

Assessment 2: Project Planning for Construction (ACBA5001): Programmes

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I. Introduction

This assessment report provides a work breakdown, sample method statements, a programme of works plus an analysis of time, cost and resources needed for the construction of fifteen timber framed dwellings, lots 70 to 84 at Hendrefoilan Student Village. Lots 70 to 84 are situated at the southern located cul-de-sac of the development; the entire scheme comprises 113 lots in total. (Portal,2024)

To apply effective project planning and programming it was necessary to break down the project into ten major deliverable activities. These activities are further broken down again into smaller more manageable minor deliverables. This planning structure of major and minor deliverables is continued as a theme throughout this assessment report.

The ten themed major deliverables are: Preliminaries, Substructure, Superstructure, Roof & External, First Fix, Surfaces, Internal Fitting, Second Fix, Finishing and Completion.

To be successful in planning and executing such a large project, the overall task needs to be simplified into a hierarchical decomposition of these major, minor and even sub-minor deliverables. The construction industry typically achieves this in creating a deliverable based Work Breakdown Structure. (IPM,2024)

Three activities from the themed deliverable list are selected in order to demonstrate Construction Method Statements:

- Substructure – Strip Foundation
- First Fix – Plumbing
- Roof & External – Roof Tiling

The Critical Path of all ten major deliverables is demonstrated on the Microsoft Project Gantt Chart as is the rates and pricing structure.

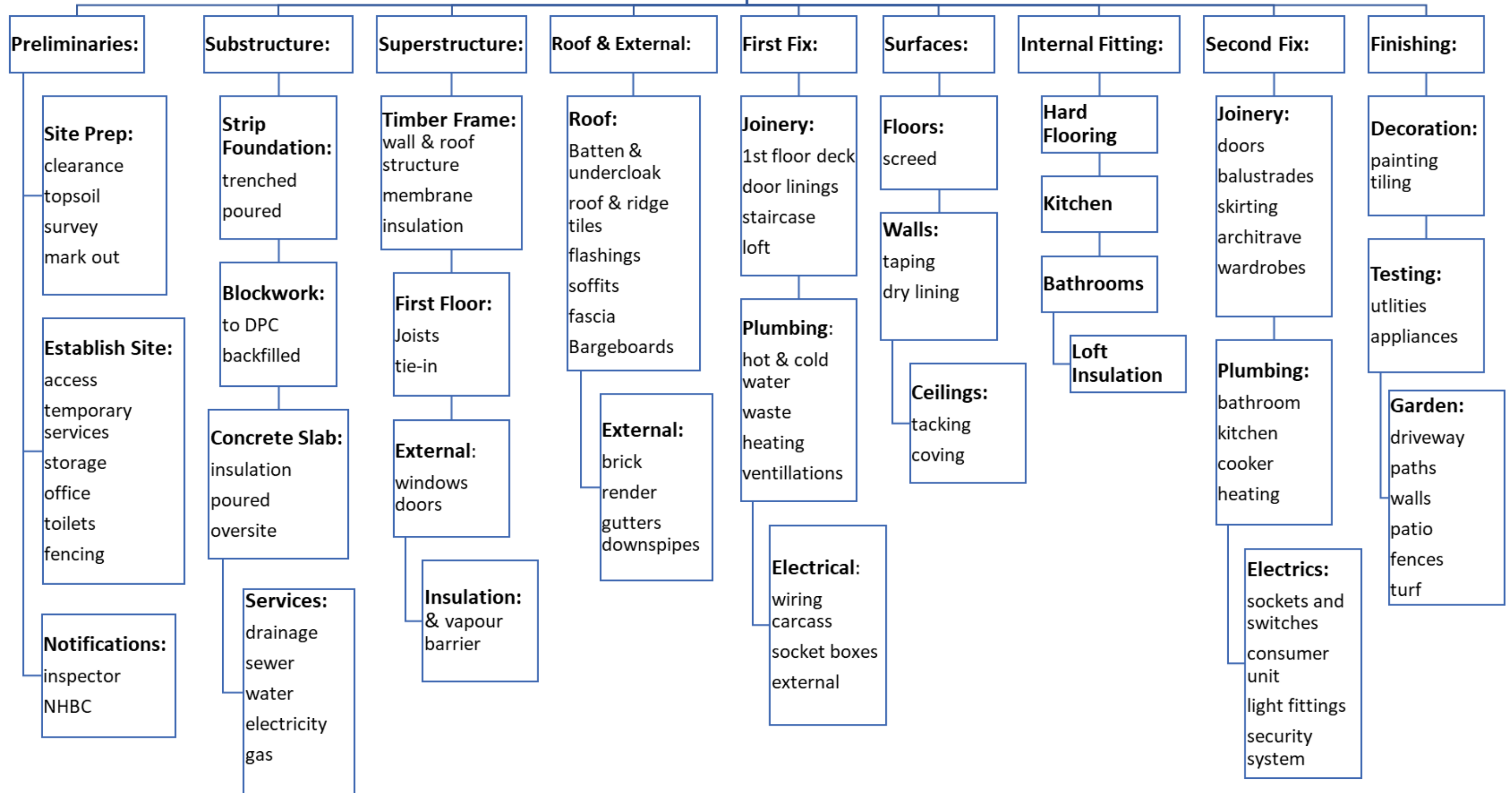
Similarly, all ten major deliverables are evaluated to produce site-specific reports for resources, time and cost.

II. Work Breakdown Structure

Handover of Hedrefoilan (Lots 70 - 84) to sales department

**Bens
Homes Ltd**

Completion: inspection, certification, snagging



**III. Construction
Method Statements****Bens Homes Ltd****Hendrefoilan Student Village – Southern Cul-de-sac****Method Statement Series:****Part G. General****Part A. Substructure – Strip Foundation****Part B. First Fix – Plumbing****Part C. Roof & External – Roof Tiling****Author**

Rev.	Company:	Document title:	Author:	Signature:	Date:
0	Bens Homes Ltd	QHSD-MS-GABC	Ben Jeffs		16/04/24

Reviewed By

Reviewed by:	Company:	Job title:	Signature:	Date:
	BHL	Quality Manager		
	BHL	Site Supervisor		

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 	Method Statement. General (applies to all project method statements)			Section			
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1. General

1.1. Project Detail

Bens Homes Ltd are designated by the Construction Design Regulations (CDM,2015) to be both the Client and Principal Contractor, individual smaller service providers are Subcontractors. The southern cul-de-sac comprises 15 houses of timber frame construction; 2 off detached 4 bedroom, 6 off semidetached 2 bedroom, 4 off semidetached 3 bedroom, 3 off terraced 3 bedroom. The intricacies of each house type are not detailed in this method statement but should be given consideration prior to work commencement. (Portal,2024)

1.2. Legislation and Best Practice

All works are carried out in accordance with the legal requirements of the Health and Safety at Work Act (HASAWA,1974), the Building Regulation (BR,2010), the Construction Design & Management Regulations 2015 (CDM,2015), as directed by contract specifications and drawings, and in compliance to industry best practices provided by the British Standards Institute (BSI,2024)

1.3. Project Communication & Important Site Locations

Ben Jeffs- Project Manager (Chartered) – overall management. Tel 07984 555111
 Andy Wood- Site Supervisor (Level 4 BTEC)– primary site contact. Tel 07984 555222
 Simon Smooth– Quality Health Safety & Environmental Manager. Tel 07984 555666
 Robert Counter– Quantity Surveyor – commercial matters. Tel 07984 555555
 John Sample- Site Administration (Level 3 BTEC). Tel 07984 555555

Important Site Locations - First aid station is located at site portacabin office.
 Welfare, toilets, kitchen and mess room are located adjacent to site portacabin office.
 Incident muster station is located at the car park adjacent to site portacabin office.

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1.4. Emergency Arrangements

In the event of an emergency follow the site procedures as detailed in your site induction training manual. This contains all site Emergency, Health & Safety Provisions.

1.5. Monitoring and Audit

These works will be subject to a closed loop auditing system where all staff and works are further inspected and signed off by the Bens Homes Ltd Project Manager. A further audit is carried out on a contract wide basis to ensure continual compliance to this quality monitoring.

1.6. Linked Contract Documents

Architect drawings relevant to the specific deliverable.

CDM Construction Phase Plan.

Site induction emergency procedures and health & safety provisions

Health Safety and Environmental Policy Statements.

Contract Risk Assessments Document: QHSD-RA4.

Site waste disposal procedure.

1.7. General PPE Requirements

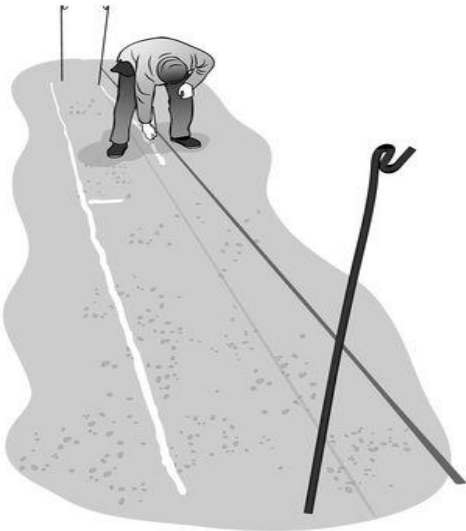
General PPE Requirements: Safety helmet, hi-vis vest, safety glasses, protective gloves, steel-toe boots, spill kit, first-aid kit x 2, knee pads, dust mask/respirator and ear protection (where appropriate) (HASAWA,1974)

A. Substructure – Strip Foundation

A.1. Scope of Work

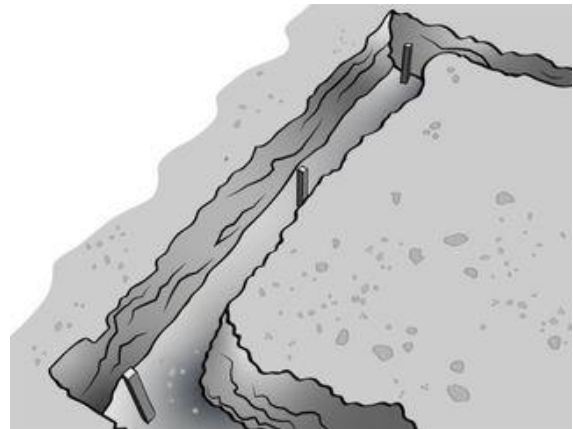
Specific legislation and best practice references include the Building Regulations (BR,2010). This scope of work is carried out as directed by contract specifications and drawings, and in compliance to British Standard BS8004:2015 Code of practice for foundations. (BSI,2024).

The scope of work includes the provision of materials and labour to:

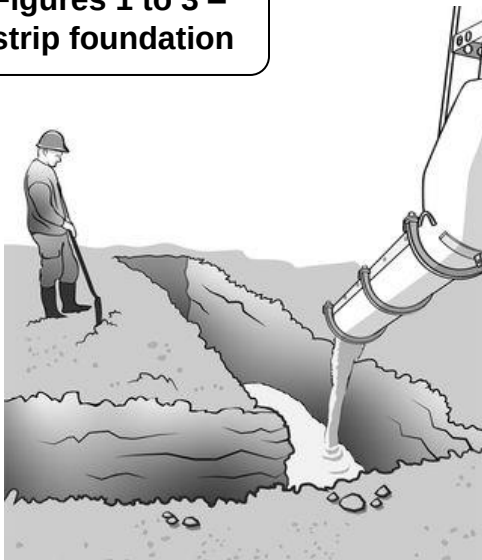


mark out the strip trench,

excavate the strip trench,



**Figures 1 to 3 –
strip foundation**



pour premix concrete and level strip foundation.

		Method Statement. Substructure – Strip Foundation	Section			
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A.2. Planning and Access

Project commencement date is 18th March 2024, Substructure commencement is estimated at Week 2. For accurate planning see latest Project Gantt Chart. The operatives required for this task are: site supervisor, project surveyor, groundworks technician, groundworks assistant, dumper vehicle operator and excavator operator.

A.3. Tools and Equipment & Materials

PPE and general hand tools; survey equipment, excavating machine, dumper vehicle, concrete pump and hoses, shovels, rakes, wheelbarrows, disposable wipes, marker pins, string, marker paint. Materials include; pre mixed concrete to specified standards and specified ducting.

A.4. COSHH

Refer to project specific COSHH Assessment Document: QHSD-COSHH5 and separate manufacturers COSHH assessment for: Hanson Pre-Mix Concrete to the client's specification, Wavin HDPE ducting glue, Debs Jizer cleaner degreaser.

A.5. Procedure

Ensure the work area is accessible and that conditions are safe to commence work.

Ensure necessary tools and materials are on hand.

Collaboration is required; the surveyor is to ensure all operatives fully understanding what is required.

Ensure areas are marked out and that peg and string lines are placed and clearly understood by all operatives. Use marker paint if deemed necessary.

Carry out buried service survey utilising CAT detection.

Ensure topsoil has been removed and stored at designated area, as delivered during the site preliminaries phase.

		Method Statement. Substructure – Strip Foundation	Section			
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Digger machine operator, dumper machine operator and banksman are fully aware of excavation parameters.

Utilising suitable digger with correct bucket width, commence excavation.

Digger to transfer subsoil to dumper, dumper to store subsoil at the designated storage area.

The surveyor will have a site level set to the required depth and width, collaborate throughout to check progress.

Lay all necessary cable and pipe ducts below the strip foundation.

The building control inspector may visit and check details at this stage.

Place depth pegs into the trench to show concrete depth, additionally mark the side of the trench with marker paint.

If it is safe to do so and the ground is stable, position the premix concrete supply vehicle and pour concrete into the trench. If access is restricted configure a concrete pump arrangement to aid delivery of the concrete to the required places.

Rake over concrete surface to make minor level adjustments, as needed.

Again, the building control inspector may visit and check details at this stage.

Clean up the work area, disposing of any waste materials.

Carry out a final visual inspection of all work.

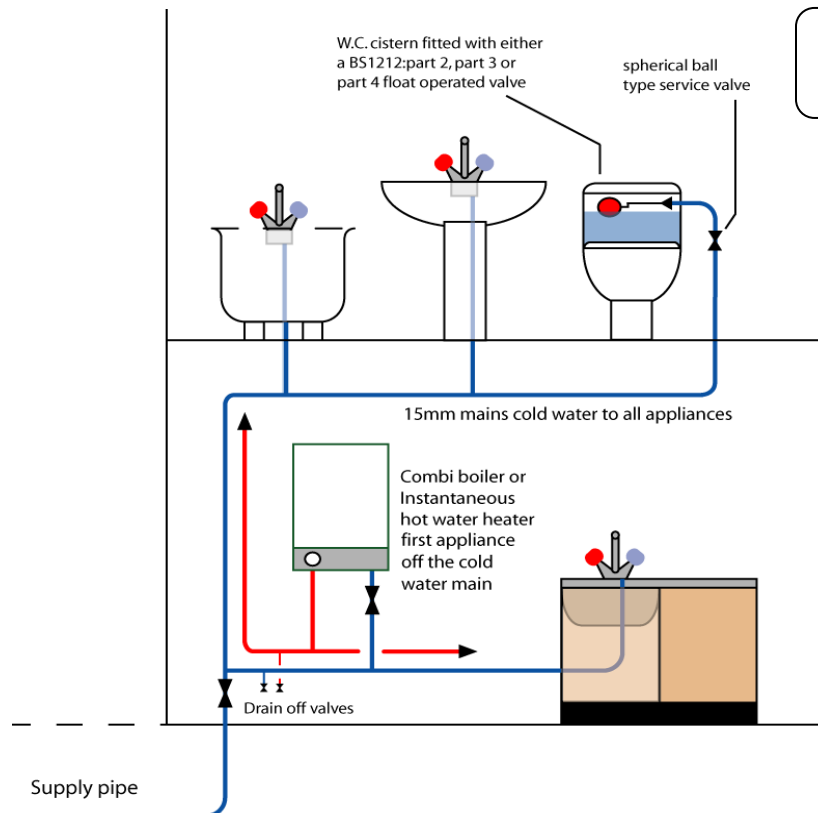
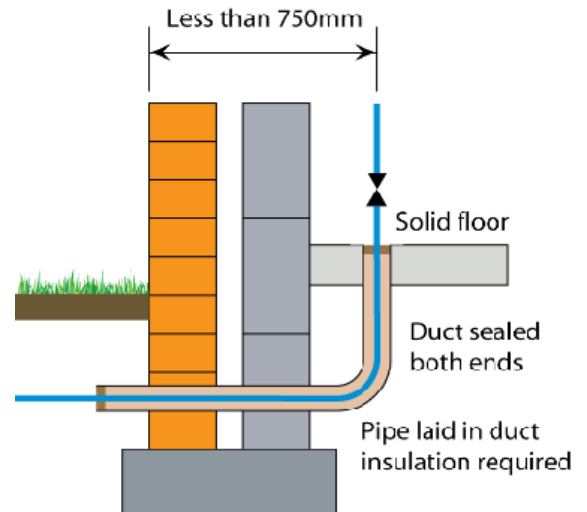
(Barrys,2010) (Chudley&Greeno,2013)

Section			
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B. First Fix - Plumbing

B.1. Scope of Work

Specific Legislation and Best Practice references include the Water Regulations (WR,2017). This scope of work is carried out as directed by contract specifications and drawings, and in compliance to industry best practices provided by the British Standards Institute (BSI,2023).



Figures 4 to 5 – cold & hot water pipework

The scope of work includes the provision of materials and labour for installation, testing and commissioning of the internal cold-water pipework from the stopcock valve and hot water pipework from the combination boiler to termination isolation valves (TIV) at the kitchen and bathroom positions:

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B.2. Planning and Access

Project commencement date 18th March 2024, First Fix commencement is estimated at Week 18. For accurate planning see latest Project Gantt Chart. The operatives required for this task are: Site Supervisor, Plumbing Technician and Plumbers assistant.

B.3. Tools, Equipment & Materials

PPE and power tools (cordless 24 volt), lighting systems (cordless 24 volt), test pump & gauge (manual operation), pipe benders, pipe cutters, general hand tools and consumables, e.g.: spanners, pliers, hammers, grips, drivers, drill bits, thread sealant, disposable wipes. Materials include; thermoplastic polymer solid wall coiled pipe and fittings; in 25mm and 15mm diameter manufactured to BSI7291,2006.

B.4. COSHH

Refer to project specific COSHH Assessment Document: QHSD-COSHH5 and separate manufacturers COSHH assessment for: PTFE sealant, WD40 penetrating lubrication oil, Fuchs red rubber grease, Debs Jizer cleaner degreaser, Cutting paste.

B.5. Procedure

Ensure the work area is accessible and that conditions are safe to commence work.

Ensure necessary tools and materials are on hand.

Fittings and pipe should be kept clean and undamaged before use. Ensure the pipe is free of score marks.

Cut the pipe square, using cutters. To prevent damage to the fittings, remove all burrs and sharp edges.

		Method Statement. First Fix – Plumbing	Section			
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Push pipe into fitting up to the pipe stop. If the pipe has been cut correctly the insertion mark on the pipe will be level with the collet head. Pull to check connection is secure.

From the stopcock valve run the 25mm diameter cold riser PB pipe through the dry wall void to; firstly, the TIV Position of the combination boiler in the utility room and then secondly via a Tee connector to the 1st floor joist level.

At joist level run 25mm diameter cold PB pipe to TIV at each room; as identified by architects' drawing. Connecting, supporting and bending as necessary.

Care should be taken when bending pipe, do not bend PB pipe beyond its recommended bending radius as this can cause kinking. PB pipes that have been damaged during bending should not be used.

Using branch connectors route the 15mm diameter cold PB pipe for each of the TIV positions on both the ground and first floor.

Route through and along joists as necessary. Utilise dry wall cavity for vertical positioning. Connecting, supporting and bending as necessary.

From combination boiler position run the 25mm diameter hot riser PB pipe through the dry wall void to 1st floor joist level. Connecting, supporting and bending as necessary.

Repeat the above steps above for the hot water pipe installation

On completion of the plumbing, Test for leaks in accordance with the British Standard BS 8558, 201. Design, installation, testing and maintenance of services supplying water and BS EN 806 Specifications for water installations inside buildings. (BSI,2024) (WR, 2017)

To carry out a hydraulic wet test ensure connections to all appliances are capped or plugged. Connect hydraulic pump at stop cock valve. Test for 2 bar for 10 minutes followed by: 10 Bar for 10 minutes. No visible loss of pressure is permitted.

Flush pipework in accordance with BS EN 806, this is essential to remove any harmful debris or contamination or chemical residues.

The building control inspector may visit and check details at this stage.

Clean up the work area, disposing of any waste materials.

Carry out a final visual inspection of all work.

(CIPHE,2023)

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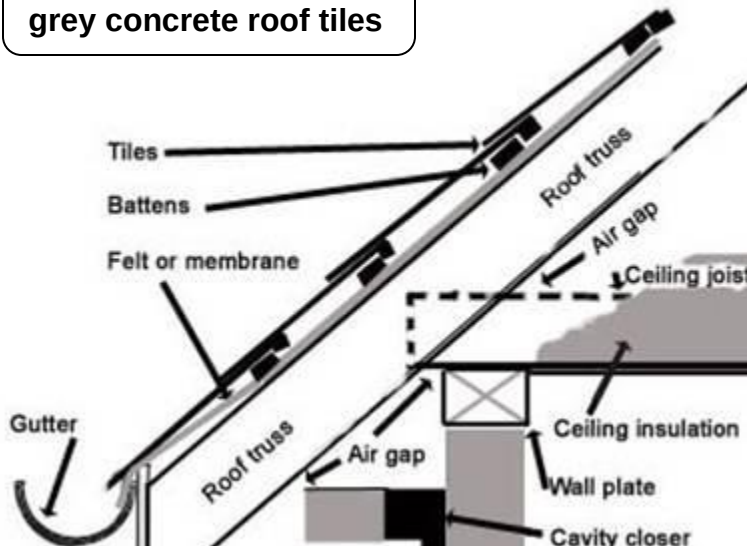
C. Roof & External – Roof Tiling

C.1. Scope of work

Specific Legislation and Best Practice references include: BSI5250 – ‘Code of practice for the control of condensation in buildings’, BSI5534 – ‘Code of practice for slating and tiling’, BS8000-6 – ‘Workmanship on building sites – Part 6. Code of practice for slating and tiling of roofs and cladding’. BSI8612 – ‘Dry-fixed Ridge, Hip and Verge Systems for Slating and Tiling - Specification’



**Figures 6 to 7 – slate
grey concrete roof tiles**



The scope of work includes the provision of all materials and labour to install the sheet insulation, breathable membrane, battens and Marley slate grey concrete roof tile. (Marley,2024)

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C.2. Planning and Access

Project commencement date is the 18th March 2024, Roof & External – Roof Tiling; commencement is estimated at Week 14. For accurate planning see latest Project Gantt Chart. The operatives required for this task are: Site Supervisor, Roofing Technician, Roofing assistant and Fork Lift Operator

C.3. Tools and Equipment & Materials

PPE and general hand & power tools (cordless 24 volt); petrol disc cutter, paslode nail fixers, pliers, hammers, grips, drivers, drill bits, consumables; adhesives, disposable wipes. Marley Alban Sussex Blend machine made clay plain tiles and fittings, 25 x 38 pressure treated batten, Marley vapour permeable underlay, aluminium and galvanised nails.

C.4. COSHH

Refer to the project specific COSHH Assessment Document: QHSD-COSHH5 and separate manufacturers COSHH assessment for: Marley underlay glue.

C.5. Procedure

Ensure safe access to the roof by means of secured ladder to fully boarded perimeter scaffold not more than 450mm below top of fascia.

Handrails to all perimeters to prevent falls from edge of platform. Falling tools and materials to be contained by brick guards or nets to all perimeters.

Always be aware of danger to others when working above areas where personnel may gain access.

Materials are elevated to the working platform using a forklift operated by a trained competent person. Operatives are to stand clear of the loading bay whilst materials are being deployed.

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Once these materials have been placed in the loading bay and the gate Has been returned to the correct position, operatives may collect materials.

Materials are to be stacked around the scaffold to allow free access on walkways and must not obstruct access points.

Roll a strip of underlay across the rafters and tack into position.

The first tile batten is nailed into position giving the tile the correct overhang into the rain gutter. Subsequent tile battens are fixed at appropriate gauge, limiting the exposure to the open edge and providing a walkway up the roof slope as works progress.

Tiles are then loaded on the battens evenly over the roof and tiling commences from right to left. Tiles are fixed to manufacturer's recommendations with alloy tile nails.

As tiling progresses, tiles that require cutting will be cut in situ using a snap cutter if possible. Where this is not possible tiles will be cut on the scaffold platform on a sacrificial board using a petrol cutter with water suppression and appropriate PPE.

Covered or Bonnet hips are mortar bedded and mechanically fixed by walking up the installed battens, which create a walkway up the roof slope or ladders. Ridges are fixed and combined with a Klover dry vented ridge system, or Ridges are bedded and mechanically fixed through the mortar joint, verges are bedded and pointed. All mortar work is in a Remix roofing black mortar pre-mixed to a roofing grade and in accordance with the aforementioned British Standards.

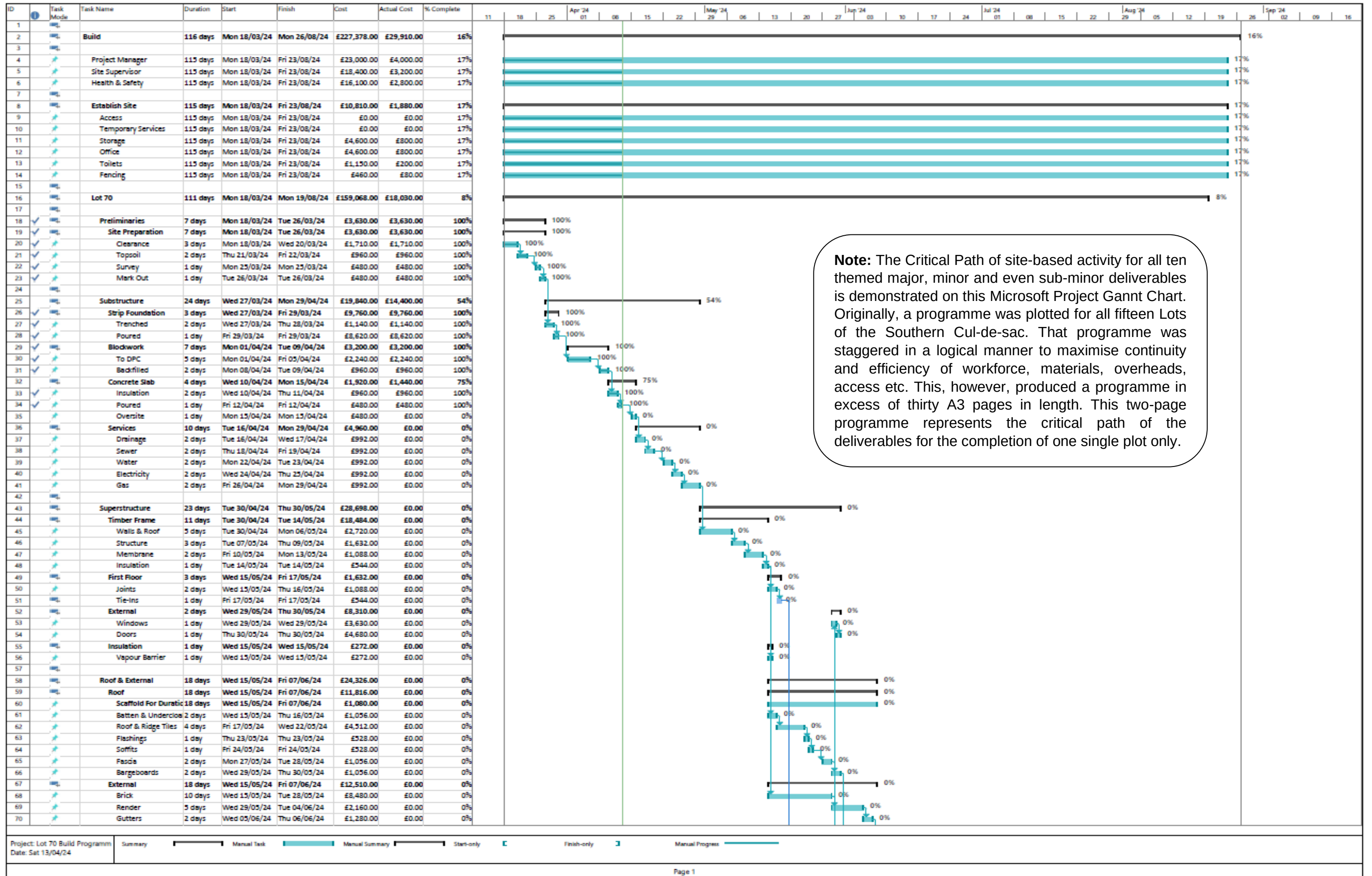
The building control inspector may visit and check details at this stage.

Clean up the work area, disposing of any waste materials.

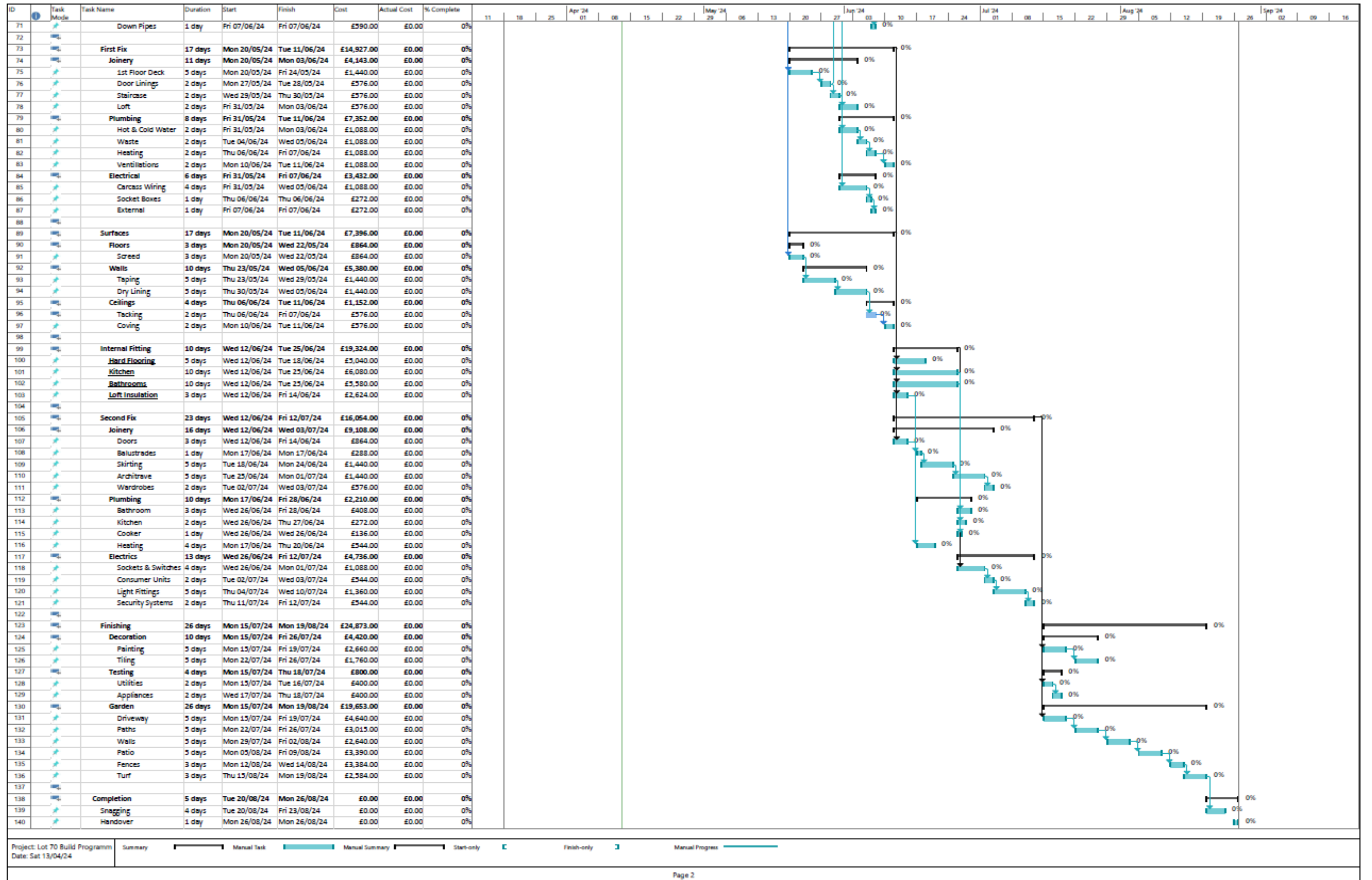
Carry out a final visual inspection of all work.

(Marley,2024)

IV. Gantt Chart. Pg. 1 of 2



IV. Gantt Chart. Pg. 2 of 2



V. Rates/Prices: Sources of rates are price books (SPONS,2024), trade web sites such as (Checkatrade,2024), major materials retailer catalogues (Jewson,2024) and building magazines (SelfBuild,2024).

ID	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Code
1												
2	Supervisor	Work		S		100%	£20.00/hr	£0.00/hr	£0.00	Prorated	Standard	
3	Project Manager	Work		P		100%	£25.00/hr	£0.00/hr	£0.00	Prorated	Standard	
4	Health & Safety Supervisor	Work		H		100%	£17.50/hr	£0.00/hr	£0.00	Prorated	Standard	
5	Office	Work		O		100%	£200.00/wk	£0.00/hr	£0.00	Prorated	Standard	
6	Store	Work		S		100%	£200.00/wk	£0.00/hr	£0.00	Prorated	Standard	
7	Toilets	Work		T		100%	£50.00/wk	£0.00/hr	£0.00	Prorated	Standard	
8	Herras Fencing	Work		H		100%	£20.00/wk	£0.00/hr	£0.00	Prorated	Standard	
9	Ground Worker 1	Work		G1		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
10	Ground Worker 2	Work		G2		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
11	Ground Worker 3	Work		G3		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
12	Ground Worker 4	Work		G4		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
13	Bricklayer 1	Work		B1		100%	£14.00/hr	£0.00/hr	£0.00	Prorated	Standard	
14	Bricklayer 2	Work		B2		100%	£14.00/hr	£0.00/hr	£0.00	Prorated	Standard	
15	Bricklayer 3	Work		B3		100%	£14.00/hr	£0.00/hr	£0.00	Prorated	Standard	
16	Bricklayer 4	Work		B4		100%	£14.00/hr	£0.00/hr	£0.00	Prorated	Standard	
17	Carpenter 1	Work		C1		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
18	Carpenter 2	Work		C2		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
19	Carpenter 3	Work		C3		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
20	Carpenter 4	Work		C4		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
21	Carpenter 5	Work		C5		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
22	Carpenter 6	Work		C6		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
23	Window & Door Fitter 1	Work		WDF1		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
24	Window & Door Fitter 2	Work		WDF2		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
25	Window & Door Fitter 3	Work		WDF3		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
26	Window & Door Fitter 4	Work		WDF4		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
27	Roofer 1	Work		R1		100%	£16.50/hr	£0.00/hr	£0.00	Prorated	Standard	
28	Roofer 2	Work		R2		100%	£16.50/hr	£0.00/hr	£0.00	Prorated	Standard	
29	Roofer 3	Work		R3		100%	£16.50/hr	£0.00/hr	£0.00	Prorated	Standard	
30	Roofer 4	Work		R4		100%	£16.50/hr	£0.00/hr	£0.00	Prorated	Standard	
31	Plumber 1	Work		P1		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
32	Plumber 2	Work		P2		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
33	Plumber 3	Work		P3		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
34	Plumber 4	Work		P4		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
35	Joiner 1	Work		J1		100%	£18.00/hr	£0.00/hr	£0.00	Prorated	Standard	
36	Joiner 2	Work		J2		100%	£18.00/hr	£0.00/hr	£0.00	Prorated	Standard	
37	Electrician 1	Work		E1		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
38	Electrician 2	Work		E2		100%	£17.00/hr	£0.00/hr	£0.00	Prorated	Standard	
39	Plasterer 1	Work		PL1		100%	£18.00/hr	£0.00/hr	£0.00	Prorated	Standard	
40	Plasterer 2	Work		PL2		100%	£18.00/hr	£0.00/hr	£0.00	Prorated	Standard	
41	Plasterer 3	Work		PL3		100%	£18.00/hr	£0.00/hr	£0.00	Prorated	Standard	
42	Plasterer 4	Work		PL4		100%	£18.00/hr	£0.00/hr	£0.00	Prorated	Standard	
43	Plasterer 5	Work		PL5		100%	£18.00/hr	£0.00/hr	£0.00	Prorated	Standard	
44	Gutters & Down Pipes 1	Work		G1		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
45	Gutters & Down Pipes 2	Work		G2		100%	£15.00/hr	£0.00/hr	£0.00	Prorated	Standard	
46	Decorator 1	Work		D1		100%	£14.50/hr	£0.00/hr	£0.00	Prorated	Standard	
47	Decorator 2	Work		D2		100%	£14.50/hr	£0.00/hr	£0.00	Prorated	Standard	
48	Landscaper 1	Work		L1		100%	£16.50/hr	£0.00/hr	£0.00	Prorated	Standard	
49	Landscaper 2	Work		L2		100%	£16.50/hr	£0.00/hr	£0.00	Prorated	Standard	
50	Landscaper 3	Work		L3		100%	£16.50/hr	£0.00/hr	£0.00	Prorated	Standard	
51	Landscaper 4	Work		L4		100%	£16.50/hr	£0.00/hr	£0.00	Prorated	Standard	
52	General Labourer 1	Work		GL1		100%	£12.50/hr	£0.00/hr	£0.00	Prorated	Standard	
53	General Labourer 2	Work		GL2		100%	£12.50/hr	£0.00/hr	£0.00	Prorated	Standard	
54	General Fitter 1	Work		GF1		100%	£13.00/hr	£0.00/hr	£0.00	Prorated	Standard	
55	General Fitter 2	Work		GF2		100%	£13.00/hr	£0.00/hr	£0.00	Prorated	Standard	
56	General Fitter 3	Work		GF3		100%	£13.00/hr	£0.00/hr	£0.00	Prorated	Standard	
57	General Fitter 4	Work		GF4		100%	£13.00/hr	£0.00/hr	£0.00	Prorated	Standard	
58	General Fitter 5	Work		GF5		100%	£13.00/hr	£0.00/hr	£0.00	Prorated	Standard	
59	General Fitter 6	Work		GF6		100%	£13.00/hr	£0.00/hr	£0.00	Prorated	Standard	
60	General Fitter 7	Work		GF7		100%	£13.00/hr	£0.00/hr	£0.00	Prorated	Standard	
61	General Fitter 8	Work		GF8		100%	£13.00/hr	£0.00/hr	£0.00	Prorated	Standard	
62	Services Installer 1	Work		SI1		100%	£15.50/hr	£0.00/hr	£0.00	Prorated	Standard	
63	Services Installer 2	Work		SI2		100%	£15.50/hr	£0.00/hr	£0.00	Prorated	Standard	
64	Services Installer 3	Work		SI3		100%	£15.50/hr	£0.00/hr	£0.00	Prorated	Standard	
65	Services Installer 4	Work		SI4		100%	£15.50/hr	£0.00/hr	£0.00	Prorated	Standard	
66												
67	Brick	Material		B			£1.00		£0.00	Start		
68	Concrete (SQM)	Material		C			£40.00		£0.00	Start		
69	Lengths of Timber	Material		L			£12.50		£0.00	Start		
70	Kitchen	Material		K			£4,000.00		£0.00	Start		
71	Bathroom	Material		B			£3,500.00		£0.00	Start		
72	Door	Material		D			£350.00		£0.00	Start		
73	Window	Material		W			£175.00		£0.00	Start		
74	Tiling	Material		T			£2.00		£0.00	Start		
75	Guttering	Material		G			£800.00		£0.00	Start		
76	Piping & Accessories	Material		P			£3,000.00		£0.00	Start		
77	Electrical Wiring & Accessories	Material		E			£1,800.00		£0.00	Start		
78	Insulation	Material		I			£2,000.00		£0.00	Start		
79	Plasterboard	Material		P			£2,500.00		£0.00	Start		
80	Bucket of Paint	Material		B			£30.00		£0.00	Start		
81	Roof Tile	Material		R			£0.80		£0.00	Start		
82	Turf	Material		T			£1,000.00		£0.00	Start		
83	Tarmac (Driveway)	Material		T			£2,000.00		£0.00	Start		
84	Other Woodwork (Balustrade Etc)	Material		O			£4,500.00		£0.00	Start		
85	Roof Accessories (Soffit Etc)	Material		R			£2,000.00		£0.00	Start		
86	Hard Flooring	Material		H			£4,000.00		£0.00	Prorated		
87	External Slab	Material		E			£25.00		£0.00	Prorated		
88	Fencing	Material		F			£1,800.00		£0.00	Prorated		
89	Joinery Items	Material		J			£975.00		£0.00	Prorated		
90	Electrical Items	Material		E			£1,200.00		£0.00	Prorated		
91	Plumbing Items	Material		P			£850.00		£0.00	Prorated		
92	Down Pipes	Material		D			£350.00		£0.00	Prorated		
93												
94	Excavator	Material		E			£90.00		£0.00	Prorated		
95	Concrete Pour Truck	Material		C			£140.00		£0.00	Prorated		
96	Scaffold	Material		S			£60.00		£0.00	Prorated		

VI. Reports

VI.a. Resources – Labour: The report provides the values for time and cost that are predicted overall, plus a snapshot of the current situation.

Name	Start	Finish	Cost	Actual Cost	Work	Actual Work	Remaining Work
Supervisor	Mon 18/03/24	Fri 23/08/24	£18,400.00	£3,200.00	920 hrs	160 hrs	760 hrs
Project Manager	Mon 18/03/24	Fri 23/08/24	£23,000.00	£4,000.00	920 hrs	160 hrs	760 hrs
Health & Safety Supervisor	Mon 18/03/24	Fri 23/08/24	£16,100.00	£2,800.00	920 hrs	160 hrs	760 hrs
Ground Worker 1	Mon 18/03/24	Mon 15/04/24	£1,920.00	£1,800.00	128 hrs	120 hrs	8 hrs
Ground Worker 2	Mon 18/03/24	Mon 15/04/24	£1,920.00	£1,800.00	128 hrs	120 hrs	8 hrs
Ground Worker 3	Mon 18/03/24	Mon 15/04/24	£1,920.00	£1,800.00	128 hrs	120 hrs	8 hrs
Ground Worker 4	Mon 18/03/24	Mon 15/04/24	£1,920.00	£1,800.00	128 hrs	120 hrs	8 hrs
Bricklayer 1	Mon 01/04/24	Tue 28/05/24	£1,680.00	£560.00	120 hrs	40 hrs	80 hrs
Bricklayer 2	Mon 01/04/24	Tue 28/05/24	£1,680.00	£560.00	120 hrs	40 hrs	80 hrs
Bricklayer 3	Mon 01/04/24	Tue 28/05/24	£1,680.00	£560.00	120 hrs	40 hrs	80 hrs
Bricklayer 4	Mon 01/04/24	Tue 28/05/24	£1,680.00	£560.00	120 hrs	40 hrs	80 hrs
Carpenter 1	Tue 30/04/24	Fri 17/05/24	£1,904.00	£0.00	112 hrs	0 hrs	112 hrs
Carpenter 2	Tue 30/04/24	Fri 17/05/24	£1,904.00	£0.00	112 hrs	0 hrs	112 hrs
Carpenter 3	Tue 30/04/24	Fri 17/05/24	£1,904.00	£0.00	112 hrs	0 hrs	112 hrs
Carpenter 4	Tue 30/04/24	Fri 17/05/24	£1,904.00	£0.00	112 hrs	0 hrs	112 hrs
Carpenter 5	Wed 15/05/24	Wed 15/05/24	£136.00	£0.00	8 hrs	0 hrs	8 hrs
Carpenter 6	Wed 15/05/24	Wed 15/05/24	£136.00	£0.00	8 hrs	0 hrs	8 hrs
Window & Door Fitter 1	Wed 29/05/24	Thu 30/05/24	£240.00	£0.00	16 hrs	0 hrs	16 hrs
Window & Door Fitter 2	Wed 29/05/24	Thu 30/05/24	£240.00	£0.00	16 hrs	0 hrs	16 hrs
Window & Door Fitter 3	Wed 29/05/24	Thu 30/05/24	£240.00	£0.00	16 hrs	0 hrs	16 hrs
Window & Door Fitter 4	Wed 29/05/24	Thu 30/05/24	£240.00	£0.00	16 hrs	0 hrs	16 hrs
Roofer 1	Wed 15/05/24	Thu 30/05/24	£1,584.00	£0.00	96 hrs	0 hrs	96 hrs
Roofer 2	Wed 15/05/24	Thu 30/05/24	£1,584.00	£0.00	96 hrs	0 hrs	96 hrs
Roofer 3	Wed 15/05/24	Thu 30/05/24	£1,584.00	£0.00	96 hrs	0 hrs	96 hrs
Roofer 4	Wed 15/05/24	Thu 30/05/24	£1,584.00	£0.00	96 hrs	0 hrs	96 hrs
Plumber 1	Fri 31/05/24	Fri 28/06/24	£1,496.00	£0.00	88 hrs	0 hrs	88 hrs
Plumber 2	Fri 31/05/24	Thu 27/06/24	£1,360.00	£0.00	80 hrs	0 hrs	80 hrs
Plumber 3	Fri 31/05/24	Wed 26/06/24	£1,224.00	£0.00	72 hrs	0 hrs	72 hrs
Plumber 4	Fri 31/05/24	Thu 20/06/24	£1,632.00	£0.00	96 hrs	0 hrs	96 hrs
Joiner 1	Mon 20/05/24	Wed 03/07/24	£3,888.00	£0.00	216 hrs	0 hrs	216 hrs
Joiner 2	Mon 20/05/24	Wed 03/07/24	£3,888.00	£0.00	216 hrs	0 hrs	216 hrs
Electrician 1	Fri 31/05/24	Fri 12/07/24	£2,584.00	£0.00	152 hrs	0 hrs	152 hrs
Electrician 2	Fri 31/05/24	Fri 12/07/24	£2,584.00	£0.00	152 hrs	0 hrs	152 hrs
Plasterer 1	Mon 20/05/24	Tue 11/06/24	£2,448.00	£0.00	136 hrs	0 hrs	136 hrs
Plasterer 2	Mon 20/05/24	Tue 11/06/24	£2,448.00	£0.00	136 hrs	0 hrs	136 hrs
Plasterer 3	Wed 29/05/24	Tue 04/06/24	£720.00	£0.00	40 hrs	0 hrs	40 hrs
Plasterer 4	Wed 29/05/24	Tue 04/06/24	£720.00	£0.00	40 hrs	0 hrs	40 hrs
Plasterer 5	Wed 29/05/24	Tue 04/06/24	£720.00	£0.00	40 hrs	0 hrs	40 hrs
Gutters & Down Pipes 1	Wed 05/06/24	Fri 07/06/24	£360.00	£0.00	24 hrs	0 hrs	24 hrs
Gutters & Down Pipes 2	Wed 05/06/24	Fri 07/06/24	£360.00	£0.00	24 hrs	0 hrs	24 hrs
Decorator 1	Mon 15/07/24	Fri 26/07/24	£1,160.00	£0.00	80 hrs	0 hrs	80 hrs
Decorator 2	Mon 15/07/24	Fri 26/07/24	£1,160.00	£0.00	80 hrs	0 hrs	80 hrs
Landscaper 1	Mon 15/07/24	Mon 19/08/24	£3,432.00	£0.00	208 hrs	0 hrs	208 hrs
Landscaper 2	Mon 15/07/24	Mon 19/08/24	£3,432.00	£0.00	208 hrs	0 hrs	208 hrs
Landscaper 3	Mon 15/07/24	Mon 19/08/24	£3,432.00	£0.00	208 hrs	0 hrs	208 hrs
Landscaper 4	Mon 15/07/24	Mon 19/08/24	£3,432.00	£0.00	208 hrs	0 hrs	208 hrs
General Labourer 1	Mon 15/07/24	Thu 18/07/24	£400.00	£0.00	32 hrs	0 hrs	32 hrs
General Labourer 2	Mon 15/07/24	Thu 18/07/24	£400.00	£0.00	32 hrs	0 hrs	32 hrs
General Fitter 1	Wed 12/06/24	Tue 18/06/24	£520.00	£0.00	40 hrs	0 hrs	40 hrs
General Fitter 2	Wed 12/06/24	Tue 18/06/24	£520.00	£0.00	40 hrs	0 hrs	40 hrs
General Fitter 3	Wed 12/06/24	Tue 25/06/24	£1,040.00	£0.00	80 hrs	0 hrs	80 hrs
General Fitter 4	Wed 12/06/24	Tue 25/06/24	£1,040.00	£0.00	80 hrs	0 hrs	80 hrs
General Fitter 5	Wed 12/06/24	Tue 25/06/24	£1,040.00	£0.00	80 hrs	0 hrs	80 hrs
General Fitter 6	Wed 12/06/24	Tue 25/06/24	£1,040.00	£0.00	80 hrs	0 hrs	80 hrs
General Fitter 7	Wed 12/06/24	Fri 14/06/24	£312.00	£0.00	24 hrs	0 hrs	24 hrs
General Fitter 8	Wed 12/06/24	Fri 14/06/24	£312.00	£0.00	24 hrs	0 hrs	24 hrs
Services Installer 1	Tue 16/04/24	Mon 29/04/24	£1,240.00	£0.00	80 hrs	0 hrs	80 hrs
Services Installer 2	Tue 16/04/24	Mon 29/04/24	£1,240.00	£0.00	80 hrs	0 hrs	80 hrs
Services Installer 3	Tue 16/04/24	Mon 29/04/24	£1,240.00	£0.00	80 hrs	0 hrs	80 hrs
Services Installer 4	Tue 16/04/24	Mon 29/04/24	£1,240.00	£0.00	80 hrs	0 hrs	80 hrs

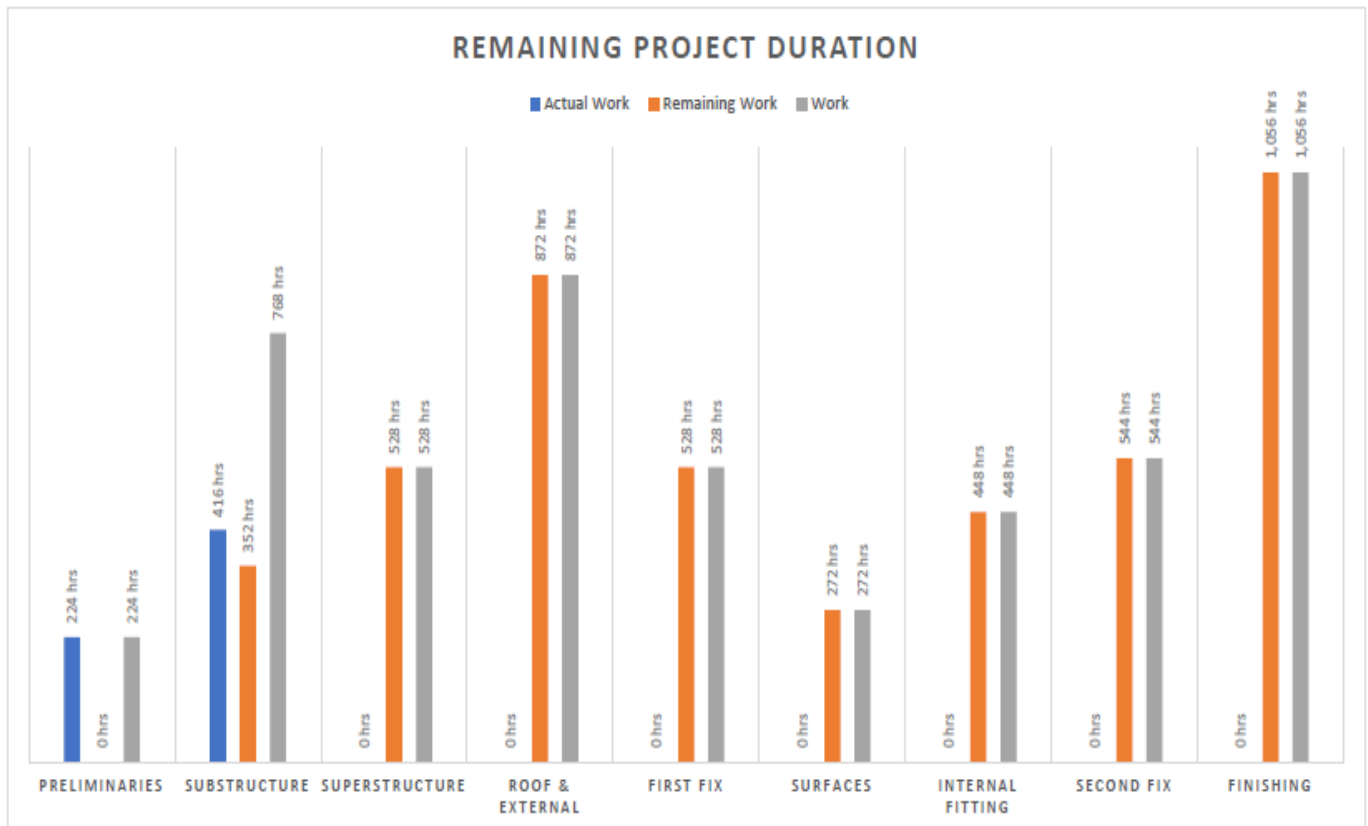
VI.b. Resources – Materials; the report provides the values for quantity and cost of materials that are predicted overall plus a snapshot of the current situation.

Name	Start	Finish	Cost	Actual Cost	Work	Actual Work	Remaining Work
Brick	Wed 15/05/24	Tue 28/05/24	£4,000.00	£0.00	4,000	0	4,000
Concrete (SQM)	Fri 29/03/24	Fri 29/03/24	£8,000.00	£8,000.00	200	200	0
Lengths of Timber	Tue 30/04/24	Tue 14/05/24	£12,500.00	£0.00	1,000	0	1,000
Kitchen	Wed 12/06/24	Tue 25/06/24	£4,000.00	£0.00	1	0	1
Bathroom	Wed 12/06/24	Tue 25/06/24	£3,500.00	£0.00	1	0	1
Door	Thu 30/05/24	Thu 30/05/24	£4,200.00	£0.00	12	0	12
Window	Wed 29/05/24	Wed 29/05/24	£3,150.00	£0.00	18	0	18
Tiling	Mon 22/07/24	Fri 26/07/24	£600.00	£0.00	300	0	300
Guttering	Wed 05/06/24	Thu 06/06/24	£800.00	£0.00	1	0	1
Piping & Accessories	Fri 31/05/24	Tue 11/06/24	£3,000.00	£0.00	1	0	1
Electrical Wiring & Accessories	Fri 31/05/24	Fri 07/06/24	£1,800.00	£0.00	1	0	1
Insulation	Wed 12/06/24	Fri 14/06/24	£2,000.00	£0.00	1	0	1
Plasterboard	Thu 23/05/24	Wed 05/06/24	£2,500.00	£0.00	1	0	1
Bucket of Paint	Mon 15/07/24	Fri 19/07/24	£1,500.00	£0.00	50	0	50
Roof Tile	Fri 17/05/24	Wed 22/05/24	£2,400.00	£0.00	3,000	0	3,000
Turf	Thu 15/08/24	Mon 19/08/24	£1,000.00	£0.00	1	0	1
Tarmac (Driveway)	Mon 15/07/24	Fri 19/07/24	£2,000.00	£0.00	1	0	1
Other Woodwork (Balustrade Etc)	Wed 12/06/24	Wed 03/07/24	£4,500.00	£0.00	1	0	1
Roof Accessories (Soffit Etc)	Wed 15/05/24	Fri 07/06/24	£2,000.00	£0.00	1	0	1
Hard Flooring	Wed 12/06/24	Tue 18/06/24	£4,000.00	£0.00	1	0	1
External Slab	Mon 22/07/24	Fri 09/08/24	£1,125.00	£0.00	45	0	45
Fencing	Mon 12/08/24	Wed 14/08/24	£1,800.00	£0.00	1	0	1
Joinery Items	Mon 20/05/24	Mon 03/06/24	£975.00	£0.00	1	0	1
Electrical Items	Wed 26/06/24	Fri 12/07/24	£1,200.00	£0.00	1	0	1
Plumbing Items	Mon 17/06/24	Fri 28/06/24	£850.00	£0.00	1	0	1
Down Pipes	Fri 07/06/24	Fri 07/06/24	£350.00	£0.00	1	0	1

VI.c. Resources – Plant: the report provides the values for time and cost of plant that are predicted overall plus a snapshot of the current situation.

Name	Start	Finish	Cost	Actual Cost	Work	Actual Work	Remaining Work
Office	Mon 18/03/24	Fri 23/08/24	£4,600.00	£800.00	920 hrs	160 hrs	760 hrs
Store	Mon 18/03/24	Fri 23/08/24	£4,600.00	£800.00	920 hrs	160 hrs	760 hrs
Toilets	Mon 18/03/24	Fri 23/08/24	£1,150.00	£200.00	920 hrs	160 hrs	760 hrs
Herras Fencing	Mon 18/03/24	Fri 23/08/24	£460.00	£80.00	920 hrs	160 hrs	760 hrs
Excavator	Mon 18/03/24	Thu 28/03/24	£450.00	£450.00	5	5	0
Concrete Pour Truck	Fri 29/03/24	Fri 29/03/24	£140.00	£140.00	1	1	0
Scaffold	Wed 15/05/24	Fri 07/06/24	£1,080.00	£0.00	18	0	18

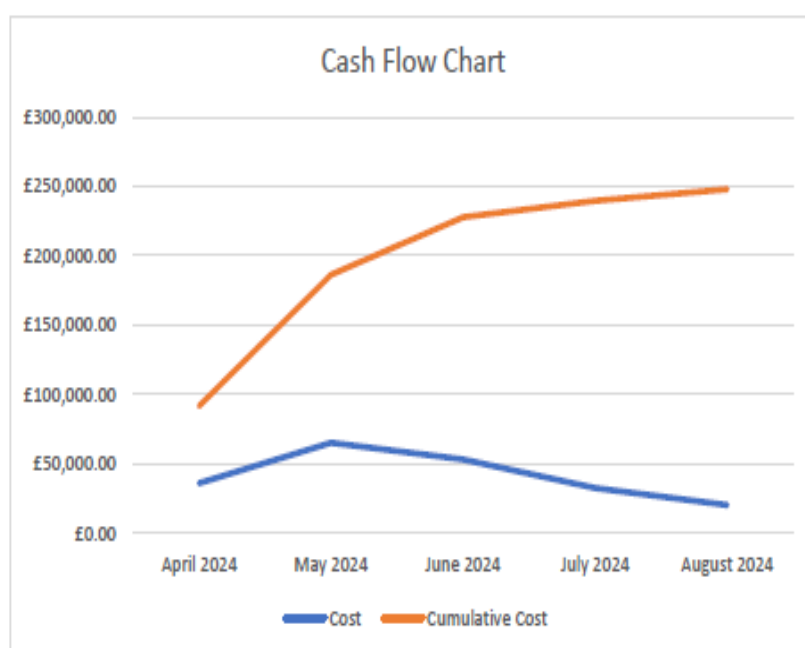
VI.d. Time Report: the report compares the programme predictions against actual completion to provide a snapshot of the current progress situation.



PROJECT TASK PROGRESS			
Name	Start	Finish	% Complete
Preliminaries	Mon 18/03/24	Tue 26/03/24	100%
Substructure	Wed 27/03/24	Mon 29/04/24	54%
Superstructure	Tue 30/04/24	Thu 30/05/24	0%
Roof & External	Wed 15/05/24	Fri 07/06/24	0%
First Fix	Mon 20/05/24	Tue 11/06/24	0%
Surfaces	Mon 20/05/24	Tue 11/06/24	0%
Internal Fitting	Wed 12/06/24	Tue 25/06/24	0%
Second Fix	Wed 12/06/24	Fri 12/07/24	0%
Finishing	Mon 15/07/24	Mon 19/08/24	0%

VI.e. Cost Report: the report compares the programme predictions against actual spend, to provide a snapshot of the current budget situation.

Name	Start	Finish	% Complete	Cost	Remaining Cost	Actual Cost
Preliminaries	Mon 18/03/24	Tue 26/03/24	100%	£3,630.00	£0.00	£3,630.00
Substructure	Wed 27/03/24	Mon 29/04/24	54%	£19,840.00	£5,440.00	£14,400.00
Superstructure	Tue 30/04/24	Thu 30/05/24	0%	£28,698.00	£28,698.00	£0.00
Roof & External	Wed 15/05/24	Fri 07/06/24	0%	£24,326.00	£24,326.00	£0.00
First Fix	Mon 20/05/24	Tue 11/06/24	0%	£14,927.00	£14,927.00	£0.00
Surfaces	Mon 20/05/24	Tue 11/06/24	0%	£7,396.00	£7,396.00	£0.00
Internal Fitting	Wed 12/06/24	Tue 25/06/24	0%	£19,324.00	£19,324.00	£0.00
Second Fix	Wed 12/06/24	Fri 12/07/24	0%	£16,054.00	£16,054.00	£0.00
Finishing	Mon 15/07/24	Mon 19/08/24	0%	£24,873.00	£24,873.00	£0.00



VI. Conclusion

This assessment has required the application of 'Process Thinking'. The building of the Southern Cul-de-sac is a major and complex task, initially it appears quite daunting. Only when it is broken down into smaller tasks in the Work Breakdown Structure does it begin to seem manageable. Carrying these tasks or deliverables forward as a theme throughout the report enabled the continued application of 'Process Thinking'. (APM,2024)

As well as their practical value, the method statements provide an even greater breakdown of the tasks and hence understanding of what is required in terms of resources, time and money.

Microsoft Project is a powerful tool; it is essential to the project manager who is always looking to the future. The Gantt Chart sets the critical path planning whilst the reports allow historical recording plus a great level of transparency of a project's current status.

An observed drawback of the software tool may be that the output is only as good as the information originally added. For example; when inputting prices, multiple different online sources were referenced; variation in prices from source to source, meant that a median price needed to be worked out, so that works could be accurately costed.

A second observation, is that programme planning using Microsoft Project can produce very large and complex charts, spreadsheets and documents that require a considerable effort to maintain.

VII. List of References

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