

Technical design note

Project name	Himley Village, Bicester - Reserved Matters Application		
Design note title	Response to LLFA Comments		
Document reference	27141-HYD-XX-XX-TN-C-0002		
Author	R Austin		
Revision	P01		
Date	22 March 2023	Approved	<input type="checkbox"/>

The following Technical Note is to be read in response to LLFAs comments on the Reserved Matters application reference 23/00207/DISC regarding the surface water drainage strategy for the Proposed Himley Village development site.

At present, LLFA object to the site based on the consideration that insufficient evidence of a suitable drainage strategy has been provided with the application, Hydrock wish to remind the officers, per reports 27141-HYD-XX-XX-TN-C-0002 and 27141-HYD-XX-XX-TN-C-0002 that Phase 1 of this application is for two simple junctions into the wider site and that this is simple an enabling package to access the site. The SuDS strategy as a whole will be submitted as part of the Phase 1b (Infrastructure) and 2a (Residential) application shortly to follow, whereby the drainage will be managed to the 2l/s/ha rate as agreed during the outline proposal.

At this stage, the drainage proposals are simply to connect the road gulleys serving the new accesses into the existing ditches prior to the development progressing and the remodelling of the ditch network.

The LLFA comments following the initial submission are as follows:

Prior to or alongside the submission of any application for approval of reserved matters for phase 1, a full surface water drainage scheme for the site, based on sustainable drainage principles and an assessment of the hydrological and hydro-geological context of the development, shall have been submitted to and approved in writing by the local planning authority prior to the determination of any reserved matters application for phase 1. The scheme shall subsequently be implemented in accordance with the approved details before the development is completed. The scheme shall also include:

» Discharge Rates

Discharge rates not provided on a drainage plan for each outfall location. Drainage plan not provided.

» Discharge Volumes

Drainage plan is required and sizing of SuDS features needs to be shown clearly. Invert and cover levels of all drainage to be showing.

» Sizing of features - attenuation volume

Calculations required for the surface water network. Calculations to include storm events up to and including the 1:100 year storm event plus 40% climate change. Also provide a surface water catchment plan showing the extent of the impermeable areas and stating the area. Also state the area with 10% urban creep.

- » Infiltration in accordance with BRE365
Provide infiltration testing results and its location plan.
- » Detailed drainage layout with pipe numbers.
Detailed drainage plan with pipe numbering not provided.
- » SuDS - Swales, Ponds, Permeable Paving, Filter Strips, Rain Gardens
Detailed drainage plan not provided to illustrate the SuDS features.
- » Network drainage calculations
Provide calculations for the entire drainage network.
- » Phasing
Discharged according to: Phasing Plan

Hydrock respond as follows:

Discharge rates not provided on a drainage plan for each outfall location. Drainage plan not provided.

Drainage plans for each access are appended to this technical note, there is no specific network or "outfall" as such, each gully connect directly into the ditch adjacent (or culverted ditch if appropriate) and with each gully serving no more than 140m², a 20mm/hr rainfall event would see outfall rates from each gully at a maximum of 0.77l/s.

This will be refined as the second planning application is made to include the improvement to onsite and nearby swales/ditches to accommodate attenuated flows.

Drainage plan is required and sizing of SuDS features needs to be shown clearly. Invert and cover levels of all drainage to be showing.

Drainage plans for each access are appended to this technical note, there are no specific SuDS features in this application which is solely for 2x highway access points. The only drainage apparatus proposed are gulleys with no distinct cover or invert level.

Calculations required for the surface water network. Calculations to include storm events up to and including the 1:100 year storm event plus 40% climate change. Also provide a surface water catchment plan showing the extent of the impermeable areas and stating the area. Also state the area with 10% urban creep.

On a highway such as the, the road gulleys will be surpassed by 1:100 + 40 year events, traditional road gulleys will not convey such flows. Any excess rainfall events will overtop into the immediately adjacent ditch, as they currently do on the road onto which the access will be constructed.

For context, the ditch currently serves 6,500m² of highway and these two junctions add an additional 700m² into the existing ditch network

There will be no urban creep as this is not a "development" as such, simply a series of highway accesses.

Provide infiltration testing results and its location plan

At this stage infiltration testing has not been undertaken, the extract from the initially approved FRA during the outline confirms that:

Hyder's SWDS further notes that the limited amount of soakaway tests carried out as part of a targeted intrusive ground investigation in 2010 indicated little infiltration.

The above will be further confirmed during intrusive geotechnical testing as part of this application.

Detailed drainage layout with pipe numbers

Drainage plans for each access are appended to this technical not, there are no pipe numbers as there are no networks, the access locations are served only by individual gulley connections.

Detailed drainage plan not provided to illustrate the SuDS features

Drainage plans for each access are appended to this technical note, there are no specific SuDS features in this application which is solely for 2x highway access points, the ditches proposed for use are existing.

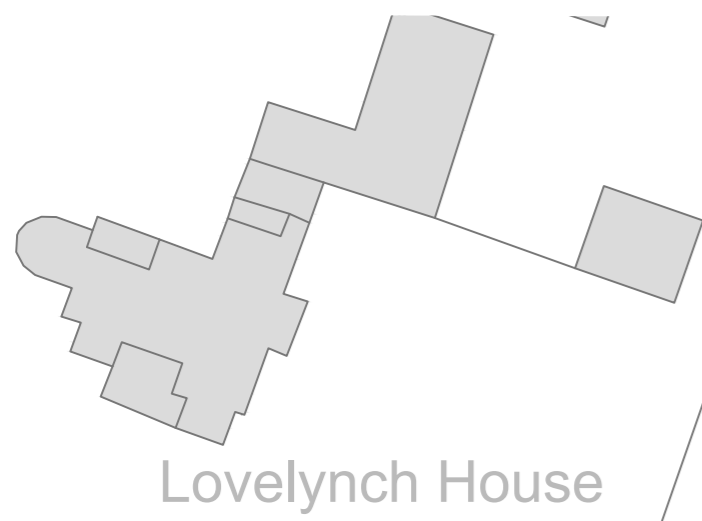
Provide calculations for the entire drainage network

There are no networks associated with this application.

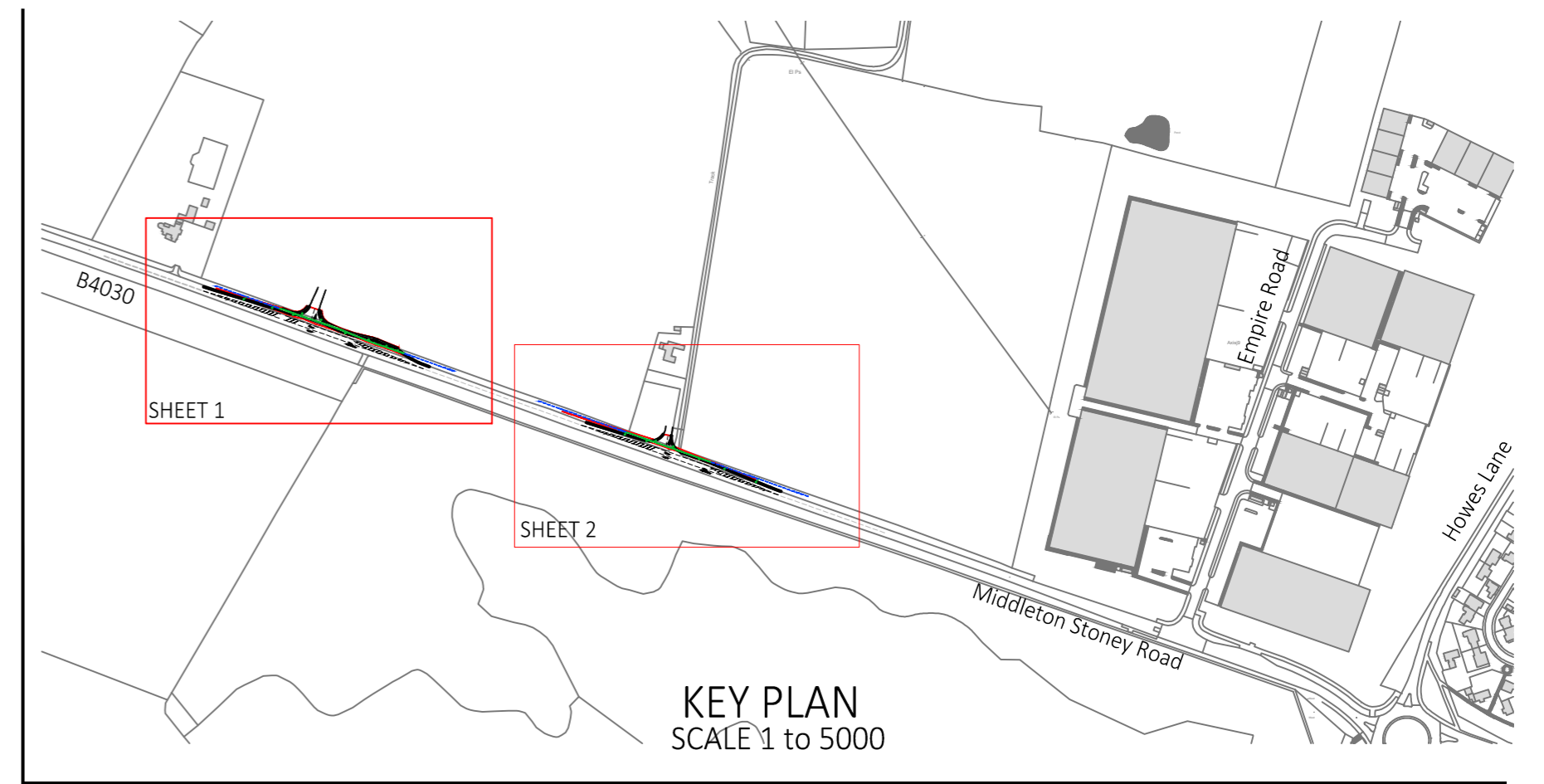
Discharged according to: Phasing Plan

As this is the Phase 1 application, there is yet to be a publicly issued phasing plan for the remainder of the site, When this is available and submitted as part of a suitable application the clear phasing route will be evident. The access (phase 1) will be constructed prior to the remainder of the site in order to permit access to construct the remainder of the site.

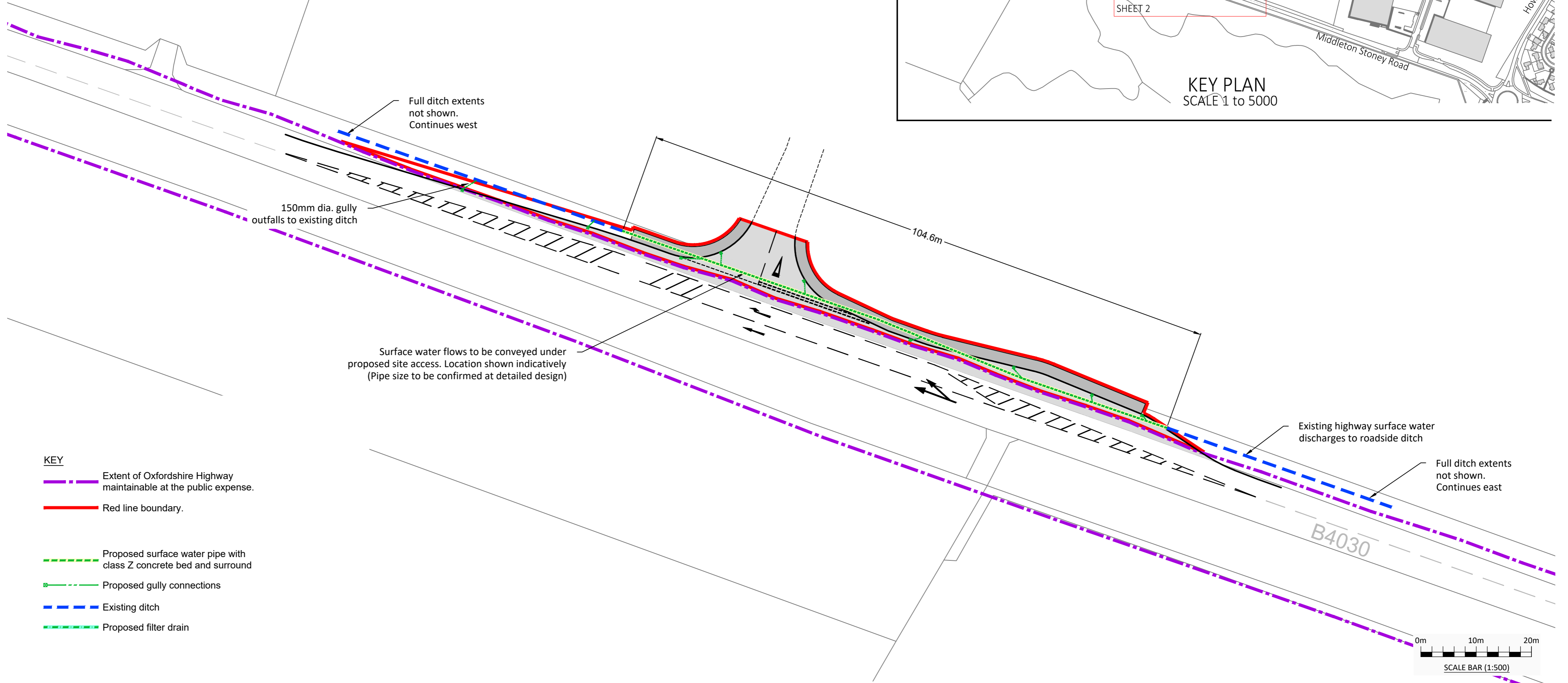
Whilst limited further information has been submitted as part of this technical note, it is hoped that the reviewing personnel will understand the reasoning behind the reduced site boundary and scope of works. The remaining phases will enable the bulk of the SuDS networks to be produced and implemented to ensure that the site as a whole will drain in a safe manner per the 2l/s/ha rate agreed in the outline FRA,



Lovelynch House



KEY PLAN
SCALE 1 to 5000



Full ditch extents not shown. Continues west

150mm dia. gully outfalls to existing ditch

Surface water flows to be conveyed under proposed site access. Location shown indicatively (Pipe size to be confirmed at detailed design)

Existing highway surface water discharges to roadside ditch

Full ditch extents not shown. Continues east

- KEY**
- Extent of Oxfordshire Highway maintainable at the public expense.
 - Red line boundary.
 - Proposed surface water pipe with class Z concrete bed and surround
 - Proposed gully connections
 - Existing ditch
 - Proposed filter drain



- NOTES**
1. Planning application number: **14/02121/OUT**.
 2. Non material amendments application number: **22/02375/NMA**.
 3. This access drainage strategy should be read in conjunction with **27141-HYD-XX-XX-TN-C-0002** - Site Wide Drainage Strategy.

P01	27/01/2023	First Issue.	SM	OD	RA
Rev	Date	Description	By	Ckd	App

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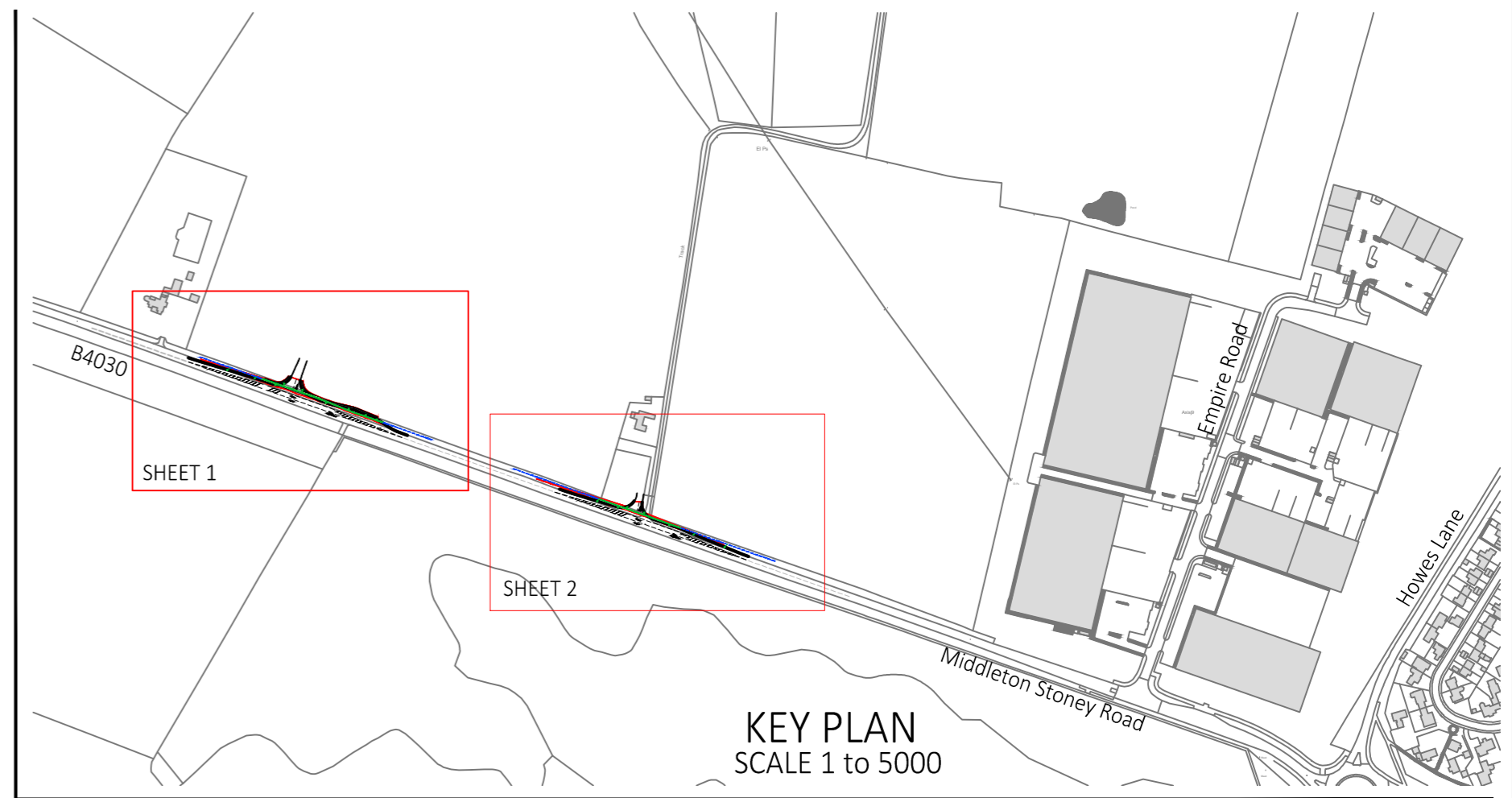
CLIENT
CALA HOMES COTSWOLDS LTD

PROJECT
HIMLEY VILLAGE, BICESTER

TITLE MIDDLETON STONEY ROAD, MAIN SPINE ROAD JUNCTION. PROPOSED DRAINAGE SHEET 1	
HYDROCK PROJECT NO. C-27141-C	SCALE @ A2 1 : 500
STATUS DESCRIPTION INFORMATION	STATUS S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 27141-HYD-XX-XX-DR-C-0001	REVISION P01



Himley Farm House



Full ditch extents not shown. Continues west

Existing highway surface water discharges to roadside ditch

25.0m

Proposed filter drain

150mm dia. gully outfalls to filter drain

Surface water flows to be conveyed under site access. Location shown indicatively (Pipe size to be confirmed at detailed design)

150mm dia. gully outfalls to existing ditch

Existing highway surface water discharges to roadside ditch

Full ditch extents not shown. Continues east

KEY

- Extent of Oxfordshire Highway maintainable at the public expense.
- Red line boundary.
- Proposed surface water pipe with class Z concrete bed and surround
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NOTES

1. Planning application number: **14/02121/OUT**.
2. Non material amendments application number: **22/02375/NMA**.
3. This access drainage strategy should be read in conjunction with **27141-HYD-XX-XX-TN-C-0002** - Site Wide Drainage Strategy.



CLIENT
CALA HOMES COTSWOLDS LTD

PROJECT
HIMLEY VILLAGE, BICESTER

TITLE
MIDDLETON STONEY ROAD,
SECONDARY ROAD JUNCTION.
PROPOSED DRAINAGE
SHEET 2

HYDROCK PROJECT NO.
C-27141-C

SCALE @ A2
1 : 500

STATUS DESCRIPTION
INFORMATION

STATUS
S2

DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)
27141-HYD-XX-XX-DR-C-0002

REVISION
P01

Rev	Date	Description	By	Ckd	App
P01	27/01/2023	First Issue.	SM	OD	RA