

PLANNING CONDITION 10 - METHODOLOGY

JBA Project Code	2017s7159
Contract	Aberavon Promenade CRM
Client	Neath Port Talbot County Borough Council
Day, Date and Time	23rd October 2019
Author	Ken Stacey / Howard Blackwell / Alec Dane / James Davies
Subject	Planning Condition 10 - Access Ramp Monitoring and Management Plan

1 Introduction

The purpose of this document is to set out a proposal for discharging **Planning Condition 10** as part of the **Aberavon Promenade Coastal Risk Management Scheme**.

2 The Planning Condition

Planning condition 10 requires an Access Ramp Monitoring and Management Plan, to monitor a section of shoreline west of the proposed beach access ramp for a 5-year period after the completion of the Aberavon Promenade CRM Scheme. Planning condition 10 is quoted below:

Condition 10

*Prior to the completion of construction of the hereby approved vehicle access ramp located adjacent to the Scarlet Avenue Car Park, an Access Ramp Monitoring and Management Plan shall be submitted to and approved in writing the Local Planning Authority. The submitted plan shall detail a monitoring programme for a minimum period of 5 years following completion of the access ramp **to assess its impact upon the adjacent area within 100m of ramp from changes due to coastal processes attributed to the approved ramp**. The approved Monitoring and Management Plan shall be fully implemented in accordance with the approved details.*

Reason

To deliver the measures as set out in the planning application submission and to ensure measures to manage and mitigate effects on S7 and SINCE habitat in line with the Environment (Wales) Act 2016 and LDP Policy EN6.

2.1 Objectives of the Access Ramp Monitoring and Management Plan

The key text in the above planning condition is highlighted in bold above, stating the purpose of the Plan. The objective of the Monitoring and Management Plan is therefore:

Objective: *To identify any impacts on the surrounding area due to changes in coastal processes attributed to the approved ramp.*

To achieve the above objective, the following questions need to be answered:

- 1) Is there any change in coastal processes as a result of the ramp?
- 2) Does any change in coastal processes result in detriment to the surrounding area?

For the purposes of discharging this condition, it is assumed that 'impacts on the surrounding area' relate to the biodiversity.

3 The Monitoring and Management Plan

To achieve the above objective and answer both the coastal processes question and the biodiversity question, the following scope of works is required:

- Understand the baseline trends
- Pre-construction condition survey
- Post-construction condition survey
- Annual monitoring
- 5-year report detailing changes

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A baseline understanding of the historic trends is required to 'benchmark' any changes subsequent to the construction of the ramp against. For example and hypothetically, if loss of cliff since the construction of the ramp are recorded as 1 metre per year, this may be seen as a negative impact of the construction of the ramp. However, if this is compared against the baseline trend that also shows 1 metre per year losses preconstruction, it can be concluded that there has been no impacts attributable to the ramp. For these reasons, a baseline understanding of the historic trends in both coastal processes and biodiversity is required.

Following an understanding of the baseline trends, a pre-construction survey (of both biodiversity and coastal processes) would be required to record the condition before construction. Likewise, a post-construction survey will form a record following completion of the construction phase.

Annual monitoring from then on would provide a record of changes over time to begin to indicate the changes following construction. At a 5-year interval a report would be undertaken to analyse any changes and suggest a plan for reinstatement / mitigation. Further detail on the proposed approach for coastal processes and biodiversity is shown below.

3.1 Understanding the Impacts on Coastal Processes

3.1.1 Desk based study of baseline trends

To identify the baseline trends in cliff behaviour, indicative erosion rates may be extracted from time series Google Earth imagery. The cliff line will be digitised for imagery recorded in 2009 and 2018 and presented on a map to suggest linear rates of cliff recession. Some of the images are not particularly clear and the 'cliff' edge lacks definition, however, an indicative result may be possible.

The desk study will be summarised in a brief report in the form of a pdf text file, photographic sheet and drawings as applicable.

3.1.2 Pre and post construction survey

In order to establish a time series data stream, it is essential that the surveys consistently measure the same thing. The measurement of a cliff edge can be problematic and as the scope of the works would not extend to a detailed remote sensing survey, picking up the edge at perhaps 5m intervals would be reasonable. There are also health and safety matters to consider to ensure there is no risk to staff¹. It is worth considering extending the scope of the survey beyond a simple edge line to also pick up the toe of the 'cliff' and also to measure sufficient points on the upper storm beach to enable a contour survey to be produced. The rationale for this extension in the scope of the survey is mainly based upon the extra data that can be acquired for little extra cost as the survey team would already be on site.

1 - The surveyor team will be supervised when carrying the survey and a minimum 2m offset template will be provided to enable survey points to be taken a set distance landward of the edge. A similar simple device has been used to monitor cliffs at other locations.

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A control line with chainages along the landward side of the cliff will be established in the survey model and cross sections will be produced over the study length of the cliff area west of the proposed access ramp. The cross sections will be referenced to a common zero point and this will indicate the position of the control line. Subsequent cross sections for each chainage will be overlaid for comparison. Cross sections will be produced at 20m intervals.

The survey would be carried out using an industry standard GPS with a qualified surveyor and assistant. The survey would be rendered into a 3D electronic form from which an edge line, toe line and upper storm beach contour file would be produced (ACad). The survey would also include a series of photographs taken from fixed points and additional general shots of interest.

A brief report in the form of a pdf text file, photographic sheet and drawings would be produced. This exercise would be repeated for the post-construction survey with a comparative analysis and a brief report. This would include an examination of the cliff edge recession and cross section profile change formulating the baseline data ongoing annual monitoring.

3.1.3 Annual monitoring

Coastal erosion would be annually monitored by a repeat of the previous surveys along with a brief report summarising the annual analysis and assessment.

It should be noted, that change will continue and the ability to establish impacts that may be directly attributable to the ramp could be difficult. Post scheme monitoring is a worthwhile undertaking and should be encouraged; however, it is unlikely that key drivers of the local coastal process environment can be separated to potentially attribute change to the introduction of the ramp. This should not be a reason not to try and acquire data along with an understanding of changes that could include a component that may be linked to the introduction of the access ramp.

3.2 Understanding the Impacts on Biodiversity

3.2.1 Desk-based study of baseline trends

A desk-based study will be undertaken to determine the baseline trends in biodiversity. The desk-based study will look at historic aerial photography (either from Google Earth or provided by Neath Port Talbot County Council) and map the areas and extents of a range of habitats. These extents will be overlaid over one another, to determine whether there is any long term trend in growth or losses of biodiversity in the area of interest.

The desk-based study will also undertake a literature review to identify whether any previous studies have concluded baseline trends in the local area. The biodiversity desk based report will consider the outcomes of the coastal processes desk based report when analysing the results of any trends identified and determine whether any species specific surveys will be needed.

3.2.2 Pre and post construction survey

To provide a record pre- and post-construction, an ortho-rectified drone survey will be undertaken (carried out by NPTCBC) providing high resolution imagery of the area. This will allow habitats to be digitised. The drone survey will be ground-truthed by undertaking a Phase 1 Habitat Survey, including

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National Vegetation Classification (NVC). This will be undertaken by a suitably qualified ecologist. A record of the pre- and post-condition survey will be provided, together with a brief summary of the results of the survey.

3.2.3 Annual Monitoring

Annual post contract monitoring will consist of additional Phase 1 Habitat Survey. The results of this will be presented alongside the pre-construction survey to determine whether any significant vegetation changes can be identified.

3.2.4 Monitoring at 5-year intervals

At year-5 post-construction, an additional Phase 1 Habitat Survey, including NVC, will be carried out. The results of this will be presented alongside the pre-construction survey to determine whether any significant vegetation changes can be identified.

3.3 The final report and mitigation / reinstatement plan

At five years post-construction the results of the above stages will be combined to determine whether there have been any changes as a result of the construction of the access ramp. A final report will be provided summarising the results of the coastal processes and biodiversity assessments and offering recommendations for any further work.

To determine whether the access ramp has caused an impact to the surrounding area, the following decision-making criteria will be adopted.

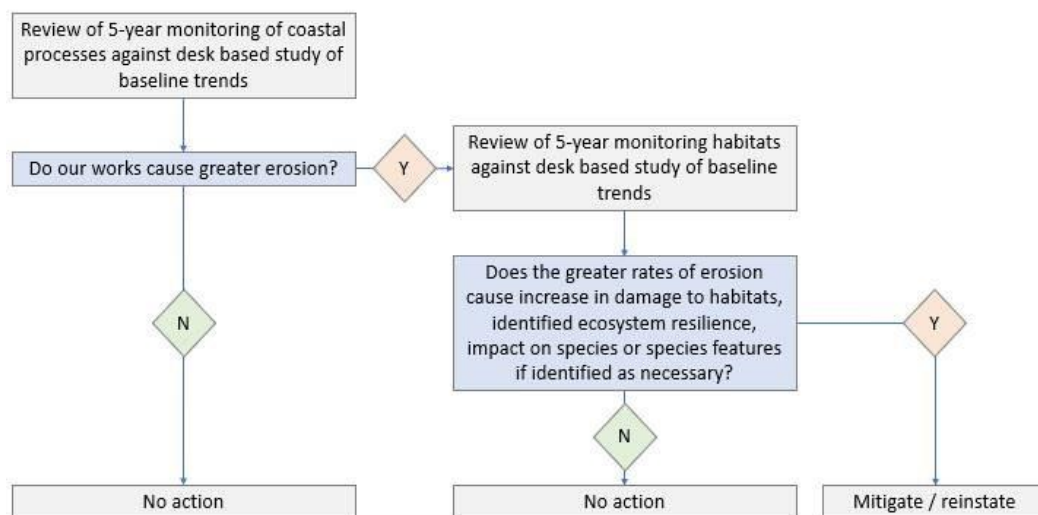


Figure 3-1: Summary of the Monitoring and Management Plan

At this stage, until the nature and extent of any detriment caused is known, the form of mitigation / reinstatement cannot be defined.

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For the purposes of discharging the planning condition, after the 5 year monitoring period NPTCBC commit to developing mitigation proposals to correct any detriment and will develop a further scheme for Planning Approval if required.