: 12/03/2018

Revision No: 0



Appendix C
Fire & Emergency Plan

	Critical Control Plan Sign-off		
Position	**Name**	**Signature**	**Date**
Project Lead	Andy Mather		
Construction Manager	Dave Syme		
Fire & Emergency Co-ordinator	Claire Stephan		
Deputy Fire & Emergency Co-ordinator	Ashton Spencer		

1.0 Fire and Emergency Co-ordinator Roles & Responsibilities

- Ensure that a suitable and adequate fire risk assessment is carried out for the project.
- Prepare, publicise and update as necessary, a Fire and emergency risk control plan
- Ensure that all site accommodation and facilities conform to the fire safety requirements of the joint code of practice on fire prevention at construction sites
- Ensure the contents of the project Fire & Emergency Risk Control plan are clearly communicated, understood and complied with by all those on the project
- Ensure a weekly inspection regime is instigated to check firefighting equipment and signage and to test alarm and detection devices installed on site. Findings must be recorded.
- Conduct weekly inspection of escape routes, fire brigade access, fire-fighting facilities and work areas and monitor the requirements laid down in the project Fire & Emergency plan
- Liaise with the local fire brigade including arranging site inspections and familiarisation tours
- Maintain a written record of all checks, inspections, tests, fire patrols and fire drill procedures

2.0 Fire and Emergency Arrangements Overview

[Detail how the fire and emergency arrangements for the project location, structural composition, lifting capability and build programme will be procured, managed and controlled]

Lend Lease will appoint a competent fire risk assessor to conduct a suitable and sufficient fire risk assessment

- Fire Risk Assessment - Lend Lease will appoint a competent and professionally accredited fire risk assessor tc provide a fire risk assessment for the works and also to guide management on compartmentation of works whil conforming to escape and travel distance requirements.
- Minimisation of fire load – As part of the fire risk assessment, Lend Lease will take advice from the appointed specialist on how best to reduce fire loading within the building. The reduction of packaging to numerous materi will be reviewed at procurement and the logistics team will review the timely removal of such redundant packag or materials (lighting boxes or floor tile packaging for example).
- It is also worth highlighting the risk poor housekeeping poses to fire starting and fire spread on sites. As a matte course Lend Lease will ensure the highest standards of housekeeping; not only to reduce fire loading and the a threat (likely source of fire starting) but also as a way to control slips, trips, improve emergency escape, manual handling and so on.

- Also as part of the ROAD (Risk and Opportunity At Design) process Lend Lease will explore work method and design alternatives to help reduce the fire loading during construction; such as offsite fabrication and pre-finished materials or, in the case of a completed building to influence design specification to reduce combustible materials installed in the building.

  As part of the strategy to reduce fire loading the storage of LPG, Propane, Oxygen and other gases will be risk assessed and kept to a minimum. Any flammable substances will be stored appropriately with bulk storage being avoided. Only reasonable supplies of any gases or substances will be stored on site rather than the entire supply of a required substance – adhesives, solvents etc.

  Any such gases or substances will be stored in accordance with best practice

- Control of ignition sources including hot works permits – the fire and emergency coordinator and the deputy will ensure there is a strict hot works permitting process is implemented. As part of this process sources of ignition will be reviewed; halogen pod lights are banned for instance, also where there is a heatless solution to an activity – heatless pipe connections for example, these will be fully explored as a way of controlling ignition. Even the simple act of ensuring rebar or threaded bar arrives on site 'cut to length' can remove the need for grinders to be used – helping to control ignition further.

- Fire detection – Fire/smoke alarms will be placed according to the fire risk assessment however it is anticipated that these will be predominately in the welfare and office locations and will be wireless so as to communicate with the site wide wireless warning, evacuation and alarm system. Also as part of the hot works permit process a strict 2 hour 'fire watch' will be adopted – this ensures the hot works will be completed well before the end of a work shift and therefore before the site is closed for the day.

- Fire warning & alarm - Effective means for the early detection and warning of the presence of fire must be in place and appropriate Wireless fire alarms must be of Class 1 receiver, to comply with ETSI EN300-220-1. Such alarms will be deployed as per the findings of the fire risk assessment and any higher risk works. Each devise will communicate with the next to ultimately convey the *alarm* back to the base stations in the offices where the emergency services and evacuation can take place - Manual hand bells must not be used on Lend Lease sites.

- Fire-fighting provision – Each fire point will be deployed as per the findings of the fire risk assessment but will carry 2 x 9L AFF/Foam extinguishers and 1 Carbon Dioxide extinguisher; as well as alarm, signage and location pictogram. Additional fire extinguishers, appropriate to the fire risk, will be deployed in high risk areas and during such higher risk activities such as hot works

- Use of flame retardant materials – all protective materials such as 'Correx' or polythene will LPS1207 (specific standard of fire retardant as approved by the Loss Prevention Certification Board (LPCB).

- Maintenance of fire protective systems – As part of the regular safety inspections, weekly checklists will be conducted on all site based fire equipment; including fire extinguishers, sand boxes, alarms and call points. Fire extinguisher testing will be diarised so as to ensure timely re-testing. Should fire extinguishers be discovered that are defective or discharged it will be swapped out with compliant stock so as not to diminish the firefighting /protective capabilities of the project.

  The frequency and type of checks needed on fire precautions will be dependent on the findings of the Fire Risk Assessment on the Project. General guidance will be:

  Daily

• Escape routes free from material / blockages
• Fire sounders and detectors working and powered
• Fire extinguishers in planned locations and not used

Weekly
• Test of fire alarm system – including audibility test by listening in all rooms
• Fire sounders are still in required places and there are still enough
• Any installed fire escape lighting is still in place
• Fire exit signage is still correct for actual fire routes (this will change frequently on some projects)

Monthly
• Fire evacuation practise (depending on numbers on site and level of fire risk on the Project)

Evacuation procedure(s) (Fire or other) - There should be at least 2 fire escapes per floor: where this is not practical, appropriate additional precautions are to be agreed with the project EHS manager. Compartmentation will be implemented in accordance with the fire risk assessment to ensure travel and escape distances are acceptable

It has also been identified that several of the existing staircases extend to the roof area which will allow for well protected escape routes to be available throughout the project.

- Training and drills – in accordance with Lend Lease requirements a Fire & Emergency coordinator will be appointed, along with a deputy F&E Coordinator they will carry out the duties outlined in this plan. Each F&E Co [and deputy] will have completed the Lend Lease F&E Coordinator course within 3 years with updates as required.

  Part of their role is to ensure there are adequate numbers of Fire Wardens throughout the project and programme. These wardens will be drawn from both the Lend Lease staff and from the Supply Chain – helping to engage the workforce further

  Fire drills will be conducted regularly with a full site wide evacuation at least every 3 months; with more frequent drills being conducted in periods of higher risk or in areas of confined conditions – such as asbestos removal or remediation works to the postal tunnel.

- Information for emergency services – the project team will liaise with the local emergency services before the start of the project; communicating this plan, fire evacuation strategy, appliance access routes, level of combustible and flammable materials and where these will be stored and identifying. This process will also help the fire service to understand where best to focus their attention should a fire break out.

  All pertinent emergency information including contact details, locations of any specific flammables (LPG, COSHH store etc.) will be placed at the project's main compound entrance and in the security office (if different locations) in a '**grab pack'** – this will be highly visible and easily accessible in an emergency.

- Work at height casualty rescue – throughout the course of the project Lend Lease will ensure that all work at height activity carries a suitable and sufficient work at height rescue plan. These plans will be practiced to ensure operatives are familiar with how to execute an effective rescue from MEWPs, harness wearers, hoists etc.

- Tower crane rescue – Training will be undertaken onsite

- Rescue from confined spaces – As identified in the pre-construction information supplied by the CDM Coordinator there are several potential confined spaces highlighted. However Lend Lease consider the remedial work to the postal tunnel will, at some stage through the programme create a 'confined space'. Such access will be strictly controlled and as part of this control Lend Lease will ensure a suitable and sufficient rescue plan is formulated & practiced.

  Only fully competent operatives will be involved in confined space activity including any rescue crew. All confined space equipment including that used in rescue will be rigorously inspected with any defects remedied prior to use.

- First Aid, Defibrillator and nursing provision – Following the completion of a first aid risk assessment by the project team first aid provision will be deployed across the project.

  First aid – emergency first aiders will be appointed in accordance with prescribed ratios recommended in the First aid at work regulations. These personnel will be drawn from both the Lend Lease and Supply Chain. First aid kits will be placed in the main project office and in specific locations across the project according to risk and work concentration.

Defibulators – A Defib unit will be placed in the main security office. The location will be communicated at induction and through periodic tool box talks which will raise awareness of emergency procedure. Lend Lease has an internal EHS training department. This resource will be able to deliver specific training on how and when to use a Defibulator – such training will be delivered on site throughout the course of the project.

Nursing provision – Lend Lease anticipate providing an occupational health nurse on site in a dedicated treatment room. This service will be on a regular 'visiting' basis however will be reviewed in line with demand and effectiveness. The nurse will conduct regular screening sessions – testing for blood pressure, blood sugar levels, lung function, skin cancer awareness amongst other conditions etc. The nurse will also be a an onsite focal point for any 'companywide' health promotions such as prostate cancer awareness or healthy eating

Mental health – Lend Lease is an industry leading advocate of mental health awareness in the workplace. As such Lend Lease will ensure at least one Mental Health First Aider (MHFA) will be resident on site throughout the project. As with an emergency first aider, a mental health first aider will be available to help direct personnel to more appropriate professional advice or support – such issues might be coping with stress, anxiety through to identifying depression or the early signs of bi-polar or schizophrenia.

- Emergency contact details – All pertinent emergency contact information will be placed in the grab packs ready for use [see 'information for emergency services' above]. Daytime contact details will be circulated to all project stakeholders as well as external organisations such as Environmental health, emergency services and the environment agency.

  The wireless fire alarm system employed by Lend Lease uses GPRS technology in its base station which sends a SMS text message to up to 10 pre-programmed numbers thus communicating the presence of smoke/fire automatically – once triggered this allows the device to contact anyone from the site security and project team to the campus and fire services

Buried Services Plan

Project Name: Manchester New Square

Date of Issue: 12/03/2018

Revision No: 0



Appendix D
Buried Services Plan

	Critical Control Plan Sign-off		
Position	**Name**	**Signature**	**Date**
Project Lead	Andy Mather		
Construction Manager	Dave Syme		
Buried Services Co-ordinator	Ashton Spencer		
Deputy Buried Services Co-ordinator	Wayne Poole		

[Index page to be added]

1.0 Buried Services Co-ordinator Roles & Responsibilities

The necessary competencies of the LL Buried Services Coordinator will vary during the contract however all Coordinators must be competent and have the necessary level of authority to carry out the role. This will include:

- Knowledge / experience of dealing with underground services that may be present on the project
- Understanding / knowledge of the dangers associated with underground services
- Knowledge / experience of permit to work systems
- Authority to suspended any works on site

Duties and responsibilities

To ensure all available information is collected, collated and coordinated, including from:

- The client/ Design team/ Local authorities/ Statutory authorities / Communication companies

2.0 Buried Services Arrangements Overview

[Detail the arrangements for the management and control of buried services for the project]

Below is a list of lendlease practices that will be required for Buried Services. On Manchester New Square the there is an existing basement which has modification works to be undertaken. Breaking ground will be reviewed for the replacement of hoardings and incoming service connections.

- Location of underground services
  - Existing drawings to be verified
  - Ground Penetrating Radar survey
  - Other surveys TBC
- Co-ordinated services drawings (existing)
  - Existing drawings and verification survey information to be co-ordinated
  - Weekly update of co-ordinated drawing to be bought within groundworks package
- Co-ordinated services drawings (updated temporary & permanent)
  - Weekly update of co-ordinated drawing to be bought within groundworks package

- Isolation arrangements for known services
    - Engagement with service providers
    - Disconnections & diversions to be undertaken
    - Use expertise of partnering contractor
    - Early engagement of Temporary Services Contractor
    - Early engagement with SSE to establish access and other procedures
- Protection of services
    - Use expertise of partnering contractor
    - Early engagement with SSE to agree protection to substation and service routes
    - Early engagement with Temporary works dept.
- Ground disturbance permits (template)
    - Implemented as LL procedures
    - Training to be provided to supply chain
- Arrangements for marking out services on site
    - To be included within preliminary surveys
    - To be maintained within groundworks package
- Compliance with PAS 128 & HSG47

Lifting Operations Plan

Project Name: Manchester New Square
Date of Issue: 12/03/2018

Revision No: 0



Appendix E
Lifting Operations Plan

	Critical Control Plan Sign-off		
Position	**Name**	**Signature**	**Date**
Project Lead	Andy Mather		
Construction Manager	Wayne Poole		
Lifting Co-ordinator	Stuart Savage		
Deputy Lifting Co-ordinator	Dave Syme		

[Index page to be added]

1.0 Lifting Co-ordinator Roles & Responsibilities

All Lend Lease projects must have a formally appointed Project Lifting Manager to be the focal point for all lifting operations. Duties should include the following]

- Prepare and implement a project specific Lifting Plan and ensure it is regularly reviewed updated and communicated
- Assess (in conjunction with the LL Appointed Person where employed) all contractor task lifting plans and provide agreement that lifting can commence
- Ensure lifting operations are coordinated with other activities. This will demand close liaison between all relevant LL and contractor personnel and also the LL Appointed Person
- Ensure a daily lifting coordination meeting is held

2.0 Lifting Arrangements Overview

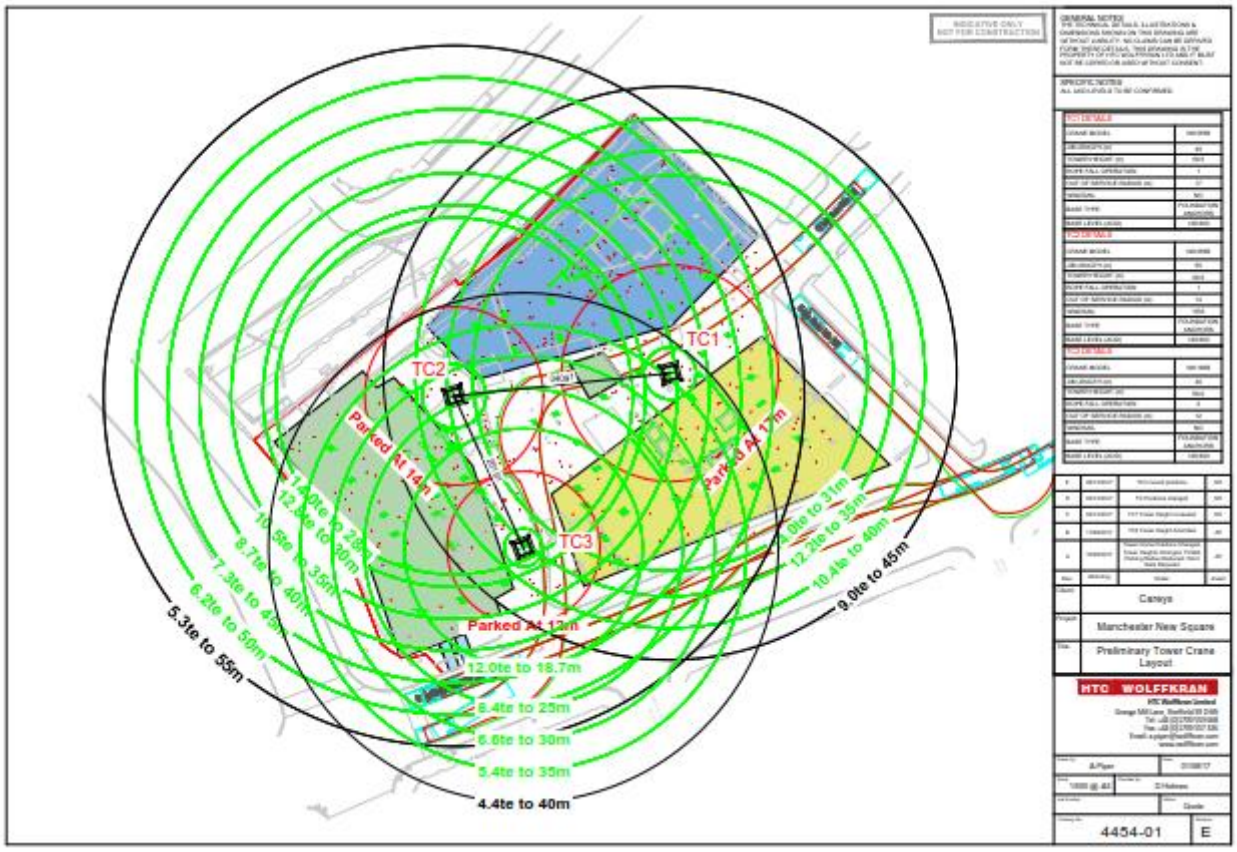
[Detail how the lifting arrangements presented by the project location, structural composition, lifting capability and build programme will be procured, managed and controlled]

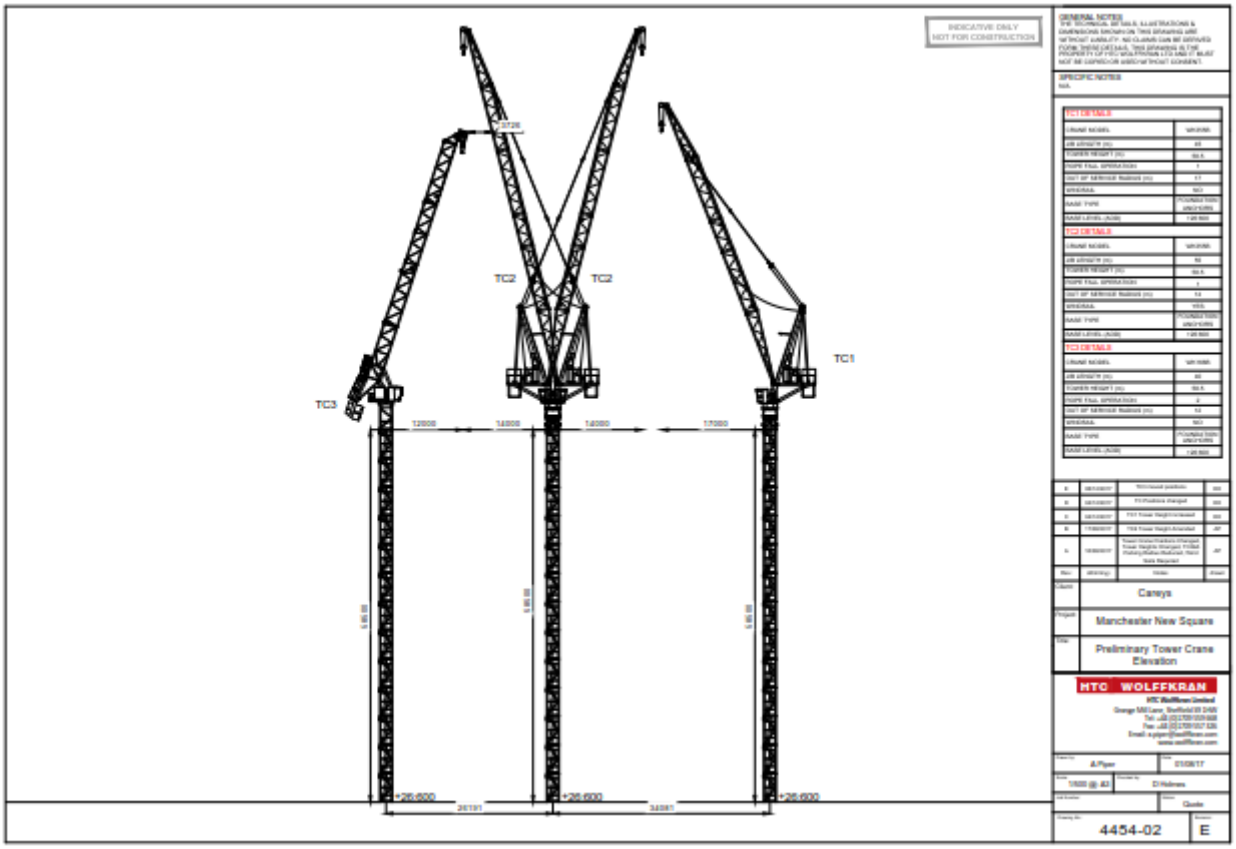
The project team have held meetings with Lifting Operations manager Steve Howard and Snr Temporary Works Engineers Andy Johnston and Kuldip Panesar to review lifting strategies and associated works.

Note: strategies around out of hours working/ road closures/ railway possessions to be reviewed and developed at next stage.

• Planned lifting arrangements All lifting processes to be bought within packages, so as to be task specific with associated RAMS & lifting plans Note: arrangements for telehandler TBC • Equipment to be used - cranes all types, hoists, tele-handlers, manually operated plant / equipment, vacuum plant. As above, to include: Spider cranes Telehandler Genies	• Contractor responsibilities Operator / User Competencies In line with legal/ LL requirements • Production of lift plan(s) and approval process In line with LL requirements • Lifting area designation(s) TBC. Note: subject to NR approval. Principals agreed with Temp. works & Lifting Specialist • 6 month rule related to web slings To be implemented • Vehicle unloading [load stability check]

• Temporary works design & approval Safety critical worker medicals (equipment operators & banksmen & slingers) Temporary works schemes for crane locations, services protection, core 6 demolition, cladding removal, building strengthening works, atrium formation All requirements to be stepped down through package procurement • How installed, modified and removed? Mobile crane locations to be in designated locations on podium slab or highway. Lifting within packages as above • How maintained, tested and examined? In line with legal/ LL requirements • Mobile crane checks prior to use on site In line with legal/ LL requirements • LL responsibilities [Lifting Manager, appointed person, slinger – signallers In line with legal/ LL requirements • Interface coordination between contractor activities In line with LL requirements Co-ordination meetings in line with strategy and supplemented where required	RAMS to be produced. LL procedures to be implemented, i.e. Checklists etc. • Pre-slung loads To be encouraged where applicable. Certs for lifting accessories required. • Excavators used as cranes Subject to LL procedures, RAMS & lifting plan • Special requirements relating to rubbish skips In line with legal/ LL requirements • Lifting operations on or close to the public highway / adjacent properties Note: NR interface. Out of hours/ possession strategies to be reviewed/ developed through the next stage. Road closures to be determined through next stage. • Exclusion zones Note: NR 10m constraint Site exclusion zones to be In line with LL requirements • Out of hours operation approval To be reviewed through the next stage for NR interface works, and material loading • Rescue arrangements To be included within RAMS Practice runs where appropriate




INDICATIVE ONLY
NOT FOR CONSTRUCTION
TC1
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Canrys
Manchester New Square
Preliminary Tower Crane Elevation
HTC WOLFFKRAN
4454-02
E

Temporary Electrics Plan

Project Name: Manchester New Square

Date of Issue: 12/03/2018

Revision No: 1



	Critical Control Plan Sign-off		
Position	**Name**	**Signature**	**Date**

Project Lead	Andrew Mather		
Construction Manager	Dave Syme		
Temporary Electrics Co-ordinator	Dave Risebrow		
Deputy Temporary Electrics Co-ordinator			

[Index page to be added]

1.0 Temporary Electrics Co-ordinator Roles & Responsibilities

[Detail how the temporary electrics for the project will be procured, managed and controlled]

All Lend Lease projects must have a formally appointed Temporary Electrics Co-ordinator. Duties should include the following

General Requirements

- Be aware of the main electrical safety legislation including the Electricity at Work regulations
- Have a basic understanding of electricity and electrical safety and delegate authority for electrical safety to suitably qualified people including a deputy to provide cover when the electrical co-ordinator is unavailable.

Specific Duties

- Prepare, monitor and regularly update an electrical safety plan that will set out the organisation and arrangements for the safe control of electrical installation and commissioning. and communicate the electrical safety plan regularly to all project and site personnel
- Review and approve contractor electrical safety plans related to the use of any temporary or permanent electrical supply in excess of the site temporary 110 volt supply.
- Be familiar with the arrangements of the temporary electrical systems and carry out regular on-site checks to ensure that they are being safely installed and managed.
- Be familiar with the site temporary lighting arrangements. Update the lighting risk assessments regularly. Carry out regular on-site checks to ensure the provision of adequate general access and emergency lighting.
- Ensure the temporary electrical contractor undertakes regular testing of all temporary electrical equipment and systems including the temporary fire alarm and detection systems and that all test results are fully recorded.
- Be familiar with the design of the permanent electrical systems and carry out regular on site checks to ensure that they are being correctly installed and safely managed.
- Organise and chair regular electrical safety meetings starting at least one month before any permanent supplies are energised. Where permanent supplies exist on the site the meetings must start immediately.
- Ensure electrical contractors operate a permit to work systems in accordance with LL EUROPEAN DELIVERY REQUIREMENT 5 Electrical Safety
- Manage approval process for application to use of 230 Volt supply

Appendix F
Temporary Electrics Plan

2.0 Temporary Electrics Arrangements Overview

[Detail how the temporary electrics for the project will be procured, managed and controlled]

- A reduced scale plan drawing and/or written description confirming the areas to which the electrical safety plan relates.

  Existing supplies have been left in for beneficial use by the contractor. We have engaged with Wingates to provide a scheme. Details & Drawings to be provided pre-construction.
- Details of all existing electrical supplies together with details of all supplies which are anticipated to be installed on site. This will include all temporary and permanent sources of electricity including generators. Ideally this information should be supplied by including a reduced site drawing marked with intake positions, main cable routes to and locations of all major switchgear and the voltages likely to be present.

  Temporary Electrics scheme in development. Details & Drawings to be provided pre-construction.
- A written description outlining when and how these supplies will be removed, amended or installed together with indication of dates when the supplies are likely to become live.

  Temporary Electrics scheme in development. Details & Drawings to be provided pre-construction.
- A section advising all contractors who will be involved in using or managing the electrical supplies what documentation will be required from them and the process that they will have to follow before they are allowed to receive an electrical supply (either temporary or permanent.) .

  Temporary Electrics scheme in development. Details & Drawings to be provided pre-construction.

  TBC
- A section confirming the key management personnel and their responsibilities. This section should also contain the details of the contractors directly controlling all temporary and electrical supplies together with the details of their Electrical Duty Holders.

  TBC
- A chart showing the project management structure for electrical safety

  TBC
- An electrical safety record chart detailing all the personnel who have been authorised to manage some element of the electrical safety system together with details of approvals of their individual safety plans.

  TBC
- A method statement detailing how each of the electrical supplies will be managed and by whom. This document should highlight any potential dangers and operational issues which may arise. This information should exist within the individual LL package method statements and can either be extracted & combined here or the relevant extracts from the individual documents can be included.

  Temporary Electrics scheme in development. Details & Drawings to be provided pre-construction.
- Lend Lease acknowledge the presence of an energised electrical substation within the footprint of the structure. Whilst access will not be required the existing and proposed electrical supplies are situated in the same vicinity
- An appendix containing samples of the following documents together with any other management documents relevant to this safety plan:

  - Details of the requirements for Contractor's Electrical safety Plans
  - Electrical Appointment Form.
  - Request for Electrical Power/ Access Form
  - LL check list for Electrical Permit to Work
  - LL Temporary Electrics Permit

Review and monitoring arrangements.

The LL Electrical Co-ordinator is to review and update the plan whenever a new electrical supply is installed, whenever an Electrical Duty Holder is appointed, whenever a new area of site is about to receive a new electrical supply.

Formal review will be carried out at the project director / manager risk review meeting but also in discussion with the trade supervisors at the weekly safety coordination meeting.

Effectiveness of the plan will be monitored by the construction and M&E managers on a daily basis.

Sustainability Plan

Project Name: Manchester New Square

Date of Issue: 12/03/2018

Revision No: 1



Appendix G
Sustainability Plan

	Critical Control Plan Sign-off		
Position	**Name**	**Signature**	**Date**
Lead Manager	Andrew Mather		
Construction Manager	Dave Syme		
Sustainability Co-ordinator	Claire Stephan		
Deputy Sustainability Co-ordinator	Tim Worthington		

[Index page to be added]

Refer to European Delivery Requirements for mandatory requirements and supporting documents for variable guidance.

1.0 Sustainability Co-ordinator Roles & Responsibilities

1. Maintain the environmental file and ensure all mandatory documents are complete and up to date.
2. Day to day management of the sustainability activities and making sure that on site operations are undertaken in line with Lend Lease sustainability requirements.
3. Monthly reporting of Environmental performance data and recording of observations and incidents on Enablon.

2.0 Sustainability Arrangements Overview

- **Energy Management**

[Summarise the most significant energy demands on your project and detail steps that will take to minimise consumption. This should include both onsite activities and ways in which individuals can reduce their own carbon footprint from travel. Sustainability Coordinator / Project Manager to add text.]

Temporary supplies for the construction works and site accommodation.
Steps for review to minimise consumption include:
Maximisation of offsite construction
Battery bank
LED lighting (PIR)
Gas rather than Diesel generators (LPG considerations)
Ecospec cabins

- **Waste Management**

Each project shall select a Waste Management Contractor from the Lend Lease approved suppliers list. All waste movements must be accompanied by a compliant waste transfer note and all waste generated must be recorded on Minimise each month.

[Sustainability Coordinator to complete the Site Waste Management Plan on Minimise. This plan will forecast waste, assign responsibilities and provide a framework for reducing waste. Actions that will be taken to ensure that all waste transfers are accompanied by a compliant waste transfer note should be recorded below along with the steps taken to segregate, minimise and manage waste on site.]

SWMP Complete: Yes
Date completed: 5th march 2018
By: Claire Stephan & Nick Surtees

Appendix G
Sustainability Plan

Surface Water Management and Pollution Prevention

[Detail steps that will be taken to prevent pollution and avoid negative impact to the local foul and surface water infrastructure, watercourses and groundwater. Sustainability Coordinator / Project Manager to add text below].

[Detail steps that will be taken to minimise water consumption on site].

Monitoring of all water consumption to be undertaken.
Concrete sock to be implemented.
Surface water management plan to be implemented.

- **Noise, Vibration and Nuisance**

A baseline noise assessment must be completed prior to the commencement of works, which will inform the analysis of on-going boundary noise monitoring. Where works have the potential to cause vibration capable of causing disturbance to local receptors the supply chain partner undertaking the works shall provide Lend Lease with baseline and on-going monitoring data.

[Detail Noise, vibration and Nuisance key risks and outline steps that will be taken to minimise adverse impact. Include details of any additional client requirements for monitoring. Sustainability Coordinator / Project Manager to add text below].

Key risks: Other stakeholders include: neighbouring residential buildings, hotel, bars, restaurants. Noise monitoring to be undertaken by supply chain and lendlease. The noise levels permissible will be as a continuation of the current levels agreed during the basement remodelling works, i.e. set at an action level of 75db at the receiver calculated and monitored over a 10-hour period as previously agreed with the Local Authority.

It is envisaged that vibration monitoring will not be required as part of the main contract works. Previous vibration monitoring was agreed with the Local Authority for the basement remodelling works. The remodelling works are now complete, and the vibration monitoring has now ceased on practical completion as of 12 March 2018. The local receptor is still located on Amazon House and can be re-used if required in the event of any requirement.

Dust will be controlled with dampening down where required. Dust will be at a controllable level as we are constructing from a concrete podium slab. No earthworks or soil breaking required. Air quality samples can be taken and monitored in the event of any persistent complaints. This can be arranged by Lendlease if required by the Local Authority.

- **Ecology**

Record below what species may be threatened by onsite activities and outline how biodiversity will be protected and enhanced across the project. Identify any potential invasive species and actions that will be taken to deal with situations as they arise. Include phase 1 habitat survey if required from PCP process. Sustainability Coordinator / Project Manager to add text below].

See ecology report issued by the client. Nothing on site that requires protection. Site inspection arranged and completed on 2nd June 2017 prior to works starting on site.
During the main contract works, protection of the canal will be as documented within Appendix A Falls and Prevention Plan and Appendix G Sustainability Plan. Ongoing dialogue will be required with River and Canals authority regarding Rochdale Canal throughout the construction of the main works. This will be to ensure compliance with this plan.

- **FSC Project Certification**

For all projects 100% of both temporary and permanent timber shall be supplied to site with a full FSC chain of custody.

[Select the appropriate statement from below and delete the other]

This project has a contract value of above £50 million and is required to undertake full FSC project certification, which shall include both temporary and permanent timber within the scope. All timber procured by Lend Lease or supply chain partners shall be supplied to site in line with the FSC chain of custody Standard FSC-STD-40-006.

Appendix G
Sustainability Plan

This project is a Lend Lease Development and is required to undertake full FSC project certification, which shall include both temporary and permanent timber within the scope. All timber procured by Lend Lease or supply chain partners shall be supplied to site in line with the FSC chain of custody Standard FSC-STD-40-006.

The Sustainability coordinator is responsible for ensuring that any individual on site that is responsible for receiving timber is adequately trained to identify compliant FSC paperwork.

[Outline the procedure that will be implemented to ensure all timber delivered to site is FSC certified with full chain of custody].

All supply chain partners have been briefed on the Project FSC requirements.
Lendlease procedures have been issued within the sub-contract.
Deliver booking and receipt procedures will be developed to address timber deliveries.

- **Responsible Procurement of Construction Materials**

. There are an increasing number of responsible sourcing certifications which ensure products meet certain minimum sustainability requirements. The most common in the UK is BES 6001, which provides independent assessment on sustainability criteria for products and their manufacturers, covering the extraction and processing phase of material manufacture as well providing evidence of good corporate governance for the material producer. Using materials certified to BES 6001 which have been rated as 'Very Good' or above can contribute to the Responsible Sourcing Credits under BREEAM and Code for Sustainable Homes. The number of products certified to BES 6001 is constantly increasing, check the Green Book Live website for up to date listings. Other responsible sourcing certifications include:

- **Eco-Reinforcement**
- **CARES SCS**
- **BS 8902**

The following materials should always have a responsible sourcing certification:

- Concrete

- Steel Rebar
- Brick and block
- Plasterboard

The project will define the scope of use and present a qualified business case to the project Environmental support for the use of any material identified on the Lend Lease Grey List. The project shall not utilise any material identified on the Lend Lease Grey List without prior written consent from the Lend Lease Environmental support through formal completion of an EF5 Form.

[The Sustainability Coordinator should record the steps that will be taken to ensure that the materials identified above are procured with a responsible sourcing certification].

N/ A to enabling works

Appendix G
Sustainability Plan

- **Recycled Content**

Are there client requirements or BREEAM / CfSH targets relating to recycled content? If yes, the Sustainability Coordinator should outline the requirements and record how the project is going to comply below:

BREEAM requirements have been briefed to the enabling works contractor, and included within the sub-contract.

- **Environmental performance reporting**

The project is required to report sustainability performance as follows:

- Minimise – monthly submission of environmental metrics data
- Enablon – log of all environmental incidents and observations (positive and negative). Completion of monthly checklists and close out of all open non-conformances that have been identified through the audit process
- Any other environmental monitoring requirement of the project

Environmental reporting is the responsibility of the Sustainability Coordinator.

[Identify additional reporting requirements for the project below].

The project is set up on Compass, and the Impacts and Aspects Register has been completed. The Project Team have access to TrackerPlus for BREEAM reporting. The project is being set up on Enablon and Minimise.

- **Considerate Constructors Scheme**

The Project will be registered with the Considerate Constructors Scheme within one month of start on site and comply with the Code of Practice. Registration shall be maintained throughout the duration of project works and the project will target a minimum score of 40/50. Signage and posters shall be displayed in line with Considerate Constructors Scheme requirements.

The project Sustainability Coordinator is responsible for the registration and performance under CCS.

[Outline the actions that will be taken to achieve or surpass the minimum required CCS score].

The project has yet to be registered with the scheme. A CCS Action Plan is in development.

- **Community Development Plan**

The project will collect Community Investment Data of inputs, outputs and impacts in line with the London Business Group (LBG) criteria for quarterly reporting, and as a minimum record the hours volunteered on Community day / projects.

Where appropriate each project shall establish and maintain a project specific Community Investment Plan. Where a project specific community development plan is not appropriate (Defence and Justice projects), the project will implement the Sector Community Development Plan.

The project Sustainability Coordinator is responsible for maintaining the Community Development Plan.

Appendix G
Sustainability Plan

- **Complaints Procedure**

The Project Manager and Senior Construction Manager must be informed of any complaint received within 1 hour of receipt.

The Project Manager or Senior Construction Manager will provide an initial response within 4 working hours of receipt of the complaint; this may be to advise that the complaint has been received and that further investigation is being undertaken.

All complaints, and all resolution actions, are to be recorded in the project complaints log.

- **Measurement of Compliance**

[Aside from the weekly and monthly environmental checklists, outline the steps that will be taken to ensure that activities on site are undertaken in line with the Lend Lease Sustainability GMRs and the expectations of the client].

Compliance monitoring in line with lendlease procedures.

- **Any other specific requirements from the client or site specific**

[Record any additional client requirements that haven't been covered in previous sections and outline the steps that will be taken to manage these risks].

N/A

- **Additional Environmental Planning requirements**

[Project Sustainability Coordinator to outline below any additional environmental planning requirements on the project and the actions that will be taken to comply].

TBC

Appendix H
Temporary Works Plan

Temporary Works Plan

Project Name: Manchester New Square

Date of Issue: 12/03/2018

Revision No: 1



	Critical Control Plan Sign-off		
Position	**Name**	**Signature**	**Date**

Project Lead	Andrew Mather		
Head of Engineering	Steve Taylor / Andrew Johnston		
Temporary Works Co-ordinator	Wayne Poole		
Deputy Temporary Works Co-ordinator	Ashton Spencer		

[Index page to be added]

1.0 Temporary Works Co-ordinator Roles & Responsibilities

The primary duties of the Temporary Works Coordinator are as follows: -

Produce and maintain a schedule of temporary works requirements (Appendix 3 Form 1) which will be used to identify requirements. The schedule shall be updated and distributed on a regular basis to the Project Manager, Site Management Team (as required) and Engineering Department.

During the Construction Phase once the Temporary Works Schedule has been prepared the TWC must organise a Kick Off meeting with the LL Engineering Department to ensure that the necessary competencies and procedures are in place in line with this procedure. At the Kick Off Meeting initial Categories of Checking will be agreed for each item on the schedule and these will be updated regularly in consultation with Lend Lease Engineering Department

Ensure that an appropriate Design Brief has been produced for each individual temporary works scheme.

Arrange in consultation with Lend Lease Engineering Department for design to be carried out either by the Subcontractor / Trade Contractor direct or by Approved External Design Consultant for Scheme design.
Checking / review shall be carried out either 'in house' by Lend Lease Engineering Department or by a Lend Lease approved External Consultant.

Ensure that satisfactory design is carried out and, that consideration for matters related to Health and Safety are always undertaken in accordance with the CDM Regulations. The design should minimise risks and ensure an appropriate level of redundancy where appropriate.

Ensure that the design has been independently checked in accordance with the specified Category of Check by a second person for Concept, structural adequacy and that they comply with the brief.

Ensure that all residual risks identified during the design and designs check process are noted on the drawings.

Ensure that the design and any residual risks are made available to other interested parties.

Keep a record of all drawings, sketches and calculations.

Ensure that those responsible for on-site supervision, receive full details of the design, including any limitations associated with it i.e. residual risks and that drawings and documents used are current i.e the most recent approved revision

Ensure that checks are made at appropriate stages covering the more critical factors, e.g. Loading and striking arrangements.

Ensure that any proposed changes in materials or construction are checked by the Designer & Design Checker against the original design and appropriate action is taken.

Ensure that any agreed changes, corrections or faults, are identified and correctly carried out on site.

On completion of the rectification of any faults identified during inspection the Project Manager should sign Inspection Report Form - Appendix 3 – Forms 3a to confirm that all faults Identified have been rectified. The TWC can then issues a Permit to Load (Appendix 3 - Form 4)

When it has been confirmed that the permanent structure has attained adequate strength, The TWC issues formal permission to dismantle the temporary works. (Appendix 3 Form 5)

The Temporary Works Coordinator must seek further advice and support whenever he considers the scope of work to be outside his competence. The Temporary Works Coordinator has the authority to delegate his responsibility in this instance to a suitably experienced and competent person. This delegation must be in writing stating any actions to be taken by the nominee or any conditions that apply and is acknowledged formally by the Project Director / Manager

In addition to the above primary duties, the Temporary Works Coordinator must ensure that the following activities receive special attention: The Category of Check Specified in the Temporary Works Schedule shall reflect this requirement.

- Installation of tower cranes and hoists (including their foundations & Ties)
- Facade support schemes
- Demolition works involving temporary support.
- Deep excavations
- Temporary loading conditions on the Permanent Works (i.e. Fit Out Loading on suspended slabs, horizontal construction loads on partially complete Permanent Works)
- Back propping schemes
- Piling and Crane Platforms
- The effects of de-watering on adjacent structures

Any temporary works requirements must be discussed with the relevant Sub or Trade Contractor at the initial safety meeting. This shall include, where appropriate, handing over a copy of this procedure.

It is a mandatory requirement that Temporary Works Coordinators attend the Lend Lease - Temporary Works Coordinators Course, and must retain a certificate of attendance for inspection if requested. Only by successfully completing this course will a person become eligible for inclusion on the Approved Register of Temporary Works Coordinators and hence be allowed to perform the role.

2.0 Temporary Works Overview

[Input a copy of the Temporary Works Schedule]

Ref. No.	Location	Description of the Temporary Works	Package Manager	Method of Procurement (Own Work or S/C)	Proposed Designer	Proposed Design Checker and Category of (Check 0, 1, 2, 3)	Who Prepares the Design Brief	Date Required on Site	Confirm if Engineering needs to Review the Method Statement
1	Podium slab and all basement levels.	Plant movements on the slabs – *As per list of plant on* Schedule	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		yes
2	Concrete pump, static lines, boom position - Foundations and loads on structure	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		yes
3	Access scaffold, Hakis and handrails	Scaffold	Stuart Wheeldon/ Dave Syme	Within Adana package	Lyndons	Cat check 0	Lyndon's/LL		yes
4	Welfare and office set up to building 2 podium slab level	Cabin loads and install	N/A Installed during MC works	Lend Lease	Temporary works / EDGE	Cat check 1	LL	07/07/17	yes
5	Site perimeter hoarding + gates	Counter balanced UPVC finished hoarding.	N/A Installed during MC works	Lend Lease	Temporary works	Cat check 1	LL	07/07/17	yes
6	Lift fall gates	Temporary fall arrest gates to shaft openings	Ben Marsden/Jack Overson	Lend Lease	Temporary works	Cat check 0	LL		yes
7	LL Sign board	LL briefing/huddle board	Ben Marsden/Jack Overson	Lend Lease	Temporary works	Cat check 0	LL		
8	Scaffold crash Deck to Princess Street	Scaffold	Stuart Wheeldon/ Dave Syme	Within Adana package	Lyndons	Cat check 0	Lyndon's/LL		
9	Scaffold protection fan to building 1 over the canal	Scaffold	Stuart Wheeldon/ Dave Syme	Within Adana package	Lyndons	Cat check 0	Lyndon's/LL		
10	Scaffold crash deck to Brazil Street	Scaffold	Stuart Wheeldon/ Dave Syme	Within Adana package	Lyndons	Cat check 0	Lyndon's/LL		

11	Concrete formwork to columns	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
12	Concrete formwork to slabs	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
13	Jump form to Concrete cores	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
14	Tower crane erection	Tower Crane	Stuart Wheeldon/ Dave Syme	Within Careys Package	Careys	Cat check 1	Careys		
15	Slab edge protection to concrete frame	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
16	Climbing screens to concrete frame	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
17	Back propping of concrete wet deck	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
18	Cantilever platforms to all buildings	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
19	Hoist to all buildings and propping of basement	Hoist	Stuart Wheeldon/ Dave Syme	Within Hoist It package	HoistIt	Cat check 1	Careys		
20	Roof edge protection to roof terraces	Scaffold	Stuart Wheeldon/ Dave Syme	Within Adana package	Lyndons	Cat check 0	Lyndon's/LL		
21	Roof edge protection to main roof	Scaffold	Stuart Wheeldon/ Dave Syme	Within Adana package	Lyndons	Cat check 0	Lyndon's/LL		
22	Temporary bracing to precast concrete shear walls	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
23	Temporary propping to level 01 transfer beam	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		
24	Propping to tower crane openings	Tower crane	N/A previously installed	Within Adana Package	Edge	Cat check 1	LL		

			during MC works						
25	Formwork for infilling of tower crane openings	Concrete installation	Stuart Wheeldon/ Dave Syme	Within Careys package	Careys	Cat check 1	Careys		