

You are to assume that a major property developer has received planning consent for a single, two storey detached domestic building with a loft room. [See attached floor plans and elevations]. It is to be built on a Greenfield site with access directly on to a public highway via a short track of 3.5m width.

The proposed foundations are concrete strip to a depth of 1m with standard cavity wall construction; block and block with partial fill cavity insulation and a smooth render externally.

Plinths, soldier courses over all openings and porch pillars are to be natural sandstone.

There is to be a suspended concrete beam and block ground floor and upper floors are to be traditional solid timber with particle board sheet covering.

Doors and windows are to be light oak wood effect uPVC with sealed Double-glazed units. Roof structure is to be trussed rafters at a 400 pitch with a natural slate covering and closed eaves. Work is proposed to start on 6th May 2019

The following tasks are allocated a percentage to emphasise the suggested time you should spend on each individual task. Marks will be allocated against the set Marking Criteria indicated on page 5.

Contents

Produce a detailed Schedule of work for all the major activities related to this project – from start until completion. (25%)

Page 2

Produce a specific Method Statement for the major work activities identified. (25%)

Page 3

Develop, evaluate and produce site specific Risk Assessments for three of the work activities. Highlighting significant hazards, control measures and mitigation. (25%)

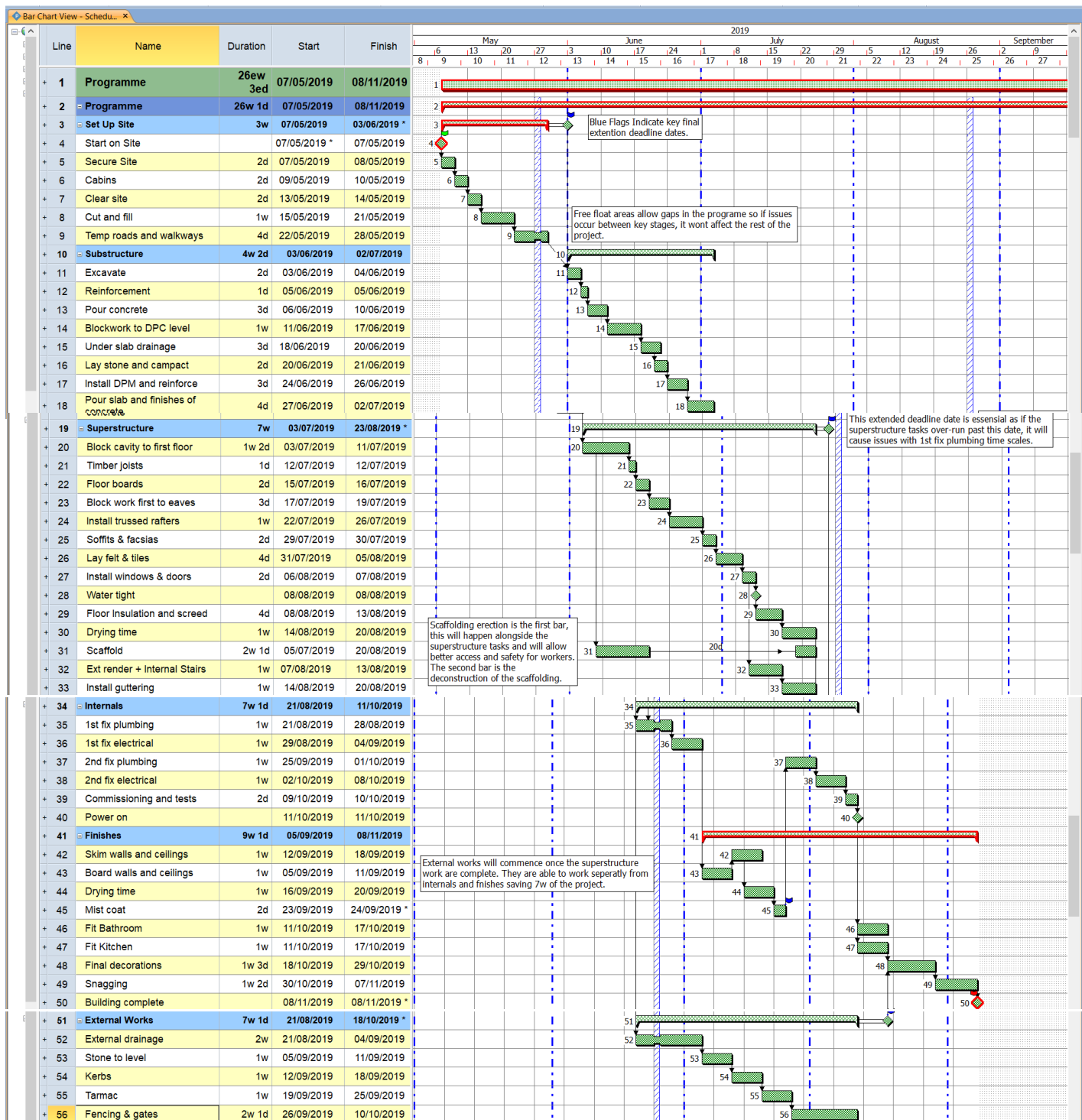
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Identify which Health & Safety legislation, based upon this construction project, is relevant and identify who is the responsible person/duty holder under those separate regulations. (25%)

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Produce a detailed Schedule of work for all the major activities related to this project – from start until completion. (25%)



Produce a specific Method Statement for the major work activities identified. (25%)

RAMS - Method Statement

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Below is the RAMS planner I consulted during this process to help keep the process in correspondence.

AutoSave On Risk Assessment Method Statement Planner.xlsx - Excel Ellis Moore

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O14

Site Name:		Swansea University Project		Project:		H&S Assignment 1		Sheet No:						
Prepared By:		Ellis Moore		Last REV:		16/03/2019								
KEY ACTIVITY:														
ACTIVITIES (refer to Programme)		*RISK ASSESSED High / Med / Low			Activity Anticipated Start Date	BYUK OR S/C	METHOD STATEMENT				SHE Team Input If High Risk			
		High	Med	Low			Required (High/Med)	OR COYMS	Required by DATE	Received DATE	DOC REVISION	Signed off DATE	Y	N
Site Set Up														
Secure site				*	07.05.19									
Cabins				*	09.05.19									
Clear site				*	13.05.19									
Cut and fill				*	15.05.19									
Temp roads and walkways				*	22.05.19									
Substructure														
Excavate			*		03.06.19		*							
Reinforcement				*	05.06.19									
Pour concrete				*	06.06.19									
Blockwork to DPC level				*	11.06.19									
Under slab drainage				*	18.06.19									
Lay stone and compact				*	20.06.19									
Install DPM and reinforce				*	24.06.19									
Pour slab and finishes of concrete				*	27.06.19									
Superstructure														
Block cavity to first floor				*	03.07.19									

RAMS Planner Matrix

Ready Type here to search 00:11 19/03/2019

A1 Work Package Details

Scope and Overview

To construct a single, two story residential building following parameters set out to me in my instructions. Planned date for the commencement of construction is the 6th of May 2019 (7th of May will be the official date as the 6th is a Sunday) and finished 24 weeks from this date.

Tasks

a.1 TASK 1 – INDUCTIONS

- Prior to any works commencing on site all operatives must attend a full site induction held by Experienced, competent trainers in the Site Offices.
- Inductions will start at 08.30am and should be complete by 09.00am Monday to Friday allowing work to commence as contracted.
- Questions will to answered at the end of any induction meetings to allow full understanding of the health and safety present on the site, site workings and routine activities (such as waste collection, fire procedures and accident reporting).
- CSCS cards and all relevant competency cards will be provided upon the inductions.

a.2 TASK 2 – SITE SET UP

- Site hoarding will be put up at the start of the job to ensure safety of the public. The main activities are;
 - Delivery and offloading of the materials
 - Service sweep to ensure no utilities are present.
 - Mark out the holes to be excavated.
 - Position a number of timber posts and temporary support.
 - Concrete the base of the posts and allow to cure.
 - Continue this process for the whole of the site.
 - Install rails top, bottom and middle.
 - Screw ply sheets to the rails.
 - Decorate hoarding (logo's)
- Cabins will be delivered to site to provide welfare facilities for all employees. The main activities are;
 - Cabins delivered to site on flat beds and Hiab'd into position onto predesigned foundations.
 - Connect utilities for the welfare cabins to operate.
 - Fill cabins with furniture and cooking equipment.
- The next step is to clear the site ready for cut and fill stage. The main activities are;
 - Consider ecology report (if non-substantial results, proceed)
 - Take delivery of JCB.
 - Clear any shrubbery in the site area (consider bird nesting season).
 - Any tree's (not protected) are too near to the site area, excavate them.
- Cut and Fill will be undertaken to ensure the site is level and ready for the substructure excavation works. The main activities are;
 - Excavate top soil layer with JCB's already stationed on site.
 - Level ground to provide flat platform to begin substructure works
 - Excavated earth to be used for next step
- Temporary roads to be fully built to allow unimpeded access to the site, the main activities are;
 - Dirt road construction (temporary) constructed to 4m wide to allow full access to all delivery vehicles. Dirt will be used from excavated ground to level temporary road area.
 - Delivery of barriers for walkways arrive.
 - Walkway barriers placed on edges of roads to ensure vehicles and people stay separate
-

a.3 TASK 3 – Substructure

- Excavations of foundations start; the main activities are;
 - Measure out layout for excavations to be made.
 - Use JCB already stationed on site to dig a trench with a depth of 1m
 - Compact ground to create a flat surface at the bottom of the excavated foundation layout.
 - Place wooden struts in the ground as temporary support pillars to take some of the load of the earth.
- Reinforcements are essential to holding the weight of the structure; the main activities are;
 - Take delivery of reinforcement cages
 - Place reinforcements at the bottom of the excavated hole making sure they are all level
- Concrete pouring is the next process and must be done exactly to the following steps to avoid issues; the main activities are;
 - Concrete truck arrives on site and will have read-to-use mixture of concrete ready to be poured.
 - Concrete is poured into the excavated hole.
 - Prod the concrete to release air bubbles trapped within the concrete to create a strong solid structure.
 - Allow to set and sure before moving onto the next activity.
- Blockwork to DPC level; The main activities are;

- Take delivery of blocks that meet specification.
- Build up blockwork level
- Install DPC (150mm above ground level)
- Under slab drainage, must follow the following steps to ensure drainage is fitted correctly; the main activities are;
 - Take Delivery of all relevant material (Pipe, connectors, sealant ect)
 - Excavate pipe holes.
 - Install piping in line with bottom of foundation excavation strips (internally outside of mass of concrete).
 - Bring points of piping to the surface layer to connect to services later down the line in the construction process.
 - Refill in the excavated piping strips.
- Lay stone and compact ground, this step is key as it allows all other works to proceed, the main activities are;
 - Take delivery of stone
 - Take the stone in sections to each individual location.
 - Tip stone into void where the flooring slabs will be placed.
 - Use a JCB tipper to apply small amounts of pressure to the stone aggregate, compacting it.
 - Have a QA (Quality Assessor) verify you have completed the task as specified.
- Install DPM and reinforce, the main activities are;
 - Take delivery of all relevant material.
 - Place reinforcement cages above the stone aggregate and make sure they are all level.
 - Install DPM to blockwork.
- Next, pour slab and perform finishes of concrete, these steps are;
 - Concrete beams layered as a support item
 - Concrete truck to fill reinforcements with concrete (whilst prodding the concrete to release air pockets).
 - Smoothen concrete with a concrete electric power trowel.

a.4 TASK 4 - Concreting foundations and slabs

- Logistics Manager on site to be informed when concrete pouring is to take place.
- Before any concrete takes place, the rest of the substructure work must be checked that it is clean and correct and that the permit to load is in place and signed off by the appropriate members of staff.
- Access to the area to be concreted will be suitable for people involved with the concrete operation.
- The concrete pump will have two designated areas, where the ground has been tested for out-rigger loadings.
- Cubes will be taken from each delivery vehicle, and, the QA for the cubes will be followed so that the crushing of cubes is documented and filed for proof of quality of materials.
- The discharge of concrete into the ground floor slabs will be done by a concrete boom pump, with rubber hoses and will proceed to fill strip foundation and slab as stated.
- Concrete finishes on slabs will be by power float.

a.5 TASK 5 – Super Structure

- First step of this new set of activities are block cavity to first floor, the main activities are;
 - Use blocks that came with first floor blockwork
 - Build up the cavity block work wall to first floor, leaving room for doors and windows (Use temporary stability bars in the middle of the window holes to allow the load to be fully supported).
- Timber joists
 - Timber joists get delivered to site.
 - Mobile Elevated Work Platforms get delivered to site.
 - Mobile crane gets delivered to site to help lift heavy materials.
 - Timber joists get listed to 1st floor level and span across the gap between the two walls.
 - Attach connectors to the main spanning beams to connect the other vertical spanning beams.
- Floor boards
 - Deliver floor boards to site.
 - Lay floor boards to specification.
 - Attach floor boards using nail guns (only personnel who have been instructed to use a nail gun may use a nail gun, all unauthorised and/or untrained personnel must use a hammer and nails to reduce risk to health).
- Block work first to eaves
 - Use same blocks from foundations and block work to first floor.
 - Once more leave gaps for windows and support them with support bars.
 - Allow the QA to assess all blockwork completed up to this state to make sure no hazards or issues have occurred.
- Install trussed rafters
 - Have specified trussed rafter delivered to the site.
 - Use the crane to lift the trussed rafter (that are at a 40-degree pitch) to the roof location and allow workers on the scaffolding and on MEWPs to guide the rafters in.
 - Secure the rafters using connectors and bolts, allowing them to meet in the middle at the top, allowing them to support each other's weight.
 - Repeat till roof is complete.
- Soffits and Facias
 - Have soffits and facias delivered.
 - Use scaffolding to allow access to attach soffits and facias to the roof trusses.
 - Screw on soffits and facias and have a QA inspect your work once your fully complete.
- Lay felt and tiles

- Have all relevant materials delivered.
- Lay felt over trussed rafters and attach using adhesive glue compound to ensure it is flush with each other and holds its shape.
- Lay tiles over the top of the felt and work bottom to top, outside to in. each roof face will take 4 people.
- Install windows and doors
 - Have delivered all external windows and doors.
 - Remove any external temporary doors
 - Fit all doors
 - Remove window supports
 - Fit windows
- Water tight
 - This is a milestone for the building and means we can begin to start internal works that would have been damaged by water.
- Floor insulation and screed
 - Have delivered all insulation needed for the entire house.
 - Fit all the insulation, going from the attic to ground floor.
 - Apply plaster boards to the walls and apply plaster.
 - Screed plaster to make it a flat finish.
- Drying time
 - Leave to set and no other works will commence in the areas until the finish has set. If this time is not given, the walls plaster could become rough allowing a poor final finish.
- Scaffold
 - As seen by the schedule of work, the scaffolding went up at the start of this section and came down at the end of the drying time.
 - Scaffolding materials arrived and put up by trained, competent employees from another specialist contractor.
- External render and internal stairs
 - External render done before the scaffolding is brought down.
 - The smooth render will be completed using external texture mix and sanded down and smoothened.
 - Stairs fitted whilst the interior is empty that allows easy access for plumbers/electrical on 1st floor.
- Install guttering
 - Guttering to be delivered to site and screwed into the rafters ends.

a.6 TASK 6 – Internals

- 1st fix plumbing
 - Contractors will enter the site once they have presented CSCS cards and had a site induction.
 - Pipes to be fitted to pipes on ground floor (allowing a flow of services).
- 1st fix electrical
 - Contractors will enter the site once they have presented CSCS cards and had a site induction.
- 2nd fix plumbing
 - Boiler and sinks will all be delivered.
 - All the above will be fitted from top floor to bottom floor to allow the house to be complete in layers.
- 2nd fix electrical
 - Sockets, fuse boxes and lights wiring will now be completed.
- Commissioning and tests
 - Tests will be undertaken on the house to make sure all waterworks flow correctly and all electrical services have been fitted correctly.
 - QA will have a walk through the house checking for any defects such as unprofessional finishes or water leaks.
- Power on
 - This is the second large milestone. If all the electrics have been fitted correctly, all lights, boils, switches etc should all turn on.

a.7 TASK 7 – Finishes

- Skim walls and ceilings / Board walls and ceilings
 - Plaster all walls and ceilings to be able to be applicable for final finishes.
- Drying time
- Mist coat
- Fit bathroom
 - Contractors will come into the site to fit the bathroom
- Fit Kitchen
 - Contractors will come into the site to fit the bathroom
- Final decorations
- Snagging
- Building complete
 - This means the building is finished and will be locked so no further work can occur by accident or mess can be made of the final finishes.

a.6 TASK 8 – External Works

- External drainage
 - Have drainage pipes delivered on the day of insulation.
 - Run grated top drainage halfpipes along the front of the house, and down either side of the entrance road (wait for entrance road to be construction first)
 - Stone to level
 - Landscape the ground outside using the JCB from the start of the works.
 - Allow water to run away from the house with a natural slope.
 - Have delivery of stone to form base of entrance road.
 - Spread the stone 3.7m wide and down towards the main entrance.
 - Kerbs
 - Have kerbs delivered from supplier.
 - Fit kerbs along the edge of the stone that has been laid.
 - Tarmac
 - Have Tarmac truck arrive on this date alone.
 - Pour tarmac and allow to fill all voids,
 - Its very hot so be aware you may need a metal probe rod to allow excess air to escape.
 - Flatten fully by having a roller brought in for the day.
 - Fencing and gates
 - Fit all final aesthetics to the homes exterior.
 - (Fencings) marks all post holes, excavate all post holes, place wooden strut into the hole and fill with concrete.
- Allow to cure and fit panels.
- (Gates) Attach the designed gates to the load bearing fence column's

CHANGES TO PLANNED METHODOLOGY

Supervisor will agree a change of methodology from the planned schedule of work sheet where the change is minor and has no safety implications.

Where a change of methodology is required that has the possibility of additional safety implications supervisor will discuss the required changes and risks associated with the alternative method. The package supervisor may agree these changes or will instruct the works to be stopped, made safe and for the works to be re-evaluated at a later stage to allow adequate time and planning for additional control measures to be put in place.

When a schedule of work needs to be amended, Design supervisor will write the amendments on the schedule brief if the amendments are simple and only after agreeing them verbally with the supervisor.

Where amendments are deemed to be significant the works will be stopped and rescheduled using the correct materials or equipment as required.

The Design Supervisor will re-brief all operatives of the amended working procedure.

All changes will be recorded on the amendment form.

A3 PERMITS

Hot works permits [daily]

Permits to load and Dismantle

A4 ENVIRONMENTAL

- ALL WORKING AREAS MUST BE KEPT CLEAN AND TIDY WITH ALL EXCESSES DEBRIS AND MATERIALS REMOVED FROM SITE AT THE END OF EACH WORKING DAY.
- Skips are in the main site compound. Under no circumstance are waste materials other than those designated to be placed in each skip.
- Hazardous waste products, containers etc are to be disposed of in the designated Hazardous / COSHH bins

B1 SITE DETAILS, ACCESS AND GENERAL SITE LAYOUT

The planned site hours are between 08:00 and 18:00 Mon-Fri. Any work out of these hours will be agreed with the principle contractor before commencement.

Access into the main construction area will be via the finger-scanner operated turnstile.

The attached traffic Management Plan details all available access routes. The site will be hoarded with entry points which will be clearly signed, these access and egress points will be briefed to all personnel.

B3 Communication and Contact

Communication	Name	Title	Contact No
Work Content Related			
	John Stamos	Project manager	08982 856907
	Jeff Moore	Engineer	08980 658297
	Russel Howard	Carpenter foreman	08944 711712
	Brad Williams	Internal Electrics	08862 832586

Safety Related

ALL the Above

Aaron Davies

H&S Manager

08793 016530

B4 EMERGENCY ARRANGEMENTS

- In the event of an emergency: exit the building and proceed to the assembly point in the Main car park adjacent to The main entrance to the site.
- In case of a minor injury: First aider to attend.
- In case of an injury requiring medical attention: Injured person to be taken to the nearest available hospital with accident and emergency services.
- In case of a severe injury: The emergency services to be called via 999 and advised of the nearest access point. Operatives will await at the access point and arrange safe passage for the emergency services
- In the case of environmental emergency and all other emergencies: Whilst activities are taking place the site shall be monitored for any signs of pollution caused by the works. In the event of any spillages the polluted area will be segregated, and spill kits will be used to contain the contamination. The Site Supervisor will inform the all relevant bodies immediately who shall in turn inform all other necessary authorities
- Emergency procedure if you see something happen beyond job control relating to the surrounding area:

TBT (Tool Box Talk) to be carried out to all operatives and refreshed every month

B5 WELFARE

Fixed welfare facilities are available in the main site office complex and consist of Toilets, Canteen, and Drying Room. These are always to be kept clean & tidy.

B6 INTERFACES

At various times there will be interface with other contractors. Where possible these interfaces will be sequenced, co-ordinated and recorded with minutes to ensure adequate arrangements.

For works where there is no warning of other people in the area the supervisor will be responsible for discussing with the other parties both sets of intended works.

If amicable arrangements can be made with both parties to allow all operatives work safely together then a safe plan will be agreed on site. If it is not possible for both parties to work together then agreement will be reached as to which party will delay their works to a different time. Dependant on the nature of the works consultation may be required to involve the Head Site Supervisor. The result of the meeting must be recorded and signed by both parties.

All interaction with the public is to be directed / reported to the Head Supervisor.

B7 FIRST AID

First Aid will be available at the Main Site Offices. First Aiders will be identified on site signage and detailed at induction. All accidents and injuries must be reported to the nearest site management immediately.

- Defibrillator available in the main site office

C1 BRIEFING ARRANGEMENTS

Method Statement Briefings

Delivered by Subcontract Supervisor to Operatives

Task briefings

Delivered by Subcontract Supervisor to operatives

Briefing acceptance sheets will be signed by all persons who have received a Task Brief to confirm that the briefing has been received and has been understood.

Develop, evaluate and produce site specific Risk Assessments for three of the work activities. Highlighting significant hazards, control measures and mitigation. (25%)

Before moving onto the risk assessments, I would carry out a workplace inspection to deduct what hazards throughout my job are the biggest risk to workers. This could be done with a Matrix, this has been supplied accordingly below.

Likelihood	Severity				
	Trivial	Minor Injury	Over 3 Day Injury	Major Injury	Incapacity or Death
Highly Unlikely	1	2	3	4	5
Unlikely	2	4	6	8	10
Possible	3	6	9	12	15
Probable	4	8	12	16	20
Certain	5	10	15	20	25

Priority Matrix	
5	Urgent Action - (Risk no 15 - 25)
4	High Priority (Risk no 10 - 12)
3	Medium Priority (Risk no 5 - 9)
2	Low Priority (Risk no 2 - 4)
1	Very Low Priority - No Action Required (Risk no 1)

The matrix table provided a set of results that I have shorted to the highest 3 tasks.

Task	Risk
Lay felt and tiles	4
Soffits & fascias	4
Under slab drainage	3

Risk Assessment 1

Felt and Tiles Installation - Working at Height

The first task I have identified to be a situation/condition with the potential for harm to occur is the task of roof slate and felt installation (coverings). This task involves high value risks (that have been calculated using a Risk Analysis Matrix) such as working at height and movement of materials. Roof fitters and labourers are at the most risk as they will be working on, or around this task. Falling tools and materials that have slid down the roof accidentally could also be a cause for concern with this job. This is a likely scenario and will have to be mitigated alongside the main task.

Working at height accidents are still common in the construction industry and are one of the most serious risks to workers on a construction site if not mitigated correctly. The "Work at Height Regulations 2005" have laid out categorically what must be done to allow working to be safe whilst working at the site at height. It has also been reported by the OSHA (Occupational Safety and Health Agency) that in 2015, falling materials and tool violations "topped the OSHA's list of violations for 2015 with 7,402" accidents reported. This could be a risk to many people not just individuals working on this specific task. Supervisors, surveyors, quality assurers, labourers and even the public would be affected in some cases if tools/materials well from the scaffolding. The employees working at height are at risk of potentially having harm occur to them without proper procedures put in place.

Site Set Up	
Secure site	1
Cabins	1
Clear site	1
Cut and fill	2
Temp roads and walkways	1
Substructure	
Excavate	3
Reinforcement	2
Pour concrete	1
Blockwork to DPC level	2
Under slab drainage	3
Lay stone and compact	1
Install DPM and reinforce	1
Pour slab and finishes of concrete	1
Superstructure	
Block cavity to first floor	1
Timber joists	3
Floor boards	3
Block work first to eaves	2
Install trussed rafters	3
Soffits & fascias	4
Lay felt and tiles	4
Install windows and doors	2
Floor insulation and screed	1
Scaffold	3
Ext render	3
Install guttering	4
Internals	
1st fix plumbing	1
1st fix electrical	1
2nd fix plumbing	1
2nd fix electrical	1
Commissioning and tests	1
Finishes	
Skim walls and ceilings	2
Board walls and ceilings	2
Mist coat	1
Fit bathroom	1
Fit Kitchen	1
Final decorations	1
Snagging	2
External Works	
External drainage	2
Stone to level	2
Kerbs	1
Tarmac	1
Fencing & gates	2

Slips and trips will also be needing action as if the scaffolding gets damp or wet, it could become slippery causing a fall from height to potentially occur.

Instruction Manuals - TBT (tool box talks) and inductions as standard.

The risk of this task has been chosen to be 5 that states "Urgent Action" is required, as this task has a high possibility of potentially being fatal if control measures are not implemented correctly. With regards to the working at height section of this risk assessment, I will implement the following safety procedures to insure safety is paramount;

- Harnesses are to be worn when working on the scaffolding to ensure falling off and causing injury is minimised.
 - o Advantages;
 - Allow workers to feel more secured working at height
 - Will allow the workers weight to be suspended/held if they fall off the scaffolding. This will avoid impact with the ground, causing avoidance of harm to the worker mentioned.
 - o Disadvantages
 - Being left hanging in the harness longer than 19 minutes may cause serious long-term harm to the user. To mitigate this risk, a cherry picker will be stationed on site throughout the works that require scaffolding.
 - Swinging from the harness once fallen off of the scaffolding could also be dangerous as contact with the building could occur causing physical damage to the worker.
- Dual personnel on scaffolding at minimum, this ensures that if a problem occurs. T
 - o There is always someone to spot a potential hazard, if harm has come to the other employee, they are able to spot this, help, or fetch relevant personnel/equipment.
- Standard site PPE
 - o The following PPE must always be worn when working at height;
 - Hard hat
 - High Visibility Jacket
 - Safety glasses
 - Safety gloves
 - Steel capped boots

With regards to the issue with tools falling from the scaffolding potentially inflicting harm to workers below, I have attempted to mitigate the risk by doing the following:

Current controls

- Toe boards for each of the scaffolding levels.
 - o These will not only provide safety for the people working on the scaffolding but will also provide a barrier so if someone knocks/kicks something over, it will be held inside that level of the scaffolding, reducing the risk dramatically.
- Be aware, PPE will be enforced on the site but may become ineffective if something was to fall from that height, eg a hammer or piece of heavy material.

New controls

- Monoflex
 - o This textile material can be wrapped around the externals of the scaffolding on 1 side (usually mirroring the building). This will provide extra safety for the workers on the scaffolding, but potentially stop materials or tools being thrown, knocked or blown off the side of the scaffolding. This material is also fire resistant.
- Lanyards
 - o This risk mitigation strategy is simple but very effective. It is a piece of non-elastic material that is attached to the bottom of the tool when being used on a high workspace. This stops the tools flying out of employee's hands and falling on people below.
- Scaffold fans are also an effective way of preventing tools falling on people below, it acts as a barrier around the outside of the scaffolding, horizontally.

The table below will show the difference between the risk against the felt and tile installation task.

Felt and Tile Installation	Stage 1 Likelihood	Stage 2 Severity	Matrix Number
Before	Probable	Major Injury	16
After	Highly Unlikely	Over 3 Day Injury	4

Hierarchy of controls

The following controls seen to the right of this text indicate how effective an action is against mitigating risk. PPE is a last resort, risk cannot be mitigated through use of normal PPE. On this task, I have used Engineering controls and Administrative controls such as dual personnel on the operation and Monoflex as an engineering control.

Storage of risk assessments

Risk assessments will be stored in the site office to be presented at quick notice to anyone who requests them on site, HSE or employee.

How to manage the site appropriately.

Review and Monitor regularly

I intend to review and update these risk assessments every 2 weeks to ensure that the risks are always kept to a low.

Inform

If new tasks are starting or an existing task is being updated, all relevant employees must be made aware of it as it could affect their stationed area or task.

Summary

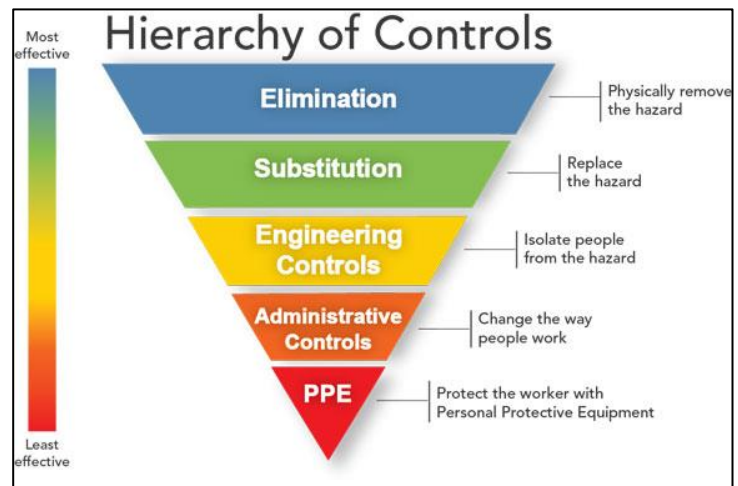
Identified hazards	Who/ What is the likelihood to be harmed	Existing/current controls	Risk rating as per Matrix	Further actions required to reduce risk + person responsible	Residential risk as per matrix after additional controls
Working at height	Workers who operate on the scaffolding	- Scaffolding matches NASC Technical Guidance TG20 parameters. No further controls	High	- Harnesses to be worn when operating on scaffolding - Dual personnel on scaffolding - Standard PPE (last option) but be highly enforced.	Low
Tools/materials becoming loose from scaffolding/operators	Anyone below or around the scaffolding	- Toe boards - Signage showing potential danger - Employee's advised to wear suitable footwear when on specific job	High	- Monoflex will be wrapped around the outer sides of the scaffolding mitigating the risk of tools being blown, thrown, dropped or kicked off the scaffolding - Lanyards - Scaffold fans.	Low

Risk Assessment 2

Installation of soffits and fascias

The second task I have identified to be a situation/condition with the potential for harm to occur is the installation of soffits and fascias. This task is similar to the risks in risk assessment 1 but I still feel it needs to be mentioned as some further risks are present and could cause fatal harm to employees on the site if these risks are not mitigated. Working at Height Regulations 2005 (WAHR) will be enforced on site to ensure the employees are fully aware of the standards on the site.

A risk when attaching soffits and fascias is that materials can become dislodged during the installation process, and as it is at a vertical angle and able to easily fall, this also works hand in hand with the risk assessment above of the tools being blown, thrown or dropped off of the scaffolding. As this risk assessment matches heavily to the previous risk assessment, I have forwarded the amendments needed below from that previous risk assessment.



I believe this task required further supervision because of the risk to employees on the site so I have decided that to help mitigate the risk further, a QA (quality assurer) will check the soffits and fascias in sections so assure that all fixings meeting British Standards.

Slips and trips are a major issue when working on scaffolding but this issue can be mitigated by the already considered option of harnesses. The tripping issue will not be mitigated but the falling off the scaffolding issue will be mitigated reducing the risk.

Instruction Manuals

With the selected task at hand, I will have toolbox talks and introduction meetings in place at the start of the task to ensure everyone on the task understands the processes they must follow, this will help mitigate partial risk down the line.

Working at height

- Harnesses are to be worn when working on the scaffolding to ensure falling off and causing injury is minimised.
 - o Advantages;
 - Allow workers to feel more secured working at height
 - Will allow the workers weight to be suspended/held if they fall off the scaffolding. This will avoid impact with the ground, causing avoidance of harm to the worker mentioned.
 - o Disadvantages
 - Being left hanging in the harness longer than 19 minutes may cause serious long-term harm to the user. To mitigate this risk, a cherry picker will be stationed on site throughout the works that require scaffolding.
 - Swinging from the harness once fallen off of the scaffolding could also be dangerous as contact with the building could occur causing physical damage to the worker.
- Dual personnel on scaffolding at minimum, this ensures that if a problem occurs. T
 - o There is always someone to spot a potential hazard, if harm has come to the other employee, they are able to spot this, help, or fetch relevant personnel/equipment.
- Standard site PPE
 - o The following PPE must always be worn when working at height;
 - Hard hat
 - High Visibility Jacket
 - Safety glasses
 - Safety gloves
 - Steel capped boots

The issue with materials falling off the scaffolding or the building can also be mitigated by using the same method as the tools falling mitigation method stated in Risk Assessment 1.

Current controls

- Toe boards for each of the scaffolding levels.
 - o These will not only provide safety for the people working on the scaffolding, but will also provide a barrier so if someone knocks/kicks something over, it will be held inside that level of the scaffolding, reducing the risk dramatically.
- Be aware, PPE will be enforced on the site but may become ineffective if something was to fall from that height, eg a hammer or piece of heavy material.

New controls

- Monoflex
 - o This textile material can be wrapped around the externals of the scaffolding on 1 side (usually mirroring the building). This will provide extra safety for the workers on the scaffolding, but potentially stop materials or tools being thrown, knocked or blown off the side of the scaffolding. This material is also fire resistant.
- To help mitigate the risk of materials becoming dislodged from the building due to high winds and improper fittings, I plan to have a QA check the fitted soffits and fascias to make sure they are up to British Standards and have no chance of falling from improper fitting.

The table below will show the difference between the risk against the felt and tile installation task.

Felt and Tile Installation	Stage 1 Likelihood	Stage 2 Severity	Matrix Number
Before	Probable	Major Injury	16
After	Highly Unlikely	Major Injury	4

Hierarchy of controls (Hazard Communication Standard: Safety Data Sheets, n.d.)

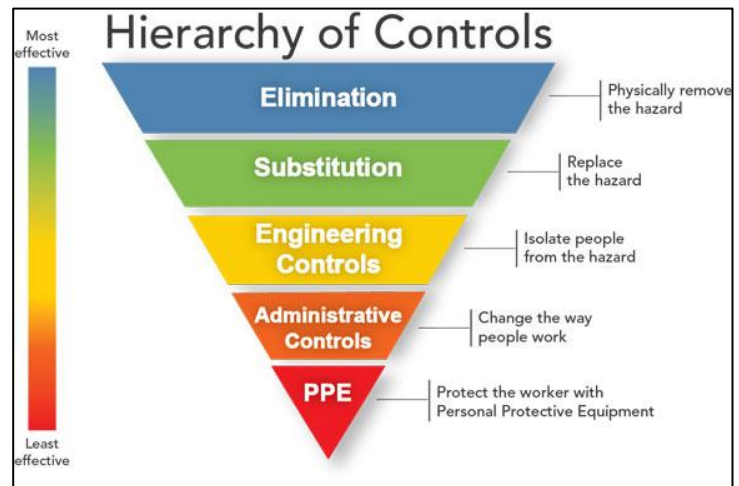
The following controls seen to the right of this text indicate how effective an action is against mitigating risk

Storage of risk assessments

Risk assessments will be stored in the site office to be presented at quick notice to anyone who requests them on site, HSE or employee.

Review and Monitor regularly

I intend to review and update these risk assessments every 2 weeks to ensure that the risks are always kept to a low.



Inform

If new tasks are starting or an existing task is being updated, all relevant employees must be made aware of it as it could affect their stationed area or task.

Summary

Identified hazards	Who/ What is the likelihood to be harmed	Existing/current controls	Risk rating as per Matrix	Further actions required to reduce risk + person responsible	Residential risk as per matrix after additional controls
Working at height	Workers who operate on the scaffolding	- Scaffolding matches NASC Technical Guidance TG20 parameters. No further controls - Operational procedure for the scaffolding shared with all relevant employees	High	- Harnesses to be worn when operating on scaffolding - Dual personnel on scaffolding - Standard PPE (last option) but be highly enforced.	Low
Materials becoming dislodged	Anyone below or around the scaffolding	- Toe boards - Signage showing potential danger - Employee's advised to wear suitable footwear when on specific job	High	- Monarflex will be wrapped around the outer sides of the scaffolding mitigating the risk of tools being blown, thrown, dropped or kicked off the scaffolding. - QA checks to help reduce risk of materials being fitted incorrectly to the building.	Low

Risk Assessment 3

Substructure – Foundation Excavation

The third task I have identified as high risk is the foundation works. The risk in this area is vast and could result in a serious injury if risk is not mitigated correctly. The foundation depth is only 1m deep but this could still cause harm if someone was to trip or fall into it. The current controls are not seen as adequate as it shields passers-by from the potential falling hazard but people working around it are still at risk.

Slips and trips are a major issue when working on uneven ground, this issue cannot be mitigated fully as there is no way to fully make the area fully flat, level and smooth. Appropriate footwear has been advised as the uneven ground could become risky for some individuals.

I believe the foundation excavation work will need to be checked against drawings to assure accuracy and this will be done by the Site Head Supervisor and QA.

Instruction Manuals

Employees working on this specific task will be briefed on the parameters in play and the correct equipment to use throughout the task.

The following are procedures I have thought of to help mitigate the risk or reduce the risk

Slips and trips

- Signage will be placed along outside fencing of foundation excavation area. These will indicate the small drop present and what PPE is required.
- I read into a article from "interstate" with ways to reduce trips and slips in my business. It recommended the following:
 - o Keep walkways clutter free.
 - o Make sure all areas are well lit.
 - o Handrails must always be available for slope is enough.
 - o Cables should be covered by plastic covers to reduce chance of tripping.
 - o Non-skid surfaces to be placed on walkway temporarily to reduce risk highly.
- Designated walkways will be put in place to ensure the employees avoid the more hazardous locations.

The table below will show the difference between the risk against the felt and tile installation task.

Felt and Tile Installation	Stage 1 Likelihood	Stage 2 Severity	Matrix Number
Before	Probable	3 day injury	9
After	Highly Unlikely	3 day injury	3

Hierarchy of controls (Hazard Communication Standard: Safety Data Sheets, n.d.)

The following controls seen to the right of this text indicate how effective an action is against mitigating risk. The most effective way to avoid risk is to avoid the task, this is not an option in this case so I attempted to mitigate the risk through engineering controls.

Storage of risk assessments

Risk assessments will be stored in the site office to be presented at quick notice to anyone who requests them on site, HSE or employee.

Review and Monitor regularly

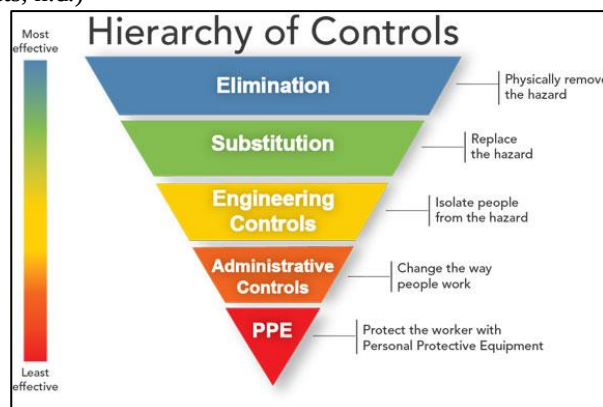
I intend to review and update these risk assessments every 2 weeks to ensure that the risks are always kept to a low.

Inform

If new tasks are starting or an existing task is being updated, all relevant employees must be made aware of it as it could affect their stationed area or task.

Summary

Identified hazards	Who/ What is the likelihood to be harmed	Existing/current controls	Risk rating as per Matrix	Further actions required to reduce risk + person responsible	Residential risk as per matrix after additional controls
Slips and Trips	Employees and public	Nothing.	9	- Extra fencing put up around excavated area - Alternative footwear if ground is uneven a slippery - Delay of task (waterlogged areas)	3



Identify which Health & Safety legislation, based upon this construction project, is relevant and identify who is the responsible person/duty holder under those separate regulations. (25%)

H&S at work act

The main duties of the different parties responsible for the management of health and safety are listed in the CDM Regulations. This identifies who is responsible for different stages of the construction process. The parties listed are:

1. Client
2. Designer
3. Principle Contractors (They are responsible/liable if the Acts/Regs/Legislation are not met on most sites).
4. Contractors

The following list of activities will match to legislation/regulation shown to the right. At the bottom of the list of activities against regulation/legislation, there will be a section of text that shows what legislation covers most activities on site.

Legislation that covers most/all tasks:

- (Health and Safety at Work etc. Act 1974 (1974.c37), n.d.) (EVERYONE IS RESPONSIBLE)
- (The Construction (Design and Management) Regulations 2015, n.d.)
- The Control of Noise at Work Regulations 2005
- The Employers' Health and Safety Policy Statements (Exception) Regulations 1975
- The Electricity at Work Regulations 1989 (Jones, 1989)
- The Health and Safety (Consultation with Employees) Regulations 1996 (HSE: Information about health and safety at work, n.d.)
- The Health and Safety Information for Employees (Amendment) Regulations 2009
- The Control of Major Accident Hazards Regulations 2015 (Hamid, Yusuf, & Singh, 2003)
- The Provision and Use of Work Equipment Regulations 1998
- The Management of Health and Safety at Work and Fire Precautions (Workplace) (Amendment) Regulations 2003
- The Workplace (Health, Safety and Welfare) Regulations 1992 (Gratton, 2004)
- RIDDOR (The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013) (RIDDOR - Reporting of Injuries, Diseases and Dangerous ..., n.d.)
- The Workplace (Health, Safety and Welfare) Regulations 1992 (The Workplace (Health, Safety and Welfare) Regulations 1992, n.d.)
- The Personal Protective Equipment Regulations (Personal Protective Equipment (PPE), n.d.)

Legislation relevant tasks identified as the construction programme

Site Set Up

- Start on Site - The Health and Safety (Consultation with Employees) Regulations 1996
- Secure site – Borehole Sites and Operations Regulations (HSE)
- Cabins
- Clear site
- Cut and fill
- Temp roads and walkways

Substructure

The Work at Height Regulations 2005

The Work at Height (Amendment) Regulations 2007

- Excavate - The Control of Vibration at Work Regulations 2005
- Reinforcement
- Pour concrete
- Under slab drainage
- Lay stone and compact
- Install DPM and reinforce
- Pour slab and finishes of concrete

Superstructure

The Confined Spaces Regulations 1997 (Covers most tasks in this bracket as they are working in a closed small space when operating at the top of scaffolding.)

The Lifting Operations and Lifting Equipment Regulations 1998

The Work at Height Regulations 2005

The Work at Height (Amendment) Regulations 2007

- Block cavity to first floor
- Timber joists
- Floor boards
- Block work first to eaves
- Install trussed rafters
- Soffits & fascias

- Lay felt and tiles
- Install windows and doors
- Floor insulation and screed
- Scaffold
- Ext render
- Install guttering

Internals

The Electricity at Work Regulations 1989

The Control of Substances Hazardous to Health (Amendment) Regulations 2003 (COSHH)

The Control of Substances Hazardous to Health (Amendment) Regulations 2004 (COSHH)

- 1st fix plumbing
- 1st fix electrical
- 2nd fix plumbing
- 2nd fix electrical
- Commissioning and tests

Finishes

The Control of Substances Hazardous to Health (Amendment) Regulations 2003

The Control of Substances Hazardous to Health (Amendment) Regulations 2004

- Skim walls and ceilings
- Board walls and ceilings
- Mist coat
- Fit bathroom
- Fit Kitchen
- Final decorations
- Snagging

External Works

The Lifting Operations and Lifting Equipment Regulations 1998

The Work at Height Regulations 2005

The Work at Height (Amendment) Regulations 2007

- External drainage
- Stone to level
- Kerbs
- Tarmac
- Fencing & gates

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