ARDENT
CONSULTING ENGINEERS

Michael Jones Architects

The Green, Richmond

Flood Risk Assessment

REPORT REF.
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HEAD OFFICE: 3rd Floor, The Hallmark Building, 52-56 Leadenhall Street, London, EC3M 5JE **T** | 020 7680 4088
EDINBURGH: Suite 35 4-5 Lochside Way Edinburgh EH12 9DT **T** | 0131 516 8111
ESSEX: 1 - 2 Crescent Court, Billericay, Essex, CM12 9AQ **T** | 01277 657 677
KENT: Suite 10, Building 40, Churchill Business Centre, Kings Hill, Kent, ME19 4YU **T** | 01732 752 155
MIDLANDS: Office 3, The Garage Studios, 41-43 St Mary's Gate, Nottingham, NG1 1PU **T** | 0115 697 0940
SOUTH WEST: Temple Studios, Bristol, England, BS1 6QA **T** | 0117 456 4994
SUFFOLK: Suffolk Enterprise Centre, 44 Felaw Street, Ipswich, IP2 8SJ **T** | 01473 407 321

Email: enquiries@ardent-ce.co.uk

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REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	DRAFT	MG	LB		
-	FINAL	MG	LB	CC	15/12/23

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1. Introduction

1.1. Ardent Consulting Engineers (hereafter referred to as "Ardent") has been commissioned by Michael Jones Architects to produce a Flood Risk Assessment (FRA) for the proposed change of use of 31 The Green, Richmond, TW9 1LX (hereafter referred to as the 'site').

1.2. This FRA has been prepared with specific reference to the requirements of National Planning Policy Framework (NPPF) updated in July 2021 and the Planning Practice Guidance (PPG), which superseded the Technical Guidance to the NPPF in 2014 and was updated in August 2022.

Site Location

1.3. The site is located within London Borough of Richmond upon Thames, in a mixed-use area inclusive of residential, commercial and retail land uses.

1.4. The site is situated towards the southernmost end of The Green which rund along the south-eastern boundary of Richmond Green. The site is located approximately 230m northeast of the River Thames. The location plan is shown on Figure 1-1 below.

Figure 1-1: Site Location Plan

Background and Current Setting

1.5. The site lies within the Richmond and Richmond Hill Conservation Area and is a building with Grade II listed status. It is situated in the southernmost corner of the Richmond Green Conservation Area (CA3).

1.6. The property at 31 The Green was originally used for residential purposes until the 1960s, following which it was converted to office use. The building was joined with no. 32 at some point prior to 1960, with internal alterations made that included the removal of the original staircase for no. 31. However, a planning application in 1992 (92/1623/FUL) indicates that permission was granted for the party wall to be re-instated and both buildings to serve independently, with a new staircase introduced for no. 31 in a non-original location. Since the approval of this planning application, no. 31 has continued to serve a commercial purpose and is currently occupied by a private bank since 2014.

1.7. The property comprises a late eighteenth century townhouse in brick, presenting a three-storey principal elevation of four bays to the street. The front elevation of the property has undergone relatively few alterations, with some significant alternations to the rear elevation and internal changes. Despite these changes, the property remains an important contributor to the character and appearance of the Richmond Green Conservation Area. Its largely unaltered principal façade and historic character make it an integral part of a collection of listed buildings that line the Green and contribute to the unique character of the area.

Development Proposals

1.8. Policy LP3 of The Local Plan aims to safeguard areas of special importance by designating Conservation Areas and ensuring that any proposals within or affecting the setting of these areas take into account their impact. The Richmond and Richmond Hill Conservation Area, within which the site is located, falls under this policy. According to this policy, any new development in the area should aim to preserve and improve the unique character and appearance of the locality.

1.9. The proposed development is looking for a change of use from office space into a single-family dwelling house consisting of minor modifications and restoration works to the external of the listed building in accordance with the above policy without any increase in impermeable areas.

1.10. Please refer to **Appendix A** for the proposed development layouts.

2. Policy Context

National Planning Policy Framework

2.1. The National Planning Policy Framework (NPPF) was updated in September 2023; paragraph 159 to 169 inclusive, establishes the Planning Policy relating to flood risk management. The Technical Guide to the NPPF has been superseded by the Planning Practice Guidance (PPG) in March 2014 and was last updated in August 2022.

2.2. The main focus of the policy is to direct development towards areas of the lowest practicable flood risk and to ensure that all development is safe, without increasing flood risk elsewhere. The main considerations are:

- applying the sequential test and then, if necessary, the exception test as set out below;
- safeguarding land from development that is required, or likely to be required, for current or future flood management;
- using opportunities provided by new development to reduce the causes and impacts of flooding (where appropriate through the use of natural flood management techniques); and
- where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations.

Flood and Water Management Act (2010)

2.3. The Flood and Water Management Act places a duty on all flood risk management authorities to co-operate with each other. The act also provides Lead Local Flood Authorities (LLFA) and the Environment Agency (EA) with a power to request information required in connection with their flood risk management functions.

2.4. The LLFAs are responsible for developing, maintaining, and applying a strategy for local flood risk management in their areas, and for maintaining a register of flood risk assets. They also have lead responsibility for managing the risk of flooding from surface water, groundwater, and ordinary watercourses.

The London Plan 2021, March 2021

2.5. The London Plan, first published in 2004 and last updated in March 2021, is the Greater London Authority's (GLA) spatial development strategy plan for London. It

sets the framework for development in London over the next 20-25 years, linking key economic, environmental, transport and social priorities.

2.6. London Plan has various objectives that aim to make the city a world leader in improving the environment. One of the objectives is to address climate change, which is elaborated in Chapter 9 of the plan. The chapter includes several policies that tackle flood risk and water resource matters, such as Policy SI12 that deals with flood risk management, Policy SI13 that covers Sustainable Drainage and Policy SI17 that covers protection of London's waterways.

- SI 12 Flood risk management – The policy states that both current and expected flood risk from all sources across London should be managed in a sustainable and cost-effective way. This should be a collaborative effort between the EA, LLFAs, developers and infrastructure providers. It also sets out requirements for developments plans and development proposals.
- Policy SI 13 Sustainable drainage – The policy provides an updated drainage hierarchy which development proposals need to adhere to when addressing surface water runoff. Proposals should aim to achieve greenfield runoff rates and manage surface water runoff as close to its source as possible, using the most sustainable solutions to reduce runoff volumes and rates. Development proposals should seek to include SuDS features to provide multiple benefits through their drainage scheme. In addition, LFRMS and SWMP documents produced by LLFAs should identify areas where there are particular surface water management issues and aim to reduce these risks.
- Policy SI 17 Protecting London's waterways – The policy requires that new developments support river and watercourse restoration. It addresses the protection of water spaces and their characteristics, with a particular priority for improving and restoring them.

The Local Plan, adopted in July 2018

2.7. The Local Plan is a document that sets out the vision, objectives, and policies for the development of the borough over the next 15 years. It covers a range of topics, such as housing, transport, environment, heritage, community facilities and more. The Local Plan is important because it guides how the borough will grow and change in the future, and how it will respond to the challenges and opportunities that it faces.

2.8. One of the key challenges that the Local Plan addresses is climate change. The Local Plan recognises that climate change is a global threat that requires local action. The Local Plan aims to reduce greenhouse gas emissions, promote renewable energy, improve energy efficiency, conserve water resources, and adapt to the impacts of climate change, such as flooding, heatwaves and droughts. The

Local Plan has two strategic objectives under the theme of 'A Sustainable Future' that relate to climate change:

- To require high levels of sustainable design and construction to minimise and mitigate against the effects of climate change with regards to carbon dioxide emissions, energy consumption and water efficiency.
- To promote and encourage developments to be fully resilient to future impacts of climate change, minimising the risk of flooding, water shortages, subsidence and overheating.

2.9. One of the policies that implements these objectives is Policy LP 21:

A. *Flood Risk and Sustainable Drainage* - All developments should avoid, or minimise, contributing to all sources of flooding, including fluvial, tidal, surface water, groundwater and flooding from sewers, taking account of climate change and without increasing flood risk elsewhere. Development will be guided to areas of lower risk by applying the 'Sequential Test' as set out in national policy guidance, and where necessary, the 'Exception Test' will be applied. Unacceptable developments and land uses will be refused in line with national policy and guidance, the Council's Strategic Flood Risk Assessment (SFRA) and as outlined in the table below.

In Flood Zones 2 and 3, all proposals on sites of 10 dwellings or more or 1000 sqm of non-residential development or more, or on any other proposal where safe access/egress cannot be achieved, a Flood Emergency Plan must be submitted.

Where a Flood Risk Assessment is required, on-site attenuation to alleviate fluvial and/or surface water flooding over and above the Environment Agency's floodplain compensation is required where feasible.

For the development located in Flood Zone 1:

- there are no restrictions in terms of land uses and developments.
- Sequential test is not required.
- Exception test is not required.
- Flood Risk Assessment should include a Drainage Statement for sites all major developments. Required for all other development proposals where there is evidence of a risk from other sources of flooding, including surface water, ground water and sewer flooding.

B. *Basements* - within flood affected areas of the borough represent a particularly high risk to life, as they may be subject to very rapid inundation. For the

basement in Flood Zone 1, no restrictions on new or extensions to existing basements will apply.

C. *Sustainable drainage* - the Council will require the use of Sustainable Drainage Systems (SuDS) in all development proposals. Applicants will have to demonstrate that their proposal complies with the following:

- reduction in surface water discharge to greenfield run-off rates wherever feasible.
- Where greenfield run-off rates are not feasible, this will need to be demonstrated by the applicant, and in such instances, the minimum requirement is to achieve at least a 50% attenuation of the site's surface water runoff at peak times based on the levels existing prior to the development.

D. *Flood Defences* - applicants will have to demonstrate that their proposal complies with the following:

- Retain the effectiveness, stability and integrity of flood defences, river banks and other formal and informal flood defence infrastructure.
- Ensure the proposal does not prevent essential maintenance and upgrading to be carried out in the future.
- Set back developments from river banks and existing flood defence infrastructure where possible (16 metres for the tidal Thames and 8 metres for other rivers).
- Take into account the requirements of the Thames Estuary 2100 Plan and the River Thames Scheme and demonstrate how the current and future requirements for flood defences have been incorporated into the development.
- the removal of formal or informal flood defences is not acceptable unless this is part of an agreed flood risk management strategy by the Environment Agency.

2.10. Site-specific Flood Risk Assessment should be completed for new proposals, or a change of use in development type to a more vulnerable class, where the proposed development could be affected by sources of flooding other than rivers and the sea.

2.11. Sequential test is not required for non-major development, redevelopment of an existing single residential property and conversions and change of use.

Strategic Flood Risk Assessment Level 1, prepared for the London Borough of Richmond upon Thames, March 2021

2.12. The purpose of the Level 1 Strategic Flood Risk Assessment (SFRA) is to deliver the planning and flood risk requirements as defined by the 2019 National Planning

Policy Framework (NPPF). The SFRA to be compliant with the latest policy requirements and utilise the latest data to better assess flood risk.

2.13. The SFRA provides a strategic overview of all forms of flood risk throughout the borough, now and in the future. This document, and the associated web-based mapping delivered as part of the SFRA, is designed to help address local requirements.

2.14. Table 6-1 (p.29) states Planning Application and Development Requirements for all developments within Flood Zones 1, 2, 3a and 3b. According to the table for development in Flood Zone 1 there is:

- No land use restrictions.
- The Sequential and Exception Tests do not need to be applied if the site is a change of use development, excluding caravans, camping chalets, mobile homes and park home sites.
- The Sequential Test only needs to be applied for development proposals in Flood Zone 1 if the SFRA and accompanying Web Map indicates there may be existing flood issues from other sources (refer to Table 6-2) or flood issues in the future. This information may also come from other sources.
- A site-specific FRA is required for all development proposals where there is evidence of a risk from other sources of flooding, including surface water, groundwater and sewer flooding. Flood risk from all sources should be assessed, including the potential impacts of climate change over the development's lifetime.
- A statement on SuDS is required for all major developments. Minor developments and change of use developments that have a bearing on a site's existing drainage regime also need to provide a Statement on SuDS as part of the development proposal.
- A detailed assessment is required for all major development and minor developments that alter the surface or sub-surface level footprint or arrangement of a site Developments within areas that are at increased risk of flooding due to groundwater and/or throughflow flood mechanisms require further analysis of flood risk. Applicants are required to ensure that proposed subsurface developments do not increase the risk of throughflow and groundwater related flood risk in the immediate area via a Screening Assessment and, if required, a Basement Impact Assessment.

Climate Change Allowance

2.15. Climate change allowance for rainfall intensity, in the Planning Practice Guidance, were updated in May 2022. Climate change allowances are now broken down into management catchments. To allow for the predicted impacts of climate change on surface water runoff within the London Management Catchment, the following

increases detailed in *Table **2-1*** below to rainfall intensity should be allowed for. For residential developments the minimum lifetime is 100 years and the upper end allowances should be used.

Table 2-1: London Management Catchment Peak Rainfall Allowances

3.3% (1 in 30-year) Annual Exceedance Rainfall Event		
Epoch	**Central Allowance**	**Upper End Allowance**
2050s	20%	35%
2070s	20%	35%
1% (1 in 100-year) Annual Exceedance Rainfall Event		
Epoch	**Central Allowance**	**Upper End Allowance**
2050s	20%	40%
2070s	25%	40%

2.16. Therefore, under the NPPF an allowance of 40% for the effects of climate change for the 1% annual exceedance rainfall event would achieve the policy requirements in designing the drainage elements the proposed residential redevelopment (the design event).

Sequential Test

2.17. The objective of the Sequential Test is to steer new developments toward areas with the lowest probability of flooding. Where there are no reasonably available sites in lower flood risk areas, local planning authorities in their decision making should take into account the flood risk vulnerability of land uses and consider reasonably available sites in higher flood risk areas.

2.18. According to the London Borough of Richmond upon Thames SFRA, The Sequential and Exception Tests do not need to be applied if the site is a change of use development, excluding caravans, camping chalets, mobile homes and park home sites.

2.19. The Sequential Test only needs to be applied for development proposals in Flood Zone 1 if the SFRA and accompanying Web Map indicates there may be existing

flood issues from other sources (refer to Table 6-2) or flood issues in the future. This information may also come from other sources.

2.20. As the site is shown to be located within Flood Zone 1 of the Environment Agency flood mapping (as discussed in Section 4) and it's not at risk of any other flood risk sources, it should not be necessary for the site to undergo the Sequential Test.

Exception Test

2.21. Table 2 'Flood risk vulnerability classification' of the PPG describes the proposed development as 'More Vulnerable'. Table 3 of the PPG replicated overleaf in Table 2-1, confirms that the Exception Test is not required for 'More Vulnerable' uses in Flood Zone 1.

Table 2-2: Extract from PPG - Table 3 Flood Risk Vulnerability

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:

✔ Exception test is not required

X Development should not be permitted

3. Baseline Conditions

Topography

3.1. A 1m LiDAR downloaded in November 2023 shows the terrain slopes downwards in a northern direction towards Richmond Green. The elevation of the land within the immediate building proximity is between 8.5m AOD and 8.7m AOD. See Figure 3-1 for details. A Topographical Survey is included in **Appendix B** but should be noted that this has been undertaken with reference to a local datum.

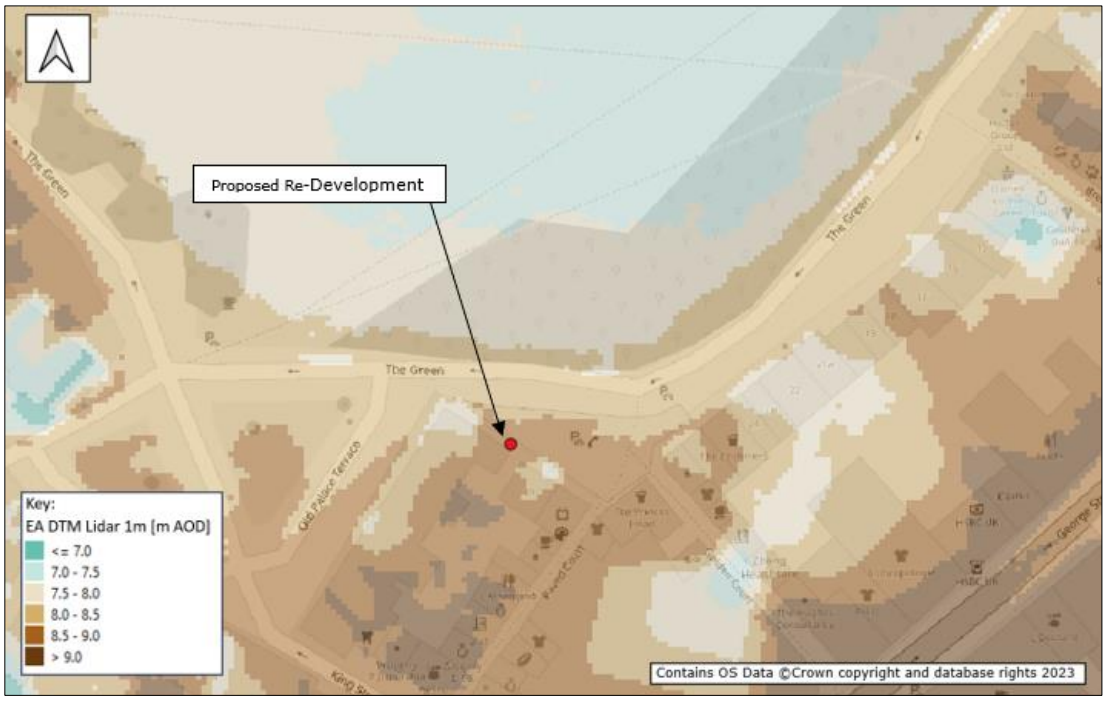


Figure 3-1: Ground elevation

Hydrology

3.2. The Environment Agency's (EA) online main river map shows that the nearest main river is the River Thames which is located approximately 230m southwest of the site. There are no ordinary watercourse in the proximity of the site.

Ground Conditions

3.3. A review of British Geological Survey (BGS) mapping shows the bedrock of the proposed site as London Clay formation mainly composed of clay, silt and sand. An extract from BGS mapping is shown in Figure 3-2.

Figure 3-2: BGS Online Geology Mapping Bedrock Geology

3.4. A review of British Geological Survey (BGS) mapping shows the superficial deposits of Kempton Park Gravel Member – sand and gravel, locally with lenses of silt, clay, or peat. An extract from BGS mapping is shown in Figure 3-3.

Figure 3-3: BGS Online Geology Mapping Superficial Geology

3.5. According to the British Geological Survey (BGS) borehole record mapping, there are a number of boreholes located to the north and west of the site. However, none of these nearby boreholes contain information regarding the groundwater level.

4. Sources of flooding

4.1. The NPPF requires flood risk from the following sources to be assessed, each of which are assessed separately below:

- Historic Flooding;
- Tidal sources (flooding from the sea);
- Fluvial sources (river flooding);
- Pluvial sources (flooding resulting from overland flows);
- Groundwater sources;
- Sewer flooding;
- Artificial sources, canals, reservoirs etc.; and,
- It also requires the risk from increases in surface water discharge to be assessed (surface water management).

Historic Flood Incidences

4.2. Based on the information available on the interactive maps developed to accompany the SFRA 2021 and Environment Agency Historic Flood Map, there have been no recorded flood incidents in the proximity of the site.

Flood Zone Designation

4.3. Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences. The NPPF Planning Practice Guidance defines Flood Zones as follows:

- Flood Zone 1: Low Probability. Land having a less than 1 in 1,000 annual probability of river or sea flooding;
- Flood Zone 2: Medium Probability. Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding;
- Flood Zone 3a: High Probability. Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding; and
- Flood Zone 3b: The Functional Floodplain. This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessment areas of functional

floodplain and its boundaries accordingly, in agreement with the Environment Agency.

Fluvial and Tidal Flooding

4.4. The Environment Agency maps shows the entire site is located in Flood Zone 1. See Figure 4-1 below.

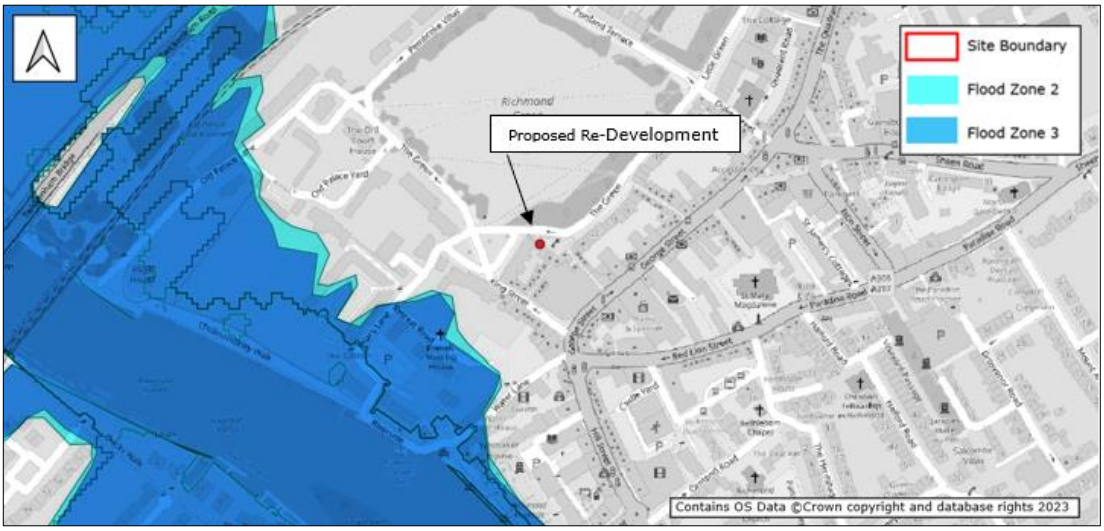


Figure 4-1: Environment Agency Flood Map for Planning

Pluvial Flooding

4.5. The Environment Agency Map surface water mapping shows the surface water flooding within the site for the 1 in 30 year, 100-year and 1000-year events which mimics the EA surface water flood map.

4.6. The EA's surface water flood maps (Figure 4-2) show that the site and surroundings has a 'very low' risk of surface water flooding, meaning that there is less than a 0.1% chance of flooding from surface water flooding each year.

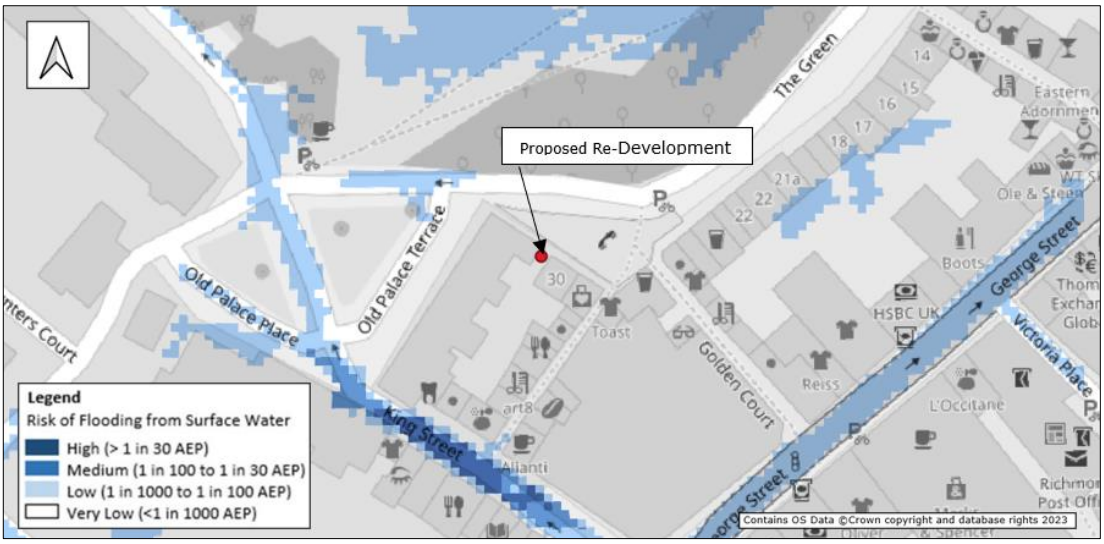


Figure 4-2: Environment Agency Flood Map for Surface Water

Groundwater Flooding

4.7. According to the London Borough of Richmond upon Thames Interactive Maps (SFRA, 2021), the property is situated within the zone where the risk of groundwater flooding ranges from 50-74.9%.

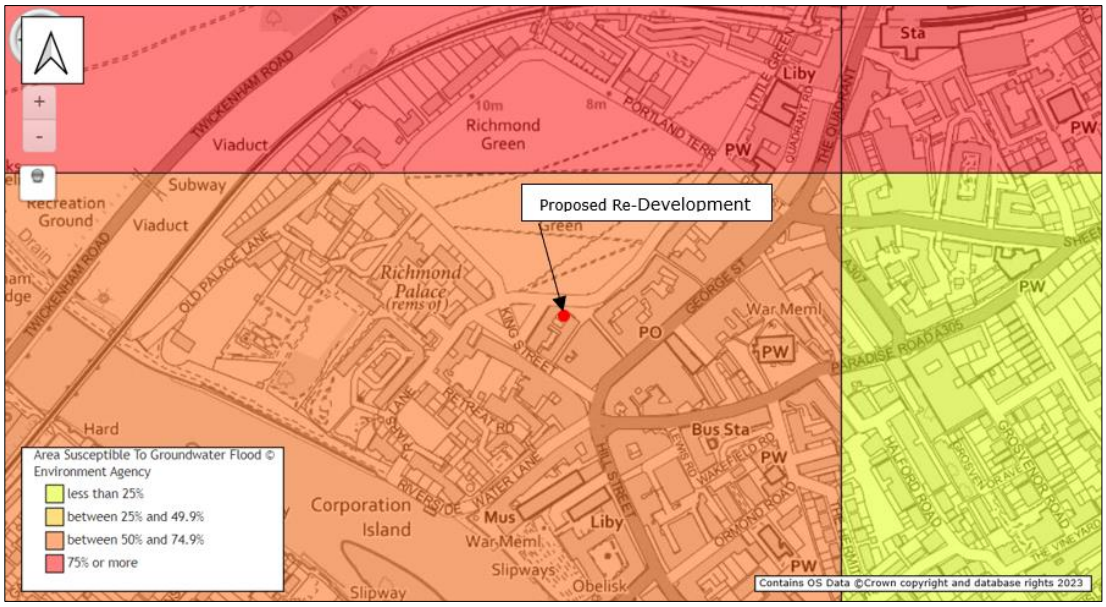


Figure 4-3: Areas susceptible to groundwater flooding (Source: London Borough of Richmond upon Thames Interactive Maps, SFRA 2021)

4.8. Therefore, the risk of groundwater flooding at the site is regarded as 'moderate'. However, as the proposals only consist of a change of use the potential emergence of groundwater on the site remains unchanged.

4.9. Certain areas within the London Borough of Richmond upon Thames may face the risk of flooding due to groundwater influence via throughflow. The subterranean conditions in these areas allow groundwater to flow downhill through the aquifers or permeable superficial deposits from the top of the catchment area. However, in the absence of such deposits, the water can still flow through the interface of the subsurface level of made ground and the clay geology stratum, which is known as throughflow.

4.10. The development site is also located within the Increased Potential for Elevated Groundwater zone and within Throughflow Catchment Area. See Figure 4-4 for details. It is assumed that this movement is groundwater flowing towards the River Thames in a south-westerly direction.

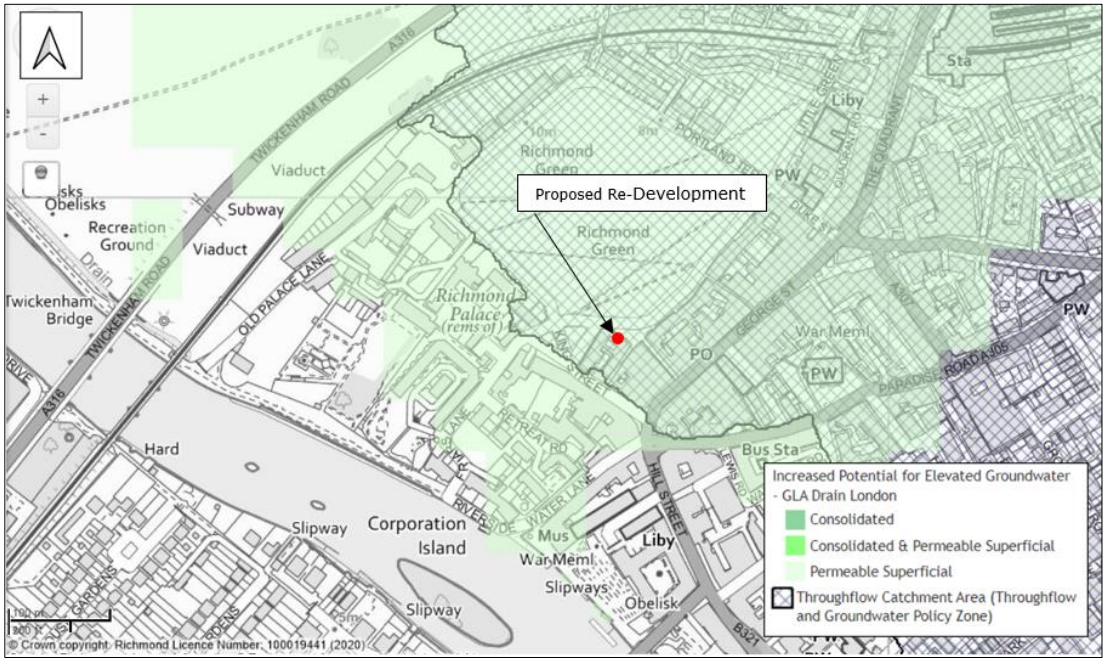


Figure 4-4: Increased Potential for Elevated Groundwater and Throughflow Catchment Area (Source: London Borough of Richmond upon Thames Interactive Maps, SFRA 2021)

Sewer Flood Risk

4.11. According to the London Borough of Richmond upon Thames Interactive Maps (SFRA, 2021), the site is situated within the Thames Water Sewer Flooding Record, where there have been between 0 to 10 incidents. The information available suggests that out of these incidents 7 occurred indoors and 2 occurred outdoors. However, the exact location of these incidents is unknown. See Figure 4-5 for details.

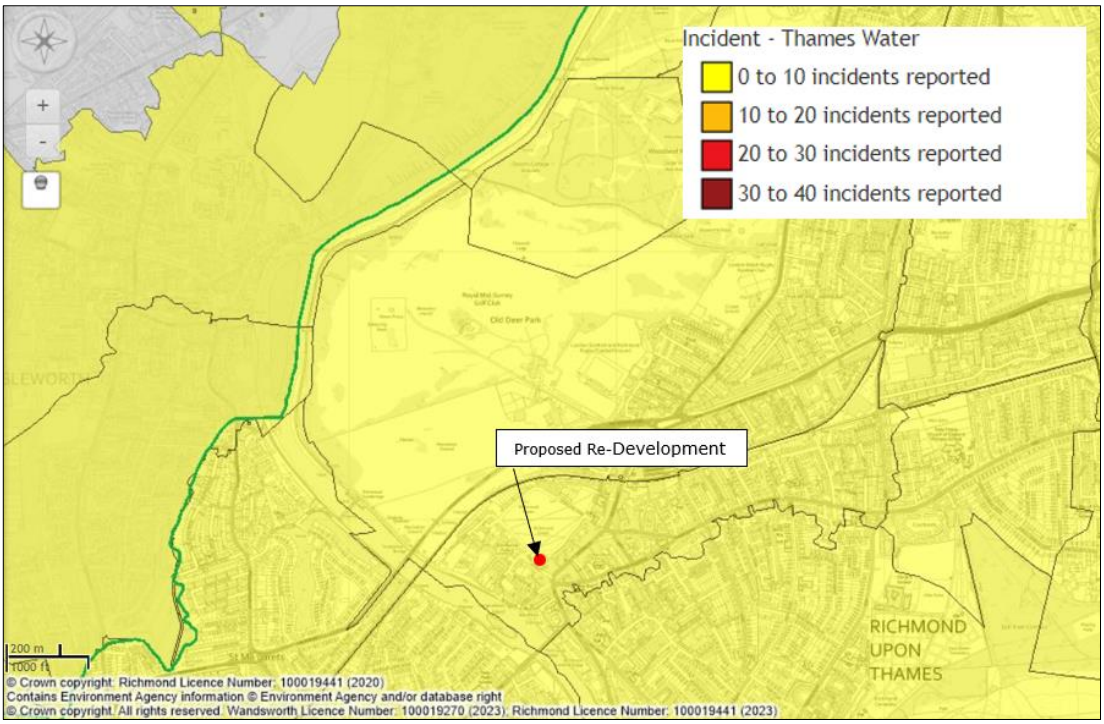


Figure 4-5: Thames Water Sewer Incident Record (Source: London Borough of Richmond upon Thames Interactive Maps, SFRA 2021)

4.12. As the proposed development comprises change of use from office space into a single-family dwelling house consisting of minor modifications and restoration works to the listed building without any increase in impermeable areas or changes in the sewer system, the sewer flood risk will remain low.

Artificial Sources

4.13. According to the Environment Agency's Flood risk from reservoir map, the site is not in an area at risk of flooding from artificial sources. Environment Agency and OS mapping indicates no nearby canals, reservoirs or similar artificial potential sources of flood risk in the nearby vicinity and upgradient of the site.

Critical Drainage Areas

4.14. The London Borough of Richmond upon Thames Interactive Maps (SFRA, 2021) shows the site is located outside of the Critical Drainage Areas. See Figure 4-6.

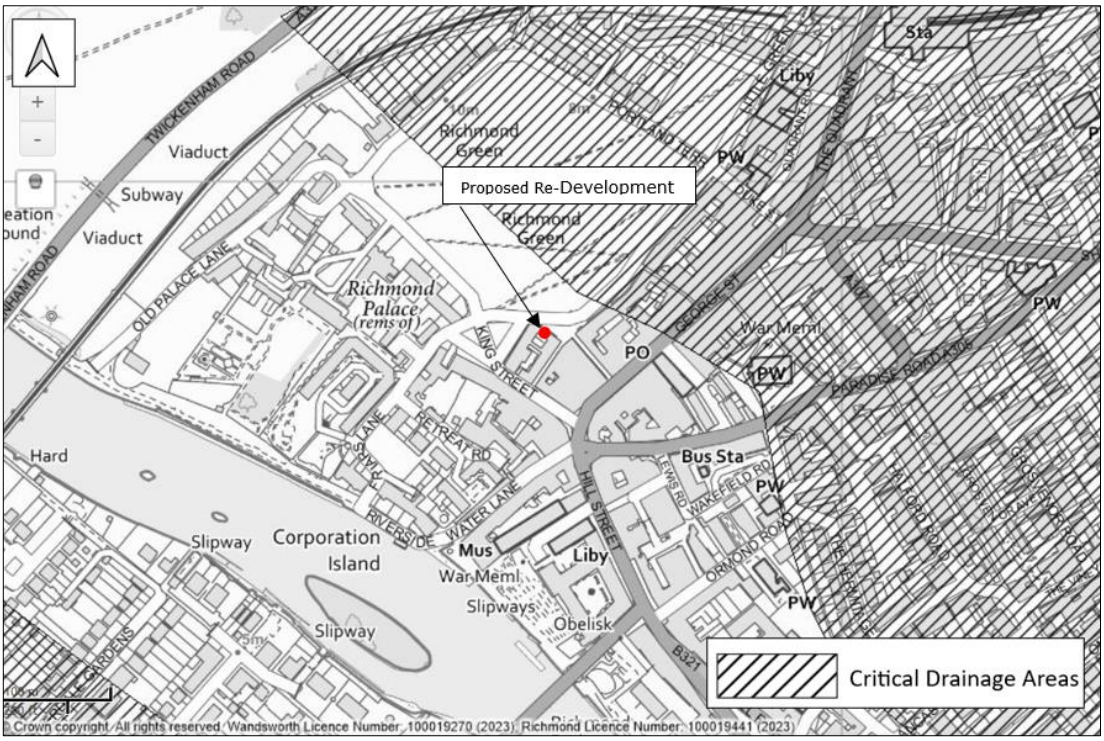


Figure 4-6: Critical Drainage Areas (Source: London Borough of Richmond upon Thames Interactive Maps, SFRA 2021)

4.15. Based on the information provided, the flood risk associated with the proposed development is considered to be low, except for the risk of groundwater flooding, which is regarded as moderate. As the development involves a change of use from office space to a single-family dwelling without any increase in impermeable area or subsurface development or extensions or external alterations, it is currently deemed that no mitigation measures are necessary.

5. Drainage Statement

5.1. According to London Borough of Richmond upon Thames SFRA (March 2021), a statement on SuDS is required for all major developments. Minor developments and change of use developments that have a bearing on a site's existing drainage regime also need to provide a Statement on SuDS as part of the development proposal.

5.2. The development proposal is described in detail in Section 1. The overall site planning redline boundary equates to approximately 91.4m². Of this area, 63.4m² is the residential building, 16.7m² is the courtyard, and 11.3m² is the ground located west of the courtyard (green permeable area). The courtyard consists of pavement and pebbles, as indicated on the topographical survey (**Appendix B**) and shown within Figure 5-1.

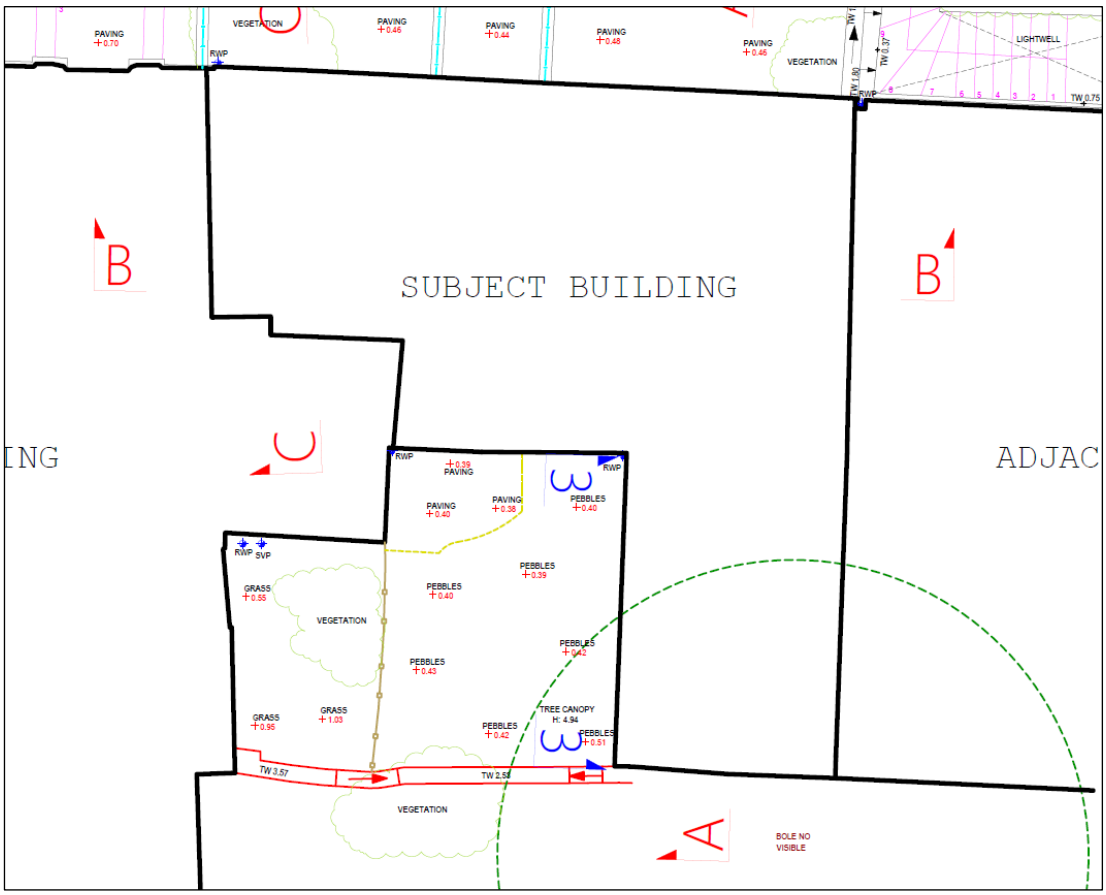


Figure 5-1: Topographical Survey

5.3. According to the proposal, the impermeable area is assumed to be 80.1m², which is 87.6% of the total site area. To increase the permeable area from 12.4% (11.3m^2) to 30.6% (28m^2), the courtyard will be converted to soft landscaping.

5.4. The client is proposing to install a rainwater harvesting tank connected to the roof gutter. The tank will have sufficient capacity to provide some rainwater storage that can be reused mainly for irrigation of the garden.

5.5. Based on the information provided, the development proposal is looking for a change of use from office space into a single-family dwelling house without any increase in impermeable area or additional building works. As a result, the existing surface water connections will be utilised with the addition of some on-site rainwater harvesting systems which will provide minor benefits to the overall existing surface water drainage network.

6. Conclusions

6.1. Ardent Consulting Engineers has been commissioned by Michael Jones Architects to undertake a Flood Risk Assessment (FRA) for the proposed change of use of 31 The Green, Richmond TW9 1LX.

6.2. The site lies within the Richmond and Richmond Hill Conservation Area and is a building with Grade II listed status and is situated in the southernmost corner of the Richmond Green Conservation Area.

6.3. The proposed development is looking for a change of use from office space into a single-family dwelling house consisting of minor modifications and restoration works to the listed building.

6.4. The Sequential and Exception Tests do not need to be applied if the site is a change of use development, excluding caravans, camping chalets, mobile homes and park home sites.

6.5. The property is located in Flood Zone 1. The property is not at risk of any source of flooding except of the risk of groundwater flooding which is moderate but will remain unchanged from the development.

6.6. As the development involves a change of use from office space to a single-family dwelling without any increase in impermeable area or subsurface development or extensions, it is currently deemed that no mitigation measures are necessary.

6.7. The proposed change of use development will provide increase in the permeable area as the courtyard will be converted to soft landscaping. The proposal also includes a rainwater harvesting tank connected to the roof gutter which will have sufficient capacity to provide some rainwater storage that can be reused mainly for irrigation in the garden. The overall proposals will provide a minor benefit to the surface water drainage network.

6.8. In conclusion, this Flood Risk Assessment demonstrates that the proposals are consistent with the aims of the NPPF. The site will not be at significant risk of flooding or increase the flood risk to others. The SuDS Statement confirmed that the proposal will include some on-site SuDS features improving the surface water management on site.

Appendix A

revisions

MICHAEL JONES ARCHITECTS
020 8948 1863 | 129 Kew Road, Richmond, TW9 2PN
www.mjarchitects.co.uk | studio@mjarchitects.co.uk

job title
31 The Green

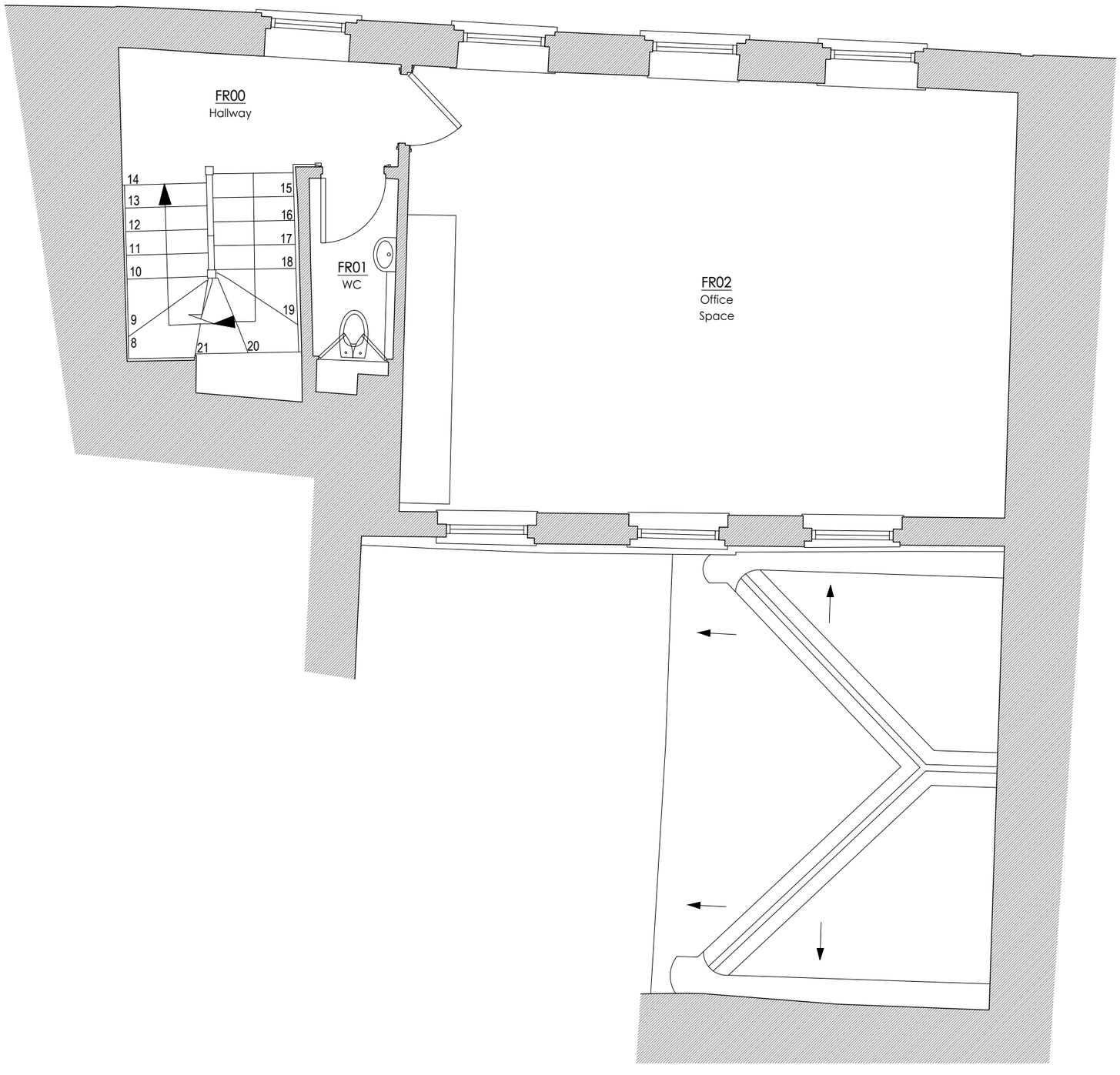
client
Justyn Bailey

drawing title
Existing Ground Floor Plan

drawing number
1951.01.03.Exg.022

rev

scale	1:50@A3
date	May 2023
drawn by	JC
checked by	IP



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N

revisions

MICHAEL JONES ARCHITECTS
020 8948 1863 | 129 Kew Road, Richmond, TW9 2PN
www.mjarchitects.co.uk | studio@mjarchitects.co.uk

job title
31 The Green

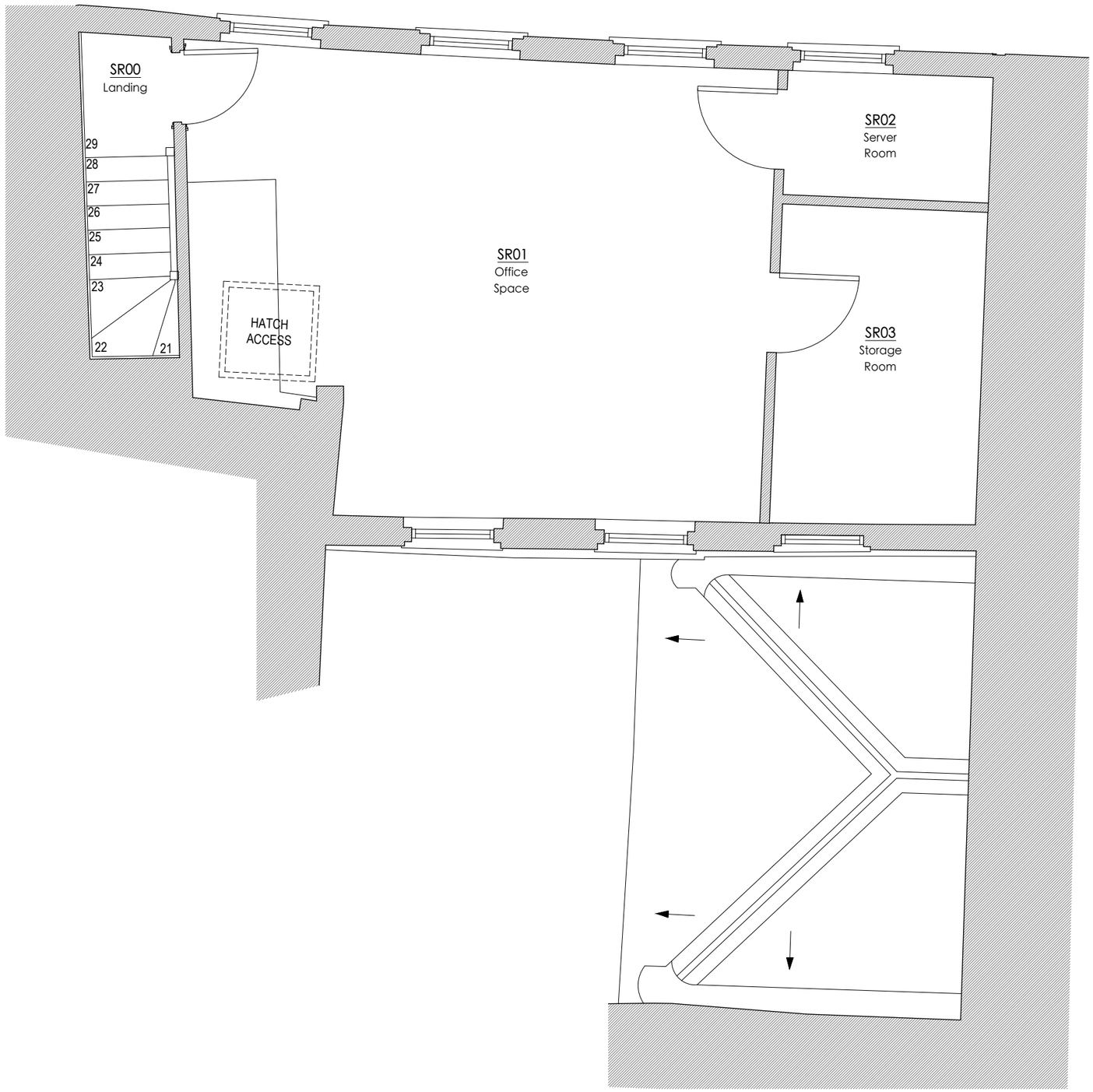
client
Justyn Bailey

drawing title
Existing First Floor Plan

drawing number
1951.01.03.Exg.023

rev

scale	1:50@A3
date	May 2023
drawn by	JC
checked by	IP



0 1 2m

N

revisions

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job title
31 The Green

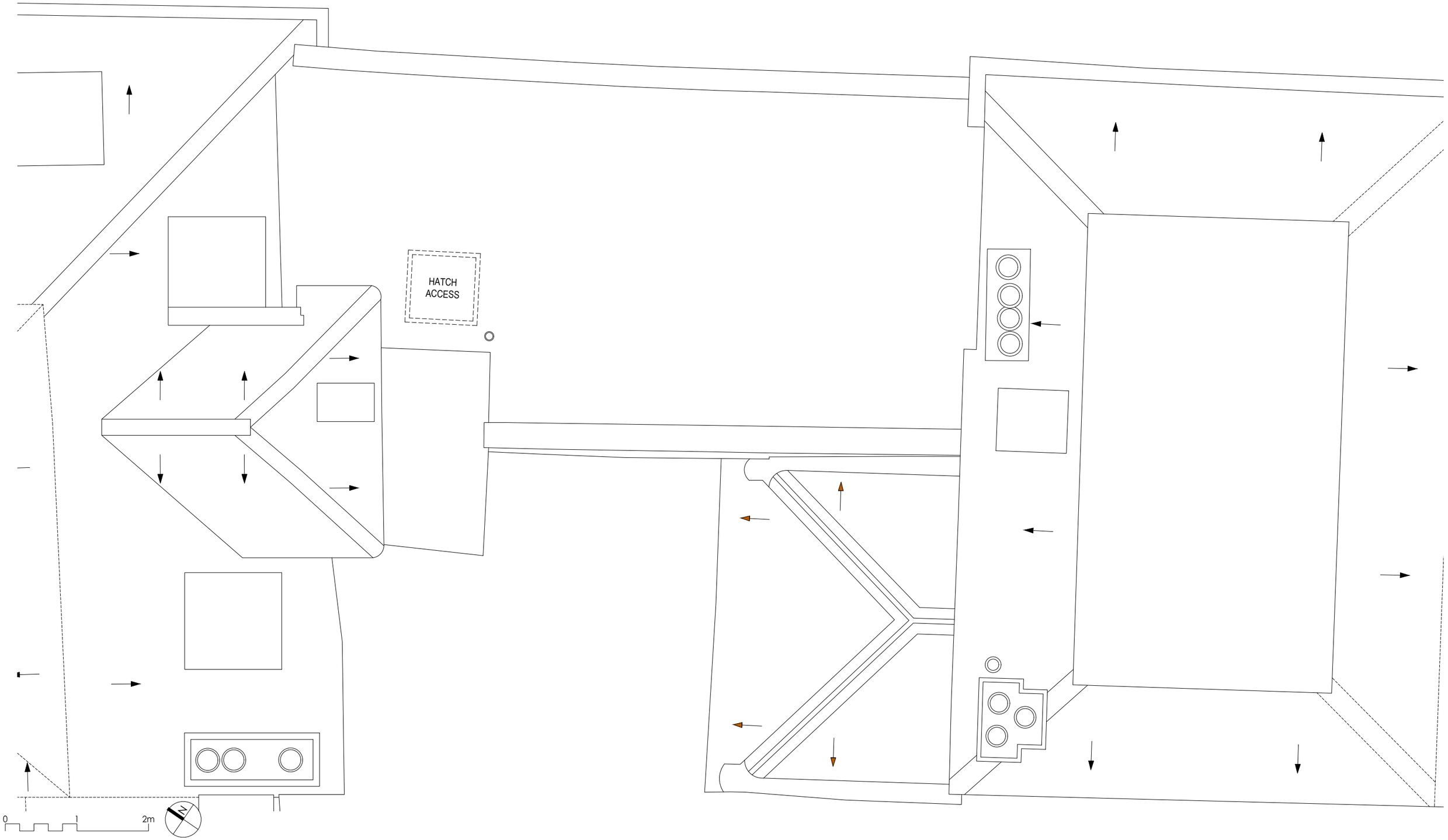
client
Justyn Bailey

drawing title
Existing Second Floor Plan

drawing number
1951.01.03.Exg.024

rev

scale	1:50@A3
date	May 2023
drawn by	JC
checked by	IP



MICHAEL JONES ARCHITECTS
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www.mjarchitects.co.uk | studio@mjarchitects.co.uk

revisions

job title
31 The Green

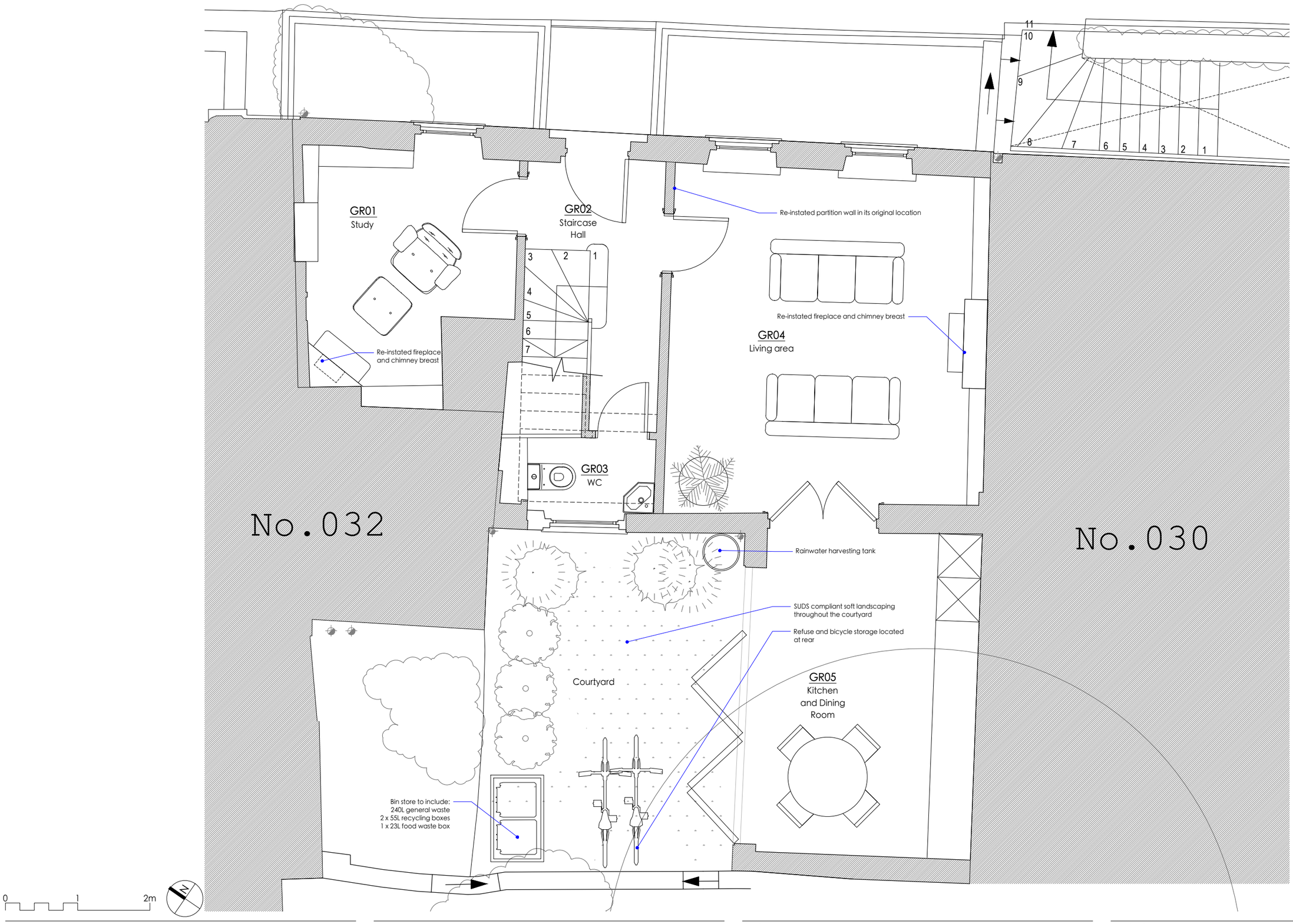
client
Justyn Bailey

drawing title
Existing Roof Plan

drawing number
1951.01.03.Exg.025

rev

scale	1:100@A3
date	May 2023
drawn by	JC
checked by	IP



revisions

A - 15/09/2023 Pre-app - revised layout

MICHAEL JONES ARCHITECTS
020 8948 1863 | 129 Kew Road, Richmond, TW9 2PN
www.mjarchitects.co.uk | studio@mjarchitects.co.uk

job title
31 The Green

client
Justyn Bailey

drawing title
Proposed Ground Floor Plan

drawing number
1951.03.03.Pln.022

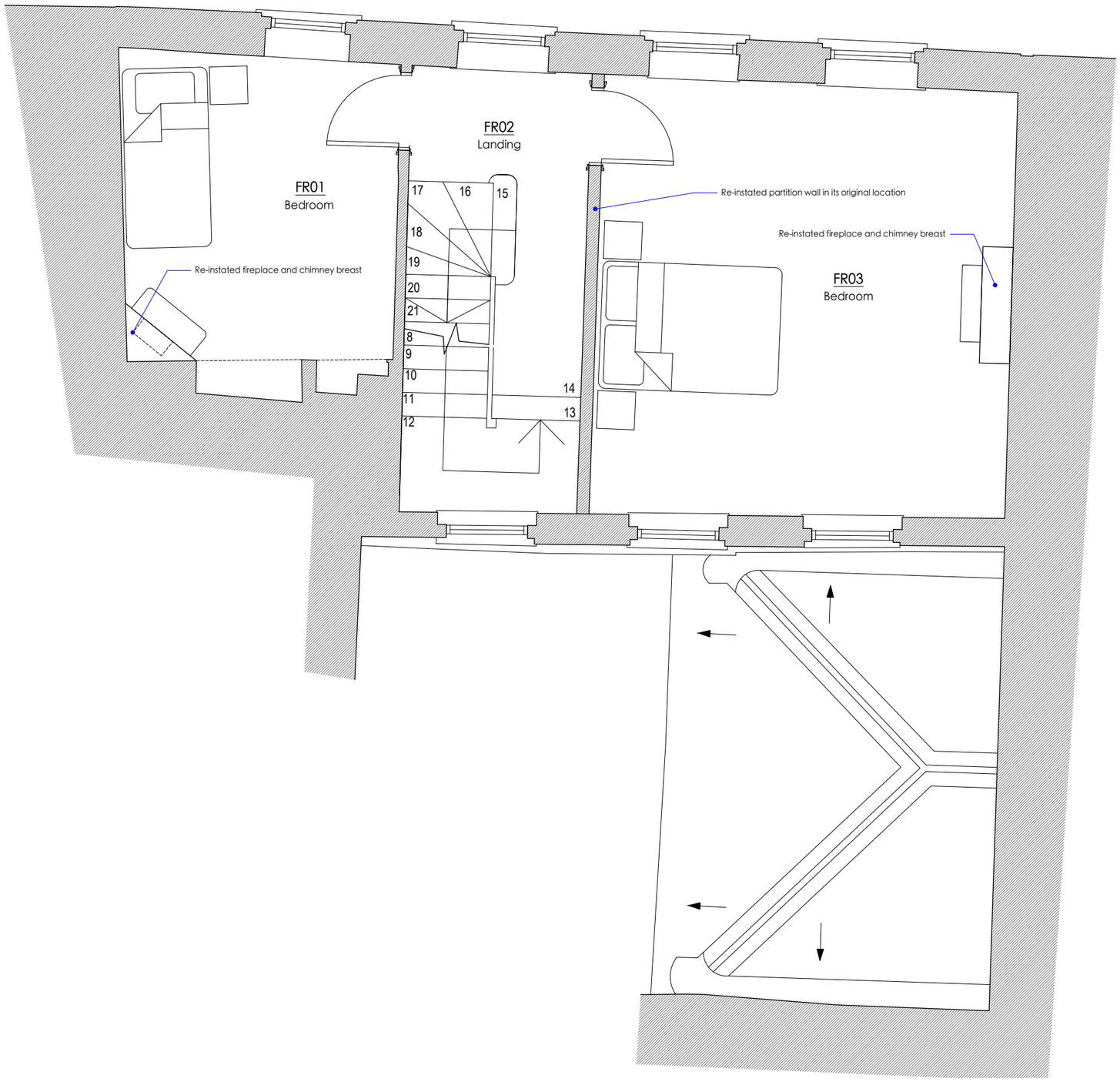
rev
A

scale 1:50@A3

date May 2023

drawn by AP

checked by IP



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revisions

A - 15/09/2023 Pre-app - revised layout

MICHAEL JONES ARCHITECTS
020 8948 1863 | 129 Kew Road, Richmond, TW9 2PN
www.mjarchitects.co.uk | studio@mjarchitects.co.uk

job title
31 The Green

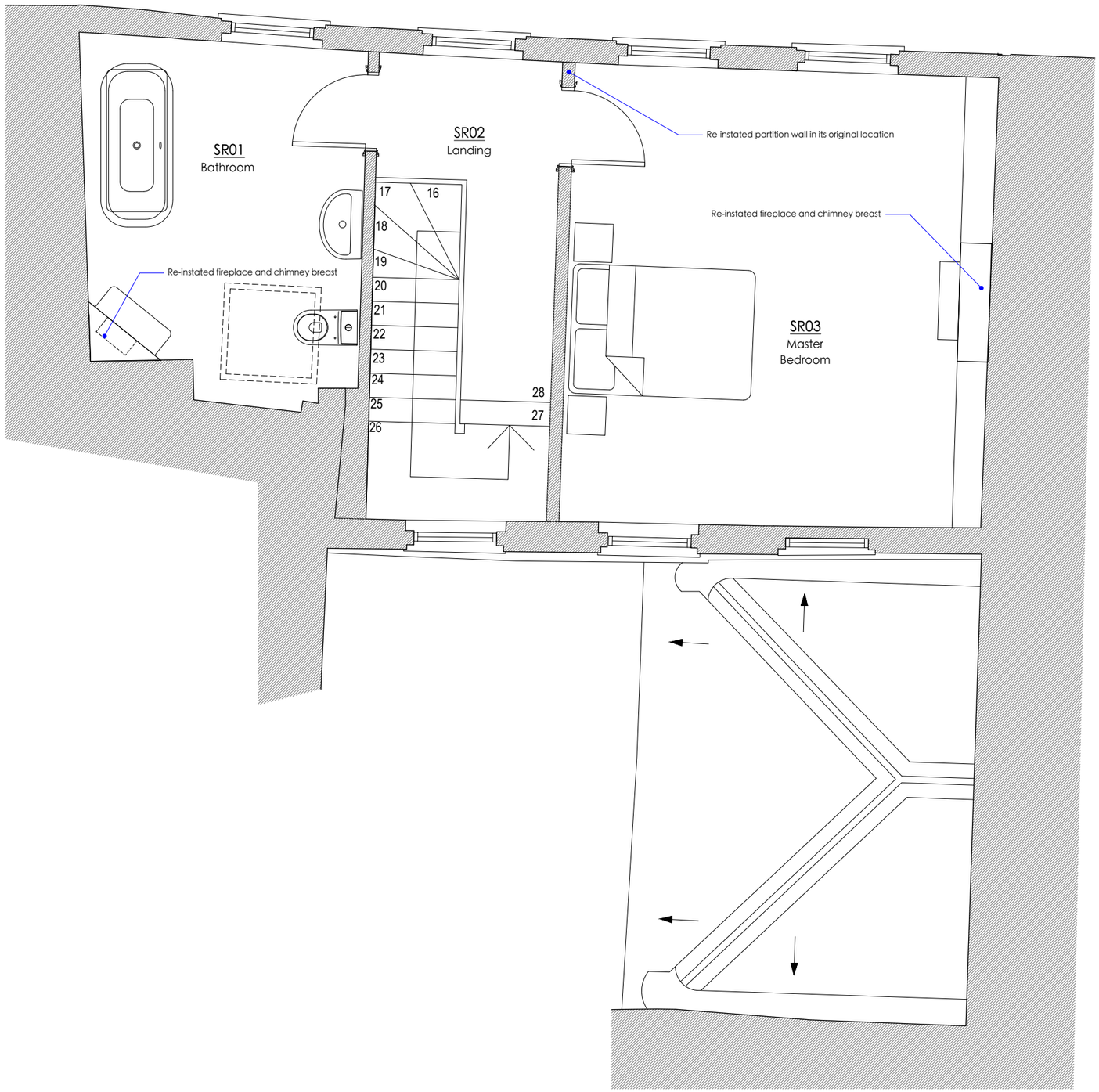
client
Justyn Bailey

drawing title
Proposed First Floor Plan

drawing number
1951.03.03.Pln.023

rev
A

scale 1:50@A3
date May 2023
drawn by AP
checked by IP



0 1 2m

N

revisions

A - 15/09/2023 Pre-app - revised layout

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job title
31 The Green

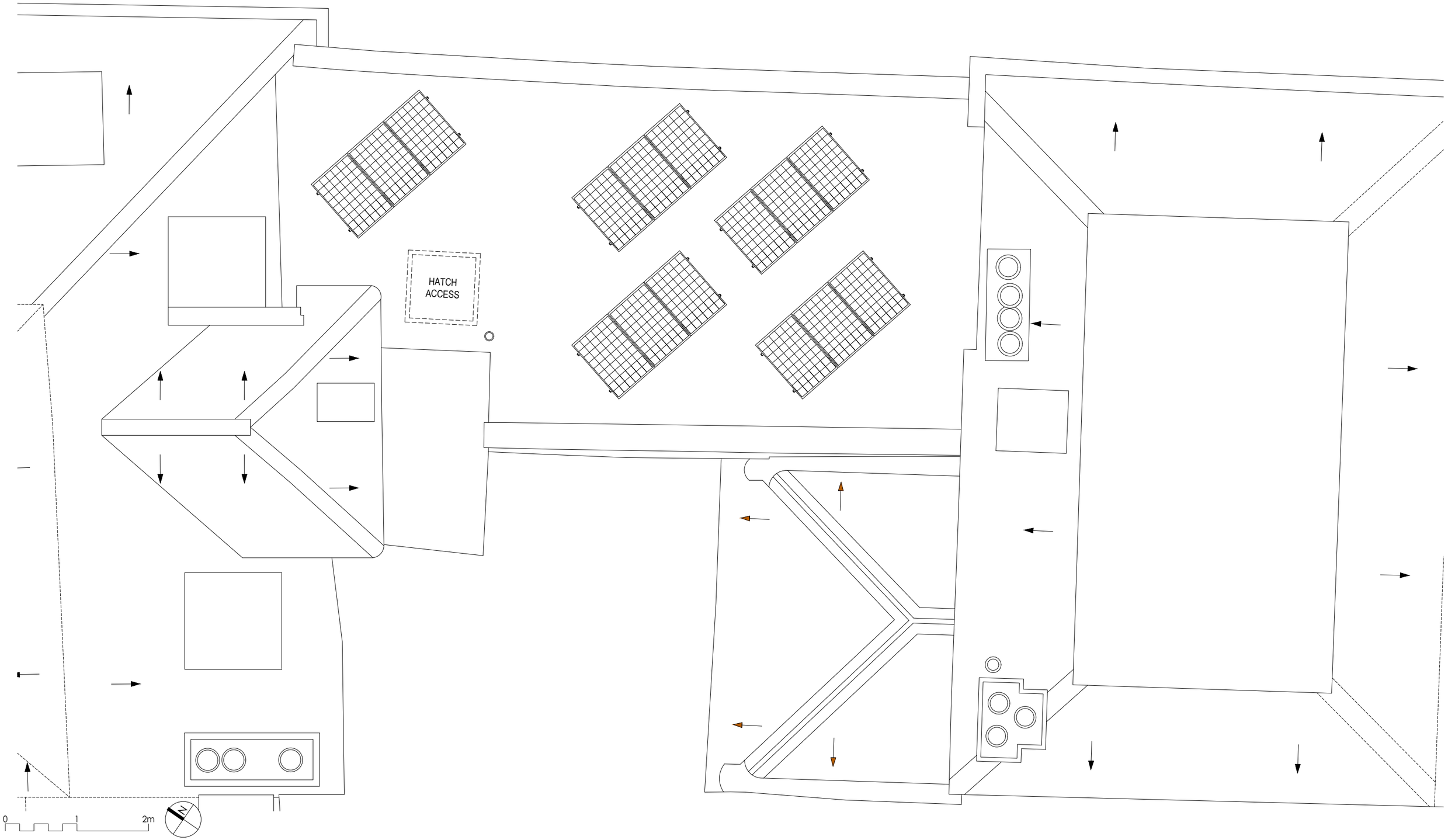
client
Justyn Bailey

drawing title
proposed Second Floor Plan

drawing number
1951.03.03.Pln.024

rev
A

scale 1:50@A3
date May 2023
drawn by AP
checked by IP



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revisions

job title
31 The Green

client
Justyn Bailey

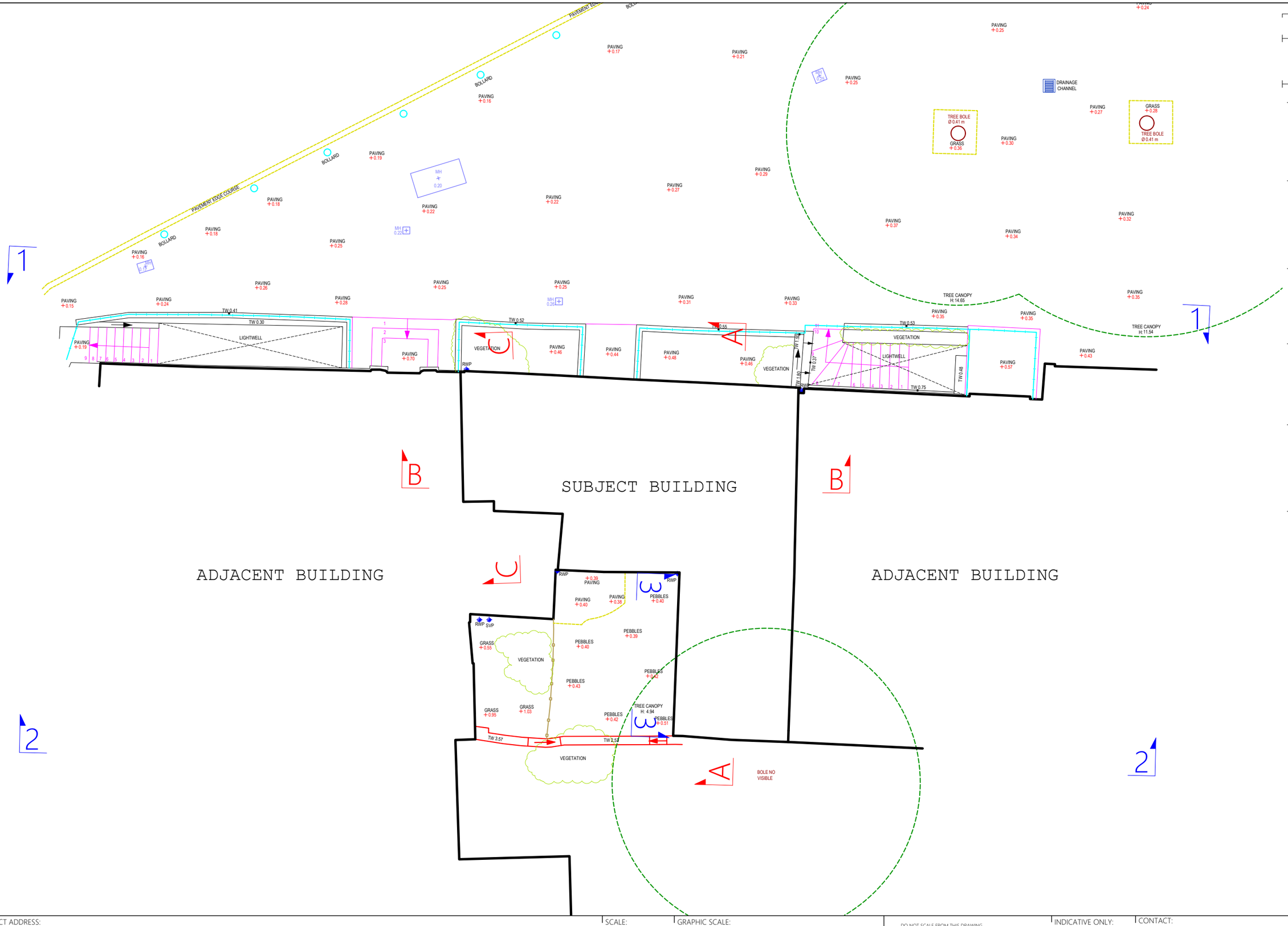
drawing title
Proposed Roof Plan

drawing number
1951.03.03.Pln.025

rev

scale	1:100@A3
date	May 2023
drawn by	JC
checked by	IP

Appendix B



DRAWING KEY

GRID
LOCAL GRID
DATUM
LOCAL DATUM

BEAM
- BH 0.00 - HEAD LEVEL
- BB 0.00 - BASE LEVEL
- BA 0.00 - APEX LEVEL
- BS 0.00 - SPRING LEVEL

DOOR
- DH 0.00 - HEAD LEVEL
- DB 0.00 - BASE LEVEL
- DA 0.00 - APEX LEVEL
- DS 0.00 - SPRING LEVEL

CEILING
- SH 0.00 - SLAB LEVEL
- CH 0.00 - CEILING LEVEL
- CA 0.00 - APEX LEVEL
- CS 0.00 - SPRING LEVEL

WINDOWS
- WH 0.00 - HEAD LEVEL
- WC 0.00 - CILL LEVEL
- WA 0.00 - APEX LEVEL
- WS 0.00 - SPRING LEVEL

RECESS
- RH 0.00 - HEAD LEVEL
- RB 0.00 - BASE LEVEL
- RA 0.00 - APEX LEVEL
- RS 0.00 - SPRING LEVEL

OTHER
- TW 0.00 - TOP OF WALL
- SK 0.00 - SKYLIGHT LEVEL
- 0.00 - FLOOR LEVEL

PROJECT ADDRESS:
31 THE GREEN, RICHMOND, TW9 1LX

SCALE:
1:100@A3

GRAPHIC SCALE:
0.0 m — 5.0 m

TYPE OF WORK:
2D MEASURED SURVEY

PROJECT NUMBER:
P23050

INSPECTION DATE:
15/05/23

DRAWN BY:
FG

DRAWING LOCATION:
TOPOGRAPHICAL

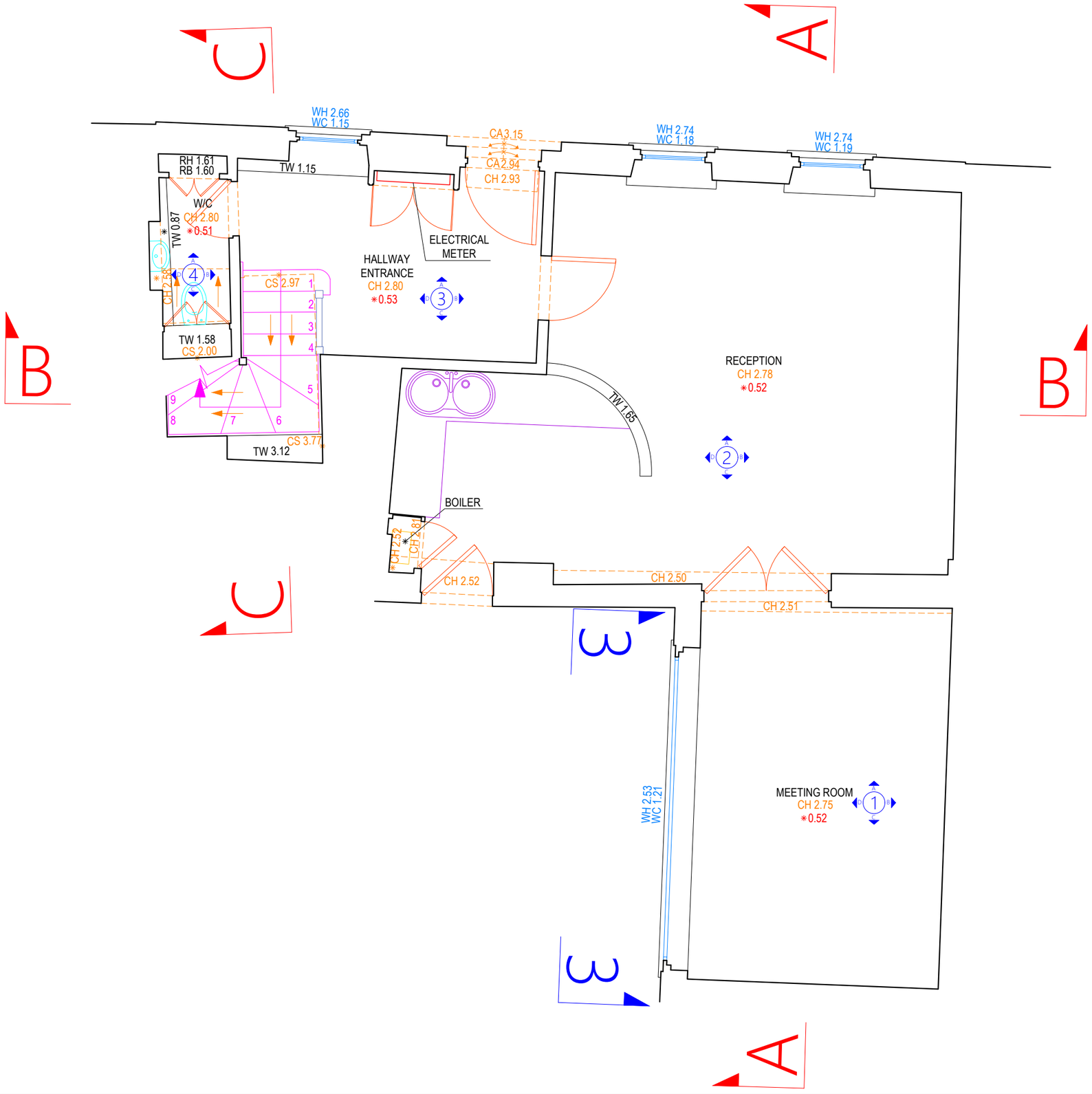
DRAWING NUMBER:
01 OF 09

DELIVERY DATE:
20/06/23

QA BY:
SH

INDICATIVE ONLY:

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk



DRAWING KEY

GRID
LOCAL GRID

DATUM
LOCAL DATUM

BEAM
- BH 0.00 - HEAD LEVEL
- BB 0.00 - BASE LEVEL
- BA 0.00 - APEX LEVEL
- BS 0.00 - SPRING LEVEL

DOOR
- DH 0.00 - HEAD LEVEL
- DB 0.00 - BASE LEVEL
- DA 0.00 - APEX LEVEL
- DS 0.00 - SPRING LEVEL

CEILING
- SH 0.00 - SLAB LEVEL
- CH 0.00 - CEILING LEVEL
- CA 0.00 - APEX LEVEL
- CS 0.00 - SPRING LEVEL

WINDOWS
- WH 0.00 - HEAD LEVEL
- WC 0.00 - CILL LEVEL
- WA 0.00 - APEX LEVEL
- WS 0.00 - SPRING LEVEL

RECESS
- RH 0.00 - HEAD LEVEL
- RB 0.00 - BASE LEVEL
- RA 0.00 - APEX LEVEL
- RS 0.00 - SPRING LEVEL

OTHER
- TW 0.00 - TOP OF WALL
- SK 0.00 - SKYLIGHT LEVEL
- 0.00 - FLOOR LEVEL

PROJECT ADDRESS:
31 THE GREEN, RICHMOND, TW9 1LX

SCALE:
1:50@A3

GRAPHIC SCALE:
0.0 m — 2.5 m

TYPE OF WORK:
2D MEASURED SURVEY

PROJECT NUMBER:
P23050

INSPECTION DATE:
15/05/23

DRAWN BY:
FG

DRAWING LOCATION:
GROUND FLOOR

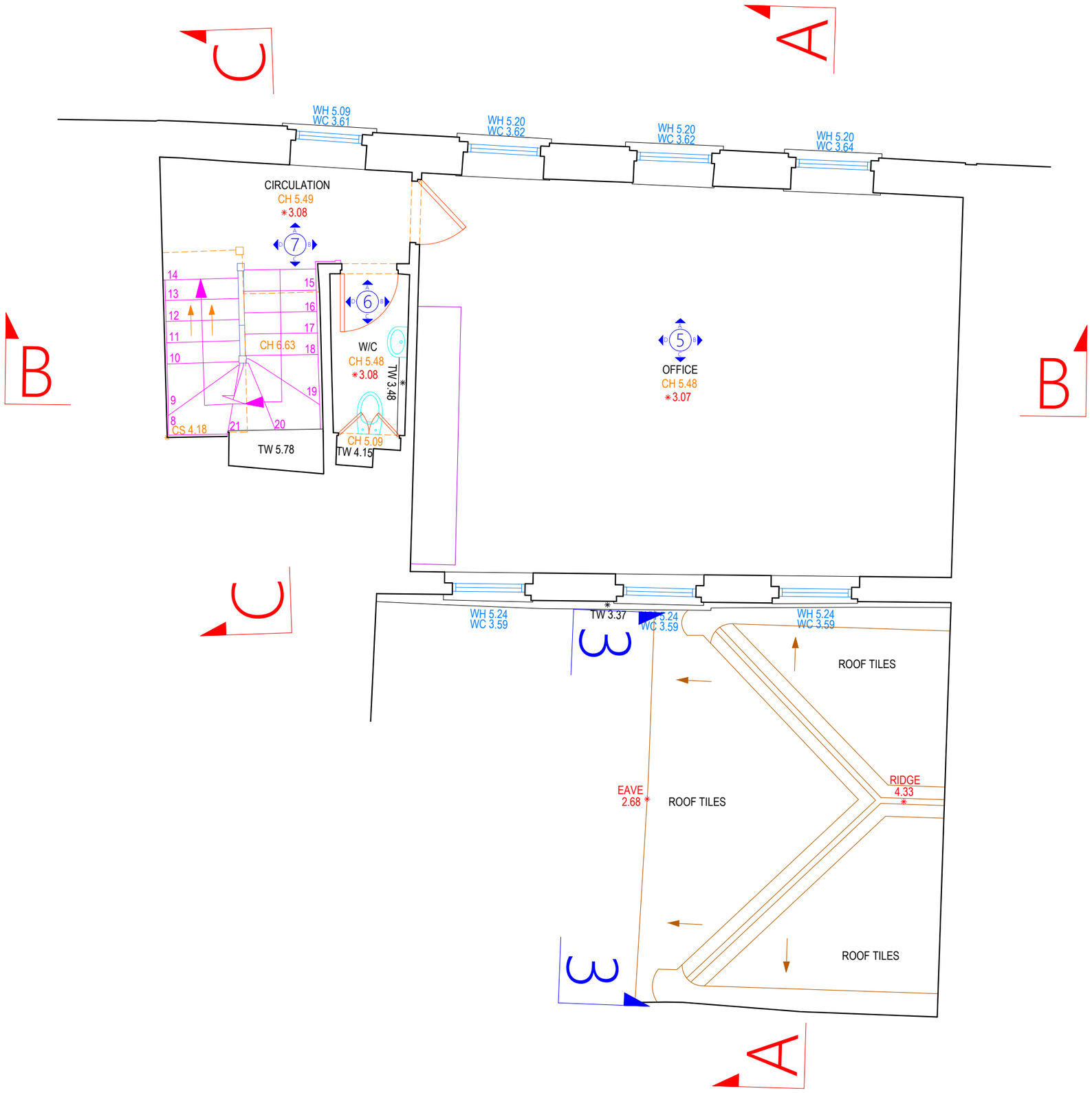
DRAWING NUMBER:
02 OF 09

DELIVERY DATE:
20/06/23

QA BY:
SH

INDICATIVE ONLY:

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk



DRAWING KEY

GRID
LOCAL GRID

DATUM
LOCAL DATUM

BEAM
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- BB 0.00 - BASE LEVEL
- BA 0.00 - APEX LEVEL
- BS 0.00 - SPRING LEVEL

DOOR
- DH 0.00 - HEAD LEVEL
- DB 0.00 - BASE LEVEL
- DA 0.00 - APEX LEVEL
- DS 0.00 - SPRING LEVEL

CEILING
- SH 0.00 - SLAB LEVEL
- CH 0.00 - CEILING LEVEL
- CA 0.00 - APEX LEVEL
- CS 0.00 - SPRING LEVEL

WINDOWS
- WH 0.00 - HEAD LEVEL
- WC 0.00 - CILL LEVEL
- WA 0.00 - APEX LEVEL
- WS 0.00 - SPRING LEVEL

RECESS
- RH 0.00 - HEAD LEVEL
- RB 0.00 - BASE LEVEL
- RA 0.00 - APEX LEVEL
- RS 0.00 - SPRING LEVEL

OTHER
- TW 0.00 - TOP OF WALL
- SK 0.00 - SKYLIGHT LEVEL
- 0.00 - FLOOR LEVEL

PROJECT ADDRESS:
31 THE GREEN, RICHMOND, TW9 1LX

SCALE:
1:50@A3

GRAPHIC SCALE:
0.0 m — 2.5 m

TYPE OF WORK:
2D MEASURED SURVEY

PROJECT NUMBER:
P23050

INSPECTION DATE:
15/05/23

DRAWN BY:
FG

DRAWING LOCATION:
FIRST FLOOR

DRAWING NUMBER:
03 OF 09

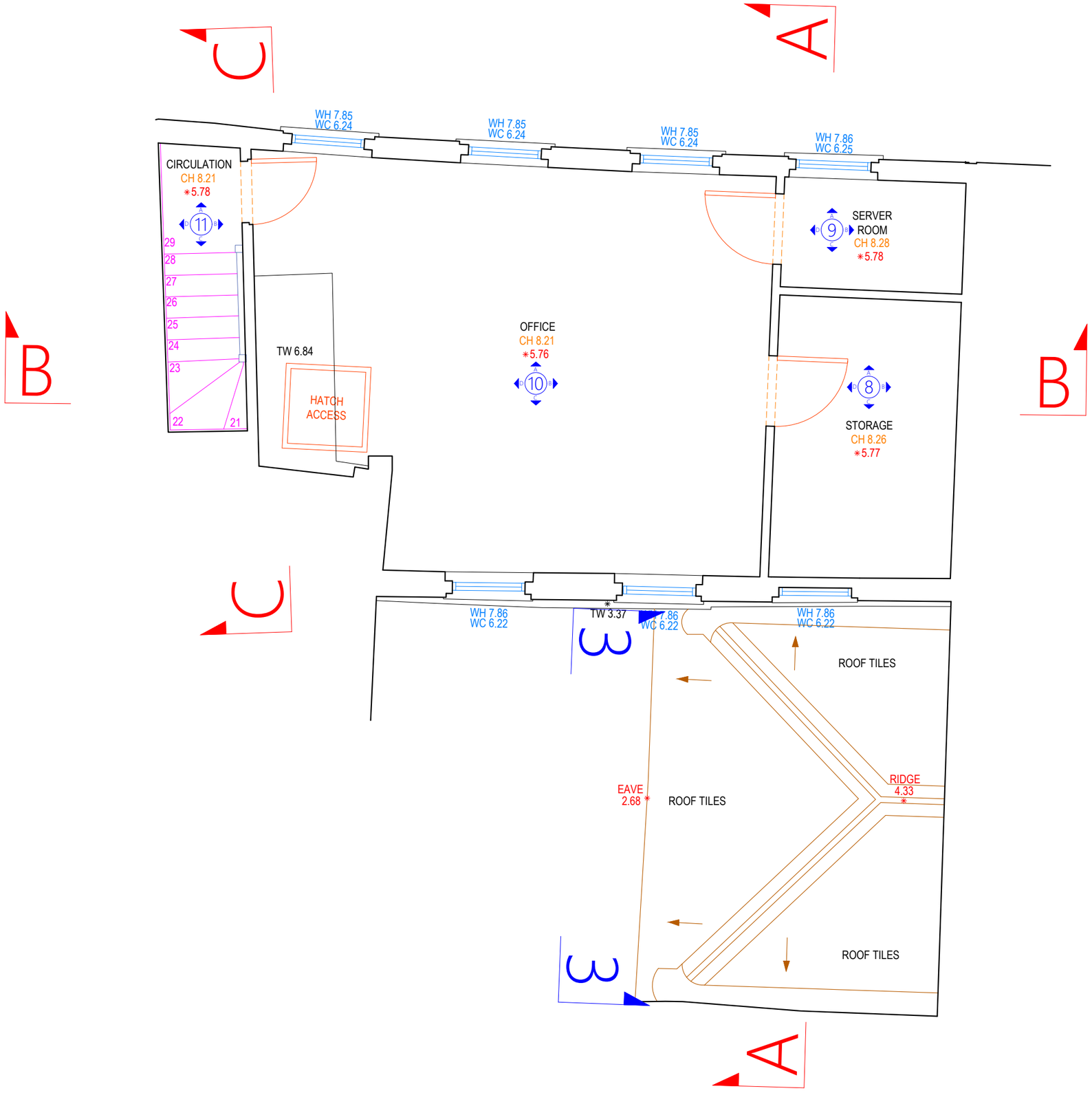
DELIVERY DATE:
20/06/23

QA BY:
SH

INDICATIVE ONLY:

N

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk



DRAWING KEY

GRID
LOCAL GRID

DATUM
LOCAL DATUM

BEAM
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- BB 0.00 - BASE LEVEL
- BA 0.00 - APEX LEVEL
- BS 0.00 - SPRING LEVEL

DOOR
- DH 0.00 - HEAD LEVEL
- DB 0.00 - BASE LEVEL
- DA 0.00 - APEX LEVEL
- DS 0.00 - SPRING LEVEL

CEILING
- SH 0.00 - SLAB LEVEL
- CH 0.00 - CEILING LEVEL
- CA 0.00 - APEX LEVEL
- CS 0.00 - SPRING LEVEL

WINDOWS
- WH 0.00 - HEAD LEVEL
- WC 0.00 - CILL LEVEL
- WA 0.00 - APEX LEVEL
- WS 0.00 - SPRING LEVEL

RECESS
- RH 0.00 - HEAD LEVEL
- RB 0.00 - BASE LEVEL
- RA 0.00 - APEX LEVEL
- RS 0.00 - SPRING LEVEL

OTHER
- TW 0.00 - TOP OF WALL
- SK 0.00 - SKYLIGHT LEVEL
- 0.00 - FLOOR LEVEL

PROJECT ADDRESS:
31 THE GREEN, RICHMOND, TW9 1LX

SCALE:
1:50@A3

GRAPHIC SCALE:
0.0 m — 2.5 m

TYPE OF WORK:
2D MEASURED SURVEY

PROJECT NUMBER:
P23050

INSPECTION DATE:
15/05/23

DRAWN BY:
FG

DRAWING LOCATION:
SECOND FLOOR

DRAWING NUMBER:
04 OF 09

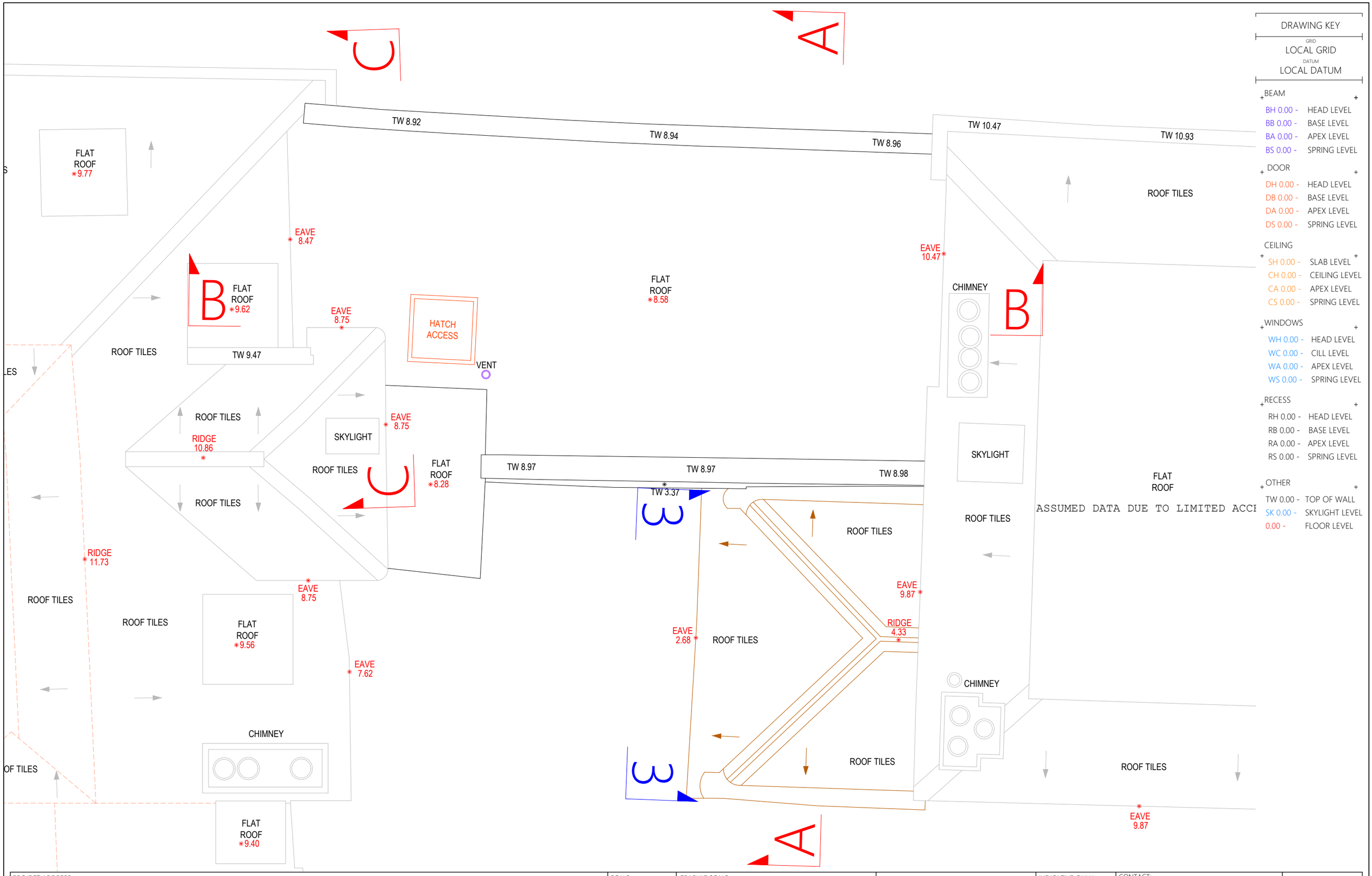
DELIVERY DATE:
20/06/23

QA BY:
SH

INDICATIVE ONLY:

N

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk



DRAWING KEY

GRID
LOCAL GRID

DATUM
LOCAL DATUM

BEAM
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- BB 0.00 - BASE LEVEL
- BA 0.00 - APEX LEVEL
- BS 0.00 - SPRING LEVEL

DOOR
- DH 0.00 - HEAD LEVEL
- DB 0.00 - BASE LEVEL
- DA 0.00 - APEX LEVEL
- DS 0.00 - SPRING LEVEL

CEILING
- SH 0.00 - SLAB LEVEL
- CH 0.00 - CEILING LEVEL
- CA 0.00 - APEX LEVEL
- CS 0.00 - SPRING LEVEL

WINDOWS
- WH 0.00 - HEAD LEVEL
- WC 0.00 - CILL LEVEL
- WA 0.00 - APEX LEVEL
- WS 0.00 - SPRING LEVEL

RECESS
- RH 0.00 - HEAD LEVEL
- RB 0.00 - BASE LEVEL
- RA 0.00 - APEX LEVEL
- RS 0.00 - SPRING LEVEL

OTHER
- TW 0.00 - TOP OF WALL
- SK 0.00 - SKYLIGHT LEVEL
- 0.00 - FLOOR LEVEL

ASSUMED DATA DUE TO LIMITED ACCI

PROJECT ADDRESS:
31 THE GREEN, RICHMOND, TW9 1LX

SCALE:
1:50@A3

GRAPHIC SCALE:
0.0 m — 2.5 m

TYPE OF WORK:
2D MEASURED SURVEY

PROJECT NUMBER:
P23050

INSPECTION DATE:
15/05/23

DRAWN BY:
FG

DRAWING LOCATION:
ROOF PLAN

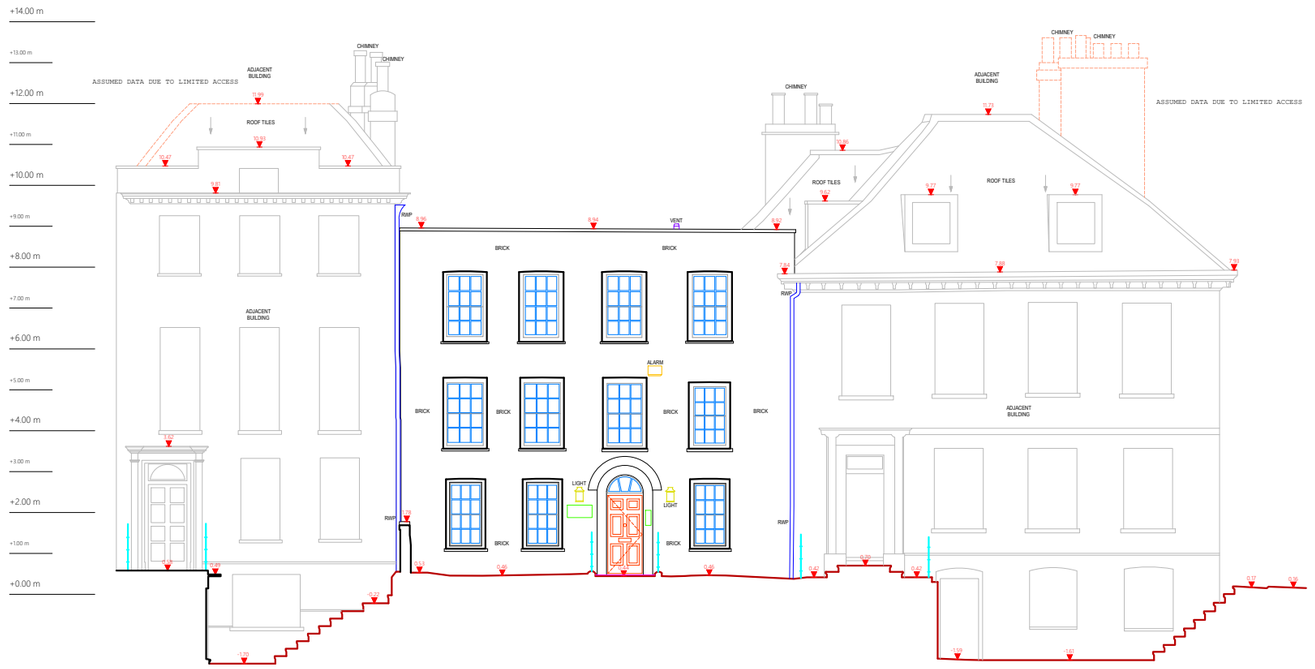
DRAWING NUMBER:
05 OF 09

DELIVERY DATE:
20/06/23

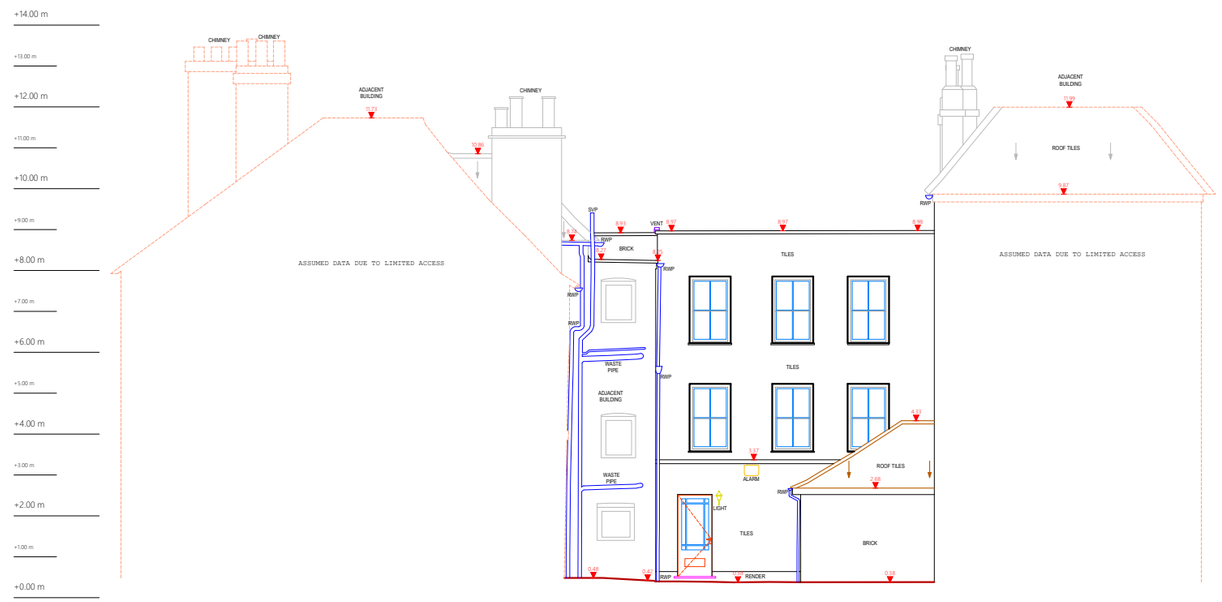
QA BY:
SH

INDICATIVE ONLY:

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk



ELEVATION 1

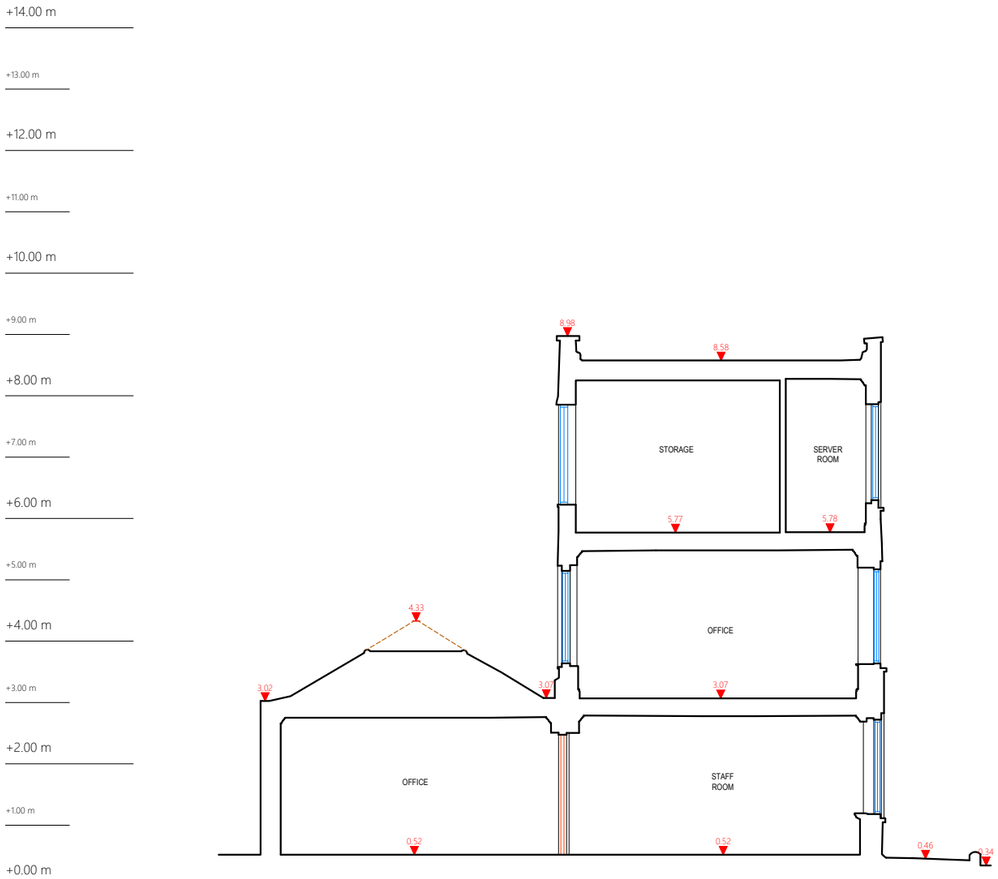


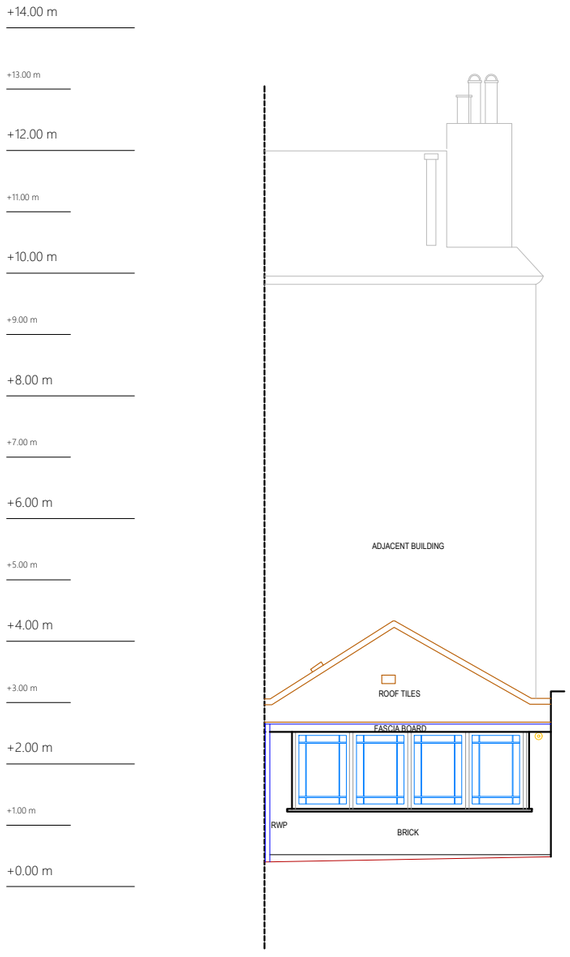
ELEVATION 2

PROJECT ADDRESS: 31 THE GREEN, RICHMOND, TW9 1LX				SCALE: 1:150@A3	GRAPHIC SCALE: 0.0 m — 7.5 m
TYPE OF WORK: 2D MEASURED SURVEY	PROJECT NUMBER: P23050	INSPECTION DATE: 15/05/23	DRAWN BY: FG		
DRAWING LOCATION: ELEVATION 1-2	DRAWING NUMBER: 06 OF 09	DELIVERY DATE: 20/06/23	QA BY: SH		

INDICATIVE ONLY:

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk





PROJECT ADDRESS:
31 THE GREEN, RICHMOND, TW9 1LX

SCALE:
1:100@A3

GRAPHIC SCALE:
0.0 m — 5.0 m

TYPE OF WORK:
2D MEASURED SURVEY

PROJECT NUMBER:
P23050

INSPECTION DATE:
15/05/23

DRAWN BY:
FG

DRAWING LOCATION:
ELEVATION 3 + SECTION AA

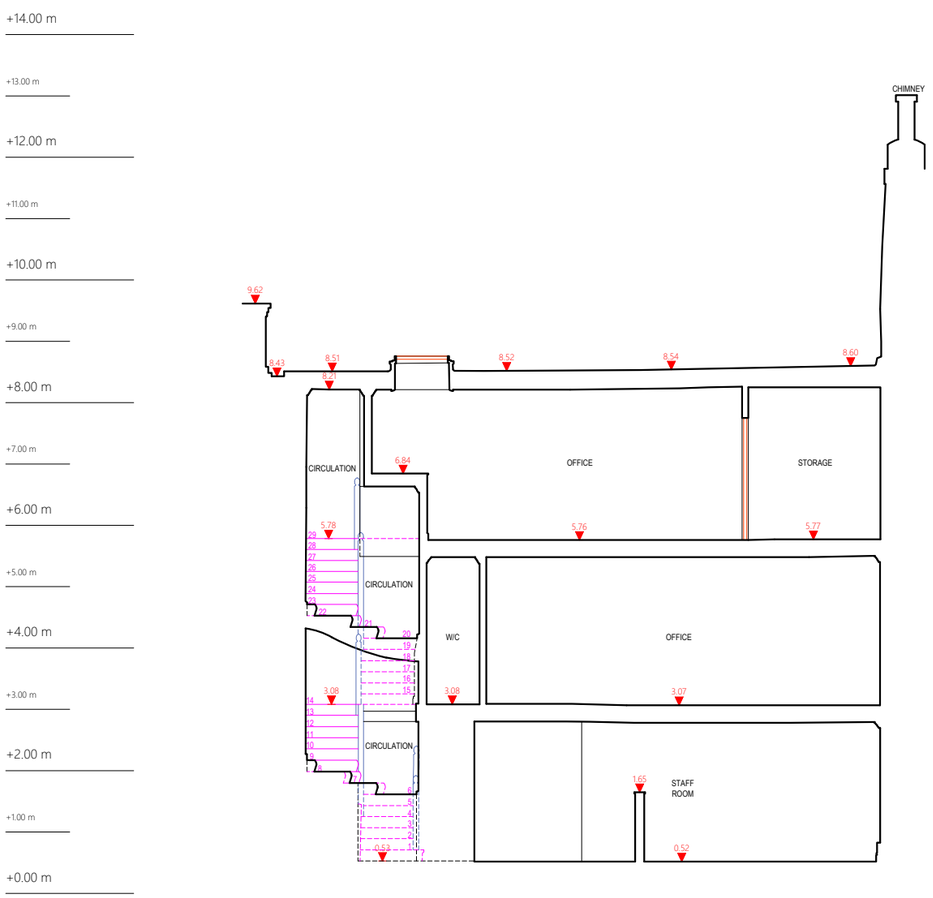
DRAWING NUMBER:
07 OF 09

DELIVERY DATE:
20/06/23

QA BY:
SH

INDICATIVE ONLY:
Y
X

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk



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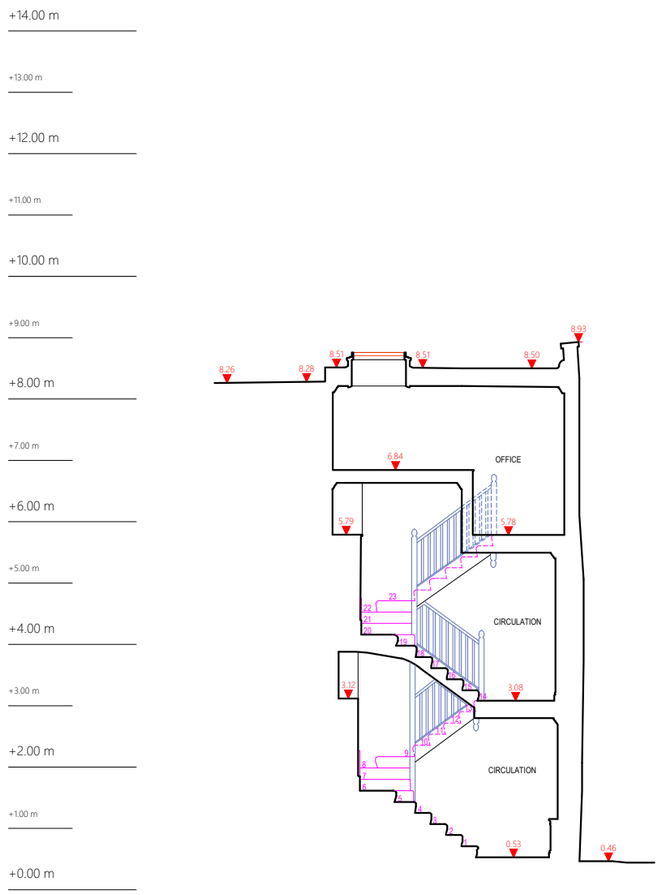


SECTION CC

PROJECT ADDRESS:
31 THE GREEN, RICHMOND, TW9 1LX

SCALE:
1:100@A3

GRAPHIC SCALE:
0.0 m — 5.0 m

TYPE OF WORK:
2D MEASURED SURVEY

PROJECT NUMBER:
P23050

INSPECTION DATE:
15/05/23

DRAWN BY:
FG

DRAWING LOCATION:
SECTION BB-CC

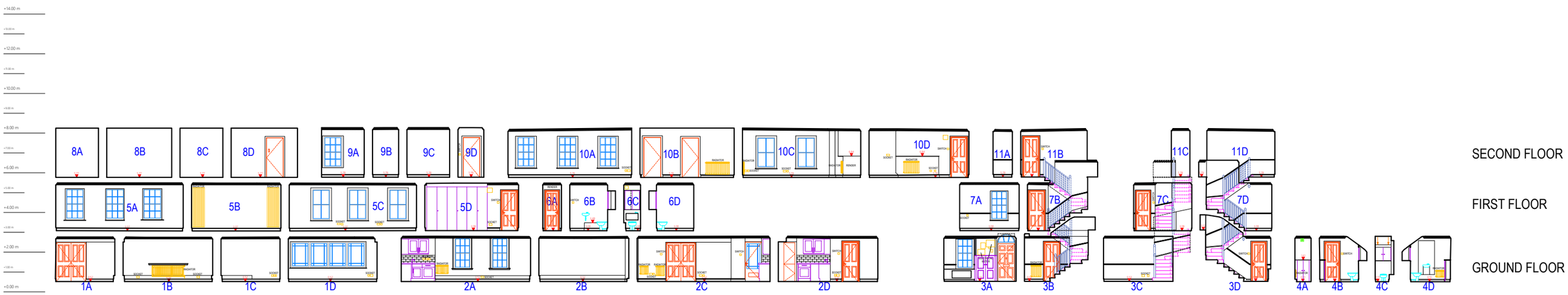
DRAWING NUMBER:
08 OF 09

DELIVERY DATE:
20/06/23

QA BY:
SH

INDICATIVE ONLY:
Y
X

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk



PROJECT ADDRESS:
31 THE GREEN, RICHMOND, TW9 1LX

SCALE:
1:200@A3

GRAPHIC SCALE:
0.0 m — 10.0 m

TYPE OF WORK:
2D MEASURED SURVEY

PROJECT NUMBER:
P23050

INSPECTION DATE:
15/05/23

DRAWN BY:
FG

DRAWING LOCATION:
INTERNAL ELEVATIONS

DRAWING NUMBER:
09 OF 09

DELIVERY DATE:
20/06/23

QA BY:
SH

INDICATIVE ONLY:
Y
X

CONTACT:
MODELLING ARCHITECTURE
020 3488 8968
info@modellingarchitecture.co.uk
modellingarchitecture.co.uk