Water Management Plan Addendum: Storm Overflow Procedure

A465_S56-FVC-GEN-SA-PD-LM-000012

Organisation:	3P64 - A465 WALES
Issue	01
Date	03/06/2024

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Date	03/06/2024	03/06/2024
Signature		

Document history

Revision	Originated	Date
Rev.00	ST	19/04/2024
Rev.01	ST	30/04/2024
Rev.02	ST	03/06/2024

Contents

1. RESPONSABILITIES.-

The Environmental Manager is responsible for facilitating the communication of the requirements of this procedure.

The Environmental Manager is responsible for facilitating the monitoring regime and for communicating results with the relevant stakeholders.

In case of exceedances, all staff are required to comply with any instructions to prevent further pollution.

The Construction Director and Manager will be responsible for ensuring suitable resources are available to minimise pollution, and to implement any rectifying actions.

N.B. In cases where the responsible person is unable to discharge their responsibilities as above (due to leave, illness etc.), that responsibility will be temporarily delegated to the next most senior member of the team.

2. PURPOSE.-

The A465 Section 5 & 6 duelling project (the Project) uses a number of principles for the management of silt-laden water. Part of the water management system involves the collection of site waters within holding ponds to allow treatment through a silt settlement system (Siltbuster units). During exceptionally heavy rainfall events, where the rate of incoming water is greater than the treatment rate of the system for extended periods of time, these ponds can overtop. In order to ensure the stability of the ponds, a planned overflow point (storm overflow) is provided.

This procedure details the measures put in place to control the risk and impact of storm overflows associated with the management of construction site effluent (silt-laden water) on the A465 Sections 5 & 6.

3. SCOPE.-

This procedure applies to all FVC´s current and future activities carried our directly or through subcontractors related to the activities and services falling within the scope of the system.

4. GENERAL REQUIREMENTS.-

The key objectives of this procedure will be to:

- Identify where storm overflow points are present on site.
- Detail measures to reduce the risk of storm overflows occurring, through suitable management and maintenance of ponds to maximise available capacity on site.
- Detail measures to reduce the impact of any storm overflow by reducing flow rate from the ponds and reducing silt loading of the overflow.
- Specify actions to be taken by FVC personnel in the event of an overflow (notification etc.).

5. STORM OVERFLOW REQUIREMENTS.-

Storm overflow points are present on a number of water management ponds on the Project. Generally, these are found where permanent attenuation ponds are used during the construction phase for site water management. These ponds are specified in table 1, and shown visually in Appendix A.

Table 1. Locations of pond storm overflows

Pond name (local)	Discharge Location (OSGR)	Receiving Watercourse
Croesbychan (Pond 3JA)	SN 97747 05576	Gelli Tarw (leading to Afon Cynon)
Nant Moel (Pond G)	SN 98366 06497	Nant Moel (leading to Afon Cynon)
Baverstock	SN 99645 06950	Unnamed tributary of Nant y Gwyddel (leading to Afon Cynon)
Pond K (Swansea Road)	SO 01602 07357	Unnamed tributary of Nant Ffrwd (leading to Taf Fawr)
Gurnos Farm Ponds	SO 04141 08606	Unnamed tributary of Taf Fechan

This list may be updated from time to time in line with site requirements.

6. PROCEDURE.-

6.1. Measures to minimise risk of overflow events

Measures are implemented to reduce the risk of overflow events occurring. These measures consist of:

- Minimising water requiring treatment
  - Cutoff ditches around site prevent clean water from entering the site, and subsequently requiring treatment, wherever possible. These are reviewed regularly.
  - During storm events site pumping activities are ceased where possible and safe to do so.

- Maximising capacity within water management ponds
  - Keeping ponds empty and emptying them as soon as possible after a rainfall event.
  - Maintaining ponds to remove sediment buildup etc. to ensure suitability for intended use.

- Maximising treatment capacity of water treatment systems
  - Regular checks and maintenance of system including pumps and settlement tanks.
  - Preventative maintenance and servicing visits from provider/manufacturer.

6.2. Measures to minimise impact of overflow events

Minimising the impact of any storm overflow event requires the reduction of the volume of any silt-laden water released, and also reducing the silt load within that water as much as possible. These measures consist of:

- Routes between storm overflow points and the receiving watercourse are lined using the following standard detail (see Appendix B for pictorial example):
  - Plastic liner laid in ditch to prevent additional silt suspension from erosion.
  - Flock matting (or similar) to form the bottom of the channel to slow flows. Impregnated gel flocculent will help to remove fine silts from suspension.
  - Wattles or sandbags to be installed to create check dams and to reduce the energy of water

and aid sediment deposition.

- A set of actions will be undertaken during any identified storm overflow event to reduce impacts:
  - Potentially polluting activities on site to be stopped (if not already).
  - Any site pumping potentially contributing to overflow to cease (so long as safe to do so).
  - If practicable, deploy bowsers to divert water to other management ponds.

6.3. Monitoring

In order to ensure the effectiveness of the above measures, monitoring will be undertaken:

- As part of daily siltbuster checks (are they running efficiently, are ponds empty etc.)
- As part of site-wide water monitoring, with actions raised as required.
- Specific inspections of overflow channels following overflow events (replacement of lining/baffles required?)

7. NOTIFICATION.-

Notification of a storm overflow event will follow the same procedure as for water pollution incidents as shown in figure 1. In addition, a template for the initial email notification is included in Appendix C.

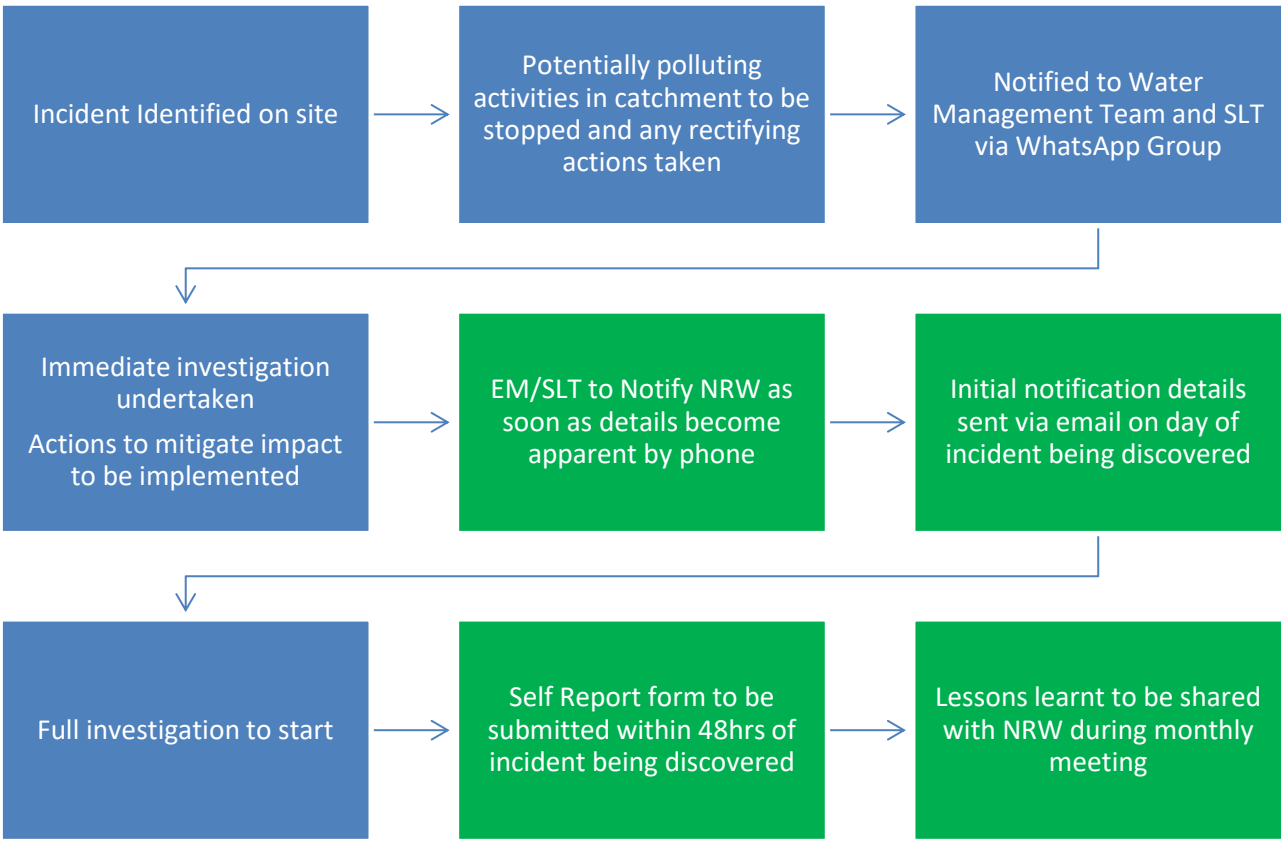

Figure 1. Notification process following storm overflow (blue – internal, green - external)

8. OUTCOMES.-

- Siltbuster check sheets
- Water monitoring records
- Incident / Lessons Learnt report

APPENDICES

Appendix A – Storm discharge channel location plans

Croesbychan (Pond 3JA)

Nant Moel (Pond G)

Baverstock


Legend
Overflow Channel
Receiving Watercourse
Google Earth
Image © 2024 Airbus
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Pond K (Swansea Road)

Gurnos Farm Ponds

Appendix B – Typical arrangement for a storm overflow ditch

Typical overflow ditch arrangement. *N.B.* Concrete canvas lining shown here would be replaced with plastic lining in most circumstances.

Appendix C – Notification Email Template

Description of pollution incident:	
Location: *Include W3W/OSGR*	
Time identified: *Include likely duration of incident if possible*	
Action Taken:	
Further actions required:	