



Design Management Plan

DMLT Critical Control Template

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1. Introduction

This Design Management Plan (DMP) describes the approach to implementing the requirements of the Group Design Management Standard (Standard) in the project environment. It forms part of and is to be read in conjunction with the Project Execution Plan (PEP).

This DMP describes how Kier will manage design risk in accepting design and build responsibility for temporary and permanent works.

The Standard contains all “must do” requirements for design management throughout project delivery. The “must do” requirements are against each key design management activity shown in the activity map in Appendix 1.

This DMP shows how the design management function intends to adapt Standard requirements to the circumstances of the project, considering any customer, JV, regulatory requirements and having regard to project requirements, complexity, risk and contractual design requirements.

This DMP should be populated at the earliest possible opportunity where the scale, risk and complexity of the project warrants, during pre-construction and must be regularly reviewed and updated by the Project Design Manager in response to new information and change. For example, the plan may be developed at the Framework level in which case minor design works associated with the framework need not be the subject of a specific plan.

If a section of the plan is not relevant because the related activity is not undertaken, simply mark the section as not applicable. For example, digital activities might not be undertaken on the relevant project.

Relevant sections of this DMP must be shared with key stakeholders in the project team, consulting supply chain and customer to ensure mutual understanding and alignment on the approach to managing design deliverables.

2. Project Information

2.1 Project Details

Project particular	Detail
Project Title	Manchester Aquatics Centre
Kier Project Number	M07-19
Project description	Refurbishment to the aquatics centre. Sectioned off into 2 phases to allow for the Paralympic Work Champs to commence July 2023
Framework description	North West Construction Hub (NWCH), High Value Construction Framework Lot 2
Permanent works scope/design	- Site Surveys - Consultant Design - Carbon Reduction Initiatives – Ameresco work - New build entrance strategy (environmental lobby) - Demolition of parts of existing building - Swiss Timing - Spa Pool refurbishment - Bubbler - Lift refurbishment / plus 1 new lift - Full MEP replacement - Potentially replacement of tiles to pool areas - Split phases of work
Temporary works scope/design	TBC – Kate Allen to confirm
Form of contract	NEC 3 option A
JV Partner	Not Applicable
Customer	Manchester City Council
Project value	£36m (+Carbon Reduction Initiatives)
Site delivery address	Manchester Aquatics Centre, 2 Booth St E, Manchester M13 9SS

2.2 Bid outcomes

Project particular	Detail
Customer drivers, objectives, priorities and expectations impacting design	• Price • Programme • Allowance of World Para Games – July 2023 • Wow Factor for overall price • Carbon Reduction Initiatives
Key elements and themes (USP) of Bid Win plan impacting the design approach	• World Para Games • Carbon Reduction Initiatives • Live Environment • Price • Programme
Implications of design requirements on construction method and buildability	• Carbon Reduction • Phasing • MECD/Balfour Site
Key VE changes made and implications for design delivery	Recorded in Change Control Tracker

3. Project Organisation

3.1 Key personnel

The following personnel are fundamental to managing design delivery.

Title	Name & Organisation	Mobile	Email	Address
Project Manager	Paul Waite - MCC	07788 978826	p.waite@manchester.gov.uk	Town Hall Extension, Albert Square, Manchester M60 2LA
Design Manager	Kier: Dane Harrop	07771835435	Dane.harrop@kier.co.uk	Kier House, Windward Drive, Estuary Business Park, Speke, Liverpool, L24 8QR
Technical Services Manager				
Customer Agent				
Principal Designer	Jonathan King, SafeSphere	07920 413045	jonathan.king@safersphere.co.uk	Victoria House, 15 Pocket Nook St, Merseyside, WA9 1LR
Planning Application Manager	David Spoors, Pozzoni		david.spoors@pozzoni.co.uk	1 st Floor, 10-12 Emerald Str, Holborn, London, WC1N 3QA
Permanent works duty holder				
Temporary works coordinator	Kier: Kate Allen	07771 806 297	Kate.Allen@kier.co.uk	Kier House, Windward Drive, Estuary Business Park, Speke, Liverpool, L24 8QR
Approved inspector				

Lead Designer	David Spoors, Pozzoni		david.spoors@pozzoni.co.uk	1 st Floor, 10-12 Emerald Str, Holborn, London, WC1N 3QA
BIM Manager	Kier: Daniel Chambers	07546406703	Daniel.Chambers@kier.co.uk	Kier House, Windward Drive, Estuary Business Park, Speke, Liverpool, L24 8QR
Risk management process owner	Kier: Dane Harrop	07771835435	Dane.harrop@kier.co.uk	Kier House, Windward Drive, Estuary Business Park, Speke, Liverpool, L24 8QR
Change control process owner	Kier: Zara Edmondson	07849 568 327	Zara.Edmondson@kier.co.uk	2 nd Floor, Optimum House, Salford, Manchester, M50 3XP

3.2 Design supply chain

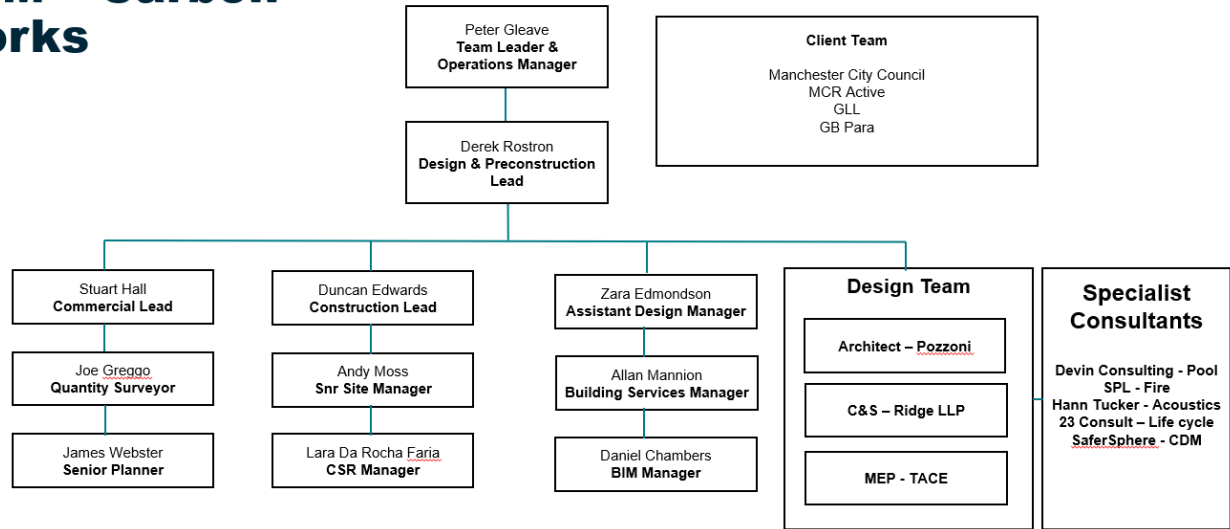
Following are the design supply chain partners, including suppliers and sub-contractors with design responsibility

Design discipline	Entity/key person	Mobile	Email	Address
Structures & Civil Engineer	Ben Marsden, Ridge LLP	07921 069233	bmarsden@ridge.co.uk	Belvedere House, 5 th Floor, 12 Booth Street, Manchester, M2 4AW
MEP	Nicholas Thomas, TACE	07976 913 728	n.thomas@tace.co.uk	Portland House, Oak Green, Cheshire, SK8 6QL
Acoustics	Andrew Jameson, Hanns Tucker	07785 455 162	a.jameson@hanntucker.co.uk	346 Deansgate, Manchester, M3 4LY
Fire	David Lengan, SPL Fire	07545 188727	david.lenagan@splfireengineering.co.uk	281 Palatine Road, Northenden, M22 4ET
Pool Specialist	Chris Graham, Devin Consult	07725658575	cgraham@devin-consulting.com	105 Howard St, North Shields, NE30 1NA
MEP Subcontractor	Ryan Rutter, NG Bailey	07795 956718	ryan.rutter@ngbailey.co.uk	Floor 6, Building 5, exchange Quay, M5 3EF

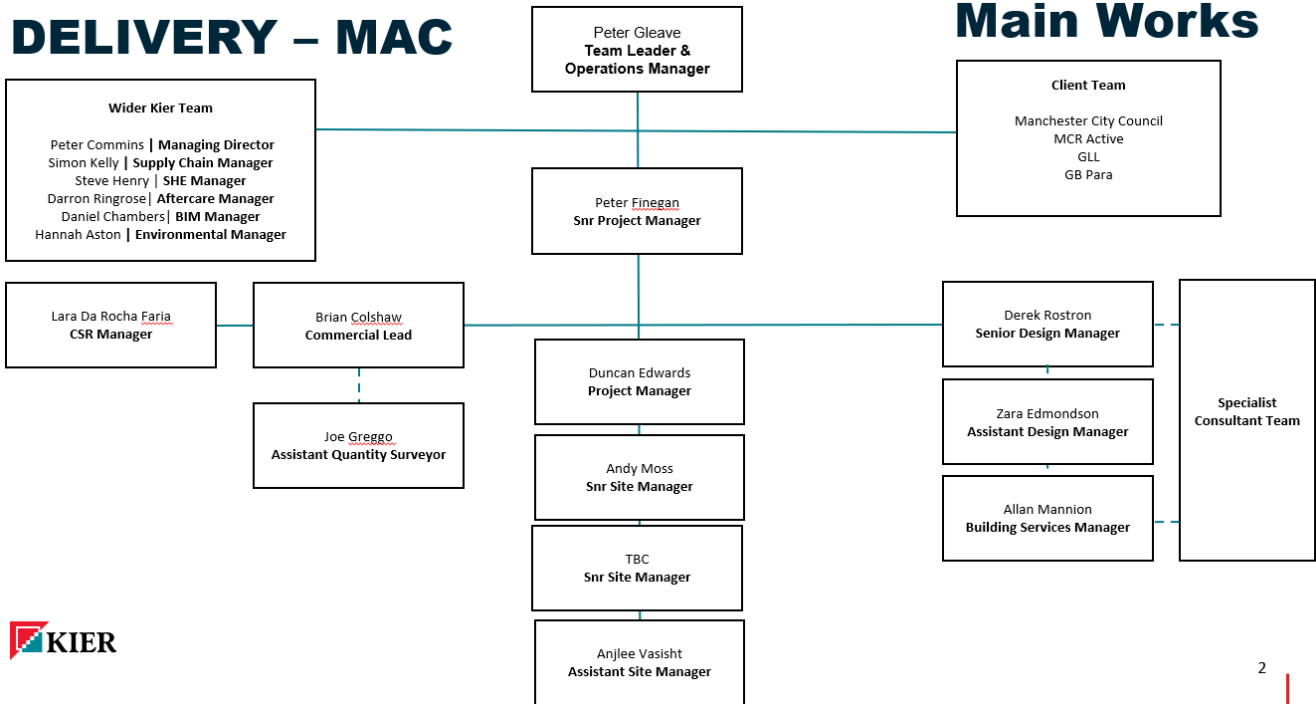
3.3 Design organisation chart

Main Scheme – See Project Organogram

ECM – Carbon Works



DELIVERY – MAC



Owner: DMLT	Version:2	PLA-GR-4001
As part of our system review, this document is valid until April 2021		Page 7 of 24

4. Managing enabling activities

4.1 Risk and lessons management

Provide input to, and managing output from, the risk management process relating to the design and design supply chain.

Requirement	Project approach
What are the key design lessons and risk registers from preconstruction phase	No design lessons Risk Register ongoing & HARM register
What is the agreed approach to coordination of risk and opportunity process with other project functions/customer (frequency, participation, and communication)	Monthly review of risk register within DTM's/ Client reviews ongoing Spreadsheet emails and Team's review
Process to be used	Outlined above
Tool to be used	Risk and opportunity register

4.2 Change management

Provide input to and manage output from the change control process relating to the design and design supply chain.

Requirement	Project approach
Frequency and forum for identify and reviewing change with design supply chain	Stage 3-4 Change Management Form Stage 3 – drawings bubbled for identification Stage 4 – Design Development/ Client Engagement
Frequency and forum for evaluation of change with project team - commercial team and safety team	Monthly
Change approval owner	Dane (Kier)
Tool to be used	Change management process Change control register Action CEM tracker

4.3 CDM

Ensure we understand and comply with the CDM Regulations 2015

Requirement	Project approach
Check the design supply chain meet their duties under the CDM Regulations 2015	Designer HEMs / Risk register PCI – Stage 3 by SaferSphere
Have all designers completed the designer's competency assessment and have these been reviewed to confirm competency of the practice and the individual(s)	Yes – see folder XX
Is the contractor designated as the Principal Designer?	Yes. CDM advisor employed

If so what is the plan to check that records are maintained to confirm that the duties are discharged	
Consult with the principal designer in relation to any proposed design change at any stage	Yes, and identified on change control register
Tool to be used	Designers residual risk register Fire risk assessment HARMS register

4.4 BIM

Manage the input from the design supply chain in accordance with the BIM execution plan (BEP).

Requirement	Project approach
What are the project BIM responsible roles and what expertise is to be consulted	Please refer to BEP
Tool to be used	BIM management process BIM execution plan [BEP] Master information delivery plan [MIDP]

4.5 Compliance

Adhere to Group and Operating company compliance requirements and systems, the requirements in any relevant contract and all relevant regulations or standards

Requirement	Project approach
What are the project specific special compliance requirements (contractual, risk, regulatory) impacting design	Building Regs – DDA and Accessibility requirements Fire Requirements Occupancy numbers – GLL enhancements ASA / British Swimming (FINA)

4.6 Performance management

Ensure that the performance of the design supply chain and the contractors design management team is reviewed, any issues addressed during the course of the project, and any lessons learned are collected for central use after the project is completed

Requirement	Project approach
What is the approach to monitoring and escalating non -performance issues	Scoring matrix quarterly
What is the frequency and approach to conducting design lessons learned with the project team and design supply chain and reporting outcomes	N/A
Tools to be used	Consultant management performance / 360 feedback

5. Managing design interface

5.1 Manage appointments

Final terms and conditions, roles and responsibilities and deliverables in appointments must be agreed, aligned and signed off prior to commencement of work.

Requirement	Project approach
Have all: - Competency assessments been undertaken - Schedules completed and incorporated in agreements	Yes
What is the approach to reviewing and confirming competency during project delivery	Checks on drawings and specifications – input into workshops on weekly review
Tools to be used	Fee activity schedules Design competency checklist Appointment documentation

5.2 Mobilise internal team

Establish how the design management function intends to work with the project and consulting team in delivering the project and the critical controls that must apply to managing outputs, communications and change.

Requirement	Project approach
What is the Date of project launch meeting	11/03/2021
Who are the Key individuals/participants	See minutes Manchester Aquatic Centre RIBA Stage 3 Restart Meeting Minutes
What are the Tender design handover requirements/documentation	Stage 2 Submission
What is the Baseline design status	Stage 2 Submission
What is the strategy for management of internal customer and supply chain interfaces, deliverables and change	Regular CEM's and individual reviews
Tool to be used	Tender handover meeting agenda & minutes

5.3 Mobilise design team

Communicate how the design management function intends to work with the design supply chain and commence design activity.

Requirement	Project approach
What is the Date of design launch meeting	11/03/2021
Who are the key participants	As above in design supply chain

Tool to be used	Design team meeting agenda and minutes
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5.4 Manage stakeholders

Establish structure and process to manage the expectations of customers, authorities, landowners, end users and other key stakeholders and obtain required information and consents around design lead activities.

Requirement	Project approach
Who are the Design related stakeholders who are critical to design delivery outcomes	MCC, GLL, MCRAActive, British Para SwimTeam,
Tool to be used	Stakeholder register

6. Controlling information release

6.1 Manage design programme

Ensure design activities, influences, interdependencies and due by dates are integrated and managed in accordance with the overall delivery programme

Requirement	Project approach
What is the approach to agreeing /updating /aligning the design programme and schedules of design deliverables with: • design supply chain • procurement, statutory approvals and overall delivery programme • customer outputs and requirements • project team • design review meetings	IRS – reviewed and comments by designs 4Projects input
Tool to be used	Design programme Design review meeting agenda and minutes

6.2 Manage customer information

Obtain and rely on Customer information and deliver relevant outputs including design data required to meet employer's requirements.

Requirement	Project approach
What is the agreed approval period, process and programme for customer information review and sign off	As per procurement programme – see attached in folder XX
What is the agreed timing of customer supplied information and instruction to support programme	As per procurement programme
Tool to be used	Contract /Employers Requirements Contractors Proposals where applicable

6.3 Coordinate Interdisciplinary reviews

Ensure different design disciplines are aligned, coordinated and compliant to contractual requirements regarding their respective outputs and design interfaces

Requirement	Project approach
What is the timeline for understanding Employer's Requirements and Contractors Proposals where applicable	CP – 15 th October 2021 ER's – see folder 11 on 4Projects
What is the plan for: - aligning design deliverables into one master design programme - multi-disciplinary review and update of design progress and the design programme	Design as per IRS
What are the key design drivers/ USPs	Wow factor for MCC's money Become an outstanding venue for British Swimming (& Para) Upgrade for MEP Upgrades for Chlorinated areas
What is the agreed software and process for data exchange with the design team	4Projects / BIM XX (input from Dan)
Process to be used	As above
Tool to be used	Design programme Design Responsibilities Matrix

6.4 Monitor contractual requirements

Establish and conduct ongoing review of design outputs to ensure these are compliant with upstream and downstream contractual requirements

Requirement	Project approach
How are design packages validated by designers against contractual, statutory and regulatory requirements	As design progress is ongoing
What is the process for monitoring, recording, communicating and escalating non-compliances within project and consultants' team	DTMs/ Early Warnings/ Feedback reviews/ Upscaling onto BIM Solibri (& software as per BEP)
Process to be used	As above
Tool to be used	Customer and Consultant contracts

6.5 Manage customer approvals

Submission of developed design information for the Customer to acknowledge that the design proposal meets contractual requirements.

Requirement	Project approach
What is the design approval period, process and programme for information review and sign off/approval	IRS & Procurement programme

What are contractual approval requirements	Construction Stage TBC
What assurance has been/is being obtained that supply chain has provided complete, current and coordinated design proposal	TBC – construction stage
Process to be used	TBC
Tool to be used	Customer Contract Design programme

7. Managing construction interface

7.1 Manage input into ITPs

Specify design outputs and specification requirements for a particular work package.

Requirement	Project approach
What elements of construction require specific inspection and testing before proceeding	Plant & Equipment configuration/ Basement integration/ Tiling to Pools including diving pit
What elements require review and approval by a specialist consultants before proceeding	Devin Consulting – Basement TACE – Plant configuration, Phases of shut-off All Consultants – integration of carbon reduction Subcontractor – Tiling
What are the established hold points	TBC
Process to be used	TBC
Tool to be used	ITPs Design risk register

7.2 Manage design related queries

Coordinate technical queries from any stakeholder which relate to design

Requirement	Project approach
What are the agreed timeframes for responding to design related questions	Between the 2-week meetings
Who is permitted/ responsible to ask and answer questions	MCC - Kier GLL – Kier If design team approach client team Kier must be copied into correspondence
Process to be used	Email/ Verbal / TQ register / RFI register
Tool to be used	Technical queries register Change control register

7.3 Manage design for buildability

Communicate and coordinate with the delivery team and the supply chain to ensure design can be delivered as planned.

Requirement	Project approach
How, when and by who are buildability reviews to be carried out	TBC
How are outcomes of the review to be recorded and actions managed	Notes, Meeting Minutes, Correspondence
Process to be used	TBC
Tool to be used	Construction sequence and methodology

	Issues close out register
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7.4 Manage value engineering and change

Coordinating activities to improve whole life cost and programme outcomes or other objective through alternative design, specification, methods or products to the reference design

Requirement	Project approach
What are the customer's key objectives and priorities	As above
What is the plan for conducting VE reviews with supply chain specialists, delivery team and the Customer	VE tracker and meetings on going and can be used if required
How are outcomes of the review to be recorded and actions managed	VE register
How is approval obtained and end date for consideration and cascaded to the design supply chain	VE register to MCC, once approve change control form is submitted formally
Process to be used	Change control process
Tool to be used	Customer contract VE register

8. Managing certification and handover

8.1 Coordinate as builds

Collate final construction issue information issued by each designer confirming their understanding of what has actually been built and highlighting any residual risks

Requirement	Project approach
What are the information requirements for CDM	Preconstruction risk register HEMs reports
What are the contractual requirements for final construction issue information	TBC
Who is responsible for the production of the as built information	All designers and specialists
Process to be used	4P uploads with approved sign off
Tool to be used	Consultant contract Final update of drawings registers

8.2 Manage statutory sign off

Ensure that all planning and project specific legislative compliance requirements for handover of design have been met

Requirement	Project approach
What certificates, discharge of planning/matters or letters from the Customer or other relevant third parties are required to submitted and obtained	Planning conditions discharge Building regs certs Fire certs – TBC
Process to be used	O&M's
Tool to be used	Statutory Requirements and ER register Planning consent and conditions Health and Safety file

8.3 Manage designer sign off

Ensure that, where required, relevant designers confirm that performance requirements have been met through relevant testing, commissioning and certification

Requirement	Project approach
Which designers are required to sign off on performance requirements	All main designers
What is the required testing, commissioning and certification to be undertaken	Independent commissioning - MEP Pool Specialists (British Swimming Association if tiling is to be removed) Fire alarm/ PA/ Timing Equipment/ Swiss Clocks ITP's

Process to be used	PEP/ ITP's
Tool to be used	Designer skill and care certificate

9. Managing aftercare

9.1 Manage snags and defects

Undertake design related activities to trouble shoot design related snags and defects during aftercare and throughout soft landings

Requirement	Project approach
Who is the nominated aftercare manager	Ian Madden
Process to be used	Snagging system Change control procedure
Tool to be used	Aftercare/Defects log