

## **PART C**

# **CARLOW CONCRETE SITE INSTALLATION RISK ASSESSMENTS**

**To be read with Part A & B**

**ATTENUATION TANK INSTALLATION  
RIVA Homes, Croft St, Birkenshaw, Bradford, BD11 2HT**

<b>CONSTRUCTION RECORD 1 Part C Risk Assessments and Cover Sheet</b>	
<b>Site Address</b>	Croft St, Birkenshaw, Bradford, BD11 2HT
<b>Client</b>	RIVA Homes
<b>Description of works</b>	Placement of precast external wall units, internal precast wall units , precast roof units, insitu floor , insitu roof screed and wall joints.
<b>RAMS Based on</b>	Construction Drawings
<b>Delivery Method</b>	40 foot trailers, delivery schedule as per programme.
<b>Placement Method</b>	Mobile Crane (Contract Lift) by Client
Prior to any work taking place all site operatives will have completed a Site Specific Induction and is briefing on the Method Statement.	

## **Table of contents:**

1. Unloading / Lifting Precast Units
2. Access and Egress
3. Dermatitis
4. Installation of Precast Units
5. Housekeeping
6. Manual Handling
7. Working at Heights / MEWP
8. Use of Ladders
9. Chemicals
10. Concreting
11. Portable Generators
12. Fall arrest equipment
13. Podium
14. Chains and Slings
15. Placing precast roof slabs
16. Powered Hand Tools
17. Vibration
18. Wrong Use of Personal Protective Equipment and not been worn
19. Setting up pad for Mobile crane / Concrete pump / MEWP
20. Collapse of precast units during erection
21. Dust
22. Noise
23. Formwork for wall infill sections
24. Abrasive Wheels / Angle Grinder / Consaw
25. Placing and tying rebar
26. Working on greenfield site excavation

27. Unloading / Lifting / Placing reinforcement mesh
28. Confined Space work medium risk
29. Fire / office / site
30. Electricity
31. Weather
32. Plant and Machinery
33. Excavations
34. Weils Disease
35. Storage of Materials
36. Welfare Canteen
37. Personal Working in close Proximity
38. Concrete Pours
39. ReadyMix trucks and Pumps
40. Steel Fixing
41. Repair to precast units
42. Carpentry
43. Bullying

44.

<b>Risk = Likelihood x Severity</b>							
		<b>Likelihood</b>					
<b>Severity</b>	5	5	10	15	20	25	
	4	4	8	12	16	20	
	3	3	6	9	12	15	
	2	2	4	6	8	10	
	1	1	2	3	4	5	
		1	2	3	4	5	
		<p><b>Likelihood</b></p> <p>Rating 1 = Very unlikely            Rating 2 = Unlikely            Rating 3 = Likely            Rating 4 = Very likely            Rating 5 = Almost certain</p>				<p><b>Severity</b></p> <p>Rating 1 = Insignificant / minor first aid / no time off            Rating 2 = Minor injury or illness / lost time            Rating 3 = "7 day" injury or illness / temporary disability            Rating 4 = Major / Permanent injury / illness / disability            Rating 5 = Fatality 1 or more people , fatal disease , fatal injury</p>	
<b>Risk = Likelihood x Severity</b>			Low		Medium		High and unacceptable

Risk assessments were prepared by Denis Lawlor on 28/09/2021 and will be reviewed every 6 months, also review will take place prior to any changes to the of method of installation. The risk assessments once printed will become the working document for the installation works.

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure			L	S	Risk	Control Measure checked by
1	Unloading / lifting precast units	Slips & trips, Entrapment Falls , Manual Handling Body hit by moving objects	3	5	15	<p>Lift plan to be completed by appointed person prior to any lifting operation. Lift plan to be signed and understood by all personnel involved in the lift. All required certs and inspections will be checked recorded and kept in the site file. PUWER and LOLER Checks to be carried out for items of plant and lifting equipment / accessories. All precast units to be lifted into place in a planned operation . All loads will be checked and secured before they are lifted and placed into position</p> <p>Lifting chains and slings clean and regularly maintained and inspected. Certified banksman in place for directing loads All lifted loads to be under the control of a Trained and Competent Slinger / Signaller. Never stand under the precast units. Lower all units to within 300mm from the ground when slewing into position. Check and confirm load weights before lifting. Lift precast units only as high as necessary before being placed into position. All lifting operations to be carried out under the supervision of a Lift Supervisor.</p> <p>Operative's will not be accessing the trailers to unload the units , slings will be passed under the units with the chains lowered down either side of the trailer.</p>			1	5	5	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly checks</b></p>

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure			L	S	Risk	Control Measure checked by
2	Access and egress  Offloading materials/making deliveries and private employee vehicles trying to access and leave the site.	Slips, Trips and falls, ground not level. Collision with vehicles / plant. Works taking place overhead hit by moving objects. Broken bones, sprains .	3	4	12	<p>Traffic management plan to be in place</p> <p>The site vehicular access route is clearly identified and capable of handling frequent deliveries with paramount consideration for road users and pedestrians passing the site boundary.</p> <p>Appropriate signage to be erected on site in accordance with legislative requirements.</p> <p>Appropriate warning signs will be displayed on the approach roads to the site to advise on-coming traffic of the site entrance ahead.</p> <p>Level pedestrian routes to be provided by CONTRACTOR</p> <p>All site personnel to wear Hi-Viz clothing on site at all times</p> <p>Plant / Vehicles to have mirrors ensuring full visibility of surroundings – where required Banksman will control movements.</p> <p>Daily Inspection of Plant and Lifting Equipment to be carried out and recorded where applicable prior to use</p>			1	4	4	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly Checks</b></p>
3	<p>Dermatitis.</p> <p>Working with cement and concrete.</p>	<p>Skin irritation.</p> <p>Affected areas may be red, swollen, tender, hot and painful or itchy.</p> <p>If the reaction is severe the skin will blister or weep</p>	3	3	9	<p>Keep the work area clean.</p> <p>Avoid spills, splashes and sprays of the substance and clean them up promptly.</p> <p>Apply barrier creams before work.</p> <p>This will make it easier to remove some of the substances that tend to stick to skin.</p> <p>Wear clean protective clothing that covers the arms.</p> <p>Treat minor cuts or abrasions promptly.</p> <p>Wear gloves at all times Gloves to be suitable for use when working with cement and concrete – rubber concreting gloves.</p> <p>CoSHH Assessment to be completed and briefed to site personnel prior to works commencing.</p> <p>Safety precautions from CoSHH Assessment to be implemented in the event of an emergency</p>			1	3	3	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly Checks</b></p>

Description		Factors of harm Likelihood x Severity = Risk			Description	Factors of harm Residual Risk level Likelihood x Severity = Risk Control				
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by	
4	<p>Installation of precast units on site Dropping precast units.</p> <p>Operatives / others struck by units or lifting equipment.</p> <p>Excavation collapse .</p> <p>People, plant &amp; materials falling into excavation</p>	<p>Body hit by moving objects.</p> <p>Broken bones, sprains .</p> <p>Crush injuries .</p> <p>Manual handling injuries .</p> <p>Trip/Fall</p> <p>Hit against</p>	3	5	15	<p>Trained operatives and competent supervision available before work starts.</p> <p>Sufficient and suitable plant and lifting requirements before work starts.</p> <p>Confirm information on ground conditions to its intended use – Permit to Load issued for Crane Platform</p> <p>Prior to mobile crane unloading precast units into the excavation check all slings, shackles and certificates are up to date.</p> <p>Ensure that all precast units are placed Systematically.</p> <p>Site crews have the use of collective fall protection systems.(Safety Harness).</p> <p>Edge protection / barriers to be in place .</p> <p>Make sure the lifting eyes/ anchors are screwed in fully before lifting .Lifting points to be used need to be certified – certification provided to Client / Main Contractor .</p> <p>All lifters will have certs in date.</p> <p>Ladder / Podium will be used access the top of the wall units to unhook the chains from the Carlow swivel lifters.</p> <p>3m walls require scissor lifts for safe access.</p> <p>Stop all lifting activities during strong winds</p> <p>All precast units to be stored a safe distance from the sides of the excavation, if units must be stored in close proximity to the edge then chocks or another means of support to be implemented.</p> <p>Where the crane operator cannot see into the excavation a Banksman is used to guide the lift ,trained and Competent Slinger / Signaller to control all lifts</p> <p>Personnel are to maintain a safe distance safe distance until the precast units are in position.</p> <p>All lifting operations to be carried out under the supervision of a Lift Supervisor.</p>	1	5	10	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly Checks</b></p>

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure			L	S	Risk	Control Measure checked by
5	Housekeeping	Slips Trips Falls Dust	3	3	9	Maintain a good housekeeping programme to manage the orderly movement and storage of materials from the point of entry to exit and within the site and the cleaning of all areas. Keep all areas clear of obstructions. Ensure that all workers adopt a "clean as you go" policy. Make sure all timber is de-nailed or nails are knocked back, before discarding. Never drop materials or rubbish from a height. Gather rubbish into bundles or containers for lower safely to ground level. Place all waste or rubbish in designated skips. Segregate waste where practicable. Ensure canteen skips or skips containing waste food products are covered. Arrange for the prompt removal of full skips.			1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b>
6	Manual Handling  Lifting, Bending, Climbing	Back strain, slipped disc.  Hernias.  Back , neck , shoulder injury.  Lacerations, crushing of hands or fingers.  Bruised or broken toes or feet.	5	3	15	Appropriate measures will be taken to reduce the need for manual handling where possible. Manual handling training will be in place for all site operatives. Mobile crane will be used wherever practicable for transporting goods, loading and unloading. Only lift items which are within your own capacity to lift. If something is too heavy for you to lift, get help or use proper lifting equipment. Use gloves when lifting objects which may have sharp edges. If in doubt ASK FOR HELP			1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b>

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by			
7 Working at height. MEWP/Scissor lift	Slips trips and falls. Bodily injury from falls. Falls of materials. Falls of plant or Equipment.	4	4	16	<p>Safe means of access and egress will be provided to the area of work eg, MEWP/ Scissor Lift /, work plan platform. Trained operator to be available at ground level to control the MEWP/ Scissor Lift in the event of an emergency.</p> <p>All plant operated by trained staff only with certs in date.</p> <p>The operating area will be firm and level.</p> <p>Fall arrest equipment will be work and attached as required.</p> <p>Do not leave units unattended in the raised position.</p> <p>Where required, signs and barriers will be erected directly below works to warn of overhead operations. No works to be carried out directly under any works being carried out at height</p> <p>Where edge protection is not practicable an alternative means of fall prevention / fall arrest will be identified.</p> <p>All operatives/subcontractors/visitors, working/passing below overhead operations to wear a safety helmet.</p> <p>Work will be monitored to ensure that additional precautions and equipment is taken into use if edge protection is removed.</p>	1	4	4	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly Checks</b></p>			
8 Use of Ladders	Falls of persons. Ladder slips. Instability . Objects dropped.	4	5	20	<p><b>Ladders will only be used for work of short duration unhooking lifters / chains etc.</b></p> <p>Top step of stepladder must not be used unless designed for that purpose.</p> <p>Ladders must be checked to ensure correct length, type and condition before use.</p> <p>ladder work is restricted to that which can be carried out using one hand only, and stepladder work to that which can be carried out ensuring the stability of the stepladder.</p> <p>The ground base for the ladder must be firm and level.</p> <p>The ladder must be of sufficient length to extend 1m above the step-off point when used as access to scaffold.</p>	1	5	5	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly Checks</b></p>			

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by			
					<p>The correct angle of rest for a ladder is 75 degrees, or a base to height ratio of 1:4. ladders must be secured against slipping, by tying at the top and footed at the bottom. Damaged ladders will be removed immediately.</p>							
9	Chemicals	Spills, contact with skin,  Ingestion  Eye and skin irritant	4	4	16	<p>MSDS on site , PPE In place. Containers properly labelled . Safe storage. Good hygiene standards. COSHH Assessments briefed to all operatives. Site Pack will include MSDS and COSHH Assessments</p>	1	4	4	<p><b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b></p>		
10	Concreting	Contact with skin, dermatitis.   Burns, Eye and skin irritant.   Ground Contamination	4	4	16	<p>All work planned in advance. Avoid contact with skin .PPE will be worn. Good hygiene in place, wear wellington boots when placing concrete. Gloves suitable for use when concreting – rubber gloves. Light eye protection to be worn at all times when concreting Follow data sheets when adding admixtures. <b>Eye Contact</b> (Fresh concrete, dust or other particles): Immediately rinse under clean running water and seek medical advice. Eye wash stations to be available in close proximity to work area – available at site information board <b>Skin contact</b> (Fresh concrete): Immediately rinse under clean running water. <b>Cuts/Abrasions:</b> Clean and treat cuts/abrasions using normal First-Aid methods. Wounds must receive prompt medical attention. All concrete wagons to washout in designated concrete washout skip</p>	1	4	4	<p><b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b></p>		

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control		
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by		
11	Portable Generators	Electrocution , Burns Manual handling, burns, noise	4	3	12	Keep generator in safe place, take care when refuelling. Do not use in a confined space. Do not move or lift on your own. Beware of hot surfaces. Generators to be placed on drip tray / plant nappy when not in use and being used.	1	3	3	Site Foreman Daily checks Weekly Checks	
12	Fall arrest equipment	Incorrect use, not fitted properly, equipment failure Sprains, Suspension trauma Falls, bodily injury	4	4	16	All equipment in good order and inspected before use. Training in place. All fitted and worn in the proper manner. Provide suitable anchorage points. 6 monthly test certificates to be provided. Check before use.	1	4	4	Site Foreman Daily checks Weekly Checks	
13	Podium	slipping, falls  Bodily injury from falls	4	3	12	Podium to be inspected on a regular basis Podium will be erected as per manufactures instructions. Only use when in good condition. Close out bar once standing on platform. Only use on level base . The ground base for the ladder must be firm and level. Keep in clean order. Do not store tools or materials on platform.	1	3	3	Site Foreman Daily checks Weekly Checks	
14	Chains & Slings	Hit by loose chains, precast units drop. Chains fail. Bodily injury , severe injury.	4	3	12	Plan all lifts, check all lifters and chains etc. Safe method of lifting will be planned and discussed. Be aware of SWL at all times, stand clear of all precast units when being lifted unhooked and slewing back to pick up / attach the next unit.	1	3	3	Site Foreman	

Description		Factors of harm Likelihood x Severity = Risk				Description	Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by	
					<p>No loads to be lifted over personnel ever.</p> <p>6 monthly inspection to be carried out and certification obtained – weekly checks carried out and recorded</p> <p>All lifting accessories will have a colour tag as agreed by site.</p>				<p><b>Daily checks</b></p> <p><b>Weekly Checks</b></p>	
15	Placing precast at height. Eg Roof slabs	Falls Hit by units. Manual handling	4	5	20	<p>All lifts are planned, no not stand under precast units, stand well clear at all times.</p> <p>Exclusion zone in place marked out with hard barriers only</p> <p>Lifting equipment to be in good order and inspected .</p> <p>Tag lines may be required.</p> <p>All lifted loads to be under the control of a Trained and Competent Slinger / Signaller</p> <p>All lifting operations to be carried out under the supervision of a Lift Supervisor.</p> <p>Hand rails in place on roof once sections are complete</p> <p>Edge protection in place.</p>	1	5	5	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly Checks</b></p>
16	Powered Hand Tools	Inexperienced operators Electricity Entanglement Bodily injury from flying debris Eye Injury Fire	4	4	16	<p>Only trained operatives allowed to operate tools.</p> <p>Unauthorised persons excluded from tool operation area.</p> <p>Appropriate personal protective equipment to be worn.</p> <p>Proper timely training and instruction.</p> <p>Operating instructions for all tools to be made freely available.</p> <p>All tools to be serviced and maintained as per manufacturers guidelines.</p>	1	4	4	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly Checks</b></p>

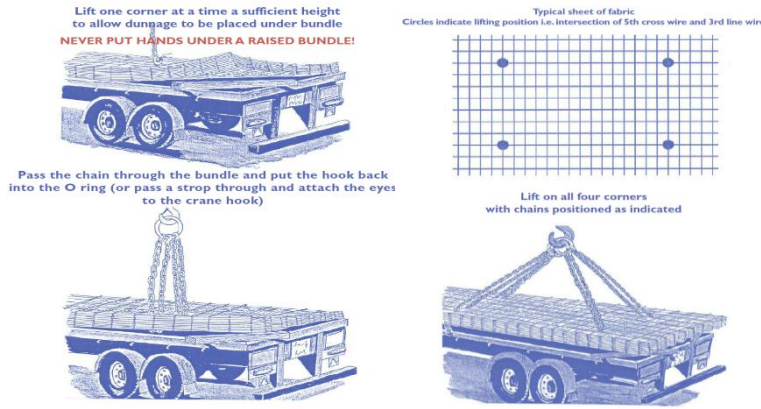
Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by			
	Hand Arm vibration Noise Dust/ Fumes Manual Handling				Weekly check of equipment to be carried out and recorded – POWER Regs. All Tools require PAT testing and site colour code tag							
17	Vibration	Hazard from vibration which can be generated from the usage of some plant static and mobile, and the use of portable hand tools, resulting in acute to chronic muscular / bone injury. Structural damage. Nuisance.	4	3	12	Operatives are instructed to operate the tools for no longer than the listed duration, as part of the safe controls tools should be used for no longer than 10 minutes with a rest period in between not exceeding the total duration listed. All operatives can only use any vibrating tool for 10 minutes without requiring a break and also ensuring the ELV is not exceeded. Regular rotation with competent personnel will assist in the reduction to exposure. Heavy plant should be positioned away from employees / general public / and neighbouring properties. Ensure vibration levels has been reviewed in the selection of equipment. Maintain plant. Restrict working hours. Records to be maintained and completed by operatives who are exposed. Each Vibrating tool must be assessed and the maximum trigger time must be calculated. Trigger time must be recorded and monitored for each operative	1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b>		
18	Wrong Use of personal protective	Hazard from the wrong type of PPE being used. Resulting in minor to moderate injury.  Face , eyes , hands etc	4	3	12	Carlow will supply to site sufficient PPE required for the duration of the works. Not limited to the following –Gloves to be level 5 cut resistance Light eye protection, laced up boots with midsole,Hard hats , Hi Viz vests etc.	1	3	3	<b>Site Foreman</b>		

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure			L	S	Risk	Control Measure checked by	
equipment and not been worn.					When issued it is to be maintained and inspected in accordance with the manufactures guidance by the operator. Any defected equipment is to be returned for immediate replacement and disposal. Refer to the specific risk assessment / CoSHH assessment for required personal protective equipment to be worn. Where signage (blue & white - Mandatory requirement or Yellow & Black - Warning) dictates the wearing of PPE these must be followed.						Daily checks  Weekly Checks	
19 Overturning Of Mobile Crane / MEWP / Concrete Pump  Wind Conditions	Collisions with persons and other vehicles or structures (e.g. precast) Overturning  Reversing Overloading & Falling	4	5	15	Stability of platform used for cranes / MEWPS etc. design by Contractor  Contractor, will provide a suitably designed Crane Platform in line with the Temporary Works Procedure / Permit to Load to be issued by Contractor / crane platform installed in accordance with temporary works design / ground to be proved suitable for use by Temporary Works Department prior to loading from any item of plant listed. Weather will be monitored by site and all lifting personal will be briefed daily regarding the works.			1	5	5	Site Foreman Daily checks Weekly Checks	
20 Collapse of Precast Units / Structure during erection	Operatives / others struck by units .  Body hit by moving objects.  Broken bones, sprains	4	5	20	All precast structures designed with 50Kn concrete , units lifted from moulds at 20Kn @ 24 hours / 40+at 7 days Units reach full design strength prior to arriving on site. Calculations confirming stability of the structure and its elements in the Temporary State – Temporary Works design for the stability carried out by Carlow			1	5	5	Site Foreman Daily checks Weekly Checks	
21 Dust	Inhalation of contaminants	4	3	12	Minimise all dust generation during operations. Damp areas down to reduce dispersion of dust.			1	3	3		

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control		
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by		
Dust generated from drilling, cutting precast.  Site dust	Ingestion of contaminants  Respiratory problems  Irritation of eyes, ears and throat.				Dust emissions to be minimised and/or contained within boundaries of the site, e.g. dampening work before or during cutting. Windblown dust to be reduced by dampening down the surface. Material Safety Data Sheets checked for those materials producing dust. Hazardous / Toxic eg cement/concrete. No food or drinks apart from water allowed at work areas Use wet systems when drilling, grinding etc.				<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b>		
22  Noise  Drilling concrete pokers, site plant generators.	Hearing loss  Hearing impairment  Tinnitus  Inability to hear warnings or other instruction	4	3	12	Obey noise hazard warning signs Consider options for reducing noise, ie -Turn off unused machinery, -Fit mufflers to tools where applicable, -Move noise source away, shield noise source, etc. If you have to shout to be heard then the noise level can be regarded as high enough to warrant the wearing of ear protection. Hearing protection is compulsory when level is recorded at 85dba	1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b>		
23  Formwork for Wall Infill Sections	Operatives / others struck by formwork, wet concrete, concrete burns.  Body hit by moving objects.	4	3	12	Temporary works design carried out and independently checked All formwork to be in place and checked prior to pour. Installation in accordance with design Permit to Load issued prior to concrete pour Concrete rate of rise not exceeded during wall infill pours. Prepour inspections Formwork will be erected as indicated on drawings. All formwork equipment will be checked to ensure it is in good order and of the correct type and capacity.	1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b>		
24  Abrasive Wheels	Exposure to high noise levels.  Inhalation of dust.	4	3	12	Only operated by trained personnel Personal protective equipment Planned preventative maintenance Undertake fuelling in the open / No naked lights / Switch off machine.	1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>		

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by			
Angle grinder and consaw  Cutting rebar/ concrete sections.	Vibration from hand held machine tools.  Eye damage .				-Store fuel in proper sealed containers, away from sources of heat and extreme cold. -Never overfill machine. Always clean flanges before mounting blade. Check both plates are same diameter. Always ensure that the arrow on the blade corresponds with the direction of rotation of the machine spindle. Always Cut in the direction of the arrow. Never apply pressure and force blade through cut. Never let excessive heat be generated at the cutting edge of the blade. Never use blade on unsuitable materials.				<b>Weekly Checks</b>			
25 Placing and tying rebar.	Cuts , bruises  Slips , trips and falls	4	3	12	All reinforcing steel (bars or mesh) to be handled by persons wearing leather working gloves. Gloves to be level 5 cut resistance All mesh to be stored laying down on wooden bearers Eye protection to be worn when fixing steel. Excess binding wire to be disposed of correctly to prevent persons becoming entangled and tripping. Exposed rebar to be capped. Bars and mesh to be handled by adequate number of persons (separate manual handling assessment required)	1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly Checks</b>			
26 Working on new greenfield site/ in excavations	Leptospirosis (weil's disease)  Infections	3	3	9	Adequate welfare provisions will be available on site – i.e. Washing & Changing. PPE may include waterproof gloves, foot protection, overalls, head, eye, hearing, barrier cream and where necessary respiratory protection. First-aid facilities to be available.	1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>			

Description		Factors of harm Likelihood x Severity = Risk				Description	Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by	
	Flu like symptoms  Headaches and vomiting and severe infection which can result in jaundice, meningitis, kidney failure and even death				Openings will be suitable fenced or closed off when not being worked upon. Suitable fencing and signs are present.				Weekly Checks	
27	Unloading, Lifting and placing Mesh  Dropping units. Operatives / others struck by units or lifting equipment.  Body hit by moving objects.  Cuts , bruis. Broken bones, sprains	4	3	12	Before lifting or moving reinforcement and mesh It is the responsibility of Carlow's slinger to direct the operator to carry out the unloading in a safe and controlled manner. <b>The bundle ties should not be used to unload the mesh.</b> <b>Lift one corner at a time and insert timber section 4"x4" timber</b> <b>Insert chains through the bundle and rehook to O ring or Slings.</b> <b>Repeat on all 4 corners and lift.</b> Lifting chains and slings are clean and regularly maintained and inspected. Certified banksman in place for directing loads All lifted loads to be under the control of a Trained and Competent Slinger / Signaller. Never stand under the mesh or reinforce as it is being unloaded. Operative's will not be accessing the trailers to unload the mesh , Slings will be passed under the reinforcement with the chains lowered down either side of the trailer.	1	3		Site Foreman  Daily checks  Weekly Checks	

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure				L	S	Risk	Control Measure checked by
												
28	<p><b>Confined space</b></p> <p>Lack of oxygen, excess gasses, dangerous gasses. Slips trips and Falls. Noise. bodily injury from slips and falls. Falling objects.</p>	4	5	20	<p><b>PLEASE NOTE –</b> <b>Only operatives with confined space training will enter the works area.</b></p> <p>Permit to work will be completed daily. Safe access. Primary access to the tanks will be gained by scaffold access. Gas monitors will always be used at all times , both before entering the work area and while the work is being carried out Testing of oxygen content will be carried out first, while the monitors being used will also test for common asphyxiating contaminants such as carbon monoxide, carbon dioxide The equipment will be suitably calibrated in accordance with the manufacturer’s recommendations. Works area will always be kept in a tidy condition. Ventilation of the confined space may be necessary during the work, replacing stale or contaminated air with fresh air.</p>				1	5	5	<p>Site Foreman</p> <p>Daily checks</p> <p>Weekly Checks</p>

Description		Factors of harm Likelihood x Severity = Risk				Description	Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by	
					<del>Generators will not be used in the excavation / works area.</del> <del>No lone working.</del> <del>Appropriate PP will always be worn as required.</del>					
29	Fire Office and factory	Hot work – welding, cutting, grinding Smoking near flammable materials Electrical faults Arson Possible burns, scalds or smoke inhalation.	4	4	16	Maintain all areas free from fire hazards and accumulated rubbish or combustible materials. The Safety Statement / Safety Plan will include details fire prevention provisions, such as, supply and maintenance of fire fighting equipment, control of hot work, emergency procedures in the event of fire, control of smoking on site as needed, and prevention of the build- up of flammable materials such as in waste skips. Adequate means of escape and access for workers and emergency vehicles will be planned for during all stages of construction. Keep all passageways and escape routes clear. Fire emergency exit routes will be established, adequately signed and kept free of obstruction. Smoking restrictions will be enforced, no smoking areas to be signed, where necessary. Hot works and use of naked flame appliances will be controlled as necessary, including the use of permit to work systems.	1	4	4	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly checks</b>

Description		Factors of harm Likelihood x Severity = Risk			Description	Factors of harm Residual Risk level Likelihood x Severity = Risk Control				
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by	
					<p>Temporary electrical systems will comply with legal standards and be inspected. Do not overload electrical equipment.</p> <p>An emergency fire and evacuation procedure is produced the factory and office and will be practiced and continuously reviewed / updated as required.</p> <p>Quantities of highly flammable liquids and LPG within stores areas will be restricted and suitable storage facilities provided.</p> <p>Records will be maintained of routine fire inspections and the maintenance and testing of fire equipment.</p> <p>Fire points and escape routes to be signed and kept clear and equipped with emergency lighting if required.</p> <p>Select and sign a suitable assembly point or points.</p> <p>Ensure a "Permit to Work" System is in place for all 'Hot' work.</p> <p>Fire drills to be carried out.</p>					
30	Electricity  Portable Generators	Electrocution by contact with voltage supply. Burns from hot surfaces. Risk of fire when refuelling. Noise. Manual handling. Asphyxiation from fumes.	3	4	12	<p>Manufacturers instructions should be followed.</p> <p>Where possible, services to the equipment should be disconnected.</p> <p>Mechanical handling equipment should be used wherever possible.</p> <p>Do not run the generator in a confined space. Keep outdoors or a well ventilated area.</p> <p>Keep fuel in a clearly labelled and suitable container.</p> <p>Ensure the generator is switched off when refuelling.</p> <p>Beware of hot surfaces such as a silencer and exhaust.</p> <p>Report defects to a supervisor.</p> <p>Repair and maintenance work to be carried out by a competent person.</p>	1	4	4	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly checks</b></p>

Description		Factors of harm Likelihood x Severity = Risk				Description	Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by	
31	Weather	Sunburn/sunstroke, possibly leading to skin cancer.  Hypothermia.  Frostbite.  Strong wind blowing materials.  Frost/snow causing slippery surfaces and burst pipes.  Flooding.	3	3	9	In sunny weather, always cover the back of the neck and have long sleeve shirt on .  Avoid sunburn and sun stroke where possible by keeping covered.  Strong winds or gusts can over balance an operator. Stop work if the winds rise to gale force.  Heavy rain will make the ground soft, excavations are at risk.  Do not work in heavy rain.  Be prepared for slippery conditions in icy weather.	1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly checks</b>

Description		Factors of harm Likelihood x Severity = Risk				Description	Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by	
32	Plant & Machinery	Overturning Collision with pedestrians Collision with other vehicles Causing collapse of or falling into excavations Impaired drivers vision Maintenance / repairs. Persons falling from vehicles	4	5	20	<p>Vehicles routes will be planned to avoid danger to pedestrians, contact structures or overhead power lines and to be clear of all excavations.</p> <p>Suitable fencing should be provided around excavations; where necessary exclusion zones may be necessary to prevent the excavation collapsing.</p> <p>Vehicle operating areas and traffic routes will be clearly signed and fenced off where practicable.</p> <p>Drivers will ensure loads are placed evenly in vehicles and that the vehicle is not overloaded.</p> <p>Visiting drivers will be briefed on site rules and hazards.</p> <p>Banksman must be provided where drivers do not have clear visibility.</p> <p>Where audible warnings are not fitted to vehicles, banksmen will be used to give warnings to others when vehicle is reversing.</p> <p>Vehicles intended for use on the public highway will comply with the current licensing requirements.</p> <p>Signs requesting visiting vehicle drivers to report to site office will be displayed</p> <p>Any machine left unattended must have the ignition key removed.</p>	1	5	5	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly checks</b></p>

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure			L	S	Risk	Control Measure checked by	
33	Excavations	Presence of contaminated ground. Oxygen Deficiency, Toxic or flammable gas. Falling materials or plant. Falls of persons, unprotected edges. Flooding, ingress of water. Collapse of sides, weakening of adjacent structures.	4	5	20	Plant and materials should be kept away from the side of excavations. If the depth of excavation is over 2 meters, or there is a particular risk of anybody falling, suitable guardrails should be placed and suitable access arrangements, such as ladders or ramps, should be provided. Place suitable barriers and signs around the excavation. If required Use trench boxes to support excavation and to allow safe work inside the trench box. Ensure all shuttering, supports and buttresses are of sufficient strength and securely supported and braced to prevent collapse. Where possible, step or batter back unstable faces to a safe angle (45 degrees or greater). Put stop blocks in place to prevent machinery driving too close or reversing into the excavation. If there is a risk of water ingress, suitable methods and/or equipment should be provided to either prevent the entry of or to remove water, e.g. water pumps. Inspections of excavations should be carried out prior to each shift, after any event likely to affect			1	5	5	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly checks</b>
34	Weills Disease	Flu like symptoms  Headaches and vomiting and severe infection which can result in jaundice, meningitis, kidney failure and even death.	4	3	12	Wearing protective clothing eg gloves Following good basic hygiene including regular hand-washing and avoiding hand to mouth/eye etc contact Taking rest breaks, including meals and drinks, away from the work area; Washing cuts and grazes immediately with soap and running water Cover all cuts, abrasions and other breaks in the skin with waterproof dressings and/or glove			1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly checks</b>

Description		Factors of harm Likelihood x Severity = Risk				Description	Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measure	L	S	Risk	Control Measure checked by	
35	Storage of Materials	Injury from falling materials Injury to trespassers, especially children Environmental contamination Musclarskeletal injuries from lifting materials Injury from mechanical lifting/delivery equipment	4	4	16	Ensure that minimum quantities of materials supplied to site in line with the programmed works, thus reducing quantities of materials stored which prevent unnecessary damage. Ensure that all material storage areas are level and stable For hazardous materials, Material Safety Data Sheets must be available. Palletised loads should not exceed two pallets in height. Loads must be lifted correctly, manual handling information and training to be provided to employees Whenever practicable mechanical lifting/delivery equipment to be provided minimising manual handling. Material stacks should be limited in height to ensure stability, no more than 2m. Guardrails will be fitted to storage areas where persons could fall more then 2m. Hazardous materials e.g. highly flammable liquids, chemicals should be stored separately and their issue controlled. Deliveries by HIAB, should be monitored and controlled and all lifting operations should not pass over personnel, plant and equipment or accommodation.	1	4	4	Site Foreman  Daily checks  Weekly checks

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
No.	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measures			L	S	Risk	Control Measures checked by
36	Welfare Canteen	Scalds from boiling water, boiler, steam, dishwasher Ill health from poor hygiene.	3	3	9	Provide adequate First Aid equipment to deal with burns, scalds and cuts. Fire extinguisher and fire blanket in place and checked regularly. Canteen floor, table, sink and work surfaces to be thoroughly cleaned every day. Rubbish bins to be emptied each day. Clean up all spills or breakages immediately. Minimise spillages by safe working techniques. All waste must be collected and discarded in a safe and secure manner. Bottles and cans should be selected and sent for re-cycling as appropriate. Authorised and licensed handlers should carry out all waste collection. All waste food holding containers must be covered and sealed to avoid contamination by rodents and birds.			1	3	3	<b>Site Foreman</b> <b>Daily checks</b>  <b>Weekly checks</b>
37	Personal working in close proximity	Lack of coordination of works  Slips trips and falls  Plant movement injury	4	3	12	Daily works briefing for all contractors working together.  Contractors to advise on clashing trades.  Contractors to work only as planned and discussed at briefings.  Contractors deliveries to be planned and notice given to site management .  Work areas to be cordoned off .  Permits to be in place is required			1	3	3	<b>Site Foreman</b>  <b>Daily checks</b>  <b>Weekly checks</b>

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
No.	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measures			L	S	Risk	Control Measures checked by
38	Concrete Pours	Manual handling of shutters and reinforcement Movement / collapse of shutters / excavation Contact with concrete delivery vehicles Contact with concrete plant e.g. mixers pumps Contact with cement products, burns, and dermatitis. Falls from heights	4	3	12	<p>All work to be planned in advance and experienced personal to be used to carry out work.</p> <p>When using ready mixed products access for deliveries and acceptable delivery schedules to be provided.</p> <p>Safe access and egress to be provided, including handrails on all platforms over 2m.</p> <p>Where possible, manual handling to be reduced by use of mechanical lifting devices.</p> <p>All formwork to be firmly secured to eliminate risk of the movement or collapsing during pour or storage.</p> <p>All vehicles to be monitored and safe traffic routes to be designed and implemented to reduce the risk of contact with operatives, third parties or construction plant.</p> <p>Correct PPE to be issued and worn by all operatives.</p> <p>Eating and drinking prohibited whilst working with concrete, - washing facilities to be provided.</p> <p>When mixing concrete in site, consideration to inhalation of dust, manual handling of concrete from mixer to mound/excavation and contact with mixers.</p> <p>Shutter to be checked for stability before pour commences.</p> <p>Concrete deliveries and pours shall be monitored to reduce risks to operatives and third parties from uncontrolled release, misdirected pours and external contamination.</p>			1	3	3	<p><b>Site Foreman</b></p> <p><b>Daily checks</b></p> <p><b>Weekly checks</b></p>

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
No.	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measures			L	S	Risk	Control Measures checked by
39	Ready Mix trucks and Use of concrete pumps	Striking against or being struck by falling objects. Noise. Manual handling – due to difficult situations requiring awkward posture whilst lifting. Concrete penetration of eyes, nose or ears due to an uncontrolled surge during cleaning. operations or clearing of blockages.	4	3	12	Full concrete trucks are top heavy with heavily loaded rear wheels. Take extra care where trucks have to go on slopes or gradients. Do not drive across slopes. Watch out for projecting reinforcement and back filled bores or excavations when reversing: A Banksman must be present to give clear signals to the driver. Wheel stops should be provided to prevent the vehicle from getting too close to the edge of excavations, piles or underground services. Spills promptly cleaned or cordoned off. Avoid contact with the skin. Wet concrete workers to wear Wellington boots. Wash hands thoroughly after contact and use a barrier cream. Remove clothing that has been contaminated by wet concrete.			1	3	3	Site Foreman  Daily checks  Weekly checks
40	Steel Fixing	Manual handling injuries  Cuts and abrasions  Falls from heights.  Falling materials or tools	4	3	12	Manual handling will be minimised using teleporters and other lifting equipment. When ladders are used, they will be secured. Steel fixers will only work in areas that are protected with handrail when above 2 meters or use suitable fall arrest system. Lay out reinforcement before fixing, so that individual bars may be easily located. Workers cutting reinforcement must have received abrasive wheel training and have suitable experience. Fit 'mushroom' caps on exposed projecting steel bars. Ensure the spacers are strong enough and at suitable centres to carry the weight of the re-bars. Provide walkways where necessary – access over steel cages, etc. When lifting assemblies by crane, always use four lifting points. Never lift reinforcement steel bundles by their binding wire only			1	3	3	Site Foreman  Daily checks  Weekly checks

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
No.	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measures			L	S	Risk	Control Measures checked by
41	Concrete repair Flexcrete Nupatch Adoplug	Cement dust Respiratory problems. Dermatitis Skin burns Skin sensitisation Eye injuries Manual handling	3	3	12	Filter masks to be used when spending even short periods of time in high dust areas and when using concrete saws or cement mixers. Avoid contact with the skin. Wear suitable PPE as listed below. Wet concrete workers to wear Wellington boots. Wash hands thoroughly after contact and use a barrier cream. Follow health & Safety instructions when using concrete additives. Remove clothing that has been contaminated by wet concrete.			1	3	3	Site Foreman  Daily checks  Weekly checks
42	Carpentry	Entanglement or contact with machinery parts, saw blades, drills etc. Exposure to high noise levels. Inhalation if wood and dust. Vibration from hand held machine tools. Damaged or worn tools. Incorrect use of tools. Manual handling of materials. Wood coatings, glues or resins. Flying pieces of wood or tools.	4	4	16	Tools and equipment to be checked before use.  Only competent operatives should use powered tools and equipment.  Adequate dust control and dust extraction should be in place or respiratory protection provided.  Mechanical handling equipment or assistance to be provided when heavy or awkward items are being worked on or moved.  Treated timber to be thoroughly dry when used.			1	4	4	Site Foreman  Daily checks  Weekly checks

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control			
No.	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measures			L	S	Risk	Control Measures checked by
43												

Description			Factors of harm Likelihood x Severity = Risk			Description			Factors of harm Residual Risk level Likelihood x Severity = Risk Control				
No.	Activity	Hazards Identified	L	S	Risk	Existing and Additional Risk Control Measures				L	S	Risk	Control Measures checked by
44													