



# Himley Village, Bicester

## Surface Water Management Plan

*For Cala Homes Cotswolds Ltd.*

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Date      3 May 2024

Doc ref    27141-HYD-XX-XX-RP-C-0011

# Document control sheet

Issued by	Hydrock Consultants Limited Over Court Barns Over Lane Almondsbury Bristol BS32 4DF United Kingdom	T +44 (0)1454 619533 F +44 (0)1454 614125 E bristol@hydrock.com hydrock.com
Client	Cala Homes Cotswolds Ltd.	
Project name	Himley Village, Bicester	
Title	Surface Water Management Plan	
Doc ref	27141-HYD-XX-XX-RP-C-0011	
Project number	27141	
Status	S2	
Date	03/05/2024	

## Document production record

Issue number	P01	Name
Prepared by	Miles Taylor BEng	
Checked by	Bryn Tawton BEng (Hons) MSc	
Approved by	Olivia Dent BEng (Hons) MSc	

## Document revision record

Issue number	Status	Date	Revision details
P01	S2	03/05/24	First Issue.

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## 1. Introduction & Aim

Hydrock has been commissioned to prepare a Surface Water Management Plan (SWMP) by Cala Homes, relating to the development of the site known as Himley Village (Granted Outline planning permission under application ref 14/O2121/OUT), to the north west of Bicester Town. This report concerns the management of surface water run-off from Phases 1 and 2 of the development, as well as information relating to discharge of planning Condition 24.

The requirement for a SWMP is based on the duty to mitigate impacts off-site by ensuring surface water quality and quantity is managed throughout the construction process and during the service lifespan of the development.

Condition 24 states "The development hereby permitted shall not be commenced until such time as a pollution prevention scheme to dispose of contaminated surface water has been submitted to, and approved in writing by, the Local Planning Authority". This report will outline the measures to be incorporated as part of construction to protect surface water drainage systems and prevent contamination by pollutants mobilised during construction.

## 2. Site Details

### 2.1 Location

The site is located to the north of Middleton Stoney Road, approximately 500m east of the M40 and 50m west of the A4095 Howes Lane. The site is approximately 2km west of Bicester town centre.

A site location plan is provided in Figure 1 below, with location details provided in Table 1.

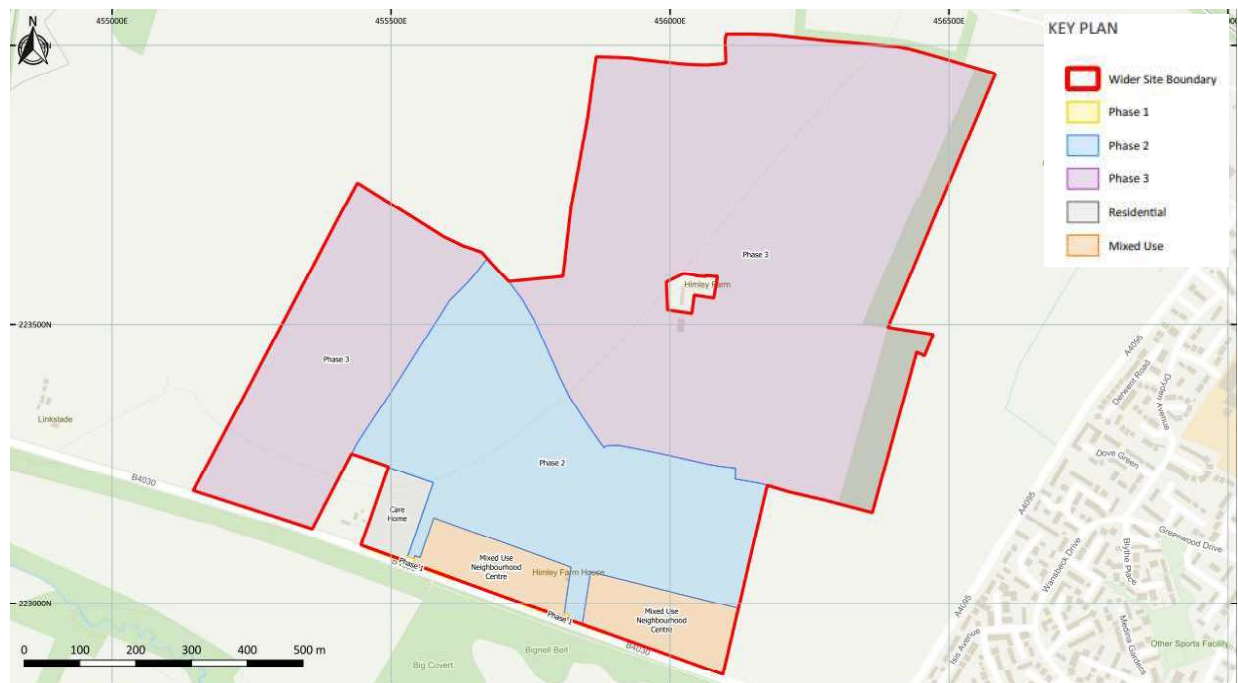




Table 1: Site Referencing Information

Item	Description
Site Name	Himley Village, Bicester
Site Address	Off Middleton Stoney Road (B4030), Bicester, Oxfordshire. The nearest postcode is OX26 1RT
Grid Reference	National Grid Reference of approximate centre of site: 455855, 223172

## 2.2 Development Proposal

The wider site has planning permission (ref 14/O2121/OUT) for up to 1,700 residential dwellings. The development is also to include provision of strategic landscape, new vehicular, cycle and pedestrian access routes, infrastructure and other operations (including demolition of farm buildings on Middleton Stoney Road).

This report concerns the first two phases of the project, comprising approximately 500 of the 1,700 residential dwellings and the associated infrastructure, including the development's primary road network, attenuation basins, roadside swales and below-ground foul and surface water sewer networks.

## 2.3 Topography

The wider site gently slopes from 97m Above Ordnance Datum (AOD) in the north west corner to 84m AOD in the south east. The topography continues to rise to the north west beyond the wider site boundary.

## 2.4 Ground Conditions

See below extracts from Topsoil Resource Survey (Tim O'Hare Associates, January 2023):

- » The British Geology Survey shows the bedrock geology of the site is part of the Cornbrash Formation – Limestone, which comprises a sedimentary bedrock formed between 168 and 163 million years ago during the Jurassic Period. This formation comprises 'Limestone, medium- to fine-grained, predominantly bioclastic wackestone and packstone with sporadic peloids'. No superficial deposits were recorded on site
- » A single topsoil profile was encountered during the site visit which was typically described as below. The topsoil was found to overlay either a heavy clay loam subsoil or limestone bedrock.
- » Topsoil Profile: Brown (Munsell Colour 10YR 4/3), slightly moist, friable to slightly plastic, slight to moderately calcareous CLAY to HEAVY CLAY LOAM with a well-developed, fine to occasionally coarse sub-angular blocky structure

See below extracts from Surface Water Drainage Strategy and Flood Risk Assessment (Alan Baxter & Associates, December 2014):

- » The online Environment Agency maps indicate that the bedrock below the site is designated as a secondary A aquifer, which is described by the EA as "permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers". The EA online maps show no Groundwater Protection Zones (SPZ) in the vicinity of the proposed Himley Village site.

- » An ordnance survey map does note a spring just to the east of Himley Farm. Water from this is likely to flow into the existing drainage ditches.

The Topsoil Resource Survey makes note of the topsoil being generally impermeable and prone to compaction due to its high clay content. Additionally, the Topsoil Resource Survey also notes that the topsoil is at high risk of waterlogging and surface water ponding.

## 2.5 Flood Risk

As detailed within the Surface Water Drainage Strategy and Flood Risk Assessment (Alan Baxter & Associates, December 2014), the wider site boundary of the Himley Village site is fully contained within a Low Flood Risk Zone, and is therefore at low risk of flooding from fluvial sources. Additionally, in discussion with Alan Baxter & Associates, the EA have confirmed there are no known flooding concerns regarding the Himley Village site.

## 2.6 Existing Drainage (Pre-Development)

See below extracts from Phase 1B Infrastructure Drainage Strategy (Hydrock, January 2024):

- » As an agricultural greenfield site, the application site benefits from numerous ditches to control surface water runoff, this network of ditches can be viewed in Figure 3.3 of the Alan Baxter FRA (reproduced below).
- » The ditches on the application site form a land drainage network to serve the site and they convey surface water to existing water courses. The site predominantly falls to the south and east through the ditches and a long ditch that runs parallel to the B4030. The ditch is culverted along the new commercial development in the south east and is piped to the south where it is understood to discharge into the Gagle Brook.

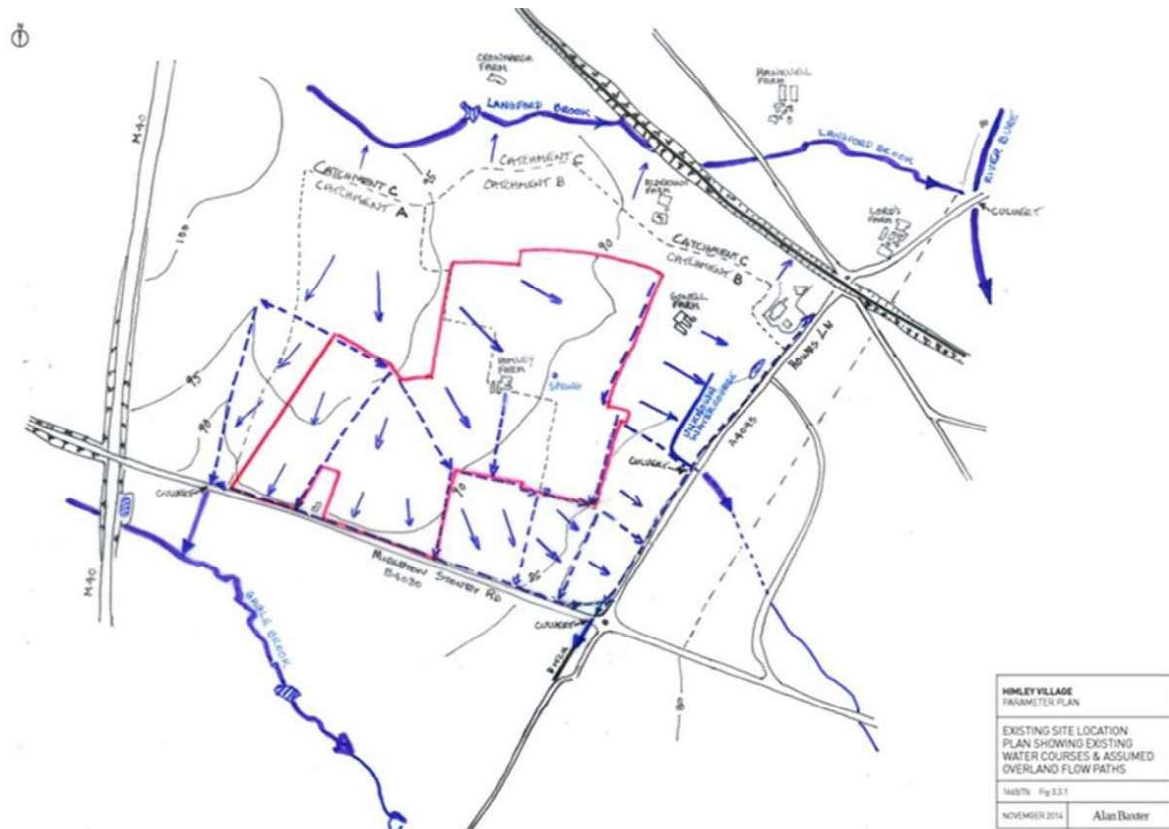


Figure 2: Site location plan with key drainage features (FRA report Fig. 3.3, Alan Baxter & Associates, 2014)

### 3. Managing Surface Water During Construction

### 3.1 Surface Water Management

A temporary surface water management system is not anticipated to be required as permanent surface water drainage infrastructure will be installed from the beginning of construction (client/contractor to confirm construction schedule). However, temporary surface water management measures such as cut-off trenches, detention ponds/basins, earth bunds may be used if necessary (i.e. due to access constraints or severe storm events). Figure 3, below, indicates the proposed phasing plan for the 500-dwelling development, and the associated proposed overland flow paths for the scheme.

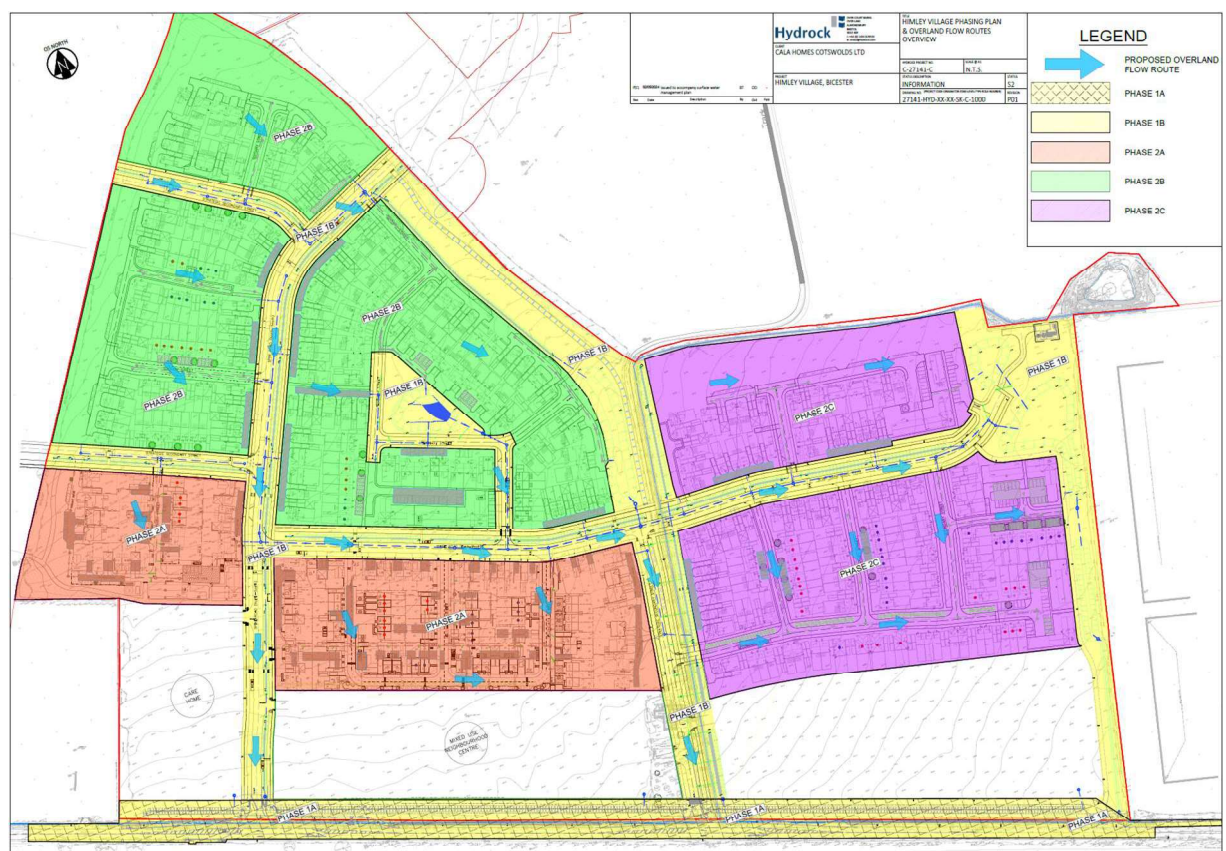


Figure 3: Site phasing plan with key overland flow routes

Phase 1A of the proposed development comprises construction of the site access bell-mouths to the south of the site, and associated drainage & cycleway along Middleton Stoney Rd. These works require the re-profiling of the drainage ditch running alongside the existing highway. All surface water runoff from Phases 1 and 2 will discharge to this ditch, which flows through Bicester to the east of the site via a culvert beneath the B4030.

Phase 1B of the development will comprise the development's main highway network featuring roadside swales, main surface and foul water sewer networks, and associated attenuation basins & conveyance swales.

Approximately 500 residential dwellings will be constructed through three development phases (2A, 2B and 2C). Surface water run-off from these phases will be drained via the permanent surface water drainage infrastructure constructed as part of the Phase 1 works.



The site compound will contain welfare facilities, material and spoil storage, and staff parking. The location of the site compound during each phase is to be confirmed by the client/contractor.

If necessary, temporary cut-off trenches/shallow swales can be used during construction to intercept surface water run-off and direct it towards low spots. At these spots temporary small basins or collection pits can be created. If installed, these features will be regularly reviewed and locations adjusted to suit the construction programme.

Earth bunds can also be used to intercept surface water run-off and direct it towards the low spots and into the collection pits. If used, the earth bunds will be 0.5m high with self-supporting 1 in 2 side slopes and an approximate 0.5m wide top plateau. As the construction progresses the earth bunds will be raised up to match the site levels to ensure they continue to intercept the surface water run-off.

Any cut-off trenches/swales deemed necessary will be shallow to mitigate health and safety risks to site personnel. The collection pits will be surrounded by temporary fencing. The dangers of these open water features (collection pits and cut-off trenches/swales) will be communicated to site personnel by the contractor.

The site is unsuitable for infiltration drainage due to the presence of impermeable clays and potential high groundwater levels (see Section 2.5). As such, a temporary soakaway is not suitable for surface water management during construction.

### 3.2 Silt Management

As noted previously; Condition 24 of the Outline planning approval states "The development hereby permitted shall not be commenced until such time as a pollution prevention scheme to dispose of contaminated surface water has been submitted to, and approved in writing by, the Local Planning Authority". It is anticipated that the primary risk for contamination of surface water on the site will arise from mobilisation of suspended silt during construction activities, and measures should be put in place by the developer/contractor to ensure silt does not impact any surface water drainage features or downstream watercourses.

Runoff containing silt is to be prevented from entering any permanent surface water drainage or SuDS infrastructure to prevent damage, loss of drainage functionality and the discharge of silt off-site. This infrastructure includes the re-profiled ditch, swales and attenuation basins to be constructed during Phase 1, as well as the SuDS components (permeable paving and cellular storage tanks) to be constructed during Phase 2.

Silt fences will be required:

- » Along the re-profiled southern ditch, swales running alongside access roads (prior to installation of inlet kerbs) and around the attenuation basins.
- » Around all SuDS components constructed during Phase 2 where runoff is likely to be directed towards them.
- » At the interface between any temporary drainage components as necessary, if silt build up within the temporary trenches caused a capacity issue and is not removed as sufficient frequencies.
- » Between phase boundaries and areas where differences in level are present to prevent the movement of silt from one area to the adjacent area.
- » Around large stock piles of earthworks and topsoil to prevent movement of silt.
- » At site boundaries where runoff would leave the site

The silt that builds up behind silt fences will be periodically monitored and, when required, the silt will be excavated and should be disposed off-site.

To reduce the amount of silt found in surface water runoff, site access roads used by construction traffic will be swept daily in winter months, October-March and twice weekly the rest of the year. Additional road sweeping will be called for by the site team where required. Road gullies are to be cleaned out regularly.

Site deliveries and incoming plant will utilise temporary running course on site's road network. Jet washing will take place to clean wheels before exiting onto the local road network. Due to the phasing of the scheme, access routes will be changing throughout the build and site will undertake regular reviews of delivery routes to minimise movement of silt/mud across the site.

Should mud or debris find its way onto the local highway network, road cleaning with a road sweeper would be organised as required.

Road gullies are to be protected with sand bags, straw bales or similar.

The contractor should provide temporary screens in each of the downstream manholes during the construction period of the development, in accordance with Sewerage Sector Guidance and the local sewerage undertakers requirements.

All permanent surface water drainage components are to be inspected at the end of construction for the presence of silt or other construction materials. If any material found, components to be fully remediated before entering service. Refer to Section 6 for further maintenance information.

If necessary, a sediment removal device (Silt Buster or similar) should be used to process the surface water collected in any temporary ponds/basins (if installed) before pumping into receiving ditch network.

Similarly, if run-off containing silt enters the permanent attenuation basins, remediation should include pumped water being passed through a sediment removal device before discharge.

### 3.3 Potential Flooding

Straw/hay bales stored on site will be placed around any collection pits in periods of excessive surface water rainfall/runoff, to prevent over topping and flooding as a result of compacted ground or increased impermeable area without connections to the permanent drainage system. After excessive storm events, all surface water drainage components should be inspected and remediated, if necessary. Refer to Section 6 for further maintenance information.

### 3.4 Pollution, Water Quality and Emergency Control Measures

#### 3.4.1 Fuel and Chemical Spills

With machinery operating on site, it is possible that fuel or chemical spills will occur. To minimise the risk when refuelling takes place, the following steps will be taken:

- » Refuel mobile machinery in a designated area, on an impermeable base away from drains or watercourses;
- » Use a bunded bowser;
- » Supervise all refuelling and bulk deliveries;

- » Don't jam open a delivery valve;
- » Check the available capacity in the tank before refuelling;
- » Check hoses and valves regularly for signs of wear;
- » Turn off valves after refuelling and lock them when not in use;
- » Use drip trays under pumps to catch spills;
- » Keep a spill kit with sand, earth or commercial products for immediate containment of any spillages;
- » Provide incident response training to the staff and contractors.

### 3.4.2 Cement and Concrete

Concrete and cement will be used to construct the dwellings, roads and hardstands. Proposed measures to minimise the risk of pollution from concrete and cement mixing, and the washing area are to be implemented as follows:

- » They are to be sited a minimum of 10m from any watercourse, ditch or surface water drain to minimise the risk of run off;
- » Have a re-circulation system for water reuse to minimise the risk of pollution;
- » Any wash water from these processes will be collected and contained in order for it to be disposed offsite.

## 4. Responsibilities & Monitoring

During the construction phase, the principal contractor will be responsible for setting the control systems in place, with regular monitoring and with a 24 hour on call emergency contact, in accordance with the CDM regulations.

Monitoring of the system during construction will continue to ensure any temporary cut off trenches/ shallow swales and earth bunds are physically maintained to ensure flow of run-off to the low points, and silt/pollutants removed as appropriate to ensure a clean flow of water is maintained.

The site perimeter will be secured with appropriate fencing/hoarding to restrict public access. Fencing and hoarding will be inspected and maintained regularly by the contractor.

Any silt/pollutants removed will be disposed of to a designated waste management facility.

The groundworks contractor will be responsible for inspecting any cut off trenches (if deemed necessary to install), silt fences and the installed permanent gullies on a weekly basis. Any blocked gullies shall be cleared of silt and debris and missing or broken geotextile fabric (Terram) over the gully gratings should be repaired. Silt will be removed from behind any silt fences and damaged fences should be repaired. Any necessary repairs to the silt trenches should also be undertaken to ensure their effective operation.

Photographic records of inspected trenches, fences and gullies are to be taken.

Table 2 identifies the key roles and responsibilities for the scheme. This is to be completed by the client and appointed contractor.

*Table 2: Roles & Responsibilities*



Role	Contact	Company Name & Address	Contact No. & Email	Key Responsibilities
<b>Monitoring and management of silt management plan</b>	To be completed by client.	To be completed by client.	To be completed by client.	Weekly review of installed silt management with groundworker. Reporting of any concerns/amendments required. Review of weather warnings and reviewing installed silt management prior to weather event.
<b>Weekly inspection and reporting of installed silt management controls</b>	To be completed by contractor.	To be completed by contractor.	To be completed by contractor.	Weekly inspections and maintenance of installed silt management. Reporting of alterations required to site management team. Review of weather warnings with site management team and reviewing installed silt management prior to weather event.

The following Met Office Weather Matrix will be used as a reference tool for weather warnings and to allow planning for all eventualities. Site will be made aware of the warning colours (yellow, amber and red) and the procedures to follow based on the warning status.

Table 3: Environment Agency Weather Warnings

Alert level	Definition	Action	Responsibility
<b>Yellow: Be Aware</b>	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. Other yellow warnings are issued when the weather could bring much more severe impacts to many	<ol style="list-style-type: none"> <li>1. Basin / ditches / swales / bunds to be checked.</li> <li>2. Drains and gullies to be checked.</li> <li>3. Pumps and hoses checked.</li> <li>4. Check filters.</li> </ol>	Site Manager

	people but 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 warnings.		
<b>Amber: Be Prepared</b>	There is an increased likelihood of impacts from severe weather, which could potentially disrupt your works plans. This means there is the possibility of travel delays, road and rail closures, power cuts and the potential risk to life and property.	<ol style="list-style-type: none"> <li>1. Place pumps to hoses ready for use.</li> <li>2. Run-off monitored.</li> <li>3. Water levels monitored.</li> <li>4. Equipment moved to high ground.</li> <li>5. Only attempt to travel if safe to do so.</li> </ol>	Site Manager
<b>Red: Take Action</b>	Dangerous weather is expected and, if you haven't already done so, you should take action now to keep yourself and your work force 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. You should avoid travelling, where possible, and follow the advice of the emergency services and local authorities.	<ol style="list-style-type: none"> <li>1. Pumps running.</li> <li>2. Secure the site Move labour to high ground/ safe place with means of escape.</li> <li>4 Temporary accommodation for onsite workers.</li> </ol>	Everyone

The site will sign up to receive official severe weather warnings, so that in the event of extreme wind or rain, tasks that have the potential to cause sediments/pollution are postponed.

Flood warnings for the site will be obtained from <https://check-for-flooding.service.gov.uk/>, 0345 988 1188

## 5. Completion of Construction

Before final completion, the new drainage system will be inspected, and CCTV surveyed to ensure any debris has been removed, so the drainage system can function as designed.

Any remedial works will need to be carried out in line with the maintenance period, unless they pose a flood risk and will need to be resolved immediately.

## 6. Maintenance Strategy

A maintenance strategy should be produced for both the permanent surface water drainage system serving the development and any temporary surface water drainage measures installed as part of construction works, in order to ensure that drainage features and any receiving watercourse are not subject to construction-related pollution. Any and all measures included in these documents should have a clear regular maintenance regime which should be adhered to by both the contractor and the operator(s) of the site, including the client and any private management company, until any adoptable drainage is transferred to the relevant adopting authority.

## 7. Conclusion

On the basis that the proposed measures outlined above are implemented, the risk of silt and pollutants entering the existing drainage system during construction is highly reduced.

On the basis that the existing flood risk to the site is low and proposed measures outlined above are implemented, it has been demonstrated that the risk of off-site flooding has been reduced during the construction period.

On the basis that a suitable drainage maintenance regime is produced and implemented, the functionality of the permanent surface water drainage infrastructure will be maintained, ensuring surface water is adequately managed during the service lifespan of the development.



## *APPENDIX A: Surface Water Management Plan - Cala Group Limited HSE Form*

# Surface Water Management Plan

## Purpose

To ensure that any surface water leaving a Cala site is sufficiently treated, so as to be acceptable for disposal into controlled waters. This will be achieved by:

- Identifying potential entry points of surface water onto or within the site;
- The implementation of specific measures for capture (e.g. lagoons);
- Treatment where necessary, within our boundaries, prior to being discharged off site; and
- Implementation of emergency measures/arrangements.

Additionally, the plan will identify the requirements to ensure that any implemented measures are adequate and effective, through monitoring, sample collection or other means. Records (logs, photographs, etc.) will be kept. The plan will identify the responsible parties (named) for each item and the frequency of each event. The plan will be reviewed at appropriate frequencies, but at least quarterly, dependent on risk and impact.

Region	Oxfordshire
Site name	Himley Village (Phases 1 & 2)
Site address	Land to north of Middleton Stoney Road (B4030), Bicester, Oxfordshire, OX26 1RT

### 1. Surface water management plan – layout

This form concerns Phases 1 and 2 of the wider Himley Village development. The boundaries of these Phases are shown within the wider site boundary in the figure below.



Figure 1: Himley Village site plan showing phase boundaries within wider site

An extract of the proposed Surface Water Drainage scheme for the development is shown below. Please refer to drawing series 27141-HYD-1B-XX-C-0600 for further details.

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2. Identifying water sources entering site (inlets)

Details of existing streams or ditches

The existing site includes a number of land drainage ditches conveying surface water to existing water courses as shown in Figure 1 below, including a ditch running along Middleton Stoney Road, immediately to the south of the development site.

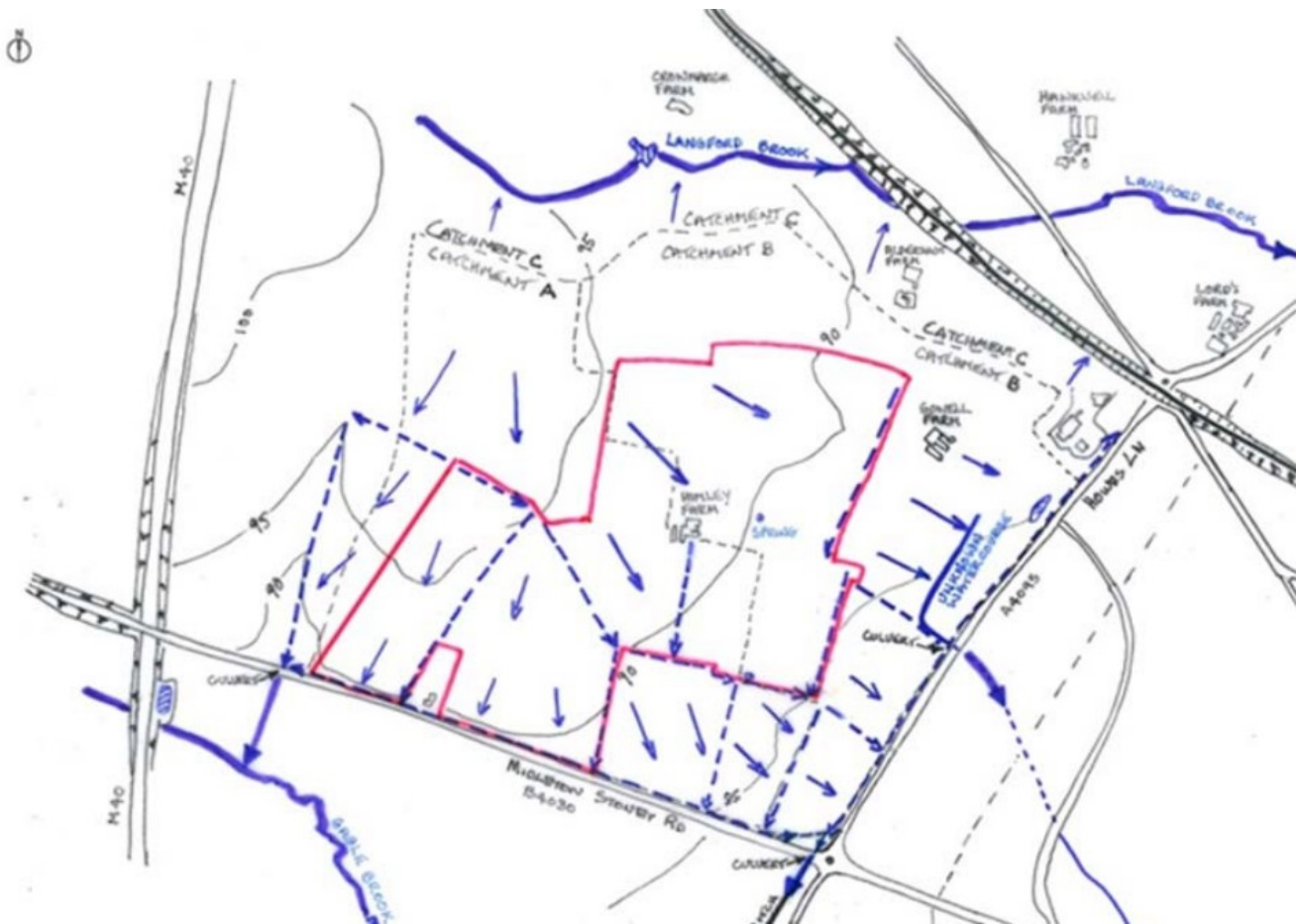


Figure 1: Site location plan with key drainage features (FRA report Fig. 3.3, Alan Baxter & Associates, 2014)

Details of springs, pumping sources

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Not Applicable.

Details of existing, proposed streams or ditches, road gullies, land drainage, surface water drainage etc.

Details of existing land drainage ditches are provided above, in Section 2.

The existing drainage ditch running along the B4030 will be re-profiled during Phase 1A. All surface water runoff from Phases 1 and 2 will discharge to this ditch via 3 no. flow-restricted outfalls, in accordance with the approved planning strategy.

Swales running alongside the development's primary road network will be constructed during Phase 1B, in addition to multiple attenuation basins & conveyance swales.

As part of the residential phase-specific drainage design, permeable paving areas and cellular storage tanks will be installed. These SuDS components (Sustainable Urban Drainage Systems), along with a series of road gullies and gravity sewers, will direct surface water runoff from the impermeable areas and roofs constructed in Phase 2 into the surface water drainage constructed in phase 1, firstly through the swales and attenuation basins, which subsequently discharge into the drainage ditch running alongside Middleton Stoney Road.

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3. Capture measures
<p>Ditches</p> <p>It is not anticipated that a temporary surface water management system will be required to manage surface water during construction on account of permanent surface water drainage being constructed early in the construction schedule (client/contractor to confirm construction schedule).</p> <p>However, if necessary, ditches could be utilised as a temporary surface water management feature to direct any excess runoff towards low spots &amp; installed permanent drainage features.</p> <p>Ditches (cut-off trenches/shallow swales) one such example of a temporary surface water management component that could be used to direct runoff to low spots.</p> <p>If installed, any temporary cut off trenches/shallow swales will be regularly reviewed and sections removed to suit the construction programme.</p> <p>Any cut-off trenches/swales deemed necessary will be shallow to mitigate health and safety risks to site personnel. The contractor will also communicate the dangers associated with open water features to site personnel.</p>
<p>Settlement ponds</p> <p>As part of the development's permanent surface water drainage network, a number of attenuation basins will be constructed. To prevent suspended materials mobilised during construction from entering the downstream ditch/watercourse network, temporary settlement ponds could be incorporated within these basins, which would be cleaned and infilled prior to completion of construction works.</p> <p>If a temporary surface water management system is deemed necessary during the construction period, settlement ponds/detention basins should be installed at low spots to collect surface water runoff.</p> <p>If installed, any temporary settlement ponds/detention basins will be enclosed by temporary fencing for safety purposes. The contractor will also communicate the dangers associated with open water features to site personnel.</p>
<p>Earth bunds</p> <p>Earth bunds are another example of a temporary surface water management component that could be used to direct runoff to settlement ponds/detention basins at low spots.</p> <p>As described above, construction of temporary earth bunds as part of a temporary surface water management system is not expected to be necessary across the site due to the generally flat topography. However, if temporary earth bunds are required, they will be 0.5m high with self-supporting 1 in 2 side slopes and an approximate 0.5m wide top plateau. As the construction progresses the earth bunds will be raised up to match the site levels to ensure they continue to intercept the surface water run-off.</p> <p>If installed, any temporary earth bunds will be regularly reviewed and sections removed to suit the construction programme.</p>
<p>Other</p> <p>N/A</p>

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4. Treatment
Dirt bags
Gulley bags
<p>Road gullies are to be protected from sediments and pollutants by sand bags, straw bales, specialist Gully Guard bags or similar.</p> <p>If specialist Gully Guard bags are used, the manufacturer's guidebook should be consulted for further information.</p> <p>The contractor should provide temporary screens in each of the downstream manholes during the construction period of the development, in accordance with Sewerage Sector Guidance and the local sewerage undertakers requirements.</p>
Silt fences
<p>Silt fences will be used to prevent silt entering any permanent surface drainage infrastructure or SuDS components. Silt buildup can result in damage to drainage components, loss of functionality and discharge of runoff containing silt off-site.</p> <p>Silt fences will be installed along the re-profiled ditch, swales running alongside access roads and around the attenuation basins, where adjacent ground levels indicate overland flows will be directed over such features.</p> <p>Silt fences will also be installed around permeable paving areas and the cellular storage tanks (prior to being buried).</p> <p>If temporary surface water drainage components are deemed necessary, silt fences will be placed at the interface between any temporary trenches and collection pits. Intermediate silt fences can be installed across the cut off trenches/shallow swales if large amounts of silt are generated on site. The fences will separate the silt from the surface runoff with the filtered runoff passing through into the small detention basins.</p> <p>Silt fences will be installed to between phase boundaries and areas where differences in level are present to prevent the movement of silt from one area to the adjacent area.</p> <p>Silt fences shall be installed around large stock piles of earthworks and topsoil to prevent movement of silt.</p> <p>The silt that builds up behind silt fences will be periodically monitored and, when required, the silt will be excavated and should be disposed off-site.</p>
Settlement tanks
<p>If necessary, a sediment removal device should be used to process the surface water collected in any permanent/temporary ponds/basins (if installed) before pumping into receiving ditch network.</p> <p>If a settlement tank is installed, the manufacturer's guidebook should be consulted for further information.</p>
Other – road cleaning, assessments, contact with neighbours

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**Road cleaning:**

Site access roads used by construction traffic will be swept daily in winter months, October-March and twice weekly the rest of the year. Additional road sweeping will be call for by the site team where required. Road gullies are to be cleaned out regularly.

Site deliveries and incoming plant will utilise temporary running course on site's road network. Jet washing will take place to clean wheels before exiting onto the local road network. Due to the phasing of the scheme, access routes will be changing throughout the build and site will undertake regular reviews of delivery routes to minimise movement of silt/mud across the site.

Should mud or debris find its way onto the local highway network, road cleaning with a road sweeper would be organised as required.

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Document Title	Surface Water Management Plan	Document Number	CGL-F-EMS1
Author	Group HSE Director	Version number	1
Approved by	Group HSE Director	Approval Date	01/05/2023
Page	6 of 8	Implementation Date	01/05/2023

**5. Discharge points****Water courses**

All surface water runoff from Phases 1 and 2 of the development will be conveyed to the drainage ditch running alongside the B4030. This ditch is culverted to the south east of the site and is understood to discharge to the east via a further ditch. Refer to Section 2 for further information.

**Surface water mains drainage**

The Surface Water Drainage Scheme proposed for the development comprises a number of SuDS features (including roadside swales, attenuation basins, permeable paving), which ultimately discharge to 3 no. outfalls to a ditch on the southern boundary of the site. To ensure all of these features, and any receiving watercourses, are protected from pollution by following measures recommended in this document and the accompanying Surface Water Management Plan.

**Tanker**

N/A

Document Title	Surface Water Management Plan	Document Number	CGL-F-EMS1
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Page	7 of 8	Implementation Date	01/05/2023



## 6. Emergency measures/arrangements

## Excessive rainfall / water flow

Straw/hay bales stored on site will be placed around any collection pits in periods of excessive surface water rainfall/runoff, to prevent over topping and flooding as a result of compacted ground or increased impermeable area without connections to the permanent drainage system. After excessive storm events, all surface water drainage components should be inspected and remediated, if necessary.

## Emergency team

Cala Homes to confirm.

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7. Monitoring arrangements (locations – marked on plan)			
What	How	When	By whom
Water basins-entry and exit points	To be completed by contractor.	To be completed by contractor.	To be completed by contractor.
Settlement ponds	“	“	“
Temporary settlement tank (portable)	“	“	“
Site entry points	“	“	“
Site exit points	“	“	“
Site entry points	“	“	“
Site exit points	“	“	“
Testing/analysis of samples	“	“	“
8. Reporting (what, when & to whom)			
What	When	To whom	
Breaches of measures to control flows (e.g. damage to filter mediums, gaps in bunds etc.)	Immediate	Cala Management	
Inadequacy of implemented measures to control flows (localised flooding, new sources of water flow etc.)	Immediate	Cala Management	
Changes to visual water quality through the outfalls	Immediate	Cala Management	
Changes to suspended solids in sampled water analysis	Immediate	Cala Management	

9. Review frequencies			
What	How	When	By whom
Surface Water Mgt Plan	A set procedure - every 3 months and following/during severe weather conditions.	3 monthly & following adverse weather	Site Manager /
Environmental objective	Silt/slurry collection, also visual assessments, flow rate assessments	2 weeks & following adverse weather	Site Manager /
Actions	System amendment if potential failures identified	Immediate	Site Manager /

10. Standards			
Item	Equipment	Supplier/provider	Installer
Filter bag medium	Dirt bag – 100 micron	Cala	Groundworker
Silt fence	Terrastop Pream – 250 micron	Cala	Groundworker
Pumping requirements	2" pump capable of delivery 600 litres per minute	Cala	Groundworker

Prepared by Contracts/Project Manager					
Print name		Signature		Date	

Reviewed by Construction Director					
Print name		Signature		Date	

Reviewed by CDM Advisor/Manager					
Print name		Signature		Date	

Accepted by Site Manager					
Print name		Signature		Date	

Revisions				
Rev.	Date	Amendments	By	Approval
01	03/05/2024	First Issue.	Miles Taylor	Olivia Dent

## *APPENDIX B: Phasing Plan & Overland Flow Routes Overview*





Hydrock

OVER COURT BARN  
OVER LANE  
ALMONDSBURY  
BRISTOL  
BS32 4DZ  
T: +44 (0) 1454 639033  
e: bristol@hydrock.com

CLIENT  
CALA HOMES COTSWOLDS LTD

PROJECT  
HIMLEY VILLAGE, BICESTER

TITLE  
HIMLEY VILLAGE PHASING PLAN  
& OVERLAND FLOW ROUTES  
OVERVIEW

HYDROCK PROJECT NO.  
C-27141-C

SCALE @ A1  
N.T.S.

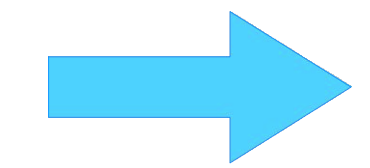
STATUS  
S2

STATUS DESCRIPTION  
INFORMATION

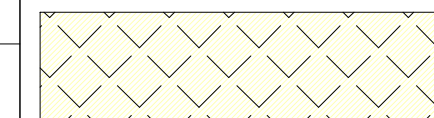
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27141-HYD-XX-XX-SK-C-1000

REVISION  
P01

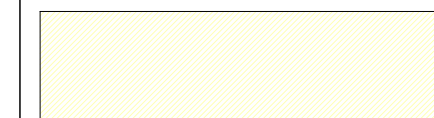
## LEGEND



PROPOSED OVERLAND  
FLOW ROUTE



PHASE 1A



PHASE 1B



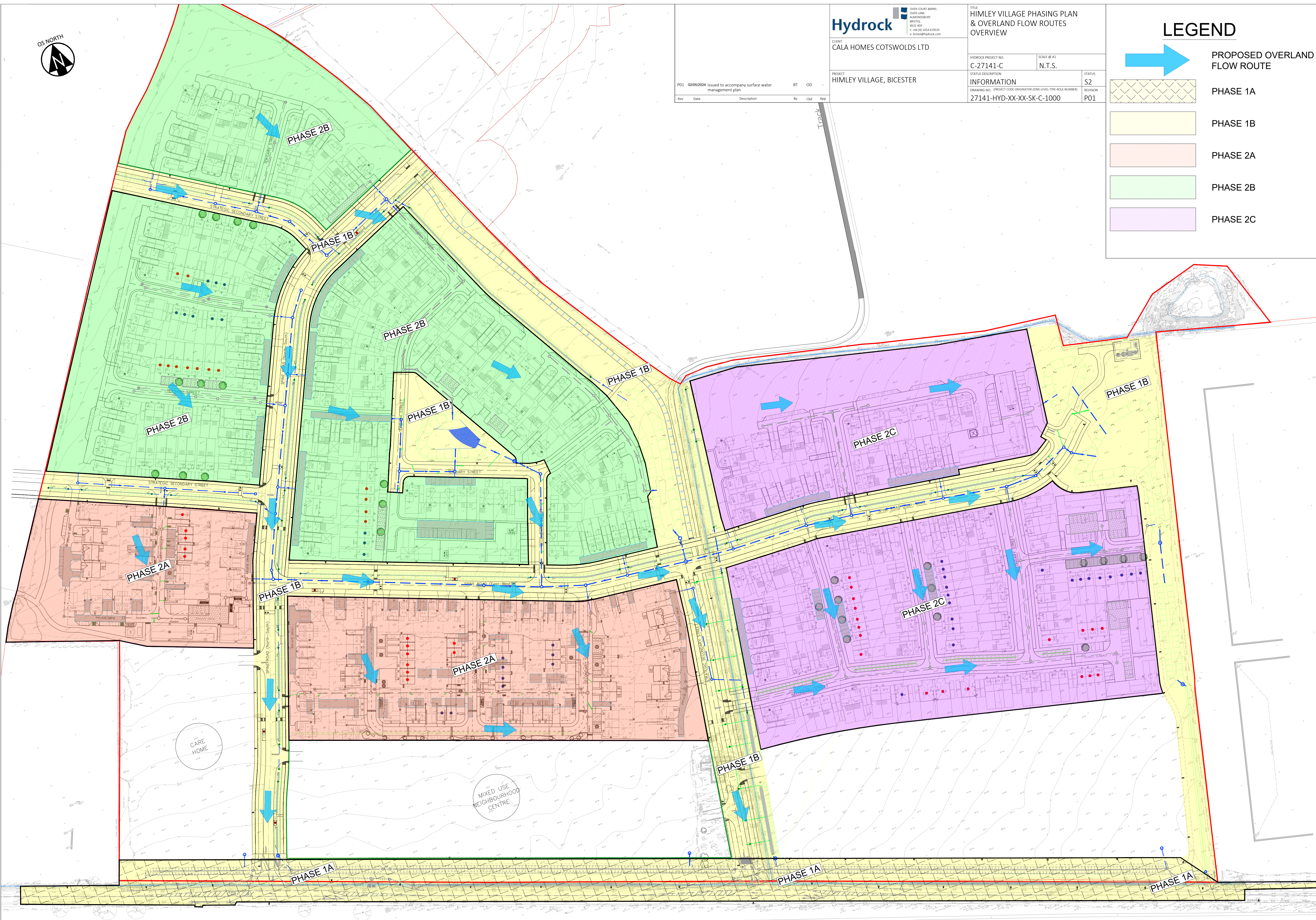
PHASE 2A



PHASE 2B

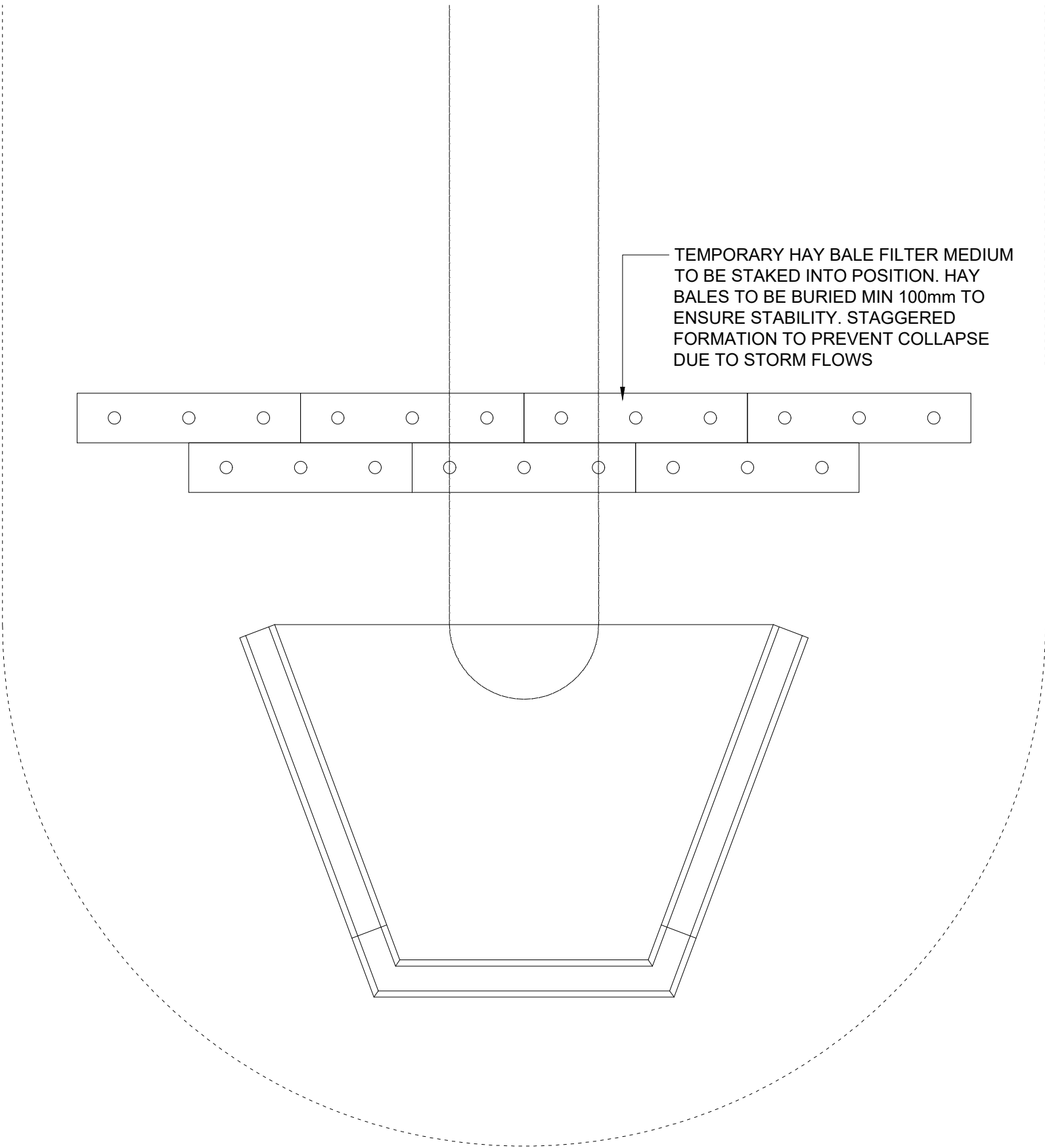


PHASE 2C

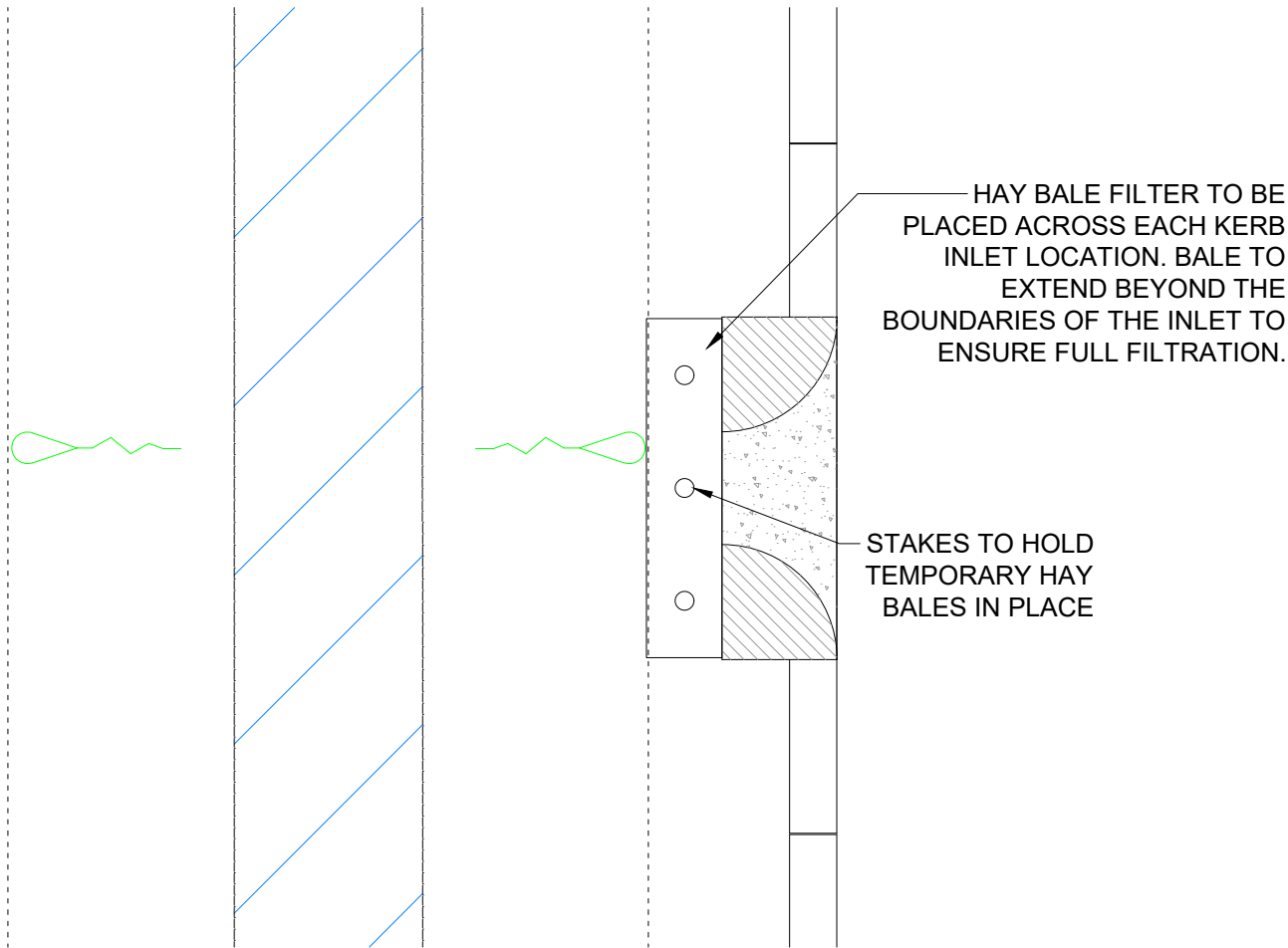




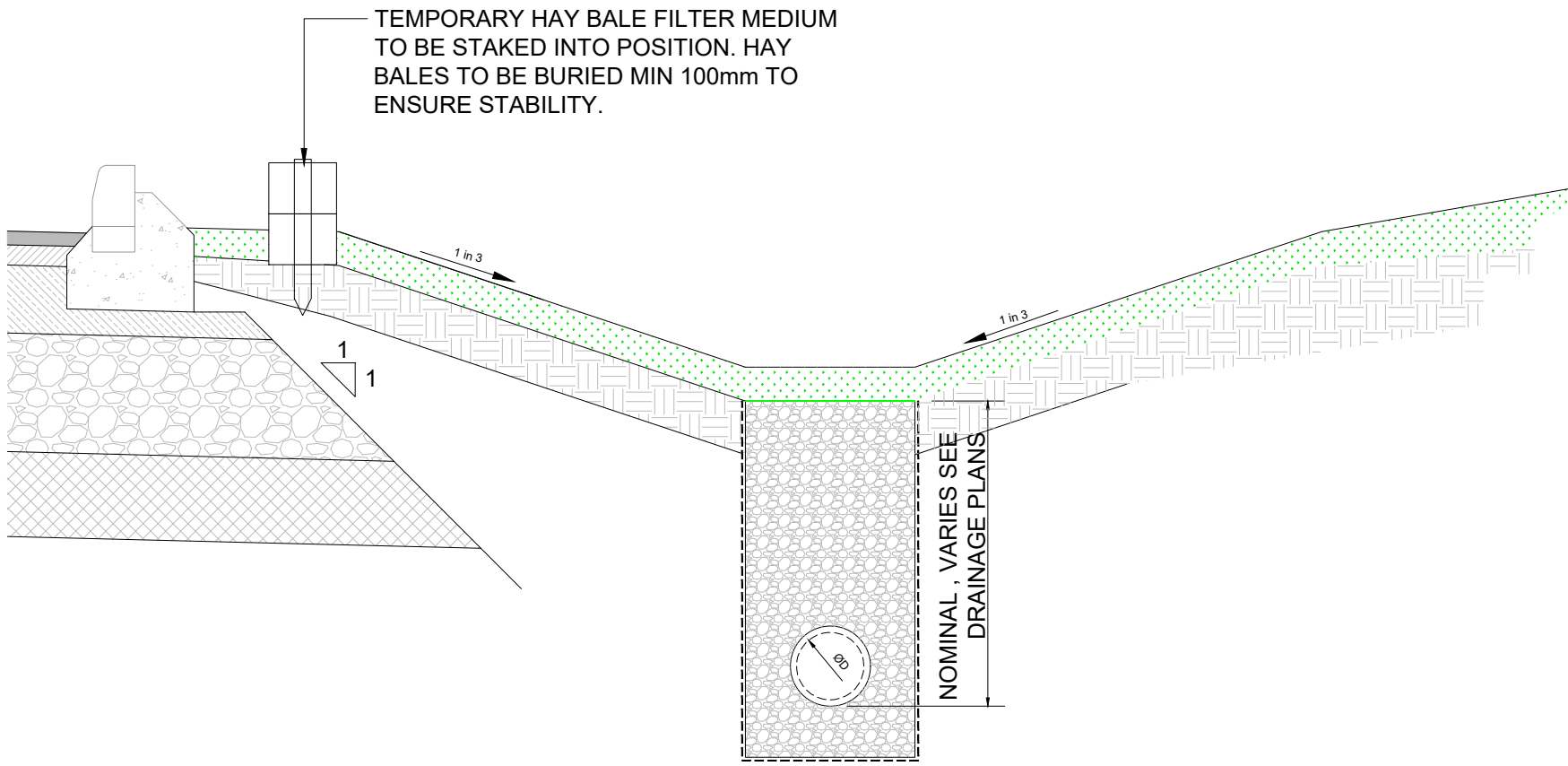
## *APPENDIX C: Indicative hay bale silt prevention detail*



TEMPORARY HAY BALE ARRANGEMENT - SWALE  
OUTLET  
SCALE 1:20



TEMPORARY HAY BALE ARRANGEMENT  
SCALE 1:20



TEMPORARY HAY BALE ARRANGEMENT SECTION  
SCALE 1:20

- Notes:
- Do not scale this drawing
  - The planning, design and construction of sewers shall be in accordance with Sewerage Sector Guidance Appendix C - 'Design and Construction Guidance'.
  - All sewers to be laid soffit to soffit unless otherwise shown.
  - Compliance with Health & Safety matters on any trench/manhole is obligatory and a permit to enter a confined space is required when connecting site drainage to the existing public sewerage system. A permit to enter a confined space will be obtained from Severn Trent Water prior to the works commencing on any public sewerage system.
  - All pipes to be plastic unless otherwise shown.
  - Ladders to be galvanised mild steel to BS 4211.
  - Step rungs to be double width, plastic encapsulated mild steel. Distance between step rungs to be 250-300mm.
  - Precast concrete rungs will not be cut under any circumstance.

REVISIONS

P01 03/05/24 First Issue. HR BT BT

Rev	Date	Description	By	Ckd	App
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OVER COURT BARN  
OVER LANE  
ALMONDSBURY  
BRISTOL  
BS32 4DF  
T: +44 (0) 1454 619533  
e: bristol@hydrock.com

CLIENT  
CALA HOMES

PROJECT  
HIMLEY VILLAGE,  
BICESTER,  
OXFORDSHIRE

TITLE  
INDICATIVE HAY BALE  
SILT PREVENTION DETAIL

HYDROCK PROJECT NO. C-27141-C		SCALE @ A1 AS SHOWN	
STATUS DESCRIPTION INFORMATION			STATUS S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 27141-HYD-1B-XX-SK-C-1450			REVISION P01