



CONSTRUCTION SURFACE WATER MANAGEMENT PLAN

03.08.23

Revision B

*Construction of 32 New Residential Properties
at Hurstlea Road, Needham Market*

Clients;

Mid Suffolk Growth Limited



Index

- 1.** Introduction
- 2.** Site Details
- 3.** Company Roles & Responsibilities
- 4.** Surface Water Management Plan
- 5.** Flood & Weather Alerts
- 6.** Legislation
- 7.** Distribution
- 8.** Sign Off
- 9.** Review of Plan
- 10.** Appendices
 1. Traffic Management Plan
 2. Construction Stage Drainage Plan
 3. Construction Management Plan

1.0 Introduction

This document has been prepared by Cocksedge Building Contractors Limited to outline the methodology to manage construction surface water management throughout the construction process and mitigate on and off-site impacts.

The document incorporates all required aspects to satisfy Planning Permission: DC/18/05104 Condition 9.

2.0 Site Details

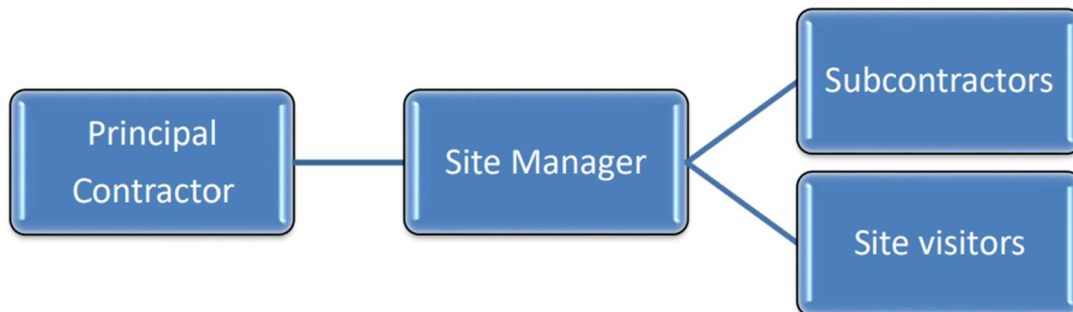
The works comprise the construction of a new on-site access road, footpaths and minor off-site highways improvements.

The construction of 32 residential properties constructed from timber frame with a combination of facing brickwork brick and render.

3.0 Company Roles & Responsibilities

Role	Contact	Company	Contact Details
Construction Director	Justin Buckingham	Cocksedge Building Contractors 25 Hampstead Avenue, Mildenhall, Suffolk, IP28 7AS	jbuckingham@cocksedge.com 01638 713694
Contract Manager	Jason Goodey	Cocksedge Building Contractors 11 Meridian Way, Norwich, NR7 0TA	jgoodey@cocksedge.com 01603 432121
Site Manager	TBC	TBC	TBC
Architect	Lee Marsh	Fusion 13 Hanover House, Market Place, Easingwold, York YO61 3AD	lee.marsh@fusion13.co.uk 03333 443013
Civil Engineer	Phil Pritchard	Schema Engineering Church Street, Coltishall, Norwich, NR12 7BX	phil.pritchard@schemaengineering.co.uk 01603 904400

During the construction phase, the Cocksedge Building Contractors (Principal Contractor) will be responsible for setting the control systems in place, with regular monitoring and with a 24 hour on call emergency contact. This is in accordance with the CDM regulations.



Monitoring of the systems outlined within this document during construction will continue and silt/pollutants removed as appropriate to ensure a clean flow of water is maintained.

4.0 Surface Water Management

Surface water systems and management procedures will be implemented on site to the compound / welfare area, as well as the construction works area. (Appendix 1 & 2).

Note: There are no required consents with the Land Drainage Act or Environmental Agency for the scheme as the drainage will discharge into the Public Sewers.

Sequence of Works & Methodology

The below sequence of works and methodology has been provided to detail temporary drainage system requirements, management of pollution, protection of controlled waters and watercourses and management of on and offsite flood risk.

- **Site Compound**

The site compound as detailed in Appendix 1 is accessed directly off Hurstlea Road via an existing asphalt surface. The compound will provide offsite parking, welfare facilities and material storage.

The site compound will be adequately prepared and managed throughout the construction phases. The compound area will be reduced, crushed with adequate material and topped with 10-20mm stone.

The material storage area will be reduced and crushed, providing firm and level storage for materials.

The site compound will be designed in accordance with all required Temporary Works procedures and recorded on site. Throughout the works, all compound areas will be maintained to ensure they remain fit for purpose throughout.

The below items detail how areas of risk will be managed to protect water systems and prevent any ground contamination, and associated impacts.

- **Temporary Foul Water**

Foul water will utilise above ground sealed effluent tanks which will be positioned within or underneath the welfare unit. The effluent tanks will be emptied at regular intervals weekly. Once the onsite foul drainage is live and operational, the welfare unit will be connected into the new live system.

- **Temporary surface water**

The site is a brownfield site, with demolition works previously undertaken. On completion of the demolition works, the site has a covering of rubble material, assisting rainwater drainage and retention on site. Where limited vegetation remains, this will remain on site as long as possible, and only be removed as works enter the next area. With vegetation remaining, we can utilise the vegetation and small route system to assist with natural surface water management.

With the nature of the site, coupled with tree exclusion zones, we will utilise the permanent onsite attenuation facilities to channel surface water in to from newly created hardstanding surfaces. The installation of the attenuation tanks will commence ahead of any hardstanding surfaces being formed.

Whilst construction activities are being undertaken, it is possible groundwater will be encountered. In strategic locations on site, holding basins will be formed, allowing any dewatering of foundation excavations to be pumped on site and suitably stored.

With the limited-on site space, and storing water within the attenuation tanks, it is likely that the water storage facilities will reach capacity prior to the final surface water drainage outfall being operational. To actively manage the onsite water storage and maintaining a clean, controlled, and organised site, vacuum tankers will be used to drain down the water storage facilities, with the water being disposed of offsite in accordance with all legal requirements.

Gullies from the hardstanding areas for site accommodation and car park areas will be connected to the permanent system throughout the construction process. These gullies and pipes will be removed, and the connection manhole grouted on completion of the contract. The design intent allows for temporary gullies to collect surface water run-off from the temporary hardstanding's, prior to completion of the permanent works.

The temporary gullies will only serve the operative parking areas, which will maintain the current use of this area, servicing vehicle parking. No construction plant or machinery will be parked in these areas.

- **Fuel & Liquid Storage**

All fuels and other Liquids will be stored within the compound areas, within a lockable and bunded secure store. Spill kits will be provided in the storage area, coupled with any applicable firefighting media.

All fuels and liquids will be stored in accordance with the manufactures COSHH guidelines.

All refuelling and servicing of plant will be undertaken in the bunded facility to prevent potential contaminants from entering the ground and subsequent watercourse.

Where construction plant is operating within the compound (Appendix 1 & 2), a designated plant refuelling point is located, in a full bunded area, complete with signage and a spill kit in the event of any fuel spillage whilst undertaking the operation.

All operatives on site will be inducted to ensure all responsible persons are aware of the refuelling policy and location.

Concrete lorries will be required to washout into a designated washout skip located within the bunded area, which again will mitigate the risk of ground contamination. Spill kits will be stored adjacent to the bund, with reserve kits within the site accommodation and in locations across the site.

- **Prevention of Pollution from Plant and Machinery:**

We promote a clean working environment to avoid pollution. Site diesel tanks are bunded and lined. Drip trays are used on all static plant and machinery to prevent leakage/contamination of the ground. Emergency spill kits are standard on site and operatives having access to the kits will have received training on their use to contain any type of potentially environmentally harmful spill. To prevent materials leaking from static plant, such as pumps and generators, contaminating the ground and being washed into the existing course, all static plant will be placed on drip trays. Fuel tanks on site are bunded and lined. The tanks are protected from vandalism and unauthorised interference and turned off and locked when not in use. Spill kit locations have been covered with in the document but will include vehicle refuelling and plant parking areas.

- **Material Storage**

A bunded area will be created within the compound for material storage, with materials stored on pallets, above ground level, and should an imminent flood event become apparent, these will be removed from site or moved to an agreed location above the potential flood level. No liquids will be stored in this area, with only solid and palletised materials.

- **Parking**

Will be restricted to the areas indicated in Appendix 1 and 2. The areas will conform with temporary works designs. Spill kits will be located within the car parking area.

- **Hoarding**

The site may have solid hoarding facing Wisbech Road, with the remaining perimeters being surrounded with open mesh Heras fencing. This will enable storm water to pass through the site unimpeded in the occurrence of a flood event.

WORKS / CONSTRUCTION AREA

The works areas as detailed within Appendix 1.

- **Access**

The existing site entrance will be used for goods deliveries, utilising existing hard standing access road. Vehicles will be dry loaded and unloading, avoiding the need for vehicles to enter construction areas and tracking mud on to the hard standing roads/access.

Circulation of plant and equipment will remain within the construction areas, avoiding any direct access on hardstanding areas which are serving goods vehicles for deliveries etc. again eliminating instances of mud being transferred on to hardstanding areas.

- **Sediment Basins & Traps**

Prior to any major groundworks taking place, sediment fences/bunds will be installed in appropriate locations to prevent sediment and silt exiting the works areas and off site. A review of all perimeters will be assessed in key work areas, with measures implemented as identified prior to tasks commencing.

- **Vegetation Clearance**

The site is a brownfield site, with demolition works previously undertaken. On completion of the demolition works, the site has a covering of rubble material, assisting rainwater drainage and retention on site. Where limited vegetation remains, this will remain on site as long as possible, and only be removed as works enter the next area.

With vegetation remaining, we can utilise the vegetation and small route system to assist with natural surface water management.

- **Surface Water Containment**

Daily monitoring will be undertaken to ensure the systems in place are correctly implemented and maintained. Should an area be identified with the potential for surface water runoff, a review will be undertaken to determine the appropriate preventative measures to manage the potential run off, by adopting the use of shallow ditches/lagoons to intercept and store water, coupled with any bunding requirements.

Due to the nature of the site and not wanting any silts to enter drainage systems, water collected in ditches/lagoons will be stored and subsequently removed from site via tankers, and not directly discharged into the new or existing surface water drainage systems.

Water quality checks will be undertaken routinely every 2 weeks and after any heavy or persistent rainfall. Should any issues be identified remedial steps will be undertaken in line with the CSWMP.

- **Works Sequence & Surface Water Management**

Prior to the construction of any dwellings, the site infrastructure will be installed, comprising the surface and foul water drainage systems, attenuation tanks and road construction. By doing so, this will enable the surface water system to become 'live' at the earliest opportunity.

The new system will be protected against silt entry and build up with regular monitoring and maintenance whilst construction activities are being undertaken. On completion of construction activities all drainage and SUDS features will be restored to their full intended working capacity prior to handover, which will incorporate jetting, CCTV survey and removal of any sediment build up etc.

- **Goods Deliveries & Vehicle Movements**

The site access currently in place is an asphalt surface, providing a firm clean access and egress to the site. The road make up will enable access for vehicles required during the initial construction process which will be predominantly rigid lorries. The road will be maintained throughout the construction period.

During all construction works Cocksedge will ensure the access road is maintained in a suitable condition throughout the works to prevent the highway being muddied by vehicle wheels.

With the nature of the constructed site access road and compound, no vehicles will enter muddy areas on the site which will then be on the highway, therefore considerably reducing the risk of mud being transferred on to the highway. Where muckaway operations are undertaken specifically, these will be dry loaded, so the muckaway vehicles do not enter muddy construction zones.

Should any vehicle have mud on the wheels, a wheel washing station will be established on site within a bunded area, to rinse the wheels of vehicles should this be required at any time during the works. Through the management of vehicles on site we do not foresee frequent use of this. The water run-off will be managed via on site attenuation, with water channelled into a holding system, eliminating any unwanted water run-off.

Should at any time the highway become muddied because of the works, Cocksedge shall undertake mechanical road sweeping to maintain the highway when appropriate.

On completion of the estate road, goods deliveries, loading and unloading will be undertaken on a clean and drained road construction, thus eliminating the requirement for any vehicle entering construction areas and tracking mud onto the highway.

- **Groundwater**

The Phase II Sitte investigation located groundwater at a range between 2.3 and 4.9 meters below ground level, with no significant risk to groundwater identified. Excavations are generally above this depth, and significant groundwater is not expected to be encountered during construction.

Should groundwater be encountered during on site excavations, the careful management and storage of pumped water from excavations will be undertaken, creating ponds/basins to store the water, prior to removal off site.

- **Material Storage**

Main material storage will be within the designated compound. Satellite material storage will be on a plot-by-plot basis, with solid materials such as timber, bricks, blocks, all of which would be palletised and stored off the ground.

The on-site mixing of mortar will be undertaken within a bunded area, with cement stored on pallets within the bund, coupled with loose sand. The washout of the mixers will be deposited within the designated washout skip located within the bunded area, which again will mitigate the risk of ground contamination. Spill kits will be stored adjacent to the bund, with reserve kits within the site accommodation and in locations across the site. The location of mortar mixing will move per phase of the development, and on each relocation a new bund will be constructed at each location.

- **Fuel & Liquid Storage**

All primary fuels and liquids are stored within the site compound area as detailed on page 6. Should a need arise for a satellite station for fuels and liquids, storage will be via a bunded area created in a designated area by the site management team.

The fuels and other Liquids will be stored within a lockable and bunded secure store. Spill kits will be provided in the storage area, coupled with any applicable firefighting

media. All fuels and liquids will be stored in accordance with the manufactures COSHH guidelines.

All refuelling and servicing of plant will be undertaken in the bunded facility to prevent potential contaminants from entering the ground and subsequent watercourse.

- **Continual Review**

During all construction activities, surface water management systems will be monitored and reviewed daily, to ensure all systems and measures are working as required. Should areas of improvement be identified, additional measures will be put in place immediately and recorded.

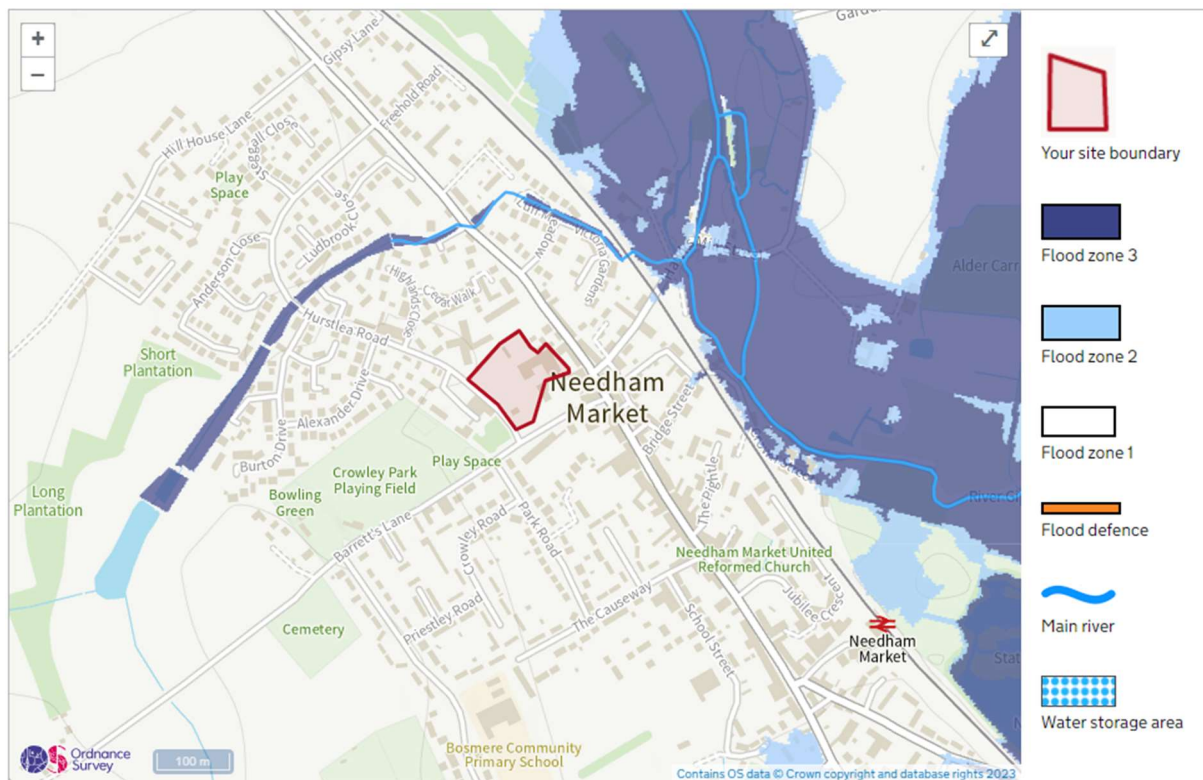
Water quality checks will be undertaken routinely every 2 weeks and after any heavy or persistent rainfall. Should any issues be identified remedial steps will be undertaken in line with the CSWMP.

5.0 Flood & Weather Alerts

Prior to commencement of the project, the Contracts Manager will sign up for flood warnings via the Environment Agency warning system <https://www.gov.uk/sign-up-for-flood-warnings>.

The site is located within a Flood Zone 3 (High probability) area (Figure 2), with a Flood Risk Assessment having been carried out previously. The flood alert levels are defined on the following page.

Alert Level	Definition	Action
Flooding Alert	Flooding is possible - be prepared	<ul style="list-style-type: none"> - Visit https://www.flood-warning-information.service.gov.uk and check flood warnings. - Prepare to act on Flood Plan. - Prepare flood kit of essential items, making staff aware of its location. - Monitor local water levels and the flood forecast.
Flood Warning	Flooding is expected - immediate action required	<ul style="list-style-type: none"> - Move staff, stock and valuables to a safe place, above ground level or off site if possible. - Turn off gas, electricity and water supplies if safe to do so. - Put flood protection equipment in place.
Severe Flood Warning	Severe flooding - danger to life	<ul style="list-style-type: none"> - Site closure, advise all staff and supply chain with immediate effect, not to attend site until further notice. Stay in a safe place, with means of escape. - Follow advice and co-operate with emergency services. - Call 999 if in immediate danger.



The Contracts Manager will also sign up for Met Office weather warnings <https://www.metoffice.gov.uk/weather/warnings-and-advice/uk> to receive details of upcoming warnings and advice should this be necessary.

Alert Level	Definition	Action
Yellow Warning	Yellow warnings can be issued for a range of weather situations. Many are issued when it is likely that the weather will cause some low-level impacts, including some disruption to travel in a few places. Many people may be able to continue with their daily routine, but there will be some that will be directly impacted and so it is important to assess if you could be affected. Other yellow warnings are issued when the weather could bring much more severe impacts to the majority of people but the certainty of those impacts occurring is much lower. It is important to read the content of yellow warnings to determine which weather situation is being covered by the yellow warning.	<ul style="list-style-type: none"> - Follow advice and details provided via the weather warning system. - Prepare for possible travel delays and disruption of day-to-day activities. - Be prepared for the weather to change or worsen. - Advise all staff and supply chain of potential changes to site activity.
Amber Warning	There is an increased likelihood of impacts from severe weather, which could potentially disrupt your plans. This means there is the possibility of travel delays, road and rail closures, power cuts and the potential risk to life and property. You should think about changing your plans and taking action to protect yourself and your property. You may want to consider the impact of the weather on your family and your community and whether there is anything you need to do ahead of the severe weather to minimise the impact.	<ul style="list-style-type: none"> - Follow advice and details provided via the weather warning system. - Prepare to change plans to protect personnel and advise all staff and supply chain of possible changes to site activity. - Prepare for the event of interruption to power supplies and the risk to life and property.
Red Warning	Dangerous weather is expected and, if you haven't already done so, you should take action now to keep yourself and others safe from the impact of the severe weather. It is very likely that there will be a risk to life, with substantial disruption to travel, energy supplies and possibly widespread damage to property and infrastructure. You should avoid travelling, where possible, and follow the advice of the emergency services and local authorities.	<ul style="list-style-type: none"> - Follow advice and details provided via the weather warning system. - Site closure, advise all staff and supply chain with immediate effect, not to attend site until further notice. Stay in a safe place, with means of escape. - Take immediate action to avoid dangerous areas. - Follow advice of the emergency services and local authority.

6.0 Legislation

The Water Environment (England and Wales) regulation 2009
Land Drainage Act 1991
SEPA Engineering in the Water Environment Good Practice Guide Temporary Construction Methods
Control of Water Pollution from Construction Sites - Guide to Good Practice (SP156)
Control of Water Pollution from Construction Sites - Guidance for Consultants and Contractors (C532)
Control of Water Pollution from Linear Construction Projects - Technical Guidance (C648)
Control of Water Pollution from Linear Construction Projects - Site Guide (C649)
Environmental Good Practice - Site Guide (C650)
Site Handbook for the Construction of SUDS (C698)
The SUDS Manual (C753)
BS 8582:2013 Code of practice for surface water management for development sites
Environment Agency PPG5 - Works in, near or liable to affect watercourses
Environment Agency PPG6 - Working at construction and demolition sites

7.0 Distribution

A copy of this document is to be retained by the Site Manager and should be laminated and kept in the site office for reference.

A signed copy of this document is to be filed in the site files.

8.0 Sign Off

NAME	COMPANY	SIGNATURE	DATE



9.0 Review of Plan

Contract Name: Wisbech Road, Littleport	Contract No: 10/377
--	----------------------------

	ANY CHANGE		DESCRIPTION OF CHANGE
	YES	NO	
Plan recommunicated to relevant parties			
Plan Reviewed by:			
POSITION;			
DATE REVIEWED:			
NEXT REVIEW DATE:			