

Gosberton House Academy- Surface Water Drainage Strategy During Construction



**Construction Method Plan (CMP) &
Sustainable Drainage Systems Method
Statement (SuDS MS) Rev A dated
03.06.2024**

CMP & SuDS MS Contents



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CMP & SuDS MS during Construction

Project and Contact Details



Business Unit	Wates Construction North (Midlands)		
Project Name	Gosberton House Academy		
Contract Number	572894		
Main Contract Address	Gosberton House School Westhorpe Road, Gosberton, Spalding, PE11 4EW, England, United Kingdom		
Site Office Address	see above		
Project Description	Construction of a new single storey four classroom block including ancillary and other teaching spaces. Construction of a new car park, service diversions and following completion of the new build, demolition of portacabin style tempoary classrooms and landscaping reinstatement.		
Insert Link to Site Plan https://watesgroup.sharepoint.com/:p:/r/sites/A00480/L_Project_HS/01.Project%20Pack/06.Logistics%20Mngmt%20Plan/Gosberton%20TMPLogistics%20-%20Rev%2001%20100424.pptx?d=wd8717fb14a24e26b0d716fe777cfa83&csf=1&web=1&e=MRPZif			
Version Number			
Phase	Select Current Phase	Person Resp for Plan at Present	Role
Bid / Work Winning	Select from dropdown		
Design	Select from dropdown		
Pre-Construction	Current Phase	James Turner	Senior Project Manager
Delivery / Installation	Select from dropdown	Charlie Falkingham	Senior Site Manager
Post Delivery / Smart Landings	Select from dropdown	Charlie Falkingham	Senior Site Manager
Approved By	Mark Jones	Date Approved	03/06/2024
Project Team		Contact Information	
Operations Manager	Mark Jones	07740376150	
Project/Account Lead	James Turner	07523044483	
Bid Manager	Ian Hirst	07718130756	
Designer	Paul Nicholl	07714674853	
Commercial Manager	James Smithers	07957654684	
Quantity Surveyor	Jess Peet	07395601191	
Project Lead	Charlie Falkingham	07979635415	
Site Manager	TBC	TBC	
Section Manager	TBC	TBC	
Project Environmental Coordinator	Charlie Falkingham	07979635415	
SHEQ Advisor	Carl Lewis	07759523823	
Environment/Sustainability Manager	Gina Ciotaki	07887 831 551	

Project Onboarding Information		Guidance	
Start date	22/07/2024	Enter estimated start date	
Expected end date	01/05/2026	Enter estimated end date	
GIFA m2	670	Relevant to Construction, Residential & Smartspace. (Living Space completion is optional and only if relevant)	
Contract value £	£6,000,000	Enter expected project value	
Background Environmental Information		Guidance	
Emergency Response 24/7 (Env)	Acumen	08436 580 513	
Environmental Regulator	Environment Agency (EA)	National Information Line 03708506506	National Emergency Line 0800807060
	Natural Resources Wales (NRW)	National Information Line 03000653000	National Emergency Line 0800807060
	Scottish Environment Agency (SEPA)	National Information Line 03000996699	National Emergency Line 0800807060
	Lead local flood Authority (LLFA)	Welland & Deepings Internal Drainage Board Deeping House Welland Terrace Spalding PE11 2TD Tel: 01775 725861 / Email: info@wellandidb.org.uk / www.wellandidb.org.uk	
Local Authority	Lincoln County Council	The local governmental authority for the project	
Statutory Nature Conservation Areas (SNCA)	N/A	Local Areas with specific conservation designations (SSSI, AONB National Parks etc.) as indicated by Project Ecological Impact Assessment	

CMP & SuDS MS during Construction Considerations

An overarching principle of our assessment for Gosberton is as follows;

1. Prioritisation of the Install, Build, use of the permanent drainage system
2. Use existing drainage systems with pollution control measures where this is not practicable
3. Align earthworks wherever possible to drier summer months

We have considered and will be implementing the following best practise;

1. Complete soil stripping sparingly and with care
2. Not exposure of areas for extended periods following earthworks
3. the use of temporary bunds
4. the use of silt curtains, blankets, wattles and fences
5. using geotextile gully guards on positive systems
6. temporary seeding and mulching for stabilisation
7. using a geotextile and temporary cover over permeable sub-bases
8. Bunded Fuel Storage and emergency spill plans

CMP & SuDS MS during Construction

Outline of CMP & SuDS MS strategy during construction stage

Strategy for surface water management during the construction stage

The construction methodology for groundworks has been planned around the following strategy in relation to the managing of surface water during the works.

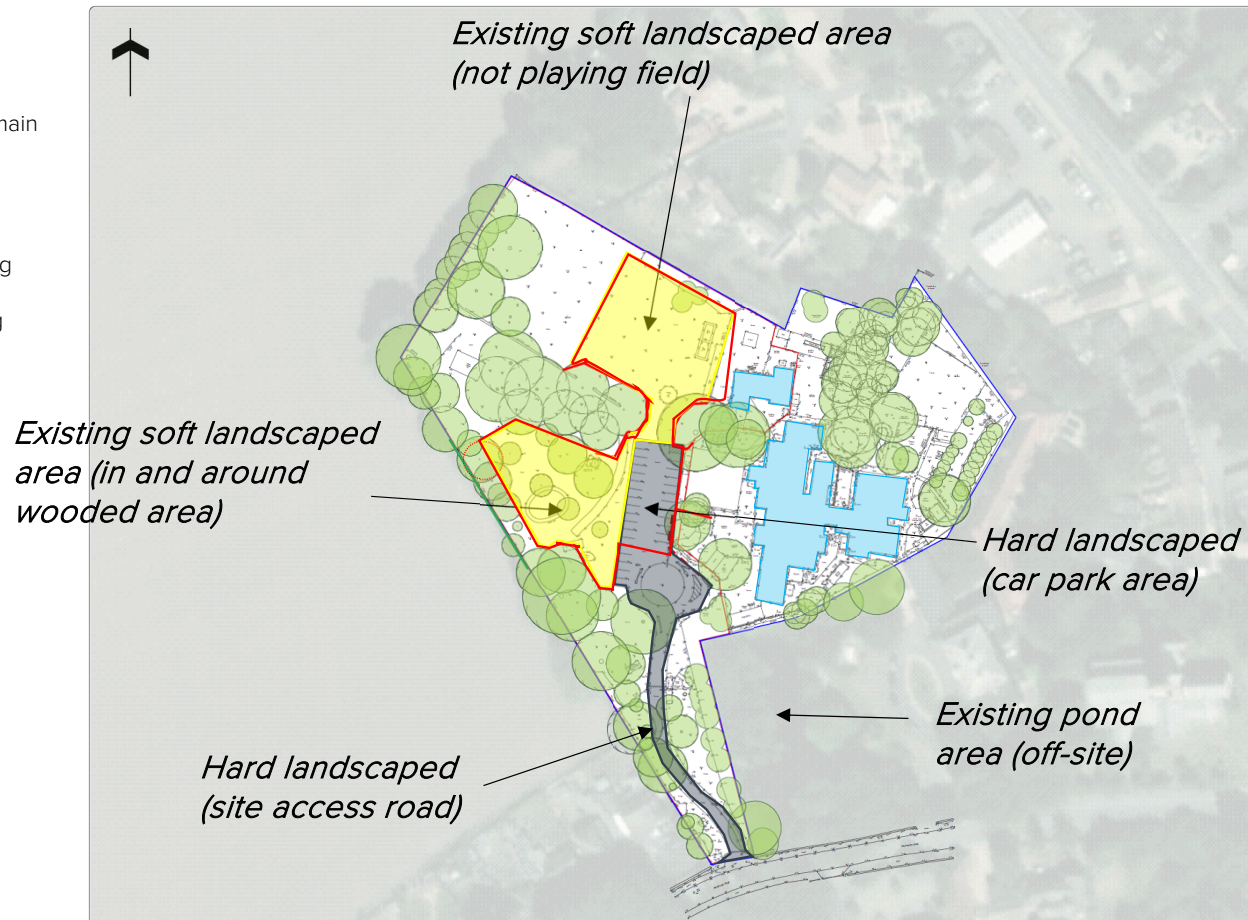
1. Undertake key groundworks in existing “soft landscaped” area during the hottest and driest time of the year.
2. Use dewatering for short duration deep excavation and apply for permit for temporary discharge to foul.
3. Time the remaining shallower excavations to minimise risk of water ingress to trenches and requirement for further de-watering as far as reasonably practicable.
4. Utilise the proposed final storm drainage as early as practicable in the construction stage.
 - Make use of the permanent design as early as possible, including the new attenuation tank.
 - Provides additional drainage capacity to the site, that isn’t achieved until the storm outflow (S.50 work) is completed.
5. Utilise the same permeable construction philosophy for temporary hardstandings as the proposed final hard landscaping construction design.
 - Porous surface to temporary site compound area to allow water through and minimise run-off
 - Temporary hardstanding built up as a raft above the existing ground level rather than displacing into the ground.

CMP & SuDS MS during Construction

Existing site (prior to construction activities)

Legend

- Proposed construction main site area
- Existing school building
- Existing hard landscaping
- Existing soft landscaping



Notes

Main areas of new construction are on existing soft landscaped areas, either the wooded area or the non-playing field grassy area.

The existing car park, which will be retained, currently drains into the existing storm water drainage system.

CMP & SuDS MS during Construction

Wates and School Interface Explanation

Legend

Wates site area

School area

Solid hoarding – above ground

Solid hoarding

Heras fencing

Vehicle gate

Pedestrian gate

Vehicle barriers

Site accommodation

School pedestrian route

School vehicle route

Construction vehicle route

Construction access to site compound via shared road.

Additional construction pedestrian access point to new build block

Roundabout used for turning larger construction vehicles

Shared access route – used by both school and WCL

School pupil route to Forest School via segregated temp path at rear of car parks

Temp car park for school during construction.

Scope

1. Construct new school building
2. Landscaping around school
3. Construct new car parking / hard landscaping in front of new school
4. Adjust site accommodation at end of phase
5. Adjust hoarding at end of phase

CMP & SuDS MS during Construction

1. Undertake key groundworks during driest time of year

Legend

Wates site area

Key Groundworks Area

Outline of permanent car park

Outline of attenuation tank

Area of works for Key Groundworks during school summer holidays

Area of temporary hardstanding for contractor's compound

Permanent car park with attenuation tank below

Notes

Key Groundworks will be undertaken during the school summer holidays (end of July to beginning of September).

The Key Groundworks are works in the existing grassy soft landscaped area to the North of the existing car park.

These works will be;

- Construct the new permanent car park, including the attenuation tank, linear drainage and stormwater drainage to S.2 manhole.
- Form temporary hardstanding for use as a construction compound.
- Porous surfaces for both temp hardstanding and permanent car park.
- Form drainage connection to existing foul for use in temporary state for dewatering.

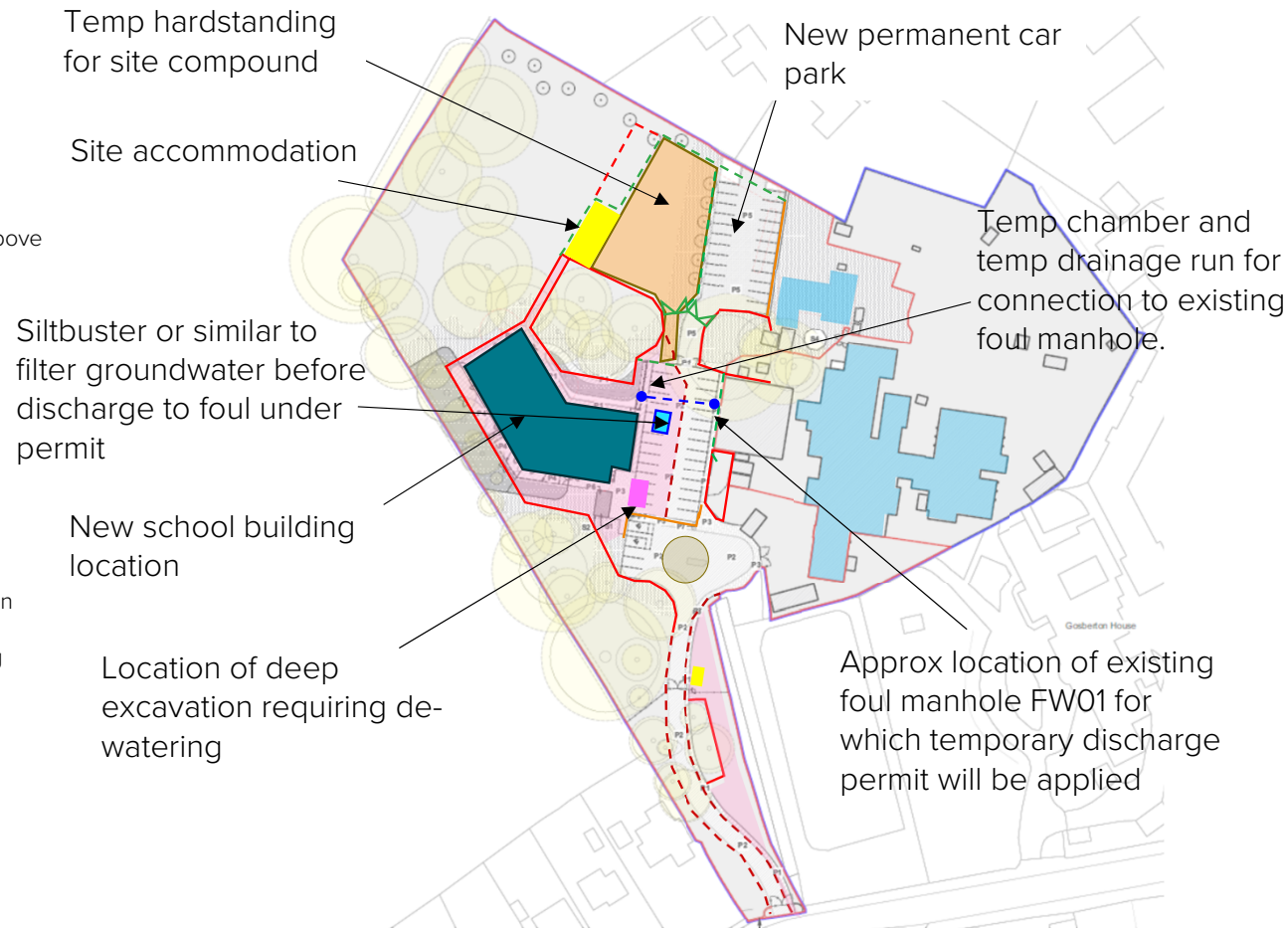
Works are programmed for driest time of the year for buildability reasons, and to minimise the extent of groundwater in excavations.

CMP & SuDS MS during Construction

2. Dewatering for deep excavation

Legend

- Wates site area
- Tree protection
- Solid hoarding – above ground
- Solid hoarding
- Heras fencing
- Vehicle gate
- Pedestrian gate
- Vehicle barriers
- Site accommodation
- Temp hardstanding
- New Building



Notes

Deep excavation (~ 2 - 3m deep) is required for foul and storm pumping station (including foundations).

Tree removal works and the requirement for piling beforehand prevent the deep excavation from being undertaken in school summer holidays (although de-watering would still be required).

Groundwater will be pumped from the excavation, treated via a siltbuster or similar, before discharging to existing foul outflow after a temporary discharge to foul permit is granted.

Deep excavation works are short duration (< 6 weeks) but cannot be undertaken prior to November. These works are necessary to achieve the proposed permanent foul and storm drainage outflow connections.

CMP & SuDS MS during Construction

3. Time the remaining excavations to minimise surface water risk

Wates

Legend

Wates site area

Tree protection

Solid hoarding – above ground

Solid hoarding

Heras fencing

Vehicle gate

Pedestrian gate

Vehicle barriers

Site accommodation

Temp hardstanding

New Building

New school building location

Building perimeter drainage main runs

New fencing gates (foundations is Summer Hols 2025)

Notes

The drainage and the foundations for external vehicle gates will be the only remaining works which require excavation greater than 100 – 200mm. These are the only other works which would have any risk of groundwater in excavations.

The proposed building sits on driven piles. The piling mat will site above existing site levels (top soil removed, then piling mat built up). The proposed levels for bottom of excavation for pile caps is <200mm below piling mat. Underslab drainage will be within the depth of the piling mat.

The remaining drainage works will be undertaken after the piling is complete (early November at the earliest). The ground will be assessed at the time of work to confirm feasibility in relation to groundwater for completing the drainage works. It is anticipated that by undertaking concurrently to the deeper excavation works, the main drainage run construction may benefit from the dewatering to the deep excavations.

If unsuitable at this time of year, the remaining drainage works would be postponed until May 2025 when drier weather is anticipated. (Although local groundworker knowledge indicates that time of year does not yield significant improvement in the ground in this area. a drier time of year will help with pleuvial groundwater infiltration to trench).

If necessary, re-applying for temporary foul discharge permit may be the only viable solution.

CMP & SuDS MS during Construction

Site Specific Environmental Impacts Aspects & Impacts – Surface Water

Evaluation of risk (refer below)

Risk Severity	Likelihood		
	LOW	MEDIUM	HIGH
Low	It has not happened for a long time, is known to be infrequent and is not likely to happen.	It may be less regular but is still recognised as being likely to happen.	It may happen regularly or it could be a usual or common occurrence.
Medium	Low	Low	Medium
High	Low	Medium	High
High	Medium	High	High

There would be minor injuries to persons or some slight damage to property. Environmental impact resulting in minimal environmental damage in both the short- and long-term.

It would probably cause serious injuries, or persons would be off work for over seven days due to their injuries / substantial property damage. Environmental impact resulting in damage contained within site boundaries but requiring prompt remedial action, e.g. Fuel spillages.

The result could be a fatal accident or multiple injuries / major property damage. Significant environmental impact resulting in off-site damage or long term environmental issue, e.g. Pollution of watercourse, contamination of land etc.

Aim: Reduce the risk to low if possible.

List the hazards associated with an activity, estimate (L, M, H) the potential severity of the hazard (refer to definitions in severity) column then estimate (L, M, H) the likelihood of it occurring (refer to definitions in Likelihood row). Do this before and after controls are identified.

Results:

- Combined risk = LOW: the activity does not require further management attention beyond the standard 'good practice' controls included in the Construction Phase Plan (CMP), site rules and relevant procedures / guidance.
- Combined risk = MEDIUM: the activity could be significant and management control is important. Manage through Risk Assessments and Method Statements (RAMS) and/or other management plans or procedures specific to the project. Additional training or resources may be required.
- Combined risk = HIGH: deemed to be significant and senior management control is of a high priority. Consider design changes, Best Practice measures will be adopted. Manage through RAMS and/or other management plans or procedures / instructions specific to the activity plus specialist knowledge and planning. Note that higher risks may additional costs and require greater levels of resources to control.

Environmental Aspect	Who / What might be harmed? Employees, Sub-Contractors, Public, Others, Environment, Wildlife	Environmental Impact	Significance (before controls)			What controls are required? (Reference to site controls or RAMS)	Action by:	Significance (after controls in place)			Opportunity e.g. - Enhanced wildlife habitat - Enhanced business reputation & ability to prequalify for contracts - Improved business reputation & increased attractiveness to skilled & trained employees - Increased operational efficiency - Operational cost savings - Business differentiator - Adding value and direct benefit to communities - Leaving a legacy in communities
			Severity	Likelihood	Risk			Severity	Likelihood	Risk	
Part 1 - Minimising the risk of pollution of land, air and water (GE700 E07) + CRIA C797											
A watercourse runs through or immediately adjacent to the site, or the site overlies an aquifer used for water supply	Environment: Public, Wildlife	Contamination entering the watercourse or groundwater because of site activities, leakage of contaminated water by people (boreholes, water abstraction) and wildlife.	M	L	M	No contamination identified as present in ground investigation reports. If during works contamination is discovered the LA should be contacted and a remedial	Charlie Falkingham	L	L	L	Increased operational efficiency
Main drainage offsite is via separate foul and surface water systems rather than combined sewer	Environment: Wildlife	Contamination and foul effluent entering surface water systems and discharging directly to watercourses etc, rather than being treated at a sewage treatment plant	M	M	M	Existing foul outfalls to be utilised. Checks on site required to see if any storm drains enter the foul network prior to discharge.	Charlie Falkingham	L	L	L	Increased operational efficiency
Works are required on or over a watercourse or floodplain, or within 10m of the top of banks or flood defences	Environment: Wildlife	Loss of materials including silt and cement fines into the watercourse during the works	L	L	L	The works are not next to a watercourse, flood plain or within 10m of a flood defence	Charlie Falkingham	L	L	L	Increased operational efficiency
Fuel, oil and/or chemicals will be stored and/or used on site	Environment	Spillage of hazardous materials onto the ground or drainage systems due to accidents or container failure	M	M	M	All fuels will be brought to site via tanker and stored in accordance with Wates standard. Lockable Double bunded tanks with 110% capacity will be used, emergency spill response will be procured will be posted on the fuel store location, spill kits will be next to fuel stores, plant nappies will be used for static plant. Emergency spill response drills and effectiveness will be recorded with any actions.	Charlie Falkingham	L	L	L	Increased operational efficiency
Plant and/or machinery will be used and/or refuelled on site	Environment	Spillage of hazardous materials onto the ground or drainage systems due to poor refuelling practices	M	M	M	All fuels will be brought to site via tanker and stored in accordance with Wates standard. Lockable Double bunded tanks with 110% capacity will be used, emergency spill response will be procured will be posted on the fuel store location, spill kits will be next to fuel stores, plant nappies will be used for static plant. Emergency spill response drills and effectiveness will be recorded with any actions.	Charlie Falkingham	L	L	L	Increased operational efficiency
The site may generate excessive silt or mud that may flow into watercourses or surface water drainage under both normal and/or flash storm conditions	Environment	Site run-off from a sloping site to a watercourse during heavy rain conditions	M	M	M	The works area and adjacent land is flat, however silt fences will be placed to stockpile soils where imported aggregates are stored.	Charlie Falkingham	L	L	L	Increased operational efficiency
The site access arrangements are likely to lead to mud on roads	Environment	Mud on roads being washed into road gulleys	M	M	M	The site layout benefits the use of existing tarmac driveway and other hard standings, this gives opportunity for vehicle wash down prior to leaving the site.	Charlie Falkingham	L	L	L	Increased operational efficiency
Silt from the site may flow onto neighbouring land under heavy rainfall	Environment	Discharge of silty water from site	M	M	M	Silt fences will be used along boundary to adjacent agricultural and residential boundaries.	Charlie Falkingham	L	L	L	Increased operational efficiency
Excess clean water must be discharged off-site (dewatering etc)	Environment	Potential downstream flood risk if discharged at excessive rates during wet weather	M	H	M	Dewatering and discharge permission will be sought from Anglian water detailing the permissible discharge rate, chemical make up and when the dewatering should stop due to weather events, contact details will be shared.	Charlie Falkingham	L	M	L	Increased operational efficiency
Contaminated or polluted water will have to be discharged off-site (from existing contaminated land, wheel washes etc)	Environment	Inadequately treated waste water entering the wider environment by discharging incorrectly causing potential harm to watercourses, flooding etc	L	L	L	The site investigation reports do not identify contamination.	Charlie Falkingham	L	L	L	Increased operational efficiency
Concrete equipment, mixers or delivery wagons will washout on site	Environment: Wildlife	Loss of cementitious washout water into watercourses, blockage of pipes and sewers	L	M	L	Wash out skips or pits lined with suitable geotextile or polythene will be used for all concrete wash and cleaning of equipment. Excess water and discharge will be managed in the same way as dewatering.	Charlie Falkingham	L	L	L	Increased operational efficiency

CMP & SuDS Maintenance

Site Specific Surface Water Maintenance Plan



Notes

- Refer to HSP drawing GSO-HSP-XX-XX-DR-C-2000 for general notes to be read in conjunction with this drawing.
- This drawing is based on:
 - ARES drawing 798-ALA-00-XX-M2-L-0001 received 23.06.08
 - Laser Surveys drawing N1605-2D-R3 dated 23.05.09

Key

- Manhole/inspection chamber
- CP Catchpit
- Linear drain
- Surface water pipework
- Geocellular attenuation storage
- Filter drain
- Pervious pavement

Note: This drawing is intended to demonstrate the surface water drainage elements on the site requiring ongoing inspection and maintenance. The maintenance of these surface water drainage features is to be in accordance with Appendix 7 of the associated flood risk and drainage strategy (report ref: HSP2023-C4324-C&S-FRAS1-1741).