BEACH MANAGEMENT SPECIFICATION

SECTION 1

WORKS INFORMATION FOR CONTRACT PERIOD

**Principal Objective**

1. The principal objective of the works is to maintain the existing standard of coastal defences along the Folkestone & Hythe District Council frontage between Fisherman’s Beach, Hythe to the Harbour at Folkestone in order to maintain the standard of protection which is approximately 1 in 200 years.
	1. This will be achieved through the recycling and regrading of the existing shingle beaches. This will raise and stabilise beach levels to provide protection to the sea wall and thus reduce the risk of coastal erosion and landslip reactivation.

**Location of the Works**

1. The frontage extends over a length of approximately 7 kilometres from St. Leonard’s Road, Hythe in the west (Grid reference 6158 1340, Ordnance Survey Sheet reference TR 1533 NE) to Marine Walk, Folkestone in the east (Grid reference 6228 1356, Ordnance Survey Sheet reference TR 2235 NE).
	1. The extent of the frontage is as defined by the *boundaries* in cl. 2.11.

**Beach and Tide Levels**

1. Beach levels – levels shown on the drawings are design levels only. Actual levels are likely to differ and will fluctuate considerably during the contract period. The *Contractor* shall make allowances for variations in beach levels.
	1. Tide levels derived from the Admiralty Tide Tables and interpolated for Folkestone are as follows:
* Mean High Water Spring Tides (MHWS): +3.45m OD
* Mean High Water Neap Tides (MHWN): +1.95m OD
* Mean Low Water Neap Tides (MLWN): -1.65m OD
* Mean Low Water Spring Tides (MLWS): -3.05m OD
	1. Tide levels may vary considerably from the predicted levels due to meteorological conditions and the *Contractor* shall make allowance for such variations. Surges of over 1 metre are possible.

**Pre-Construction Information**

1. The pre-construction information is at Appendix B.

**Cultural Heritage**

1. Any features of potential cultural heritage interest discovered during the works are to be reported to the *Project Manager* and instruction obtained before proceeding.

**Information Required**

1. The following list identifies the items that are to be provided by the *Contractor* to the *Project Manager* at least 2 weeks before the first planned access period and, if changed, at least 2 weeks before all subsequent planned access periods and at least 1 day before any emergency works. All items are subject to the approval of the *Project Manager*, which will not be unreasonably withheld. All sub-contractors are subject to the approval of the *Project Manager*.
	1. Construction Phase Health and Safety Plan identifying the person(s) responsible for health and safety during the access period and incorporating detailed method statements, the Traffic and Pedestrian Management Plan (including plant delivery) and proposals for minimising noise, dust and vibration.
	2. Detailed risk assessments and method statements.
	3. Details of sub-contractors.
	4. Details of site facilities.
	5. Details of any materials to be used, including manufacturer’s information and names of suppliers.

**Health and Safety**

1. The *Contractor* shall adopt safe methods of work and comply with all other requirements of the Health and Safety at Work etc Act 1974 in order to protect the health and safety of its personnel and if relevant the health and safety of Council employees and all other persons.
	1. The *Contractor* is required to act as the Principal Contractor as defined in the Construction (Design and Management) Regulations 2007.
	2. The pre-construction information prepared by the Council is enclosed at Appendix B. The *Contractor* is to comply with all requirements therein.
	3. Tenderers are required to include preliminary method statements for all significant residual risks identified in the pre-construction information, any other significant risks identified by the *Contractor’s* own risk assessment and all major construction activities as a separate document with their tender submission. The preliminary method statements shall include information on the major items of plant to be used.
	4. The *Contractor* shall develop the preliminary risk assessments and method statements into detailed risk assessments and method statements for inclusion in the Construction Phase Health and Safety Plan required by the CDM Regulations. These are to be approved by the *CDM Co-ordinator* at least 2 weeks before the first planned access period and in the event of any subsequent proposed change.
	5. The Construction Phase Health and Safety Plan must include copies of all personnel certification/accreditation for plant operation or use for all personnel on site, a Traffic and Pedestrian Management Plan (including plant delivery) and proposals for minimising noise, dust and vibration.
	6. The *CDM Co-ordinator* will notify the HSE before all access periods (planned and emergency) and shall provide a copy of the Form F10 notification for display on site and shall copy the *Contractor* and *Project Manager* into any correspondence with the HSE.
	7. The *Contractor* is to produce the Health and Safety File as required in the pre-construction information.

**Hazardous Substances**

1. When substances covered by the Control of Substances Hazardous to Health (COSHH) Regulations are likely to be encountered or used by the *Contractor*, the *Contractor* shall maintain Health Risk Assessment Statements relevant to any of his activities on the site which may be affected by the substances. These risk assessments shall be included in the Construction Phase Health and Safety Plan. The *Contractor* shall hold on site relevant Product Hazard Sheets and evidence of the control, exposure monitoring and health surveillance measures to be employed
	1. Records of examinations and tests carried out shall be available at all times for inspection by the *Project Manager* and the HSE.
	2. The *Contractor* shall warn and instruct his workmen and all other persons (including sub-contractors' workmen and visitors) under his control as to the hazards and precautions to be taken. Such instruction shall be documented in the Construction Phase Health and Safety Plan.
	3. The *Contractor* shall remain alert to the possibility that other hazards may exist which are not identified prior to work commencing.
	4. The *Contractor* shall establish a procedure to ensure that all persons requiring instruction or warning actually receive and understand the instruction or warning, together with a record thereof. He shall furnish such records to the *Project Manager* when called upon to do so.

**Project Manager’s Equipment**

1. Survey Equipment – if required, the *Contractor* is to provide survey equipment for the *Project Manager’s* use which shall remain in the *Employer*'s ownership at the completion of the Contract. Evidence of cost is to be provided and shall be the basis for payment. No allowance is required at tender stage.
	1. Personal Protective Equipment – if required, the *Contractor* shall provide personal protective equipment for the *Project Manager’s* use which shall remain in the *Employer*'s ownership at the completion of the Contract. Evidence of cost is to be provided and shall be the basis for payment. No allowance is required at tender stage.

**Working Hours**

1. The hours of working during planned access periods are for the *Contractor* to determine, subject to the prior agreement of the *Project Manager* and provided that they fall within the normal working hours detailed in Appendix B i.e. between 0800 and 1800 on weekdays (excluding bank holidays) and between 0800 and 1300 on Saturdays. Work on Saturday afternoons and at any time on Sundays will not normally be permitted for planned work.
	1. A period of up to half an hour before and one hour after normal working hours may be used for preparatory, maintenance and other non-productive activities including taking deliveries, unloading, movement to/from places of work, refuelling and the like, provided that these activities do not include the use of plant and machinery which give rise to noise likely to exceed the trigger levels detailed in Appendix B.
	2. Tenderers are to set out their proposed working hours during planned access periods in their tender submission.
	3. There is no restriction on working hours or noise levels during emergency works, although the *Contractor* should do everything possible to minimise disturbance to residents at all times.

**Access**

1. Road access to the seafront shall be via the routes shown in the pre-construction information (Appendix B). The *Project Manager* will provide keys to the height barriers at the Battery Point and Twiss Road car parks. The *Contractor* is to replace the barriers immediately after delivery to site of each item of plant and ensure that they are in place at all other times during the works.
	1. The use of the promenades as access routes is to be kept to a minimum. Where it is necessary to do so the promenades are to be treated as working areas and access to the public prevented accordingly. Other than plant, the *Contractor* is to allow no more than 2 vehicles on the promenade outside of areas to which public access is prevented, one for the transportation of workmen (a minibus or similar) and the other for the transportation of supervisory staff (a car or similar). Workmen are not to use individual cars or similar for their personal transportation along the promenade, except in the case of banksmen when the use of cars for shelter against adverse weather has been approved by the *Project Manager*.
	2. The *Contractor* should note that the promenade varies in width and that there are a number of obstructions (not all shown on the contract drawings) hindering access along its length. These include bollards, handrailing, floodwalls, street furniture, gates, shelters and kiosks. Shingle can also be thrown onto the promenade by storms.
	3. The existing slipways are available as accesses to the beach. The *Contractor* is permitted to adapt the ramps to accommodate larger plant if required. Any additional expense incurred in reinstating the promenade and seawall prior to the slipway alterations shall be the *Contractor’s* responsibility. The *Project Manager* will arrange for removal and subsequent replacement of sufficient railings at Battery Point Car Park and for the opening of the flood gate at Twiss Road Car Park (location references C on Drawing PT03/2015/03) to enable access for plant to the beach via the slipways.
	4. The *Contractor* shall have due regard for the operational and access requirements of any private concerns such as kiosks and vans selling ice cream, snacks etc.
	5. The *Contractor* shall take proper precautions, to the satisfaction of the *Project Manager*, for the protection, safety and convenience of members of the public using the public rights of way and the promenade in the vicinity of the works. Before commencing the works details of precautions to be taken by the *Contractor* are to be submitted as an integral part of the Construction Phase Health and Safety Plan.
	6. On no account shall the *Contractor* prevent or obstruct access on public or private rights of way, unless unavoidable for safety or other reasons and only with the permission of the *Project Manager*.
	7. To carry out the works it may be necessary to create access routes within the site e.g. to gain access over groynes. Any such routes are to be located where agreed in advance with the *Project Manager*, created from existing shingle and removed on completion.

**Site Clearance and Preparation**

1. No necessity for such works is envisaged.

**Statutory Undertakers and Regulatory Authorities**

1. For the purposes of this document, Statutory Undertakers shall be taken to mean all organisations responsible for the provision and/or maintenance of the public highway and underground or overhead utility services, including electricity, telecommunications, water supply, sewerage, drainage and the like.
	1. There are no known buried services in the working area where recycling normally takes place apart from the storm water outfalls (location references E & K on Drawing PT03/2015/03. The *Project Manager* will advise the *Contractor* if he becomes aware any new services or work on existing services are planned although it is anticipated that there will be no change during the contract period. Any change that affects the works would be the subject of a Compensation Event. Further information and requirements regarding this is contained within the pre-construction information.
	2. The *Contractor*, during his inspection of the site, shall note the location of any buried or overhead services, including drainage, street lights and supplies etc. within the area proposed for the site compound(s) and adjacent to the working area and shall allow for any measures necessary to locate and protect them within his rates.
	3. If necessary, the *Contractor* shall be responsible for obtaining from the Statutory Authorities up to date publications and requirements for carrying out works in connection with their services. All work carried out by the *Contractor* on or adjacent to any apparatus or plant owned by any Statutory Authority shall comply with these requirements. The *Contractor* shall comply with all procedures and liaison required by the Statutory Undertakers that are necessary to obtain their consent and approval for the carrying out of any works or which are otherwise reasonably required.
	4. The *Contractor* is to ensure and allow for the support and full protection of mains, pipes, cables, plant and other apparatus owned by the Statutory Undertakers during the progress of the Works and shall construct and provide, to the satisfaction of the Statutory Undertaker concerned all works necessary for the prevention of damage or interruption of services. If, in the execution of the Works, the *Contractor* causes, either directly or indirectly, any damage to any apparatus or any interruption of any service, the *Contractor* shall bear and pay the cost incurred by the Statutory Authority for any loss sustained as a result of such damage or interruption.
	5. The *Contractor* shall at all times during the progress of the Works afford facilities to properly accredited agents of the Statutory Authority for access to any of their plant or apparatus situated in or under the site, as may be necessary for inspecting, reporting, maintaining, removing, renewing or altering such apparatus in connection with the construction of the works or for any other purpose whatsoever.
	6. During the works the *Contractor* is responsible for the maintenance of flows in existing drains, sewer outfalls, culverts and the like wherever such flows are affected either permanently or temporarily by the works and shall indemnify the Council against any claims for flooding as a result of his operations.
	7. The *Contractor* is to liaise and co-operate as necessary with all Regulatory Authorities having an interest in the site or works thereon, including the Environment Agency, Marine Management Organisation, Coastguard, Highway Authority and Planning Authority.
	8. The *Contractor* is to liaise and co-operate with all Statutory Undertakers and Regulatory Authorities as necessary in respect of the details of his programme and methods of working.

**Damage and Reinstatement**

1. The *Contractor* shall take all necessary precautions to avoid damaging all land and property, including promenades, highways, roads, tracks, access ways, buildings, bridges, boundary walls, fences, structures, grassed areas, gardens, plants, beaches, cliffs, coastal slopes, coast protection structures and Sandgate Castle.
	1. On or before completion he shall make good any damage caused, including by sub-contractors and suppliers, and clean away any cement, mortar, concrete, grout, oil or other deposited materials at his own expense, to the satisfaction of the *Project Manager*. Making good shall be with identical and matching materials or the complete item(s) shall be replaced with approved alternative materials.
	2. The *Project Manager’s* opinion regarding original condition shall be final in the event that the Condition Survey (see Section 5) does not clearly show the original condition of an area where damage has occurred.
	3. The *Contractor* is specifically reminded that, other than in an emergency or by prior agreement with the *Project Manager*, on no account shall plant be permitted to track on or immediately adjacent to the rock outcrops at Mill Point, which is located in Cell 6 (location reference R on Drawing PT03/2015/03).
	4. Except for the placing of materials by plant in their permanent position shown on the Drawings or otherwise specified by the *Project Manager*, no loads shall be placed upon any works, structures or buildings without the written permission of the *Project Manager*.

**Scope of Works**

1. This section contains a general description of, and requirements for, the main activities to be carried out along the frontage. Following sections contain specific details of, and requirements for, the additional works to be carried out in each beach recycling cell. A recycling cell is a section of frontage between groynes and other boundaries as shown on Drawings PT03/2015/01 & 02.
	1. Shingle recycling is to be carried out as detailed below:
	2. Shingle is to be excavated from source sites identified by the *Project Manager* at least one week before the start of each planned access period and transported to renourishment sites also identified by the *Project Manager*. Source and renourishment sites will generally, but not always, be at the east and west ends respectively of each cell. Shingle is generally, but not always, to be deposited at the beach crest where it is to be graded to reform the beach to as near as possible the design width and level of crest shown on the sections and tables on Drawings PT03/2015/01 & 02 along all parts of the frontage, which vary along the frontage as specified on the tables. If insufficient shingle exists on any section(s) of beach to form the design crest width, design crest level and/or a reasonable slope (see below) then an adjusted profile will be determined by the *Project Manager* to suit the amount of shingle available.
	3. The normal range of volumes of shingle to be recycled in each recycling cell during each planned access period are shown in Table C below for information only, together with indicative average haul distances. The actual volumes to be recycled will depend on the condition of the beach and funding available and will be advised by the *Project Manager* before each access period and could be outside the ranges shown.

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| **Table C – Typical Haul Distances & Recycling Volumes**  |
| **Recycling****Cell Name** | **Location** | **Average haul distance****(m)** | **Normal minimum total volume of shingle to be recycled (m3)** | **Normal maximum total volume of shingle to be recycled (m3)** |
| Cell 1 | Groyne A to Groyne B | 350 | 3,000 | 7,000 |
| Cell 2 | Groyne B to Groyne C | 450 | 2,000 | 7,000 |
| Cell 3 | Groyne C to Groyne D | 1,800 | 4,000 | 10,000 |
| Cell 4 | Groyne D to Groyne I | 2,300 | 4,000 | 10,000 |
| Cell 5 | Groyne I to Groyne J | 400 | 3,000 | 10,000 |
| Cell 6 | Groyne J to Groyne K | 250 | 0 | 5,000 |
| Cell 7 | Groyne K to Groyne L | 120 | 0 | 5,000 |
| Cell 8 | East of Groyne L | 100 | 0is required | 1,000 |

* 1. Shingle may also be recycled between recycling cells, as instructed by the *Project Manager*, where insufficient material is available at the source site of a cell to suit the volumes required at the renourishment site of that cell. Indicative haul distances and volumes cannot be provided as they will depend on the condition of the beach at the time.
	2. Normal (typical) recycling activities are described in the Activity Schedule for each cell, for information and as a basis for pricing. Actual recycling activities will depend on the condition of the beach and available funding and will be as directed by the Project Manager. *Tenderers* are to price for recycling work in each cell separately using the assumed volumes and haul distances shown in the Activity Schedule, for tender purposes only.
	3. In the Activity Schedule *tenderers* are to provide rates for the recycling of shingle in £/m3/km which will be used to calculate payments due. These rates will apply to any recycling work instructed by the *Project Manager* on any part of the beach. Payments will be based on volumes recycled, actual haul distances and the tendered rates.
	4. The budget available for each planned access period will not be determined until a month before each period.

Shingle regrading is to be carried out as detailed below:

* 1. The beach is to be reformed to as near as possible the design width and crest levels shown on the sections and tables on Drawings PT03/2015/01 & 02. For convenience on site, the vertical distances from the top of the maintenance gangway/promenade down to the adjacent design crest level are shown on Drawings PT03/2015/01 & 02. The slope below the crest (design slope shown as 1 in 8) is less critical and any reasonable slope will be accepted, provided that it is evenly graded from the crest seawards, no steeper than 1 in 5 in any area and free from “cliffing” or other steep drops.
	2. Final beach levels and profiles along crests and slopes are to be blended in with the adjacent beach so as to achieve a natural appearance as far as is reasonably practicable. Final beach surfaces are to be smooth, evenly graded and free from vehicle ruts.
	3. Shingle is to be moved away from the back of the beach where it has built up against the promenade/sea wall, including around slipways, ramps, access stairs, stormwater outfalls and the like, so that the beach is level across the full width of the crest, or as otherwise agreed with the *Project Manager*. When working within 2 m of the promenade/sea wall plant is to work carefully and in a perpendicular direction to minimise the risk of damaging the stormwater outfalls which pass through the sea wall and which terminate in stainless steel grilles and/or projecting rubber non-return pipes. Shingle is to be cleared away from all stormwater outfalls to at least 300 mm below the invert level of the outfalls. It is expected that plant used for recycling will also be used for regrading when not being used to load dumper trucks or distribute deposited shingle.
	4. Tenderers should allow for the provision of a 35 tonne 360 degree tracked excavator and a D6 bulldozer for the durations shown in the Activity Schedule for each cell, which are in addition to any time spent by this or similar plant during recycling. These durations are based on previous experience and should be adequate to complete the specified regrading work. If more time and/or other plant is necessary due to the condition of the beach this will be the subject of a Compensation Event. It is for the *Contractor* to determine when this work is carried out to suit his working method and programme but regrading should be completed out as soon as possible after recycling within each cell so as to allow each section of beach to be re-opened to the public with a minimum of delay.
	5. Shingle clearance – during each access period the *Contractor* is required to remove any shingle which has been deposited on the maintenance gangway/promenade and on, over or around slipways, ramps, access stairs, stormwater outfalls and the like, down to and level with the adjacent finished beach crest. All shingle is to be returned to the beach. Provided that the amounts of shingle are not too great, this is to be carried out by the banksmen while recycling and/or regrading are being carried out on the adjacent beach. Banksmen are to be equipped with suitable brooms and shovels. If the amount of shingle deposited is too great to be removed by the banksmen, a mechanical wheeled sweeper brush and/or a small rubber-tracked excavator may be required, depending on the location, which shall be the subject of a Compensation Event. Accordingly the activities for banksmen and shingle clearance are combined in the Activity Schedule and are on a cell-by-cell basis.
	6. Additional works – works additional to the main activities of shingle recycling, regrading and clearance are normally required at specific locations along the frontage to suit local conditions and requirements. These are due to features in the beach and promenade, adjustments to the design profile and other reasons, as set out below. For the location of these additional works see the reference letters given below and the locations shown on Drawing PT03/2015/03. Other additional works may be instructed by the *Project Manager* which will be the subject of Compensation Events.
	7. Damping down - if dry and windy weather occurs during an access period the plant may generate an unacceptable amount of dust. In this case the *Contractor* is to damp down the haul routes with seawater using suitable plant and equipment. The damping down plant is to be self-propelled (e.g. a tanker) or provided with a means of propulsion (e.g. a tractor unit with towed bowser) so that it is not reliant on other items of plant for relocation. It must have a storage capacity of at least 10,000 litres and be equipped with the means to pump water from the sea and spray it back across the haul routes, including all necessary hoses. Only one section of beach is required to be damped down at any one time. The damping down plant is to have a dedicated full time operator and an additional full time banksman to ensure public safety. A preliminary method statement is to be submitted with the tender detailing the proposed plant, associated equipment and method of working. Tenderers may wish to note that no damping down work has been necessary in recent years.
	8. The *Contractor* is to supply all necessary personnel, vehicles, plant, equipment and materials to ensure the safe and efficient completion of the works and is to allow for all necessary associated work including fuelling, maintenance and cleaning.
	9. The *Contractor* must comply with all appropriate and related legislation together with associated regulations and Codes of Practice at all times.

**Planned Works**

* 1. Tenderers are to allow for time and cost of carrying out all specified activities during each planned access period in the Activity Schedule, including all plant (including fuel, maintenance, servicing, mobilisation and demobilisation) and personnel (including supervisors, drivers, banksmen and any other operatives). ‘Working days’ shall be taken to mean full days between 0800 and 1800 when the plant is available to carry out the Activities listed in Section 5 and excludes mobilisation and demobilisation.
	2. The items of plant, the duration that each is required for, the sequence of working and the number of banksmen required will depend upon the condition of the beach, time of year, available funding and other factors for each access period and will be agreed with the *Contractor* prior to the commencement of the respective access period.

**Emergency Works**

* 1. At any time between 7th April 2020 and 7th April 2025 the *Contractor* may be required to respond to requests from the *Project Manager* to mobilise plant to site (and on completion to demobilise) to carry out emergency regrading/recycling works following a severe storm. It is possible that emergency works will need to be carried out on a weekend or during unsociable hours. If a request is received the *Contractor* is expected to make every effort to mobilise the required plant to site within 24 hours of the request. All health and safety provisions and the requirements of the works information will apply to emergency works. The *Contractor* is required to provide an action plan for mobilising to site which shall include details of key people who can be contacted by the *Project Manager* in an emergency both during and outside of normal working hours.
	2. The *Contractor* is not expected to have plant or labour on standby for emergency works but is to have an action plan that can be put into place to source appropriate plant and labour at short notice.
	3. The number of emergency events, their timing, duration and details of the works necessary cannot be predicted at tender stage. Tenderers are therefore to allow for one period of emergency work lasting up to two weeks occurring at any time during the contract period which requires plant of the type and for the durations shown on the Activity Schedule. Payment for emergency event(s) will be based on the activities undertaken. Rates for each activity shall be based on those tendered for the previous and next planned access periods, adjusted on a pro rata basis based on the number of days between the start date of each planned access period and the start date of the emergency works.

**Plant**

* 1. Plant that has been used successfully in recent works is described below. The *Contractor* is free to choose the type and number of plant used provided that they achieve the requirements of the contract.
* Dumper trucks - 6 wheeled with tailgate, 30 & 40 tonne maximum load capacity
* Excavators - 35 tonne, 360 degree tracked with loading bucket
* Bulldozers - D6
	1. Tenderers should satisfy themselves by inspection of the site that all plant proposed is suitable for the works to be undertaken, including access to, from and within the site. The use of alternative plant will only be approved by the *Project Manager* if it can be shown by the *Contractor* that it will not cause any damage to the site and environs or other problems. No plant is to be used unless approved in advance by the *Project Manager*. Permission to use alternative plant may be withdrawn at any time if its use causes unacceptable problems, at the discretion of the *Project Manager*.
	2. Copies of all personnel certification / machine tickets (including banksmen) must be supplied with the *Contractor’s* construction phase health and safety plan.
	3. Plant is to be used at its maximum potential consistent with safe working practices as appropriate to the location and site conditions. All trucks are to be fitted with tailgates to minimise spillage during hauling: trucks without tailgates are not to be used. Trucks are to be driven in such a manner as to minimise spillage, particularly when travelling up, down or across slopes.
	4. The *Contractor* shall choose appropriate plant and use best practice to minimise the amount of noise and vibration during working hours.
	5. The *Contractor* is to avoid moving slow and/or heavy vehicles through the local area during rush hours during mobilisation, demobilisation and at other times.
	6. Plant may be left overnight on the section of beach where it has been working that day. However no plant is to be parked overnight near to any particular dwellings for more than one night.
	7. The *Contractor* is to make written daily records of activities and events on site and provide copies to the *Project Manager* on a weekly basis or otherwise on request. The daily records are to include the following:
	+ Weather conditions
	+ Working hours
	+ Work locations
	+ Work activities
	+ Details of personnel on site and their roles
	+ Details of plant and equipment on site and moving to/from site
	+ Number of loads and total weight of shingle recycled by each individual truck
	+ Total weight of shingle recycled by all trucks in each recycling cell
	+ Quantity of fuel delivered with meter readings
	+ Details of working time and any breakdowns
	+ Any other issues including health and safety, spillages, visitors, instructions received additional work etc.
	1. Any plant or machinery that cannot feasibly be repaired within one day is to be replaced at the *Contractor’s* expense so as to ensure that the works proceed without unnecessary delay.

**Progress**

* 1. Once the works have commenced they shall continue until completion without delay subject to clauses 4.69. and 4.70. below.
	2. Work on the foreshore is limited by marine conditions, including waves, tides and storms. The *Contractor* shall make due allowance for this in his working times, programme and time for completion.
	3. Work on the foreshore can be affected by weather conditions. The *Contractor* is to take all reasonable measures to work through, reschedule or extend activities to accommodate the conditions and inform the *Project Manager* immediately at the commencement and cessation of such conditions. The *Project Manager* may allow the *Contractor* to work outside of the previously agreed working hours if necessary to complete the work within the agreed programme or may require the *Contractor’s* programme to be extended.

**Waste**

* 1. The works comprise the recycling and regrading of existing beach material within the site so it is not anticipated that any waste will be produced. Accordingly a Site Waste Management Plan (SWMP) is not relevant so has not been prepared. In the event that any waste is produced, or is anticipated to be produced, the *Contractor* is to immediately comply with the requirements of the Site Waste Management Plans Regulations 2008 which shall include working with the *Project Manager* to set up and manage a SWMP in accordance with these Regulations.
	2. In the event that any waste is produced, a Registered Waste Carrier shall dispose of all surplus arisings and waste in an appropriate manner to a suitable licensed tip. Copies of all Waste Transfer Notes are to be provided to the *Project Manager*.

**Progress Reports and Meetings**

* 1. The *Contractor* shall produce daily updates detailing the work completed with sufficient details (work locations, plant and personnel used, volumes recycled, haul distances etc.) for payment to be calculated. The daily updates are to be emailed to the *Project Manager* by 12.00 on the following working day.
	2. The *Contractor* shall produce reports summarising progress at weekly intervals. Each weekly progress report shall include a description of any delays which have occurred and the action the *Contractor* proposes to take to overcome such delay. The weekly progress reports shall also detail any additional works and costs, so far as these are known or can reasonably be estimated.
	3. Weekly progress meetings between the *Contractor* and the *Project Manager* may be required and will be held on site during which the weekly progress report will be discussed.

**Funding and Expenditure**

1. Funding for the works is currently provided by the Environment Agency. At time of tender invitation the required funding for the term of the contract has been identified but not yet allocated or finally approved by the Environment Agency. In recent years final approval of funding in each financial year has been received in the summer of each year prior to the planned works in the following autumn on a rolling annual basis. It is possible that funding for either of the financial years covered by the term of the contract may not be approved in part or full. It is also possible that additional funding may be granted in one or both of the financial years.
	1. The anticipated approximate expenditure profile for the term of the contract (assuming that all funding identified is finally approved) is shown below, together with the activities assumed in each period:
		* **Financial Year 2020/21 – £230,000**
		* first planned access period
		* second planned access period
		* emergency works
		* **Financial Year 2021/22 – £230,000**
		* third planned access period
		* fourth planned access period
		* emergency works
		* **Financial Year 2022/23 – £230,000**
		* fifth planned access period
		* sixth planned access period
		* emergency works
		* **Financial Year 2023/24 – £230,000**
		* fifth planned access period
		* sixth planned access period
		* emergency works
		* **Financial Year 2024/25 – £230,000**
		* fifth planned access period
		* sixth planned access period
		* emergency works
	2. The *Contractor* is to liaise and co-operate with the *Project Manager* to ensure that the contract expenditure in any financial year does not exceed the funding available for that year, when known. This will be achieved by adjusting the activities (if necessary) to suit the funding available.
	3. If emergency works are not required in a financial year it may be possible, subject to Environment Agency approval at the time, for the associated funding to be used to increase the scope of planned works in that year and/or carried over to subsequent years.
	4. The expenditure profile may be varied for any reason at the *Project Manager’s* discretion including changes in funding, unforeseen beach conditions, weather events and the necessity for emergency works.

**Marine and Coastal Access Act 2009**

1. The works are exempt from licensing by the Marine Management Organisation (MMO) under the above Act.

**Environmental Best Practice**

1. The Council is committed to the environmental principles of stewardship and sustainability to maintain and enhance the water environment. The *Contractor* shall plan and order all his activities to assist the Council to achieve these goals. In addition to this general requirement, particular areas for action are:
* Avoidance of pollution of any waters (surface or underground)
* Avoidance of pollution of any land
* Preservation of flora and fauna
* Avoidance of nuisance of sounds, vibration and dust
	1. The *Contractor* shall demonstrate in his written method statements his proposals to minimise environmental impact and satisfy the above requirements. The following, inter alia, shall be addressed/taken into account in the method statement:
	+ *Contractor’s* equipment which leaks any fuel, lubricant or any hydraulic fluid shall not be used
	+ Bio-degradable hydraulic fluid is preferred
	+ *Contractor’s* equipment shall be maintained to ensure efficiency and to minimise emissions
	+ *Contractor’s* equipment shall be steam cleaned prior to delivery to the site
	+ Fuel and oil storage shall be away from watercourses, fully contained within an impermeable bund to 110% of the volume stored and maintained in a clean and secure manner. Delivery and vent pipes shall terminate within the bund
	+ Refuelling and servicing of *Contractor’s* equipment shall be carried out in designated locations away from water
	+ Refuelling shall be supervised and shall be carried out by pumping through a trigger-type delivery nozzle
	+ An adequate supply of absorbent materials shall be readily available on site at all times (e.g. in cab of *Contractor’s* equipment)
	+ Any spillage shall be immediately contained, removed from site and disposed to a licensed tip. The *Project Manager* shall be informed immediately
	+ *Contractor’s* equipment shall be effectively silenced and shall comply with any stated requirements of the Council.
	1. The *Contractor’s* attention is drawn to the CIRIA Manual ‘Coastal and Marine Environmental Site Guide’. This publication offers guidance and good practice in avoiding the effects of poor environmental practice on coastal and marine construction projects.
	2. The *Contractor* is to comply with all current guidance on the prevention of pollution published by the Environment Agency.
	3. The *Contractor* is to note and comply with the Environmental Action Plan which applies to this project (see Appendix C). Note that some of the actions applied to the construction phase of the project are not relevant to these works e.g. rock placement.

**Specification**

1. All works are to be carried out in accordance with the ‘Civil Engineering Specification for the Water Industry’, 7th Edition (CESWI 7), published by WRc plc on behalf of UK Water Industry Research Ltd. in March 2011, supplemented by any specific requirements of this Contract contained in Special Clauses or Appendices and later amendments due to changes in the relevant British Standards Institution publication.
	1. Any Special Clause or Special Sub-Clause which bears precisely the same number as a clause or sub-clause of CESWI 7 shall be deemed to be substituted for that clause or sub-clause of CESWI 7.
	2. Insofar as any Special Clause, Special Sub-Clause or Appendix may conflict or be inconsistent with any provision of CESWI 7, the Special Clause, Special Sub-Clause or Appendix shall always prevail.
	3. Special Clauses comprise of:
	* Standard clauses with additions and/or amendments.
	* Additional clauses including associated appendices where appropriate.
	* Standard appendices with additions and/or amendments.
	1. In addition to this Specification, the Council has produced a ‘Construction Works Policy’ that any contractor carrying out work in the Shepway area is expected to comply with. This Policy is contained within the pre-construction information.

**Additional Works**

1. Additional works are only to be carried out with the express prior permission of the *Project Manager*.

WORKS INFORMATION FOR EACH ACCESS PERIOD

**Condition Survey**

1. Immediately before the beginning of each access period, the *Contractor* shall produce a photographic Condition Survey of all property that may potentially be affected by the works. The *Contractor* shall be responsible for making the inspections, taking high resolution (5 MB or greater) JPG format digital photographs, and providing the *Project Manager* with copies on a computer disc (not emailed or web hosted) within 48 hours of possession of the site. Hard copy (printed) photographs are not required.
	1. The Condition Survey shall cover all property within and immediately adjacent to site areas, within and immediately adjacent to site access routes and property nominated (within reason) by the *Project Manager*. Property shall include sand pits, groynes, sea walls, promenades, walls, fences, roads, paths, paved areas, steps, ramps, street furniture, grassed areas, trees, bushes, etc.
	2. The photographs should pay particular attention to property in poor condition and/or possessing existing faults.
	3. The location of each photograph must be identified in some way, either by means of a marked up drawing, geo-tagging or some other means. The date each photograph was taken shall also be identified.
	4. The *Contractor* should note that the Condition Survey will be used to establish the standard of reinstatement required on completion of the scheme. It will also be used to determine if any damage or defects reported may have been caused by the *Contractor* or already existed before the works.

**Progress Photographs**

* 1. The *Contractor* shall take dated photographs to record any storm event, damage caused or any other significant event that may occur during the works. These are to be high resolution (5 MB or greater) JPG format digital photographs and shall be provided on a computer disc (not emailed or web hosted) to the *Project Manager* on completion of each access period.
		1. The location of each photograph must be identified in some way, either by means of a marked up drawing, geo-tagging or some other means. The date each photograph was taken shall also be identified

**Signage**

* 1. Public notices - at least 14 days before the beginning of each planned access period the *Contractor* shall provide and erect public notices to advise the public about the planned works. Wording shall be generally as shown in Appendix A but the final version shall be agreed with the *Project Manager*. The minimum size of the signs shall be A3 (420 x 297 mm). Public notices are to be located throughout the site at all purpose built access points to the beach (stairs, ramps, slipways etc.) and at regular intervals and appropriate locations along the seawall. The maximum distance between signs shall be 300 m.
	2. Scheme board – throughout each planned access period the *Contractor* shall provide and erect at least two portable scheme boards. Wording shall be generally as shown in Appendix A but the final version shall be agreed with the *Project Manager*. The minimum size of the signs shall be A1 (840 x 598 mm). The signs shall be securely mounted on whatever means deemed necessary, moved on a daily basis to locations agreed with the *Project Manager* as being nearest to the main construction activities and removed on completion of the works.
	3. *Contractor*’s board - The *Contractor* may also erect his own signboard, provided it is no greater in size than the portable scheme boards and after approval of the content has been obtained from the *Project Manager*.
	4. Warning signs - throughout the works the *Contractor* shall provide and erect pairs of warning signs (Vehicle Warning and Beach Closed) to warn the public that access to the beach is temporarily closed and of vehicle movements. Wording shall be generally as shown in Appendix A but the final versions shall be agreed with the *Project Manager*. The minimum size of each sign shall be A4 (297 x 210 mm). Warning signs are to be located at all purpose built access points to the beach (stairs, ramps, slipways etc.) and at regular intervals and appropriate locations along the seawall directly adjacent to site activity. The maximum distance between pairs of signs shall be 150 m.
	5. General - all signage is to be provided, erected, maintained in good condition and removed on completion. It is to be rigid, robust, durable, properly secured and clearly visible. Laminated paper or other flexible signs are not acceptable. Signs may be temporarily fixed to railings provided that these are not damaged in any way. Temporary posts or other temporary means of mounting the signs are to be provided where there is nothing existing that is suitable. Signage is to be purpose made for the scheme and must include the *Contractor’s*, Environment Agency’s and Folkestone & Hythe District Council’s logos as indicated in the preliminary details. Details of the form, size, wording and precise locations shall be to the approval of the *Project Manager*.

**Site Facilities**

* 1. There are no facilities on site for storage, telecommunications, foul drainage or the supply of water, lighting and power. Temporary facilities are to be arranged by the *Contractor* as required and necessary for the completion of the works at his own expense. Preliminary details of the facilities to be provided shall be provided with the tender submission.
	2. The *Contractor* will be permitted to use an area of the site as a temporary compound. This is to be sited as far from dwellings and business premises as is reasonably practical in a location agreed with the *Project Manager*. In previous years contractors have used the car park and adjacent beach at Battery Point (location reference 3 Drawing PT03/2015/03) for their temporary compound.
	3. The *Contractor* shall provide, erect, maintain, clean and remove on completion temporary accommodation within the temporary compound for the use of his own staff and workforce and those of his sub-contractors. This accommodation shall include messing, sanitary and welfare facilities, stores, workshops, compounds, parking areas and the like, as necessary for the completion of the works and as required by the CDM Regulations. The location and layout of the temporary accommodation shall be to the approval of the *Project Manager*.
	4. The *Contractor* shall ensure that the temporary compound and accommodation are maintained in a clean, tidy and safe condition at all times. All areas adjacent to the site, including roads and pavements, are to be kept clean and clear of mud, dirt, water or other materials at all times.
	5. When going to and from the site and temporary compound, workmen must keep strictly to roads, footpaths and other agreed routes. They must not enter on to any private land or buildings unless this is necessary to carry out work included in the contract, and then only with the prior permission of the owner(s).
	6. The *Contractor* shall maintain a visitor book for the duration of the works.
	7. The *Contractor’s* staff may park during the day at the pay-and-display public car parks at Battery Point, Twiss Road and the Coastal Park. For locations see references P on Drawing No. PT03/2015/03. Parking permits are required for these car parks which will be provided free by the Council for the duration of the works including mobilisation and demobilisation. The *Contractor* is entirely responsible for using the car parks in accordance with the regulations: penalty notices will not be waived for failure to display a valid permit or for any other reason. At least 3 weeks before each access period the *Contractor* to advise how many vehicles require parking permits. The *Project Manager* may require registration and other details of the cars to be parked. Contractor’s cars are to be parked on the northern (landward) side of each car park whenever possible and at least 6 spaces are to be retained at all times for parking by the public on the southern (seaward) side of each car park.
	8. The *Contractor* shall leave the site in a clean, tidy and safe condition at the end of each working day.
	9. The *Contractor* shall, on removal of all his plant, equipment and temporary works from the site, leave all affected areas clean and in a tidy condition.

**Project Manager’s Facilities**

* 1. Office Accommodation - the *Contractor* shall provide for each planned access period (but not for emergency work) a suitable temporary office area with a minimum floor space of 10m² for the use of the *Project Manager’s* staff. The office is to be located in one of the temporary compound sites identified by the location references C on Drawing No. PT03/2015/03.
	2. Sanitary Accommodation - toilet facilities shall be housed within a separate but adjacent building with a wash hand basin with cold water supply. Portable self contained units are acceptable.
	3. Services – the *Contractor* shall provide all reasonable assistance to the *Project Manager* and his staff in carrying out site surveys, checking, setting out, taking material samples and undertaking quality control, if required. Assistance shall include the provision of small tools, sample sacks and equipment and a chainman as and when required. No allowance for this work need be made at tender stage.
	4. Maintenance - all office and sanitary accommodation shall be kept clean and well maintained. The *Contractor* shall supply and pay for all cleaning materials, washing materials and paper towels.

**Security**

* 1. Tenderers’ attention is drawn to the risks of vandalism and theft, particularly outside working times. Security of the site is entirely the *Contractor’s* responsibility. The *Contractor* is to provide and maintain suitable security measures throughout the period of the works. Preliminary details of the security measures to be provided shall be provided with the tender submission.
	2. The *Contractor’s* temporary compound is to be protected by suitable means which may include security fencing around the perimeter, lockable steel shutters over the windows of accommodation units, CCTV cameras and/or watchmen.
	3. When parked overnight all plant is to be covered and/or protected in an appropriate manner to ensure any possible vandalism is kept to a minimum (e.g. all fuel filler points must be secured, windscreens must be shielded etc.).
	4. Security arrangements, particularly lights and generators, are to be arranged so as not to cause nuisance or annoyance to nearby residents, particularly out of working hours. Any lights used are to be directed towards the sea only. Any generators used are to be the 'super-silenced' type where the noise measured at 1 m from the generator housing does not exceed 40 dB when the generator is running at less than 50% load. Generators are not to be run at more than this level outside working hours.
	5. If any complaints are made by members of the public or nearby businesses these are to be immediately communicated to the *Project Manager*. The *Contractor* is to change the security arrangements to address any valid complaints at his own cost.

**Mobilisation and Demobilisation**

* 1. Tenderers are to allow for the mobilisation and demobilisation of all plant and equipment to and from the site for each planned access period, including all associated costs. The area chosen by the *Contractor* for his temporary compound will be available for use up to one week before planned activities commence and up to one week after they have been completed. No plant, materials etc. are to be left on site outside of this period.

**Supervision**

* 1. The *Contractor* is to ensure that a suitably qualified and experienced foreman (or equivalent) is on site during all working hours to direct work activities including plant and personnel. The foreman shall ensure that the works are carried out safely and efficiently and shall, when necessary, act on the instructions of the *Project Manager*. The foreman shall have an independent means of transportation within the site so that he is able to adequately supervise activities running concurrently on different parts of the site. The foreman shall be included in the list of key people included in the tender document.

**Activities in Cell 1**

* 1. Shingle recycling is generally to be as described in Section 4. Shingle in this cell is normally recycled from the source site at the eastern end of the cell (normally Zones 6 & 7) to the deposition site at the western end of the promenade (normally Zones 3 & 4). In Zone 3 the design profile is normally extended in front of the promenade at least 20 m westward of the access steps at the end of the promenade (location reference Q) to marry in with adjacent beach levels in Zones 1 & 2, to achieve a gradual transition between profiles.
	+ Shingle regrading is to be as described in Section 15.
	+ Shingle clearance is to be as described in Section 15.
	+ Damping down may be necessary but has not been so in recent years.
	+ Avoid working in any areas used by commercial fishermen which is normally in Zones 1 & 2.

**Activities in Cell 2**

* 1. Shingle recycling is generally to be as described in Section 4. Shingle in this cell is normally recycled from the source site at the eastern end of the cell (normally Zones 14 & 15) to the deposition site at the western end (normally Zones 9 & 10).
	2. Shingle regrading is to be generally as described in Section 15. Opposite the Hythe and Saltwood Sailing Club (location reference S) reduce the crest locally to a length exceeding 10 m but less than 15 m to form a more evenly sloped access between Hythe and Saltwood Sailing Club and the sea. Marry in with adjacent beach levels to achieve a gradual transition between profiles. Throughout this cell ensure that all plant, but especially bulldozers, travels and works parallel to the promenade as far as is reasonably possible. This is necessary to minimise vibrations transmitted to nearby houses.
	3. Shingle clearance is to be as described in Section 15.
	4. There are normally four items of additional work as follows:
		1. Sandpit - the sandpit is to be raked to remove all stones and other debris on the surface. Return any shingle removed to the beach. If additional play sand is required to make up levels this will be instructed by the *Project Manager* and will be the subject of a Compensation Event. See location reference N.
		2. Temporary ramp - the temporary timber ramp from the promenade to the beach will be removed by Hythe and Saltwood Sailing Club and stacked on the promenade or at the back of the beach. Profile the shingle under evenly so that the ramp, when replaced by Hythe and Saltwood Sailing Club, slopes evenly and without trip hazards between the promenade and the beach. The finished ramp levels are to be slightly above the adjacent surfaces to allow for settlement. See location reference S.
		3. Buried ramp - opposite the Hythe and Saltwood Sailing Club the *Contractor* is to be aware that sections of temporary timber ramp that have not been removed may be buried in the beach. At the commencement of work in this area to probe the beach for any remaining sections and either remove them or advise the *Project Manager* immediately. The *Contractor* is to avoid plant travelling over any remaining sections of ramp. See location reference S.
		4. Permanent ramp - dress shingle around the permanent timber ramp from the promenade to the beach at Hythe and Saltwood Sailing Club to reduce the drop at all edges of the ramp to less than 100 mm. Marry in with adjacent beach levels to achieve a gradual transition between profiles. See location reference S.
	5. Damping down may be necessary but has not been so in recent years.

**Activities in Cell 3**

* 1. Shingle recycling is generally to be as described in Section 4. Shingle in this cell is normally recycled from the source site at the eastern end of the cell (normally Zones 35 to 38) to the deposition site at the western end (normally Zones 17 to 20). It is often necessary around Smuggler’s Slipway (location reference M) to extend the width of the crest sufficiently seaward beyond the design profile to allow access for plant during the works.
	2. Shingle regrading is to be as described in Section 15.
	3. Shingle clearance is to be as described in Section 15.
	4. There is normally one item of additional work as follows:
		1. Sandpit - the sandpit is to be raked to remove all stones and other debris on the surface. Return any shingle removed to the beach. If additional play sand is required to make up levels this will be instructed by the *Project Manager* and will be the subject of a Compensation Event. See location reference L.
	5. Damping down may be necessary but has not been so in recent years.

**Activities in Cell 4**

* 1. Shingle recycling is generally to be as described in Section 4. Shingle in this cell is normally recycled from the source site at the eastern end of the cell (normally Zones 62 to 66) to the deposition site at the western end (normally Zones 40 to 43). It is often necessary to move shingle from the eastern end of Cell 3 (Zones 37 & 38) into this cell to provide access for plant along this cell, primarily immediately eastwards of Battery Point (location reference C), before recycling and other work within and eastwards of this cell can commence. At the back of the beach opposite Folkestone Rowing Club in Granville Parade (location reference F) mound the shingle locally to just below promenade level to facilitate beach access by rowers carrying boats.
	2. Shingle regrading is to be generally as described in Section 15. At Coastguard Cottages in Sandgate (location reference H) locally build out the beach using shingle from adjacent sections of the beach to provide additional protection to the row of houses. The crest is to be at least 10 m further seaward than the design profile, extending to at least 20 m in both directions measured along the beach from the gable wall of the terrace of houses. Marry in with adjacent beach levels to achieve a gradual transition between profiles. Pull shingle away from the western sides of the four small groynes (location reference G) so that shingle levels on both sides of each groyne are the same as each other and the adjacent beach.
	3. Shingle clearance is to be as described in Section 15.
	4. There are normally three items of additional work as follows:
		1. Storm overflows - the Enbrook Stream Storm Overflows are both encased in concrete and supported on timber piles. Avoid damaging the concrete casing or piles by mounding shingle over the casings before any plant traverses across them. The depth of shingle mounded over is for the *Contractor* to determine dependent on the plant being used but is to be a minimum of 500 mm. See location reference E.
		2. Stormwater outfalls - on the beach adjacent to Sandgate Road clear shingle away from the three stormwater outfalls to at least 500mm below the invert level of the outfalls and grade the beach onto which the outfalls discharge to fall seaward, to enable them to function properly. See location reference K.
		3. Inclinometer - avoid damaging the concrete inclinometer housing by digging carefully in this area to expose it, if not already visible, and marking its position with excavation marker tape or similar to prevent plant access during the works. See location reference J.
	5. Damping down – this may be necessary but has not been so in recent years.

**Activities in Cell 5**

* 1. Shingle recycling is generally to be as described in Section 4. Shingle in this cell is normally recycled from the source site at the eastern end of the cell (normally Zones 70 & 71) to the deposition site at the western end (normally Zones 68 & 69). It is often necessary to move shingle from the eastern end of Cell 4 (Zones 65 & 66) into the western end of this cell (Zone 68) to provide access for plant along this cell before recycling and other work within and eastwards of this cell can commence.
		1. Shingle regrading is to be as described in Section 15.
		2. Shingle clearance is to be as described in Section 15.
		3. There is normally one item of additional work as follows:

Grilles - in the concrete sea wall at the back of the beach there are two stainless steel grilles with fixed louvres, each approximately 1.0 m square. The grilles are positioned in front of the louvred air vents behind the concrete splash wall at the rear of the promenade. These grilles cover overflows to the Channel Tunnel Rail Link stormwater drainage system. Avoid damage to the grilles by digging carefully in this area to expose them, if not already visible, and marking their position with excavation marker tape or similar to prevent plant access during the works. See location reference D.

* 1. Damping down may be necessary but has not been so in recent years.

**Activities in Cell 6**

* 1. Shingle recycling is generally to be as described in Section 15. Shingle in this cell is normally recycled from both sides of the bay towards the middle, or as directed by the *Project Manager*.
	2. Shingle regrading is to be as described in Section 15.
	3. Shingle clearance is to be as described in Section 15.
	4. There are normally two items of additional work as follows:
		1. Sandpit - the sandpit is to be raked to remove all stones and other debris on the surface. Return any shingle removed to the beach. If additional play sand is required to make up levels this will be instructed by the *Project Manager* and will be the subject of a Compensation Event. See location reference A.
		2. Concrete access ramp to groyne - the concrete ramp from the promenade to the concrete surfaced groyne in Zone 72 is to be cleared of shingle. Shingle is to be graded evenly so that the ramp edge slopes evenly and without trip hazards between the promenade and the concrete walkway. The finished ramp levels are to be slightly above the adjacent surfaces to allow for settlement. See location reference B.
	5. Damping down may be necessary but has not been so in recent years.

**Activities in Cell 7**

* 1. Shingle recycling is generally to be as described in Section 15. Shingle in this cell is normally recycled from both sides of the bay towards the middle, or as directed by the *Project Manager*.
	2. Shingle regrading is to be as described in Section 15.
	3. Shingle clearance is to be as described in Section 15.
	4. Damping down may be necessary but has not been so in recent years.

**Activities in Cell 8**

* 1. Shingle recycling is generally to be as described in Section 15. Shingle in this cell is normally recycled within the cell to create a minimum crest width, or as directed by the *Project Manager*.
	2. Shingle regrading is to be as described in Section 15.
	3. Shingle clearance is to be as described in Section 15.
	4. Damping down may be necessary but has not been so in recent years.

**Measurement and Payment**

1. The basis of payment for shingle recycling shall be a rate in pounds sterling per cubic metre of shingle per kilometre (or part thereof) hauled. The means of measurement shall be as specified below. The basis of payment for shingle regrading shall be a daily rate for each item of plant required in each cell. Payment for all other aspects of work shall be on a lump sum basis. No other payments will be made except where specifically referred to in this document or covered by a Compensation Event.
	1. The *Contractor* shall provide and maintain an accurate, detailed and independent means of measurement for recording the volumes, distances, source sites and deposition sites of all shingle recycled. The proposed means of measurement is to be described and submitted with the tender for assessment and is to be approved by the *Project Manager* before being implemented. The *Project Manager* may require the *Contractor* to provide details and justification of the accuracy, completeness or any other aspect of the means of measurement at any time during the contract. All costs associated with the means of measurement are to be met by the *Contractor*.
	2. The means of measurement are for the *Contractor* to determine but the following are suggested. Other means may be used provided that full details are submitted with the tender and all details subsequently approved by the *Project Manager*. Tenderers are reminded that a quality score will be given for the proposed means of measurement which must reach or exceed the quality threshold if the tender is not to be rejected.
		1. Telemetry – use of an accredited on-board GPS-based system on all trucks. Details of the proposed system including accreditation, data recorded, analysis and reporting are to be submitted to and approved by the *Project Manager* before use. Reports containing all of the load and location details required above are required for each truck separately and in total on both a daily and weekly summary basis. Daily reports covering all trucks used are to be submitted by email within one working day of the work being carried out unless agreed otherwise by the *Project Manager*. Weekly reports covering all trucks used are to be submitted by email within two working days of the end of the previous week unless agreed otherwise by the *Project Manager*. A conversion factor of 0.5556 (= 1 / 1.8) shall be used to convert the weight of shingle in tonnes to volume in cubic metres, unless evidence based on site measurements is provided to the contrary to the satisfaction of the *Project Manager*. Loss of shingle due to the action of wave, tide, storm or any other cause which occurs during the course of work in each recycling cell is an *Employer’s* risk if this means of measurement is used.
		2. Visual recording – use of one or more independent surveyors, as necessary to suit the working method and locations, to record the size of load and number of trips made by each truck. At the beginning of the contract period, and again whenever new trucks are used, the *Contractor* shall confirm to the *Project Manager* the minimum load in cubic metres to be carried by each truck. The minimum load shall be verified by the *Contractor* by means of measurement of the dump box, use of a weighbridge or other means agreed with the *Project Manager*. A means of verifying visually from the adjacent promenade that each truck is carrying this minimum load is to be agreed with the *Project Manager*. This may include filling each dump box to overflowing or levelling each load so that the shingle reaches a datum level in the dump box. The surveyor is to record any trucks which do not appear to be carrying the minimum load and report these to the *Contractor* and *Project Manager* immediately. Haul distances are to be based on site measurements or by reference to the zones, the reference numbers of which are marked on the sea wall at the centre of each. If the latter the chainage of the centre of the cell, derived from the chainages shown on Drawings PT03/2015/01 & 02, may be used for any shingle taken from or deposited in that cell. Reports containing load and trip data and the location details required above are required for each truck separately and in total on both a daily and weekly summary basis. Daily reports covering all trucks used are to be submitted by email within one working day of the work being carried out unless agreed otherwise by the *Project Manager*. Weekly reports covering all trucks used are to be submitted by email within two working days of the end of the previous week unless agreed otherwise by the *Project Manager*. The surveyors and any survey or other equipment required by them are to be paid for the *Contractor*. The surveyors are to be employed and managed by the *Contractor* and are to report to both the *Contractor* and the *Project Manager* at the same time. Banksmen or other contractor’s staff may not be used as surveyors. Details of the proposed surveyors are to be submitted by tenderers. Surveyors are only to be employed if approved by the *Project Manager*. Loss of shingle due to the action of wave, tide, storm or any other cause which occurs during the course of work in each recycling cell is an *Employer’s* risk if this means of measurement is used.
		3. Survey - use of independent surveyors to survey, analyse and report the volume and locations of all shingle moved. Surveys are to be carried out in each recycling cell both immediately before and immediately after work in that cell has been completed. A report for each completed recycling cell is to be submitted by email within two working days of the work in that cell being completed unless agreed otherwise by the *Project Manager*. Surveys are to comprise plan and level information for all areas affected by the works to a maximum spacing in plan of 5 m in any direction and to minimum accuracy of 50 mm in both plan and level. All levels must be referenced to Ordnance Datum. GPS surveys are preferred but not required. Reports are to include all raw survey data in Excel format and analysis of volumes and distances for checking and approval by the *Project Manager*. The surveyors and any survey or other equipment required by them are to be paid for the *Contractor*. The surveyors are to be employed and managed by the *Contractor* and are to report to both the *Contractor* and the *Project Manager* at the same time. Banksmen or other contractor’s staff may not be used as surveyors. Details of the proposed surveyors are to be submitted by tenderers. Surveyors are only to be employed if first approved by the *Project Manager*. No payment will be made for any shingle moved which has not been recorded by the surveys. Loss of shingle due to the action of wave, tide, storm or any other cause which occurs during the course of work in each recycling cell or between the completion of work and the survey in each cell is therefore a *Contractor’s* risk if this means of measurement is used.
		4. The *Contractor* should note that the *Project Manager* will verify the volumes and haul distances reported by the *Contractor* using GPS-based survey equipment to carry out surveys before, during and after the works. In the event of any significant discrepancy between the volumes reported by the *Contractor* and those surveyed by the *Project Manager*, the *Project Manager* may require the means of measurement to be checked and verified by the accredited supplier and may not accept the volumes reported by the *Contractor* unless they can be adequately verified. In the event of any dispute, the volumes surveyed by the *Project Manager* shall be used for the purposes of payment.

**Banksmen**

1. The primary duty of the banksmen is to ensure public safety by making sure that members of the public do not access the beach in areas where plant is working. Banksmen are to be distributed along the promenade between the source and deposition sites during recycling or near to the plant during regrading. They are to advise members of the public attempting to use the beach that it is not safe and that they should use another section of beach. If anyone refuses to leave the works are to cease in the area and the *Project Manager* is to be advised immediately.
	1. Banksmen are to be equipped with the means, such as mobile phones or radios, to contact or warn plant operators if members of the public access any part of the beach where plant is working. Plant working in an area where a member of the public has accessed the beach is to stop immediately and remain at a standstill until the members of the public have left the beach.
	2. No plant is allowed to work unless a banksman is present in the designated working area. Downtime incurred due to the absence of banksman is to be recorded.
	3. In addition to their primary duty of ensuring public safety, banksmen are also required to clear shingle from the promenade and other areas as described above. This work is to be carried out in such a way that it does not conflict with their primary duty. This is to be achieved by making sure that shingle is cleared from a section of promenade only when recycling or regrading works are being carried out in that area, so that the position of the banksmen does not need to be altered from that which would exist if there were no shingle to clear. Accordingly the activities for banksmen and shingle clearance are combined in the Activity Schedule and are on a cell-by-cell basis.
	4. Banksmen are to be positioned on the promenade as follows:
		1. Close to each excavator
		2. Close to each bulldozer
		3. Between source and deposition sites in positions enabling them to see the whole of the promenade and beach during recycling in each cell
	5. During working periods banksmen are to remain on the promenade in all weather except heavy rain or strong winds and are to be provided with suitable weatherproof clothing. If heavy rain or strong winds occur and subject to the prior approval of the *Project Manager*, banksmen may shelter in vehicles parked on the promenade while there are no members of the public using the promenade or beach. Vehicles are to be parked in such a way that full visibility is maintained and banksmen are to remain vigilant in case any members of the public access the promenade or beach, in which case they are to leave their vehicles.
	6. The behaviour of banksmen is important as they are the main interface between the public and the *Contractor* and *Employer*. Banksmen are to be briefed on the purpose of the works so that they can explain to the public if asked. They are to be appropriately dressed and are to maintain a professional standard of behaviour. Any banksman who fails to maintain an appropriate standard of behaviour is to be removed from the works, at the discretion of the *Project Manager*.
	7. The numbers of banksmen necessary in each cell are for the *Contractor* to determine in order to satisfy the above requirements and ensure public safety. However, as guidance to tenderers, the following number of banksmen in each cell are anticipated as a minimum:
	* Cell 1 - 3 No.
	* Cell 2 - 3 No.
	* Cell 3 - 4 No.
	* Cell 4 - 4 No.
	* Cell 5 - 2 No.
	* Cell 6 - 2 No.
	* Cell 7 - 2 No.
	* Cell 8 - 1 No.

**Compensation Events**

1. The place where weather is to be recorded is the nearest coastal location to the site at which records are made by the Met Office and/or the Channel Coastal Observatory, as appropriate to the type of record.
	1. The *weather measurements* to be recorded for each access period are:
	2. The daily rainfall (mm)
	3. The number of days with rainfall more than 5mm
	4. The number of days with minimum air temperature less than 0 degrees Celsius
	5. The number of days with snow lying at 0900 hours GMT
	6. And these measurements:
		* wind speed and direction - this data shall be measured and recorded in sufficient detail at an agreed location to allow the wave hindcasting methods outlined in the CIRIA/CUR ‘Manual on the use of rock in coastal and shoreline engineering’ to be employed.
		* actual wave heights (on which compensation events will be determined) by either or both of the following methods:
* From actual measured data recorded at the wave rider buoy, located approximately on the 12mCD contour due south of Sandgate Castle 51° 03’ 32’’ North 01° 08’ 23’’ East. Data from this buoy is freely available from the internet or directly from Folkestone & Hythe District Council.
* In the event that the wave buoy is inoperative, wave heights are to be established through traditional hindcasting methods as outlined in the CIRIA/CUR ‘Manual on the use of rock in coastal and shoreline engineering’. Wind speeds used for the calculation of wave heights shall be mean, not peak speeds.
	1. The nearest Met Office Weather Recording Station to the site is between Dover and Deal at Langdon Bay. The Ordnance Survey Grid Reference is 6340 E and 1425 N, 117m AMSL.
	2. For the purposes of defining a compensation event that relates to a delay to the works caused by excessive wave heights, the 1 in 10 year extreme significant wave height of 4.16m shall be the threshold value. This value was established from wave modelling and extremes analysis carried out for the detailed design of a coastal defence project along this frontage and is based on a 10-year offshore data set provided by the Met Office. The modelled location for this wave event is the 5m CD contour due south of Sandgate Castle.
	3. The *arbitration procedure* is the Institution of Civil Engineers Arbitration Procedure 2006 including any amendments in force at the time the arbitrator is appointed.
	4. The person or organisation who will choose an arbitrator if the Parties cannot agree a choice is the President of the Institution of Civil Engineers.
	5. These are additional shared *Contractor’s* and *Employer’s* risks:

*Excessive changes in the cost of fuel for plant*, as defined below:

For the purposes of this contract clause an excessive change (increase or reduction) in the cost of fuel is defined as having occurred if the cost of fuel is outside the range given in Table B below for each access period

|  |
| --- |
| **Table B – Fuel Prices** |
| **Access Dates** | **Minimum Price****per litre** | **Maximum Price****per litre** |
| September to October 2020 | 61p | 76p |
| February to March 2021 | 62p | 77p |
| September to October 2021 | 63p | 78p |
| February to March 2022 | 64p | 79p |
| September to October 2022 | 65p | 80p |
| February to March 2023 | 67p | 81p |
| September to October 2023 | 68p | 82p |
| February to March 2024 | 69p | 83p |
| September to October 2024 | 70p | 84p |
| February to March 2025 | 71p | 85p |
| September to October 2025 | 72p | 86p |

If the cost of fuel rises excessively additional payment to the Contractor will be made for all justified additional fuel costs incurred by the Contractor based on the quantity of fuel used and the amount by which the cost of fuel exceeds the maximum price per litre

If the cost of fuel reduces excessively payment to the *Contractor* will be reduced for all fuel costs incurred by the *Contractor* based on the quantity of fuel used and the amount by which the cost of fuel is lower than the minimum price per litre.

For the purposes of this contract clause ‘cost of fuel’ is defined as the price reasonably paid by the *Contractor* at the point of delivery including any taxes, duties or other similar costs levied directly or indirectly by the Government or regulatory authorities.

For the purposes of establishing the value of a compensation event the *Contractor* is to provide invoices for relevant fuel deliveries that shall clearly show the unit price paid on all dates for which a compensation event is considered to have occurred. He is also to provide delivery notes or other means acceptable to the *Project Manager* to evidence the quantity of fuel used during the period for which a compensation event is considered to have occurred.

The *Project Manager* may require further information to justify that the quantity of fuel used is reasonable for the number and type of plant being used and the duration of the works, taking into account the terrain, site conditions and operations carried out.

The *Contractor* notify the *Project Manager* of any actual or possible changes in the cost of fuel that fall outside the range given above within 24 hours of its delivery to site to enable the *Project Manager* to maintain suitable records for the purposes of agreeing the value of any compensation event.

The *Contractor* is to co-operate fully with the *Project Manager* in obtaining records of fuel deliveries, costs and usage sufficient to agree the value of any compensation event.

* 1. Delay damages for Completion of the whole of the *works* or the programmed works in any access period are £250 per working day.
	2. The amount and form of the performance bond (if considered necessary) will be determined by the *Employer* following the receipt of tenders.

## Appendices

The following appendices are provided as separate documents i.e. not part of this document:

* Appendix A Signage details
* Appendix B Pre-construction information
* Appendix C Environmental Action Plan
* Appendix D Drawings