

3 Manchester Rd, Netley Abbey,
Southampton, SO31 5DB

Construction Environmental Management Plan (CEMP)
for the construction of the sea defences to the
rear of 3, Manchester Rd, Netley Abbey,
Southampton, SO31 5DB

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Proposals drawing 445472-
301P7

1.0 Introduction

The Construction Environmental Management Plan (CEMP) will detail how the proposed works, both during and after construction, will avoid, minimise or mitigate effects on ecology and the environment of the site and its surroundings.

It will do this by explaining why a new sea defence is required and by describing the proposed replacement works. It will demonstrate that the environmental and ecological issues applicable to the site have been considered and show that mitigation measures have been included in the method of construction and that enhancement of the ecology has been included in the final design.

2.0 Background

3 Manchester Road is a medium sized modern property. The 25m long back garden slopes gently down towards a steep approximately 5.0-6.0m high scarp that backs directly onto Southampton water, where the base of the scarp is at approximately the mean high-water level. This is currently protected from erosion by a gabion wall comprising three tiers of gabions.

During recent severe storms the gabion retaining wall to the property has been badly affected and the lowest level of gabions have begun to deteriorate and the wall sink leading to movement of the ground retained by it. Gabion cages have also started to corrode and allow the rock contained within to fall out. The wall is in poor condition and will not satisfactorily withstand further storms in the near future. Replacement of the existing wall is therefore required to maintain the line of the existing sea defence.



Poor condition of sea defence gabion wall (Sept 2022)



Further degradation of sea defence gabion wall (Feb 2022)

3.0 Scope of work and project description

The purpose of the works is to provide a new gabion sea defence along the approximately 13m long rear boundary and to take out and re-compact the loose and voided ground to the rear of the existing wall.

A gabion wall was chosen as it has good qualities for a sea defence and is a suitable construction technique for the site specific lack of easy access or storage of materials.

Details of the proposed replacement gabion wall are shown on the attached drawing 445472-301P7. The wall is to be formed with six stacked stepped gabions in most areas with a seventh level gabion just to retain the existing patio area on site that is at a higher level. The lower row of gabion is 3.0m wide, the upper rows are 1.5m wide.

The lower level of gabion baskets is to be founded on a layer of compacted granular material at around 500mm below existing beach level, which site investigations have confirmed is within the firm silty sandy clay present below the 200mm of sand and gravel beach.

Gabions will be 5mm Galfan coated wire gabions for longevity. The proposed works will minimise the materials needed for the construction by re-using the stone to the existing gabion wall, supplementing this as required with like for like imported pebbles. Further, very little material will be needed to backfill the new wall as the existing sandy fill will be dug out and recompacted in layers. Any additional fill needed will be of a similar nature to that already present..

4.0 Working methods

4.1 Site limits / Site Compound and Storage

This section details the general arrangement for the site compound and working area, the storage of materials, access to the site and the method in which the works will be undertaken.

The site will comprise the rear portion of the garden to 3 Manchester Road, the bank and gabion wall at the rear of the garden and, during working hours and subject to tides, a 5m width of beach adjoining the existing wall along the rear boundary.

The site compound and store will be at the end of Beach Lane - as has been done on previous similar works and will be subject to permissions from the relevant Council departments. This minimises the need for vehicular movements, whilst the scheme design minimises the materials than need to be brought to site.

Materials delivered to site will comprise the gabion cages, which come flat packed, gabion stone and sand, both delivered by 10T tippers. The stone and sand will be tipped in the compound using the excavator and dumper. From there the materials will be incorporating into the works either using just the excavator bucket, or a combination of excavator and dumper depending upon the stage of the works.

Measures to avoid pollution incidents during construction in accordance with current best practice guidelines including the provision of spill kits and the appropriate storage of materials and machinery away from the watercourse. No storage of materials will be allowed adjacent to the Solent and Southampton Water Ramsar site and SPA.

4.2 Site Access

The plant used in the construction will be a 14T excavator and a dumper. Works vehicular access will be via Beach Lane, 200m to the northwest. At the start and end of the working days, and as dictated by tides, the dumper will track back to the site compound in Beach Lane. The excavator, when necessary, would be parked at the bottom of Beach Lane, as has been the case for several neighbouring properties over the years for similar sea-wall projects. Appropriate permissions will be sought.

4.3 Schedule of works

- Implement findings of Ecological Impact Assessment as required and follow measures set out within this CEMP.
- Set up site compound
- The existing wall is to be taken down and replaced in three stages working from one end to the other – approximately 5.0m per stage.
- Excavate behind the section of wall to be taken down and store arisings on beach, disposing of unacceptable material.
- Cut cages to existing gabions by hand, remove gabion stone and store locally on beach using excavator and labour

- Remove existing gabions and excavate to formation level using excavator and dumper. Shingle arisings from excavation to be spread on beach. Any underlying sandy clay is to be removed from site
- Install base course of gabion baskets, roughly course the outer face by hand, install intermediate windlasses, fill remainder of gabion via excavator bucket.
- Once the base course for each section of wall has been installed proceed with construction of upper courses and backfill behind with saved arisings from the original excavation.
- Fill to be backfilled and compacted in 150mm thick layers with a vibrating plate compactor.
- On completion of the northern most section of wall, move to the middle section and repeat.
- On completion of the middle section of works proceed with the final southerly section of wall.
- Reinststate the garden and beds where disturbed by the works
- Reconstruct the boundary fences where already damaged
- Final clean and tidy then clear site

5.0 Ecology

An Ecological Appraisal undertaken in July 2022 concluded that the site and its immediate surrounds may support nesting birds, foraging waterbirds, reptiles and small mammals, See report by Ecosa Ecological Survey and Assessment.

5.1 Designated Sites

A desk study confirmed that the site coincides with the following statutory designated sites;

- Solent and Southampton Water Special Protection Area (SPA) which is designated for its breeding and wintering bird populations.
- Solent and Southampton Water Ramsar, which is designated for its habitats, rare invertebrates, rare plants and populations of wintering waterbirds.
- Lee-on-Solent to Itchen Estuary Site of Special Scientific Interest (SSSI), which is designated for its intertidal habitats, over-wintering dark-bellied brent geese *Branta bernicla* bernicla, wildfowl, waders and coastal plants.

Furthermore, Netley to Hamble Shore Site of Importance for Nature Conservation (SINC) lies approximately 150m to the north of the site and is designated for its semi-natural coastal and estuarine habitats.

5.2 Threats to Ecological Receptors

The potential impacts of the construction works on ecological receptors are listed below:

- The killing or injury of animals during site clearance operations
- The loss of habitats that animals use for feeding, refuge or breeding
- Disturbance to foraging or roosting waterbirds during winter
- Pollution incidents that may impact on coastal habitats

Some of the above impacts could be detrimental to the interest features of the designated sites.

5.3 Avoidance and Mitigation Measures

The following working methods are proposed to avoid, reduce or mitigate the potential impacts on ecological receptors. Any recommendations within the Arboriculture Development Statement should also be followed.

5.4 Timing of works

All works will be undertaken between April and September to avoid any impacts on wintering or migratory wildfowl and waders and the site clearance operations will be timed to avoid the reptile hibernation period, which is typically between November and March, inclusive. The works will be restricted to daylight hours to avoid the use of external lighting to prevent unnecessary disturbance to nocturnal and crepuscular species such as bats.

Any changes to the proposed work schedule will be agreed with the Local Planning Authority prior to commencement.

5.5 Project Set Up

All personnel involved in the construction works will be briefed on the ecological mitigation strategy and relevant wildlife legislation. Zones for the piling of soil, storage of materials and machinery associated with the project will be clearly defined. Fuel, oil and other chemicals will be stored in appropriate containers that are impervious to the material being stored. Leaking and empty containers will be removed from the site immediately. Finally, by replacing the flood defences on a like for like basis will ensure that there is no loss of coastal/ inter-tidal habitats.

5.6 Working Methods

Prior to the engineering works beginning, all vegetation will be removed using hand tools under the supervision of an ecologist, who will check for the presence of nesting birds, small mammals, reptiles and invertebrates. If Schedule 1 birds are found nesting, then works will be delayed until the young have dispersed.

The vegetation will be cut back to around 5 cm using hand tools and the site left overnight for any animals using crevices in the soil to move away from the area of works. The arisings will be removed from the site to prevent animals from using them as a refuge. Any animals that are found during the works will be moved to a safe location away from the area of works. A suitable recipient area is scrub further along the coast to the south. Both of these areas provide corridors to suitable habitat off site.

5.7 Control of pollution to adjacent habitats

Due to the nature of the work, pollution incidents are extremely unlikely. Small amounts of dust may be emitted during the movement of soil and filling of the gabion baskets. There are no statutory or guidance limits for the deposition of dust on vegetation and ecosystems although draft guidance from the Highways Agency suggests that some sensitive species appear to be affected by levels above 1,000 mg/m²/day. Dust emitted through construction processes will be kept to a minimum by a number of methods, including: using water as a dust suppressant during dry weather and reusing existing materials to construct the gabion wall.

Machinery and materials for construction will be stored as far away from aquatic habitats as possible and no machinery will be refuelled on site.

The construction methodology will ensure that there will be no pollution of the inter-tidal habitats from the deposition of silt/dust or other pollutants.

5.8 Roles and responsibilities

Ecology Clerk of Works (ECoW)

Prior to the start of site clearance an ECoW will be appointed. The ECoW will take responsibility for advising the relevant persons about ecological issues, and ensuring the measures specified within this document are implemented correctly and in line with best practice. The ECoW will also be responsible for planning and reacting to incidents as they occur. ECoW responsibilities include:

- Thoroughly understanding the ecological issues and best practice methods relevant to the project;
- Fulfilling the requirement of this CEMP.
- Advising on the location of sensitive ecological features and the type of protection or mitigation required.
- Supervising and monitoring the implementation and maintenance of protective or mitigation measures to ensure legal compliance and safeguard sensitive ecological receptors.
- Liaising with and reporting to the construction project manager, site personnel and contractors and the Eastleigh Borough Council about ecological issues.
- Educating relevant personnel (principally site staff and contractors) about ecologically sensitive features, legal obligations, best practice, and procedures.
- Ensuring that this CEMP is updated/ revised according to new information.

Contractors

Key to the successful delivery of the measures set out in this CEMP will be the collaboration of all project personnel, especially those involved in site clearance and construction activities. The CEMP will be distributed to key representatives of construction personnel, ideally as part of site induction, including the project management team and all appointed contractors and sub-contractors. The contractors' responsibilities will include the following:

- Adhering to the relevant provisions made within this Plan and complying with the advice of the ECoW.
- Ensuring that protective measures described are maintained for the required duration and understood by all site personnel.

- Contacting the ECoW regarding any uncertainties or activities that may impact on ecological features.

6.0 Summary and Conclusions

Despite the numerous statutory designated sites that are coincident with the area of works, the Ecological Appraisal has concluded that the works will have no significant impact on designated sites, that there are no Habitats of Principal Importance and that the adjacent habitats will experience only temporary disturbance during the works.

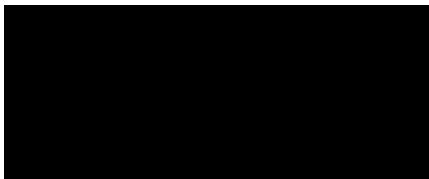
The scheme design and proposed method of construction minimises vehicular movements by reusing materials wherever possible.

The pre-works ecological survey will check for nesting birds and arrange for relocation of stag beetles, small mammals and reptiles if found. If there are nesting or protected birds, the works will be deferred until they have gone.

As an enhancement to the existing situation, the reconstructed bank above the new gabion sea defence will be planted with native species as per the landscape plan.

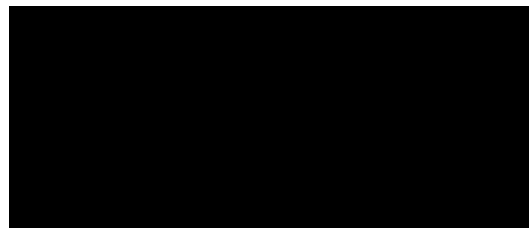
Overall the scheme will enhance the coastal protection to No 3 Manchester Road and provide beneficial effect to the local wildlife, whilst causing only temporary disturbance during construction.

Yours sincerely



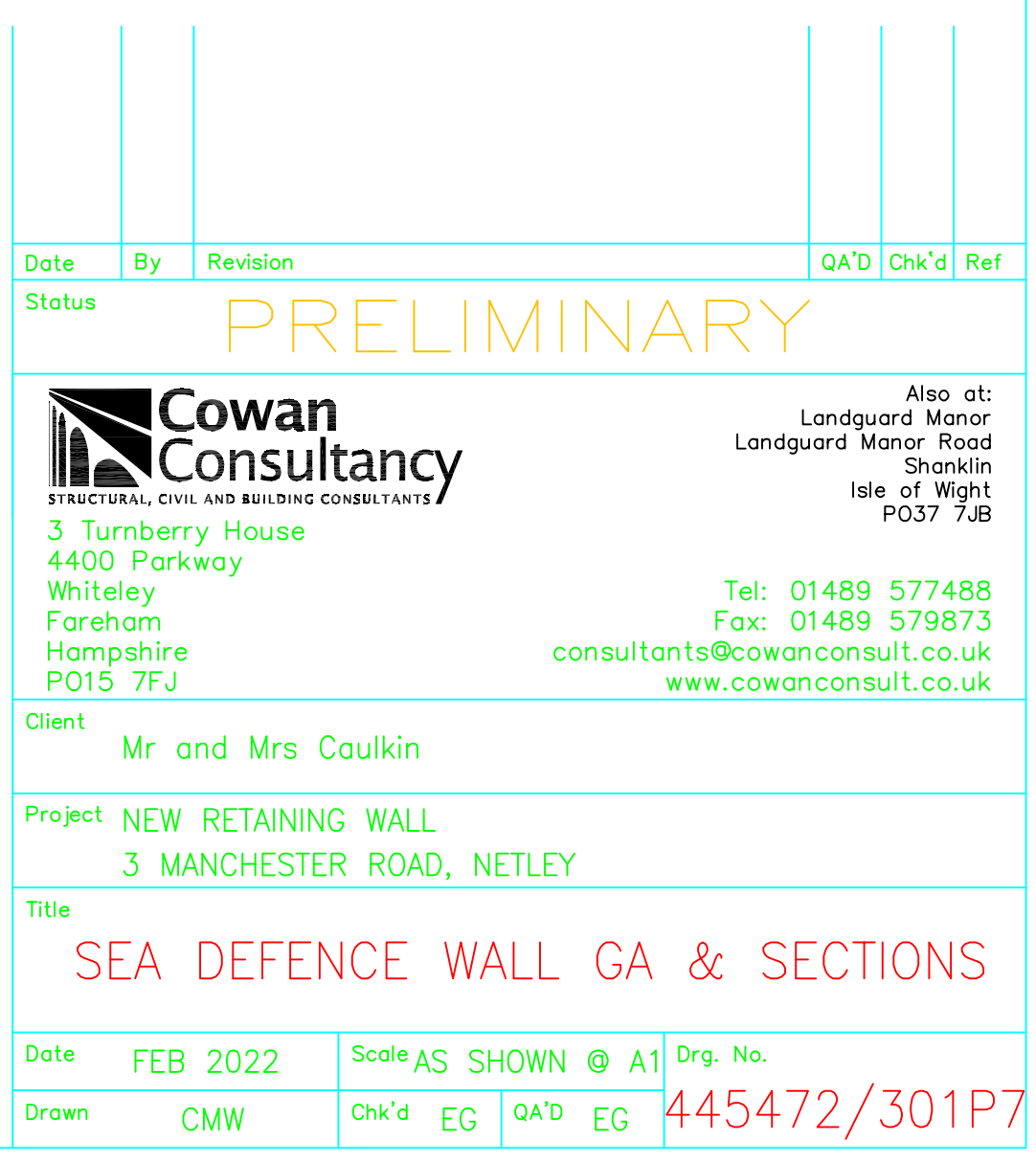
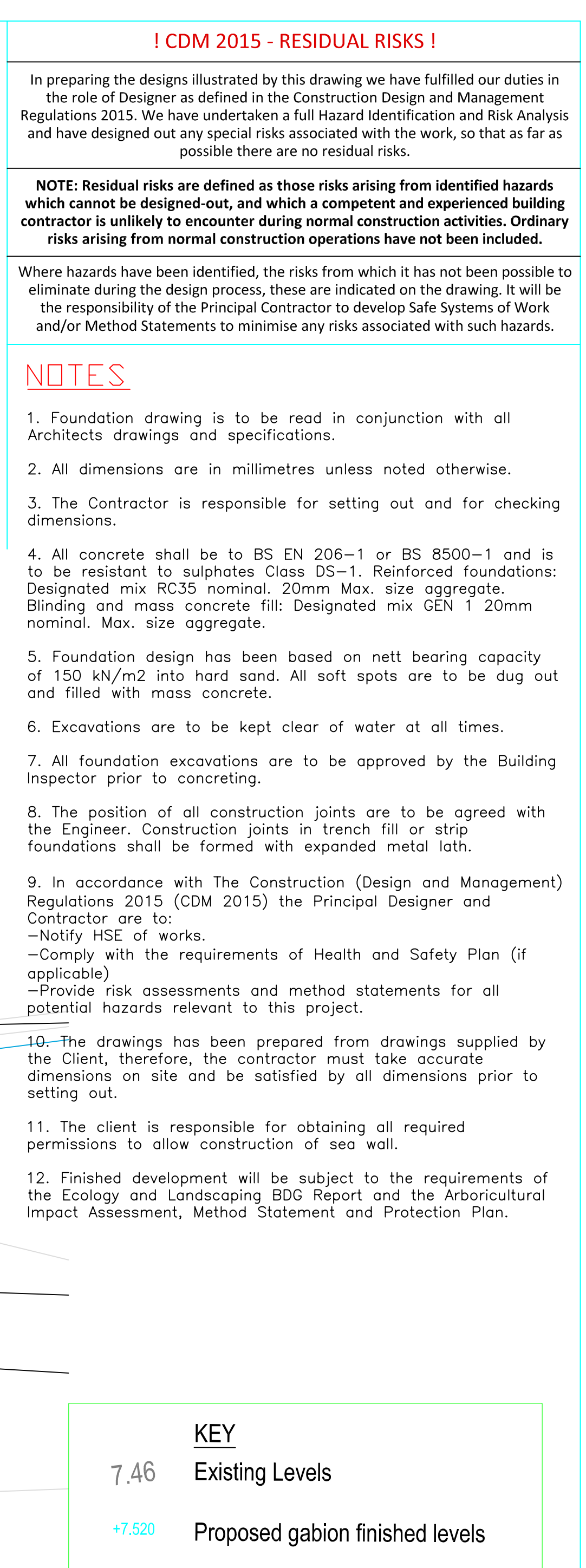
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For and on behalf of Cowan Consultancy Ltd.



DAVID BUTTON BSc (Hons) CEng

Appendix 1



DO NOT SCALE THIS DRAWING