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CONSTRUCTION PHASE PLAN (CPP)

GREYHOPE ROAD WEST EMBANKMENT

FOR

ABERDEEN CITY COUNCIL

Job No 2727

21st May 2020

Rev 3

W M Donald Ltd
Civil Engineering Contractors

Issue and revision record

Revision	Date	Originator	Checked	Description
-	09/04/20	Scott Dickie	ER	First Draft
1	21/04/20	Scott Dickie	ER	Revised to Address ACC Review
2	30/04/20	Scott Dickie	ER	Revised to Address ACC Review
3	21/05/20	Scott Dickie	ER	Revised to Address ACC Review

Record of Client Approval

Position	Name	Signature	Date

PERSONNEL REGISTER

I confirm that I have received the site induction and understand the information contained within this Construction Phase Plan.

Name	Date

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SECTION 1

W M DONALD LTD (PRINCIPAL CONTRACTOR) CONTACT TELEPHONE NUMBERS

NAME	POSITION	OFFICE NO	MOBILE NO
Austen Brooks	Senior Contracts Manager		07525 592869
Katy Forbes	Senior Quantity Surveyor	01569 730590	
Scott Dickie	Senior Technical Engineer	01569 730590	07495 150570
Ian Gray	Operations Director		07841 210963
Willie Donald	Chief Executive Officer	01569 730590	07764 931971
Ewan Riddoch	Managing Director	01569 730590	07764 931960
Eilidh Cameron	HR & HSEQ Compliance Manager	01569 730590	07989 352487
Mike Meldrum	Engineering Director	01569 730590	07843 356359

ABERDEEN CITY COUNCIL PROJECT CONTACT TELEPHONE NUMBERS

NAME	POSITION	PHONE NO	EMAIL
James Howden	Engineer	01224 523665	JHowden@aberdeencity.gov.uk
Steve Davidson	Roadworks Coordination	01224 522351 07880 051304	SteDavidson@aberdeencity.gov.uk
Terry MacLeod	Roadworks Coordination	01224 522324 07919 298532	tmacleod@aberdeencity.gov.uk

EMERGENCY TELEPHONE NUMBERS

NAME	LOCATION	TEL NO
Emergency Services	-	999
Accident & Emergency	Aberdeen Royal Infirmary, Foresterhill Road, Aberdeen, AB25 2ZN	999 0345 456 6000
Police Scotland	Emergency Call Centre	999
Scottish Fire & Rescue Service	Emergency Call Centre	999
Ambulance Service	Emergency Call Centre	999
SSE Power Distribution (Electric)	Emergency Call Centre	0800 300 999
National Gas Helpline – SGN / SSE (Gas)	Emergency Call Centre	0800 111 999
Openreach (BT)	Emergency Call Centre	0800 023 2023
Scottish Water (Water)	Emergency Call Centre	0845 600 8855
Health & Safety Executive	Incident Contact Centre	0345 300 9923 0224 252525
SEPA	Customer Enquiries	03000 996699
QUENSH Specialists	West Pitmillan Business Centre, Foveran, Ellon, AB41 6AL	01358 788094

SPECIFIC SITE INFORMATION

Nothing the company does is so important that we cannot take the time to do it safely.

Please refer to W M Donald Ltd Site Induction Notes and this Construction Phase Plan

SECTION 2

SAFETY INDUCTION

All personnel visiting or working on the site will be given the Company safety induction (either PowerPoint or Flip Chart format). All personnel and visitors will be required to sign as having received and understood the safety induction.

The safety induction will cover the following topics:

- Project/Company 'Safety Goals;
  - Zero Accidents
  - Zero Tolerance – Drugs and Alcohol
  - No harm to people
  - Ensure workers have a clear understanding of their responsibilities
  - No harm to the environment
  - Service Excellence
- Project management structure
- General HSE policy aims
- Fire safety arrangements
- Traffic management arrangements
- Welfare arrangements
- First aid arrangements
- Safety administration
- Site Rules
- Housekeeping requirements – Tidy site, waste management, reduce slips, trips and falls
- Key site-specific hazards & any special controls control measures
- Skills cards (CSCS & CPCS requirements and checks)
- PPE requirements
- The environment
- Reporting incidents & 'near misses'
- Q&A to test understanding

SITE RULES

(Mandatory for all WMD employees and Contractors)

The Contracts Manager will ensure that these site rules are effectively communicated to all site personnel and that they are actively enforced.

- All personnel must receive a 'Site Safety Induction' before undertaking any work.
- All persons entering the site (including visitors) are to 'sign-in' and fully comply with these site rules; visitors are always to be accompanied.
- All persons working on the site are to have an in date CSCS card or CPCS or equivalent; visitors who do not have a suitable card will always be accompanied by a qualified individual.
- Copies of all training and accreditation will be taken and hard / electronic copies stored in site file.
- All hazards will be identified, and risk level estimated using the 'On Site Risk Assessment' (Pad). This will be done daily before work commences.
- All personnel will follow the appropriate safe systems of work i.e. safety signage, risk assessments, COSHH assessments and method statements etc.
- No illegal drugs or any alcohol will be allowed on site. Any person who is considered to be under the influence of drugs or alcohol will be removed from site. You must inform the Contracts Manager if you are taking any medication that may affect you working safely.
- Traffic management arrangements shall be established in accordance with Chapter 8. Traffic management procedures should be continually assessed and updated as required.
- Vehicles will only reverse with the aid of on-board rear cameras or a banksman, who will keep the reversing area free of pedestrians.
- Construction traffic will access the site from Sinclair Road on to Greyhope Road.
- The use of mobile telephones is prohibited whilst operating mechanical plant or using work equipment. Other than emergencies or company business, the use of mobile phones is prohibited during working hours.
- High standards of housekeeping and cleanliness will be maintained in order to reduce the likelihood of slips, trips and falls on site.
- Rubbish and surplus material arising from the works must be disposed of properly, either in skips or in appropriate stockpiles. Where necessary stockpiles should be fenced off.
- Smoking is only permitted in designated areas, and is never permitted within property under construction, or in or around storage areas.
- The burning of rubbish or other waste on site is prohibited.

- Existing underground services shall be located and marked i.e. from service drawings, cable detection equipment and trial holes BEFORE any excavation work is undertaken.

- Excavations shall be adequately shored or battered back (where there is a risk of collapse) to prevent any collapse and to prevent material falling in. Edge protection and stop blocks will be provided (based upon risk assessment) to stop people and vehicles falling in.

- Existing overhead cables should be identified and marked, and their location brought to the attention of all operatives. 'Goal posts' must be in place for any road or track crossing under overhead cables. (Note: not present on this site).

- All work equipment will be visually inspected before first daily use; it will not be used if it is in anyway unserviceable or unsafe and will only be used for the purpose for which it is intended.

- Any accidents, hazardous situation or near misses shall be reported to the Contracts Manager without delay.

- PPE appropriate to the task being carried out will be worn at all times. The minimum PPE standard is: safety footwear, hard hats and Hi-Viz.

- If you are unsure about the safety of any task, STOP and seek advice – if you see someone else working unsafely STOP them and discuss it. Watch out for one another**!**

THE PROJECT – GENERAL

The works described in this Construction Phase Plan are for the replacement of a damaged length of the Greyhope Road West embankment. The works comprise a new revetment lined in rock armour, road drainage, kerbing, fencing and street lighting.

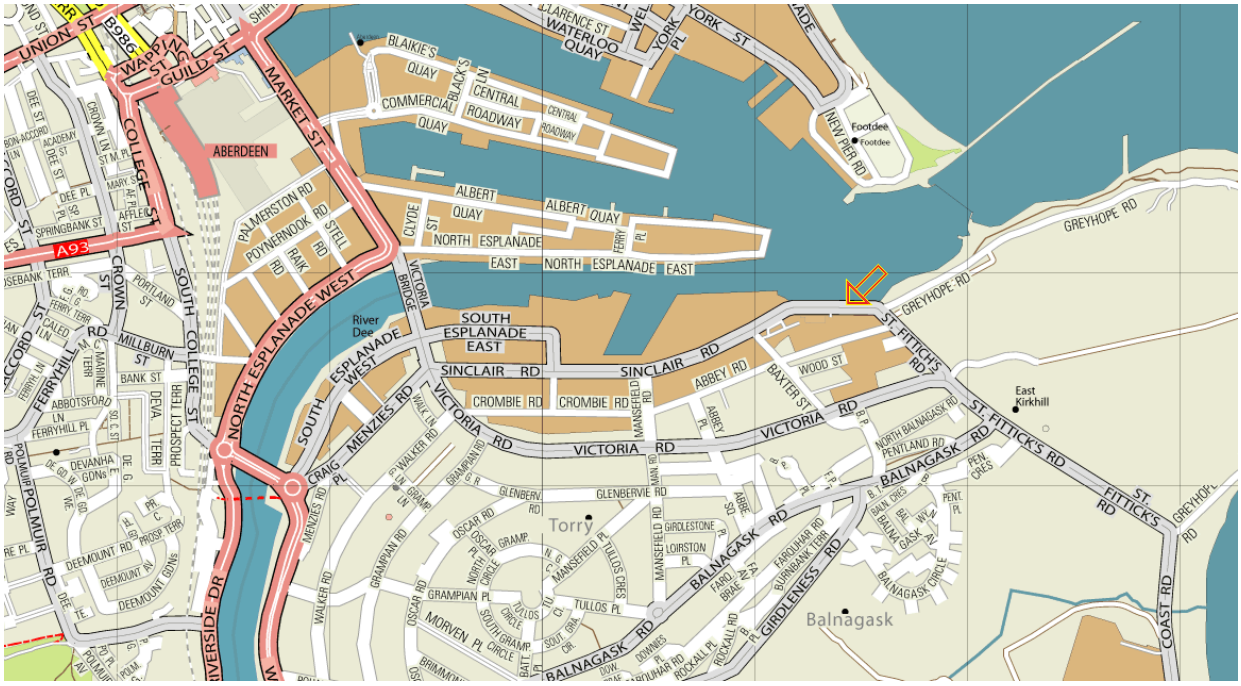


Figure 1 – Geographic Location

The site co-ordinates are centered at:

Latitude: 57° 08' 22" N (57.139341)
Longitude: 2° 04' 50" W (-2.080465)

The site address is:

W M Donald Ltd
Greyhope Road
Aberdeen
AB11 9BP

START DATE AND CONTRACT PERIOD

The start date will be confirmed at a later date. W M Donald Ltd will run as Principal Contractor.

EXISTING SERVICES

Existing services drawings have been provided by Aberdeen City Council along with a detailed record of what services were identified during previous work scopes on Greyhope Road. This provides a clear reference for works on site. Only one unidentified service is present in the verge immediately behind the road construction. As requested by Aberdeen City Council, investigation works will be carried out

prior to any works which may disturb this service to try and identify what it is and whether it is live, dead or abandoned. Care will be taken to support this service where works are being carried out adjacent to the service. An existing streetlight is to be relocated during the works therefore an LV cable will be present supplying the column.

Unidentified Service on Greyhope Road

UNEXPLODED ORDNANCE (UXO)

The Pre-Desk Study Assessment carried out by ZeticaUXO recommended that a detailed desk review to assess, and potentially zone, the Unexploded Ordnance (UXO) hazard level on the site.

W M Donald Ltd will engage with ZeticaUXO or another UXO specialist to carry out the detailed desk review and subsequently carry out any further investigation works identified. As a company we have experience of carrying out similar works as part of the Aberdeen Harbour Extension Project (AHEP) which included non-intrusive and intrusive surveys.

EXISTING TRAFFIC AND RESTRICTIONS

Access to the work site will be taken from Sinclair Road on to Greyhope Road.

Access to the foreshore is restricted by the tide, therefore tide tables will be reviewed to ensure that each available working period is maximised. Preparation in terms of planning, material deliveries and setting out will be carried out ahead of the working period to improve efficiency of works on the foreshore.

Pedestrian access along Greyhope Road will be maintained using the existing footpath on the south side of the road (in front of the SEPA building).

Refer to the Traffic Management Plan for further details.

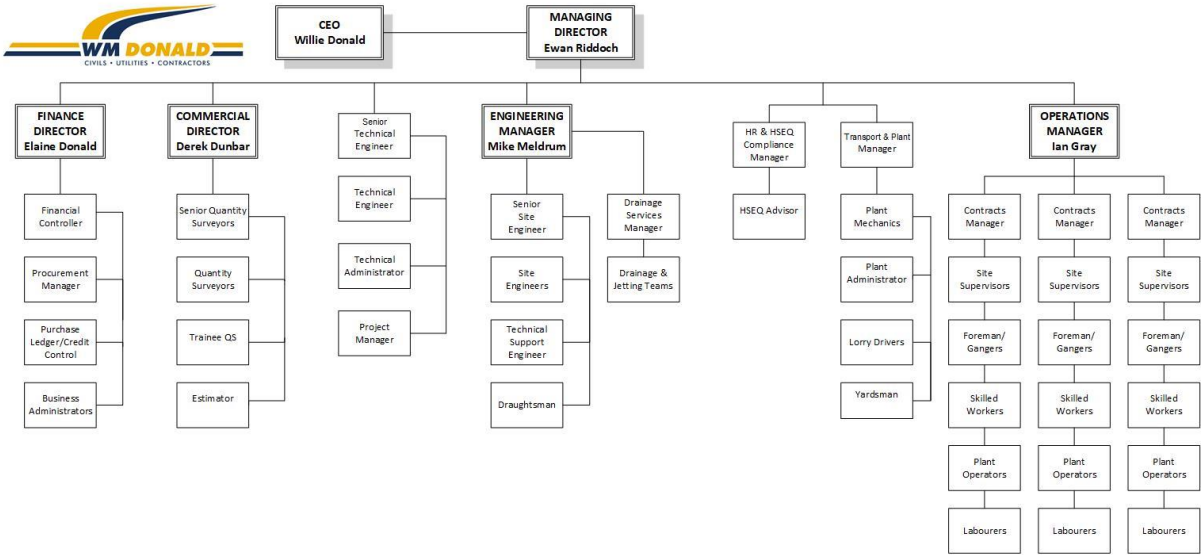
SITE STAFF

NAME	ATTENDANCE
Foreman	Full Time
Plant Operators	Full Time
Technical Engineer	As Required

SITE LABOUR

SITE OPERATION	NO OF OPERATIVES
Earthworks/Road Construction	4-6

W M DONALD INTERNAL ORGANISATIONAL CHART



HR-ORG-001 Company Org Chart Feb 2020 Rev 8

SITE PLANT

MAJOR PLANT DESCRIPTION	MAX NO OF UNITS
360° Excavator / 180° Excavator	3
Dumper	2
Road Lorry (as required)	2
Petrol Vibrating Plate	2
Ride-on Roller (as required)	2
Cable Detection Equipment (CAT & Genny)	1
Cut Off Saws	2
Welfare Unit	1

SITE HAZARDS AND MEASURES TO BE TAKEN

Company risk assessments will be augmented by a daily pre-work 'On-Site Risk Assessment' (Pad) which will be completed by the Contracts Manager/Site Supervisor. This will ensure that day to day changes in the hazards are identified and appropriate control measures implemented.

All personnel are required to fully comply with all risk assessments and all method statements. These must be effectively communicated to all workers prior to work commencing by the Contracts Manager/ Foreman. Please refer to:

- Detailed Method Statements (Section 4 of this Construction Phase Plan)
- Risk Assessments (Appendix A of this Construction Phase Plan)
- COSHH Statement (Appendix B of this Construction Phase Plan)

Specific Site Hazards

- Tidal access to foreshore
- Embankment stability
- Uncontrolled movement of rock armour or other heavy materials
- Uncontrolled movement of geotextile rolls
- Environmentally sensitive
- Existing services
- Potential presence of Unexploded Ordnance (UXO)

All personnel are required to fully comply with all risk assessments and all method statements. These must be effectively communicated to all workers prior to work commencing by the Contracts Manager/ Foreman.

ACCESS FOR RESIDENTS

On arrival to site, the site compound will be formed including offices, parking, welfare and lay-down

area.

To ensure safety for the workforce and members of the public, a Temporary Traffic Restriction Order (TTRO) to close Greyhope Road between will be implemented between Sinclair Road and St Fitticks Road.

Vehicle and pedestrian access to the SEPA office to the west of the work site and to Peacock Oilfield Services on the east of the work site will be maintained through the works. Where any disruption to access is necessary, W M Donald Ltd will contact those businesses direct to advise on alternative arrangements. The Marex Marine building located between SEPA and Peacock Oilfield Services is currently unoccupied therefore access should not be required to this property.

SIGNAGE

The Temporary Traffic Regulation Order (TTRO) will be obtained by Aberdeen City Council. W M Donald Ltd intend to use Aberdeen City Councils Traffic Management team as a sub-contractor to install and maintain the closure and diversion route with signage to Chapter 8 for the duration of the works.

Refer to the Traffic Management Plan for further details.

PERIODS OF NON-WORKING TIME

At the close of each day an inspection of all open work-sites will be carried out to ensure that it is secure and safe to be left overnight.

Worksites that are partially complete will be maintained with suitable traffic management to maintain safety overnight, conforming to Chapter 8 of the Traffic Signs Manuals.

Where possible plant should be disabled or parked in such a manner as to prevent accidental or malicious movement. Keys to be stored in a locked container.

Temporary stores of materials should be chalked and/or barriered off to prevent access.

SECTION 3

GENERAL HEALTH & SAFETY INFORMATION

DEFINITIONS

The following definitions will be used in this document:

Practicable - 'Practicable' means that there is no scope for taking cost and convenience into account; the duty must be complied with if it is possible to carry it out within the current state of knowledge and technology (if it is technically possible, then the duty must be complied with).

Reasonably practicable - Where a requirement to carry out a specific legal duty is qualified by the phrase 'as far as is reasonably practicable' employers are allowed to exercise their judgement on the extent of the measures that need to be taken to ensure the health and safety of the person(s) carrying out the job and anyone else who may be affected by it.

Accident - is an unplanned, unscheduled, unwanted event, or occurrence, any undesired circumstance, which may result in injury to persons and damage to property. The injured person in an accident need not be an employee and the property need not belong to W M Donald Ltd or the employer.

Hazard - is the potential to cause harm, including ill health and major injury; damage to property, plant, products or environmental production losses or liabilities.

Risk - means the likelihood (and consequences) that a specified undesired event will occur due to the realization of a hazard by, or during, work activities or by the products and services created by work activities.

ACCIDENT REPORTING AND INVESTIGATION

W M Donald Ltd has a duty under the law (RIDDOR 2013) to report deaths and serious injuries immediately and less serious injuries and occurrences within seven days of the incident.

Reports must be prepared and submitted for: -

- Fatalities and specified injuries
- Injuries resulting in incapacity for more than seven days
- Specified diseases
- Dangerous occurrences

The persons covered by the Regulations include:

- Employees
- Self-employed
- Trainees
- Other persons injured on controlled premises:

Specified injuries and serious conditions must be reported to the appropriate authority immediately by telephone and followed by a written report within ten days (15 days for 'over 7 days' injury).

REPORTABLE DISEASES

A disease must be reported where it has been diagnosed in a person doing a specified type of work. The report must be made when a registered medical practitioner has diagnosed the disease. The report must be made to W M Donald Ltd in writing.

W M Donald Ltd will maintain a record of all incidents, reportable injuries and dangerous occurrences.

HEALTH AND SAFETY RESPONSIBILITIES

Hazards on construction sites are numerous and forethought is essential in preventing accidents. All operatives must consider the possible effects on others of disregarding safe working methods. Newcomers to the site shall undergo induction training targeting known hazards and safe practices.

This CPP does not change individual responsibilities under the 1974 Health and Safety at Work Act and accompanying legislation. Each person is responsible for his or her own safety and for the safety of others.

Safety is not negotiable. All defects or safety requirements are to be notified immediately. The well-being and good health of all operatives is essential to the efficiency and profitability of the company. It is therefore imperative that all personnel assist the site management **at all times** when enforcing safety rules.

W M Donald Ltd has a duty to control health and safety and protect the interests of all personnel on its site. There is also a duty towards employees of other contractors and members of the public. No safety measure reduces the responsibilities, accountability or authority of any employee or sub-contractor.

Common Responsibilities: -

- Co-operate with the Contracts Manager as he has the responsibility for safety on the whole site.

- Notify the Contracts Manager of any hazards encountered or assistance required.

- Report all accidents and near misses to the Company and ensure that a record is entered in the site safety record book.

- Inform the Contracts Manager if any special risks are attached to any product or site operation.

- Demonstrate by example personal commitment to the requirements of the Health and Safety Plan.

- If leaving the project, ensure that your replacement is fully briefed.

The Health and Safety at Work Act requires employees to:

> ***Take care for the health and safety of himself and others who may be affected by his acts or omissions at work and to co-operate with his employer and others to enable them to comply with their duties under the Act.***
>
> ***Not to intentionally or recklessly interference with, or misuse anything provided in the interests of health, safety and welfare.***

STATEMENT OF INTENT

The policy objectives will be achieved through the actions of all employees in the company in accordance with the general responsibilities detailed below. The policy shall be brought to the attention of all new employees and induction training will be given in the policy requirements and the specific hazards associated with the work undertaken.

All Employees Are Required To:

- Be aware of the Company policy on Health & Safety and play their part in promoting and complying with it.

- Comply with all company rules, regulations and instructions in order to ensure the health, safety and welfare of everyone affected by our undertaking.

- Any sub-contractors working for W M Donald are on our approved vendors list, have appropriate training, insurances and are generally long term contractors with the company.

Contracts Managers/Foremen will implement the policy by:

- Being familiar with their obligations under the health and safety law, and particularly the CDM Regulations and relevant Codes of Practice and by actively ensuring compliance.

- Incorporating safety instructions in routine orders and monitor the safety performance of the operatives under their jurisdiction. Also ensuring that operatives are made aware of any hazard and the necessity for taking appropriate action and the wearing of suitable protective equipment; e.g. safety helmets, eye and ear protection, face masks etc.

- Ensuring that new employees are given appropriate safety instructions to take all necessary safety precautions for the job at hand.

- Disciplining those who constantly fail to consider their own wellbeing and that of others around them (but only after every effort has been made to get the individual to improve).

- Reporting defects in plant, equipment, scaffolding, excavations etc. to their immediate Manager.

- Setting a personal example by routinely exhibiting the correct and safe behaviours, by not allowing or taking 'short-cuts', by wearing the correct PPE and by challenging all unsafe behaviours on every occasion when they are observed.

- Deliver toolbox talks to the operatives on relevant topics with respect to ongoing works on site and advise of any safety alerts and updates as and when they arise.

Tradesmen and Operatives will implement the policy by:

- Complying with all risk assessment and method statement requirements and all health and safety instructions given by their immediate supervisor.

- Working in a safe manner avoiding placing themselves or others at unnecessary risk.

- Using the correct tools and equipment for the job: using safety equipment and protective clothing supplied, e.g. safety helmet, eye and ear protection, safety belts, face masks etc.

- Ensuring that safety equipment etc. provided in the interests of health, safety and welfare are not misused.

- Reporting to their immediate supervisor any defects in plant or equipment.

- Avoiding improvisation without authority.

CAUSES OF ACCIDENTS

Accidents can be caused by the unsafe acts and attitudes of people at work, which results in unsafe conditions being created. Unsafe people create unsafe conditions, which cause accidents, which often result in injury or damage. Accidents may also be caused by a lack of foresight or planning, which may be a failure to set up a safe system of work, or failure to appreciate the results of risk assessments.

PROCEDURE FOR UNFORESEEN EVENTUALITIES

Should a situation arise which poses a risk and has not been covered in this Health and Safety Plan that situation will be immediately be made safe and operations suspended until remedial action has been planned and implemented.

W M Donald Ltd will notify such circumstances to, the Principal Designer at earliest opportunity. The Principal Designer may arrange for the Designer to assess the design in light of the changed circumstances and notify all parties of any resulting in design change.

WELFARE AND FIRST AID

A trained first aider will be on site during the works and details are displayed in the site cabins. All company vehicles are equipped with a basic first aid kit and it is the responsibility of the vehicle key holder to ensure that the contents of the first aid kit are checked and replenished as required.

A full first aid kit is located in the site welfare unit.

Where an injury is severe or a head injury involved, an ambulance should be called immediately.

PERSONAL PROTECTIVE EQUIPMENT

During site operations, personnel will wear appropriate PPE for the task being carried out. As a minimum, this shall include hard hat, safety footwear and high visibility clothing. Safety Glasses or goggles, gloves, facemasks, ear defenders and waterproofs etc. will be provided for use as required.

Supervisory staff and visitors to site will be required to wear high visibility clothing, hard hats and safety boots or shoes.

Provision will be made to supply UV barrier / sun cream for all staff and operatives on site from the welfare unit.

CONTROL OF NOISE OR NUISANCE

Silenced plant / generators will be used whenever possible. Acoustic barriers may also be erected adjacent to static plant where required in order to reduce noise impact to adjacent inhabitants.

Unnecessary running of plant engines is to be avoided. Surplus materials, site-produced litter and debris will be removed from site promptly.

ACCIDENT AND DANGEROUS OCCURRENCE REPORTING

All accidents and dangerous occurrences, however minor, will be recorded in the accident book to be kept on site at all times and reported to WMD Ltd Head Office and the Client's Site Representative as soon after the event as possible. It is the duty of all employees to ensure that any incident/accident or dangerous occurrence is reported to WMD Management, e.g. Contracts Manager. Accidents will be logged at W M Donald Head Office.

The decision to report to the HSE under RIDDOR will be made by Senior Management, i.e. Managing Director or Technical Director after consulting the specific regulatory requirements.

INSTRUCTION AND TRAINING

Site Induction is mandatory for all employees, sub-contractors and site visitors prior to the start of operation. The induction will cover items stated in Section 2 and will be supplemented by Tool Box Talks at a frequency of 2 per month. The Contracts Manager and Site Supervisor will review this CPP prior to commencement of operations and it is their duty to ensure that particular site hazards and risks are brought to the attention of all those working on the site. Training requirements identified by risk assessment and the training of inexperienced operatives will be provided in advance. Particular attention will be paid to the training of those operatives who may be required to use cutting equipment, enter confined spaces and working adjacent to Overhead cables.

ARRANGEMENTS FOR MANAGING THE CONSTRUCTION WORK

On/off site works will be managed from the WMD Ltd Site Office with support from head office by direct communication from the Project or Contracts Manager to head office. All site operatives are to co-operate with the Contracts Manager and Site Supervisor as they have the responsibility of ensuring safety over the whole site.

W M Donald Ltd will attend meetings with the client as required. Health and Safety information will be discussed at these meetings.

All W M Donald Ltd operatives have been advised to accept instruction only from W M Donald head office via the Project/Contracts Manager/Site Supervisor. To avoid confusion a proper record of all instructions issued by the client, his representative or other party with express authority to raise instructions, will only be accepted in writing via W M Donald Ltd Head Office.

ARRANGEMENTS FOR MONITORING COMPLIANCE WITH STATUTORY PROVISIONS

The HSEQ manager will visit the site on a regular basis to ensure that site operatives are carrying out the works in an approved and safe manner. Head office personnel will monitor current provisions and amend procedures when required.

Weekly monitoring of health, safety and environmental standards will be undertaken by W M Donald HSEQ department. This will be carried out by means of documenting findings in our standard 'site visit' report format.

Form F10 will be completed and returned by the principal designer. A copy of the F10 will be displayed in the site office

W M Donald Ltd Insurers will be advised of the content, extent and duration of the works.

W M Donald will carry out active monitoring of site safety performance. Our HSEQ Advisor will make weekly site inspections and report directly back to head office. No advance warning of site inspections will be made to the site.

ARRANGEMENTS FOR COMBATING SPECIFIC RISKS INVOLVED IN THE CONSTRUCTION WORK

Risk Assessments – The purpose of the risk assessment is to identify potential hazards and risks. Where possible if a risk is identified, alternative methods of working will be proposed. If the hazard cannot be eliminated, then appropriate protective measures and procedures will be employed. Foremen will be advised of these hazards and risks and instructed accordingly.

All site personnel MUST notify the Contracts Manager/Site Supervisor if any unusual hazards are encountered or assistance is required. Where any special risks are attached to any product or site operation the Contracts Manager/Foreman will be informed. (See later section for details of risk assessments and specific site hazards)

Lift Plans for all typical lifting operations that are undertaken on site have been developed by an Appointed Person and provided within this CPP. A banksman / slinger will be in place for all lifting operations, reflecting the degree of risk and personnel involved in the particular lifting operation.

Certified slings, shackles will be used and all relevant documentation retained in site files.

All general COSHH assessments that are required for this site are attached to this CPP. Any further requirement for additional materials / substances will be reviewed should the need arise.

Contingency Plans - W M Donald Ltd will ensure that the person in charge of the site can, at all times immediately summon the emergency services and will ensure that emergency contact numbers are prominently displayed. They will ensure that communications are regularly tested, and that reception is reliable and sufficiently clear. A list of the emergency numbers will be kept adjacent to the site telephone.

Should anything change on site, the Contracts Manager will undertake a review of requirements and the CPP updated as required.

INFORMATION ABOUT THE ARRANGEMENTS FOR THE WELFARE OF PERSONS AT WORK

Welfare facilities and office accommodation will be provided on site and include messing, drying and toilet facilities (male and female). One to be specifically for females and signed accordingly. A site cabin will also be provided for site management. Facilities to be kept clean and tidy at all times.
WM Donald Ltd will be Principal Contractor for the duration of the project.

ARRANGEMENTS FOR THE HEALTH, SAFETY AND WELFARE OF PERSONS CARRYING OUT THE CONSTRUCTION WORK OR AFFECTED BY THE CONSTRUCTION WORK

All site operatives will have attended a safety awareness course within the last year and hold current CSCS/CPCS (or approved equivalent) certificates. All plant is regularly maintained by either the manufacturer or W M Donald Ltd service engineer. A service log will be kept for all plant and a weekly return made to WMD Head Office. All personnel are provided with and required to wear the appropriate personal protective equipment for the task in hand.

All operatives required to enter confined spaces will have undergone confined space training. Gas monitors, tripods and escape BA sets are available from WMD Head Office and will be called onto site as and when required.

A safety zone will be maintained around the works. Plant and machinery will be segregated from the public and work operations. No plant will be allowed to enter the safety zone. All operatives will be required to wear yellow Hi-Viz reflective vests.

A digital copy of the CITB GE 700 (current version) will be available in the site office as an immediate source of reference.

SECTION 4

METHOD STATEMENT – PRE-START

Prior to works commencing on the foreshore (below MHWS), the pre-construction deliverables will be passed to Aberdeen City Council and Aberdeen Harbour Board for acceptance. These documents include a detailed method statement, risk assessment and details of emergency recovery procedures should any plant breakdown on the foreshore. The intention is for this to satisfy the Aberdeen Harbour Board HE1 works licence obtained by Aberdeen City Council and the marine licence issued to Aberdeen City Council by Marine Scotland.

Access to the foreshore is restricted by the tide, therefore tide tables will be reviewed to ensure that each available working period is maximised, Preparation in terms of planning, material deliveries and setting out will be carried out ahead of the working period to improve efficiency of works on the foreshore.

Site visited by Contracts Manager prior to start to establish:

- Plant requirements
- Traffic Management Requirements
- Risk Assessments
- Anticipated hazards or difficulties
- Site Accommodation Requirements

Prior to works commencing, a Site Induction will be held with the workforce on the site to identify the key risks associated with the works. Aberdeen City Council Project Manager/Supervisor will be invited to attend to provide relevant information on the project. This is expected to include information on the otter survey and non-native invasive plants carried out. If necessary, any areas that have been identified will be marked and a buffer zone implemented to ensure these are not disturbed.

Issue Foreman with all relevant contract documents and drawings. Ordered materials and arrange dates for delivery and offload.

Establish on site areas for storage of materials.

Check availability of plant and arrange hires if required. Ensure own plant is checked.

If required advise local Police of working areas and arrange meeting to discuss Traffic Management requirements.

Ensure traffic management signs etc. are available for the contract duration.

Ensure Heras fence and barriers are available for the required duration and that the site is secured against unauthorized access (particularly the prevention of children entering the site).

Ensure appropriate fire safety plan and arrangements/equipment are in place.

PHASING OF THE WORKS

Site works are programmed to take nine weeks. W M Donald Ltd will run as Principal Contractor.

TRAFFIC MANAGEMENT

The Temporary Traffic Regulation Order (TTRO) will be obtained by Aberdeen City Council. W M Donald Ltd intend to use Aberdeen City Councils Traffic Management team as a sub-contractor to install and maintain the closure and diversion route with signage to Chapter 8 for the duration of the works.

To ensure safety for the workforce and members of the public, the Temporary Traffic Restriction Order (TTRO) to close Greyhope Road between will be implemented between Sinclair Road and St Fitticks Road. The approved diversion is expected to be via Baxter Street, Victoria Road and St Fitticks Road.

Refer to the Traffic Management Plan for further details.

MATERIAL DELIVERY – GENERALLY

Construction materials will be delivered to site on flat bed or tipper lorry as appropriate for the material. Unloading materials will be to temporary storage area or adjacent to the works as appropriate for the material. Banksman to ensure delivery vehicles and pedestrian workers are segregated during unloading and loading operations.

WM Donald will endeavour to ensure that all materials are delivered in such a manner that eliminates any requirement for workmen or drivers to climb onto the delivery vehicle load bed. Pipework will be stacked across load bed and other materials on pallets. There are some exceptions and these included chamber rings where the auto grab cannot be used and lifting pins require to be manually inserted in the lifting eye holes. Fall protection bags are to be placed around the delivery vehicle in this instance.

ACCESS TO EXISTING PROPERTIES

Vehicle and pedestrian access to the SEPA office to the west of the work site and to Peacock Oilfield Services on the east of the work site will be maintained through the works. Where any disruption to access is necessary, W M Donald Ltd will contact those businesses direct to advise on alternative arrangements. The Marex Marine building located between SEPA and Peacock Oilfield Services is currently unoccupied therefore access should not be required to this property.

DUST CONTROL

The delivery and movement of fill and rock armour may create dust. Where necessary this dust will be suppressed using water sprayed over the material during tipping from the lorry using a pressure

washer or hose. Alternatively, the material will be damped down prior to leaving the quarry.

Note: Aberdeen City Council has advised that the adjacent SEPA building would be sensitive to high amounts of dust as they have a ventilation system that automatically opens windows.

Cutting of the existing surfacing will be carried out wet to minimise dust.

NOISE CONTROL

Consideration of local residents will be taken into account when carrying out works that create significant noise levels. However due to the nature of the works including excavating, compaction and vibratory rolling there will be an increased level of noise created.

VIBRATION CONTROL

The majority of works carried out on this project should not create significant levels of vibration. During placement and compaction of the imported fill material vibratory rollers will be used. The largest roller planned for site is a Bomag 213 smooth drummed roller. This is a common type of roller and is designed to locally compact placed fill material and therefore vibration impact to the wider area is not anticipated to be high.

Note: Aberdeen City Council has advised that the adjacent SEPA building has vibration sensitive laboratory equipment therefore liaison with them will be necessary in advance of any unusual increase of vibration adjacent to their building.

QUALITY CONTROL

Materials will comply with the contract specification.

PLANT CONTROL

All plant operators are to hold valid competence training certificate e.g. CPCS or equivalent for the items of plant they are to use.

ENVIRONMENTAL CONTROL

The site is an environmentally and ecologically sensitive one. Refer to Environmental Management and Emergency Response Plan (EMERP) for further details.

The project involve works below the MHWS within the boundary of the River Dee Special Area of Conservation (SAC), therefore the site is extremely sensitive both environmentally and ecologically. The methodology contained in the tender documentation will be further developed to satisfy the provisions and conditions contained in the following, which will be provided on contract award:

- Aberdeen Harbour Board HE1 works licence (for works below MHWS line)

- Habitats Regulations Appraisal (HRA) created by Aberdeen City Council and accepted by Scottish Natural Heritage (SNH)
- Marine Licence for operations in the Special Area of Conservation (SAC) for Atlantic Salmon, Fresh Water Pearl Mussels and Otters

This detailed Method Statement and accompanying site-specific Environmental Management Plan will be developed and approved to address all of the information above.

Additional Ecological Measures:

- Awareness of the presence of otters which are present occasionally on and near the site
- Implementation of any specific recommendations of the otter survey report – refer to the Environmental Management and Emergency Response Plan for further details
- Segregation of construction works from non-native invasive species so they are not disturbed

General Environmental Protection Measures:

- Bunded and locked fuel tanks
- Self-contained welfare facilities
- Regular plant servicing and daily inspections prior to use
- Spill kits located with each item of plant
- No fuelling will take place on the foreshore

Take all reasonable steps to ensure noise, dust and waste is kept to a minimum and to ensure that they do not become a hazard or nuisance to others.

Tidy up working areas regularly and dispose of waste packaging to the skips provided.

Spillages should be cleared up immediately and the cleaning materials disposed of in an appropriate manner for the materials discharged.

Works will be carried out with reference to, and in accordance with SEPA publication “The Water Environment (Controlled Activities) (Scotland) Regulations 2011 – A Practical Guide”. W M Donald Ltd Environmental Policy Statement also contains further information on this subject.

PERSONAL PROTECTIVE EQUIPMENT

W M Donald Ltd policy will issue good quality PPE appropriate for the task to be carried out. It is the responsibility of all W M Donald employees and sub-contractors to wear the appropriate PPE and to ensure that is maintained in good order (allowing for fair wear and tear). It is the responsibility of employees to think ahead to ensure that they have the appropriate PPE for the task to be carried out.

As a minimum all personnel will wear the following PPE at all time when on site as a minimum:

- Hard hats
- Protective footwear
- Hi-Viz/reflective vests
- Gloves
- Eye Protection

Other PPE should be worn as stated in the risk assessments or as otherwise instructed by management.

FIRST AID AND EMERGENCY PROCEDURES

At the site induction (on first arrival to site) all operatives will be made aware of the first aid and emergency procedures operated on the site.

All plant and equipment used for this project will be regularly maintained and subject to daily inspections prior to use. The tracked excavator and wheeled dumper will provide a method of recovery for each other should one of them breakdown. The affected item of plant will be towed to the sloped access path using appropriate recovery equipment.

Spill kits will be kept at the site compound and on each item of mobile plant.

Fuel tanks will be of the bunded type and a spill kit will be kept with the tank at all times. Fuel tanks are also padlocked when not in use. No fuelling will take place on the foreshore.

Site welfare will be self-contained and serviced weekly.

All accidents are to be reported; please refer to W M Donald Ltd Procedure at Section 3 of this Construction Phase Plan.

CONSULTATIONS

Consultation may be required with the following agencies, where this is required it will be initiated by the Technical Director and / or Contracts Manager;

- Aberdeen City Council - Roads Department
- Symology - Existing Utility Information
- Scottish Water – Identify location of plant
- SSE – Identify location of plant
- BT Dial before you dig – Identify location of plant
- Scottish Gas Networks – identify location of plant

WM Donald operates an open door policy whereby employees and sub-contractors can raise issues regarding HSEQ or otherwise at any time on the site.

WORKING ADJACENT TO EXISTING SERVICES - GENERAL

Existing services drawings have been provided by Aberdeen City Council along with a detailed record of what services were identified during previous work scopes on Greyhope Road. This provides a clear reference for works on site. Only one unidentified service is present in the verge immediately behind the road construction. As requested by Aberdeen City Council, investigation works will be carried out prior to any works which may disturb this service to try and identify what it is and whether it is live, dead or abandoned. Care will be taken to support this service where works are being carried out adjacent to the service. An existing streetlight is to be relocated during the works therefore an LV cable will be present supplying the column.

Unidentified Service on Greyhope Road

Unexploded Ordnance (UXO)

The Pre-Desk Study Assessment carried out by ZeticaUXO recommended that a detailed desk review to assess, and potentially zone, the Unexploded Ordnance (UXO) hazard level on the site.

W M Donald Ltd will engage with ZeticaUXO or another UXO specialist to carry out the detailed desk review and subsequently carry out any further investigation works identified. As a company we have experience of carrying out similar works as part of the Aberdeen Harbour Extension Project (AHEP) which included non-intrusive and intrusive surveys.

Services General Approach

The exact location of services is not always clear from the surface and the location may require to be identified by the excavation of trial holes. Under no circumstances shall an excavation parallel to delicate services, e.g. LP gas mains be allowed within 500mm of that service. If the excavated subsoil is non-cohesive, then the safety zone will be extended.

Should the service be found within 500mm or less of the excavation, WM Donald to refer to the designer for potential re-routing decision, e.g. bend the pipe leg away from the service, relay the section of sewer to a new line away from the service, or divert the service.

Where it is necessary to cross below services at 90°, ensure that the existing service is well supported. Request attendance of the local utility inspector to give advice on any additional protection measures required. Give as much advance notice as possible for an inspector to visit the site.

CHECK LIST

Identify the route of the proposed sewer / utility and spray markers onto the carriageway.

Obtain and use all relevant utility drawings to identify the approximate location of the services.

Examine the markings on the utility drawings and advise Scottish Water and the other utility providers of areas in which there may be a potential conflict between the sewer and services.

Excavate trial holes by hand or use Suction Excavator to find the exact location of the services / mains. Note the material that the main is constructed from, its condition and dimensions from the existing kerb line. Backfill the trial hole and reinstate or barrier off for further works. Notify the Client of any potential conflict between the main and other services.

Inspect footway and carriageway for tobies or other indicators. Where possible trace back to the main.

Where works are suspended because of unexpected service issues, record all standing time for all labour and plant.

If in doubt, ask!

Do not, under any circumstance try to identify the nature of an existing service by invasive techniques (drilling etc.). Suspend excavation operations and notify the client or their agent immediately.

When excavating always check for signs of disturbed subsoil which may indicate the presence of a service. Older services are often poorly laid and it is not uncommon to find a new service that has been laid without marker tape or sand bedding.

Never assume that the utility or service has been laid in a straight line. Deviations from the route detailed on the service drawings are common and may be without apparent reason.

All excavation work must be undertaken in accordance with the risk assessments, method statements and HSG 47 (Avoiding Danger from Underground Services) which can be downloaded from this link: http://www.hse.gov.uk/pubns/books/hsg47.htm

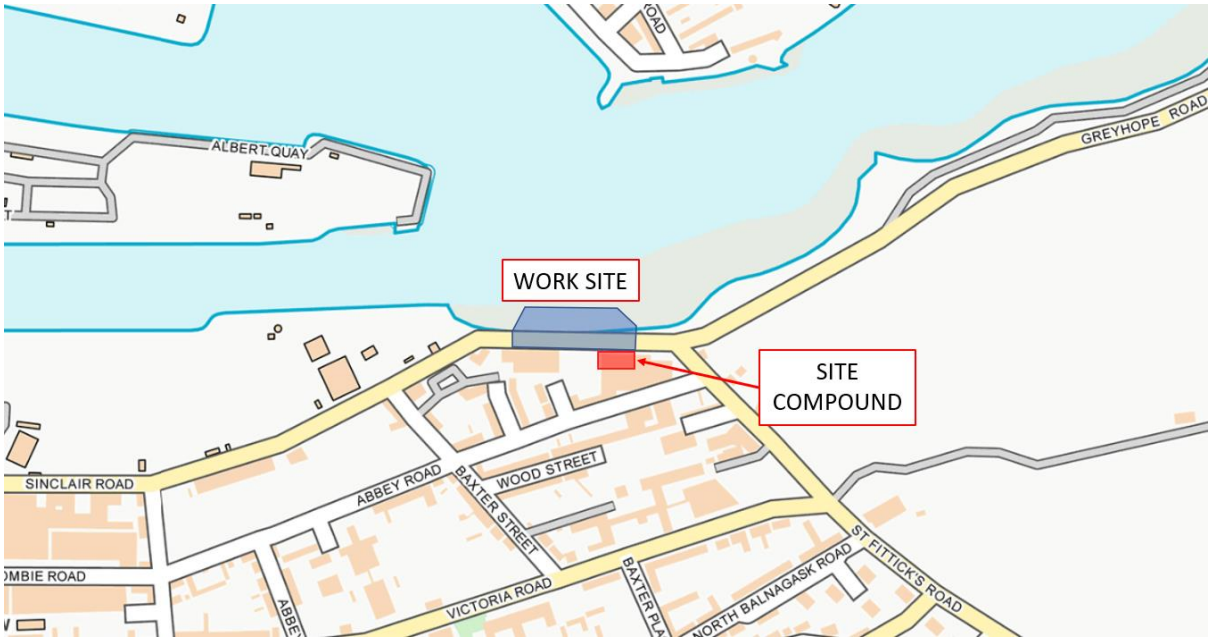
METHOD STATEMENTS

SITE SET UP – GENERAL

In the role of Principal Contractor, W M Donald Ltd will mobilise a site compound incorporating car parking, offices, changing area, messing facilities and toilets. The welfare units will be self-contained and serviced weekly for the duration of the project. The size of provision will be selected to reflect the number of people working on site at any stage.

Suitable accommodation will be made available to the Project Manager/Supervisor, including changing/messing facilities, desk and chair within a heated and well-lit office, and toilets.

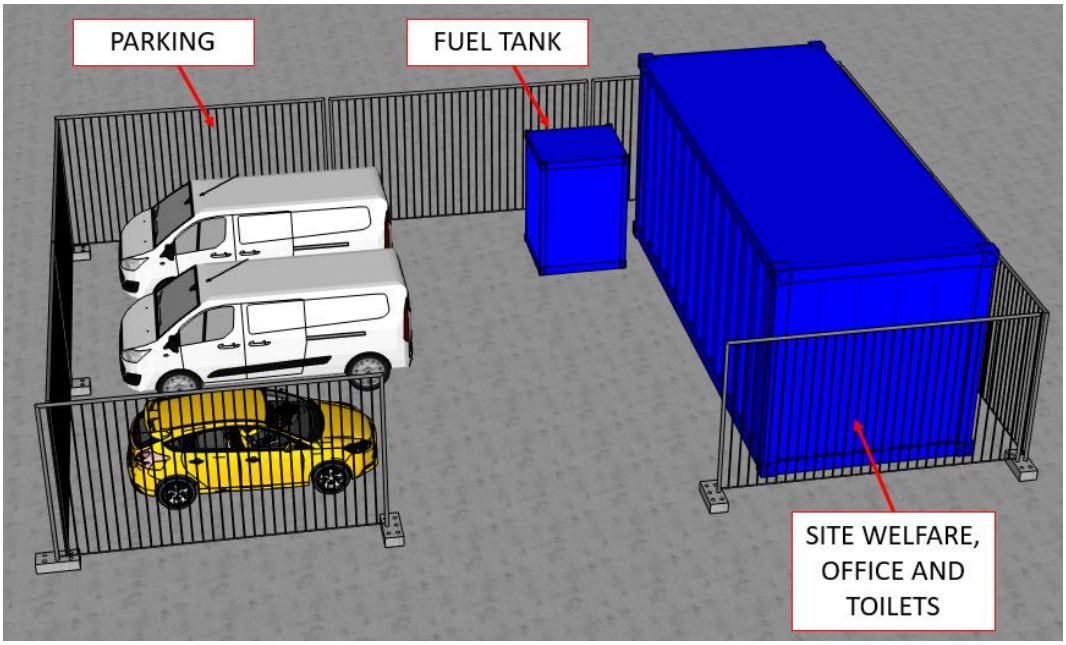
The proposed site compound location will be within the front compound of the building previously operated by Marex Marine. This is owned by Aberdeen Harbour Board and an agreement will be put in place with them to use this area for the duration of the works. This location will provide ample room for the welfare units and car parking. Heras fencing erected around the compound will prevent any unauthorised entry.



Proposed Site Compound Location

Note: Presence of non-native species identified during investigation works. This will have to be located and fenced off. Refer to Environmental Management and Emergency Response Plan (EMERP) for details.

An example of the compound is shown below.



Site Compound Layout

STORAGE AND DELIVERY OF MATERIALS – GENERALLY

The lay-down areas utilised will be selected based on the area where the material will be used. The intention for this project will be take materials to site when required to minimise the size of the lay-down areas required.

Material being used to strengthen the revetment will predominantly be deposited from the road lorry on to Greyhope Road immediately above the location of placement. A wheeled excavator will then lower the bucket down to foreshore level for placement by a second excavator. Where a tracked excavator is utilised in place of a wheeled excavator, the road surface will be protected using steel plates, composite mats or a layer of fill material separated from the surface using a geotextile.

Material being used for the road drainage works will be delivered to a similar location.

Material removed from the foreshore will be loaded directly to dumpers and transported to the foreshore access point to the east of the site. A second access point may be utilised by forming a temporary ramp directly off Greyhope Road on to the beach to the west of the work site. The material will then be tipped and re-loaded to road lorry for disposal off-site.

Alternatively, where the excavator on the foreshore has sufficient reach the material removed from the foreshore will be placed directly on to the road and then loaded to road lorry for disposal off-site.

Note:

- Only the non-beach material excavated from the embankment will be disposed of off-site. This is the material from above the beach level, behind the existing lining.
- Material excavated from the beach to create the toe and lower slope of the revetment will be used to reinstate beach levels with the remainder being spread to the adjacent beach area.

A smaller additional lay-down area will be available at the foreshore access point.

Material will be delivered to site on rigid and articulated lorries on a just in time basis. Unloading will

be by the haulier where he is suitably equipped or by an excavator appropriate for the weight and style of the material.

Improperly stored material may be hazard especially to children. It is essential that the general public and especially children are kept segregated from stored material and that all materials are properly banded, wrapped or stacked.

MARINE WORKS - FORESHORE

The first phase of works will be carried out on the foreshore. Access will be taken via the existing sloped access between Greyhope Road and the foreshore. Aberdeen Harbour Board will provide a key for the locked bollard at the entrance to the sloped access.

A tracked excavator will prepare a route along the foreshore to ensure dumpers can travel back and forward along the route. Disturbance of the existing ground conditions will be kept to a minimum, focussing predominantly on removing large and sharp boulders/rocks from the route to reduce the potential for punctures on the dumper tyres.

The excavator may also prepare a second access point by forming a temporary ramp directly off Greyhope Road on to the beach to the west of the work site.

Access Route to Foreshore

A wheeled excavator will be positioned on Greyhope Road to support the excavator working on the foreshore.

The demolition and reinstatement works will be carried out in a phased manner to ensure that the ongoing works do not expose the embankment to further damage from exposure to the sea and tides. Each section is planned to be 10m or less.

Throughout the works, Aberdeen City Council Project Manager will be provided the opportunity to inspect progress. Notice will be given to the Project Manager to allow them to view the subgrade prior to placement of fill layers.

During each shift a section of the existing embankment will be broken down. Suitable arisings from the demolition will be re-used in the lower rock armour layer. The material may require to be broken into smaller sizes to meet the required specification.

Excavation and benching of the slope will then be carried out by the excavator on the foreshore.

Only the non-beach material excavated from the embankment will be disposed of off-site. This is the material from above the beach level, behind the existing lining.

Material excavated from the beach to create the toe and lower slope of the revetment will be used to reinstate beach levels with the remainder being spread to the adjacent beach area.

The excavator will then excavate to formation level of the toe and set aside the beach material (sand, gravel, boulders, rocks) on the foreshore for later backfilling.

Once the excavator reaches the formation level, the filter geotextile will be rolled out and laid into position. The geotextile will be laid out across an area that is within reach of the excavator boom to ensure material can be placed without the excavator tracking on to the geotextile.

The revetment rock filter layer material will be delivered by road lorry to the work area on Greyhope Road. The material will be tipped on to a steel plate which will protect the road surface, or alternatively the wheeled excavator will dig the rock fill directly from the lorry box.

The wheeled excavator will then feed material down to the work site for placement by the tracked excavator. The tracked excavator will then spread a 200mm single layer of revetment rock filter material on to the geotextile.

Once the revetment rock filter layer has been placed, the revetment rock armour will be delivered in the same manner as detailed above. The wheeled excavator will then feed material down to the work site for placement by the tracked excavator. The tracked excavator will then spread two layers to a combined thickness of 0.96m. The processed arisings from the demolition will also be incorporated into the lower rock armour.

On reaching the level where Class 6N structural fill is required, the material will be placed in layers and compacted according the Specification for Highway Works Series 600. The fill material will be placed beyond the required profile to allow for suitable compaction on the face of the slope. Once complete the excavator will trim the face back to achieve the correct profile.

The geotextile will then be laid to the trimmed face of the Class 6N material prior to placement of the revetment rock filter and revetment rock armour layers.

Once the structural fill layers have been completed, the placement of the geotextile, revetment rock filter layer and revetment rock armour will be completed in the same manner as described earlier.

The intention will be to complete each section to a level above the MHWS by the end of working window allowed by the low tide.

Where the new headwall is being installed, the existing interlocking concrete blocks will be removed using the appropriate lifting equipment and set aside for re-use. Any surplus blocks will be loaded on to a road lorry and transported to Aberdeen City Council storage depot.

The embankment will be taken up to formation level and the filter geotextile laid.

The existing interlocking concrete blocks retained on site will be placed as per design to form the base for the new headwall.

Class 6N structural fill will be placed in layers behind the interlocking concrete blocks and compacted according the Specification for Highway Works Series 600. Once this reaches the top of the concrete blocks the headwalls will be installed.

Blinding concrete will be placed to the formation of the headwalls and tamped to level.

An external shutter will be formed using timber with bracing to the required dimensions.

Structural concrete will be placed into the timber shutter to form the headwall base slab. The concrete will be pokered and tamped to level.

The pre-cast headwalls will then be delivered to site and landed in position. Pre-formed holes int he headwall floor will be used to drill in and resin fixed dowels to the headwall base slab.

The existing pipework will be extended to the new headwalls and backfilled with pipe bedding.

Class 6N structural fill will then be brought up to the top of the headwall, with compaction as detailed above.

The final profile of the embankment will be formed by placing the revetment rock armour.

ROADWORKS AND DRAINAGE

The second phase of works will be carried out on Greyhope Road. Access will be taken to both ends of the site using Sinclair Road and St Fitticks Road. All plant and materials will be located on Greyhope Road.

Kerbing

Set out the route of the proposed kerb to line and level using steel pins or timber posts to suit the ground conditions, taking care when work close to existing services. Setting out to be carried out by setting out engineer using predetermined lines inputted to data logger on instrument.

aw cut existing tar and use excavator to excavate down to formation. Deposit arisings into dumper for temporary storage or directly into road lorry for transport off-site. Existing granite cassies to be set aside on pallets for transport to Aberdeen City Council storage depot.

Take delivery of sub-base to site where wheeled excavator will spread below the kerb-line. Use plate compactor to consolidate the sub-base. Regulate sub-base to level and check by dipping with gut or similar line.

Take delivery of concrete and pour kerb-log. Distribute kerbs on pallets by wheeled 180° excavator to point of placement. Spread bedding concrete on log and place kerb using vac lift or team lifting as appropriate for the number of kerbs to be laid, complexity of kerbing and location.

Manually adjust kerb using tongs and tamp to level and line. Use excavator to distribute and haunching concrete to back of kerb. Spread as appropriate with shovel and shape.

Repeat until section to be kerbed is complete.

Drainage Including Gullies, Pipework, Manholes and Headwalls

Set out the proposed gully locations including route for connections to existing sewers.

Saw cut existing tar and use excavator to excavate down to formation. Deposit arisings into dumper for temporary storage or directly into road lorry for transport off-site.

Lay new pipework from the sewer to the proposed gully location. Make connection with existing sewer using appropriate fittings. Bed and surround pipe with bedding material. Backfill and consolidate track with plate compactor.

Set the road gully pot in location adjacent to the kerb log, connect to the gully tail pipework and surround with concrete. Fit gully grating on mortar bed to line and level.

Set out the proposed manhole locations.

Saw cut existing tar and use excavator to excavate down to formation. Deposit arisings into dumper for temporary storage or directly into road lorry for transport off-site.

Consolidate bottom of excavation and take delivery of concrete to construct mass concrete base for manhole. Ensure the concrete is well compacted and free from void and air pockets using vibrating poker. Concrete should be placed by the excavator bucket.

Take delivery of precast chamber rings or sections using the proprietary lifting fingers and the correct lifting chains. Chains should be inspected prior to any lifting operation and a check made to ensure that the chain legs are of equal length and free form damage. Set the chamber ring or segment on mass concrete base and check for plumb. Ensure that the steps are positioned correctly.

No internal benching is required where pre-formed manhole bases are used. Where traditional manholes are installed shutter manhole internally as required with proprietary formwork and plywood sheeting internally. Order and pour concrete ensuring adequate consolidation. Strike shutters and remove all debris from the excavations.

Continue to bring chamber to the correct level using a combination of ring heights. Backfill the excavations in layers not exceeding 150mm thick. Each successive layer will require to be well consolidated using either a vibrating roller or heavy plate. Place cover slab correctly orientated over steps. Place ductile iron cover and frame over opening to restrict access to the manhole.

Carry out drainage air test and record results. Ensure Aberdeen City Council Supervisor is given notice to attend and witness the test.

Relocation of Lighting Column

W M Donald Ltd lighting sub-contractor will obtain permission from Aberdeen City Council to carry out works on the lighting network. Once approved, sub-contractor to isolate and disconnect power supply to the column.

To remove the existing column, excavator to break out concrete foundation around column. Once the column is free, utilise web sling choked around the column to lift from the existing location. Set aside column for re-use.

Set out the proposed street lighting location including route for cable ducting.

Saw cut existing tar and use excavator to excavate down to formation. Deposit arisings into dumper for temporary storage or directly into road lorry for transport off-site.

Lay new duct to the proposed lighting column. Bed and surround duct with sand bedding. Backfill and consolidate track with plate compactor.

Excavate new lighting column position and use web sling choked around the column to set in position. Backfill with concrete ensuring column remains plumb and cable is routed into the entry point.

Backfill and consolidate track with plate compactor.

Reinstatement of Surfacing

Following completion of backfill to formation level, take delivery of sub-base and spread 200mm layer to track. Where the cut edge is damaged, use saw to cut a clean edge.

Lay 210mm AC binder course and 45mm HRA surface course and use ride on roller to compact. Where areas are inaccessible such as around gully gratings and the like, utilise petrol vibrating plate to achieve compaction.

Any extra control measures required are to be recorded by the Client or Contracts Manager.

Item	Control Measure	Equipment

APPENDIX A

RISK ASSESSMENTS

RISK ASSESSMENT – GREYHOPE ROAD WEST EMBANKMENT

SRA001

Activity	Site Specific HSE Risk Assessment						
Compiled by:	Scott Dickie		Signed:	Scott Dickie		Doc Ref:	2727-SRA-001
Assessment date:	22/04/2020	Rev No:	2	Review Date:	08/04/2021	Permit required:	YES

Severity \ Likelihood	1	2	3	4	5
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

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Impact to an Environmentally and Ecologically Sensitive Site	4	5	20	• Compliance with Aberdeen Harbour Board HE1 works licence (for works below MHWS line) • Compliance with the conditions of the Marine Licence • Working in line with the Scottish Natural Heritage (SNH) accepted Habitats Regulations Assessment (HRA) • Compliance with Environmental Management and Emergency Response Plan (EMERP) • Provision of contingency plan for plant recovery	2	5	10	Y
Impact on Additional Ecological Sensitivities	4	5	20	• Awareness of the presence of otters which are present occasionally on and near the site. • Implementation of any specific recommendations of the otter survey report • Segregation of construction works from non-native invasive species, so they are not disturbed	2	5	10	Y
Impact on General Environmental Protection	3	5	15	• Bunded and locked fuel tanks • Self-contained welfare facilities • Regular plant servicing and daily inspections prior to use • Spill kits located with each item of plant	2	5	10	Y
Embankment Stability	4	5	20	• Embankment will be inspected at the start of each shift • A banksman will monitor the stability of the embankment during all excavation works • Exclusion of staff on foot from near the embankment toe during demolition and excavation • The excavator working on the foreshore will commence each section by working from the upper section of the embankment	3	5	15	Y

				first to prevent the embankment slipping • The excavator working on Greyhope Road will ensure a suitable position is taken to avoid surcharge on to the embankment				
Unexploded Ordnance (UXO)	3	5	15	• Detailed desk to be carried out by UXO specialist • If recommended by the specialist carry out non-invasive or invasive investigations • Previous experience of similar operations	2	5	10	Y
Weather and Tidal Conditions	3	4	12	• Daily monitoring of weather forecasts and tide times to ensure works can proceed • Decision taken on site whether to proceed where forecast is unfavourable • Similar approach taken where working period is shortened by tide times • No working in water	2	4	8	Y
Access and Egress to the Foreshore	3	5	15	• Established route on to the foreshore used previously • Excavator to clear any large boulders/rocks from the route to provide dumper access • Daily review of tide times to maximise working periods during low tides • Ensure plant working on the foreshore return to the sloped access in sufficient time before the tide comes in	2	5	10	Y
Access and Egress to Greyhope Road	3	4	12	• Works carried out under road closure (TTRO) • Established diversion route • Weight restriction lifted for project period • Areas of potential concern protected by steel plates • Steel plates used for material lay-down areas to protect the carriageway	2	4	8	Y
Contact With Members of the Public	3	4	12	• Temporary traffic management established to close Greyhope Road to vehicles • Pedestrian access maintained on the existing footpath on the south side of Greyhope Road • Site works segregated using barriers and signage to keep members of the public informed on the site restrictions • Project details and site contact information displayed at entrances • Direct contact with SEPA and Pheonix Oilfield Supplies with regards to access to their offices and car park and any changes to the route during the works	2	4	8	Y
Existing Services	3	5	15	• Desktop review will be carried out prior to works commencing to identify service locations • Additional information provided by Aberdeen City Council regarding one unknown service in the verge	2	5	10	Y

				• CAT scans, hand-dug or suction excavator trial holes carried our prior to mechanical excavations				
Accidental Discharge from Mechanical Plant	3	• 4	• 12	• All plant regularly maintained and subject to daily inspections prior to use • Second piece of will provide a method of recovery for each other should one of them breakdown.				

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	HSG47 'Avoiding Danger from Underground Services'
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)	✓	Safety glasses/ goggles	✓	
Members of the public (vehicles)	✓	Gloves – general handling	✓	
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)	✓	High visibility coveralls/trousers	✓	
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate): Insulated hand tools	✓	

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk.

RISK ASSESSMENT

RA001

Activity	**Trench Excavations for Pipework and Services etc.**					
Compiled by:	F Morrison	Signed:	[Redacted]		Doc Ref:	H&S-RA-001
Assessment date:	10/10/2017	Rev No:	4	Review Date: As per Master Schedule	Permit Required:	YES

Severity						
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
			Likelihood		

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Unsafe working environment due to unknown hazards.	3	4	12	• Risk assessment undertaken prior to works commencement to establish if temporary works design required.	2	4	8	Y
Plant & vehicle movement close to excavation – at risk of excavation collapse or plant or vehicle slipping into excavation.	3	4	12	• Mobile plant kept minimum of 1.50m from edge of excavation. • Use stop blocks or ramped material to prevent mobile plant reversing into excavation or surcharging trench walls • Batter back trench walls beyond safe angle of repose for material or utilise shoring of appropriate size (Temporary Works Design).	2	4	8	Y
Loss of excavator bucket into the excavation by falling in due to proximity to excavation.	3	4	12	• Store spare buckets behind the machine away from excavation or in bucket loading area away from edge of excavation. Only change buckets in this area.	1	4	4	Y
Working in the excavation - potential for collapse especially following inclement weather or frost.	3	5	15	• Batter trench walls beyond safe angle (1:2 slope or step back with each step being 1 metre high and 1 metre wide) of repose for material or use appropriate shoring (Temporary Works Design may be required). • Inspect trench daily, after each shift change or following heavy rain or frost and record the inspection noting if there are changes or not. • When pumping ground / surface water ensure sub soils are not drawn from behind shoring or supports causing instability. • Plan location of side cast material to avoid surcharging excavation. Ideally be stored at least 1.5 times the depth of the excavation away. • Only work within shored/ battered/ stepped areas of the excavations. • Consider using a drag box/ trench box and remain within the confines of this if in use.	1	5	5	Y

				• If shoring a trench ensure temporary works design is in place.				
Unhealthy atmospheres within the trench.	3	5	15	• Be aware of live sewers or other sources of gas e.g. exhaust fumes. Use gas monitor to check atmosphere. Follow confined space procedures (see separate RA).	1	5	5	Y
Access and egress into trench where there is a risk of slips, trips and falls.	3	3	9	• Ideally batter back end of excavation and grade to from walkway into the trench. • Ensure ladders are of the appropriate length, properly footed and fixed in position if being used.	1	3	3	Y
Serious injury or fatality to/ of a member of the public.	3	5	15	• Ensure traffic is kept minimum of 1.20m from trench wall and suitable vehicle restraint barrier are in place. • Segregate site and/ or working area from the public or other site workers by putting up fencing/ barriers with appropriate warning signage (i.e deep excavation). • Ensure excavations are securely fenced off when leaving unattended. • Ensure appropriate signage is in place around the excavation if out with the confines of the site or at the perimeter of our site.	1	5	5	Y
Fall from height into the excavation leading to a serious injury or fatality.	3	5	15	• Ensure shoring box or trench sheets have upstand (min 950 mm) above the ground level of the excavation. • Where not possible, use trench box guard rails (fitted to top of box). • For battered excavations consider pedestrian barriers around the excavation and at least 1 metre back from the edge and the barriers are secured down. • Ladders to be appropriate length and condition and fixed at the top with at least 3 rungs above the top of the excavation. • Where shoring is fixed for a period of time, consider using ladder landing frame.	1	5	5	Y
Contact with existing buried service when excavating.	3	5	15	• Locate buried services using PUSWA information, service provider call outs, cable avoidance tools and trial holes BEFORE work starts. • Always use safe hand digging methods in accordance with HSG 47. • Use the suction excavator where possible. • Use insulated tools when digging trial holes to locate services. • Never assume drawings are correct.	1	5	5	Y
Unsafe working environment due to unknown hazards.	3	4	12	• Risk assessment undertaken prior to works commencement to establish if temporary works design required.	2	4	8	Y
Plant & vehicle movement close to excavation – at risk of excavation collapse or plant or vehicle slipping into excavation.	3	4	12	• Mobile plant kept minimum of 1.50m from edge of excavation. • Use stop blocks or ramped material to prevent mobile plant reversing into excavation or surcharging trench walls • Batter back trench walls beyond safe angle of repose for material or utilise shoring of appropriate size (Temporary Works Design).	2	4	8	Y
Loss of excavator bucket into the excavation by falling in due to proximity to excavation.	3	4	12	• Store spare buckets behind the machine away from excavation or in bucket loading area away from edge of excavation. Only change buckets in this area.	1	4	4	Y

Working in the excavation - potential for collapse especially following inclement weather or frost.	3	5	15	• Batter trench walls beyond safe angle (1:2 slope or step back with each step being 1 metre high and 1 metre wide) of repose for material or use appropriate shoring (Temporary Works Design may be required). • Inspect trench daily, after each shift change or following heavy rain or frost and record the inspection noting if there are changes or not. • When pumping ground / surface water ensure sub soils are not drawn from behind shoring or supports causing instability. • Plan location of side cast material to avoid surcharging excavation. Ideally be stored at least 1.5 times the depth of the excavation away. • Only work within shored/ battered/ stepped areas of the excavations. • Consider using a drag box/ trench box and remain within the confines of this if in use. • If shoring a trench ensure temporary works design is in place.	1	5	5	Y
Unhealthy atmospheres within the trench.	3	5	15	• Be aware of live sewers or other sources of gas e.g. exhaust fumes. Use gas monitor to check atmosphere. Follow confined space procedures (see separate RA).	1	5	5	Y
Access and egress into trench where there is a risk of slips, trips and falls.	3	3	9	• Ideally batter back end of excavation and grade to from walkway into the trench. • Ensure ladders are of the appropriate length, properly footed and fixed in position if being used.	1	3	3	Y

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	RA028 – excavations for pipework adjacent to trees
Other contractors	✓	High visibility top (long/ short sleeve)	✓	RA016 – confined spaces
Members of the public (pedestrians – any age)		Safety glasses/ goggles	✓	
Members of the public (vehicles)		Gloves – general handling	✓	
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA002

Activity	**Topsoil strip, reduced level excavation & local excavation for pits or strip foundations etc.**						
Compiled by:	Fraser Morrison		Signed: [Redacted]			Doc Ref:	H&S-RA-002
Assessment date:	10/10/2017	Rev No:	4	Review Date:	As per Master Schedule	Permit Required:	YES

Severity \ Likelihood	1	2	3	4	5
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

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Failure of equipment and/ or failure to operate equipment correctly.	3	5	15	• Only trained and competent plant operators to operate plant after verification of training/ competencies. • Plant and equipment regularly inspected and maintained. • Understand limitations of and work within safe working load parameters of the equipment. • Lift plan in place for lifting equipment with plant.	1	5	5	Y
Contact between plant/equipment and people.	3	5	15	• Segregate people from mobile plant by putting up designated walkways. • Follow traffic management/earthworks management plan. • Only allow trained operatives to use plant. • Ensure pedestrians keep to site footpaths. Be vigilant and aware of surroundings. • Banksman to control vehicle movements.	2	5	10	Y
Moving plant and equipment overturning or falling into excavation.	3	5	15	• Create and regularly maintain haul roads. • Use stop blocks, timber baulks, site material etc. at edge of excavations at least 1.5 metres from edge. • Traversing mobile plant kept at least 1.5m from face of excavation edge. • Plan location of side cast material to avoid surcharging excavation. • Put up appropriate signage around the excavation. • No plant to travel across gradients or tips loads unless on level ground.	2	5	10	Y

Machinery or operatives coming into contact with live underground services.	3	5	15	• Locate buried services using PUSWA information, service provider call outs, cable avoidance tools and trial holes BEFORE work starts. • Use insulated tools when digging trial holes. • Never assume drawings are correct. • Wear flame retardant coveralls when digging for live services.	1	5	5	Y
Trench collapse while Operatives working within.	4	4	16	• Use trench support systems or batter/ step trench sides which may require temporary word designs. • If stepping try and achieve a 1metre high, 1 metre wide rule of thumb for each step level.	2	4	8	Y
Work on ground level near to the edge of a deep exaction with the potential to fall from height.	3	5	15	• Guard trenches with barrier system, toe boards and warning signs. • Provide ladders for access/egress and ensure at least 3 rungs are above the opening of the trench. • Store tools, plant, equipment and materials a minimum of 1.5 metres from edge. • Ensure barriers are at least 1.5 metres back from edge of excavation.	2	5	10	Y
Excavations adjacent to structures causing collapse, destabilising or causing damage to structures.	2	4	8	• Site specific risk assessment required whilst working close to existing structures. Specific temporary work design may be required. Consult project engineer prior to undertaking any work of this type.	1	4	4	Y
Water ingress/flooding of a trench while Operatives are working.	2	5	10	• Provide sump for draining water or other methods of dewatering trench such as a pump. • Monitor gas levels within trench as water enters as gases may rise, if any.	1	5	5	Y
Members of the public and/ or motor vehicles entering excavations/ falling into excavations.	2	5	10	• Ensure adequate barrier system in place, appropriately signed in accordance with NRSWA 1991. • Traffic management measure where appropriate. • If in a residential area, send out letters letting home owners/ residents of the work about to take place.	1	5	5	Y

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	HSE - HSG47
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)	✓	Safety glasses/ goggles	✓	
Members of the public (vehicles)	✓	Gloves – general handling	✓	
Children	✓	Gloves – specialist (cut resistant etc)		
Members of the emergency services	✓	Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)	✓	Coveralls – flame retardant	✓	
Young/ inexperienced workers		Respiratory protection	✓	
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA003

Activity	**Use of Portable Hand Tools**						
Compiled by:	Fraser Morrison		Signed: [Redacted]			Doc Ref:	H&S-RA-003
Assessment date:	10/10/2017	Rev No:	5	Review Date:	As per Master Schedule	Permit Required:	YES

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Cuts, lacerations, abrasions through contact with moving parts or from projectiles such as chips/dust.	3	3	9	• Only those trained and authorised can use equipment. • Ensure tools have been regularly maintained and are inspect prior to use. Any defects are notified immediately to your Supervisor. • Always use the correct tool for the job and that the tool is used as per manufacturer instruction/ guidance. • Ensure correct consumables are fitted and are appropriate for the task. • Wear cut resistant gloves and safety goggles when cutting and ensure all PPE is in good order. • Ensure water suppression is used when cutting blocks/ brick.	1	3	3	Y
Burns /electric shock from faulty equipment/ exposed live electric wires.	2	4	8	• Check equipment leads and connectors prior to use. If damaged do not use tool and report defects to your supervisor. • Ensure equipment has valid PAT test & PAT test label fitted which is in date. • Ensure tools have been maintained and any defects identified report immediately to your supervisor. • Only use 110V tools on site. • Maintain good housekeeping and plan cable routes which are visible to all.	1	4	4	Y
Injury through manual handling / repetitive movement.	2	3	6	• Trained in manual handling techniques and practices. • Use correct posture and take regular breaks and when possible work share. • Wear appropriate footwear, gloves and keep warm.	1	3	3	Y

				• Do not attempt lift beyond your capabilities and seek assistance where required. • Do not lift items above 20kg alone even if you feel you are capable to do so.				
Temporary or permanent hearing impairment or total hearing loss.	3	3	9	• Wear appropriate hearing protection for the sound pressure and environment. • Mandatory hearing protection for noise levels over 85dB.	1	3	3	Y
Injury through use of vibrating equipment (HAVs).	3	4	12	• Tools inspected and maintained. If tool is damaged or has a fault do not use and report to your supervisor. • Do not operate any equipment if you have an injury and notify your supervisor. • Stop work immediately if you feel unwell or feel an injury. • Do not exceed total trigger for all tools used in a 24 hour period. This will be worked out by your Supervisor who will inform you the length of time you can use the tool. • Keep warm and dry. Work under covered areas or wait until inclement weather has passed before operating tools. • Do not use tools if you have any pre-existing HAV related injury/ illness and report same to your supervisor.	2	4	8	Y
Risk of burns/ skin injuries due to contact with fuel when fuelling equipment or spills of fuel when using equipment.	3	4	12	• Ensure all fuel (petrol/ diesel) is carried in the correct containers/ cannisters. • PPE is worn at all times when handling fuel and spill kits are at hand to contain spills. • COSHH assessments/ MSDS sheets have been read and understood about the substance you are handling. • Refuel equipment over a plant nappy and ensure equipment is switched off. • Have an appropriate fire extinguisher at hand in case fuel catches fire. Refer to MSDS sheet for which type.	2	4	8	Y

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles	✓	
Members of the public (vehicles)		Gloves – general handling	✓	
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)	✓	Coveralls – flame retardant	✓	
Young/ inexperienced workers		Respiratory protection	✓	
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA004

Activity	**Manual Handling**			[Redacted]			
Compiled by:	Fraser Morrison		Signed:			Doc Ref:	H&S-RA-004
Assessment date:	10/10/2017	Rev No:	5	Review Date:	As per Master Schedule	Permit Required:	YES

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Lifting, lowering, pushing or pulling a load resulting in muscle strain or potential for abrasion or lacerations of the hands.	3	4	12	• Prior to lifting examine load for appropriate lifting points, plan and check route and ensure item(s) are secure. • Where practicable avoid manual handling - always consider mechanical alternative e.g. vac lift, scissor grab etc. • Use team lifting techniques where appropriate. • Where possible break down load into multiple lighter units and plan as point 1. • Use good lifting technique, bent knees and straight back. • Wear appropriate PPE. A • All operatives to be appropriately trained. • Do not lift items if any existing medical conditions that would affect your ability to lift.	1	4	4	Y
Moving whilst carrying a load - potential for slip or trip; impact in to objects.	3	3	9	• Inspect work area for hazards prior to commencement of lift and plan route. • Ensure walkways are clear of obstructions. • Use a team or second person if required. • Use mechanical devices if available. • Where surfaces are uneven use boards or plates where appropriate. • Wear suitable footwear.	1	3	3	Y

Person(s) exposed to risk: Tick		Minimum PPE requirement: Tick		Related Documents & reference(s)
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling	✓	
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)	✓	Coveralls – flame retardant		
Young/ inexperienced workers	✓	Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA005

Activity	**Contact with Dangerous Sub** [Redacted]						
Compiled by:	Fraser Morrison		Signed:			Doc Ref:	H&S-RA-005
Assessment date:	10/10/2017	Rev No:	5	Review Date:	As per Master Schedule	Permit Required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Explosive or flammable substances igniting causing an explosion/ fire.	3	4	12	• Ensure COSHH safety data sheets are read and understood and they are briefed to employees. • Use substances for designated purpose and in accordance with the manufacturers instructions. • Ensure suitable storage for flammable substances and ensure they are in the appropriate container. • Ensure appropriate firefighting equipment is available. • Keep flammables away from sources of ignition. • Hazard signage to be displayed when dealing with flammable substances near public footpaths/ areas.	1	4	4	Y
Contact with toxic, corrosive and/ or harmful substances which have the potential to cause inflammation and/ or blistering to skin.	3	4	12	• Ensure COSHH safety data sheets are read and understood and they are briefed to employees. • Use substances for designated purpose and in accordance with the manufacturer's instructions. • If contact occurs follow the guidance as per manufacture MSDS and inform supervisor immediately.	1	4	4	Y
Contact with raw sewage - poisoning / illness.	3	3	9	• See RA015 - purging of gas; flushing manholes with disinfectant to make area 'clean'. • PPE - rubber boots, overalls (long sleeve), gloves, head and eye protection to be worn and in good order. • Washing facilities to be provided. • Ensure hands and face thoroughly washed before eating. • If contact is made with raw sewage whereby it is ingested, inform your supervisor immediately and seek medical attention.	2	3	6	Y

Person(s) exposed to risk: Tick		Minimum PPE requirement: Tick		Related Documents & reference(s)
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)		
Members of the public (pedestrians – any age)		Safety glasses/ goggles	✓	
Members of the public (vehicles)	✓	Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA007

Activity	**Abrasive Wheels**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-007
Assessment date:	10/10/2017	Rev No:	6	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Contact with abrasive wheels during operation and maintenance.	3	4	12	• Only trained and competent personnel to use an abrasive wheel(s). • Operatives trained in use of equipment and fitting of wheel/disks in accordance with manufacturer's instructions. • Guards in place and checked they are in good working order prior to using tool. • Correct tool and consumables for the task / material being cut. • Tool maintained and checked prior to use. Defective equipment removed from use immediately. • Appropriate PPE for the tool to be worn (impact goggles/ cut resistant gloves and hearing protection). • Isolate tool from power prior to maintenance or changing of discs. • Only use tools that are 110v rated.	1	4	4	Y
Projectiles from the work piece or from the disc in use.	3	4	12	• Use correct tool wheels/disks for the equipment and task/material being cut. • Tools maintained and checked prior to use. Any defects to be reported to a Supervisor. • Abrasive wheel fitted in accordance with manufacturers guidance. • Eye protection (high impact goggles) and coveralls to be worn as well as cut resistant gloves and hear protection. • Segregate the operation from others, using distance or screening.	2	4	8	Y
Electric shock from exposed wires/ flexes.	2	4	8	• Use of insulated cables and 110v power source.	1	4	4	Y

				• Maintenance and pre-use check of equipment. Electrical equipment PAT tested.				
Material cutting/ nearby materials ignite due to sparks/ heat while cutting.	3	3	9	• No grinding to be carried out near flammables. • Wear appropriate PPE, cut resistant gloves and eye protection (high impact goggles). • Firefighting equipment to be located in work area that is appropriate for the type of work activity.	1	3	3	Y
Excessive noise while wheel in operation.	3	4	12	• Hearing protection to be used when operating grinders. • Limit noisy operations outside normal working hours. • Tools well maintained. Ensure they are checked prior to use and any defects reported immediately.	1	4	4	Y
Vibration/ increased HAV.	3	4	12	• Operators briefed in HAVS and early signs and symptoms. • Tools maintained and selected with consideration given to reducing HAVS and plan to reduce exposure times. • HAVS usage planned and recorded as per WMD Process. • Any early symptoms, work is stopped and reported to your supervisor.	1	4	4	Y

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles	✓	
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant	✓	
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate): Dust suppression system	✓	

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA008

Activity	Working Near Underground or Overhead Services						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-008
Assessment date:	10/10/2017	Rev No:	4	Review Date:	As per Master Schedule	Permit required:	YES

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Working adjacent to or under overhead power cables.	4	5	20	• Identify cables at planning stage. Where practicable design out the need to work below or next to overhead cables. • Where possible arrange for de-energising of cables and only carry out work once written notification has been received. • Where work under live cables is necessary, work with the power company to ensure safe clearance, exclusions zones, goal post arrangements are in place. • If excavators are working under live power cables ensure they have a slew/ height restrictor. • Prepare site specific risk assessment and review regular. • Do not carry equipment such as ladders and scaffolding/metallic poles/surveying poles below power lines. Where unavoidable use designated passage way and carry equipment horizontally. • Establish demarcation signage and barriers in accordance with GS6 guidance.	2	5	10	Y
Working near underground services - contact with electric cables - contact, damage or release of gas - contact with water / sewers - loss of service(s) to nearby buildings.	4	5	20	• Obtain existing service drawings from the Onecall system and mark out the route of services prior to commencing work. • Contact the public utilities and request that they identify their own plant on site. • Use cable detecting equipment to trace cables and metal pipes. • Dig trial holes by hand, with insulated tools, to ascertain the exact location and depth of the services.	2	5	10	Y

				• Ensure all operatives are aware of underground and overhead lines and procedure to be followed. • Refer to Guidance Note HSG47 'Avoiding Danger from Underground Services'. • Emergency action plans in place and everyone on site has been briefed on them. • Report any damage or signs of damage immediately. • Mark known locations with spray paint and signs. • Flame retardant coveralls to be worn when working/ locating electric and gas pipes/ services. • Never assume a service drawing is correct and dig trial holes to locate the service.				

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	HSG47 'Avoiding Danger from Underground Services'
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling	✓	
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant	✓	
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate): Insulated hand tools	✓	

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA009

Activity	**Lifting Operations**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-009
Assessment date:	10/10/2017	Rev No:	4	Review Date:	As per Master Schedule	Permit required:	YES

Severity						
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
			Likelihood		

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Dropped loads due to - failure of lifting equipment or accessories - incorrect slinging of load	4	4	16	• Lift only to be performed by trained competent certified operators and banksmen. • Lifting equipment and accessories inspected and maintained. Any defects found prior to the lift, they are to be quarantined and reported to your Supervisor. • Ensure lifting equipment certification is in date - check colour of tags to ensure current. • Only use the appropriate equipment and accessories for the load. • Use correct slinging procedures for the load. • Prepare area prior to commencing lift and ensure route is free from obstruction. • Carry out a test lift to check load for stability prior to lifting. • Ensure bystanders are segregated from the lifting operation by putting up barriers around the area. • No one is to walk under a suspended load at any time.	2	4	4	Y
Complex or non-standard lift where the risks are unknown due to the complexity of the lift.	4	4	16	• All complex or non-standard lifting operations require a specific lift plan and risk assessment carried out by an appointed person. Ask the HSEQ Advisor for assistance.	2	4	8	Y
Impact between plant/ load and persons or other property.	3	4	12	• Trained and competent operators involved in the lift (operators/ banksmen/ slingers). • Ground stability checked prior to lifting.	2	4	8	Y

				• Segregate bystanders by putting up barriers defining the lift area. Banksmen to monitor area to ensure no one enters it. • Transit distances to be kept to a minimum and routes planned with banksmen guiding plant. • All those involved in lift wear high visibility clothing. • Ensure lift area is clear of any obstructions prior to operations.				

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	Lifting Operations and Lifting Regulations 1998
Other contractors	✓	High visibility top (long/ short sleeve)	✓	BS7121 – Crane lifts
Members of the public (pedestrians – any age)	✓	Safety glasses/ goggles		
Members of the public (vehicles)	✓	Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA010

Activity	**Fitting or Adjustment of Ironwork (includes road gullies and tobies)**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-010
Assessment date:	10/10/2017	Rev No:	3	Review Date:	As per Master Schedule	Permit required:	YES

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Traffic and site plant entering work area/ passing close by to Operatives working.	4	4	16	• Liaise with site manager to establish alternative route for site and public traffic while carrying out the operation. • Segregate plant from the public and others working on site by designating walkways/ exclusion zones. • Excavators and tippers to be fitted with audio/visual warning devices. • Banksman to guide tippers when reversing. • Erect signs informing public of raised ironwork and where possible feather raised covers with tar. • If traffic management is required ensure it complies with street work legislation. • Liaise with local authority for road closures/ traffic diversions well in advance of the work commencing.	2	4	8	Y
Lifting of ironwork which is heavy and potential pinch or impact injury.	4	3	12	• Use mechanical lifting aids where possible, if not use tandem lifting techniques. • Consider alternative lifting methods especially if lift is in excess of 20kg. Utilise excavator with suitable lifting accessory to lift equipment. • Ensure operatives take frequent breaks where manual handling unavoidable. • All Operatives to be trained in manual handling techniques – see HSEQ Advisor for advice if not trained.	2	3	6	Y
Unhealthy atmosphere in existing manholes.	3	3	9	• Do not enter the manhole without having considered hazards and control measures detailed on risk assessments RA014 and RA024. • Only acceptable if all control measures in RA014 and RA024 are met.	2	3	6	Y

Contact with cement based products with potential to cause damage to the skin.	3	3	9	• Avoid direct contact with cement based products. Wear suitable gloves. • If contact is made wash hand thoroughly and report to supervisor.	1	3	3	Y

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors		High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection	✓	
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT	RA012	WM DONALD CIVILS • UTILITIES • CONTRACTORS

Activity	Surfacing with Bituminous Materials by plant or hand						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-012
Assessment date:	10/10/2017	Rev No:	5	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
			Likelihood		

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
People (pedestrians), Operatives, plant and live traffic interfacing where they may come into contact with each other.	3	5	15	• Operatives to wear Hi-Viz clothing. • Establish Traffic management (speed restriction as necessary) and set up and maintain safety zones and barriers. • Restrict access by the public by setting up barriers and diverting walkways if applicable. Put up appropriate signage alerting the public of the work. • Only authorised operatives to operate plant who are to carry out daily inspections of the piece of plant to ensure it is fit for purpose. Any faults/ defect should be reported to Management and the plant not used. • Banksman to guide tippers when reversing. • Excavators, tippers and rollers to be fitted with audio/visual warning devices when reversing. • Ensure machine properly secured at the end of work and all barriers and gates are checked prior to leaving site.	2	4	8	Y
Exposure to excessive noise levels.	3	3	9	• Plan noisy operations during normal working hours. • Consider acoustic screening in highly populated areas. • If noise in excess of 80dB then hearing protection must be worn. • If using noisy plant/ equipment (above 80dB) in a highly populated area, someone is to	2	3	6	Y

				watch for passing public and no work to take place until they have passed – so they are not exposed to the noise.				
Public exposed to nearly laid surfaces containing hazardous substances while wet.	3	3	9	• Segregate public from the works with suitable barriers/ fencing. • Information letter drop where appropriate before the start of the works.	2	3	6	Y
Entanglement in moving parts of machinery.	3	5	15	• Ensure guards are fitted whilst machines operating – daily checks of machine to be carried out to ensure guards are fitted and in order. • Faulty equipment withdrawn from service upon finding a defect. • Only machine operators allowed on deck of surfacing plant. • Deck free from obstructions. • Only authorised operatives to operate plant.	2	5	10	Y
Handling hot bituminous materials. Working in hot environment.	3	2	6	• Fire extinguishers fitted on surfacing plant. • LPG tanks securely stored. • Avoid contact with hot bitumen, wear flameproof clothing. • Trained first aider and burn gel on site at all times. • Ensure operatives take frequent breaks especially during hot weather and keep well hydrated at all times.	2	2	4	Y
Repetitive raking and tamping bituminous materials.	3	2	6	• Operatives trained in manual handling. • Where possible, use mechanical plant to distribute bituminous materials. • Operatives take regular breaks. • Operatives wear appropriate PPE.	2	2	4	Y
Handling vibrating tools.	3	4	12	• Ensure equipment maintained and in good order wit daily checks carried out and recorded. Any defects found then the item is not to be used and report defects to Supervisor. • Use correct equipment for job. • Work planned to ensure vibration exposure does not exceed exposure limit value – calculated daily. • Regular breaks are taken. • Operatives undergo regular occupational health surveillance checks. • Hearing protection to be worn. • Operatives to be briefed on the early signs of HAVs. If any early signs/ symptoms suspected, stop work immediately and report to your Supervisor QHSE Advisor.	2	4	8	Y
Exposure to dust through inhalation/ contact with eyes.	3	4	12	• Use water to supress dust. • Use digger to distribute tar to work area. • Wear impact glasses.	2	4	8	Y

				• Wear cut resistant gloves that are water proof also.				

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors		High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles	✓	
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate): Hearing protection	✓	

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA013

Activity	**Bitumen and Pitch Boilers**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-013
Assessment date:	10/10/2017	Rev No:	3	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
LPG cylinders have the potential to cause fire and explosion causing severe injury or fatality	3	5	15	• Store LPG cylinders in a secure place away from naked flames. • Disconnect cylinder from boilers when not in use. When in use, ensure that cylinder is upright and placed on level ground and secured to ensure it remains vertical. • Ensure that LPG Cylinders are placed at least 3metres from bitumen boiler and their position away from potential damage by moving plant. • Check connections for gas escape with leak detection solution prior to commencing work. • Ensure at least 2 fire extinguishers are on site and have been serviced. • If any defects are found with the cylinder/ connections then do not use them and report immediately to your supervisor.	1	5	5	Y
Bitumen boilers have the potential to cause burns to operatives and damage to the environment	3	3	9	• Bitumen boilers must be placed on level ground. • Before use, check connections for gas escape with leak detection solution. • Bitumen boilers must not be left unattended or moved when lit. • Bitumen boilers must be placed in a safe area to avoid damage from moving plant. Place barriers around the boiler to highlight its location and mark out an exclusion area. • Bitumen boilers to be placed in an area separate from the general public, protected by a	2	3	6	Y

				barrier system and never left unattended. • Operatives must wear protective clothing to avoid contact with exposed skin and eyes. Flame retardant coveralls, impact glasses and waterproof/ tear resistant gloves (as long as manufacture guidelines state they can deal with bitumen and other substances). • Do not leave site until bitumen boiler is confirmed as being cool and remove off site to WMD yard if possible.				
Carrying containers for bitumen have the potential to cause burns if spillage occurs.	2	3	6	• Ensure route between bitumen boiler and work site is level and free from obstacles. • Do not overfill containers. • Ensure that carrying equipment is fitted with containment lids. • If 20kg or above consider 2 man lift or lifting device to be used for loads of any weight.	1	3	3	Y

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors		High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles	✓	
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant	✓	
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT			RA017				
Activity	**Working with Concrete or Cement**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-017
Assessment date:	10/10/2017	Rev No:	3	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Contact with wet concrete to hand/ eyes.	4	3	12	• Operatives must wear waterproof gloves, over suits and wellington style boots. • Operatives to limit the amount of exposed skin through the wearing of coveralls/ WMD uniform. • Eye protection to be worn at all times. Goggles to be used where splashing is likely to occur. • Protective balm, soaps and moisturisers available and to be utilised. • Wash off any concrete that comes into contact with skin immediately. • All operatives other than those required for the pour shall stay clear of operating machinery and away from the concrete.	2	3	6	Y
Inhalation of cement dust.	4	3	12	• Mixing of cement based materials to be carried out in a suitable mixer to contain dust. • Operatives must wear dust masks - specification (EN149) FFP3 when dealing with concrete powder. • Area to be barriered off to stop encroachment of those not wearing PPE. • Safety goggles to be worn to protect the eyes.	2	3	6	Y
Manual handling while moving bags of cement.	3	3	9	• Operatives must avoid carrying heavy loads of wet cement/concrete and use mechanical devices to do this. • Smaller loads that are easier to carry, meaning more loads, rather than a few heavy loads. • Operatives trained in manual handling. • Place mixer on flat stable ground with clear access and where	2	3	6	Y

				possible site batching area close to work area. Otherwise use a barrow to transport mortar from batching area to work area to reduce manual handling. • Use mechanical devices (bucket of excavator) to transport mortar.				
Use of abrasive wheels while cutting/ breaking cast concrete resulting in - projectiles - dust - shattering of wheels - noise - vibration	3	3	9	• See RA003 and RA007. • Use goggle eye protection, dust masks, dust suppression systems. • Trained operatives to change blades. • Planning of tasks to reduce noise and vibration exposure. • Hearing protection to be worn. • HAVS exposure to be calculated and if any pre-existing injuries/ symptoms to be notified to supervisor. • If any HAVS related symptoms develop then stop work immediately and report to your Supervisor.	1	3	4	y

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors		High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles	✓	
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant	✓	
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate): Hearing protection	✓	

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT	RA020	WM DONALD CIVILS • UTILITIES • CONTRACTORS

Activity	Refuelling of Plant and Machinery						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-020
Assessment date:	10/10/2017	Rev No:	4	Review Date:	10/10/2019	Permit required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Fire / explosion or spill of fuel during refuelling process.	3	4	12	• Refuelling of plant must only be carried out in a designated area where available. • No plant to plant fuelling. • Designated fuelling area to be away from vehicle access routes and protected where possible to prevent collision. • No naked flames to be close to fuelling station. No smoking in the area. • Ensure all fuel caps, oil caps, hoses and pipes are replaced correctly and securely. • Spill kits available and any spills cleaned up immediately. • Drip trays and funnels to be used if refuelling out with designated areas. • Fire extinguishers to be nearby. • Flame retardant coveralls to be worn.	2	4	8	Y
Skin/ eye contact with substances, fuel, oils, greases.	3	3	9	• Suitable PPE to be worn by operatives - coveralls, goggles, nitrile gloves. • Welfare facilities must have soaps, barrier creams. • Public kept away from fuelling station by fencing and signage in place. • COSHH assessments in place which have been read. • If any contact with skin/ eyes then it must be reported to your Supervisor immediately.	1	3	3	Y
Fuel stored in circumstances where it could ignite.	3	4	12	• Designated fuelling tanks to be double skinned or bunded. • Smaller storage facilities to be bunded. • Containers and equipment to be stored safely and in good condition which have caps that are securely fitted.	1	4	4	Y

				• A maximum of 3 jerry cans per vehicle is to be transported. • Spill kits available at fuelling station and in vans if fuel is being transported. • Fire extinguishers to be carried in vehicles. • When locking vehicle for the night check that all containers etc are properly closed and secure.				

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors		High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)	✓	Safety glasses/ goggles		
Members of the public (vehicles)	✓	Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant	✓	
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA021

Activity	**Control of Public Access to Works**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-021
Assessment date:	10/10/2017	Rev No:	5	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
			Likelihood		

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Collision between site vehicles, plant and a member of the public.	3	5	15	• Barrier off work area. • Ensure perimeter fencing is in place and checked twice daily. • Put up signage advising members of the public of work on going. • Ensure everyone who enters onto site is inducted. • Any visitors are accompanied by a member of staff. • Walk ways are designated.	2	5	10	Y
Open excavations.	3	5	15	• Ensure fencing and edge protection is in place which is at least 1 metre back from the leading edge. • Ensure the site is secured which means checking fencing at the start and end of each shift. • Do not leave chambers open overnight. Replace lids (if applicable) or cover and put further barriers around.	2	5	10	Y
Public interfering with plant or equipment.	3	4	12	• Site fenced and secured out of working hours with warning signage in place. • Fencing checked twice daily, once in the AM and once at the end of the working day. • Electrical supply is isolated. • Equipment stored in lockable building or compound. • Ladders removed or made inaccessible. • Plant demobilised and to prevent roll on if break released. • Small plant stored away or removed from site where possible. • All surplus materials must be protected by panel fencing. • Consider having CCTV camera on site. • Remove all keys for plant off site/ store in a locked cabinet within a locked container.	2	4	8	Y

Exposure to chemicals, fire and explosion	2	4	8	• Suitable secure storage facilities for substances with signage. • Fuelling stations to be locked. • Site fenced. • Fire extinguishers in place and spill kits.	2	4	8	Y

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors		High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)	✓	Safety glasses/ goggles		
Members of the public (vehicles)	✓	Gloves – general handling	✓	
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA022

Activity	**Use of Dumper Trucks (rigid and articulated) (inc. forward and rear tipping)**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-022
Assessment date:	10/10/2017	Rev No:	3	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Overturning of dumper - through contact with other vehicles, gradient or excavation.	3	5	15	• Operative to be over 18, trained and competent. • Dumper maintained and subject to pre-use checks which are recorded. • Dumpers are kept a minimum of 1.50m from the edge of excavations. • Passengers should not be carried. • Ensure that roll over protection is in place and that seat belts are worn where fitted to the plant. • Travelling across excessive inclines to be avoided. • Operator to vacate dumper (forward tipping) during loading. • Ensure stop blocks or suitable ramped material are set to prevent dumpers reversing into excavations. • All open excavations on site are highlighted – barriers placed around them. • Tipping of loads should be on as flat ground as there is possible.	2	5	10	Y
Operator falling from dumper - fall from height.	3	5	15	• Operative to be over 18, trained and competent. • Dumper maintained and subject to pre-use checks which are recorded. • Hand holds to be used when entering or exiting the dumper. • No persons to work on the back of the dumper. • Passengers are not carried and seatbelts to be worn by Operators at all times.	2	5	10	Y
Dumper and operator falling into excavation	3	5	15	• Dumpers are kept a minimum of 1.50m from the edge of excavations and that they are not overloaded.	2	5	10	Y

				• Ensure stop blocks or suitable ramped material are set to prevent dumpers reversing into excavations or when tipping. • Passengers should not be carried. • Ensure that roll over protection is in place and that seat belts are worn where fitted to the plant.				
Materials dropped from dumper.	3	5	15	• Operative to be over 18, trained and competent. • Dumper maintained and subject to pre-use checks which are recorded. • Do not overload dumper. • Hard hats worn by operatives on site. • Ensure area is clear prior to tipping. Banksman used as required. • Only tip loads in designated areas. • Dumpers to stick to designated haul roads and if passing pedestrians/ operatives slow to 5mph. • Maximum speed on site, no matter the conditions, is 20mph.	2	5	10	Y
Contact with overhead obstructions.	3	5	15	• Operative to be over 18, trained and competent. • Prevent loads overhanging skip body unless suitably flagged and clearance of route is checked prior to travel. • Do not operated dump trucks within 6m of overhead cables. • Only pass under overhead cables if GS6 goal posts are in place. If no goal posts are present then do not pass under and contact your Supervisor.	2	5	10	Y
Contact with pedestrians or vehicles - other operatives, members of the public	3	5	15	• Operative to be over 18, trained and competent. • Pedestrian segregation to be set up and clear, designated haul roads. • Ensure area clear prior to tipping. Banksman used as required. • Only tip in designated areas.	1	5	5	Y
Jack knifing of or operatives trapped between pivot points of articulated trucks.	3	4	12	• All operatives to stay clear of pivot points and operator to ensure that they are clear at all times. • Trained and competent operators, who are over 18 years old, to operate plant. • Maintenance of dumper to be carried out daily – daily check sheets to be completed. • Restricted access to site and set up clear, designated haul routes for dumpers. • Dumpers to stick to designated haul roads and if passing pedestrians/ operatives slow to 5mph. • Maximum speed on site, no matter the conditions, is 20mph.	2	4	8	Y
Trench collapse due to surcharge exerted by dumper.	3	5	15	• Ensure that dumpers are kept a minimum of 1.50m from the edge of excavations and that they are not overloaded.	1	3	3	Y

				• Ensure stop blocks or suitable ramped material are set to prevent dumpers reversing into excavations or when tipping. • No persons to be in trenches during tipping operations. • All trenches/ excavations are clearly defined – barriers around them.				

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)	✓	Safety glasses/ goggles		
Members of the public (vehicles)	✓	Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers	✓	Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA023

Activity	**Use of Mechanical Excavators (wheeled and tracked)**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-023
Assessment date:	10/10/2017	Rev No:	4	Review Date:	As per Master Schedule	Permit required:	YES

Severity						
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
			Likelihood		

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity — Acceptable | Tolerable | Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Over turning of machine.	3	5	15	• Operator trained in use of excavator & quick hitch (and over 18 yrs. old). • Safe load indicator fitted. • Understand ground condition and excavator capabilities. • Excavator inspected daily with daily checks recorded. • Excessive gradients to be avoided for travelling on. • Banksman used at all times where there is a high flow of pedestrians.	2	5	10	Y
Materials or equipment falling from machine.	3	4	12	• Operator trained in use of excavator and quick hitch (and over 18yrs old). • Ensure persons stand clear of excavator when in motion. • Erect barriers where appropriate around machine. • Banksman used at all times where there is a high flow of pedestrians • Understand load and slinging points. Only trained slingers to sling loads. • Only use approved lifting accessories. Inspect accessories before use and if any defect found report immediately to your supervisor and quarantine the accessory.	2	4	8	Y
Machine striking overhead cables.	3	5	15	• Set up goal posts either side of overhead cables in line with the GS6 guidance. See HSEQ Advisor for more information/ assistance if in doubt. • Do not pass under overhead cables unless there are goal posts in place.	2	5	10	Y

Machine Striking underground services.	3	5	15	• See RA008 for control measures that must be adhered to.	1	5	5	Y
Contact between persons and machine (other site operatives or public).	3	5	15	• Convex mirrors and/or camera to provide all round visibility at 1 metre from the machine. • Site access restricted. • Site personnel to wear Hi-Viz and hard hats and safety boots. • Banksman to be in attendance where there is a high flow of pedestrians/operatives passing the area. • Inductions to include plant exclusion zones.	2	5	10	Y

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)	✓	Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)	✓	Coveralls – flame retardant		
Young/ inexperienced workers	✓	Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA025

Activity	**Laying precast concrete kerbs and paviours**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-025
Assessment date:	10/10/2017	Rev No:	3	Review Date:	As per Master Schedule	Permit required:	YES

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Manual handling of kerbs, slabs, pavers, pallets: - musculoskeletal injuries from heavy lifting, repetitive bending and lifting. - injury to hands from sharp edges, pinched fingers - injury to legs and feet from dropped objects.	3	3	9	• Trained in manual handling techniques and practices. • Use correct posture and take regular breaks and when possible work share. • Wear appropriate footwear, gloves and keep warm. • Do not attempt lift beyond your capabilities and seek assistance where required. • Do not lift items above 20kg alone even if you feel you are capable to do so. • Ensure you have walked the proposed route to ensure it is clear from slip/ trip hazards.	2	3	6	Y
Cutting with abrasive wheels: - inhalation of dust - contact with cutting blades - projectiles while cutting	3	3	9	• Only those trained and authorised can use equipment. • Ensure tools have been regularly maintained and are inspect prior to use. Any defects are notified immediately to your Supervisor. • Always use the correct tool for the job and that the tool is used as per manufacturer instruction/ guidance. • Ensure correct consumables are fitted and are appropriate for the task. • Wear cut resistant gloves and safety goggles when cutting and ensure all PPE is in good order. • Ensure water suppression is used when cutting blocks/ brick. • HAVS is monitored and daily use is recorded prior to using tool.	2	3	6	Y
Contact with concrete products which could cause skin irritation or dermatitis.	3	2	6	• Avoid direct contact with cement based products. Wear suitable gloves.	2	2	4	Y

				• If contact is made wash hand thoroughly and report to supervisor				
Impact / contact from site traffic	3	5	15	• Segregate plant from the public and others working on site by designating walkways/ exclusion zones. • Excavators and tippers to be fitted with audio/visual warning devices. • Banksman to guide tippers when reversing. • If traffic management is required ensure it complies with street work legislation. • Liaise with local authority for road closures/ traffic diversions well in advance of the work commencing if applicable. • Ensure everyone is briefed (induction time) about correct procedures when approaching plant.	1	5	5	Y

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat		
Other contractors		High visibility top (long/ short sleeve)		
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc.)		
Members of the emergency services		Safety boots/ wellington boots		
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA026

Activity	**Backfilling Excavations**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-026
Assessment date:	10/10/2017	Rev No:	3	Review Date:	As per Master Schedule	Permit required:	YES

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Unplanned movement of material placed in heaps.	3	4	12	• Area to be kept clear during unloading. • Allow time to settle to natural angle of response. • Avoid high stockpiles of materials. • Consider if stockpiles require to be covered to avoid wind displacement or deterioration due to rain or frost. • Use an excavator to compact/ move soil into a stockpile. • If stockpile over 5m high Temp Works design required – see Project Engineer.	2	4	8	Y
Delivery truck / dumper causing excess load on excavation walls.	3	5	15	• Ensure that dumpers are kept a minimum of 1.50m from the edge of excavations and that they are not overloaded. • Ensure stop blocks or suitable ramped material are set to prevent dumpers reversing into excavations or when tipping. • No persons to be in trenches during tipping operations. • All trenches/ excavations are clearly defined – barriers around them.	2	5	10	Y
Instability of backfilled excavation.	3	5	15	• Operators trained and competent. • Material placed by machine and compacted in layers. • Shoring box to be lifted with backfill operation. • Ensure no material larger than 75mm is placed in the track and that compaction is achieved to the HAUC standard. • Use water to bind backfill material if required.	2	5	10	Y

				• Compact using remote operated high impact articulated roller. Ensure any tools/ plant have underwent a daily check which is recorded.				
Operator trapped by plates, rollers or shoring boxes.	3	4	12	• Operatives must not enter the trench when trench support systems are being lifted by mechanical means. • Operatives must not enter the trench when backfill material is being placed by mechanical means. • All work is risk assessed and discussed with those involved prior to starting. • Hi-Viz clothing to be worn.	2	4	8	Y

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA027

Activity	**Installation of Street Lighting Columns**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-027
Assessment date:	10/10/2017	Rev No:	4	Review Date:	As per Master Schedule	Permit required:	YES

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity — Acceptable | Tolerable | Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Underground and overhead services.	3	5	15	• Operative to be over 18, trained and competent. • Prevent loads overhanging skip body unless suitably flagged and clearance of route is checked prior to travel. • Do not operated dump trucks within 6m of overhead cables. • Only pass under overhead cables if GS6 goal posts are in place. If no goal posts are present then do not pass under and contact your Supervisor. • For underground services wear flame retardant clothing and use insulated tools to dig trial holes. • Never assume the service drawing is correct. • Use cat & genny to help locate services.	2	5	10	Y
Falls from height into an excavation.	3	5	15	• Guard trenches with barrier system, toe boards and warning signs. • Provide ladders for access/egress and ensure at least 3 rungs are above the opening of the trench. • Store tools, plant, equipment and materials a minimum of 1.5 metres from edge. • Ensure barriers are at least 1.5 metres back from edge of excavation.	1	5	5	Y
Instability of excavation: - shallow cable track - deep column pit	3	5	15	• Use trench support systems or batter/ step trench sides which may require temporary word designs. • If stepping try and achieve a 1metre high, 1 metre wide rule of thumb for each step level. • Avoid entering unsupported excavations unless supported or battered back.	1	5	3	Y

				• Keep vehicles away from the excavation by the use of brightly painted baulks or barriers and stop blocks. • Keep members of the public away from excavations by the use of heras type fencing.				
Manual Handling - cable drums, boxes and ducts - potential musculoskeletal injuries and potential hand injuries from sharp edges.	3	3	9	• See RA004 for manual handling. All control measures to be followed.	2	3	6	Y
Lifting operations: - column overbalancing / impacting persons or property when lifting - failure of lifting gear or accessories	3	5	15	• Refer to RA009. • Operative trained in operating a machine to lift items. • Lifting gear and accessories subject to examination and inspection. Any defect found then remove the item, place in quarantine and report to your supervisor. • Use correct slinging procedure and only those trained in slinging to sling the items. • Operatives to stay clear of the lift, banksmen to control and segregate the area off. • Use of tag lines connected to the columns to stabilise the lift and to guide the column into the pit. Operatives must not enter the pit whilst the column is being placed.	2	5	10	Y

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat		
Other contractors		High visibility top (long/ short sleeve)		
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)		
Members of the emergency services		Safety boots/ wellington boots		
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA029

Activity	**Setting out sewers, roads, plot works etc. recording as-built information**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-029
Assessment date:	10/10/2017	Rev No:	4	Review Date:	As per Master Schedule	Permit required:	YES

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Manual Handling - putting in post/ carrying equipment.	3	3	9	• Rotate workforce where there is a requirement to drive in a large number of pegs. • PPE including safety boots and gloves. • Use a peg holder when hammering them into the ground.	2	3	6	Y
Contact with live underground services through use of metal pinch bar / contact with overhead cables.	3	5	15	• Check location of underground cables through service drawings. • Be aware of changes in ground conditions which may indicate location of services. • Identify overhead cables - Engineer to have staff set at lowest height and to be aware of overhead cables. • Ensure ground is scanned for underground services prior to putting in a peg.	1	5	5	Y
Contact with mobile plant.	3	5	15	• Hi-Viz, hard hats, safety boots and gloves to be worn. • Only trained operatives to operate plant. • Remain to designated pedestrian routes. If you have to divert from them gain the attention of all plant in area and notify the operators of your area of work. • If remaining in an area for some time, up barriers/ cones around your work area to highlight it to plant operators.	1	5	5	Y
Lone working.	3	4	12	• Arrangements with line manager to notify of site visit and to call in on departure. • Avoid working in poor light conditions. • Sign in to every site and sign out. • Check mobile phone when in work area for signal.	1	4	4	Y

Use of nail gun.	3	4	12	• Only those trained and competent in use of nail guns to use it. • PPE to be worn - gloves, safety glasses, safety footwear. • When indoors/restricted area ear defenders are to be worn. • Nail guns maintained in good working order. Carry out a daily check and report any defects.	2	4	8	Y

Person(s) exposed to risk: Tick		**Minimum PPE requirement: Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors		High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles	✓	
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate):		

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA031

Activity	**Construction of kerb log and kerbing with haunch**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-031
Assessment date:	10/10/2017	Rev No:	3	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Contact with mobile plant.	3	5	15	• Segregate plant from the public and others working on site by designating walkways/ exclusion zones. • Excavators and tippers to be fitted with audio/visual warning devices. • Banksman to guide tippers when reversing. • If traffic management is required ensure it complies with street work legislation. • Liaise with local authority for road closures/ traffic diversions well in advance of the work commencing if applicable. • Ensure everyone is briefed (induction time) about correct procedures when approaching plant.	2	5	10	Y
Manual handling - musculoskeletal injury, cuts or abrasions, slip trip or fall.	3	4	12	• Trained in manual handling techniques and practices. • Use correct posture and take regular breaks and when possible work share. • Wear appropriate footwear, gloves and keep warm. • Do not attempt lift beyond your capabilities and seek assistance where required. • Do not lift items above 20kg alone even if you feel you are capable to do so. • Ensure you have walked the proposed route to ensure it is clear from slip/ trip hazards.	2	4	8	Y
Contact with concrete to hands and/ or eyes.	3	3	9	• Operatives must wear waterproof gloves, over suits and wellington style boots.	1	3	3	Y

				• Operatives to limit the amount of exposed skin through the wearing of coveralls/ WMD uniform. • Eye protection to be worn at all times. Goggles to be used where splashing is likely to occur. • Protective balm, soaps and moisturisers available and to be utilised. • Wash off any concrete that comes into contact with skin immediately. • All operatives other than those required for the pour shall stay clear of operating machinery and away from the concrete.				
Use of abrasive wheels - noise, dust, projectiles, cuts or amputations.	3	3	9	• See RA003 and RA007. • Use goggle eye protection, dust masks, dust suppression systems. • Trained operatives to change blades. • Planning of tasks to reduce noise and vibration exposure. • Hearing protection to be worn. • HAVS exposure to be calculated and if any pre-existing injuries/ symptoms to be notified to supervisor. • If any HAVS related symptoms develop then stop work immediately and report to your Supervisor.	2	3	6	Y

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate): Hearing protection	✓	

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA036

Activity	**Working adjacent to live traffic**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-036
Assessment date:	10/10/2017	Rev No:	5	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
Collision between site worker/ plant and public vehicle.	3	5	15	Establish safety zone. Check unfamiliar visitors to site to ensure they are authorised to be there. Separation of site works and the public by way of fencing such as Heras type panel fencing, securely fixed. Warning signs displayed on the fencing. Where works are remote from the site, e.g. sewer connections on existing roads, use hears fencing and/or pedestrian barriers to isolate the working area.	1	5	5	Y
Potential for traffic to enter works or open excavations.	3	5	15	Speed of adjacent traffic reduced. Excavations should be fenced off. Work area assessed for risk. Rhino barriers or equivalent placed and appropriate signage erected.	2	5	10	Y
Potential for plant to swing over live carriageway/ pavement into pedestrians or vehicles.	3	5	15	If possible divert pedestrians and vehicles away from works. Working area to be coned off/barriered or fenced off from adjacent carriageway. Where machines are working adjacent to a live carriageway a banksman must be used to ensure the machinery does not swing into a live carriageway or footway. Adequate signing must be in place prior to work starting.	2	5	10	Y
Construction debris or spillage.	2	5	10	Reduce potential for spills on adjacent highway. Spill kit to be available. Storage location of materials to be separated from carriageway.	1	5	5	Y

Person(s) exposed to risk: Tick		Minimum PPE requirement: Tick		Related Documents & reference(s)
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate): Hearing protection	✓	

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

RISK ASSESSMENT

RA037

Activity	**Operating machinery with potential for Whole Body Vibration (WBV) exposure**						
Compiled by:	Fraser Morrison		Signed:	[Redacted]		Doc Ref:	H&S-RA-037
Assessment date:	10/10/2017	Rev No:	3	Review Date:	As per Master Schedule	Permit required:	NO

Severity						
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
	Likelihood				

Likelihood	Rating	Severity
Very Unlikely	1	No injury/environmental harm
Unlikely	2	Minor injury or illness/environmental harm
Likely	3	7-day injury or illness/significant environmental harm
Very Likely	4	Major injury or illness/major environmental harm
Almost Certain	5	Fatality, disabling injury/extreme pollution event

Risk = Likelihood x Severity Acceptable Tolerable Unacceptable

Hazards	Potential Risk(s)			Control Measures	Reviewed Risk(s)			
	Likelihood (L1)	Severity (S1)	Initial Risk (L1) x (S1)		Likelihood (L2)	Severity (S2)	Residual Risk (L2) x (R2)	Acceptable Y or N*
General operation of diggers and dumpers on sites travelling over rough terrain.	3	4	12	• WM Donald owned diggers are all of modern design and selected with consideration to WBV and ergonomics for the user. • Maintenance and servicing schedule in place for each machine. • Contract drivers require to demonstrate maintenance of their machines – documentation must be supplied. • Where WMD designs/ controls the workplace (PC) layout shall reduce the need for movement of materials. • Rest periods in place for operators. • Health surveillance programme in place to assess the health of Operators. • Staff trained in identifying causes and symptoms and if they feel that have any stop work immediately and report to your Supervisor. • Designated haul roads set up with are graded/ smoothed to ensure less vibration.	2	4	8	Y
Breaking out ground / pecking using a digger.	4	4	16	• WM Donald owned diggers are all of modern design and selected with consideration to WBV and ergonomics for the user. • Maintenance and servicing schedule in place for each machine. • Contract drivers require to demonstrate maintenance of their machines – documentation must be supplied. • Where WMD designs/ controls the workplace (PC) layout shall reduce the need for movement of materials.	2	4	8	Y

				• Rest periods in place for operators. • Health surveillance programme in place to assess the health of Operators. • Staff trained in identifying causes and symptoms and if they feel that have any stop work immediately and report to your Supervisor. • Regular breaks are taken and pecking tasks are interspersed with other work. • Large material is broken out and then a crusher is used to further reduce size.				
Operation of rollers and other ride on machines.	3	4	12	• WM Donald owned diggers are all of modern design and selected with consideration to WBV and ergonomics for the user. • Maintenance and servicing schedule in place for each machine. • Contract drivers require to demonstrate maintenance of their machines – documentation must be supplied. • Where WMD designs/ controls the workplace (PC) layout shall reduce the need for movement of materials. • Rest periods in place for operators. • Health surveillance programme in place to assess the health of Operators. • Staff trained in identifying causes and symptoms and if they feel that have any stop work immediately and report to your Supervisor. • Designated haul roads set up with are graded/ smoothed to ensure less vibration. • Remote control rollers used where appropriate. Where large amounts of rolling is required large rollers are used to reduce duration.	2	4	8	Y

Person(s) exposed to risk: **Tick**		**Minimum PPE requirement:** **Tick**		**Related Documents & reference(s)**
W M Donald Employees	✓	Hard hat	✓	
Other contractors	✓	High visibility top (long/ short sleeve)	✓	
Members of the public (pedestrians – any age)		Safety glasses/ goggles		
Members of the public (vehicles)		Gloves – general handling		
Children		Gloves – specialist (cut resistant etc)	✓	
Members of the emergency services		Safety boots/ wellington boots	✓	
Principal contractor (if not WM Donald)		Coveralls – flame retardant		
Young/ inexperienced workers		Respiratory protection		
		Other (stipulate): Hearing protection	✓	

*If No is placed in this column then the level of risk is still unacceptable and the work cannot take place. Please consult with the HSEQ Advisor to discuss an alternative way/ further control measures to be put in place to reduce the level of risk

APPENDIX B

COSHH / MATERIAL SAFETY DATA SHEETS

APPENDIX C

LIFTING PLANS

APPENDIX D

MANUAL HANDLING ASSESSMENTS