

Programme Control

UWTSD Kingsway Mixed Use Development



Elliott Lewis 2014602

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Summary

This report will provide a complete overview from initial design concept through to the completion and handover of a large mixed-use education and office development in Swansea City Centre. The report will also provide specific resource analysis for the key work activities based off the programme of works. Also, this report will address ways of managing productivity and contractual arrangements to ensure optimal efficiency during the project. Finally, as construction projects can be complex, often than not, they require adaptations along the way for unforeseen issues and constraints, this report will review ways of addressing and managing these changes on site without causing unnecessary delay.

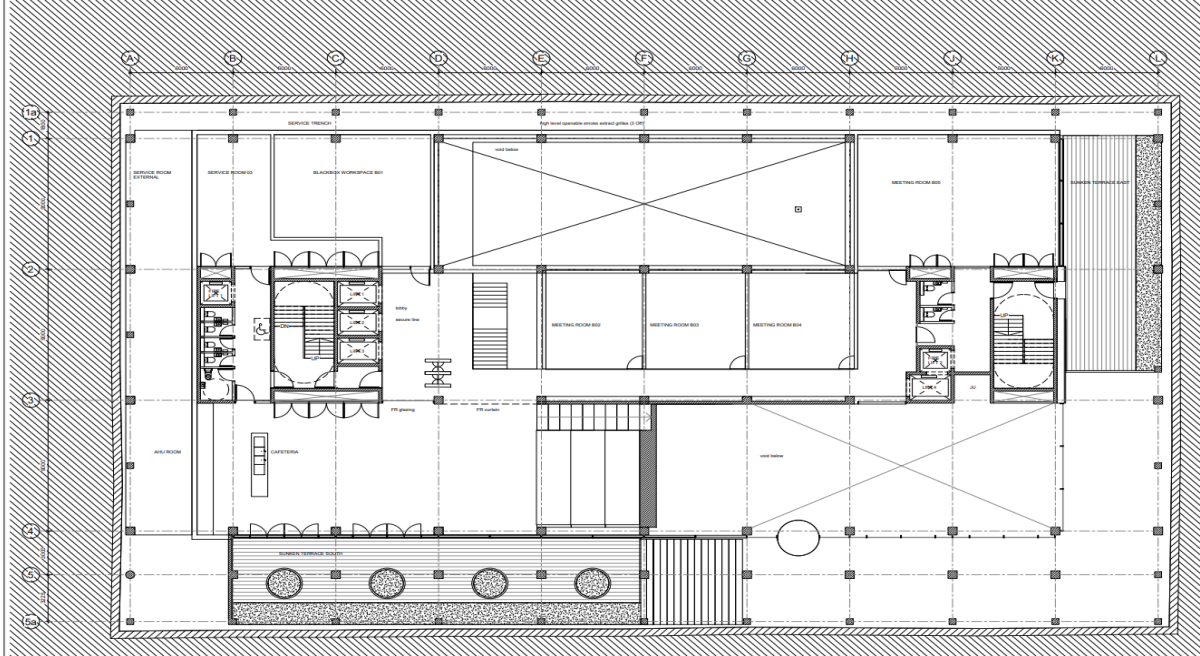


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Introduction

UWTSD are constructing a new building in the heart of Swansea for the future generation to develop and progress their education in a state-of-the-art facility. The gross external area floor space will be 10,560m² with approximately 60% being used for education, 20% for flexible working/offices and 20% social and community spaces including a café, gym, and bar. (Property Swansea.Gov, 2023)



The office spaces allow for the promotion of agile working and creates a link for student to interact with working professionals.

The proposed site is located at 71 and 72 The Kingsway, Swansea with the main part of the site being a former demolished nightclub. There are also some existing buildings on site that require demolition. There is access to the site via Picton Lane and The Kingsway (Google Earth, 2024). The site is extremely tight and therefore it's vital that the site setup, access and traffic and pedestrian routes are well thought out. All deliveries should be planned to avoid peak times and delivered on site just in time.



UWTSD will act as the Client and manage the project internally taking it from early design stages through to completion. An external design team will develop the scheme to RIBA stage 4 before being

tendered competitively for cost and quality certainty. The works will be managed using a NEC 4 Option A Contract fixed price with activity schedule (NEC, 2022).

Programme commentary

See Appendix 1 for full programme showing the critical path and RIBA design stages. The programme shows the design stage leading into works starting on site on the 4th of March 2024. Planned completion and Handover is 26/03/27 resulting in an estimated project duration of 2 years, 9 months and 3 days.

RIBA stages

To give architects, project managers and their clients a framework for working on projects together, the RIBA Plan of Work helps to clarify the various stages of a project. It has developed over time to reflect shifting project approach patterns and has turned into a tool used by the entire industry (NBS, 2022)

RIBA Plan of Work 2020		0	1	2	3	4	5	6	7
		Strategic Definition	Preparation and Briefing	Concept Design	Spatial Coordination	Technical Design	Manufacturing and Construction	Handover	Use
Stage Boundaries: Stages 0-4 will generally be undertaken one after the other. Stages 5 and 6 will overlap in the Project Programme for most projects. Stage 5 commences when the contractor takes possession of the site and finishes at Practical Completion. Stage 6 starts with the handover of the building to the client immediately after Practical Completion and finishes at the end of the Defects Liability Period. Stage 7 starts concurrently with Stage 6 and lasts for the life of the building. Planning Note: Planning Applications are generally submitted at the end of Stage 3 and should only be submitted earlier when the threshold of information required has been met. If a Planning Application is made during Stage 3, a mid-stage gateway should be determined and it should be clear to the project team which tasks and deliverables will be required. See Overview guidance. Procurement: The RIBA Plan of Work is procurement neutral - See Overview guidance for a detailed description of how each stage might be adjusted to accommodate the requirements of the Procurement Strategy. Employer's Requirements Contractor's Proposals		Projects span from Stage 1 to Stage 6; the outcome of Stage 0 may be the decision to initiate a project and Stage 7 covers the ongoing use of the building.							
Stage Outcome at the end of the stage		The best means of achieving the Client Requirements confirmed	Project Brief approved by the client and confirmed that it can be accommodated on the site	Architectural Concept approved by the client and aligned to the Project Brief	Architectural and engineering information Spatially Coordinated	All design information required to manufacture and construct the project completed	Manufacturing, construction and Commissioning completed	Building handed over. Aftercare initiated and Building Contract concluded	Building used, operated and maintained efficiently
Core Tasks during the stage		Prepare Client Requirements Develop Business Case for feasible options including review of Project Risks and Project Budget Ratify option that best delivers Client Requirements Review Feedback from previous projects Undertake Site Appraisals	Prepare Project Brief including Project Outcomes and Sustainability Outcomes, Quality Aspirations and Spatial Requirements Undertake Feasibility Studies Agree Project Budget Source Site Information including Site Surveys Prepare Project Programme Prepare Project Execution Plan	Prepare Architectural Concept incorporating Strategic Engineering requirements and aligned to Cost Plan, Project Strategies and Outline Specification Agree Project Brief Undertake Design Reviews with client and Project Stakeholders Prepare stage Design Programme	Undertake Design Studies, Engineering Analysis and Cost Exercises to test Architectural Concept resulting in Spatially Coordinated design aligned to updated Cost Plan, Project Strategies and Outline Specification Initiate Change Control Procedures Prepare stage Design Programme	Develop architectural and engineering technical design Prepare and coordinate design team Building Systems information Prepare and integrate specialist subcontractor Building Systems information Prepare stage Design Programme	Finalise Site Logistics Manufacture Building Systems and construct building Monitor progress against Construction Programme Inspect Construction Quality Resolve Site Queries as required Undertake Commissioning of building Prepare Building Manual	Hand over building in line with Plan for Use Strategy Undertake review of Project Performance Undertake seasonal Commissioning Rectify defects Complete initial Aftercare tasks including light touch Post Occupancy Evaluation	Implement Facilities Management and Asset Management Undertake Post Occupancy Evaluation of building performance in use Verify Project Outcomes including Sustainability Outcomes
Project Strategies might include: - Conservation (if applicable) - Cost - Fire Safety - Health and Safety - Inclusive Design - Planning - Plan for Use - Procurement - Sustainability See RIBA Plan of Work 2020 Overview for detailed guidance on Project Strategies		No design team required for Stages 0 and 1. Client advisers may be appointed to the client team to provide strategic advice and design thinking before Stage 2 commences.				Specialist subcontractor designs are prepared and reviewed during Stage 4	Building handover tasks bridge Stages 5 and 6 as set out in the Plan for Use Strategy		Adaptation of a building (in the form of its useful life) triggers a new Stage 0
Core Statutory Processes during the stage: Planning Building Regulations Health and Safety (CDM)		Strategic appraisal of Planning considerations	Source pre-application Planning Advice Initiate collation of health and safety Pre-construction Information	Obtain pre-application Planning Advice Agree route to Building Regulations compliance Option: submit outline Planning Application	Review design against Building Regulations Prepare and submit Planning Application	Submit Building Regulations Application Discharge pre-commencement Planning Conditions Prepare Construction Phase Plan Submit form F10 to HSE if applicable	Carry out Construction Phase Plan Comply with Planning Conditions related to construction	Comply with Planning Conditions as required	Comply with Planning Conditions as required
Procurement Route Traditional Design & Build 1 Stage Design & Build 2 Stage Management Contract Construction Management Contractor-led		Assess client team	Appoint design team	Appoint contractor	Pre-contract services agreement	Appoint contractor	Appoint contractor		Appoint Facilities Management and Asset Management teams and strategic advisers as required
Information Exchanges at the end of the stage		Client Requirements Business Case	Project Brief Feasibility Studies Site Information Project Budget Project Programme Procurement Strategy Responsibility Matrix Information Requirements	Project Brief Designations Signed off Stage Report Project Strategies Outline Specification Cost Plan	Signed off Stage Report Project Strategies Updated Outline Specification Residual Project Strategies Updated Cost Plan Planning Application	Manufacturing Information Construction Information Final Specifications Residual Project Strategies Building Regulations Application	Building Manual including Health and Safety File and Fire Safety Information Practical Completion certificate including Defects List Asset Information (If Verified Construction Information is required verification tasks must be defined)	Feedback on Project Performance Final Certificate Feedback from light touch Post Occupancy Evaluation	Feedback from Post Occupancy Evaluation Updated Building Manual including Health and Safety File and Fire Safety Information as necessary

RIBA
Architecture.com

Core RIBA Plan of Work terms are defined in the RIBA Plan of Work 2020 Overview glossary and set in Bold Type.

Further guidance and detailed stage descriptions are included in the RIBA Plan of Work 2020 Overview

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RIBA Stage 1 – 5 days

Allowance has been made for determining the project outcomes and client requirements in line with the key deliverables and sustainability goals set out at the start.

RIBA Stage 1	5 days	Wed 19/04/23	Tue 25/04/23
Prepare Project Brief	5 days	Wed 19/04/23	Tue 25/04/23
Determine Project Outcomes	5 days	Wed 19/04/23	Tue 25/04/23
Determine Sustainability Outcomes	5 days	Wed 19/04/23	Tue 25/04/23

RIBA Stage 2 – 56 Days

Allowance has been made for a feasibility study exploring the specific site constraints such as asbestos, utilities, ecology, and planning consultation. By reviewing these in detail early in the process it can save time and cost by eliminating risks of unexpected issues.

RIBA Stage 2	56 days?	Wed 26/04/23	Wed 12/07/23
Stakeholders Design Meeting	1 day	Wed 26/04/23	Wed 26/04/23
Develop Architectural Concepts	15 days	Thu 27/04/23	Wed 17/05/23
Desktop Study	15 days	Thu 27/04/23	Wed 17/05/23
Topographical Survey	1 day	Thu 18/05/23	Thu 18/05/23
Asbestos Demolition Survey	3 days	Thu 18/05/23	Mon 22/05/23
Utilities Survey	3 days	Thu 18/05/23	Mon 22/05/23
Ecology Survey	5 days	Thu 18/05/23	Wed 24/05/23
Planning Consultation	20 days	Thu 25/05/23	Wed 21/06/23
Feasibility Report	10 days?	Thu 22/06/23	Wed 05/07/23
Feasibility Cost Plan	10 days	Thu 22/06/23	Wed 05/07/23
Client Approval	5 days?	Thu 06/07/23	Wed 12/07/23

RIBA Stage 3 – 110 days

This stage allows for the design to develop to planning level so it can be submitted for review by the Local Authority's planners. There is also a gateway at the end of the stage for written client approval prior to progressing to the next stage.

RIBA Stage 3	110 days	Thu 13/07/23	Wed 13/12/23
Prepare Pre Construction Information	5 days	Thu 13/07/23	Wed 19/07/23
Develop Architectural drawings	20 days	Thu 13/07/23	Wed 09/08/23
Develop Mechanical drawings	10 days	Thu 10/08/23	Wed 23/08/23
Develop Electrical drawing	10 days	Thu 10/08/23	Wed 23/08/23
Develop Civils drawings	20 days	Thu 13/07/23	Wed 09/08/23
Develop Structural drawings	20 days	Thu 10/08/23	Wed 06/09/23
Cost Plan Update	5 days	Thu 07/09/23	Wed 13/09/23
Client Approval	5 days	Thu 14/09/23	Wed 20/09/23
Grant Application Submission	60 days	Thu 21/09/23	Wed 13/12/23
Submit Planning Application	60 days	Thu 21/09/23	Wed 13/12/23

RIBA stage 4 – 70 days

High level of detail is incorporated into the design package ready for a competitive tender exercise to appoint a competent contractor. The works will be tendered using a 70% price 30% quality split. This stage also allows for the contractor to mobilise ready for the construction stage. Due to the highly populated surrounding area a letter drop will take place informing local businesses of the planned works.

RIBA Stage 4	70 days?	Thu 21/09/23	Wed 27/12/23
Prepare Tender package	10 days	Thu 21/09/23	Wed 04/10/23
Stage 4 Cost Plan	5 days	Thu 21/09/23	Wed 27/09/23
Client approval	5 days	Thu 28/09/23	Wed 04/10/23
Tender goes live	40 days	Thu 05/10/23	Wed 29/11/23
Tender evaluation	16 days	Thu 30/11/23	Thu 21/12/23
Appoint Contarctor	1 day	Fri 22/12/23	Fri 22/12/23
Contarctor Mobilisation	30 days	Mon 25/12/23	Fri 02/02/24
Sign Contract	1 day	Mon 25/12/23	Mon 25/12/23
Pre contract meeting	1 day	Tue 26/12/23	Tue 26/12/23
Discharge Pre Start Planning Conditions	20 days	Mon 05/02/24	Fri 01/03/24
SWMP prepared	1 day	Wed 27/12/23	Wed 27/12/23
F10 notification	1 day	Wed 27/12/23	Wed 27/12/23
Community Benefits action plan	5 days	Wed 27/12/23	Tue 02/01/24
Public consultation - Letter Drop	1 day	Wed 27/12/23	Wed 27/12/23
Establish KPIS	1 day	Wed 27/12/23	Wed 27/12/23

RIBA Stage 5 – 800 Days

The construction stage has been planned to ensure maximum output of works with the consideration of the critical path. The works have been split into stages which allow the internal fit out and external cladding works to be staggered across each floor resulting in constant progress. Due to the limited parking and space on site a park and ride system will be introduced to ensure minimal disruption to the surrounding area and allow maximum workforce on site at any one time. The UWTSD campus at SA1 will have dedicated parking for workers who will then be transported to and from site. The tower crane will assist greatly in the ease of construction of the structural frame. Due to the site being near the coast time risk allowance has been built into all works which require the crane in the event of disruption caused by high winds. The Health and Safety Executive advise of a maximum wind speed for tower cranes at 38mph (HSE,2023)

Site setup – 17 Days

The site setup will start on 4th March 2024 and set up in 17 days ready to be signed off by the Clients site supervisor / clerk of works in line with their duties under CDM 2015 (R Chudley and Greeno, 2020). A F10 notification to HSE will be applicable on this scheme. Security and fencing will be robust due to its central location and proximity to nightclubs and bars increasing the risk of disorderly behaviour which could result in the public putting themselves at risk.

Site setup	17 days?	Mon 04/03/24	Tue 26/03/24
Hoarding	5 days?	Mon 04/03/24	Fri 08/03/24
Formation of loading area	3 days?	Mon 11/03/24	Wed 13/03/24
Temporay Track way Installation	3 days?	Thu 14/03/24	Mon 18/03/24
Welfare Install	5 days?	Tue 19/03/24	Mon 25/03/24
Client sign off CDM	1 day?	Tue 26/03/24	Tue 26/03/24

Demolition – 64 days

The asbestos survey of the unoccupied former bank building must happen prior to any demolition works commence. An initial semi-intrusive survey at design stage showed the presence of asbestos. Its important sufficient time is given to ensure it's removed and disposed of safely and correctly. This will be covered in the site waste management plan.

Demolition to existing building	64 days?	Wed 27/03/24	Mon 24/06/24
Disconnection of services	1 day?	Wed 27/03/24	Wed 27/03/24
Soft Strip	20 days?	Thu 28/03/24	Wed 24/04/24
Asbestos removal	8 days?	Thu 25/04/24	Mon 06/05/24
Delivery of plant	1 day?	Tue 07/05/24	Tue 07/05/24
Set up Water bowser for dust supression	1 day?	Tue 07/05/24	Tue 07/05/24
Take down Second floor	8 days?	Wed 08/05/24	Fri 17/05/24
Cart materials off site	8 days?	Wed 08/05/24	Fri 17/05/24
Take down 1st floor	7 days?	Mon 20/05/24	Tue 28/05/24
Cart materials off site	7 days?	Mon 20/05/24	Tue 28/05/24
Take down Ground floor	5 days?	Wed 29/05/24	Tue 04/06/24
Cart materials off site	5 days?	Wed 29/05/24	Tue 04/06/24
Grup up basement	10 days?	Wed 05/06/24	Tue 18/06/24
Shoring/propping works to basement walls	3 days?	Wed 19/06/24	Fri 21/06/24
Install Fall protection	1 day?	Mon 24/06/24	Mon 24/06/24

Piling – 72 days

See Page 13 for detailed resource breakdown and cost estimates. Vibration and sound monitoring will be required throughout the piling process.

Piling	72 days?	Tue 25/06/24	Wed 02/10/24
Install piling mat	5 days?	Tue 25/06/24	Mon 01/07/24
Mobilisation of piling rig	5 days?	Tue 02/07/24	Mon 08/07/24
Piling	58 days?	Tue 09/07/24	Thu 26/09/24
Cast pile caps	58 days?	Tue 09/07/24	Thu 26/09/24
Building Control Foundations Inspection	1 day?	Fri 27/09/24	Fri 27/09/24
Removal of piling mat	4 days?	Fri 27/09/24	Wed 02/10/24

Reinforced Concrete Frame – 341 Days

The RCF has been shown on the programme per level. As this works is due to start during the colder winter months float has been included to allow for weather disruptions. Under The NEC Contract the contractor will be entitled to a compensation event for lost time if the weather recorded at the nearest weather mast is worse than 1 in 1000.

Reinforced Concrete Frame	341 days?	Thu 03/10/24	Thu 22/01/26
Lower Basement	40 days?	Thu 03/10/24	Wed 27/11/24
Errect vetical columns Lower Basement	10 days?	Thu 03/10/24	Wed 16/10/24
Errect Shoring Lower Basement	5 days	Thu 17/10/24	Wed 23/10/24
Pour walls Lower Basement	10 days	Thu 24/10/24	Wed 06/11/24
Errect decking lower basement	5 days	Thu 07/11/24	Wed 13/11/24
Lay and fix reinforcement	10 days	Thu 14/11/24	Wed 27/11/24
Slump test concrete	1 day?	Thu 14/11/24	Thu 14/11/24
Pour slab lower basmenet	5 days	Thu 14/11/24	Wed 20/11/24
Install pre cast stair case lower basement	5 days	Thu 21/11/24	Wed 27/11/24
Upper Basement	56 days?	Thu 21/11/24	Thu 06/02/25
Errect vertical columns upper basement	10 days	Thu 21/11/24	Wed 04/12/24
Errect Shoring upper basement	10 days	Thu 05/12/24	Wed 18/12/24
Pour walls Lower upper baseme	10 days	Thu 19/12/24	Wed 01/01/25
Errect decking upper basement	5 days	Thu 02/01/25	Wed 08/01/25
Lay and fix reinforcement	10 days	Thu 09/01/25	Wed 22/01/25
Slump test concrete	1 day?	Thu 23/01/25	Thu 23/01/25
Pour concrete slab upper basem	5 days	Thu 23/01/25	Wed 29/01/25
Install pre cast stair case upper basement	5 days	Thu 30/01/25	Wed 05/02/25
Remove fall protection	1 day?	Thu 06/02/25	Thu 06/02/25
Ground Floor	43 days?	Fri 07/02/25	Tue 08/04/25
Errect scaffold	3 days?	Fri 07/02/25	Tue 11/02/25
Errect vertical columns Ground fl	10 days?	Wed 12/02/25	Tue 25/02/25
Errect decking ground floor	10 days	Wed 26/02/25	Tue 11/03/25
Lay and fix reinforcement	10 days	Wed 12/03/25	Tue 25/03/25
Slump test concrete	1 day?	Wed 26/03/25	Wed 26/03/25
Pour concrete slab ground floor	5 days	Wed 26/03/25	Tue 01/04/25
Install pre cast stair case ground floor	5 days	Wed 02/04/25	Tue 08/04/25

First Floor	43 days?	Wed 09/04/25	Fri 06/06/25
Errect next level of scaffold	3 days?	Wed 09/04/25	Fri 11/04/25
Errect vertical colum s first floor	10 days?	Mon 14/04/25	Fri 25/04/25
Errect decking first floor	10 days?	Mon 28/04/25	Fri 09/05/25
Lay and fix reinforcement	10 days	Mon 12/05/25	Fri 23/05/25
Slump test concrete	1 day?	Mon 26/05/25	Mon 26/05/25
Pour concrete slab first floor	5 days	Mon 26/05/25	Fri 30/05/25
Install pre cast stair case first flo	5 days	Mon 02/06/25	Fri 06/06/25
Second floor	43 days?	Mon 09/06/25	Wed 06/08/25
Errect next level of scaffold	3 days?	Mon 09/06/25	Wed 11/06/25
Errect vertical colum s Second flo	10 days?	Thu 12/06/25	Wed 25/06/25
Errect decking second floor	10 days?	Thu 26/06/25	Wed 09/07/25
Lay and fix reinforcement	10 days?	Thu 10/07/25	Wed 23/07/25
Slump test concrete	1 day?	Thu 24/07/25	Thu 24/07/25
Pour concrete slab second floor	5 days?	Thu 24/07/25	Wed 30/07/25
Install pre cast stair case second floor	5 days	Thu 31/07/25	Wed 06/08/25
Third floor	43 days?	Thu 07/08/25	Mon 06/10/25
Errect next level of scaffold	3 days?	Thu 07/08/25	Mon 11/08/25
Errect vertical colum s third floo	10 days?	Tue 12/08/25	Mon 25/08/25
Errect decking third floor	10 days?	Tue 26/08/25	Mon 08/09/25
Lay and fix reinforcement	10 days?	Tue 09/09/25	Mon 22/09/25
Slump test concrete	1 day?	Tue 23/09/25	Tue 23/09/25
Pour concrete slab third floor	5 days?	Tue 23/09/25	Mon 29/09/25
Install pre cast stair case third fl	5 days?	Tue 30/09/25	Mon 06/10/25
Fourth Floor	43 days?	Tue 07/10/25	Thu 04/12/25
Errect next level of scaffold	3 days?	Tue 07/10/25	Thu 09/10/25
Errect vertical colum s fourth flo	10 days	Fri 10/10/25	Thu 23/10/25
Errect decking fourth floor	10 days	Fri 24/10/25	Thu 06/11/25
Lay and fix reinforcement	10 days	Fri 07/11/25	Thu 20/11/25
Slump test concrete	1 day?	Fri 21/11/25	Fri 21/11/25
Pour concrete slab fourth floor	5 days	Fri 21/11/25	Thu 27/11/25
Install pre cast stair case fourth floor	5 days	Fri 28/11/25	Thu 04/12/25
Fith floor	35 days?	Fri 05/12/25	Thu 22/01/26
Errect vertical Columns	10 days?	Fri 05/12/25	Thu 18/12/25
Errect Decking	10 days	Fri 19/12/25	Thu 01/01/26
Lay and fix reinforcment	10 days	Fri 02/01/26	Thu 15/01/26
Concrete slump test	1 day	Fri 16/01/26	Fri 16/01/26
Pour concrete	5 days	Fri 16/01/26	Thu 22/01/26

Roof – 60 days

Completion of the roof will result in a watertight structure triggering the internal fit and 1st fix M&E activities.

Roofing	60 days?	Fri 23/01/26	Thu 16/04/26
Main roof terrace green roof	40 days?	Fri 23/01/26	Thu 19/03/26
Install Planters roof top	20 days?	Fri 20/03/26	Thu 16/04/26
Install roof lights	20 days?	Fri 20/03/26	Thu 16/04/26
Warm roof construction	50 days?	Fri 23/01/26	Thu 02/04/26

Envelope – 170 Days

The scaffold assembled during erection of the structural frame will continue to be utilised for the enveloping works. Materials will be lifted using the crane to dedicated loading platforms.

Envelope	170 days?	Fri 19/12/25	Thu 13/08/26
Lower basement fair faced blockwork	15 days	Fri 19/12/25	Thu 08/01/26
Upper basement fair faced blockwork	15 days	Fri 09/01/26	Thu 29/01/26
Ground floor fair faced blockwork	15 days	Fri 30/01/26	Thu 19/02/26
First Floor fair faced blockwork	15 days	Fri 20/02/26	Thu 12/03/26
Second floor fair faced blockwork	15 days	Fri 13/03/26	Thu 02/04/26
Third floor fair faced blockwork	15 days	Fri 03/04/26	Thu 23/04/26
Fourth Floor fair faced blockwork	15 days	Fri 24/04/26	Thu 14/05/26
Fifth Floor fair faced blockwork	15 days	Fri 15/05/26	Thu 04/06/26
Curtain wall upper and lower basements	15 days?	Fri 30/01/26	Thu 19/02/26
Install rails, insulation and aluminium cladding Ground floor	15 days?	Fri 20/02/26	Thu 12/03/26
Install rails, insulation and aluminium cladding First Floor	15 days	Fri 13/03/26	Thu 02/04/26
Install rails, insulation and aluminium cladding Second floor	15 days	Fri 03/04/26	Thu 23/04/26
Install rails, insulation and aluminium cladding third floor	15 days	Fri 24/04/26	Thu 14/05/26
Install rails, insulation and aluminium cladding fourth floor	15 days	Fri 15/05/26	Thu 04/06/26
Soffit works and balconies	30 days	Fri 05/06/26	Thu 16/07/26
Perimeter mesh screen fifth floor	20 days	Fri 17/07/26	Thu 13/08/26

Windows and doors – 85 Days

All the glazing will be installed in sequence starting on the ground floor.

Windows and Doors	85 days?	Fri 20/02/26	Thu 18/06/26
External Doors install Ground floor	10 days?	Fri 20/02/26	Thu 05/03/26
Windows install Ground floor	10 days	Fri 20/02/26	Thu 05/03/26
External Doors install First floor	2 days	Fri 13/03/26	Mon 16/03/26
Windows install first floor	10 days	Fri 13/03/26	Thu 26/03/26
External Doors installs second floor	2 days	Fri 03/04/26	Mon 06/04/26
Windows install third floor	10 days	Fri 24/04/26	Thu 07/05/26
External Doors installs third floor	2 days	Fri 24/04/26	Mon 27/04/26
Windows install fourth floor	10 days	Fri 15/05/26	Thu 28/05/26
External doors fourth floor	2 days	Fri 15/05/26	Mon 18/05/26
Windows install fifth floor	10 days	Fri 05/06/26	Thu 18/06/26
External doors fifth floor	2 days	Fri 05/06/26	Mon 08/06/26

Internal Works – 286 days

The internal works begin in the basement at the same time as the final façade works. This staggered approach allows for maximum productivity on site. Following the testing and commission and final clean the building will be handed over on the 26th of March 2027.

Internal Works	286 days?	Fri 20/02/26	Fri 26/03/27
Infill steel work lower and upper basement	20 days?	Fri 20/02/26	Thu 19/03/26
Install glazed partitions	40 days?	Fri 05/06/26	Thu 30/07/26
Power coat concrete floor	60 days	Fri 20/03/26	Thu 11/06/26
First fix carpentry	40 days	Fri 05/06/26	Thu 30/07/26
First fix mechanical	90 days	Fri 05/06/26	Thu 08/10/26
First fix electrical	90 days	Fri 05/06/26	Thu 08/10/26
Internal fit out	110 days	Fri 05/06/26	Thu 05/11/26
Second fix carpentry	60 days	Fri 31/07/26	Thu 22/10/26
Install Carpets	25 days?	Fri 23/10/26	Thu 26/11/26
Second fix mechanical	40 days	Fri 09/10/26	Thu 03/12/26
Second fix electrical	40 days	Fri 09/10/26	Thu 03/12/26
Decoration	50 days	Fri 27/11/26	Thu 04/02/27
Electrical Testing	5 days	Fri 05/02/27	Thu 11/02/27
Mechanical testing	5 days	Fri 05/02/27	Thu 11/02/27
Witnessing and training	5 days	Fri 12/02/27	Thu 18/02/27
Snagging	5 days	Fri 19/02/27	Thu 25/02/27
Final Clean	20 days	Fri 26/02/27	Thu 25/03/27
Handover	1 day?	Fri 26/03/27	Fri 26/03/27

Piling Resource

The piling works are estimated to take 72 days and cost £406,040.

Equipment

Hire of the piling rig is estimated to cost around £900 a day (Piling Rig Hire,2022). Any delay will result in an additional £900 a day charge. The piling mat will cost £15,000 and includes installation and removal. The design of the piling mat has been carried out to ensure its not too deep and a waste of time and materials but also durable and sufficient for the imposed loads to ensure no damage or need for urgent repairs during piling (Designing Buildings, 2022).



Labour

Allowance has been made for one gang of piling specialists on a rate of £40 each per hour which equates to £200 an hour for the gang (Go Construct, 2023)

Materials

Based off the site area of approx. 1,300m², materials cost split across both concrete and steel reinforcement is £20,000 for concrete and £80,000 for the piles. The average price for concrete per cubic meter is £75 but with delivery and pumping this can increase significantly. Boom pump rental per day average rate is £600 (Statista, no date)

Cost report

Piling	72 days?	Tue 25/06/24	Wed 02/10/24	72		£406,040.00
Install piling mat	5 days?	Tue 25/06/24	Mon 01/07/24	72	Gang	£25,400.00
Mobilisation of piling rig	5 days?	Tue 02/07/24	Mon 08/07/24	75	Gang	£16,400.00
Piling	58 days?	Tue 09/07/24	Thu 26/09/24	76	Gang	£193,800.00
Cast pile caps	58 days?	Tue 09/07/24	Thu 26/09/24	76	Concr	£161,640.00
Building Control Foundations Inspection	1 day?	Fri 27/09/24	Fri 27/09/24	77,78	Inspe	£480.00
Removal of piling mat	4 days?	Fri 27/09/24	Wed 02/10/24	77	Gang	£8,320.00

Performance monitoring and incentivisation

The success of the project relies heavily on a smooth delivery process to ensure minimal disruption to the surrounding busy area and promote a drive for the building to be operational within the timeframe set at the outset. UWTSD as a Client will hold monthly progress meeting to monitor progress and address any issues that arise promptly.

Options for Client

Performance and productivity on site need to be consistent throughout the whole delivery process. During the tender process the tender evaluation should be split between cost and quality. The percentage split should reflect the key drivers for the project. The cost time quality triangle represents the three key drivers when determining the brief and deliverables of a project and often it's very difficult to prioritise all three. To ensure a good quality product sufficient time and skill is required which costs considerably more in comparison to value engineering and tight budgets forcing unskilled resource and rushed work. A 70% cost 30% quality split at tender stage allows for cost to still be the main factor ensuring value for money but whilst also assessing the contractors on their competence and experience (Compass, E. 2017). Given the location of the site at tender stage, questioning the bidding contractors on how they are going to manage the site logistics will demonstrate their competency to deliver a complex project efficiently. If the site compound and access points were not managed effectively this could possibly have a negative impact to the surrounding area and the programme of works.

Contract Options

Under the NEC Contract there are several clauses and mechanisms that benefit both the project and client project manager to ensure smooth efficient delivery of projects. The NEC contract sets out the requirement for a revised construction programme to be submitted monthly for review by the project manager (NEC, 2022). This ensures any slippage or changes to the scope of works are captured. The contract also encourages the contractors to account for time risk allowances against high-risk activities such as works that may be affected by weather, helping to reduce the risk of falling behind programme. The NEC contract also requires contractors to allow for float in programmes.

The NEC Contract also has an optional damages clause where if the contractor fails to deliver the works by the completion date defined in the contract, they are required to pay a weekly fee until the works are accepted by the client as being completed. The weekly penalty fee is defined prior to signing the contract. On large schemes a penalty fee between £2-5k a week will act as a large incentive for contractors to perform and meet their programme dates.

The NEC Contract also has an acceleration clause built into the contract which allows the client project manager to request a quotation from the contractor to bring the completion date of the works forwards (NEC, 2022).. The contractor can submit a quotation for the additional resource required to deliver the project sooner or state the reasons why they don't believe the works can be accelerated.

KPI'S

Key Performance Indicators when used correctly are a great way to encourage consistent performance levels. Poor performances can be tracked and used to deny contractors future works until they address the issues, they are scoring poorly in.

Contractor's Workforce

A poor workplace environment and lack of incentivisation can result in workers feeling drained, disrespected, and discouraged. Although money is the main factor, simple verbal appreciation and regular praise creates a positive environment and ensures works feel valued.

Bonuses

Performance based bonuses can incentivise workers to work towards tight timelines and provide pride and quality in their work. Bonuses in large construction companies need to be managed fairly and in line with a set policy to avoid confusion and disputes between staff which could result in demotivating them (Pinsent Masons, 2022). Workers bonuses should be in line with their specific role and achievable at all levels within the company.

Overtime

The offer of gaining more hours may not appeal to all workers but is a great way to catch up with productivity on site if the programme has slipped whilst also incentivising staff with the opportunity to earn more money.

Training

Creating routes for progression within the workplace is a key way to incentivise workers to perform and strive to develop their skills and knowledge. Knowing hard work can lead to promotion is a great way to positively improve performance on site whilst also achieving personal goals and promotions. The construction industry offers a range of roles and training opportunities and by offering training schemes and time off for study, staff can not only develop their capabilities in the workplace by gaining qualifications but also progress within the company. Retaining staff and attracting skilled workers in to a construction company is vital to both good reputation and business performance.

Client Design Change

During the internal fit out, a regular site meeting with the client representative resulted in a dispute over the carpet choice across the main sections of the building. The Contractor evidenced that they had follow the specification stated within the contract documents. The contractor had ordered a quarter of the amount of carpet needed which was approximately £90,000. As the client did not like the carpet, they requested a quote from the contractor to lay all the flooring in a different flooring. Under the NEC contract the clients project manager can instruct a change under clause 14.3. Following this instruction, the contractor is required to respond with a quotation within a 2-week period. This quotation needs to set out both the time and cost implications. If the project manager accepts the change and quotation provided by the contractor, they can notify the change under clause 65.1 which amends the contract sum and contract completion date in line with the contractors quote.

Program delay

The 4-week lag added to the programme pushes project completion to the 23rd of April 2027 from the 26th of March 2027. See Appendix 2 for full programme.

Internal Works	306 days?	Fri 20/02/26	Fri 23/04/27	
Infill steel work lower and upper basement	20 days?	Fri 20/02/26	Thu 19/03/26	165
Install glazed partitions	40 days?	Fri 05/06/26	Thu 30/07/26	170
Power coat concrete floor	60 days	Fri 20/03/26	Thu 11/06/26	194
First fix carpentry	40 days	Fri 05/06/26	Thu 30/07/26	170
First fix mechanical	90 days	Fri 05/06/26	Thu 08/10/26	170
First fix electrical	90 days	Fri 05/06/26	Thu 08/10/26	170
Internal fit out	110 days	Fri 05/06/26	Thu 05/11/26	170
Second fix carpentry	60 days	Fri 31/07/26	Thu 22/10/26	197
Install Carpets	25 days?	Fri 20/11/26	Thu 24/12/26	201FS+20 days
Second fix mechanical	40 days	Fri 09/10/26	Thu 03/12/26	
Second fix electrical	40 days	Fri 09/10/26	Thu 03/12/26	199
Decoration	50 days	Fri 25/12/26	Thu 04/03/27	202
Electrical Testing	5 days	Fri 05/03/27	Thu 11/03/27	205
Mechanical testing	5 days	Fri 05/03/27	Thu 11/03/27	205
Witnessing and training	5 days	Fri 12/03/27	Thu 18/03/27	206,207
Snagging	5 days	Fri 19/03/27	Thu 25/03/27	208
Final Clean	20 days	Fri 26/03/27	Thu 22/04/27	209
Handover	1 day?	Fri 23/04/27	Fri 23/04/27	210

Conclusion

By ensuring a detailed design stage is in place, encouraging close client and stakeholder engagement from the start and optimising the NEC Contract, the scheme will be in a strong position to mitigate risks of unnecessary delay. Strong programme management, budget management and effective stakeholder engagement are key to the successful delivery of complex projects.

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Appendices

Appendix 1 _ Master Programme

Appendix 2 Revised Programme

