

Project Execution Plan

Grenfell Tower Regeneration Project



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APPROVAL SHEET

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Nov 2012	Kensington and Chelsea Tenant Management Organisation	M Anderson	Rev 1

FOREWORD

- This document has been prepared by Appleyards with all reasonable skill, care and diligence within the terms of the contract with the Client and within the limitations of the resources devoted to it by agreement with the Client.
- 2. This document is confidential to the Client and Appleyards accepts no responsibility whatsoever to third parties to whom this document, or any part thereof, is made known. Any such party relies upon the document at their own risk.
- This document shall not be used for project or contractual purposes unless signed above by the author and the approver for and on behalf of Appleyards, and unless the document status is 'Final'.

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of the Project Execution Plan (the "PEP") for the Grenfell Tower Regeneration Project ("GTRP") project is:

- a) to clarify the project requirements and project constraints, such as approved budget and timescales;
- b) to set out the way all parties within the project team will work together to develop the design, procurement and construction.

The PEP will list and refer to other approved project documents and does not intend to repeat the content of other project documents.

This document will not form part of any contractual documentation between the Royal Borough of Kensington & Chelsea Tenant Management Organisation (the "TMO") and any of the parties involved in this project and will not seek to modify or detract in any way from the contractual responsibilities undertaken by any of the parties or their duty or obligations to TMO.

The PEP is a working document that follows the project from inception to completion, and will be reviewed as necessary and at significant milestones through the life of the project by reference to TMO's requirements, instructions and in response to the approved project documents. Uncontrolled copies of this document should be avoided. The current version can be provided from Appleyards at any time. The current version will be available from Appleyards on request and issued at each revision.

No changes to the PEP or project procedures are to be implemented without the approval of the TMO project manager.

1.2 PROJECT DEFINITION

The project comprises the regeneration of Grenfell Tower by way of revitalising the public realm and entrance, re-cladding with insulated rain screen, replacement windows, new efficient heating system, re-organised office, and new boxing club and nursery (the "**Project**").



2.0 THE REQUIREMENTS

2.1 BUSINESS PLAN

The Project was created to address the following key objectives of TMO:

- To provide a 'legacy' project for the Royal Borough of Kensington and Chelsea
- To provide additional family homes within Grenfell Tower
- To improve energy efficiency and bring the external skin of the Tower up to modern day standards

2.2 PROJECT OBJECTIVES

The following project objectives are a summary of the project brief.

Tower Generally

- The existing canopy is to be removed and a new design fitted as per planning drawings.
- Ground floor and reception are to be refurbished to allow an open entrance and access to elevators/ stairs.
- Security will be increased with a new suite of CCTV cameras and via Grenfell Tower's reception having a more prominent monitoring role. The nursery to have defensable internal and external space.
- Plant to be retained at roof with new storage units in line with resident water usage, see Max Fordham Stage C report.

Residential

- Existing 120no residential units are to have new hot and cold water piping and new windows – a VE exercise is underway to ascertain exact specification of windows, options are tilt and turn (the cheaper) or central pivot (the more expensive). The units will also benefit from a re-cladding of the entire elevation of Grenfell tower that will improve the heat loss, acoustic performance, and ventilation to prevent overheating.
- Each unit will have provision for individual kitchen extract and the central bathroom extract fans will be upgraded to improve performance.
- Where applicable all units to have heat and carbon monoxide detectors.
- 7no new family residential units of 3-bed and 4-bed units are to be created at 3rd and 4th storey.

Public Realm

The site is to be re developed within the stated site boundary. The site boundary was extended during RIBA C design to include adjacent garages. The approved boundary plan will form part of the RIBA Stage D report and the Contract.

CHP

CHP to be renewed and new hot and cold water feed pipes to be installed within existing risers to improve efficiency and reduce temperature/ load of hot water. At



present hot water is being fed into the system at approximately 95 degrees causing over heating in all flats.

Relocation of other site users

- The existing nursery will be relocated to ground floor and will benefit from new playground space as part of Kensington Academy and Leisure Centre's ("KALC") public space.
- The existing boxing club will be relocated to the walkway level and will be reaccommodated to enlarge the foot print and provide private access.
- The estate inspectors and TMO Estate Management to share newly refurbished offices within the existing garages.

KPI's

 The Client Design Team & Contractor will be scored and benchmarked using KPI's produced by iESE for IESE projects. The templates to be used are contained at Appendix B.

Post project evaluation

At the completion of each RIBA work stage [stages D, E and Contract award] the developed project scope/design/solution shall be reviewed against the approved Project Brief and KPI's /success criteria. RIBA stage D report will comprise the 'Employers Requirements' and the RIBA stage F1 will comprise the 'Contractors Proposal'. Any divergences from the approved brief shall be notified to TMO for approval or instruction as to any corrective action.

Lessons learned during each work stage shall be reviewed at the end of each work stage and recommendations for improvement to aid the remainder of the project discussed and agreement/instruction sought from TMO.

Ethos

The project is to be carried out in an environment of fair dealing, good faith, mutual cooperation and trust with a firm focus on delivery to meet the Project Success Criteria.

2.3 BUDGET

The approved budget for the Project is TBC; Refer to RIBA Stage C Rev B budget cost plan.



2.4 TIMESCALE & APPROVALS

Summary programme

Element	Start	Finish
RIBA C	July 2012	October 2012
Procurement of Contractor (preconstruction phase)	Dec 2012	Jan 2013
RIBA D	October 2012	October 2012
Planning application Allowance for possible Judicial Review	August 2012 October 2012	End October 2012 December 2012
Design Team Novation	October 2012	November 2012
RIBA E/F1	November 2012	January 2013
Pre Contract award / Enabling works	October 2012	January 2013
Grenfell Construction Period	January 2013	May 2014
External Works	February 2014	May 2014

Key Dates/ Approvals/ Gateways

Construction Completion dates:

 The Project is to achieve Practical Completion before KALC that will open on 1st September 2014 for students.

Project Governance/ Gateway dates

- TMO will review the design upon completion of each design RIBA work stage and confirm to the project team the basis for approval to commence the next design work stage.
- Prior to placing the contract(s) for construction work, TMO Executive approval will be required.

Planning

The project submitted a full planning application at the end of August 2012, which was registered on [TBC]. Subsequent design changes and specification uplifts have meant that a full substitute of planning drawings are required. The anticipated planning committee date that we will aim for is 14th December, 2012.



Detailed / stage programmes

The detailed design and works package procurement programmes for the Project & Public Ream works are to be prepared and coordinated by Leadbitter. This will be located on Leadbitter's 4Projects site and Studio E's FTP site.



3.0 ORGANISATION AND WAYS OF WORKING

3.1 PROJECT ORGANISATION

Project team

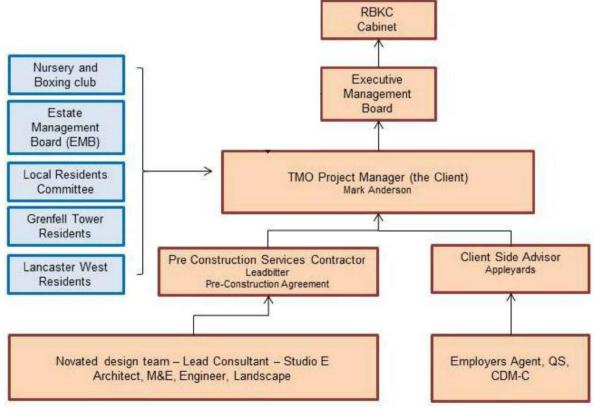
The project team for the Project comprises;

Role	Organisation
Client	ТМО
Pre-construction services Contractor	Leadbitter
To be novated Design Team working to Leadbitter	Studio E and their named consultants, Max Fordham, Curtains Consulting, Chapman Landscape Architects
Client Advisors	Appleyards – EA, QS, CDM-C
Main Contractor	TBA
Clerk of Works	TBA

Organisational structure - RIBA stages C/D - Contract award

Grenfell Tower Regeneration Project Organisation Chart

Stakeholders





Roles and responsibilities

The roles & responsibilities of the appointed consultants are fully defined by the formal appointment documents. A summary of the key roles and responsibilities is provided below:

TMO Client

Role	Owner	Responsibility
Project Executive	TBC	 Sign off objectives and business case. Responsible for key decision approval Approves investment Approves all financial decisions Takes investment decisions Accepts project risks on behalf of TMO
Project Manager	Mark Anderson	 Day to day project management of the KALC project and coordination of TMO officer input. Responsible for coordination of key stakeholders approvals Development and monitoring of client brief Programme management oversight Delegated Financial responsibility Responsible for ultimate delivery of the project

Contractor & Novated Design team

Role	Owner	Responsibility
Pre-Construction Services; <i>Leadbitter</i>	Colin Chiles	Refer to Appendix 9 of iESE ITT documents
Post Construction Services	ТВА	• TBA
Architect & Lead Consultant Studio E	Adrian Jess	Strategic design leadershipLead Architect for the Project
Civil & Structural Engineers Curtains	Stefano Strazzulo	Civil & Structural design
Environmental Engineers <i>Max Fordham</i>	Andrew McQuatt	Mechanical & Electrical design
Landscape Architects Churchman	Chris Churchman	Landscape design



Client advisors

Role	Owner	Responsibility
Lead Consultant / Employers agent	Alun Dawson	 Overall coordination and control Work with TMO on overall project management
Quantity Surveyor	Chweechen Lim	Overall budget management & Cost control
CDM Coordinator	Keith Bushell	CDM duties
BREEAM consultant	Constantine Tornaros	BREEAM pre-assessment and final certification
Fire Safety Surveyor	Terry Ashton	Fire Safety plan for existing tower and proposed layout

Clerk of works

Role	Owner	Responsibility
TBA	TBA	•

Project directory

A project directory contains contact details for all personnel involved with the project. It is located on the Studio E ftp site.

3.2 PROCUREMENT STRATEGY

Consultants

Consultants are to be procured via a single appointment to Studio E. Specialist surveys required by the design team to be procured directly to TMO.

Main Contractor - IESE

The main contractor for the whole project is to be procured using the IESE framework. The procurement is in two parts:

- Part one selects the main contractor via written submission and interview. This
 includes contract sums for preliminaries, OH&P.
- Part two is package procurement for the trades packages. These will be procured on an open book basis with tender returns sent to TMO for opening.
- Contract award will be secured following achieving a minimum 80% cost certainty. TMO Executive Board approval required to approve/enter into Contract.

TMO procurement

The following table sets out the details for the procurement limits as defined by TMO's regulations:

Order Value	Procurement method
-------------	--------------------



< £5k	Single Source	
£5 – 60K	Minimum of three quotes	
> £60k	Full tendering exercise.	

3.3 COMMUNICATIONS

Lines of Communication

Formal communications between the client (TMO) & the project team are to be issued by the TMO. The TMO will formally communicate with either Leadbitter or Appleyards. Formal communications with the novated design team shall be via Leadbitter.

To facilitate effective lines of communication, all parties of the project are encouraged to communicate direct to each other, but ensuring that all key members are copied into communications.

See additional detail within the Change Control section of this document.

Phone, email and meetings are the normal means of communication.

Emails

All emails issued are to be in the following format:

"Grenfell Tower Regeneration Project, [subject heading here]"

Please ensure all emails are copied to 11833. Grenfell@appleyards.co.uk

Drawing control

TBA

[Drawing No, Title, revision, issue date, circulation, purpose for issue]

Records / filing

Leadbitter will establish a central repository (4Projects) for all design information. All parties to the project will have log on details.

Appleyards will maintain a Microsoft SharePoint site for Client side Advisor information post novation. TMO will have access to this.

The design team ftp site may still be used for informal communication of draft design information, but all project design information will be located on the 4Projects site. The address and log on details for the design team ftp are:

Hostname/IP Address:	studioe-ftp1.iweb-ftp.co.uk	
Username:	studioe-grenfell	
Password:	8c78ef93	



Each project team member is responsible for their own filing within their own company systems.

Reports

Stage C and D reports will be produced for client signoff. Following Stage D, Appleyards will report on a monthly basis to the TMO. The report will contain; commentary on progress, a project cost report, a summary of key issues and risks.

Leadbitter will produce a monthly progress report for submission to Appleyards & the TMO.

TMO will report progress of the project to their Programme Board.

Meetings

<u>Design team meetings</u> are to be chaired and minuted by the lead design consultant. Areas of the design that have changed since the previous meeting are to be raised by the originator of the proposed changes, to allow discussion and any resultant change control request to be submitted to TMO PM for consideration.

Risk is to be considered at each DTM and the risk register to be updated thereafter. CDM is to be discussed at each meeting.

Stakeholder engagement

Leadbitter to employ Resident Liaison Officer and schedule plan of action for engagement.

3.4 CONTROL

Design / procurement / pre construction activity management

TIME

Master Programme

The management of the overall project Gantt Chart will be the responsibility of Appleyards Lead Consultant and Employers Agent.

Pre-Construction design & procurement programme

Leadbitter will be responsible for the production of the detailed design and package procurement programme for all contract award activity. Studio E as lead designer will have responsibility for ensuring coordination and delivery of all design matters and to ensure key design dates are met.

Enabling works & Construction programme

Leadbitter will be responsible for preparation of both the pre contract enabling works and the main construction contract programmes.

Progress control



The programmes will be updated at least on a monthly basis and divergences from plan will be reported upon as part of the monthly report. Leadbitter will progress the preconstruction design & procurement and Enabling/construction works programmes and issue to Appleyards for incorporation into the master programme.

Early warning

All members of the project team will be responsible for providing advance warning of any aspect of the project that may or will affect the timing, cost or quality of the project.

Budget / cost control

Through the establishment of collaborative working and the implementation of Appleyards' Quantitative Risk Analysis process, Appleyards are responsible for the cost management of the design to ensure that the scheme stays within the approved budget.

At all stages of the Project the cost estimates will take into account the costs of construction, Consultant's fees, Contractor's Preliminaries, overheads and profit, Contractor's pre-construction fee, Contractor's design fees, other development/project costs, e.g. surveys, insurances, planning fees, risk allowances, tender and construction inflation.

The order of cost estimates that form the basis of the Approved Budget for the Project (see section 2.3) will be developed into elemental cost plans. These cost plans will be used as a tool for testing the affordability of the design and cost management, reporting through each design stage. The cost plans will be taken forward in the procurement process for the Contractor.

All cost planning shall be carried out in accordance with the RICS New Rules of Measurement for Order of Cost Estimating and Elemental Cost Planning.

Change Control

For the GTRP project, Change is defined as; "any variation to the approved scope of the project. A change may be cost neutral or impact the budget either up or down".

The approved business case/client briefs and the next RIBA report (stage D) will form the basis for change control.

For clarification, End User Client driven change;

- Applies to any change to the Stage D design information, which could be a change in the Brief, room modifications or change in room use etc.
- Applies to any discussions or other workshops that change the Stage D design.
- · Applies to any change raised by the Planning Authority
- Applies to any change raised by the Environmental Agency.

Changes to the scope of the design team appointment will also be subject to the Change Control procedure.



Approval to procure surveys or other aspects of the approved project scope that do not incur a variation to the project budget will NOT be subject to the Change Control procedure.

Changes to the specification of the Pre-Construction services that the Contractor is to perform will be in accordance with the Change Control Procedures to be set out in the Pre-Construction Agreement.

Proposed change can be initiated by any party, but approval will be subject to the following process: (A graphical representation is included at the end of this section)

- For end user client generated changes, these shall be issued to Appleyards & TMO with details of the required change, and the source of funding if a cost increase is likely. — OR - For design team generated proposals, these shall be submitted to Leadbitter for sanction prior to dispatch to Appleyards.
- 2. Appleyards to log CRF form on central CRF register and issue to Leadbitter
- 3. Leadbitter to inform Appleyards of timescale and cost of considering the proposed change.
- 4. Appleyards to seek approval from TMO to instruct Leadbitter to proceed with assessing the implications of the proposed change.
- 5. Leadbitter/design team prepare sketch plans and consider implications to specification, project programme and cost.
- 6. Appleyards QS to assess cost implications
- 7. Completed CRF to be submitted to TMO for approval / signature
- 8. If approved Appleyards to issue Employers Agent Instruction to Leadbitter.
- 9. Leadbitter to implement the approved change.

NB. Alterations to the GA drawings shall not be made until the change has been instructed.

Approval (item 7 above) shall be subject to the following procedure:

Prior to TMO signing the CRF the End User Client shall be consulted and their acceptance sought to the change and its implications.

NB. Design Development as defined below is not subject to Client Change control.

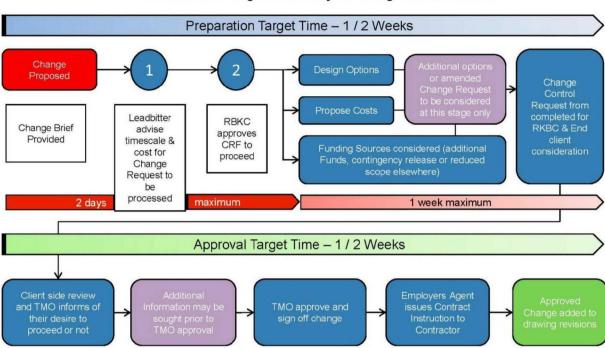
Design Development change.

- Applies to all design coordination between design team.
- Applies to all feedback from Building Control, CDM, Fire Officer, Highways, and Statutory Authorities.
- Applies to all discussions surrounding FF&E that do not affect the Stage D plans, sections and elevations.

For all changes the design team are requested to maintain a log of all changes arising (since the last approved RIBA stage design) to their individual drawings including those instructed thought the Client driven Change. Major changes are to be identified at the CEM's, minor changes will be presented at Stage E and Stage F report milestones.

See Change Control Process flow chart on following page.





Grenfell Tower Regeneration Project - Change Control Process

Instructions

All contract instructions during the pre-construction and construction periods to Leadbitter and the novated design team will be issued by Appleyards EA. Instructions will broadly be to confirm either; a) the outcome of a Change Request, or b) instruction to proceed with an action, (i.e. placing an order for works within the scope of the project).

3.5 QUALITY

Quality management

The consultant team will adhere to QA procedures, of which this document is a part.

Appointed contractors will be required to follow QA procedures.

Quality control

The consultant team shall be responsible for the quality of their own work.

The TMO will appoint a Clerk of Works to undertake quality assurance checks on site works.

Project Commissioning

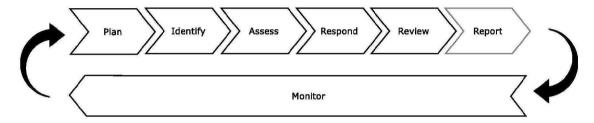


TBA

3.6 **RISK**

Risk Process

The TMO Client advisor will lead the management of risk during the pre-construction period, using the process described below.



Plan; Risk will be a standing item at all design team meetings. Risks workshops will be arranged at a frequency of once per RIBA design stage. The first risk workshop will be held on 18th October 2012 at the end of RIBA stage C.

Identify; The purpose of risk identification is to identify the sources of uncertainty for the project. As such it obviously requires an intimate knowledge of the project, its strategic objectives and the context (legal, social, environmental etc) in which it will operate.

It is intended that the main form of risk identification will be risk workshops, and attendance at a variety of project meetings. During the pre-construction stage, workshops will generally include the TMO PM, client representatives, design team representatives and the contractor, once appointed.

Assess; Each risk that is identified will be assessed to rate its likelihood and impact, both before any risk response has been carried out, and if identified risk responses have been successfully implemented. The likelihood and impact of each risk will be given a qualitative rating from 1 (Very Low) to 5 (Very High). The values used will be taken from the Probability Impact Grid (described below).

Each risk has an identified risk owner and a risk actionee. The risk owner is the person/discipline responsible to ensure the risk is appropriately managed to avoid the risk manifesting itself. The risk actionee is the person / discipline best placed to undertake the identified mitigation plan.

Note that where the Risk Management Process identifies potential opportunities, these will be managed through a separate opportunity register, and be managed through the appropriate Value Engineering techniques.

It is intended that the assessment of the overall risk to the project will be supported by Quantitative Cost Risk Assessments ("QCRA"). Monte Carlo simulation techniques will be used to assess the overall risk to the project represented by the risks identified in the Risk Register. It is intended that QCRAs will be carried out periodically, (generally towards the end of each RIBA design stage). The results of these detailed assessments will be used to update the quantification of risks within the RIBA stage Cost Plan.



Respond; The Client Advisor representative will ensure that all risks have suitable risk responses to manage the risk, including assigning specific action owners and completion dates for those actions.

Review; Risks and the planned mitigation action will be regularly reviewed by the design team at design team meetings. with occasional wider involvement of the project team to ensure the widest possible input into the risk management process.

Report; Risks will be reported on a monthly basis, as part of Appleyards' & Leadbitter's reports to TMO.

Monitoring; The Client Advisor's specialist risk advisor will regularly monitor and report to demonstrate the effectiveness (or otherwise) of the project risk management process. This report should cover:

- Risk response actions implemented on time versus outstanding risk response actions
- o Effectiveness of risk response actions that have been implemented
- Any key Lessons Learned

Risk register

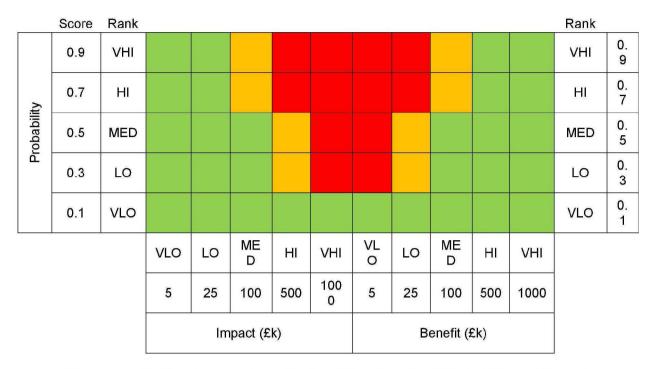
The risk register is a live document and will continue to be reviewed and updated throughout the lifespan of the project. The risk register is located on Appleyards SharePoint site for Client access.

Risk evaluation

The Probability Impact (PI) Grid gives an indication of the relative importance that the project team believes applies to a particular risk or opportunity, in this case purely by its' potential project cost impact:

- Red risks / opportunities are ones which need immediate and active management in order to mitigate the risk / realise the opportunity
- Orange risks / opportunities warrant additional monitoring to ensure that they do not become 'red'
- Green risks / opportunities may be expected to be managed by normal project processes and are monitored as part of the on-going risk management process.





The values that the team assigned to the different ranks of Probability and Impact were:

Rank	Probability	Impact greater than	Impact less than
Very High	90%	£500k	£1,000k
High	70%	£100k	£500k
Medium	50%	£25k	£100k
Low	30%	£5k	£25k
Very Low	10%	0	£5k

The PI Grid rank and impact was developed and agreed by the client PM, design team and client consultant, at a risk workshop during the RIBA C stage.

3.7 SAFETY

CDM Co-ordinator ("CDMC")

The CDMC will fulfil their duties under the Construction (Design and Management) Regulations 2007 and Approved Code of Practice – "Managing Health and Safety in Construction".

Pre-Construction Information

The CDMC will manage the process of collection and distribution of the Pre-Construction Information.

Construction Phase Health & Safety Plan

The Principal Contractor will prepare the Construction Phase Health and Safety Plan in advance of the construction work. The Client has a duty under the Construction (Design



and Management) Regulations 2007 not to allow construction work to start on site until a Construction Phase Health and Safety Plan is in place. The CDMC will review the Construction Phase Health and Safety Plan on behalf of the Client and will serve notice advising the Client when, in the opinion of the CDMC, the Construction Phase Health and Safety Plan has been sufficiently developed for a start of construction work on site.

Health and Safety File

The CDMC will prepare the Health and Safety File in accordance with the requirements set out in the Approved Code of Practice – "Managing Health and Safety in Construction". Information for the Health and Safety File will be provided to the CDMC by the Client, Designers, Contractors, Principal Contractor and others as the project progresses. The CDMC will prepare, maintain and close-out a Tracking Schedule for the information required for the Health and Safety File. The completed Health and Safety File will be handed to the Client on completion of the construction work. The Principal Contractor will be responsible for the preparation of the separate Building Manual, Operation and Maintenance Manual and Building Users Guide.

Site arrangements

The Principal Contractor will be responsible for the arrangements on site for Health and Safety in accordance with requirements of the relevant legislation, Codes of Practice, construction industry Guidance and construction industry recognised good practice.

Safety & Environmental management

The Principal Contractor will be responsible for establishing a suitable and sufficient regime for site safety and environmental inspections and audits. The reports from the inspections and audits shall be presented to the Client, Employer's Agent and CDMC each month. The reports shall show how and when any non-compliance has been corrected and shall provide a commentary on how management arrangements have been reviewed and adjusted to ensure the avoidance of a reoccurrence of the non-compliance.

In addition the Principal Contractor will report, the following data, as a minimum, which will be recorded on a monthly and a "to-date" basis:

- · Total number of man-hours worked
- Number of accidents entered into Accident Book
- Number of reportable accidents
- Number of Near Misses
- Man-hours worked since last Accident Book entry.
- Carbon dioxide emissions
- Energy targets

3.8 POST COMPLETION

TBA

APPENDIX A

Project Programme





APPENDIX B

iESE KPI's



Pre construction Client Performance.do



Pre construction Contractor Performar



Post Construction Client Performance.de



Post Construction Contractor Performar



Cost Time Benefits Master rev 5b.xls