



METHOD STATEMENT

Project Title: Veolia – Moray Outfalls – Seatown Outfall **Type of Work or Operation: Repair works to outfall**

Method Statement Number: MS004

Contract Number: 7531

Issue Number: 001

Author: D McCulloch

Scope of Works: -

Undertake concrete repairs to joints & surfaces on existing concrete outfall.
Undertake replacement of outfall foundation where it has been scoured by sea.
Undertake installation of rip-rap in locations identified by designer.

Personnel – All persons employed for this scheme of work are over 18 years of age and will inducted into the sites safe systems of work.

Role	No	Training Required
Site Supervisor	1	Bill Shannon - SMSTS/SSSTS, EUSR Water Hygiene Card, DOMS Training, CSCS Card & First Aid
Operative	1-3	Patrick Canning ; Jamie Grieve; Nicos Lambrou - EUSR Water Hygiene Card, DOMS Training, CSCS / CPCS Card
Site Coordinator	1	Gary Shannon - SMSTS/SSSTS, EUSR Water Hygiene Card, DOMS Training, CSCS Card & First Aid

Programme

Planned duration 3 weeks

Planned start May 2021 - tbc

Personal Protective Equipment (PPE) & Emergency Equipment – To conform to British & European standards

COP = Carry On Person

Equipment	Status	Use with following operations	Equipment	Status	Use with following operations
Hard Hat	Mandatory		Safety Wellingtons	Optional	Task Specific
Overalls	Optional		Gloves	Mandatory	Suitable for the Activity
Lace up safety boots	Mandatory		Safety Glasses	Mandatory	
Hi Vis Jacket / Vest	Mandatory		Hearing protection	COP	Task Specific
Disposable PPE: Coveralls, nitrile gloves, masks	Task specific	Task specific where RA deems it is required	Life Jacket	Task Specific	Minimum buoyancy of 150 Newtons

Plant & Equipment –

Ground hog self-contained welfare unit, Herras safety fencing, 20ft storage container

Concrete repairs - Plant Nappy, 3KVA Generator, 110V 16A Cables, Pressure Washer, Breaker, Paddle Mixer, 5” Grinder, Diamond cutting disc, Mixing Tubs, Buckets, Measuring jug, Wire Brush, Hand tools

Foundation repairs – Concrete tremie, 20t excavator, 2” concrete poker



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Rip-Rap Installation – 20t excavator with grab attachment, 7t tracked dumper

Materials –

Clean Fresh water

Natcem 35 – estimated 48 bags

Washed building sand

OPC cement

Concrete to Grade XS3 C25/30 with minimum 340kg/m³ cement

Stainless steel dowel bars – 800mm long 20mm diameter

Non-woven heavy duty geotextile. Minimum tensile strength 100 kN/m

6F4 stone locally sourced

Rip-rap stone – Estimated at 1350t of stone required – Granite, Quarried from Park Quarry, Nairn. Selected at quarry in line with sizes advised by designer - HMA 300/1000 Rock Armour. Approximate size 700mm x 700mm x 700mm. Material to be square in shape, with maximum length to thickness ratio of 3:1 ±5%. Material to have a minimum mean value of compressive of 80MPa as well as having a minimum water absorption rate of 1.5%. Material should have a minimum particle density of 2.7.

Co-ordination with other Site Operations:

Existing Site Risks are to be included within Construction Phase Plan for the works and to be briefed at site induction. Ensure information is received regarding gas storage / Chemical Storage / Emergency procedures (i.e. chlorine, ozone or the like). Scottish Water / Veolia Access permits are to be gained / issued prior to works commencing. All site roads and access doors on the works are to be kept clear at all times. Roads around the site are to be kept clear – park in designated areas. Discussions at site induction with SW Operator to ensure we are aware of planned deliveries and other contractors on site.

Safe Systems of Work :-

This task can be undertaken and completed whilst maintaining 2m separation/social distancing, please refer to Stonbury COVID-19 site risk assessment.

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Weather and Tidal Times

Prior to any works commencing, weather forecast and tidal times must be checked and recorded.

If the forecast indicates High winds/heavy rainfall/extreme cold/poor visibility (fog), this must be reported to the site supervisor/project manager for further assessment and guidance.

Tidal times must also be checked each day to indicate when low and high tides are expected.

Sufficient time must be factored into the work activities to ensure that all personnel, plant and materials can be safely taken to and removed from the work site.

If there is any concern regarding poor weather conditions, tidal times or access/egress times to the work site, do not proceed with the works and consult the Site Co-ordinator or Project Manager for further guidance.

Working Area

The working area will be restricted to the designated area of the ATC certificate which will be issued by Scottish Water to Veolia / Stonbury

Parking

Parking is to be restricted to the designated site parking area. On access routes priority to local traffic and SW/Veolia employees will be given where required.

Site laydown area as agreed with Veolia and identified on location map.

Site access route to be as identified and agreed with Veolia. Any deviation due to local ground or site conditions to be notified to the Site Co-ordinator.

Emergency Procedures:

First aid in site welfare

Follow emergency procedures identified in induction – SW shout

Main Risks:-

- Contact with other operatives
- Environmental – fuel spillage
- Vehicle movements
- Weather
- Live plant
- Slips, trips & falls – working on beach. Natural surfaces may be uneven / loose
- Working near water – sea. Be aware of tides.
- Working near waste water – follow all water hygiene rules
- Covid-19

General notes:

- Report to site office for induction and issue of permits
- Follow all designated access routes
- Do not work outside of safety barriers



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- All material deliveries to be controlled and banked by Stonbury, bulk stone deliveries to be delivered as close to working area as possible.
- Report to site office on completion of works & close off permits

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COVID-19 Guidance, Precautions and Mitigation

All works are to be in conjunction and adhering to the guidance and risk assessments put in place by both Stonbury and Veolia. these shall include but not limited to the following requirements and will be updated to suit any further government guidelines;

- Site Covid-19 risk assessment for Stonbury to be reviewed before commencing works
- Single occupancy travel – separate vans
- Daily COVID-19 Symptom Questionnaire to be handed in on arrival to site
- Adherence to company 2 metre social distancing policy
- Staggered break times, where required due to canteen size.
- Personal FFP3 fully fitted face masks to be worn when required. Separate Close Working Risk Assessment will be required for working within 2m of each other
- Face shield to be used when required. Separate Close Working Risk Assessment will be required for working within 2m of each other
- Personal nitrile gloves and antibacterial gels
- No sharing of tools; any tools and equipment that are shared must be cleaned before and after use
- Distancing from other site operations whilst executing task to be maintained at all times if this is not possible, works must stop and be reviewed

Relevant drawings:

- 18890-H-DR-001-P1 Existing Details
- 18890-H-DR-002-P2 Proposed Repair Options Outfall Scour
- 18890-H-DR-003-P1 Layout Plans
- 18890-H-DR-004-P1 Layout Plans Proposed Rock Armour

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Safe System of Work –

Pre-start

1. Site welfare to be set up within agreed designated laydown areas.
2. Herras fencing to be erected around laydown areas.
3. Rip-rap delivery area to have road plates / type 1 installed to protect ground.
4. Site signage to be erected.
5. Confirm & identify designated access route to work location.
6. Install access ramp from beachhead onto beach utilising 20t excavator and 6F4 stone.
7. Ensure safe access route past the laydown areas is identified for the public.
8. All permits to be secured.
9. All Method Statements & Risk Assessments to be reviewed and signed on to.

Concrete repair works – methodology.

1. Point of Work Risk Assessment to be undertaken. (POWRA)
2. Visual inspection of concrete pipeline to be carried out. Any additional defects other than those previously noted to be identified and advised to the Site Co-ordinator.
3. Power-wash the outfall surface to remove vegetation & other contaminants.
4. Any defected areas of concrete identified will be hammer tested, marked and noted in repair schedule.
5. Defects will then be sawcut to a minimum depth of 10mm using a 5” grinder ensuring all edges are neat, tidy and square.
6. Breaker will then be used to remove the remaining spalling concrete ensuring a minimum depth of 10mm is left for repair.
7. Any steel present in repairs will be cleaned using a wire brush to ensure all loose and rusted metal is removed.
8. Repairs will then be cleaned out using clean water to ensure all dust and loose material is removed.
9. All arisings from the concrete breakout and cleaning will be removed from the beach to a skip for disposal off-site.
10. Area for repair will be saturated with clean water.
11. Natcem 35 will be mixed using a paddle mixer as per manufacturer’s instructions.
12. Material will then be hand placed into repair area ensuring it is well compacted.
13. A plastic float will then be used to finish repair ensuring a flat and even surface.
14. Any droppings from material will be lifted, bagged and removed to site waste.

Foundation underpinning repair works – methodology.

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1. Point of Work Risk Assessment to be undertaken. (POWRA)
2. Visual inspection of concrete pipeline foundations to be carried out. Any additional defects other than those previously noted to be identified and advised to the Site Co-ordinator.
3. Sections of outfall requiring new underpinning to be installed to be identified.
4. Section to be fully cleared of debris and other contaminants to half width of the outfall as per the design.
5. Formwork to be erected along length of new underpinning to be cast to sizes as designed.
6. New stainless steel dowel bars to be tied into the formwork and set ready to be cast in.
7. Excavator to be positioned on beach below sea wall. Tremie attached to excavator.
8. Concrete to be poured into tremie from concrete delivery truck positioned at ground level.
9. Concrete poured into the formwork and suitable compacted.
10. Concrete cured overnight.
11. Second half of the underpinning foundation to be cast will be excavated and cleared.
12. Formwork erected along second section of new underpinning.
13. Concrete poured utilising excavator and tremie as above.
14. Concrete to be cured overnight.
15. Once concrete is cured dry-pack mortar to be installed between top of foundation and the base of the outfall to give solid installation and support to outfall.
16. Works to be repeated (4 to 15) as required until all new sections of underpinning have been installed.

Rip-rap installation works - methodology

1. Point of Work Risk Assessment to be undertaken. (POWRA)
2. Visual inspection of location for rip-rap to be carried out. Any additional defects or areas that may require new rip-rap other than those previously noted to be identified and advised to the Site Co-ordinator.
3. Utilising excavator area for new rip-rap to be excavated and graded to give trench with level base for first layer of rip-rap.
4. Rip-rap to be delivered to designated laydown area.
5. Rip-rap to be loaded into tracked dumper utilising 20t excavator.
6. Rip-rap transported along designated route to location adjacent to outfall in preparation for installation.
7. Non-woven heavy-duty geotextile to be laid to bottom of trench prior to first layer of rip-rap being installed.
8. Rip-rap to be lifted and placed in location by 20t excavator fitted with grab attachment.
9. Rip-rap to be installed in line with design in approx. 3 layers to top of outfall.
10. Installation to be checked for stability as works progress.



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On completion of the works

1. Confirm all works complete.
2. Completion photos taken at outfall.
3. Access ramp to be remove from beachhead access point.
4. Close out all permits.
5. Demobilise site.

**20 Second Rule – Before starting a task look around your place of work and consider any potential risks. If any identified take immediate corrective action.
Don't take chances with the Health and Safety of you or others – Stick to the Method Statement.**