

# Flood Risk Assessment

Proposed Dwelling at 31 Briskman  
Way, Aylesbury, Buckinghamshire,  
HP21 8FR

March 2024

HDC1080/01

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**Hegsons Design Consultancy (UK) Limited**

Dublin | Cork | Bedford | High Wycombe | Buxton | Saint-Denis-Le-Gast



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Buckinghamshire, HP21 8FR  
Flood Risk Assessment

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**March 2024**



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# 1 Background

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## 1.1 Introduction

Hegsons Design Consultancy Limited were commissioned to prepare a Flood Risk Assessment to support the planning application for the development proposals at 31 Briskman Way, Aylesbury, HP21 8FR. Refer to **Table 1-1** below for the site characteristics and **Figure 1-1** for the site location plan.

<b>Site Address</b>	31 Briskman Way, Aylesbury, Bucks, HP21 8FR
<b>Grid reference</b>	480886mE, 212902mN (SP 80886 12902)
<b>Site Area</b>	399m <sup>2</sup>
<b>Geology</b>	Alluvium over Kimmeridge Clay Formation
<b>Site Access</b>	Briskman Way
<b>LPA</b>	Buckinghamshire Council

**Table 1-1: Site Characteristics**



**Figure 1-1: Site Location Plan**

## 1.2 Development Proposals

The proposals are comprised of a single storey rear extension. Refer to the proposed development plans in **Appendix A**.

## 2 Baseline Conditions

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### 2.1 Geology

Based on the British Geology Survey (BGS) online data, the site appears to be underlain by Alluvium (Clay, silt, sand and gravel) over Kimmeridge Clay Formation (Mudstone). Refer to **Figure 2-1** below for an excerpt of the BGS map.



**Figure 2-1: Superficial Deposits**

Based on Defra's Magic Map application, the site is not located in a Source Protection Zone.

### 2.2 Hydrology

There are a number of tributaries to the Beaver Brook (all designated as Main Rivers) in close proximity to the site. Refer to **Figure 2-2** below.



**Figure 2-2 Hydrology**

## 3 Flood Risk Assessment

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### 3.1 Fluvial Flooding

Based on the Environment Agency's (EA) Flood map for planning the site appears to be located in Flood Zone 2. The predicted floodplain appears to be associated with the risk of blockage in the culverted watercourse below the A418 Oxford Road approximately 270m southwest of the site.

Land in Flood Zone 2 is defined as having a medium probability of flooding. This means in any year land has between a 1% and 0.1% chance of flooding from rivers. Refer to **Figure 3-1** below.



**Figure 3-1: EA Flood map for planning**

### 3.2 Sequential Test

The objective of the Sequential Test is to steer new developments toward areas with the lowest probability of flooding, i.e. Flood Zone 1 – less than 1 in 1000 annual probability of river or sea flooding in any year. The proposal is considered a minor development and therefore the sequential test is not required.

### 3.3 Exception Test

Table 3 of the PPG ( Table 3-1 below), indicates that the proposed extension is classified as More vulnerable and appropriate in Flood Zone 2. Therefore, the exception test is not required.

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	x	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	x	x	x	✓*

Key:

✓ Development is appropriate

x Development should not be permitted.

**Table 3-1: Extract from the PPG - Table 3: Flood Risk Vulnerability**

Therefore, the residual risk of flooding from fluvial sources is assessed as low. Details of flood protection and mitigation is outlined in **Section 4.0**.

### 3.4 Pluvial Flooding

Based on the EA Flood risk from surface water data, the site appears to be at high risk of surface water flooding. Refer to **Figure 3-2** below.





**Figure 3-2: EA Flood risk from surface water**

It is noted that the EA data is based on the local topography – road levels generally fall southbound along Briskman Way, and the flood data may not account for the existing highway drainage system. Refer to **Figure 3-3** and **Figure 3-4** below for the local drainage network. Therefore, the risk of surface water flooding is assessed a low.

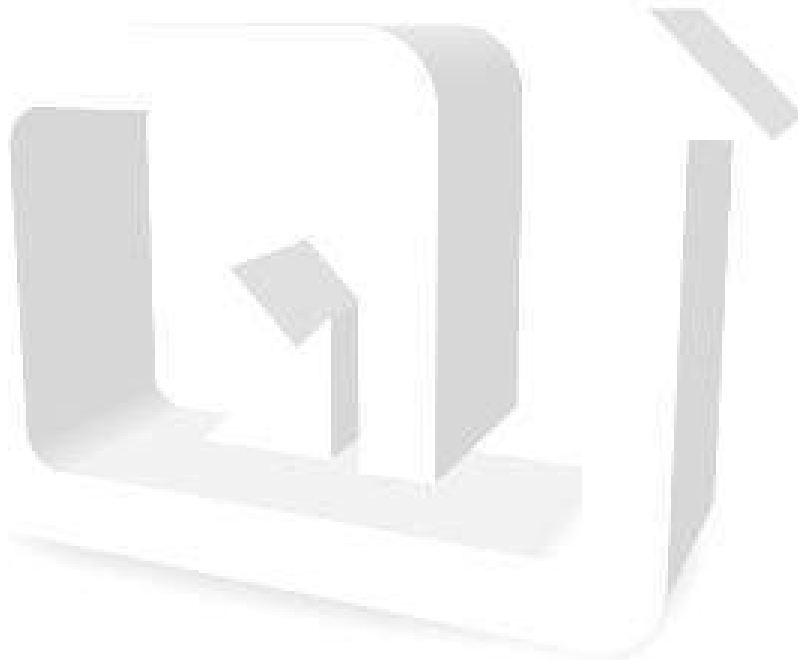


**Figure 3-3: Highway drainage gullies**





**Figure 3-4: Buckinghamshire Highway Assets**



### 3.5 Groundwater Flooding

Based on Defra's Magic Map, the site appears to be a low risk of groundwater flooding. Refer to **Figure 3-5** below.



**Figure 3-5: Groundwater Vulnerability Map**

### 3.6 Sewer surcharge

Based on the Buckinghamshire Council Preliminary Flood Risk Assessment (PFRA), there are no historic flood records in close proximity to the site. Therefore, the site is assessed as having low risk of flooding from sewer surcharge.

### 3.7 Artificial Sources

Based on the EA Long term flood risk data the site is not located in an area at risk of flooding from reservoirs or artificial sources. Refer to **Figure 3-6** below.



**Figure 3-6: Flooding from reservoirs**

## 4 Flood Risk Management

The residual risk of fluvial flooding has been alleviated through considering a number of mitigation measures as part of the development proposals.

### 4.1 Safe access & egress

The instructions of the Emergency Services should always be followed during a flood event. If time does not allow for safe access and egress, residents/visitors should remain on site and seek refuge.

If it is safe to travel, residents and visitors could travel north on Briskman Way, and continue westbound on the A418 Oxford Road to seek refuge outside of the floodplain. The indicative evacuation route is illustrated in **Figure 4-1** below.



**Figure 4-1: Safe access & egress**

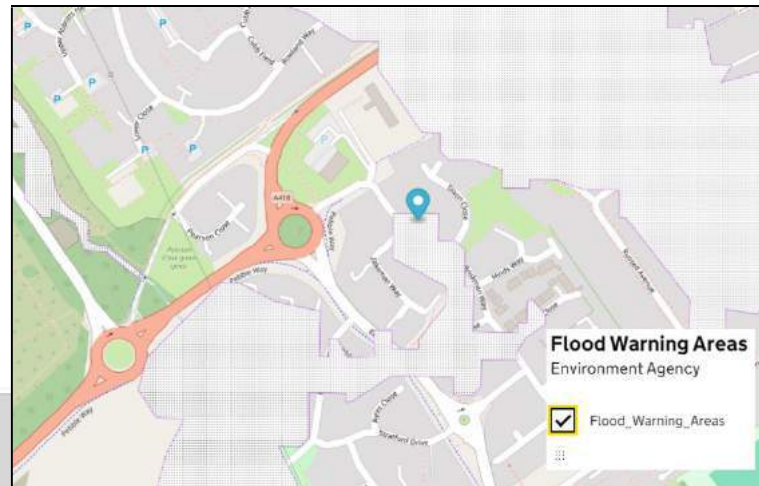
### 4.2 Finished Floor Levels

All sleeping accommodation will be provided at 1<sup>st</sup> floor and above and the proposals will be designed so that finished floor levels within the extension will be set no lower than existing levels on the site.

The residual flood risk to the property will be mitigated through the incorporation of flood resistance and resilience measures within the design in accordance with best practice.

## 4.3 Flood Warnings

The site is located in a Flood Warning Area, as shown in **Figure 4-2** below.



**Figure 4-2: EA Flood Warning Areas**

The building occupiers can register with the Environment Agency's Floodline Warnings Direct, which gives advanced notice of potential flooding. Registration is either through the Environment Agency's website or by calling the Floodline / Environment Agency on 0345 988 1188.

## 4.4 Flood Resistance and Resilience

The proposals will incorporate the flood resistance and resilience measures outlined in **Table 4-1**, to protect the building and its occupants against the risk of flooding and minimise the potential damage that could be caused by flooding.

<p>Raising electrical sockets as high as practical at ground floor.</p>	
<p>Using plastic / water resistant flood doors.</p>	
<p>Installing airbrick covers.</p>	
<p>Using a waterproof mortar, for the lower courses of brickwork.</p>	
<p>Non-return valves can be retro-fitted to protect from sewer surcharge flood events.</p>	

**Table 4-1: Flood resistance and resilience measures**

## 5 Conclusions

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This report has been prepared to support the planning application for the single storey rear extension at 31 Briskman Way, Aylesbury, Bucks, HP21 8FR.

Based on the Environment Agency's (EA) Flood map for planning the site appears to be located in Flood Zone 2. Land in Flood Zone 2 is assessed as having a medium risk of flooding - between a 1 in 100 and 1 in 1000-year annual exceedance probability (AEP) of fluvial/river flooding (0.1-1% AEP).

The Site is assessed as being at "Low" risk of flooding from surface water, groundwater, artificial sources, and sewer surcharge.

The instructions of the Emergency Services should always be followed during a flood event. If time does not allow for safe access and egress, residents/visitors should remain on site, and seek refuge on the top floors. If it is safe to travel, residents and visitors could travel north on Briskman Way, and continue westbound on the A418 Oxford Road to seek refuge outside of the floodplain.

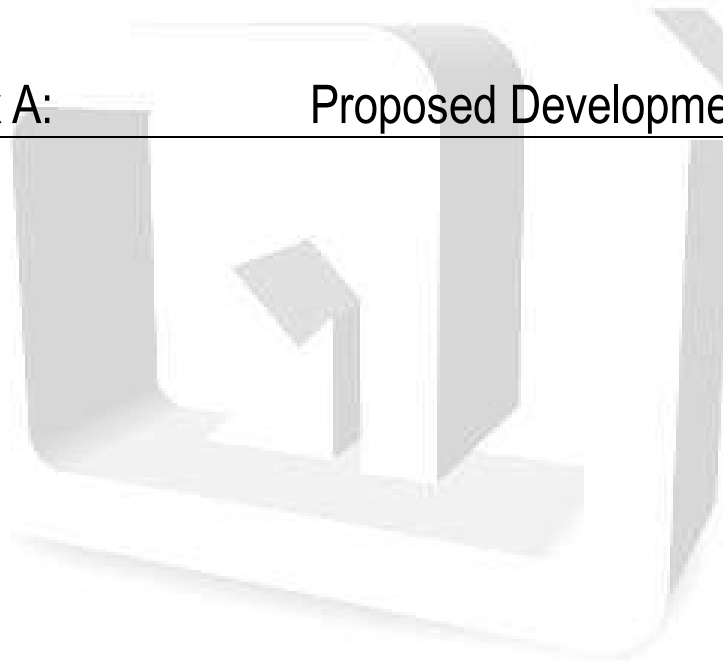
All sleeping accommodation will be provided at 1<sup>st</sup> floor and above and the proposals will be designed so that finished floor levels within the extension will be set no lower than existing levels on the site.

Further flood resistance/resilience measures could be implemented where appropriate/feasible, including but not limited to: paint that can be easily cleaned in the event of a flood; flood proof doors, and ventilation covers.

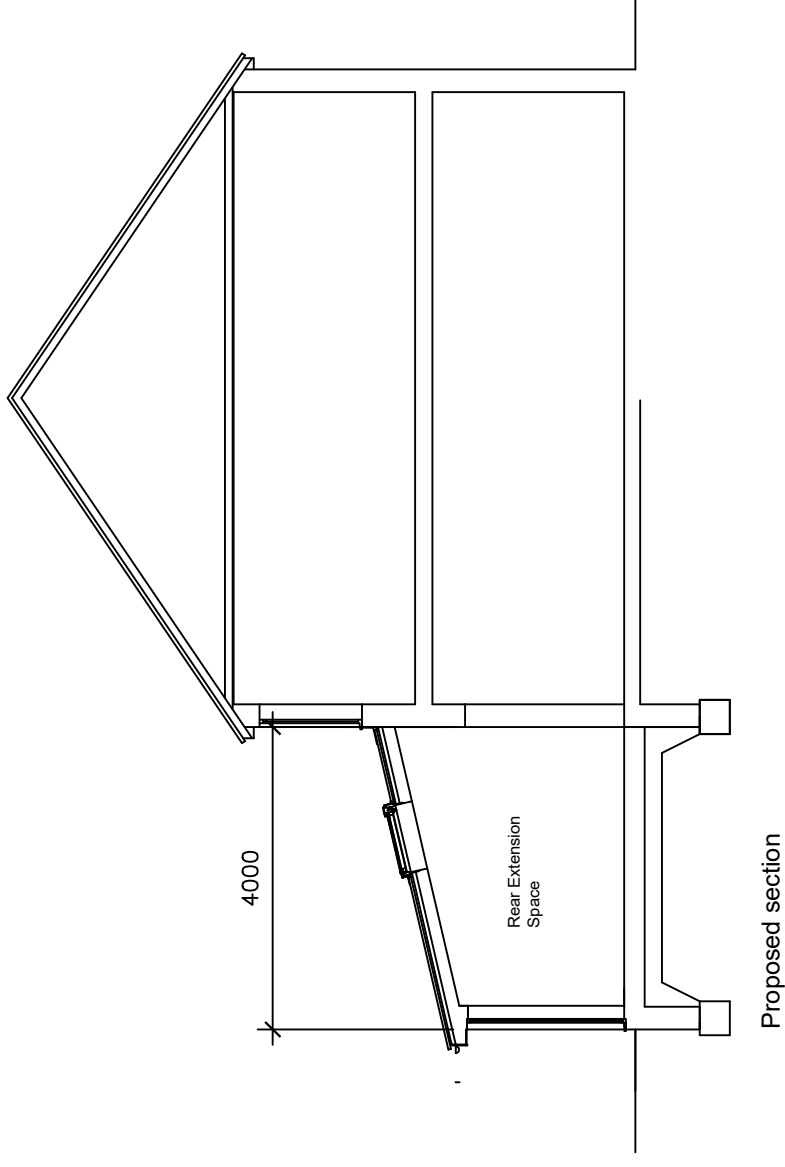
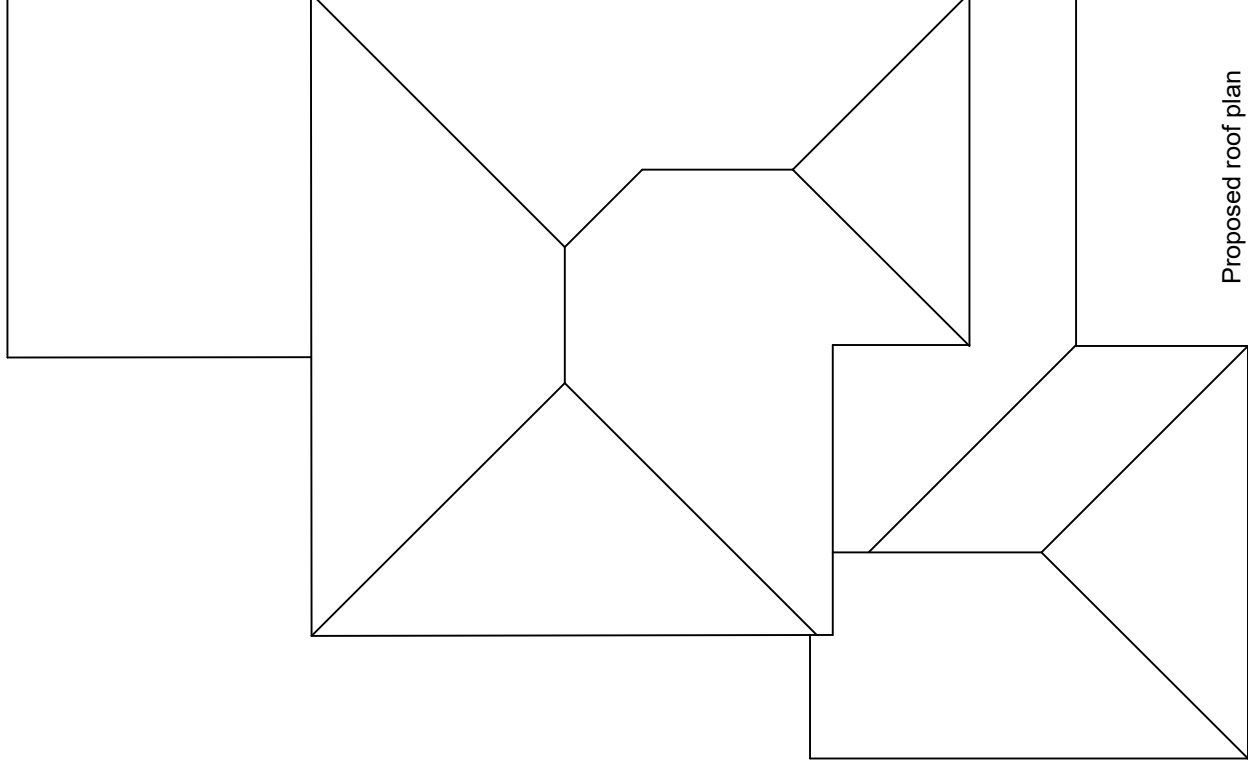
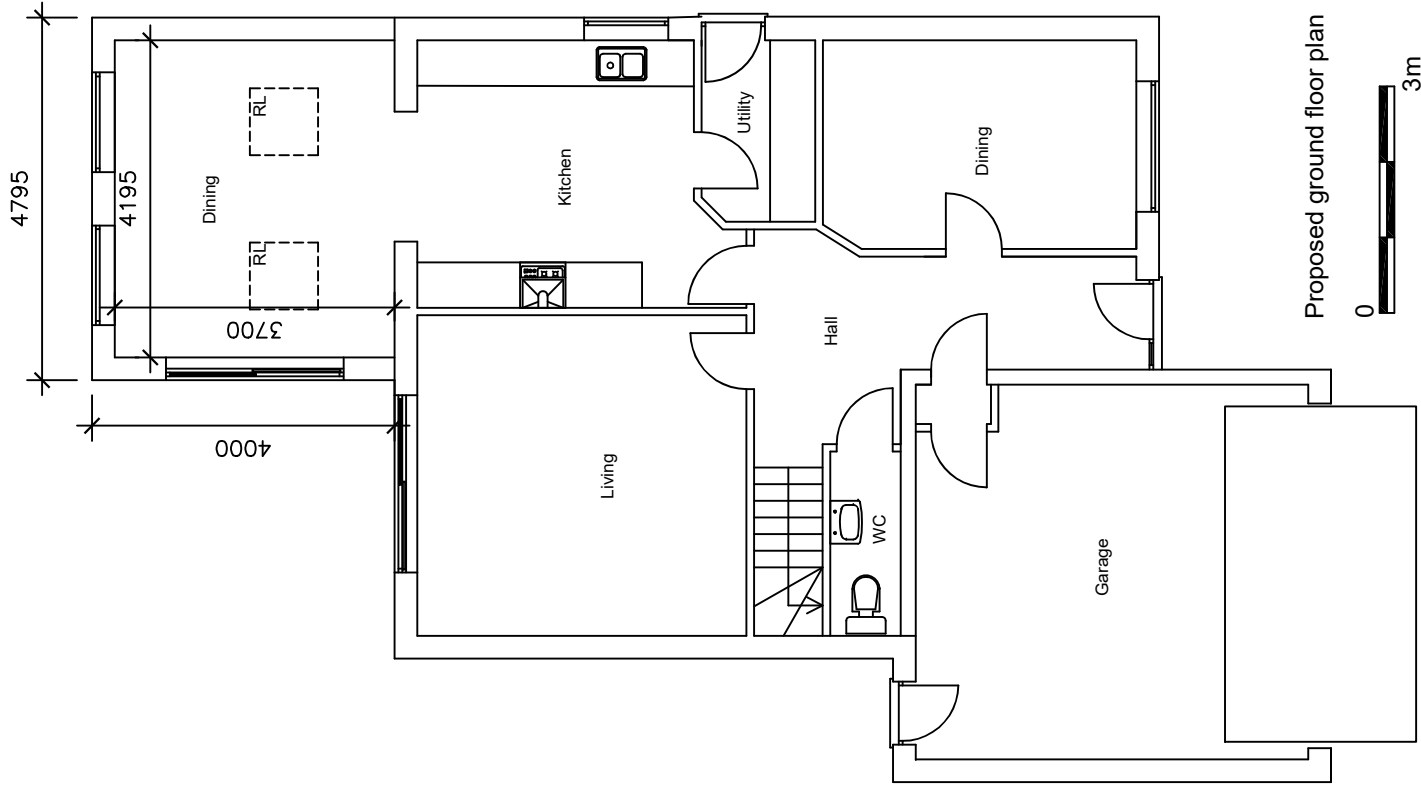
In conclusion, this FRA demonstrates that the proposals are consistent with the aims of the NPPF and the Planning Practice Guidance to the NPPF along with the aims of the Local Flood Risk Management Strategy. The Site will not be at significant risk of flooding or increase the flood risk to others.

## Appendix A: Proposed Development Plans

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Client	Job	Drawing	Date	Scale	Drawing No.	Revision
Colin & Thelma King.	31 Briskman Way, Aylesbury, Bucks. HP21 8FR	Proposed Plans	December 2023	1:100	PD02	Rev A



BRISKMAN WAY

DIXON CLOSE

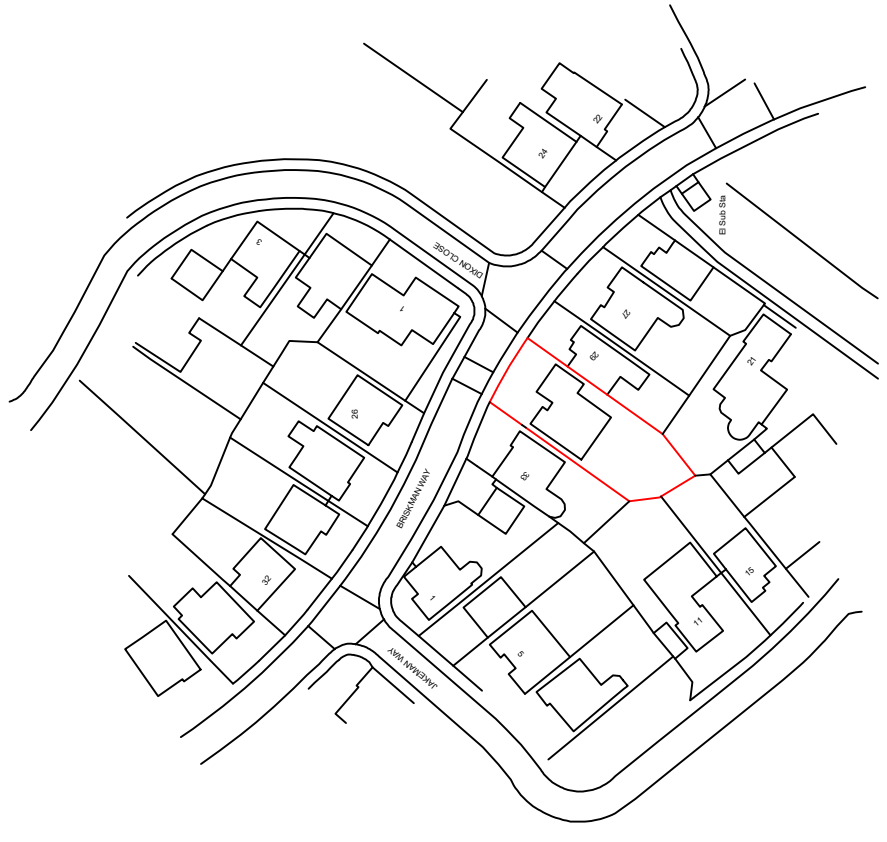
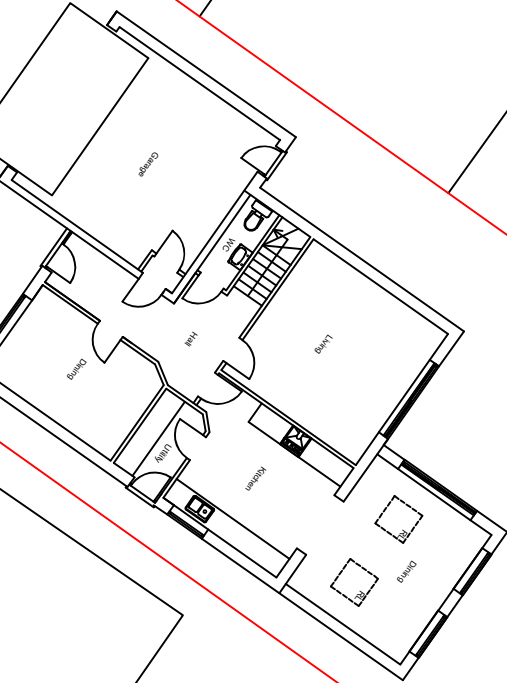
33

29

27

Existing parking

Rear garden



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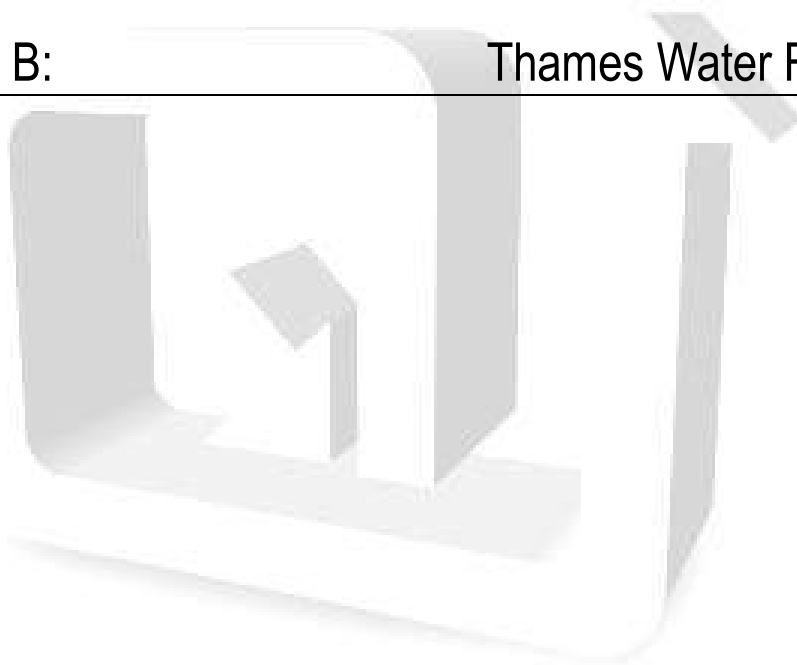


Existing Location

Client	Job	Drawing	Date	Scale	Drawing No.	Revision
Colin & Thelma King.	31 Briskman Way, Aylesbury, Bucks. HP21 8FR	Proposed Block & Location Plans	December 2023	1:200 & 1250	PD04	Rev



## Appendix B: Thames Water Records



# Sewer Flooding

History Enquiry



Property Searches

**Search address supplied** 31  
Briskman Way  
Aylesbury  
HP21 8FR

**Your reference** 24050

**Our reference** SFH/SFH Standard/2024\_4955157

**Received date** 1 March 2024

**Search date** 1 March 2024



Thames Water Utilities Ltd  
Property Searches, PO Box 3189, Slough SL1 4WW



[searches@thameswater.co.uk](mailto:searches@thameswater.co.uk)  
[www.thameswater-propertysearches.co.uk](http://www.thameswater-propertysearches.co.uk)



0800 009 4540

# Sewer Flooding

History Enquiry



Property Searches

**Search address supplied:** 31,Briskman Way,Aylesbury,HP21 8FR

**This search is recommended to check for any sewer flooding in a specific address or area**

TWUL, trading as Property Searches, are responsible in respect of the following:-

- (i) any negligent or incorrect entry in the records searched;
- (ii) any negligent or incorrect interpretation of the records searched;
- (iii) and any negligent or incorrect recording of that interpretation in the search report
- (iv) compensation payments



Thames Water Utilities Ltd  
Property Searches, PO Box 3189, Slough SL1 4WW



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[www.thameswater-propertysearches.co.uk](http://www.thameswater-propertysearches.co.uk)



0800 009 4540

### History of Sewer Flooding

#### **Is the requested address or area at risk of flooding due to overloaded public sewers?**

The flooding records held by Thames Water indicate that there have been no incidents of flooding in the requested area as a result of surcharging public sewers.

For your guidance:

- A sewer is “overloaded” when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Flooding as a result of temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded.
- “Internal flooding” from public sewers is defined as flooding, which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.
- “At Risk” properties are those that the water company is required to include in the Regulatory Register that is presented annually to the Director General of Water Services. These are defined as properties that have suffered, or are likely to suffer, internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant reference period (either once or twice in ten years) as determined by the Company’s reporting procedure.
- Flooding as a result of storm events proven to be exceptional and beyond the reference period of one in ten years are not included on the At Risk Register.
- Properties may be at risk of flooding but not included on the Register where flooding incidents have not been reported to the Company.
- Public Sewers are defined as those for which the Company holds statutory responsibility under the Water Industry Act 1991.
- It should be noted that flooding can occur from private sewers and drains which are not the responsibility of the Company. This report excludes flooding from private sewers and drains and the Company makes no comment upon this matter.
- For further information please contact Thames Water on Tel: 0800 316 9800 or website [www.thameswater.co.uk](http://www.thameswater.co.uk)



Thames Water Utilities Ltd  
Property Searches, PO Box 3189, Slough SL1 4WW



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[www.thameswater-propertysearches.co.uk](http://www.thameswater-propertysearches.co.uk)



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