



FRAYS AVENUE, WEST DRAYTON

FLOOD RISK ASSESSMENT

REPORT NO. 23000-FCE-XX-XX-RP-D-0001

PROJECT NO. 23000

JANUARY 2023

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DOCUMENT CONTROL

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1.0 INTRODUCTION

1.1. This report has been prepared to support the planning application for the development proposals at 23A Frays Avenue, West Drayton. Refer to **Table 1.1** below for the site characteristics and **Figure 1.1** for the site location plan.

Site Address	23A Frays Avenue, West Drayton, UB7 7AF
Grid reference	505723mE, 179700mN (TQ 05723 79700)
Site Area	21m ²
Geology	Alluvium (Clay, silt, sand and gravel) over London Clay
Site Access	Frays Avenue

Table 1.1: Site Characteristics

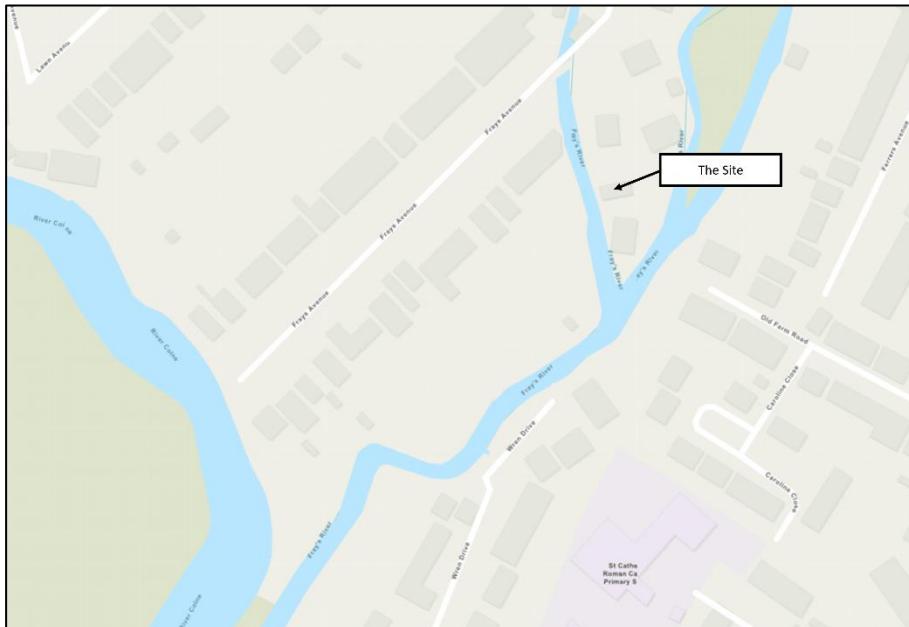


Figure 1.1: Site Location Plan

Development Proposals

1.2. The proposals are comprised of the demolition of an existing garage and the erection of a home office/ gym over the same footprint. The proposed development plans are included in **Appendix A**.

2.0 FLOOD RISK ASSESSMENT

Fluvial/Tidal Flooding

- 2.1. Based on the Environment Agency's (EA) Flood map for planning the site appears to be located in Flood Zone 2 and 3, associated with the Fray's River (designated Main River).
- 2.2. Land in Flood Zone 3 is defined as having a 1 in 100 or greater annual probability of river flooding ($\geq 1\%$) or having a 1 in 200 or greater annual probability of sea flooding ($\geq 0.5\%$). Refer to Figure 2.1 below and drawing 23000-FCE-XX-XX-DR-D-0001 in Appendix B.

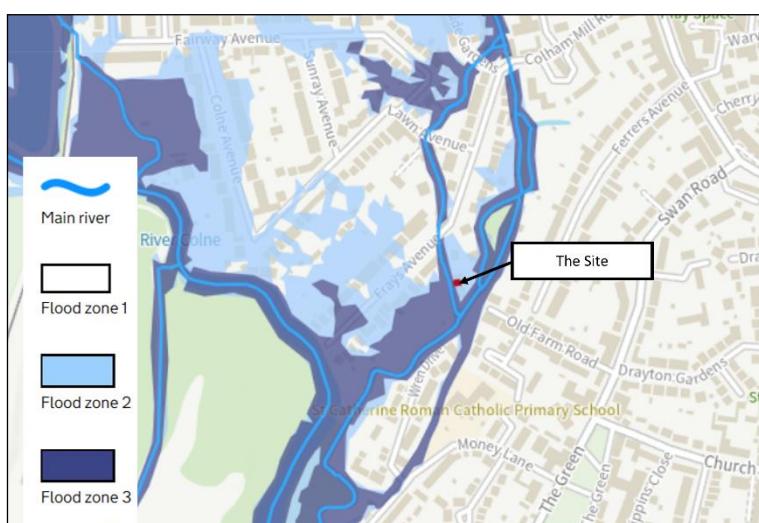


Figure 2.1: EA Flood map for planning

Sequential Test

- 2.3. 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, therefore the sequential test is not required.

Exception Test

2.4. Table 3 of the PPG, **Table 2.1** below, indicates that the proposed Home office/gym uses are Less vulnerable and appropriate in Flood Zone 3. Therefore, the exception test is not required.

Flood risk vulnerability classification (see table 2)	Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Flood zone (see table 1)	Zone 1	✓	✓	✓	✓
	Zone 2	✓	✓	Exception Test required	✓
	Zone 3a	Exception Test required	✓	✗	Exception Test required
	Zone 3b functional floodplain	Exception Test required	✓	✗	✗

Key: ✓ Development is appropriate.
✗ Development should not be permitted.

Table 2.1 Extract from the PPG - Table 3: Flood Risk Vulnerability

2.5. Therefore, the residual risk of flooding from fluvial sources is assessed as low. Details of flood protection and mitigation from fluvial flooding is outlined in Section 3.0.

Pluvial Flooding

2.6. Based on the EA Flood risk from surface water map, the site appears to be at very low risk of surface water flooding (between 0.1% and 1% AEP). Refer to **Figure 2.2** below.



Figure 2.2: Environment Agency's Flood risk from surface water

Groundwater Flooding

2.7. Based on BGS data and DEFRA's Magic Map application, the site appears to have Medium-Low vulnerability to groundwater. Refer to **Figure 2.3** below.

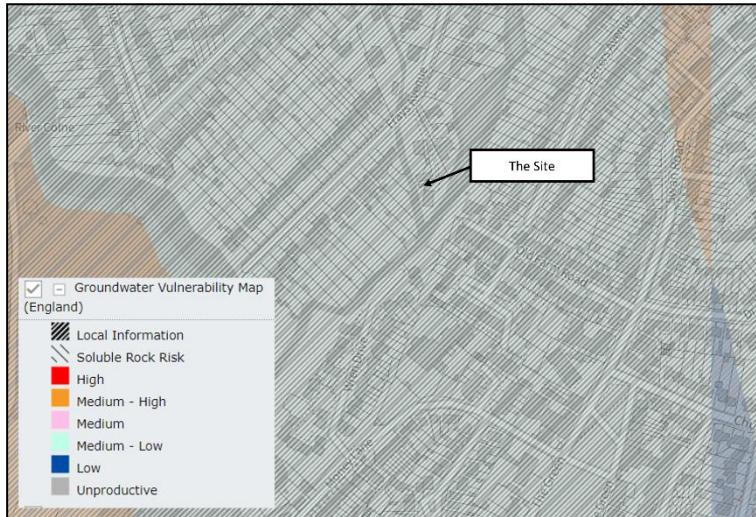


Figure 2.3: Groundwater Vulnerability Map

2.8. Based on the West London Strategic Flood Risk Assessment online data the local area appears to have a $\geq 75\%$ Susceptibility to Groundwater Flooding. Refer to **Figure 2.4** below.

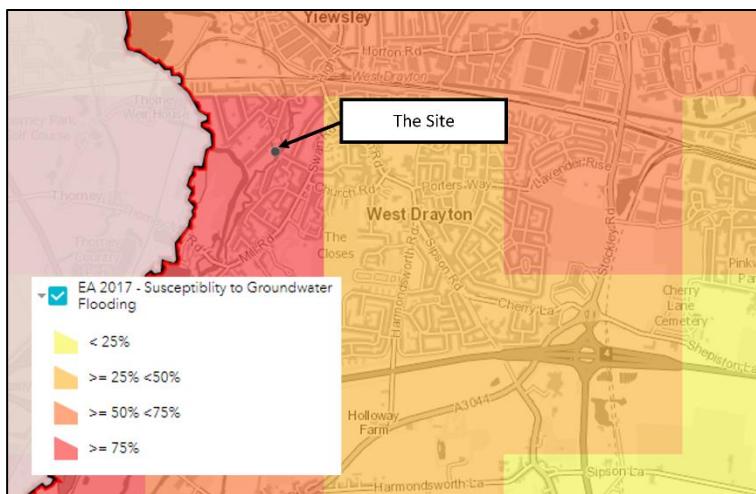


Figure 2.4: Susceptibility to Groundwater Flooding

2.9. The proposed development does not include any basements and dewatering of excavations will be managed in line with best practice during construction. Therefore, the risk of groundwater flooding is assessed as low.

Sewer surcharge

2.10. Based on the West London Strategic Flood Risk Assessment online data and Thames Water 2017 – Sewer Flooding Records, the site appears to be at low risk of flooding from sewer surcharge. Therefore, the risk of flooding from sewer surcharge is assessed as low.

Artificial Sources

2.11. Based on the EA Long term flood risk information the site is located in an area at risk of flooding from reservoirs or artificial sources. Refer to Figure 2.5 below.

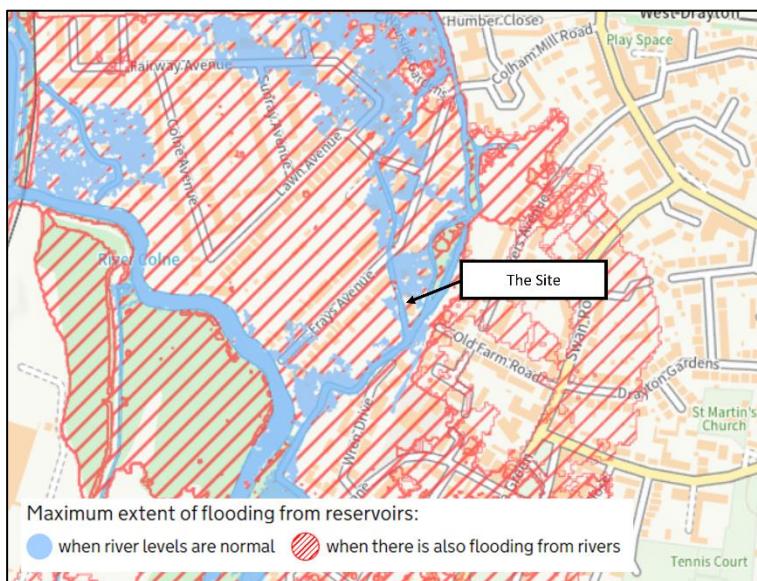


Figure 2.5 Flooding from reservoirs

2.12. Flooding from reservoirs is extremely unlikely, and there has been no loss of life in the UK from reservoir flooding since 1925. Therefore, the risk of flooding from reservoirs is assessed as low.

3.0 FLOOD RISK MANAGEMENT

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

Safe access & egress

3.2. 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.

3.3. If it is safe to travel, residents and visitors could travel north on Frays Avenue towards Colham Mill Road to seek refuge outside of the floodplain. The indicative evacuation route is illustrated in **Figure 3.1** below.



Figure 3.1 Safe access & egress

Finished Floor Levels

3.4. The proposals will be designed so that finished floor levels within the home office will be set no lower than existing levels on the site, with flood resistance and resilience measures incorporated within the design.

Flood Warnings

3.5. The site is located in a Flood Warning Area, as shown in **Figure 3.2** below.



Figure 3.2: EA Flood Warning Areas

3.6. The building occupiers will need to register with the Environment Agency's Floodline Warnings Direct. This is a free service provided by the Environment Agency, 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.

Flood Resistance and Resilience

3.7. The proposals will incorporate the flood resistance and resilience measures outlined in **Table 3.1**, to protect the building and its occupants against the risk of flooding and minimise the potential damage that could be caused by flooding.

Raising electrical sockets as high as practical, minimum 450mm above FFL at ground floor.	
Using plastic / water resistant flood doors.	
Installing airbrick covers.	
Using a waterproof mortar, for the lower courses of brickwork.	
Non-return valves can be retro-fitted to protect from sewer surcharge flood events.	

Table 3.1: Flood resistance and resilience measures

4.0 CONCLUSIONS

- 4.1. This report has been prepared to support the planning application for the development proposals at 23A Frays Avenue, West Drayton, UB7 7AF.
- 4.2. Based on the Environment Agency's (EA) Flood map for planning the site appears to be located in Flood Zone 2 and3 Land in Flood Zone 3 is defined as having a 1 in 100 or greater annual probability of river flooding ($\geq 1\%$) or having a 1 in 200 or greater annual probability of sea flooding ($\geq 0.5\%$).
- 4.3. The Site is assessed as being at “Low” risk of flooding from surface water, groundwater, artificial sources, and sewer surcharge.
- 4.4. 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 site. the top floor of the main building. If it is safe to travel, residents and visitors could travel north on Frays Avenue towards Colham Mill Road to seek refuge outside of the floodplain.
- 4.5. Finished floor levels for the proposed outbuilding will be set no lower than existing levels on site.
- 4.6. 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.
- 4.7. 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



Issued for PLANNING 23.11.22

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DRAWING TITLE:

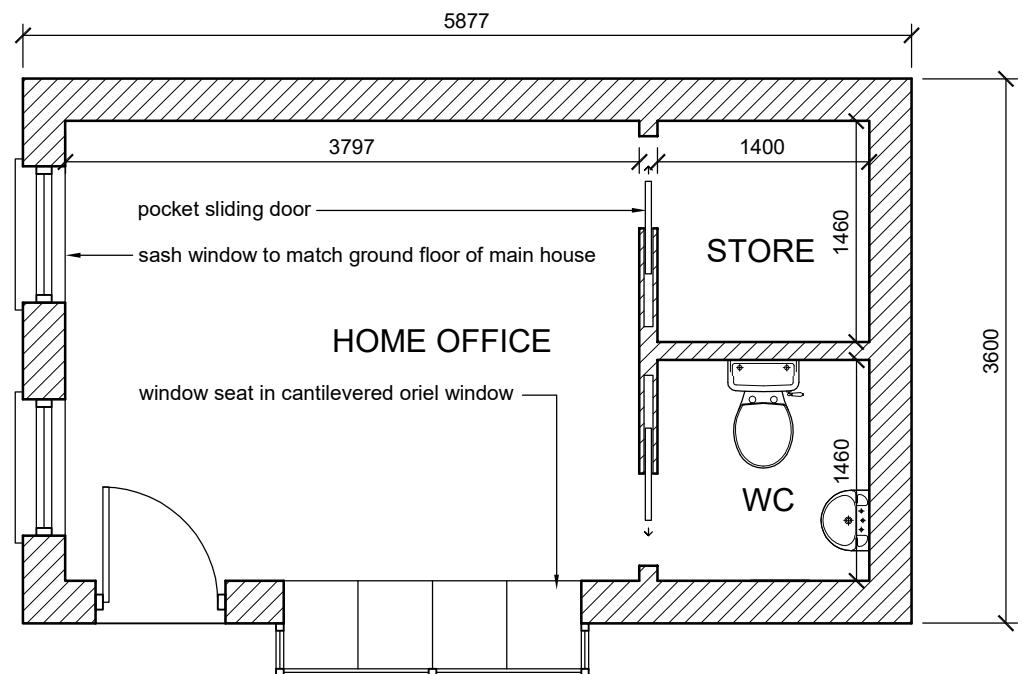
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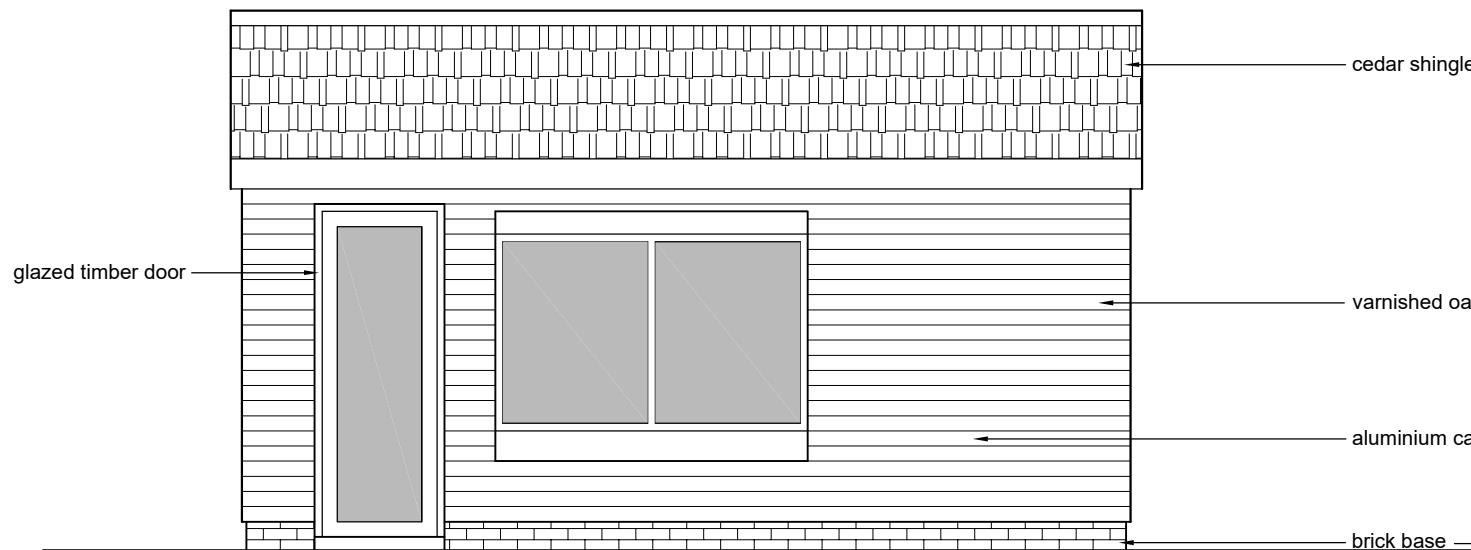
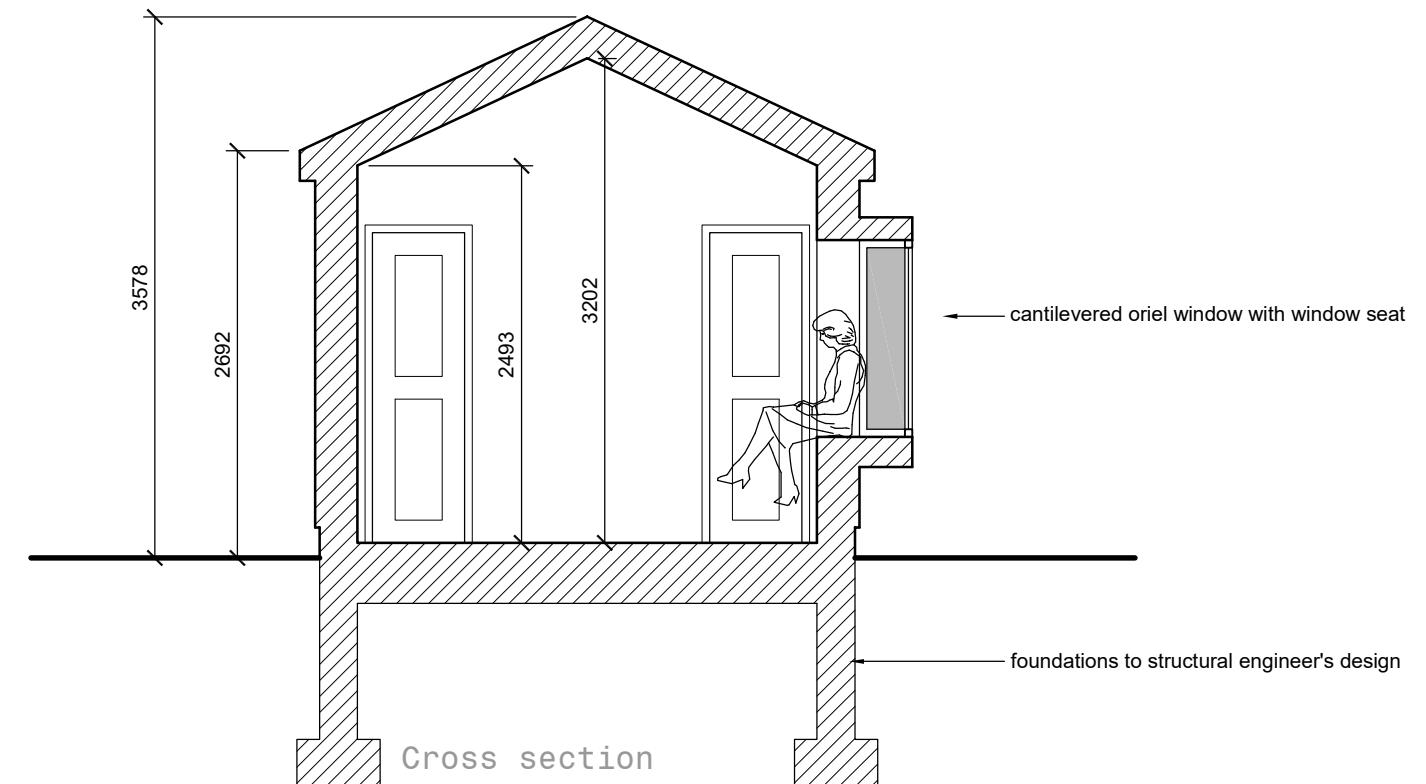
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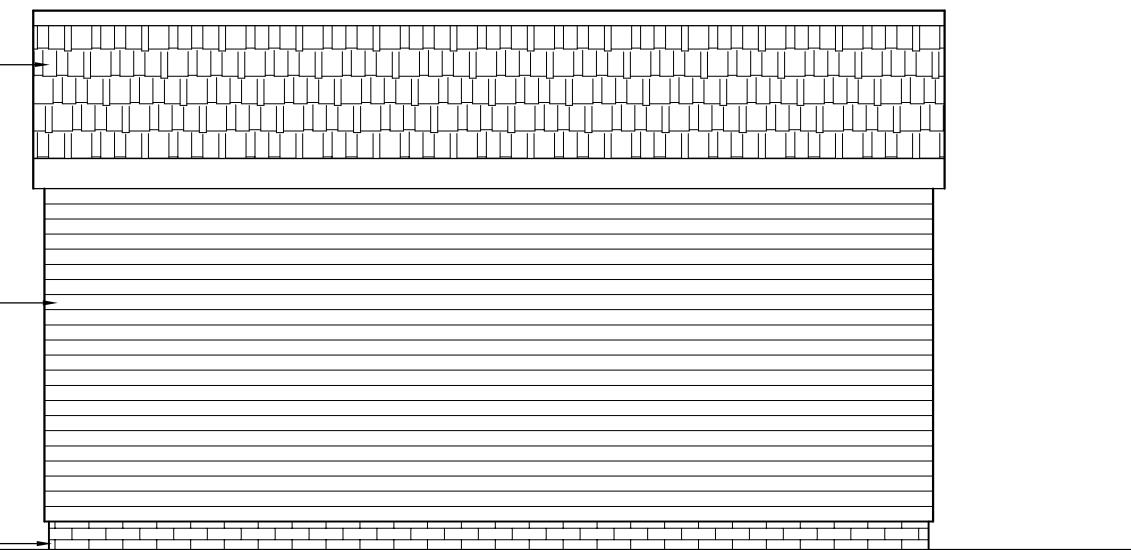
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Plan



Side elevation 1



Side elevation 2

PROJECT: 23A FRAYS AVENUE, WEST DRAYTON UB7 7AF
DRAWING TITLE:

Proposed home office plans

SCALE: 1:50@A3 DRAWING NUMBER: P-12A

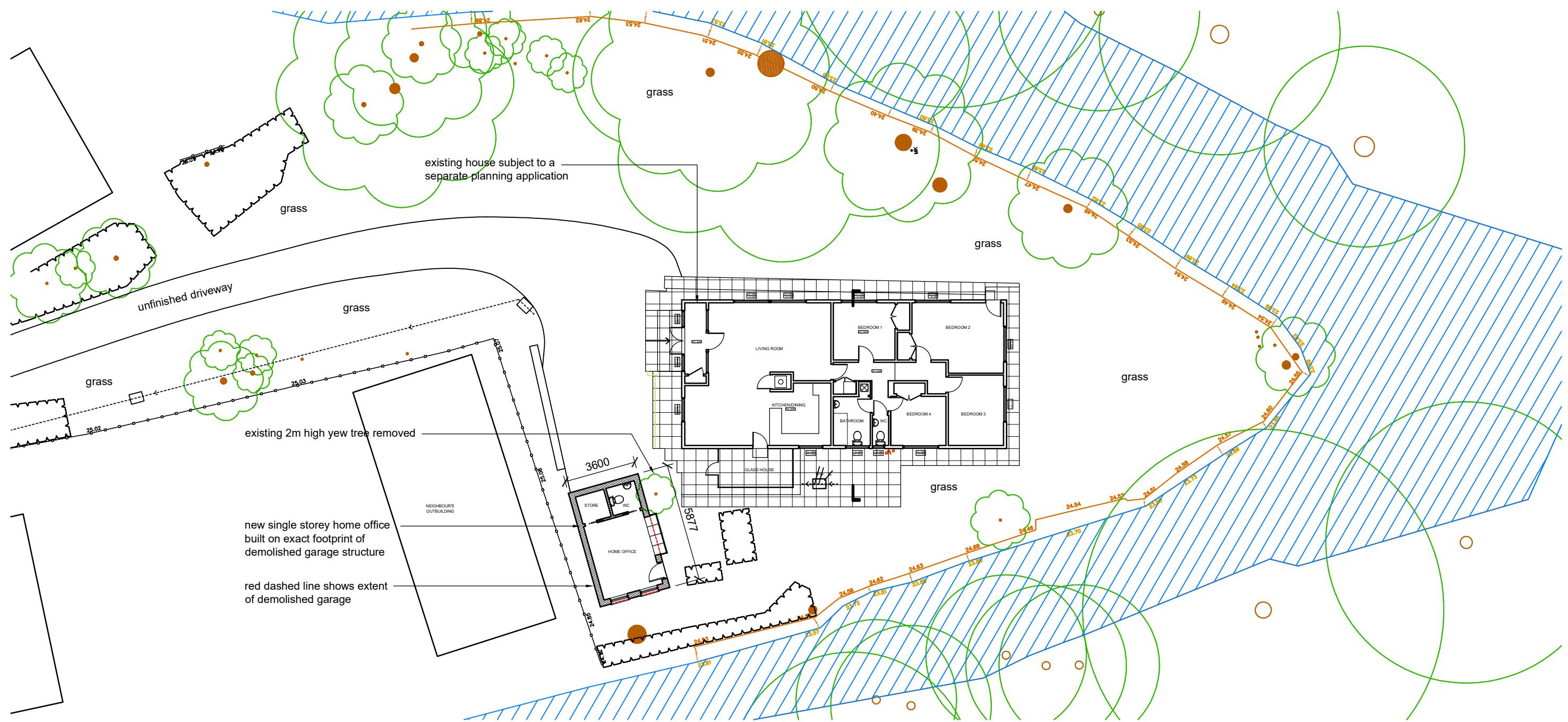
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Issued for COMMENT 11.11.22
Issued for COMMENT 22.11.22
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PROJECT: 23A FRAYS AVENUE, WEST DRAYTON UB7 7AF
DRAWING TITLE:

Rescue

Proposed home office block plan

SCALE: 1:200@A3 DRAWING NUMBER: P-14A

A horizontal number line with tick marks at 0, 1, 5, 10, 15, and 20m. A thick black bar is drawn from the 0 mark to the 1 mark.

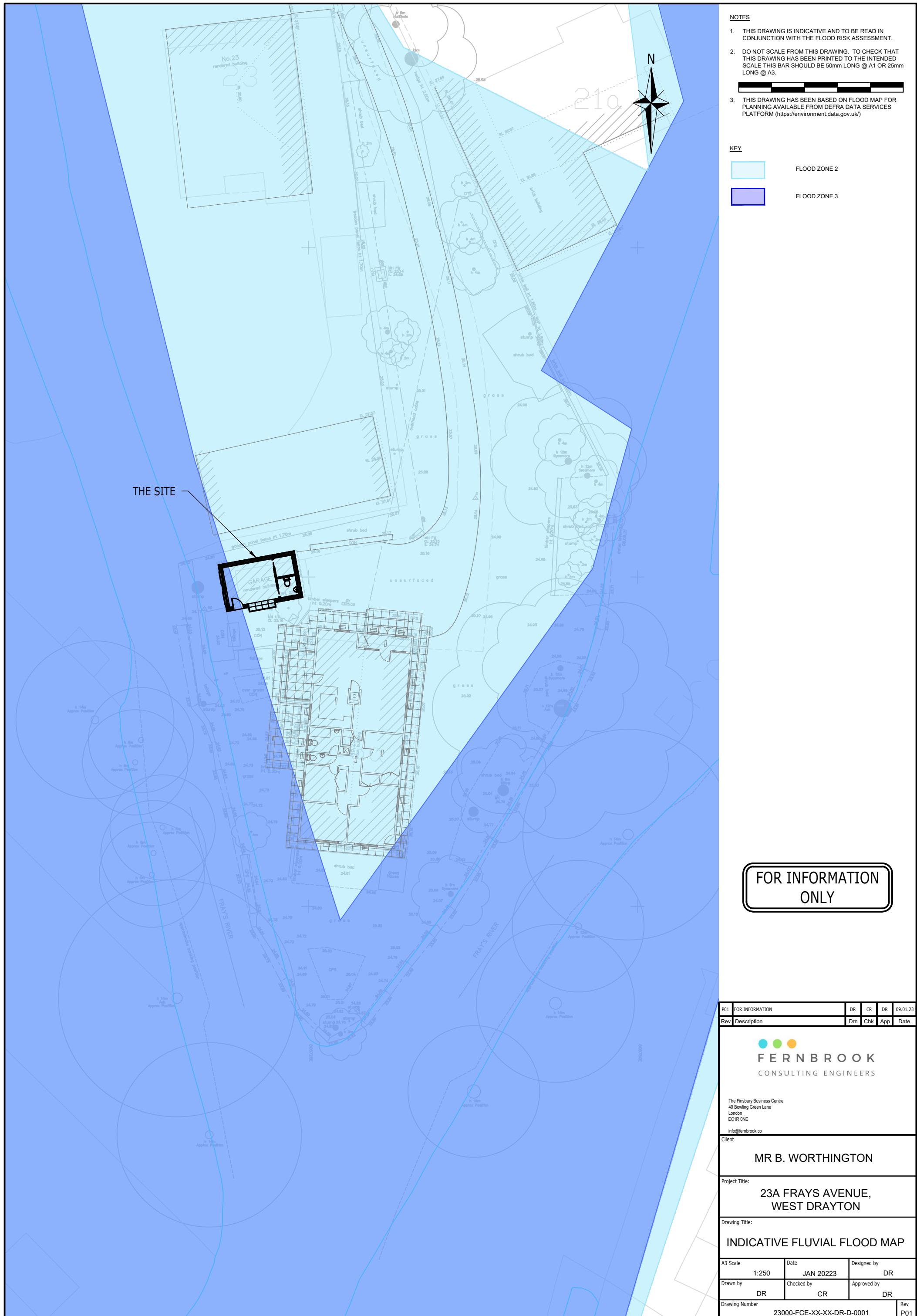
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APPENDIX B – FLOOD MAP FOR PLANNING



NOTES

1. THIS DRAWING IS INDICATIVE AND TO BE READ IN CONJUNCTION WITH THE FLOOD RISK ASSESSMENT.
2. DO NOT SCALE FROM THIS DRAWING. TO CHECK THAT THIS DRAWING HAS BEEN PRINTED TO THE INTENDED SCALE THIS BAR SHOULD BE 50mm LONG @ A1 OR 25mm LONG @ A3.
3. THIS DRAWING HAS BEEN BASED ON FLOOD MAP FOR PLANNING AVAILABLE FROM DEFRA DATA SERVICES PLATFORM (<https://environment.data.gov.uk/>)