

NEW MURABBA

Mukaab District

Project Quality Plan

MKB-HKR-DES-PLN-00002

HKR ARCHITECTS

Project Quality Plan

MKB-HKR-DES-PLN-000002

Document History

Revision code	Description of changes	Purpose of issue	Date

Design Team Lead

HKR Architects



Document Approval

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Project Quality Plan

Stages 3B to 3D Asset Design

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1 Introduction

1.1 Purpose and use of this manual

This Project Quality Plan is intended to define useful project specific information. The plan falls into three parts:

1. Project Definition.
Section 2 is intended as an executive summary, presenting high-level project-specific information. This is intended as an efficient way of communicating key project information to the Consultant Team.
2. The Services and Project Team
Section 3 to 6 are intended to provide all information necessary to understand the scope of services and the role of each project team organization.
3. Project Processes
Section 7 to 15 provides the bulk of information on processes which are to be operated or maintained during the course of the Project. Where possible these are described through reference to the standard processes covered in the Practice Manual; however deviations from standard protocol or bespoke project processes are fully detailed (through reference to Level 4 process information, templates and records).

The Project Director is responsible for managing the planning, implementation and audit of this management plan.

This Project Quality Plan is to be updated as the scheme progresses and the relevant information becomes available. As such, it's not expected that this document is completed in it's entirety from the offset.

1.2 Relationship with Quality Management System

This Project Quality Plan is an integral part of HKRs QMS and must be operated on every Project. Refer to Quality Manual for further information on the relationship with other documents in the QMS.

2 Project Definition

2.1 Project Summary

The following table is to be completed by the Enquiry Director as part of the Enquiry Close-Out process based on information known at the Enquiry stage. This section is to be updated throughout the course of the project.

Project Name:	<i>Residential Assets Stage 3B to 3D</i>	Project No: 04040
HKR Practice	<i>HKR London</i>	
HKR Project Director	<i>Kola Ojeyomi</i>	
HKR Design Lead	<i>Joao Ornelas</i>	
HKR Technical Lead	<i>Ayna Azhigali</i>	
Client	<i>New Muraab Development Company</i>	
General Project Description:	<p><i>HKR architects has been appointed to deliver Residential Assets from stage 3B to 3D.</i></p> <p><i>The Residential assets are comprised of a total of seventy-one (60) buildings distributed over eight (7) different building typologies and an array of seven (5) different façade typologies. The buildings also feature different GF layouts (as illustrated above) with a typical design from the first floor upwards, resulting in several unique building layouts. These are located in the southwest of NMDC, MUKAAB and is geographically situated between the Red Sea and the backdrop of the Shar Mountains.</i></p>	
Client Objectives	<p><i>MUKAAB will be the first development in NMDC. It is positioned to be a hub for innovation and a sustainable environment for living and working. It provides key industrial processes and facilities for NMDC, KSA and the rest of the region. In essence, MUKAAB is the catalyst for economic growth and diversity in NMDC and the Kingdom, and contributes to redefining the world's approach to sustainable industrial development.</i></p>	
Agreement Form	<i>Bespoke Form of Contract</i>	
Services (Role)	<p><i>Lead Designer, to include disciplines necessary to fulfil project requirements in line with appointment contract:</i></p> <ul style="list-style-type: none"> • <i>Modular Design</i> • <i>Architectural Design Works</i> • <i>Interior Architecture Design Works</i> • <i>Landscape design</i> • <i>Retail and Food and Beverage (F&B) Works</i> • <i>Acoustics</i> • <i>Signage and Way Finding</i> • <i>Structural Engineering</i> • <i>Mechanical Engineering</i> • <i>Electrical Engineering including Extra Low Voltage (ELV) Systems</i> • <i>Mobility</i> • <i>Vertical Transportation</i> 	

	<ul style="list-style-type: none"> • External Works • Fire Safety Engineering • Security • Solid Waste Management <p>Refer to NMDC-NEN-PRC-005_02.00 - Design Stages Deliverables Procedure for further details</p>
Services (Workstages)	NMDC work stages 3B to 3C, including validation of stage 3A
Services (Start Date)	20/02/2023
Services (Completion Date)	56 Weeks from Commencement Date
Project Completion	2025

The table below is to be completed to record the Technology Strategy for production of Consultant Deliverables:

Deliverable	Technology Strategy
Drawings	BIM (Revit) – further details provided in BIM Execution Plan process information
Schedules	BIM (Revit) and Microsoft Office Suite
Reports	Microsoft Word and/or Adobe InDesign
Bill of Quantities	Microsoft Office Suite
Specifications	Microsoft Office Suite
Renderings	JPEG
Animation	MP4

2.2 Project TEAM Organisations

Refer to the Project Directory for the project team organisations and their contractual roles and relationships on the project, including details of Client-authorized Third Parties.

Consultant/Project organisation chart(s) are to be maintained as outlined in 4.2 of this document.

2.3 Services Summary

Refer to NMDC-NEN-PRC-005_02.00 - Design Stages Deliverables Procedure for Team organisations scope and responsibility for the Services – as defined within **HKR-Client Agreement**.

2.4 Enquiry Material

All documents received or submitted during the Enquiry (speculative) Period (*including the Client RFP and HKR's Proposal*) are to be kept on the F drive until HKR's appointment has been formalised. At this point, the enquiry material is moved into the '00 initial info' folder of the project folder on the J drive.

2.5 Project Material Provided by Client

All the digital project material issued by the client is to be filed in the relevant folder location as outlined in HKR's 'Electronic Naming and Filing' QMS Document.

All physical property provided to HKR Architects by the Client is to be marked "Client Property" and securely stored at the archive locations detailed below. All property is to be returned immediately to the Client at their request.

Physical Property Provided by Client	Archive Location

2.6 Project Records

The following table is to be completed over the course of the Project:

Digital Record Information	Doc Created	Reference Document
HKR-Client Agreement Actions Tracker	-	<i>Refer to HKR Contract Documents</i>
HKR-Client Agreement	-	
Schedule of Services	-	
HKR Project Roles Table	-	
Project Programme	-	
HKR-Sub Consultant Agreement: [Service]	-	
HKR-Sub Consultant Agreement: [Service]	-	
HKR-Sub Consultant Agreement: [Service]	-	
Fee Management Schedule	-	
Integrated Risk Register	-	
PQP Responsibilities Matrix	-	
Project Directory	-	
Consultant Team Org. Chart	-	
Final Project Brief	-	
Meeting Schedule	-	
Responsibilities Matrix: Services	-	
Master Deliverables Schedule	-	
Service Stage Deliverables Schedule	-	
Service Stage Programmes	-	
Design Actions Tracker	-	
Specifications Master-Format Matrix	-	

3 Design Requirements

3.1 Project Brief

HKR's Brief is to develop the design prepared by others during stage 3A, validate the stage 3A design, develop the design further during 3B, Preparing developed design including coordinated drawings, developed specifications, developed capital cost estimate and lifecycle cost. During 3C, HKR will Prepare detailed design including coordinated drawings, detailed specifications, detailed capital cost estimate and lifecycle cost. During stage 3D, HKR will provide Tender Support Services, Contract Formation Support and IFC Drawings & Documents.

Refer to NMDC-NEN-PRC-005_02.00 - Design Stages Deliverables Procedure for further details.

3.2 Client Objectives and Requirements

MUKAAB will be the first development in NMDC. It is positioned to be a hub for innovation and a sustainable environment for living and working. It provides key industrial processes and facilities for NMDC, KSA and the rest of the region. In essence, MUKAAB is the catalyst for economic growth and diversity in NMDC and the Kingdom, and contributes to redefining the world's approach to sustainable industrial development.

MUKAAB, the "Industrial City of the Future", is strategically positioned to contribute to the success of NMDC. It adopts the latest state of the art technologies in construction, industrial manufacturing, supply chain, logistics, smart cities, and sustainability to serve its purposes, seeking LEED Platinum.

3.3 Design Standards

Design development is to follow NMDC processes and procedures and KSA building codes. Where other standards are required, these are identified by each discipline consultant within their stage 3B submission after being approved by the client following the respective RFI procedures.

Below is a list of some of the key standards. Refer to NMDC-NEN-PRC-005 for further details.

NMDC-NEN-PRC-006	Safety in Design Procedure
NMDC-NEN-PRC-007	Value Engineering Procedure
NMDC-NEN-PRC-008	Document Numbering and Revision Procedure
NMDC-NEN-PRC-009	BIM & GIS Procedure
NMDC-NEN-PRC-010	Drawing and Drafting Procedure
NMDC-NEN-PRC-011	Site Specific Seismic Hazard Study Procedure
NMDC-NEN-PRC-020	Asset Naming Conventions Procedure
NMDC-NEN-PRC-021	Stage Review and Approval Procedure
NMDC-NEN-PRC-022	Handing Over Procedure
NMDC-NEN-PRC-029	NMDC Plan of Work
NMDC-NEN-SCH-002	Schedule Q – Quality Requirements for Contractors
NMDC-NEN-SCH-005	List of Technical Codes and Standards
NMDC-NLF-PRC-002	Fire Safety Approvals Procedure
NMDC-NPR-PLN-101	Project Design Management Plan

3.4 Compliance

In order to demonstrate compliance with NMDC-NEN_PRC-005 and the RFP requirements for each stage and discipline, HKR have implemented the use of compliance checklists. These are completed prior to each stage cycle submission by each of HKR's discipline leads and verified and signed off by HKR directors and Quality manager.

Compliance with building codes and regulations are addressed within the submission books for each individual discipline.

4 Project Team Structure

4.1 HKR's Client

HKRs use of the term 'Client' refers to the organisation who has engaged HKRs professional services. HKR are responsible for delivering the Services to the satisfaction of our Client. The Project Directory is to be updated to record the name, project team role and representative of the Client organisation. In this case the client is NMDC company, with Parsons as PMC.

4.2 Project and Consultant TEAM

The Project Directory is to be maintained for key personnel contacts within each project and consultant team organisation. The names, roles and representatives of each project team organisation are to be listed in the Project directory, including but not limited to organisations responsible fulfilling the following project roles:

- Client/End-User/Occupier (if applicable)
- Client/Employer
- Local Authority Liaison
- Translation (where required)
- Cost-Planning and Control
- Consultants; or
- Lead Consultants and Sub-Consultants
- Works Package Contractors

The names, roles and representatives for all Client-authorized Third Parties are also to be listed in the Project directory, including but not limited to:

- Local Authorities
- Operators
- Tenants
- Bank/ Funding Institutions

A Contractual Tree (Team Org. Chart) is to be established to represent the contractual relationship and lines of communication between HKR and our sub-consultants. This is to be maintained as a project record (section 2.6). A Project Team Org. Chart is to be obtained from the Client, to represent the contractual relationships and lines of communication between all Project Team organisations listed in the project directory. This information may be incorporated into the Contractual Tree if appropriate.

4.3 Authorised Third Parties

The names, roles and representatives for all Client-authorized Third Parties are also to be listed in section 2.2, including but not limited to:

- Local Authorities
- Operators
- Tenants
- Bank/ Funding Institutions

The Project Directory is maintained including all representatives of the third-party organisation listed in section 2.2.

5 Scope and Responsibility

5.1 Schedule of Services

The Schedule of Services is to be defined in the HKR-Client Agreement – *refer section 7.3.1*. The Schedule of Services is to be extracted from the HKR-Client Agreement and maintained as a Project Record (*refer section 2.6*)

The Project Director is to complete the Project Roles Table (section 2.3), to summarise the scope and organisational responsibilities for the Services.

Project Record - Schedule of Services (as per HKR appointment)

5.2 Responsibilities/Services

HKR are to identify organisational primary and/or secondary responsibility for each Service.

Once organisational responsibility has been defined the Project Director is responsible for ensuring that responsibility has been adequately defined to ensure the delivery of the Services, and assessing progress and completion of Services at each design stage.

Refer to team organogram in section 4.2 for the team structure roles and the specialism that each subconsultant is responsible for. Also refer to NMDC-NEN-PRC-005 for detailed information.

5.3 Deliverables Schedules

The **Master Deliverables Schedule** acts to identify all Information required at each Services Stage; checking responsibilities; method of production (BIM, CAD etc). This Information forms the basis of the Service-Stage Deliverables Schedule, Information Register and Information Issue Sheet – discussed later in this plan.

In the case of this project, the deliverables are outlined in NMDC-NEN-PRC-005_02.00 - Design Stages Deliverables Procedure and appendices 8A and 8B of HKR appointment contract.

Client/ Stakeholder Management and Approvals

5.4 Design Approvals

5.4.1 Submissions

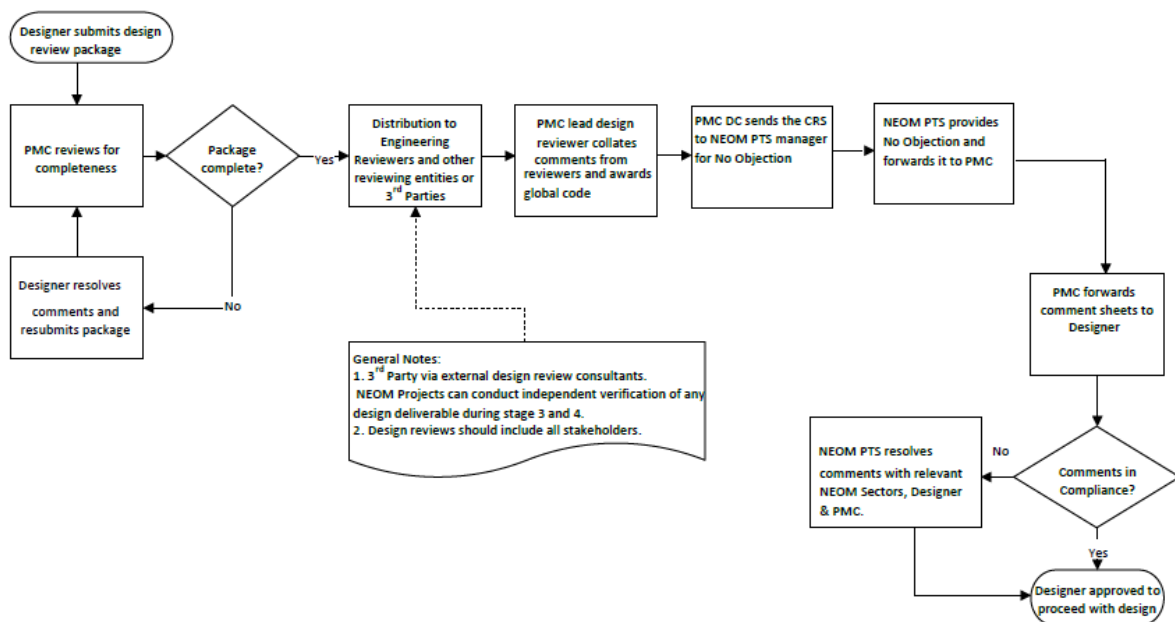
Stages 3B, 3C, and 3D Design Schedule:

Client/ Stakeholder Approvals

A simplified flow chart showing the various steps involved in Stage 3B, Stage 3C, and Stage 3D design reviews are provided in the figure below.

Above: Stage 3B-3C-3D Design Review Steps

The design team will conduct the design review during the design and construction phases within the guidelines established by NMDC and will adhere strictly to the Mandatory Documents and other Contract requirements as the basis for the design including but not limited to NMDC-NPR-PRO-100_05.00 Design Review Procedure



HKRs commitment to receive Client approval of each submission detailed in section 6.1.1 necessitates engagement and coordination with the Stakeholders listed above.

5.4.2 Third Party Approvals

The name of the organisation(s) responsible for securing Third Party Approvals is detailed in section 2.3.

HKR offer a professional commitment to support and assist the Client and Employer in obtaining Third Party approvals of HKR deliverables. The following tables records Third Party approvals (including statutory and local authority) approvals sought by the Employer.

Name of Third Party Approval Required	Approving Body	Sought By	Application based on 3B, 3C, 3D	Status
LEED Gold	GBCI	AESG		pending

The table above is to be updated during the course of the project to record the status of each approval. All overdue approvals and associated Consultant team action is to be recorded and tracked in the Design Actions Tracker, with comments pertaining to any HKR current actions.

5.5 Design Approvals consultation

Meetings/Workshops are the primary forum for Client/ Stakeholder and Third Party consultation.

Client Stakeholders and Employer-appointed Consultant organisations are to be consulted throughout the design process, through scheduled meetings and presentations. All Stakeholder requests, comments and directions are to be recorded in the minutes of meeting. Minutes of meetings are written in such a way that all comments and actions are carried forward.

Refer to separate MOM tracker dates and availability if meeting minutes.

5.6 Client technical and budget approval process

The Client Technical and Budget approval process and timeframes will vary at each design stage:

- The time-frames for each stage are established through initial consultation with the Client
- The process for Client Technical and Budget approval is set out in the contract documentation and procedures provided by the client.

5.7 Client Comments management and Design Stage Close Out

All comments received during the Client Approval periods are to be confirmed via a written instruction submitted via Aconex. For this project HKR are to follow the clients own procedures which include the use of CRS sheets to record and track comments and responses.

5.8 Quality Management

The Client's Quality Management Objectives are defined during the initial Client Consultation period.

HKR's Project Director is responsible for ongoing liaison with the Client, to ensure that their requirements are being met. If any Quality issues are raised, a mitigation strategy is to be identified and implemented through consultation with the HKR Quality Manager. The Client Feedback and the resulting mitigation strategy are to be reviewed with the Client and recorded in an Update Report to be provided to the client.

The QMS Project Update will be reviewed at HKR Board Level in consideration of changes to the QMS. The QMS Coordinator will continue communications with the Client to ensure that the issue has been successfully resolved.

Refer to Appendix 1 for HKR Company Quality Policy.

5.9 Quality Objectives Measurement Criteria

The measurement of quality for the project can be expressed in several ways. These are generally linked to internal review processes and trackers. The overall objective is to minimise the amount of revisions required. Minimal reviews and comments mean that the work has been successfully completed in the first place, this expedites the programme and reduces the resource requirements. Therefore it is beneficial to all that the quality objectives are met.

HKR constantly reviews and coordinates all project deliverables with our team and consultants internally, tracking all major comments. These are marked as 'open' or 'closed' enabling HKR to quantify the both the amount of comments for each discipline as well as the percentage of resolved comments.

In addition to this HKR employ the project trackers provided by the PMC team to track all comments and resolutions. These are also quantifiable and enable HKR to track the percentage of closed items, as well as the percentage of code A, B, C, D, etc, with the ultimate goal of achieving 100% closeout with 100% code A.

6 Architect (HKR) Appointment

6.1 HKR Management Team Appointment

Top Management are to appoint a Project Director/coordinator, Design Lead and Technical Lead. The names of these parties are to be recorded in section 2.1 of this PQP.

The Project Director is to responsible for leading and coordinating the Enquiry Close-Out process to manage the transfer of responsibility from the Enquiry Director to the Project Director.

6.2 HKR-Client Initial Meeting Series

HKR Project Director is to convene and chair a meeting with the Client to formalise HKRs appointment. The ***Client Consultation Agenda*** is to be used to manage Client consultation. The meeting is to be recorded in minutes, with pertinent points used to complete section 2 of this Project Quality Plan. Further meetings are to be scheduled to close-out all actions detailed in the minutes.

6.3 HKR-Client Agreement

The Project Director is to ensure that a mutually acceptable HKR-Client Agreement is in place for the provision of the Services and that the Agreement includes all information described in this section (7). HKR are also to act to ensure that back-to-back agreements have been reviewed in principle with named sub-consultants prior to signing HKR-Client Contract and that they are committed to securing adequate PI Insurance.

6.3.1 Agreement Form, Conditions and Schedule of Services

Prior to signing, the HKR-Client Agreement is to be reviewed against;

- the draft Agreement Conditions and Schedule of Services previously reviewed during the Enquiry Period
- clause-by-clause comments made in HKRs Proposal

All deviations in the standard or particular conditions, from the drafts available during the Enquiry period, are to be forwarded to HKR-Commercial and PI Insurer for further review.

All deviations in the schedule of services, from the drafts available during the Enquiry period, are to be forwarded to the Lead Designer for further review. The Project Director is responsible for ensuring that HKRs services are adequately defined prior to signing the HKR-Client Agreement.

All comments made on the Agreement (during the Enquiry or Project stage), prior to signing the HKR-Client Agreement are to be closed out before signing the contract.

6.3.2 Programme

Prior to Signing the Agreement, the Project Director is to ensure that a baseline Project Programme has been established and that this represents HKR's Proposal. All comments on the baseline Programme are to be closed out prior to signing HKR-Client Agreement.

Refer to section 6.1.1: Stages 3B, 3C, and 3D Design Schedule

6.3.3 Billing Schedule

The Project Director is to prepare and submit a Billing Schedule, for inclusion in the HKR-Client Agreement through consultation with the Client. The Billing Schedule should as a minimum reflect the following agreements:

- Total Fee
- Weighting of Fee per work stage
- Frequency of Invoicing
- Invoice Approval Period
- Invoice Substantiation
- Invoice Format
- % Retention (not to exceed 5%)

The pertinent details of the Billing Schedule are recorded in section 2.1 of this PQP.

6.3.4 Named Sub-Consultant

Where the HKR-Client Agreement specifies Named Sub-Consultants, HKR are to issue a draft 'un-signed' back-to-back Agreement to the named Sub-Consultants for review and comment, requesting a written commitment to accept back-to-back agreement and secure PI Insurance to the appropriate level (defined in the draft Agreement).

The draft back-to-back agreement is to include the words, "Draft – Without Prejudice" on every page.

Further information on the Sub-Consultant procurement and appointment process is detailed in section 9.1.

6.3.5 Signing of HKR-Client Agreement

All HKR-Client Agreements are to be signed by top management. Top Management are to ensure that they are in receipt of all the relevant information.

Immediately after signing the HKR-Client Agreement, HKR are to secure back-to-back HKR-Sub Consultant Agreements with all named and domestic Sub-Consultants for signature (as described in section 9.1)

6.4 Statutory Project Material Required From Client

The following information should be obtained (as a minimum) from the Client, filed on the Project Server and recorded in section 2.5 of this Project Quality Plan:

- Notice of Award
- HKR-Client Agreement (access limited to top management only)
- HKR-Client Agreement – excluding Fee Information
- Project Programme (extracted from HKR-Client Agreement and Saved Separately)
- Schedule of Services (extracted from HKR-Client Agreement and Saved Separately)

- Information from previous Consultant (where applicable)
- As-Built Information of Existing or Adjacent Structures
- Site-Survey Information
- Existing (Construction) Works Agreements
- Employer/ Client Management Plans and Protocols
- Third Party Approvals
- Pertinent Project Meeting Minutes – *prior to HKR appointment*
- Project Team Org. Chart

7 Fee Planning and Management

7.1 Fee Planning

For this project, fee procedures to follow agreed NMDC protocols.

7.2 Fee and Resource Management

Refer to Appendix 2, baseline schedule MKB-HKR-ARC-PRG-000001 (approved with code B) for weighted distribution and manpower resources.

7.3 HKR-Client Invoicing

Invoices are to be submitted in accordance with the Billing Schedule appended to the HKR-Client

7.4 Pursuing Outstanding / Overdue Invoices

All invoices submitted are to be tracked and followed, as a minimum, on a weekly basis. If any invoice is not paid within the agreed Invoice Approval Period, the matter is referred to top management.

7.5 Project Controls

The following Information will be updated at the frequency detailed below to track and report progress and risks.

Information	Update Frequency	PQP Reference
Project Programme	Monthly	6.1.1
HKR Risk Register	Monthly	
Fee Management Schedule	Monthly	

The Project Director is to prepare a monthly Project Update report for the attention of the Practice Principal using the A4 Report Template structured under the following headings and appending the Information detailed above:

- Introduction
- Executive Summary
- Client Feedback
- Fee Management
- Quality Management
- Progress Against Programme (including delay mitigation where necessary)
- Health and Safety
- Risks
- Staffing and Resources

In the case of this project, the regular progress report prepared for the client can be used as the practice principal update.

8 Sub Consultant Administration

8.1 Sub-Consultant Appointment

The Project Director is to review section 4.3 of the Enquiry Management Plan and the Proposal to establish specialist services, for which HKR are responsible but are yet to identify/ appoint a sub-consultant. These are identified as 'TBC' in section 2.3, which is to be subsequently updated as sub-consultants are appointed.

The Project Director then establishes, through discussion with the Managing Director, which pre-qualified* sub-consultants should be approached to tender for the specialist services. Where the specialist service is large, the service must be competitively tendered to at least 3 pre-qualified sub-consultants, in compliance with the Sub-Consultant Procurement and Appointment process.

HKR maintain a shortlist of pre-qualified sub-consultant organisations, referred to as **Pre-Qualified Sub-Consultant Register (refer to section 5.5 of the Practice Manual). HKR top management are responsible for maintaining this register as described in the **HKR Sub-Consultant Procurement** process.*

8.1.1 Sub-Consultant Administration

HKR are to ensure that back-to-back agreements are in place with named sub-consultants. All sub-consultants are required to have adequate PI Insurance.

8.1.2 Sub-Consultant Financial Management

All sub-consultant(s) invoices are submitted to and paid by HKR unless agreed otherwise in the HKR-Sub-Consultant Agreement.

The table below records the agreed methods of managing sub-consultants invoices and payments for this project:

Consultant Organisation	Preferred Invoicing Method (<i>Cooperative</i>)

The Cooperative method – whereby HKR notify sub-consultant of the maximum invoiceable amount after receiving monies from HKR Client; the sub-consultants raises an invoice against which HKR pay immediately.

8.1.3 Sub-Consultant Evaluation

This is an internal process to HKR. HKR evaluates the performance of each sub-consultant at the end of each design stage and at each milestone submission (depending on the scale of the project). Following each evaluation, HKR provides feedback to each consultant. HKR at this point may decide to either continue with the sub-consultant, or replace them with an alternative sub-consultant from our approved shortlist.

9 Communications

9.1 Lines of Communication

All formal letters and document transmittals, between organisations are to be authorised by the Project Director and marked for the attention of the recipients Project Director. The Project Director authorisation will act to ensure that the following protocol is observed:

- HKR are to seek Client (prior) approval for all outgoing communications with any organisations with whom we are not contractually bound by Agreement (for example, members of Project Team and Authorised Third Parties); where approved for issue, mails are to copy the Client and the Employer.
- HKR are to reply to any project-related correspondence from a party with whom we are not contractually bound by Agreement, on which our Client is not copied, asking that it be *'reissued through the correct channels of communication'*.

- HKR are to act to ensure that our sub-consultants (where appointed) do not communicate with any member of the Project Team without HKRs prior knowledge and consent; and that, where authorised, HKR are kept copied.

Any deviation from this protocol must be authorised by the Project Director.

9.2 Language

Language	<i>Insert official language of correspondence and project documentation</i>
Translation by	<i>Insert organisation name responsible for translations (where appropriate)</i>

9.3 HIERARCHY and Methods of Communications

HKR communications protocol is defined in section 5.3 of the Practice Manual.

The following table records the hierarchy of communications on this project (listed in order of precedence) and any deviation from the standard protocol detailed in section 5.3 of the practice manual.

Precedence	Format	Deviation/ Exceptions from HKR-Standard Communications Protocol
1 (Highest)	Letter/ Memos	
2	Minutes	
3	Information Management System Transmittal	
4	Email	
5	Telephone	
6	Instant Messenger	
7 (Lowest)	Fax	

HKR maintain standard templates for letters and memos. HKR also maintain standard templates for meeting agendas and minutes. In the case of this project, MOM template has been provided by the client.

9.4 Meetings

A Project Meeting Schedule is to be maintained as a project record for the duration of the project, in this case a formal schedule is maintained by Parsons, with input from HKR on required meetings.

Coordination meetings/workshops with consultants are for the most part immediate and as required.

The Project Director is responsible for maintain the following elements of the Meetings process:

- Scheduling and convening (including issuing invitations for) **all** meetings
 - Establishing and recording the following information in the Meeting Schedule

- Date, time and location of meetings
- HKR personnel attendees
- Organisational responsibility for minutes (and where HKR, individual responsibility for minutes)
- Updating the Meeting Schedule on a daily basis to record the status of minutes
- Review status of minutes received from other organisations.

The Project Director has delegated the responsibilities listed above to a Project Secretary. As such, all internal communications relating to meetings or meeting minutes are to be directed to the following person:

Project Secretary	
Available Meeting Rooms/ Locations	

HKR maintain standard templates for meeting agendas and minutes. Where the project requires the adaptation of these standard templates, the templates listed below are to be adapted or replaced.

10 Programme

10.1 Author Responsibility

HKR Services are to be scheduled in consideration of the Project Programme.

10.2 Project Programme

The Project Programme is to be extracted from the HKR-Client Agreement and saved as a standalone document.

The Project Programme is a contractual document which cannot be amended unless with consensus of both parties to the Agreement. As such Project Programme updates show take the form of a 'Tracking Gant' view demonstrating progress against the baseline Project Programme.

10.3 Service-Stage Programmes

Refer to NMDC-NEN-PRC-005_02.00 - Design Stages Deliverables Procedure and HKR Contract for further details.

10.4 Identifying and Mitigating Risks to Programme

Programme Risks can be raised by any Employee by completing and sending a **Risk Identification Form** to the Information Controller (copying the Project Director) by email. The Information Controller will

record all Programme Risks. Programme Risks are to be reviewed at the Consultant Team meeting series, to identify and implement mitigation measures.

11 Project Team Coordination

11.1 Consultant Team Meetings

HKR are responsible for convening, chairing and recording internal meetings to fulfil the coordination and integration aspect of our Services. For this particular project, coordination meetings/workshops with consultants are for the most part immediate and as required.

Further details of activities relating to scheduling, convening, preparing, attending and recording meetings are detailed in section 10.4.

11.2 Change Management

A Change is considered a deviation from the Final Project Brief or HKR Services Agreement. All changes (Client-instigated or otherwise) are to be assessed and declared for Client consideration and approval. The change management process, detailed here and in the Change Management process information, acts to ensure that the impact of all changes are declared and accepted by our Client *prior* to implementation and that all members of the Consultant Team are properly recompensed for additional Services associated with Client-authorized changes.

All potential changes are to be immediately recorded in the Change Register once identified and subsequently assessed in consideration of legal, quality, programme and budget factors prior to presentation to the Client. The Change Management process differs depending on the service stage at which the change is identified, to avoid inhibiting a necessary fluidity in implementing Design Changes in the early Services Stages.

Further details are provided in the Change Management **Change Management** process information, which references a **Change Request Form** used to raise potential changes for consideration and a **Change Register** for tracking and recording the status of all historic, current and potential changes.

For this project, HKR are to follow change procedures set out by the client. Refer to change management workshop minutes: MKB-HKRARC-MOM-000017

11.3 Design Actions Tracking And Close Out

During design stages, all comments and associated actions relating to the Services are to be recorded and tracked through minutes of meetings. For comments raised outside a recorded meeting series, the comment is recorded in an email sent to the Lead Designer who will ensure that it is raised for confirmation at the next appropriate meeting series.

Comments received during the Client approval stage (after a service stage submission has been made) are to be recorded in a **Design Actions Tracker**, developed from the standard **Actions Tracker** template. Specific actions and responsibilities (at an organisation and individual level) are assigned to each comment and a required close-by date specified. Once established, the Design Actions Tracker is to be maintained as a Project Record.

The tracker is distributed to all members of the Consultant Team who meet on a daily, bi-weekly or weekly basis, as required to coordinate associated actions. Recommendations are made at the meeting as to which comments can be considered closed; however HKR are to seek confirmation from the author of the comment before closing any comment on the Design Actions Tracker.

In the case of this project, in addition to the process described above, the client also has a process of Comment Resolution Sheets (CRS) which is implemented on this project.

11.4 Technology Strategy

The Technology Strategy for each type of deliverable is to be recorded in section 2.1.

The following plans and guidance documents are to be adapted and adopted (where appropriate), to reflect the agreed processes and protocols relating to the use of Technologies listed in section 2.1:

- BIM Execution Plan

Where adopted the plans and guidance documents are to be maintained as process information. Where not applicable, the process information is to be deleted from the QMS suite.

The MIDP Deliverable List is essential, and relies on an integrated and well-coordinated Building Information Modeling (BIM) model. This integration is critical for producing high-quality drawings and outputs from the BIM model.

11.5 Specifications

An Outline Specification is to be produced at Services Stage 3, based on the **Outline Specification** template.

A Master Specification is to be produced at Services Stage 4/5, whereby the Consultant team prepare individual subdivisions of one consolidated specification based on a common format. HKR are responsible for overall coordination including identifying the name and number of specification subdivisions to be produced, assigning primary and secondary responsibilities for the production of each subdivision and collating the final combined specification.

12 Cost Planning and Control

12.1 Cost Control responsibility

The cost planning organisational responsibility is to be recorded in section 2.2.

HKR offer a professional commitment in meeting the Client's Objectives within the approved Budget. The Budget is reviewed and agreed at the project outset through initial Client consultation. In the event that the Services cannot subsequently be delivered to the Client's satisfaction within the agreed Budget, HKR will interface with the appropriate members of the Project Team to offer the Client either;

- Cost-Saving options; and/or
- Value Engineering options; and/or
- Recommend an increase to the Budget

12.2 Cost Plans

HKR are to review the Service Stage Deliverables schedule with the Cost Consultant at the outset of each stage to establish scope and timescale for release of Information.

HKR are to issue the selected Work-In-Progress and Published Information to the Cost Consultant to provide appropriate information to enable;

- Validation of the Budget at the end of Stage 3A Service
- Estimation of the Construction Cost at the end of Stage 3
- Update of the estimated Construction Cost at the end of Stage 4 and Stage 5 (Subject to appointment)
- Un-priced Bill of Quantities and Pre-Tender Estimate to be produced at the end of Stage 4 (Subject to appointment)

Cost Plans are to be made obtained, saved and reference in section 2.4 and made available to the Lead Designer and Project Director only.

12.3 Value Management

The process of interrogating options for reducing the Construction Cost to meet the Client Budget is referred to as Value Management (VM). VM options are to be classified as either Value Engineering options or Cost Saving options:

- Value Engineering reflects options which satisfy the Final Project Brief requirements
- Cost-Savings represent options which do not satisfy the Final Project Brief requirements

HKR will undertake a Value Management exercise as required by the Services or directed by the Client. The exercise will result in a series of design options which are processed as follows before presentation to the Client:

- Recorded in a **Value Management Schedule**
- Technically and commercially assessed by the Consultant Team
- Classified as either Value Engineering or Cost Saving options

HKR are to present options for Client consideration at a specially convened meeting or workshop. Client instruction is required before implementing any option. All Client comments or instructions relating to presented options are to be recorded in the Value Management Schedule. Approved VE/ Cost Saving options are to be recorded in the **Change Register** (refer section 12.2) and implemented in the next Services stage.

12.4 NMDC specific VE procedures

Value Engineering (VE) is a vital component of NMDC's project development, ensuring value-conscious design practices. VE is integrated into each design stage, starting at Concept Design (Stage 3A) and continuing through design reviews. HKR spearheads VE efforts, presenting recommendations to NMDC for review, encompassing scope, objectives, timing, and participation.

The Projects team oversees and manages VE implementation, ensuring alignment with guidelines. If an asset exceeds NMDC's budget or timeline, a specific VE and design optimization process is undertaken to realign with approved limits, emphasizing ROI and overall value enhancement. VE has been implemented during asset design phases to instil a value-improvement mindset. Notably, VE has focused on making designs more efficient without compromising essential performance, quality, or maintainability. It emphasizes achieving primary functions at lower lifecycle costs while eliminating non-essential elements. VE is not merely cost-cutting but a holistic approach to efficient asset development.

Value Engineering is conducted at key milestones. It is most relevant for complex assets with new technology, tight budgets, fast-track projects, aggressive schedules, or landmark importance. VE is most effective when performed early in the asset's lifecycle. While value methodologies can be applied at various stages, the greatest benefits and resource savings are typically achieved when applied shortly after developing basic design elements and defining the budget. The concept design stage offers the highest potential for net savings as it allows for the identification and consideration of alternative, more cost-effective approaches when the basic function of the asset is being established.

However, VE efforts should also be carried out during the developed and detailed design stages, especially when cost estimates exceed the approved budget, or as required by the NMDC Representative at any stage. Overall, VE serves as a proactive measure to optimize asset costs and efficiency.

Refer to NMDC-NEN-PRC-007 for a more detailed account of NMDC's Value engineering procedures.

13 Document Management

13.1 Information Naming and Filing

All project material is named in accordance with the general principles set out in NMDC-NEN-PRC-030_02.00 Project Document Numbering and Revision Procedure. All material is to be filed within the relevant sub-folder of the Server Project folder.

A unique protocol is to be observed for BIM Model management - detailed in the ***BIM Project Execution Plan*** process (refer section 12.4).

13.2 Checking Procedures

All published information is to be subject to 3 party checking procedures prior to release. The core principle of this process is to ensure that all documents are:

- checked for formatting or administrative errors
- authorised by the author(s) for issue
- checked by senior technical staff for technical errors and inconsistencies
- authorised by top management/ Enquiry Director

In accordance with HKRs standard document control process, HKR are to complete a QA/QC sheet and/or Information Register recording the authorisation of information for issue. All sub-consultants information is to be issued in accordance with the same procedure.

All documents shall contain a "Document Approval" section used to record the preparation, review and approval of the document. It shall be in table format and shall contain the columns and informational elements shown below. Signature to be signed underneath the Job Title column for each reviewer. Refer to section 4 of NMDC-NEN-PRC-030_02.00 Project Document Numbering and Revision Procedure

13.3 Incoming Documentation

All incoming documentation and formal correspondence (letters and hard copy information) is to be directed to an Information Controller for processing.

If the scale and complexity of the project does not warrant a dedicated document controller, then the team member to whom the correspondence is addressed, is responsible for correctly filing incoming information.

13.4 Outgoing Documentation

The Information Controller is responsible for processing all outgoing documentation and formal correspondence in accordance with the Checking process (detailed in section 14.2) and Issuing Documentation. Project Document Transmittals are to be transmitted through the Client's chosen document management platform (refer section 14.6)

13.5 Email Filing

All incoming and outgoing emails are to be filed on the project folder on the J-Drive server, in a subfolder location according to the intended recipient/ sender.

13.6 Document Management Platform

Aconex

13.7 Client Project Protocols

The client has provided a suite of protocols and procedures that HKR must follow.

As a starting point refer to NMDC-NEN-PRC-005_02.00 - Design Stages Deliverables Procedure.

14 Integrated Risk Management

14.1 Risk Management

For all projects HKR offer a professional commitment to identify, prioritise and mitigate risks to HKR and the Project.

Risk identification and mitigation is to be considered at the outset of the project, through open discussion with Project Stakeholders.

Risks are to be reviewed by the responsible Project Director immediately upon receipt, prioritised and appropriate action taken accordingly:

- For high priority risks (including all health and safety related risks), immediate action is to be taken
- For medium and low priority risks, risks and proposed mitigation measures are to be reviewed at weekly design team and/or Client progress meeting.

Risk can be flagged at any point during the project, by any member of HKR team by completing and issuing a Risk Identification Form. All risks are recorded in HKR's **Integrated Risk Register**. Further details of the procedure for identifying, assessing and mitigating risk are detailed in Risk Management process set out by the client.

Refer to NMDC-NEN-PRC-006- Safety in Design Procedure

15 Compliance with ISO 9001:2015



Certification is conditional on maintaining the required performance standards throughout the certified period of registration
The British Assessment Bureau, 30 Tower View, Kings Hill, Kent, ME19 4UY

The management system of Certificate Number **205738**
HKR Architectural Services Limited
57 Great Suffolk Street, London, SE1 0BB

has been assessed and certified as meeting the requirements of

ISO 9001:2015

for the following activities

International architecture and Urban design Practice providing co-ordinated design and construction delivery services, project management as lead designer, subconsultant procurement and management, Integrated drawing packages coordinated with architectural, engineering and environmental disciplines. Working internationally, predominantly in Europe and the Middle East. Servicing multiple sectors, including, but not limited to residential, commercial, leisure and hospitality.

Further clarifications regarding the scope of this certificate and the applicability of requirements may be obtained by consulting the certifier.



8289



Valid from
Initial Certification: 26 January 2018
Latest Issue: 31 January 2024
Expiry Date: 25 January 2027
subject to annual assessments

Authorised by

A handwritten signature in black ink, appearing to read "Mike Tims".

Mike Tims
Chief Executive Officer

www.british-assessment.co.uk

Certificate issued by Amtivo Group Limited, trading as British Assessment Bureau

The validity and status of this certificate can be verified by using the UKAS CertCheck website at certcheck.ukas.com

16 Compliance with ISO 14001:2015



Certification is conditional on maintaining the required performance standards throughout the certified period of registration
The British Assessment Bureau, 30 Tower View, Kings Hill, Kent, ME19 4UY

The management system of Certificate Number **216715**
HKR Architectural Services Limited
St Magnus House, 3 Lower Thames St, London, EC3R 6HD

has been assessed and certified as meeting the requirements of

ISO 14001:2015

for the following activities

International architecture and Urban design Practice providing co-ordinated design and construction delivery services, project management as lead designer, subconsultant procurement and management, Integrated drawing packages coordinated with architectural, engineering and environmental disciplines. Working internationally, predominantly in Europe and the Middle East. Servicing multiple sectors, including, but not limited to residential, commercial, leisure and hospitality

Further clarifications regarding the scope of this certificate and the applicability of requirements may be obtained by consulting the certifier.



8289



Valid from
Initial Certification: 17 January 2019
Latest Issue: 31 January 2024
Expiry Date: 16 January 2025
subject to annual assessments

Authorised by

A handwritten signature in black ink, appearing to read 'Mike Tims'.

Mike Tims
Chief Executive Officer

www.british-assessment.co.uk

Certificate issued by Amtivo Group Limited, trading as British Assessment Bureau

The validity and status of this certificate can be verified by using the UKAS CertCheck website at certcheck.ukas.com

Appendix 1 - HKR Company Quality Policy

Quality Policy and Environmental Objectives Statement

HKR Architectural Services Ltd
London

Form No.
1X-X002

Document Number
EULon_1X-X002_QualityPolicyandObjectives

Revision History

Rev	Primary Author	Date	Revision Comments
00	Joao Ornelas	2017.12.19	Issue for ISO 9001 Auditor Review and Comment
01	Angelo Virciglio	2018.06.04	Updated to add ISO 14001
02	Joao Ornelas	2021.07.20	Periodic Review
03	Joao Ornelas	2022.10.19	Periodic Review

INTRODUCTION

The architectural practice of Horan Keoghan Ryan was established in Ireland in 1992. Developing a strong reputation as a general practice, particularly in the commercial development sector, offices were established in London, Manchester, Belfast and Prague.



Changes to the practice structure in response to the changing global economy led to the closure of the original Dublin practice in 2012. New practices bearing the HKR brand were established in London in 2007 and Abu Dhabi in 2008. These have common shareholders but are legally and operationally independent of each other. Since their incorporation, both have profitably traded on and contributed to the HKR reputation and brand.

HKR Architectural Services are now focused on trading on our strengths, specialisms, services and sectors to position ourselves as an architectural consultancy for the new global economy:

Our Strengths:

- Agile and responsive – *we understand what our Clients really need from their architects in the new economy*
- Pragmatic approach and a wide cultural perspective – *we open local offices instantly, wherever our clients need us and our teams work seamlessly across a variety of jurisdictions*
- Committed, commercial, transportable, flexible and fast – *we get straight to the point of our projects and deliver beyond the expectations of our Clients*

Our Specialisms:

- Mixed Use and Urban Design
- High Rise Building Design
- Modern Methods of Construction

Our Sectors:

- Residential
- Hospitality
- Education
- Workplace

Our Services:

- Architecture
- Lead Design Consultancy
- Construction Monitoring
- Master planning
- Interior Design

HKR have operated a Quality Management System since 2008. This was completely redrafted in 2010 (launched 2013) with a greater emphasis on our international work – in particular our collaboration with international partners. There was a brief period in time between 2015 and 2017 when HKR did not maintain the certification, however, these systems remained in place and followed, the end of 2017 when HKR obtained ISO 9001 accreditation once again, this time as a combined certification with ISO 14001. The current Quality Management System has been refined to be more streamline, reducing our QMS suite of documents by 50%. In doing so HKR has drastically cut the resources required to maintain the system, while maintaining a high level of quality and environmental standards.

QUALITY POLICY

HKR Architectural Services is a leading London-based architectural practice, operating under the 'HKR' brand.

The HKR brand represents;

- High quality design solutions for the built environment
- Client-focused companies providing design led products and a delivery-oriented services
- Agility and responsiveness
- A pragmatic approach
- A wide cultural perspective
- Commitment, consistency
- Transportable, flexible, fast
- Commitment to sustainability

In order to maintain and improve the professional service upon which the Clients of HKR depend, a clear understanding is required of the balance of commercial, creative, regulatory and functional requirements which drive projects. HKR Architectural Services are to promote this understanding through the consistent use of an ISO9001/ISO14001 compliant Quality Management System.

HKR Architectural Service set rigorous technical and professional standards to demonstrate continual improvement in the quality of the design product and service provided. These standards are consistently applied to maximise the value offered to every project and every Client.

QUALITY OBJECTIVES

HKR Architectural Services has adopted the following quality objectives in relation to Quality Management.

The key objectives of the HKR Architectural Services ("HKR AS") in operating a Quality Management System can be summarised as follows:

1. Services

To ensure that the practice provides consultancy services to a consistently high & improving standard relative to statutory norms and professional best practice.

Success will be measured by:

- Client feedback
- Achievement of measurable service objectives set out in the Project Quality Plans
- Increasing levels of repeat business enquiries and referrals

2. Design Product

To ensure that services provided the practice result consistently in a design product of high and improving quality.

Success will be measured by

- Client feedback
- Achievement of measurable design objectives set out in the Project Quality Plan
- Increasing levels of new business enquiries
- Peer recognition (including awards & publications)

3. Professional Expertise

To maintain and improve the level of professional expertise offered by the Practice by supporting personnel development, by encouraging any research or development content offered by HKR projects, by consistently complying with appropriate international standards and regulatory requirements and by timely adoption of new technologies to enhance professional performance.

Success to be measured by:

- Improvement in the consistency and relevance of recorded CPD activities by individual Operational Staff
- Reduction in the levels of staff turnover
- Increase in publications, speaking & teaching engagements by HKR Operational Staff

4. Business Performance

To operate a stable, sustainable & efficient business model, suited to current and future economic and industry conditions; underwriting the quality of our Service and Design Product for our Clients by adopting & enforcing robust commercial practices and operating in a diversity of geographical markets and industry sectors.

Success to be measured by:

- Reduction in unstructured staff overtime from the current levels
- Increase in percentage of staff time recorded against fee earning work
- Consistent profitability of individual projects
- Increase in conversion rate of Enquiries to Projects
- Regular, planned and identifiable investment in the Practice
- Reduction in levels of staff turnover
- Consistent production of reliable monthly management reports

5. Health & Safety

The reduction of hazards, prevention of injury, ill health and pollution.

Success to be measured by:

- Level of reported first aid injuries
- Yearly review of Health and Safety Policy

6. Environmental Policy

To operate a business that aims to protect the environment and pursue the goal of harming no people. Use materials and energy efficiently and play a leading role in promoting the best practice in our industry. Manage HSE matters as any other critical business activity and promote a culture in which all HKR employees share this commitment. We aim to offer the most environmentally friendly and sustainable material to clients but accept that it is still the final choice of the client on what will be used.

Success to be measured by:

- Keeping track of sustainable options offered to client and decisions made
- 1 bag of landfill rubbish per day – everything else to be recycled
- Survey staff on good practices yearly
- Use recycled products where feasible
- Use less paper – compare how many reems are purchased yearly



.....
Mr Kola Ojeyomi

Practice Principal

HKR Architectural Services Ltd