APPENDIX A - EMERGENCY PROCEDURES

EMERGENCY PROCEDURES

Arrangements for dealing with minimising the effects of; -

Injuries. First aid arrangements and equipment must be in place before any work commences the Principal Contractors Site Supervisor is to arrange for the supply of the materials, signs and regulation information. The Principal Contractors Site Supervisor is to ensure that all site personnel know the location of the aforementioned in accordance to RIDDOR Risk of Injury Disease or Dangerous Occurrences Regulations and COSHH Control of Substances Hazardous to Health Regulations.

Disease. Adequate welfare arrangements and equipment will be in place before work commences to include first aid and washing facilities.

Dangerous Occurrences. The Principal Contractors Site Supervisor will ensure that all site personnel are fully informed and trained regarding carrying out operations or handling materials, which may result in a dangerous occurrence. This will be carried out by issuing specific method statements. Face to face instruction with written confirmation and operators signature to prove understanding of instruction As RIDDOR.

Fire, explosion. The Principal Contractors Site Supervisor will ensure all planned safety measures have been provided, that is all fire precautions in accordance with the regulations are supplied and maintain all first aid appliances comply with relevant British Standards including regular service and maintenance. All hazardous materials shall be stored and handled in accordance with the suppliers' instructions and company health and safety policy instructions

REPORTING INJURIES, DISEASES AND DANGEROUS OCCURRENCES REGULATIONS 1995.

These regulations make reporting accidents and ill health a legal requirement for every employer, the self employed or anybody in control of a building site or premises of work. All major injuries, death, disease and dangerous occurrences are to be reported by any of the following methods to the **Incident Contact Centre**.

Phone:	0845 3009923 (8.30am – 5.00pm)
Fax:	0845 3009924 (anytime)
Internet:	www.riddor.gov.uk (anytime)
Email:	riddor@natbrit.com
By Post:	Incident Contact Centre, Caerphilly Business Park, Caerphilly CF83 3GG.

Categories to Report.

Major injuries or death.

If there is an accident connected with work and your employee, or a self employed person working on your premises or site is killed or suffers a major injury (including as a result of physical violence), or a member of the public is killed or taken to hospital you must notify the **Incident Contact Centre** without delay. Notifiable major injuries are

1. A fracture other than to fingers, thumbs or toes.
2. Amputation.
3. Dislocation of the shoulder, hip, knee or spine.
4. Loss of sight. (temporary or permanent)
5. Chemical or hot metal burn to the eye or any penetrating injury to the eye.
6. Any injury resulting from electric shock or electric burn leading to unconsciousness, or requiring resuscitation, or requiring admittance to hospital for more than 24 hours.

7. Unconsciousness caused by asphyxia or exposure to a harmful substance or biological agent.
8. Acute illness requiring medical treatment, or loss of consciousness arising from absorption of any substance by inhalation, ingestion or through the skin.
9. Acute illness requiring medical treatment where there is reason to believe that this resulted from exposure to a biological agent or its toxins or infected material.

Dangerous Occurrences.

1. Collapse, overturning or failure of load-bearing parts of lifts or lifting equipment.
2. Explosion, collapse or bursting of any closed vessel or associated pipe work.
3. Failure of any freight container in any of its load bearing parts.
4. Plant or equipment coming into contact with overhead power lines.
5. Electrical short circuit or overload causing fire or explosion.
6. Any unintentional explosion, misfire, failure of demolition to cause the intended collapse, projection of material beyond a site boundary or injury caused by explosion.
7. Malfunction of breathing apparatus while in use or during testing immediately before use.
8. Collapse or partial collapse of a scaffold over five metres high, or erected near water where there could be a risk of drowning after a fall.
9. A dangerous occurrence at a pipeline.
10. The unintended collapse of any building or structure under construction, alteration or demolition where over five tonnes of material falls or a wall, floor or any false work falls.
11. An explosion or fire causing suspension of normal work for over 24 hours.

Reportable Diseases.

1. Poisons.
2. Skin diseases.
3. Lung diseases.
4. Infections.
5. Others e.g. occupational cancer.

Note. The enforcing authority may be the Health & Safety Executive or the Local Authority. In either case the construction site (demolition) injury or dangerous occurrence will be reported to the Area Health & Safety Executive office applicable to the site (see Health & Safety Welfare Site Arrangements form).

Contractors (CDM) Regulations. Contractors making reports under RIDDOR must immediately inform the Principal Contractor who may wish to investigate the incident and consider changing the Construction Phase Health & Safety Plan.

Records. The Principal Contractor, Wooldridge Ecotec Limited will keep records of all reportable injuries and dangerous occurrences noting the following information

Date and time of accident of the accident causing injuries or dangerous occurrences.
Personnel details.
Full name.
Occupation.
Nature of injury or condition.
Location of accident or dangerous occurrence.
Brief description of the circumstances.

All causes of accidents will be investigated to,

Identify the cause to initiate measures to prevent re-occurrence.
Gather information for use in any proceedings.
Confirm or refute any claim.
Prepare notifications to enforcing authority.

Procedure to determine:

The cause.
Who was involved?
When, where and why it occurred.
Consider how it could have been prevented.

WELFARE FACITLIES

Arrangements for the provision and maintenance of welfare facilities.

The Principal Contractors Site Supervisor will ensure all welfare and first aid facilities are in place before any of the demolition work commences.

REGULATIONS

Copies of the regulations will be kept on site and or/work place.

All site personnel will be informed of the locations of the first aid kit and welfare facilities by notice boards face-to-face instruction written handouts etc.

TRAINING INFORMATION

Information and training for people on site and the arrangements for checking the provision of; -

Health and Safety information. The Principal Contractors Site Supervisor will ensure that all health and safety information is readily available on site and that all site personnel know of its location and availability. Communication by face-to-face instruction.

Health and Safety training. The Principal Contractors Site Supervisor (in person) is to check and record the persons' name and qualification of competence relating to the jog operation. It is the site agent's responsibility that no operative carries out duties beyond his qualification or experience.

Information provided (by Employers) about the project e.g. name of CDM Co-ordinator, principal contractor, relevant parts of the health and safety plan arrangements for project specific awareness training tool box or task health and safety talks of statutory notice.

The Principal Contractor 's Company Health and Safety Supervisor will visit the site to ensure that the arrangements for specific training, toolbox or health & safety talks have been or will be given. He will also check that all the required notices have been displayed at clearly visible locations.

HEALTH, SAFETY AND WELFARE SITE ARRANGEMENTS

Wooldridge Ecotec Limited Unit 17. Hallgrove Farm Acton Road Bagshot Acton GU19 5HP Tel: 01276 470 333 Fax: 01276 470 301	**Project Site Address** **Twickenham Sorting Office,** **109 London Road,** **Twickenham,** **TW1 9BE**

Site Supervisor	**Billy Harmes**	Tel. **07831 407816**

Contractor	**Wooldridge Ecotec Limited**	Tel. **01276 470 333**

Site Safety Supervisor	**Billy Harmes**	Tel. **07831 407816**

First Aider :	**Daniel McDonnell**	Tel. **07747 034771**

First Aid Room Location – Welfare Unit

The nearest Hospital is; - **West Middlesex University Hospital**
Twickenham Road
Isleworth
Middlesex
TW7 6AF

Distance: 2.88 Km – 1.8 miles

In case of an accident phone **01372 735 735** or dial **999**

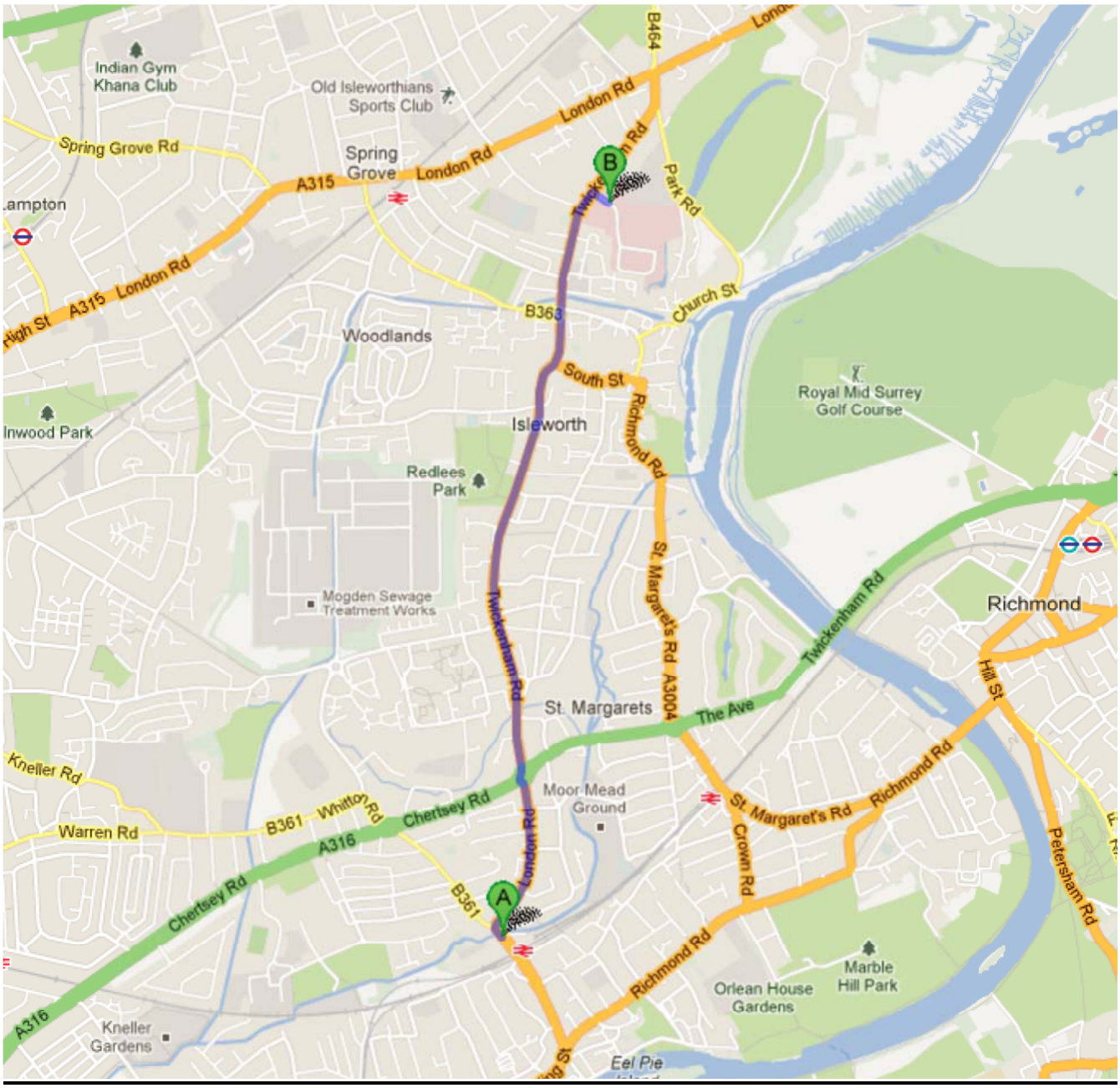
Local Office of the Health & Safety Executive

Rose Court
2 Southwark Bridge
LONDON
SE1 9HS

Tel: 0845 345 0055 **Fax: 020 7556 2102**

The Person responsible for Health & Safety this site is
Mr Billy Harmes Tel. **07831 407816**
Wooldridge Ecotec Safety Co-ordinator
Andrew Leonard
Tel. 01276 470333 Fax. 01276 470301
MOB: 07887 994712

ROUTE to West Middlesex University Hospital



TW1 9BE, UK

1.	Head **northwest** on **London Rd/A310** toward **Whitton Rd/B361** Continue to follow A310 Go through 2 roundabouts About 5 mins	go 1.8 mi total 1.8 mi
2.	Turn right Destination will be on the right About 50 secs	go 249 ft total 1.8 mi

Isleworth TW7 6AF, UK

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

STAFF SAFETY FIRE PROCEDURE

Wooldridge Ecotec Limited Unit 17. Hallgrove Farm London Road Bagshot Surrey GU19 5HP Tel: 01276 470 333 Fax: 01276 470 301	Project Site Address **Twickenham Sorting Office,** **109 London Road,** **Twickenham,** **TW1 9BE**

Site Supervisor:	**Billy Harmes**	Tel. **07831 407816**

ACTION IN CASE OF FIRE AND DIRECTION FOR DEALING WITH FIRE

FIRE INSTRUCTIONS

If you discover a fire,

1. Raise the alarm at the nearest call point **(Site Office) or shout "FIRE, FIRE, FIRE".**
2. If you are unable to tackle the fire, without taking personal risk, leave the area immediately.

On hearing the fire alarm **(GAS OPERATED FOG HORN).**

1. Proceed immediately to the assembly point.

ASSEMBLY POINT

OUTSIDE WELFARE UNIT

2. Use the quickest route of escape.
3. Do not stop to collect personal belongings.
4. Do not enter or re-enter the building until you are told it is safe to do so.

WHEN DEALING WITH FIRE : -

If a persons clothing is on fire, wrap a blanket, rug or similar article closely around them and lay them on the ground to prevent flames reaching the head.

If petroleum materials are involved distance yourself as far away as possible. Do not try to deal with the fire yourself.

Shut the doors and if possible, the windows of the room in which the fire is discovered.

IT IS IN YOUR OWN INTEREST : -

To study this notice, to know what to do in the event of a fire and how to use the fire appliances.
To make yourself familiar with all means of escape in case of a fire and to avoid any obstruction of the escape routes at all times.

APPENDIX B - RISK ASSESSMENTS

INTRODUCTION

The following risk assessment refers to the demolition and associated works of the **Former Twickenham Sorting Office, 109 London Road, Twickenham, TW1 9BE.** This risk assessment is not definitive and may vary to ensure the safety of all those directly involved or otherwise.

Seeking out, identifying and quantifying hazards is the essence of risk management and it is important that this activity is systematically carried out during the life cycle of the project. There are numerous approaches to risk management, from the complex quantitative approach to the relatively simple qualitative approach based upon personal judgement, supported by generalised data of risk.

Unless otherwise stated, quantitative assessments should be undertaken.

The proposed rating system is as follows

Severity	**Rating by Hazard**	**Value**
Major	Immediate danger exists, hazard capable of causing death and illness on a wide scale	**3**
Serious	Hazard can result in serious illness, severe injury, property and equipment damage.	**2**
Slight	Hazard can cause illness, injury or equipment damage but the results would not expect to be serious.	**1**

Probability	**Rating of Hazard value**	**Value**
Probable	Likely to occur immediately or shortly.	**3**
Reasonably Probable	Probably will occur in time.	**2**
Remote	May occur in time.	**1**

The Rating Value that is high, Medium or low	**Equals**	**The severity value multiplied by the probability value.**
HIGH	**Equals**	7 to 9
MEDIUM	**Equals**	4 to 6
LOW	**Equals**	1 to 3

#	HAZARD	INITIAL RISK RATING			MITIGATING ACTION	RESIDUAL RISK RATING		
		PROBABILITY	SEVERITY	RISK		PROBABILITY	SEVERITY	RISK
1.	**Working at height – causing death, injury and/or damage.**	3	3	HIGH	**It is our principal intention to avoid placing any site operatives at high level to carry out demolition work. All demolition work is to be carried out by remote methods. However when required we will provide safe and secure working platforms having integral ladders. Where required provide proprietary scaffold systems e.g. mobile scaffold towers. Inspect before use, weekly and after alteration and/or repair. Record condition before use and after all maintenance and/or alteration work. Where required provide mechanical methods to raise and lower operatives, plant, tools equipment and materials e.g. scissor lift, MEWP or Telehandler. If used all proprietary scaffold systems, tower scaffolds and power operated mobile working platforms must be placed on firm and level bases. Appropriate Personnel Protection Equipment (PPE) will be issued. Onsite training given to instruct when the equipment is required and its correct use. Where reasonably practical continual on site monitoring will be carried out by the delegated person in charge to ensure that all PPE is used where required and access equipment is used in the correct manner.**	1	3	LOW
2.	**Working at height from a MEWP – risk of fall, toppling over.**	3	3	HIGH	**Before using check machine for defects. Plan the route of the machine to avoid any depressions voids and drains. Check service drawings for vulnerable ducts etc. Do not raise platform before deploying the out riggers. Communicate intentions to your banksman and operatives in the platform. At height move platform slowly. All operatives to wear harnesses and be clipped on before raising the work platform.**	1	3	LOW
3.	**Harness Rescue from work platform**	3	2	MED	**Any operative that becomes fully suspended in a fall arrest harness through a fall must be rescued from that position as soon as possible. In the case of a fall from the MEWP's working platform the operator is to boom in the MEWP and lower the platform to the floor.**	1	2	LOW
4.	**Working at height from an aluminium tower – risk of fall, toppling over.**	3	3	HIGH	**Only position on a flat clear surface. Do not place the wheels over floor boxes. Always deploy the outrigger support legs. Check the tower and out riggers after each move. No overreaching from the tower. Guard rails to be placed a minimum of 910mm above the working platform. Use toe boards around the platform to prevent objects and tools from falling**	1	3	LOW
5.	**Aluminium tower erection.**	2	2	MED	**Only a competent person is to erect the tower. Check all components are serviceable and are free from any welding defects, dents, bends or distortion before assembly. Platform**	1	2	LOW

#	HAZARD	INITIAL RISK RATING			MITIGATING ACTION	RESIDUAL RISK RATING		
		PROBABILITY	SEVERITY	RISK		PROBABILITY	SEVERITY	RISK
					boards must be free from holes and de-lamination. Using the adjustable legs ensure the platform is level and check the vertical alignment. Do not exceed a height to base ratio of 3:1. Do not place the legs over floor boxes.			
6.	**Asbestos cement sheet removal**	**2**	**3**	**MED**	**Comply with HSB189/2 "Working With Asbestos Cement" as issued by the HSE. Use a wetting agent or water to soak the asbestos cement sheets continually to minimise the possibility of fibre release. Wear disposable overall, dust masks to FFP3, gloves and safety glasses over and above the standard PPE. Restrict access to the working areas. Constant supervision to adhere to best practise method. Double bag all waste, seal and label. Remove from site as soon as possible to a licensed waste station.**	**2**	**1**	**LOW**
7.	**Prevention of falling objects generally – causing injury and/or damage to persons and/or objects below**	**3**	**3**	**HIGH**	**Provision of protection sheets, boards, toe boards, hand and guardrails. Provision of warning signs and control barriers to establish drop zones in accordance with BS6187 2011. Prevent access into drop zones by non-work operatives or more importantly improperly equipped or un trained operatives. Appropriate Personnel Protection Equipment PPE will be issued. On-site training given to instruct when the equipment is required and its correct use. Where reasonably practical continual on site monitoring will be carried out by the person in charge to ensure the all the PPE is used where required and in the correct manner and that the exclusion zones remain secure all the time a demolition excavator is working in the zone. All our demolition excavators have FOPS systems over the cabs.**	**1**	**3**	**LOW**
8.	**Dust – nuisance and/or damage to eyes and by inhalation**	**3**	**2**	**MED**	**Where required and as necessary continual dampening down using fine water spay on to activity areas creating dust. Provision of protection sheets and boards, signs and control barriers to prevent access of non-work operatives or more importantly improperly equipped operatives. Appropriate Personnel Protection Equipment (PPE) will be issued i.e. goggles and facemasks. On-site training given to instruct when the equipment is required and its correct use. Where reasonably practical continual on site monitoring will be carried out by the person in charge to ensure the all the PPE is used where required and in the correct manner. Provision and maintenance of fresh air supply by natural ingress where reasonably practical. By mechanical means In extreme conditions.**	**1**	**2**	**LOW**

#	HAZARD	INITIAL RISK RATING			MITIGATING ACTION	RESIDUAL RISK RATING		
		PROBABILITY	SEVERITY	RISK		PROBABILITY	SEVERITY	RISK
9.	**Noise – nuisance and/or damage to ears in extreme cases.**	**3**	**2**	**MED**	**Provision of warning signs and control barriers to prevent access of non-work operatives or more importantly improperly equipped operatives. Machine noise levels as published by the manufacturers and as described in the H&S Plan will be adhered too. Appropriate Personnel Protection Equipment (PPE) will be Issued i.e. ear defenders and earplugs. On-site training given to instruct when the equipment is required and its correct use. Where reasonably practical on site monitoring will be carried out by the person in charge using a hand held sound meter to measure the force of the sound. This will help determine when noise levels are reaching the action levels as described in the "Control of Noise at Work Regulations 2005. The site supervisor is to ensure the correct PPE is used where required and in the correct manner.**	**1**	**2**	**LOW**
10.	**Existing Services – injury and/or damage due to electrocution and/or Fire.**	**2**	**3**	**MED**	**Request and obtain all available Information regarding service dimension and position in the form of as built drawings, specification and/or on site instruction from the appropriate Statutory Authorities or the Project Service Engineer. Identify and/or label all service pipes, wires cables and ducts before any work commences. Have the Statutory Authorities disconnect and cap off all existing services away from the site-specific work places and preferably at the boundary of the site. Use a CAT SCAN to determine the location of known services. Mark these identified services with either paint or lightweight bunting. Set up an exclusion zone of 2 metres either side of the service. Before any excavations take place SCAN the area to check for any unknown services that may pass through the site. Instruct all site operatives regarding all service supply locations category and condition (live or dead or to be maintained). Protect all live services that are to remain. Provide warning signs and control barriers to prevent access to anybody except those authorised to work on the services.**	**1**	**3**	**LOW**
11.	**Serviceability and maintenance of Plant, equipment and tools. The lack of causing damage, injury and/or death.**	**3**	**3**	**HIGH**	**Before using any plant, equipment or tools operatives must check for defects. All plant, equipment and tools must be regularly checked maintained and repaired. All plant, equipment and tools will be fitted with the appropriate safety guards, safety catches, cut out switches handles and grips etc. All defective parts, guards and cables must be reported immediately to the site supervisor. Maintenance, service and repair records must be kept updated. Defective tools must be quarantined and must be appropriately marked up as defective. All operatives are to receive appropriate instruction and training in the correct use of all plant, equipment and tools. Appropriate PPE will be issued.**	**1**	**3**	**LOW**

#	HAZARD	INITIAL RISK RATING			MITIGATING ACTION	RESIDUAL RISK RATING		
		PROBABILITY	SEVERITY	RISK		PROBABILITY	SEVERITY	RISK
					Site supervisor to monitor the correct use of tools and PPE. Only operatives trained to CITB standards are to operate any plant, equipment and tools and only with the authority of the site supervisor.			
12.	**Disc Cutter – Abrasive wheels.**	**3**	**2**	**MED**	**Only a trained and competent person is to change the wheels. Assess the correct wheel is used for the job. Avoid operations that continually snag the wheel. Maintain all the guards and safety systems on the disc cutter. The cutting area must be clear of obstructions and operatives. Communicate with other operatives your intended area of cutting and the direction of the sparks and debris. Afford a fireproof barrier to protect finished areas from the sparks and debris. Always operate the machine with two hands. Always start the disc cutter on a level surface and not in the air. Wear gloves, goggles and dust masks at all times whilst operating the disc cutter.**	**1**	**2**	**LOW**
13.	**Hot Works**	**3**	**2**	**MED**	**Comply with the hot works permit conditions as issued by St James. Provide sufficient fire extinguishers. Remove all flammable materials from the vicinity. Afford protection from sparks or flames with fire blanket covered boards. Initiate a fire watch brief to all operatives involved. Stop hot works two hours before the end of a shift.**	**1**	**2**	**LOW**
14.	**Misuse of plant, machinery, equipment and tools – causing damage, injury and/or death.**	**3**	**3**	**HIGH**	**Only authorised and appropriately trained operatives are to operate plant, machinery, equipment and tools. Evidence of training and competence must be provided. All manufacturers' specifications with regard to safe working limits must be strictly adhered too. This applies to height, reach, weight and capacity. No machine, item of plant or equipment is to be repaired, adjusted or maintained by any person unless they have been trained and are authorised to do so. All plant, machinery, equipment and vehicles MUST BE IMMOBILISED when left unattended, for any length of time or when parked overnight. No vehicle, plant or machinery must block the sites access or exit at any time. No tools, plant, machinery or equipment should be used for any work other than what it was specifically designed for. There is to be NO REVERSING WITHOUT A BANKSMEN of any plant or vehicle on any site regardless of whether CCTV reversing aid has been fitted to the vehicle or not. The maximum speed on site is 10 mph.**	**1**	**3**	**LOW**
15.	**Hazardous substances under COSHH – injury to**	**2**	**3**	**MED**	**Provision installation and maintenance of the correct storage facilities commensurate to the hazard severity of the material and/or item to be stored. Request and obtain all available**	**1**	**3**	**LOW**

#	HAZARD	INITIAL RISK RATING			MITIGATING ACTION	RESIDUAL RISK RATING		
		PROBABILITY	SEVERITY	RISK		PROBABILITY	SEVERITY	RISK
	skin, eyes, nose lung. Due to touch, entry through the mouth, the nose and inhalation causing affixation. Contamination due to spillage.				**information regarding the material and/or item that is to be stored from the manufacture and/or supplier considering the minimum storage time the use and identification of the correct containers to be used i.e. labels, identification sheets and stickers. Smoking prohibited. Test atmosphere in confined spaces and provide fresh air by natural ingress or mechanically. Provision of warning signs and control barriers to prevent access of non-work operatives or importantly improperly equipped and/or insufficiently trained operatives. Appropriate Personnel Protection Equipment (PPE) will be issued i.e. gloves and facemasks. Note washing facilities are to be made available close to the areas where the hazardous materials are stored. I.e. water, wash hand bowl, towel and soap. Where reasonably practical continual on site monitoring will be carried out by the person in charge to ensure the all that all PPE is used where required and in the correct manner.**			
16.	**Visitors to site, the Project Site Area. Protection to avoid nuisance injury and/or damage.**	**2**	**3**	**MED**	**On site instruction will given to all site visitors regarding the site rules and the use of the issued Personnel Protective Equipment and its correct use (Safety Helmets). The site experience of all site visitors will be evaluated and a member of the Principal Contractors site team will accompany them around the site at all times. (The exception being experienced members of the Projects Management team. Client, Designers Principal Contractors office staff etc.). Where reasonably practical continual on site monitoring will be carried out by the person in charge to ensure the all that all the issued PPE is used where required and in the correct manner by all site visitors and that the site visitors strictly adhere to all the site rules.**	**1**	**3**	**LOW**
17.	**Removal and disposal of Florescent tubes**	**2**	**2**	**MED**	**Check electricity is switched off. Client to issue disconnection notice. Work from an aluminium tower. Remove the tube carefully wearing gloves, safety glasses and dust mask. Remove one tube at a time and pass to second operative. Place in transfer container one at a time. Care must be taken not to break the glass tube. A specialist company will collect the tubes from site and dispose of them correctly.**	**1**	**2**	**LOW**
18.	**Contact with high voltage overhead power cables – causing injury and/or damage to**	**N/A**	**N/A**	**N/A**	**No overhead high voltage cables pass across the project site area.**	**N/A**	**N/A**	**N/A**

#	HAZARD	INITIAL RISK RATING			MITIGATING ACTION	RESIDUAL RISK RATING		
		PROBABILITY	SEVERITY	RISK		PROBABILITY	SEVERITY	RISK
	persons and/or objects.							
19.	**Contact with underground services – causing injury and/or damage to persons and/or objects.**	**3**	**3**	**HIGH**	**Obtain all available information from the appropriate Statutory Authorities, either in the form of drawings, specification and/or on site instruction. Ensure that all the Statutory Authorities have been notified.**	**1**	**3**	**LOW**
20.	**Accidents adjacent to the site access – causing injury and/or damage.**	**2**	**3**	**MED**	**Liaise with the Local authority's Highways department and Local Police. Monitor all vehicular movement into and out from the site. Schedule all deliveries of plant machines and equipment. Schedule the removal of materials and demolition arisings Ensure compliance with traffic restrictions example no waiting systems and no parking systems. Ensure all due care and attention is given to other road users and pedestrians.**	**1**	**3**	**LOW**
21.	**Spillage of hydraulic oil – causing injury and/or damage.**	**2**	**2**	**MED**	**As necessary pump out and/or soak up with sand and spill kits, remove from the site and deposit in an approved disposal facility. All consignment notes and waste disposal receipts will be retained as proof that the correct method of removal and disposal has been carried out in strict accordance to all statutory requirements.**	**1**	**2**	**LOW**
22.	**Demolition by hand.**	**3**	**3**	**HIGH**	**Provision of warning signs and control barriers to prevent access of non-work operatives or importantly improperly equipped and/or insufficiently trained operatives. Appropriate Personnel Protection Equipment (PPE) will be issued i.e. safety helmets, boots, gloves, goggles and facemasks. Note welfare facilities to include washing facilities and drying areas are to be made available close to the areas where the project works are to be carried out. Where reasonably practical continual on site monitoring will be carried out by the person in charge to ensure the all that all PPE is used where required and in the correct manner.**	**1**	**3**	**LOW**
23.	**Structural stability/Premature collapse – the prevention of.**	**3**	**3**	**HIGH**	**Provision and maintenance of temporary propping, shoring and support measures. Only a competent person is to determine the method and sequence of demolition of a structure. The structure must be reduced in size by one structural bay at a time. Buildings will be tiered to maintain structural stability.** **Provision of control barriers and warning signs to define specific work site areas and/or drop zones. Continual on site**	**1**	**3**	**LOW**

#	HAZARD	INITIAL RISK RATING			MITIGATING ACTION	RESIDUAL RISK RATING		
		PROBABILITY	SEVERITY	RISK		PROBABILITY	SEVERITY	RISK
					monitoring during the progress of the work. Posting of Banksmen during the operation of machines in close proximity of other building structures that are to remain, deep excavations and overhead services.			
24.	**Personal injury – generally.**	**3**	**3**	**HIGH**	**Provision of warning signs and control barriers to prevent access of non-work operatives or more importantly improperly equipped and/or insufficiently trained operatives. All appropriate Personnel Protection Equipment (PPE) will be issued. On-site training given to instruct when the equipment is required and its correct use. Where reasonably practical continual on site monitoring will be carried out by the person in charge to ensure the all the PPE is used where required and in the correct manner. Safety awareness and induction talks given at the commencement of the work and there after to all new on site arrivals.**	**1**	**3**	**LOW**
25.	**Fire – generally.**	**2**	**2**	**MED**	**Implement Fire plan considering alarm systems muster points and procedures. Designate site as a non-smoking area. Provide and maintain adequate first aid Fire fighting appliances. Safety awareness and Induction talks given at the commencement of the work and there after to all new on site arrivals.**	**1**	**2**	**LOW**
26.	**Manual Handling – causing muscular/skeletal injury, strains and sprains**	**3**	**2**	**MED**	**Where reasonably practical avoid manual handling operations to move or lift heavy and/or bulky objects. Assess objects weight, shape and manoeuvrability considering individual or team lifting – reducing the objects size by cutting/dismantling – chose alternative way of moving/lifting i.e. mechanical methods. Operatives instructed in the correct way of lifting considering individuals capability, keeping a good posture, avoiding twisting, stooping reaching upwards and attempting to carry unpredictable loads. All appropriate Personnel Protection Equipment (PPE) will be issued e.g. safety boots, gloves. Training given to instruct when the equipment is required and its correct use. Where reasonably practical continual on site monitoring will be carried out by the person in charge to ensure the all the PPE is used where required and in the correct manner. Safety awareness and induction talks given at the commencement of the work and there after to all new on site arrivals.**	**1**	**2**	**LOW**
27.	**Vibration – causing Hand Arm Vibration Syndrome**	**3**	**2**	**MED**	**All rotary and percussion hand operated tools fitted with vibration suppressors and insulated handles (hired and new). Regular inspections, maintenance, repairs and re-placement – recorded and certified ready for use. Vibration labels attached to**	**1**	**2**	**LOW**

#	HAZARD	INITIAL RISK RATING			MITIGATING ACTION	RESIDUAL RISK RATING		
		PROBABILITY	SEVERITY	RISK		PROBABILITY	SEVERITY	RISK
	Vibration White Finger or Reynard's Syndrome. (HAVS VWF)				**equipment. Where reasonably practicable consider alternative method of works using non- rotary and percussion hand operated tools. Operatives instructed in the correct use of tools – to ware gloves, to keep hands warm, avoid exhausts to pass over hands, massaging and exercising hands and fingers during breaks. Adhere to maximum exposure times and job rotation systems to avoid excessive exposure. Operative trained to recognize HAVS and VWF symptoms and the need to report these symptoms to the Supervisor. All appropriate Personnel Protection Equipment (PPE) will be issued e.g. anti-vibration gloves, warm and weatherproof clothing. Where reasonably practical continual on site monitoring will be carried out by the person in charge to ensure the all the PPE is used where required and in the correct manner. Safety awareness and induction talks given at the commencement of the work and there after to all new on site arrivals.**			
28.	**Decommissioning and Removal of underground fuel tanks**	**3**	**3**	**HIGH**	**Set up a physical exclusion zone with signage warning of potential for Flammable hazards and excavations. Suitable and sufficient fire fighting equipment must be in close vicinity. If decommissioning certificates are not available investigate contents of tank to determine the hazards. Use specialist company to remove and clean tanks as appropriate. A specialist company to be employed to carry out the necessary works i.e. purge, de-gas and clean empty leaving each tank filled with inert material such as water. Check that all service pipes to the tank have been disconnected, removed and securely plugged. With the tank filled with inert material and all service pipes disconnected and removed, excavate around the tank exposing concrete surround. Carefully break up and remove hard standing and expose fuel tank below. Carefully break up and remove tank from excavation and place on the ground for further inspection. Pump out water into tanker and dispose of as hazardous waste. If the tank is small crush to a manageable size and deposit in steel waste bin for recycling. If the tank is large proceed to sheer or hot cut the tank into smaller manageable sections and deposit in the steel recycling bin. If no contamination is detected in the hole back fill void and compact with hardcore arising from the site. If contamination is detected in the excavation contact for further instruction. Make sure the excavation is then protected with a physical barrier (i.e. Heras Fencing) and signage is displayed warning of the excavation.**	**1**	**3**	**LOW**

APPENDIX C - COSHH ASSESSMENTS

Substance Name:	**Un-leaded Gasoline (Petrol)**
Can the substance be avoided?	**No**
Can the substance be substituted?	**No**
Contents:	**A complex combination of Hydrocarbons consisting primarily of paraffins, cycloparaffins, aromatic and Olefinic hydrocarbons having carbon numbers predominantly greater than C3 Some Alkyl Lead additives will be present.**

Hazard				
				
Extremely Flammable	**Harmful**	**Irritant**	**Explosive**	**Danger to the Environment**

Exposure Limits
Alkyl Lead 0.10 mgm3 TWA 8 Hrs

Health Risks	
Inhalation	**Carcinogenic vapours causing damage to the lung lining.**
Skin Contact	**Irritant**
Eye Contact	**Irritant**
Ingestion	**May cause lung damage if swallowed and aspired into the lungs**

First Aid	
Inhalation	**Remove to fresh air administer artificial respiration if breathing stops seek medical assistance immediately** note **This product contains Benzene(<5%) which is classified as a Carcinogen**
Skin Contact	**Remove contaminated clothing and wash with copious amounts of clean fresh water and soap.**
Eye Contact	**Irrigate with copious amounts of clean fresh water. Seek medical assistance immediately**
Ingestion	**Do NOT induce vomiting Seek medical assistance immediately.**

Fire Precautions	
Suitable Extinguishing Media:	**DO NOT use water. Use Foam, or dry powder to extinguish the flames. Beware of reignition.**
Unusual Fire/Explosion Hazards:	**Vapours will pool in low lying areas Forms an extremely flammable mixture**

Spillage / Waste Management / Storage

Harmful to Flora and Fauna. Do not allow product to contaminate the drains or watercourses
In the event of a major spillage only trained persons wearing self contained breathing apparatus are to clean up the spill. Alert the Fire and Rescue Service, Eliminate ALL **sources of ignition, If vehicles are present switch off all engines. Contain the spillage if possible**

Storage

Gasoline storage is subject to legislative controls. A petroleum licence must be obtained from the local petroleum officer for bulk storage. Storage tanks must be suitably designed and installed. Storage must be remote from all sources of ignition heat and flame. The vapours in the tank head spaces must be considered HIGHLY FLAMMABLE at all times. The areas must be kept well ventilated. Do Not Smoke in the vicinity. Avoid breathing the vapours or mists. Launder contaminated clothing before re-use. NO PETROL WILL BE STORED OVERNIGHT ON SITE.

Project Specific Application and Controls

Project Address:	**London Road, Twickenham**
Method of Application:	**Refuelling portable plant**
Area of Application:	**External fuel supply tank**
Length of Exposure:	**5 minutes**
Controls to be implemented:	**No smoking. Have foam Fire extinguisher on standby. Use organic vapour mask (PP3) Wear impervious nitrile or pvc gloves.**
Residual Risk with ALL **controls in place:**	**LOW**

Substance Name:	**Gas Oil**
Can the substance be avoided?	**NO**
Can the substance be substituted?	**NO**
Contents:	**Mixture of Hydrocarbons mainly Paraffinic with some aromatics and Napthenes**

Hazard

				
Extremely Flammable	**Harmful**	**Explosive**	**Danger to the Environment**	

Exposure Limits

Napthenes 53mg.m3 TWA 8 Hrs

Health Risks

Inhalation	**Anaesthesia, Unconsciousness, Death**
Skin Contact	**Irritation, Dermatitis**
Eye Contact	**Irritation**
Ingestion	**Harmful if swallowed internal burns Sickness, Vomiting, Diarrhoea Carcinogenic Possible risk of irreversible effects**

First Aid

Inhalation	**Remove to fresh air Seek medical assistance immediately**
Skin Contact	**Remove contaminated clothing wash with clean fresh water and soap.**
Eye Contact	**Irrigate with copious amounts of clean fresh water Seek medical assistance immediately**
Ingestion	**Do Not Induce Vomiting Give plenty of clean fresh water tom drink seek medical assistance immediately.**

Fire Precautions

Suitable Extinguishing Media:	**Foam, Dry Powder, Water Fog**
Unusual Fire/Explosion Hazards:	**Product of combustion may contain hydrogen sulphide, Carbon Monoxide and other toxic materials**

Spillage / Waste Management /Storage /Disposal

Eliminate all sources of ignition, Contain spill to the smallest area possible using dikes, dams or booms as appropriate. Recover as much of the product as possible. Soak up small amounts using absorbent materials. Remove contaminated items including soils and place in suitable containers for disposal.
Store in suitably designed tanks away from heat ignition sources and open flames in line with national and local regulations and codes of practice.
Keep area well ventilated
Disposal
Incineration in an approved facility is the approved method of disposal.
Control of Pollution (Special Wastes) Regulations apply.
Do not discharge into the public drainage system.

Project Specific Application and Controls

Project Address:	**London Road, Twickenham**
Method of Application:	**Refuelling Plant**
Area of Application:	**Internal Fuel Tanks on excavators**
Length of Exposure:	**20 mins**
Controls to be implemented:	**No Smoking. Suitable footwear to be worn, Overalls that conform to EN 531 must be worn Impervious nitrile or PVC gloves must be worn. Eye protection should be worn.**
Residual Risk with ALL **controls in place:**	**LOW**

Substance Name:	**Concrete Dust (Respirable Crystalline Silica)**
Can the substance be avoided?	**NO**
Can the substance be substituted?	**NO**
Contents:	**Crystalline Silica**

Hazard

				
Respiratory Irritant	Harmful			

Exposure Limits; **Respirable Crystalline Silica – 0.1mg.m³ TWA 8 Hrs. In 2006 the Health and Safety Commission (HSC) set a new exposure limit for respirable crystalline silica (RCS) of 0.1 mg/m3. It was previously 0.3mg.m³**

Health Risks

Inhalation	**Fine dust containing crystalline silica can cause lung damage (silicosis). Silicosis is a slowly progressive, irreversible disease that usually takes some years to develop. Silicosis can cause breathing problems, the severity of which can range from mild through to severely disabling, depending on the amount of dust inhaled. In severe cases, silicosis leads to premature death. In people who have had exceptionally high exposures over just a few months or years, a rapidly progressive and often fatal condition known as "acute silicosis" can occur. Heavy and prolonged exposures to Respirable Crystalline Silica under conditions that produce silicosis can also cause lung cancer. Silicosis is made worse by smoking. 'Respirable' means that the dust can get to the deepest parts of the lung. Such fine dust is invisible under normal lighting.**
Skin Contact	**Cement is capable of causing dermatitis by two mechanisms - irritancy and allergy.**
Eye Contact	**Irritant**
Ingestion	**Nor a recognised route of entry**

First Aid

Inhalation	**On inhalation of concrete dust, remove the affected person to fresh air and seek medical attention if required.**
Skin Contact	**On contact with concrete dust, wash with soap and water. If irritation occurs seek medical attention.**
Eye Contact	**On contact with concrete dust, Immediately irrigate with eyewash solution or clean water. If symptoms develop, obtain medical attention.**
Ingestion	**If ingestion of concrete dust causes problems, remove from exposure and seek medical attention if required.**

Fire Precautions

Suitable Extinguishing Media:	**Concrete is not flammable and will not facilitate combustion with other materials.**
Unusual Fire/Explosion Hazards:	None known

Spillage / Waste Management/ Handling

Cleaning Up:
No special requirements, where possible use mechanical aids to reduce the risk of manual handling injury.
Environmental Measures:
Does not constitute a significant environmental hazard.
Handling:
Wear respiratory protective equipment when entering areas where dust is known to be present unless atmosphere is PROVED to be safe. Ventilate the area.

Project Specific Application and Controls

Project Address:	**London Road, Twickenham**
Method of Application:	**By product of breaking cutting or crushing concrete**
Area of Application:	**Various on site**
Length of Exposure:	**Long Exposure dependent on operations. Intermittent throughout the day**
Controls to be implemented:	**RPE should be mandatory and monitored. Where reasonably practicable dust exposures should be controlled by engineering methods, such as wet cutting**

	and local exhaust ventilation.
Residual Risk with ALL controls in place:	LOW

Substance Name:	**Fluorescent Tubes (Vaporised Mercury)**
Can the substance be avoided?	**No**
Can the substance be substituted?	**No**
Contents:	**Small amounts of vaporised mercury per tube**

Hazard

				
Poisonous	**Harmful**	**Irritant**	**Explosive**	**Danger to the Environment**

Exposure Limits

Vaporised Mercury 0.025 mg/m3 TWA 8 Hrs

Health Risks

Inhalation	**The mercury concentration in air produced as a result of breaking one or a small number of fluorescent tubes would result in significant exposure levels. Acute exposure can cause severe nausea and vomiting. Effects can take up to 10 days to manifest. Respiratory protection to FFP3 as a minimum.**
Skin Contact	**Prolonged exposure to mercury on the skin would be absorbed in varying amounts. Cumulative effects would cause Nausea, vomiting, bloody diarrhoea, kidney damage and death.**
Eye Contact	**Irritant.**
Ingestion	**Chronic exposure can cause death.**

First Aid

Inhalation	**Remove to fresh air administer artificial respiration if breathing stops. Seek medical assistance immediately.**
Skin Contact	**Remove contaminated clothing. Wash the affected area of skin with copious amounts of clean fresh water and soap. Health monitoring with medical assistance.**
Eye Contact	**Irrigate with copious amounts of clean fresh water. Seek medical assistance immediately**
Ingestion	**Do NOT induce vomiting Seek medical assistance immediately.**

Fire Precautions

Suitable Extinguishing Media:	**Non flammable**
Unusual Fire/Explosion Hazards:	**N/A**

Spillage / Waste Management / Storage

Large quantities of mercury is harmful to water courses. Large quantities of releases from breaking in confined spaces could cause respiratory contamination. Wear suitable respiratory protection. FFP3 as a minimum.

Storage

Store tubes in the boxes they were delivered in. Disposal through a specialist hazardous waste contractor. Avoid breathing the vapours or mists from breakages.

Project Specific Application and Controls

Project Address:	**London Road, Twickenham**
Method of Application:	**Removing fluorescent tubes from the light fittings**
Area of Application:	**Throughout**
Length of Exposure:	**1 minute**
Controls to be implemented:	**Use organic vapour mask (PP3). Wear safety glasses. Wear PVC gloves.**
Residual Risk with ALL controls in place:	**LOW**

Substance Name:	**Asbestos Cement Sheet. (Chrysotile)**
Can the substance be avoided?	**NO**
Can the substance be substituted?	**YES**
Contents:	**10% to 15% Chrysotile Asbestos Fibre. Portland Cement**

Hazard

				
Harmful				

Exposure Limits

Only asbestos fibres greater than 5 micrometers (µ)m in length are considered for the following exposure limits.
Chrysotile. - 0.1 fibres/ml of air over any continuous period of 4 hours
- 0.6 fibres/ml of air averaged over any continuous period of 10 minutes.

Health Risks

Inhalation	**Inhalation is the usual route of exposure to asbestos fibres. The most common changes that asbestos exposure may cause, depending on the total dose received, are plural plaques, pleural thickening, asbestosis, lung cancer and mesothelioma of the pleura and peritoneum. Asbestos related diseases are of insidious onset and generally appear many years after first exposure.**
Skin Contact	**Irritation, Dermatitis**
Eye Contact	**Irritation**
Ingestion	**A secondary route of exposure through the ingestion of contaminated mucus is swallowed after coughing. Possible factor in the development of peritoneal mesothelioma.**

First Aid

Inhalation	**Remove the victim from further exposure. Seek medical assistance immediately**
Skin Contact	**Remove contaminated clothing wash with clean fresh water and soap.**
Eye Contact	**Irrigate with copious amounts of clean fresh water Seek medical assistance immediately**
Ingestion	**Do Not Induce Vomiting Give plenty of clean fresh water to drink seek medical assistance.**

Fire Precautions

Suitable Extinguishing Media:	**Non flammable**
Unusual Fire/Explosion Hazards:	**Non combustible**

Spillage / Waste Management /Storage /Disposal

Where reasonably practicable, avoid working on asbestos cement. Keep the material wet when working on it. Where reasonably practicable, avoid using abrasive power and pneumatic tools. Use hand tools in preference to abrasive power or pneumatic tools. Wear suitable PPE, including RPE. Keep the work area clean and tidy. Avoid the use of cleaning methods such as sweeping which will make dust airborne. Make sure the work area is thoroughly clean on completion of the work.
Disposal
Under the control of the Special Waste Regulations 1996 and the Hazardous Waste Regulations 2005 all asbestos containing materials and asbestos containing waste be consigned to a site which is authorised to accept asbestos waste. This is enforced by the Environment Agency and the local authorities in England and Wales.

Project Specific Application and Controls

Project Address:	**London Road, Twickenham**
Method of Application:	**Removal of Asbestos Cement soffits.**
Area of Application:	**External to garage buildings but within the Gateway Site**
Length of Exposure:	**2 Hours**
Controls to be implemented:	**Disposable overalls and dust masks (FFP2)should be worn. Gloves and safety glasses. Constant wetting down of the sheet while removing. Double bagged and labelled ready for disposal.**
Residual Risk with ALL controls in place:	**LOW**

APPENDIX D - INDUCTION, TOOLBOX, METHOD REGISTER

WOOLDRIDGE DEMOLITION

Hall Grove Farm Industrial Estate
London Road
Bagshot,

Method Statement / Site Induction / Toolbox Talk Register

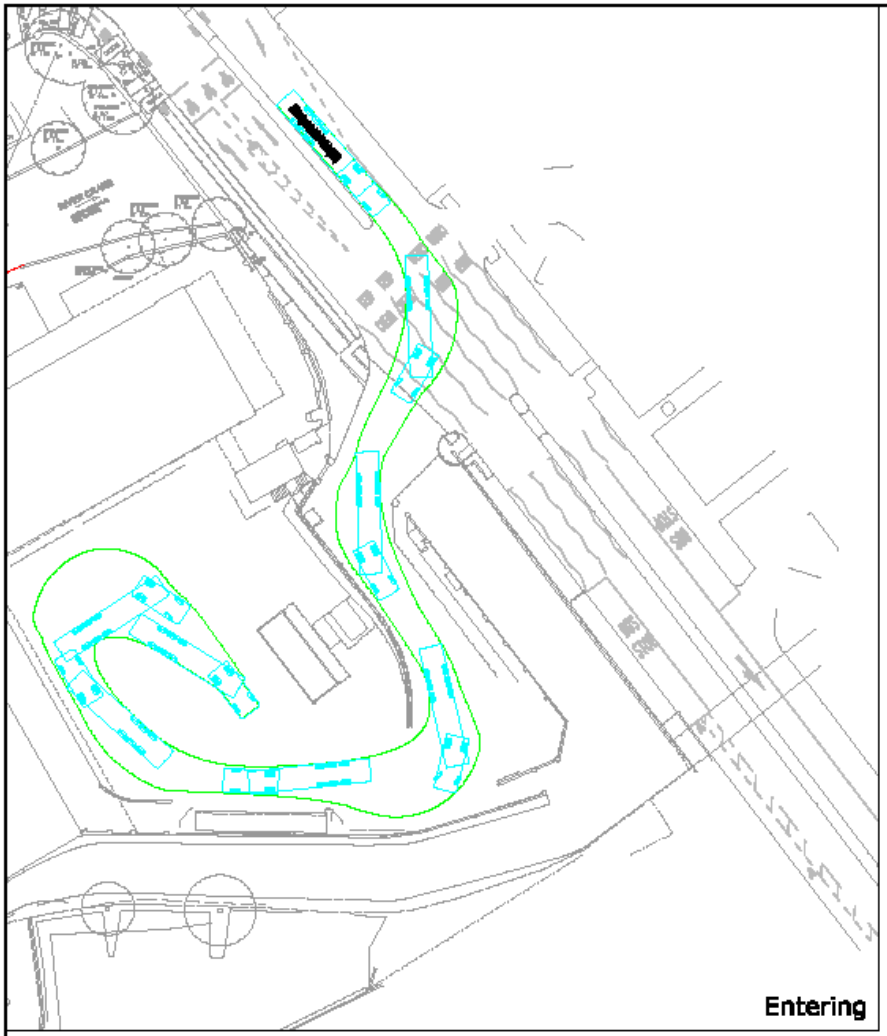
Site Address					
Supervisor (PRINT NAME)		Date			
Method Statement Briefing		Toolbox Talk		Site Induction	
Topic Discussed					

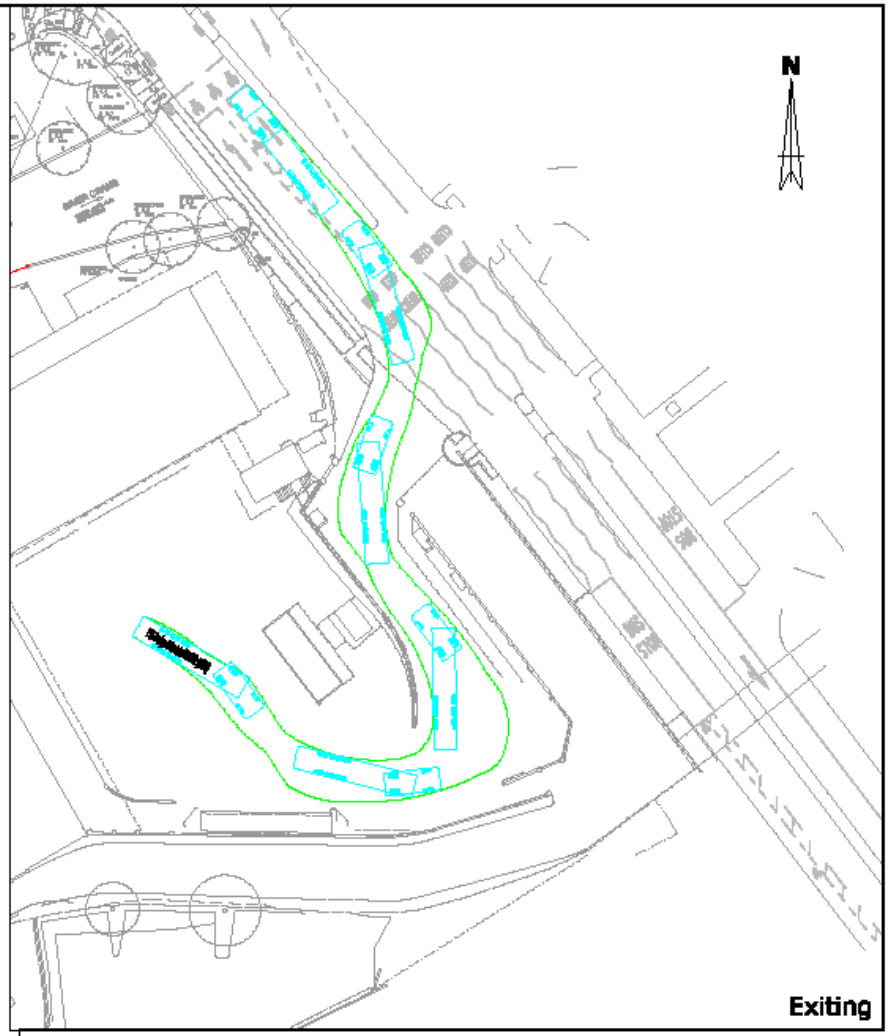
Print Name	Employer	Signature

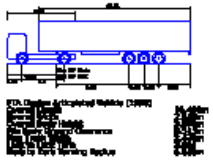
This Register is to be used to record the fact that all site operatives and contractors have been inducted into the site safety procedures or that important safety information has been passed on to those that require it. The more people that know about the dangers on site the less chance something could go wrong.

Protect everybody – Induct everybody.

APPENDIX E – TRAFFIC MANOEVERES AND ROUTES







This drawing has been prepared for planning purposes and should not be used for construction.

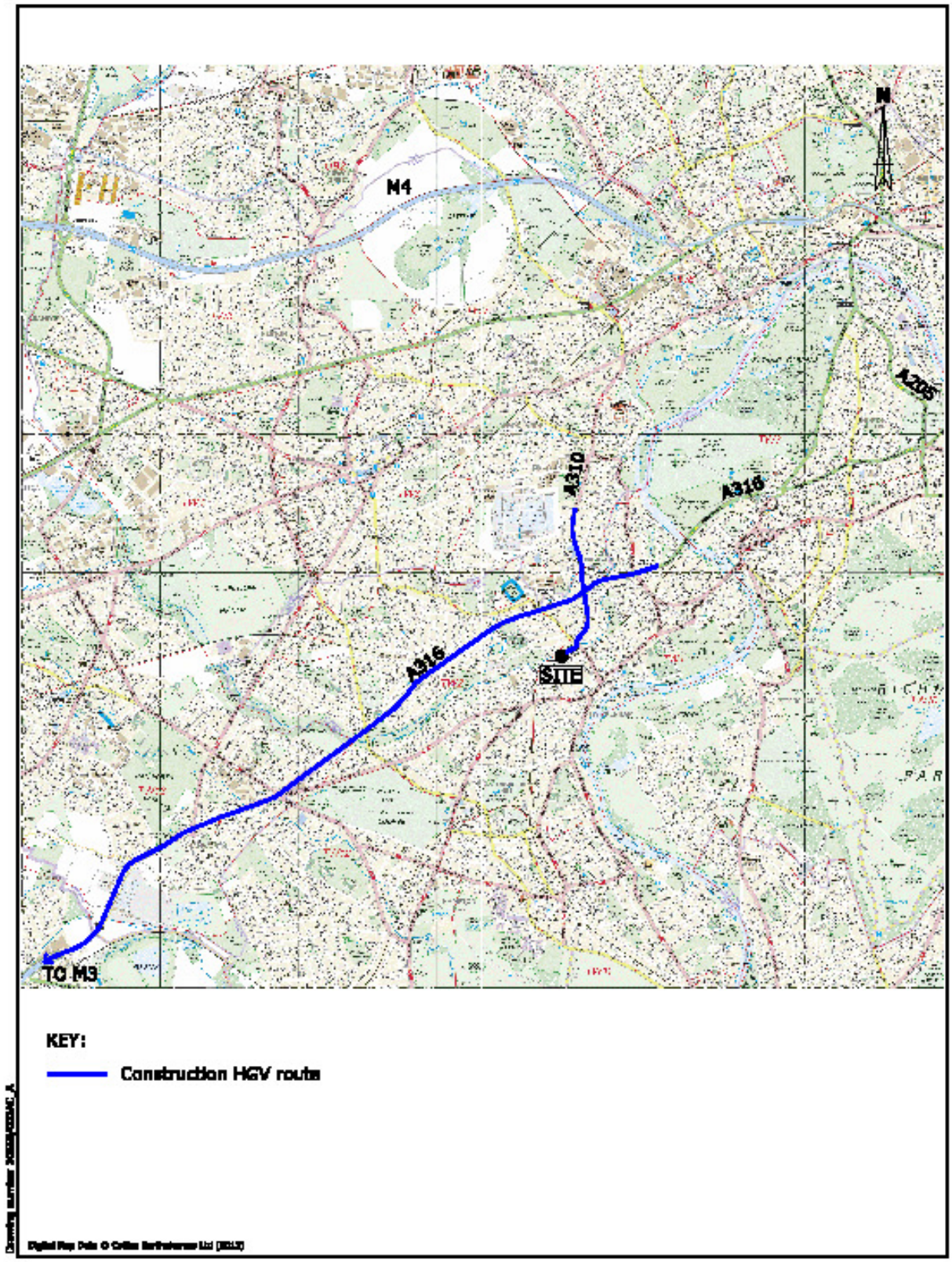
TWICKENHAM SORTING OFFICE

Swept paths of 16.5m articulated vehicle accessing the site.

SCALE @ A3	DATE	DRAWN BY	CHECKED
1:500	22/05/13	TC	CVR

TRANSPORT PLANNING PRACTICE
70 Cowcross Street
London, EC1M 6EL
t: 020 7608 0008
w: www.tppweb.co.uk

DRAWING NUMBER: 30558/002AC REV: A



HGV construction vehicle routes

Figure 1

APPENDIX F – DEMOLITION NOISE ASSESSMENT
by Peter Brett Associates

Job Name: Former Royal Mail Sorting Office, Twickenham

Job No: 26503-21

Note No: 1

Date: 21st March 2013

Prepared By: Mubassir Malik

Subject: Demolition Noise Assessment

Item	Subject
1.	**Introduction** Peter Brett Associates LLP (PBA) has been commissioned by St.James to undertake a noise assessment for demolition works at the former Royal Mail Sorting Office site in Twickenham. The demolition noise assessment was requested to be undertaken by London Borough of Richmond's Environmental Health Department to determine the impact on nearby receptors and detail mitigation measures to be incorporated into the site management plan.
2.	**Proposals** Demolition works are proposed to be undertaken over a 12-week period. A figure detailing the locations of demolitions works over the 12 week period is detailed in Figure 1 attached to this note. The demolition works will include the demolition of all buildings down to and including the ground slab and foundations to a maximum depth of 2m. Selected hard standings and foundations may not be removed due to the proximity of the water course. All demolition arisings will be crushed to BS 6F2 and stockpiled on site for St.James re-use. All waste will be removed from site to recycling centres or licensed waste transfer sites. The operating hours for demolition are 8am - 6pm on Monday – Fridays and 8am -1pm on Saturdays. No evening or night-time works are proposed.
3.	**Site Location and Nearby Receptors** The demolition works will be undertaken on the former Royal Mail Sorting Office site in Twickenham which is located immediately west of London Road (A310) and Twickenham train station. The buildings listed below are the nearest sensitive receptors to the site and have been assessed within this noise report. The receptors are shown in Figure 2. • Receptor 1: Railway Cottages (Located directly south of the site); • Receptor 2: Heatham House Youth Centre (located directly north of the site); • Receptor 3: 14 Craneford Close (located to the north-west of the site).
4.	**Noise Guidance** For the assessment of noise from construction sites, the relevant guidance and methodologies are provided in B25228: 2009. **British Standard 5228: 2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites** British Standard 5228 (BS5228): Part 1 provides recommendations for noise control on construction and open sites where work activities/operations generate significant

Item	Subject
	noise levels. **The Standard also provides sound level data for mobile and fixed plant.** **This guidance has been used to determine the noise limits for the site and is the method followed to calculate noise impacts from demolition plant at the nearby receptors.**
5.	**Methodology** **Baseline Noise Levels** **Baseline noise surveys were undertaken at three locations surrounding the application site. The survey was undertaken between 1st March 2013 and 16th March 2013.** **Noise readings were carried out in areas representative of nearby sensitive receptors for 4 days including Saturdays. The survey locations and survey periods are described below in Table 1:**

Table 1: Baseline Noise Survey Results

Receptor	Survey Time Periods
1 – Railway Cottages , South of site	12th – 16th March 2013
2 – Heatham House Youth Centre	1st March – 4th March 2013
3 – 14 Craneford Close	6th March – 11th March 2013

The average noise levels measured at each location for the daytime $L_{Aeq,10h}$ (08:00 – 18:00) are presented below in Table 2. Noise levels from Sundays have been excluded from the results as there would not be any demolition work on this day.

Table 2: Baseline Noise Survey Results

Receptor	$L_{Aeq,10h}$ dB Daytime Noise Level
1 – Railway Cottages	61
2 – Heatham House Youth Centre	57
3 – 14 Craneford Close	57

6.	**Noise Limits** **For demolition works which will be undertaken for 12 weeks noise limits have been based on those recommended in BS 5228:2009 Annex E (Informative) – Significance of Noise Effects, referred to in E.3.2 as the 'ABC' method.** **Although Annex E is an Informative, and as such is not afforded the same level of authority as the British Standard itself, it provides useful guidance on the significance of noise effects and examples of noise limits for construction noise based on the pre-existing noise climate (i.e. the pre-construction baseline). Day, evening and night-time periods are defined, with limits provided as shown in Table 3 below:**

Table 3: BS5228 Recommended Construction Noise Limits

Assessment category and threshold value period	Threshold value, in decibels ($L_{Aeq\ T}$) (dB)		
	Category A [A)]	Category B [B)]	Category C [C)]

Item	Subject

Night-time (23.00–07.00)	45	50	55
Evenings and weekends [D)]	55	60	65
Daytime (07.00–19.00) and Saturdays (07.00–13.00)	65	70	75

NOTE 1 A significant effect has been deemed to occur if the total L_{Aeq} noise level, including construction, exceeds the threshold level for the Category appropriate to the ambient noise level.
NOTE 2 If the ambient noise level exceeds the threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a significant effect is deemed to occur if the total L_{Aeq} noise level for the period increases by more than 3 dB due to construction activity.
NOTE 3 Applied to residential receptors only.
A) Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.
B) Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.
C) Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.
D) 19.00–23.00 weekdays, 13.00–23.00 Saturdays and 07.00–23.00 Sundays.

The recommended limits are defined as the 'threshold of significance'. The significance of construction noise impacts have therefore been considered with regard to these recommended limits. Noise measurements undertaken at nearby receptors were below 65 dB(A) as presented in Table 2. Therefore, the daytime threshold value used is 65 dB(A) between 07:00 and 19:00 hrs.

BS 5228-1:2009 goes on to describe measures for sound insulation should threshold values be exceeded.

Therefore should the threshold level of 65dB(A) be exceeded BS 5228 states in E.4 that noise insulation or the reasonable costs thereof will be offered by the developer or promoter to owners, if the following apply to property lawfully occupied as a permanent dwelling:

- **Where the total noise (pre-construction ambient plus construction noise) is 5dB above the existing airborne noise level for the corresponding time of day; and**
- **For a period of ten or more days of working in any fifteen consecutive days or for a total of days exceeding 40 in any 6 month period.**

7. **Noise Model**

A noise model using the software SoundPLAN version 7.1 has been used to predict the noise arising from the demolition works.

The calculation methodology used within the model to predict the noise levels at the noise sensitive receptors is described in accordance with BS5228:2009.

Table 4 presents the demolition to be used as supplied by the demolition contractor. Also included is the sound power level for the plant and the percentage of time when the plant item is operating during the assessment period (% on time).

Table 4: Demolition Plant

Plant	Number	Sound Power Level dB	On-time
Volvo 210 Excavator	1	102	65%
Volvo 290 Excavator	1	104	65%
Volvo 360 Excavator	1	105	65%

Item	Subject

Hitachi 360 Excavator	1	97	65%
Hitachi 220 Shovel	1	103	65%
Crusher	1	114	65%

In addition to the fixed plant there will 3 dump trucks accessing the site per day to remove waste from the site. A sound power level of 96dB(A) has been applied to the dump trucks with the trucks moving at 20mph within the site.

Incorporated into the noise model as mitigation measures are a 2.4m noise barrier to be erected directly north of the Railway Cottages. This would provide attenuation measures from the demolition noise for the closest receptor. The other incorporated mitigation measure is for the crusher which produces the highest noise level. A 3.5m noise bund has been located directly surrounding the crusher such that noise emissions towards the nearest receptors is minimised.

8. **Results and Analysis**

The noise levels predicted at the sensitive receptors are presented in Table 5 for each of weeks of the demolition works. The predicted noise level at ground and first floor level are presented.

Table 5: Predicted Noise Levels at Receptors (Free field)

Item	Subject

Week	Receptors Noise Level $L_{Aeq,10h}$ dB (Construction Noise +Ambient Noise)					
	Railway Cottages		14 Craneford Close		Heatham House Youth Centre	
	Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor
1	63	65	60	60	63	63
2	63	66	60	60	65	65
3	64	70	60	60	65	65
4	64	69	61	61	63	64
5	63	66	62	62	62	62
6	63	64	64	64	61	61
7	63	64	64	64	60	61
8	63	65	62	62	61	61
9	65	70	61	61	63	63
10	65	70	60	60	63	63
11	65	69	60	60	63	63
12	64	66	60	60	62	62

The results show that the threshold noise level of 65dB(A) will not be exceeded at either Heatham House Youth Centre or 14 Craneford Close.

At the Railway Cottages the threshold value will be exceeded but only at first floor level. Inspection of the property has concluded that no living rooms are situated on the first floor with only bedrooms located on the first floor. Bedrooms are considered to be a night-time living area and as there are no night-time demolition works we have not considered this applicable for further assessment.

A noise model output has been produced illustrating the noise impact arising from the demolition works for the worst case week. This is week 10 and is shown at ground floor in Figure 3.

9. <u>Mitigation</u>

The assessment has shown that the noise limits set within BS5228 would not be exceeded, therefore mitigation is not required. However, noise impacts could be further minimised by good noise management practices as part of the management scheme. These could include:

- **Possible solutions for plant and/or machinery to reduce noise effects which will include only using plant conforming to relevant standards and directives on emissions and selecting the quietest plant available where practicable. It is recommended that the operator ascertains the noise emissions of plant under consideration to ensure selection of the quietest equipment that is practicable;**
- **The maintenance of all equipment to reduce noise effects;**
- **Orientating plant that is known to emit noise strongly in one direction so that the noise is directed away from houses, where possible;**
- **Opportunities for fitting equipment with appropriate silencers, mufflers or acoustic covers where applicable;**

Item	Subject
	• **Locating stationary noise sources away from noise-sensitive receptors and possible methods to shield them;** • **Management of activities e.g. the opportunity to shut down any machinery in intermittent use in intervening periods of non-use or where this is impractical, it should be throttled back to a minimum;** • **Minimising drop heights of materials; and** • **Education and supervision of employees to ensure compliance with good practice noise management measures.** **All plant selected should not exceed the sound power levels used within this assessment. If plant is selected which exceeds the noise levels assumed within this report or additional plant is used then a further assessment should be undertaken to determine the additional impact.**
10.	**<u>Conclusions</u>** **A noise assessment has been undertaken to consider the potential noise effects associated with the proposed demolition works at the Former Royal Mail site in Twickenham.** **Demolition works are proposed for a 12 week period and the impact from this has been considered at nearby dwellings.** **SoundPLAN version 7.1 noise modelling software has been used to predict the noise level of the plant during the works and compares the results to threshold values contained in Annex E of BS 5228:2009 for the demolition works.** **Mitigation measures have been incorporated into the site and should include a 2.4m barrier to protect the nearest dwellings south of the site. Furthermore, the crusher which would produce the highest noise levels should be attenuated by providing a bund of 3.5m surrounding it.** **The study concludes that noise levels would not be exceeded at any of the nearby noise sensitive receptors during the demolition at ground floor levels. However, it is recommended that to further minimise any noise impact from the works at nearby dwellings good noise management practices which are identified within BS 5228:2009 are implemented.**