

Sustainability Strategy -

Construction Leading Option Rock Armour Fillet

Contract ID: YOS351C/001A/011A

Contract Title: Runswick Bay Coastal Strategy

Coastal Officer: Robin Siddle

Contract Type: YorConsult

Budget Value: £2.77m (100 years cash costs)

Client: Scarborough Borough Council

Design Phase

Identify design options and examine sustainability issues of material components/construction methodology and determine most sustainable outcome. Detailed below are a series of questions that the team need to answer for each scheme. The list is not exhaustive, it should be used as a base set of questions that the project team add to.

<u>No.</u>	<u>Design Question</u>
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1	<i>What are the likely major materials for the scheme? e.g. top 3, steel piling, rock armour, concrete blocks</i>
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The coast protection works will predominately require rock armour.

2	<i>Is it likely that these major materials will be from a renewable source, be recycled or have recycled content? If the material is non-renewable, how plentiful is the supply?</i>
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Rock armour could be recycled from elements already on the beach, but more likely new rock will be from a licenced quarry either in the UK or from abroad, e.g. Norway.

3	<i>Where is the material likely to come from? Note: If the material comes from the developing world there will be social and economic impacts that will need to be managed.</i>
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Rock armour source from a licenced quarry either in the UK or from abroad, e.g. Norway.

- 4 ***What are the logistical implications of the material choice/how far will have to travel? (Note: Do not include site movements, these are covered in the EIA.)***

Rock armour could be delivered by road but more likely by barge onto the site.

- 5 ***Are there any pressure group (e.g. Greenpeace) activities associated with these materials?***

Interested parties in the village are very supportive of the scheme and are prepared to contribute to the scheme to preserve the village.

- 6 ***What are the on-going maintenance requirements of material options and are there any disposal issues with materials used for maintenance?***

Provision has been included for storm damage repairs as and when required.

- 7 ***What are the waste management options for any leftover materials at the end of the construction phase (Hazardous waste, concrete recycling, WEEE, re-use, income potential etc)?***

Aim not to have any left over materials. Any spare rock can be incorporated as a foreshore feature.

- 8 ***What are the waste management options at the end of the scheme life?***

Outcome required to maintain a long term standard of coastal protection to the village. If the current structure (fails a landslip could occur which would potentially mean the loss of 93 properties.

- 9 ***Do any of the designs present opportunities to use local labour in the scheme as sub-contractors or low/semi-skilled workers?***

The intention is to use a local contractor on the Council's framework. Specialist contractors will be required for marine works (rock placing) but from within UK. Yorkshire Water will also be improving the sewerage network in the foreshore prior to the main works taking place by diverting flows into the pumping station along the seawall.

- 10 ***Are there any consequences of material choice/logistics that will cause concern in the local community?***

Works site located in front of the current seawall. Preference for works to be outside of the main holiday

period.

11 ***Are there any planning constraints restricting material choice or source?***

Likely constraints will relate to matching rock colour and texture to promote colonisation of the rock. The existing rock revetment to the south of the village has been accepted in the community.

Preferred Design Option

Select appropriate key materials from the list. Note that any requirement for piling must use the National Contract and any requirements for timber must comply with the Environment Agency Timber Policy.

Material

Rock armour
Pipework and concrete for the Yorkshire Water sewer diversion

Manufacture

Pipework

Transport

Contractor sourced materials (to be confirmed)

Mandatory Actions

Ensure supplier demonstrates good environmental management of their premises.
Examine options for use of small/ local suppliers.
Ensure coatings are environmentally sound.
Assess maintenance regime and ensure it is as efficient as possible.
If the excess steel work is scrapped or recycled, ensure carrier has appropriate licenses and EMS.

Scheme Specific Actions

The intention is to use local labour for majority of works and supplement with specialists for key activities.

Impact

Plant

Environmental

Carbon Dioxide
Particulate Emissions
Local air quality

Social

Noise

Health Impacts
Safety

Economic

Use of local plant hire firms

Mandatory Actions

Specify bio degradable oils
Examine options to use local providers
Examine vehicle management/maintenance practices and EMS
Ensure drivers aware of pollution management protocols
Ensure pollution clean up kits available
Ensure bowsers are banded as necessary

Scheme Specific Actions

Preferred contractor will have access to an extensive range of rock handling plant.

Post Construction Phase Impact

The following set of generic questions are to be considered and answered for the preferred/final design option. You can add any other issues.

No. **Question**

1 ***Which left over materials will be re-used or sold for income e.g. piles, timber, concrete etc? (Ensure left over materials are re-used by the Agency, or sold to gain an income for the EA, if no value are offered to the contractor for re-use, are recycled if re-use is not possible and if recycling is not possible are disposed legally)***

Major component of work involves installation of rock armour. Existing rock boulders will be incorporated into the works.

2 ***What are the maintenance requirements of the preferred option?***

Intermittent maintenance will be required on the armour, perhaps every 10 to 20 years. Design life for components is 100 years.

3 ***Will maintenance be provided by internal resource or external?***

It is likely that the maintenance will need to be contracted out to specialist suppliers.

4 *Are there any consumables/materials being used in maintenance?*

Maintenance will use existing materials already on site.

5 *Are there any sustainable supply chain implications in these consumables/materials?*

None expected.

6 *How are efficient logistics being applied to ensure maintenance/labour is efficient as possible in its timing, duration and total distance travelled to maintain?*

All maintenance activities on the rock will be carried out concurrently on the new north and existing south revetments.

7 *What are the disposal implications at the end of the scheme life?*

Structure being built to effectively provide a long term protection of the town.

8 *Is there any electrical equipment involved in the scheme? (ensure its WEEE ownership details are kept on file for recycling at disposal)*

No electrical equipment.

Other considerations

So far the project has explored opportunities to use existing foreshore rock materials and improve the sewer network.