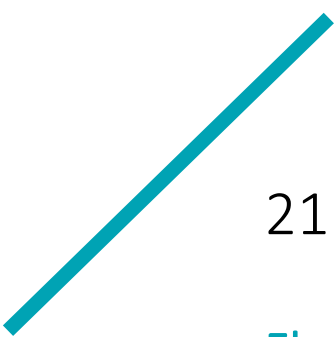




21 Park Parade, Havant

Flood Risk Assessment

January 2026

PDP Architecture Ltd



**RESIDENTIAL
21 PARK PARADE
HAVANT**

Flood Risk Assessment

CONTROLLED DOCUMENT

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RESIDENTIAL 21 PARK PARADE HAVANT

FLOOD RISK ASSESSMENT

Contents

1.	EXECUTIVE SUMMARY	2
2.	INTRODUCTION.....	3
3.	PLANNING POLICY	4
4.	CLIMATE CHANGE	6
5.	FLOOD RISK	8
6.	RESIDUAL FLOOD RISK	17
7.	SUMMARY AND CONCLUSION.....	18

Figures

<i>Figure 1: Site Location Plan</i>	<i>3</i>
<i>Figure 2: Havant Borough Council Local Plan Policy CS15 Flood and Coastal Erosion Risk</i>	<i>5</i>
<i>Figure 3: NPPF Planning Practice Guidance Table – Flood Risk Vulnerability and Flood Zone Compatibility.....</i>	<i>7</i>
<i>Figure 4: Flood Map for Rivers and Seas</i>	<i>9</i>
<i>Figure 5: Long-term flood risk from rivers and seas map</i>	<i>9</i>
<i>Figure 6: Long term flood risk from reservoirs map.....</i>	<i>10</i>
<i>Figure 7: EA Long term flood risk from surface water</i>	<i>11</i>
<i>Figure 8: EA Long term flood risk from surface water for 0.2m depth.....</i>	<i>12</i>
<i>Figure 9: Flood Hazard mapping at 0.75 Hazard rating.</i>	<i>12</i>
<i>Figure 10: Flood Hazard classification</i>	<i>13</i>
<i>Figure 11: Havant Borough Council SFRA extract - Surface Water Flood risk</i>	<i>13</i>
<i>Figure 12: EA Long-term flood mapping - Groundwater</i>	<i>15</i>
<i>Figure 13: SFRA Susceptibility to groundwater flooding (BGS) extract</i>	<i>15</i>
<i>Figure 14: SFRA Southern Water Observed Flooding</i>	<i>16</i>

Tables

Table 1: Peak Rainfall Intensity allowance in small and urban catchments 3.3%AEP Events	6
Table 2: Peak Rainfall Intensity allowance in small and urban catchments. 1%AEP Events	6
Table 3: Summary of Existing and Residual Flood Risk	17

1. EXECUTIVE SUMMARY

- 1.1 This Flood Risk Assessment (FRA) has been prepared by Paul Basham Associates on behalf of PDP Architecture LLP to support a planning application for the change of use from a gym into residential apartments. The proposed development is located on the first floor and ground floor of the building; the ground floor will be retained as a gym/commercial unit.
- 1.2 The land is located to North of Tidworth Road and south of Park Parade, the postcode for the site is PO9 5AA.
- 1.3 This FRA has been prepared in accordance with the NPPF and Planning Practice Guidance, as well as the local planning policies set out by Havant Borough Council.
- 1.4 The development is in Flood Zone 1 and has been categorised as "more vulnerable"; therefore, in accordance with NPPF, the proposals are acceptable, and the site will not require an exception test.
- 1.5 Residual flood risk from:
 - Fluvial and tidal flooding is considered to be **Very Low**
 - Reservoir flooding is considered to be **Very Low**
 - Surface water flooding is considered to be **Low**
 - Groundwater flooding is considered to be **Low**
 - Public sewer flooding is considered to be **Low**
- 1.6 the proposed development would benefit from a clear flood response plan incorporating temporary flood protection measures to manage potential surface water flooding of up to 200 mm depth, alongside practical preparedness actions. Registration with the Met Office weather warning service is also recommended to provide advance notice of severe weather, enabling timely implementation of mitigation measures and reducing overall flood risk to the building.
- 1.7 As a result of the proposals, there will be no increase to flood risk on or off the site and therefore the development is considered suitable from a flood risk perspective.

2. INTRODUCTION

- 2.1 This Flood Risk Assessment (FRA) has been prepared by Paul Basham Associates on behalf of PDP Architecture LLP to support a planning application for the change of use from a gym into residential apartments. The proposed development is located on the first floor and ground floor of the building; the ground floor will be retained as a gym/commercial unit.
- 2.2 The land is located to North of Tidworth Road and south of Park Parade, the postcode for the site is PO9 5AA.
- 2.3 The plot size is approximately 340m² and the building is currently a gym.
- 2.4 The development aspirations are for 9 residential apartments, 7 located on the first floor and 2 located on the ground floor.



Figure 1: Site Location Plan

3. PLANNING POLICY

- 3.1 The planning policies and guidance that are relevant to the proposed Development with regard to flood risk and surface water management are outlined below.

National Planning policy

- 3.2 2025 updated National Planning Policy Framework (NPPF) and the associated continuously updated Planning Practice Guidance (PPG) by the Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government
- 2022 updated EA Standing Advice
 - EA National Strategy for Flood and Coastal Erosion Risk Management 2020
 - DEFRA Sustainable Drainage System: Non-Statutory Technical Standards 2015
 - CIRIA C753 The SuDS Manual 2015
 - Flood and Water Management Act 2010
 - Flood Risk Regulations 2009
 - Flood risk assessments: climate change allowances 2016 (updated in 2022).

Regional and Local Planning policy

- 3.3 The Lead Local Flood Authorities Management of Surface Water contain the following policies.
- Havant Borough Council Strategic Flood Risk Assessment (June 2024)
 - Hampshire County Council Surface Water Checklist & Checklist Guidance
 - Havant Borough Council Flood Risk Information for Applicants
- 3.4 The Havant Borough local plan (March 2011) contains the following policies relating to flooding, drainage, and surface water.

Policy CS15 Flood and Coastal Erosion Risk

Development in areas at risk of flooding now and in the future as identified on the latest Environment Agency flood risk maps and Strategic Flood Risk Assessment climate change maps will only be permitted where:

- 1. It meets the sequential and exception test (where required) in relation to PPS25.**
- 2. The site is located in a low hazard area as defined in the Strategic Flood Risk Assessment.**
- 3. A site-specific flood risk assessment demonstrates that the development will be safe, including the access, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.**
- 4. The scheme incorporates flood protection, flood resilience and resistance measures appropriate to the character and biodiversity of the area and the specific requirements of the site.**
- 5. Appropriate flood warning and evacuation plans are in place.**
- 6. New site drainage systems are designed taking account of events which exceed the normal design standard.**

All development will be required to ensure that there is no net increase in surface water run off. Priority should be given to incorporating Sustainable Drainage Systems (SuDS) to manage surface water drainage, unless it is proven that SuDS are not appropriate. Where SuDs are provided arrangements must be put in place for their whole life management and maintenance.

The council will work with partners to implement the Coastal Policy Zones in the North Solent Shoreline Management Plan to ensure that development avoids areas at risk from coastal erosion and coastal flooding and that areas required to offset coastal squeeze and prevent habitat fragmentation, to allow species to adapt to climate change, are identified and protected from development.

Figure 2: Havant Borough Council Local Plan Policy CS15 Flood and Coastal Erosion Risk

3.5 Based on the above policies, the key requirements in relation to the surface water management and flood risk for the proposed Development are considered as to be follows:

- National Planning Policy Framework (2025): “A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use.”
- Environment Agency Standing Advice: “The surface water management needs to meet requirements set out in either your local authority’s Surface Water Management Plan (SWMP), Strategic Flood Risk Assessment (SFRA) and Building Regulations Part H. Emergency escape plans for any parts of a building that are below the estimated flood level are required”

4. CLIMATE CHANGE

Peak Rainfall Intensity Allowance

- 4.1 The “Flood Risk Assessments: Climate Change Allowances Guidance” 2016 (updated in 2022) published by the EA indicates that climate change is currently expected to result in increased peak rainfall and rising sea levels.
- 4.2 **Table 1** and **Table 2** shows anticipated changes in peak rainfall intensity in small and urban catchments within England. The development is classed as more vulnerable, and the design life is approximately 100 years. Therefore, the upper end allowance would be required for all designs.
- 4.3 The peak rainfall intensity allowance is 40% for a 3.3% AEP Event (**Table 1**) and 45% AEP for a 1% AEP Event (**Table 2**).

Epoch	Central Allowance	Upper End Allowance
2050s	20%	35%
2070s	25%	40%

Table 1: Peak Rainfall Intensity allowance in small and urban catchments 3.3%AEP Events

Epoch	Central Allowance	Upper End Allowance
2050s	20%	40%
2070s	25%	45%

Table 2: Peak Rainfall Intensity allowance in small and urban catchments. 1%AEP Events

Source: <https://environment.data.gov.uk/hydrology/climate-change-allowances/rainfall>

National Planning Policy Framework (NPPF)

4.4 This report has been prepared considering the National Planning Policy Framework (NPPF) Technical Guidance and the Environment Agency's (EA) flood risk standing advice.

4.5 Table 2 from the Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government Flood risk and coastal change guidance has been included as **Figure 3** below. This provides the classes of development (based on flood risk vulnerability) that are permitted within each of the flood zones. The Flood Risk Vulnerability Classification for the site is 'More Vulnerable' as it is a housing development, which is defined in Annex 3 of the NPPF.

4.6 The development is in Flood Zone 1; therefore no sequential test or exception test is required.

Flood Zones	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	✓*

Table 2 - Flood risk vulnerability and flood zone 'compatibility'

Key: ✓ Exception test not required X Development should not be permitted.

Notes to table 2:

- This table does not show the application of the [Sequential Test](#) which should be applied first to guide development to Flood Zone 1, then Zone 2, and then Zone 3; nor does it reflect the need to avoid flood risk from sources other than rivers and the sea;
- The Sequential and [Exception Tests](#) do not need to be applied to [minor developments](#) and changes of use, except for a change of use to a caravan, camping or chalet site, or to a mobile home or park home site;
- Some developments may contain different elements of vulnerability and the highest vulnerability category should be used, unless the development is considered in its component parts.

† In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

* "In Flood Zone 3b (functional floodplain) essential infrastructure that has passed the Exception Test, and water-compatible uses, should be designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows and not increase flood risk elsewhere.

Figure 3: NPPF Planning Practice Guidance Table – Flood Risk Vulnerability and Flood Zone Compatibility

5. FLOOD RISK

5.1 In line with the EA Standing Advice, the estimated flood level is considered to be the higher of:

- A river flood level with a 1 in 100 or greater annual probability plus an allowance for climate change; and
- A tidal flood level with a 1 in 200 or greater annual probability plus an allowance for climate change.

5.2 The following Flood Zone definitions ignoring flood defence, are set out in the Planning Practice Guidance:

- Zone 1 Low Probability - Land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%);
- Zone 2 Medium Probability - Land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5%– 0.1%) in any year; and
- Zone 3 High Probability - Land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.

Flood Zones

- 5.3 Flood mapping obtained from the government's 'flood map for planning' website has identified that the site falls within Flood Zone 1 (**Figure 4**)

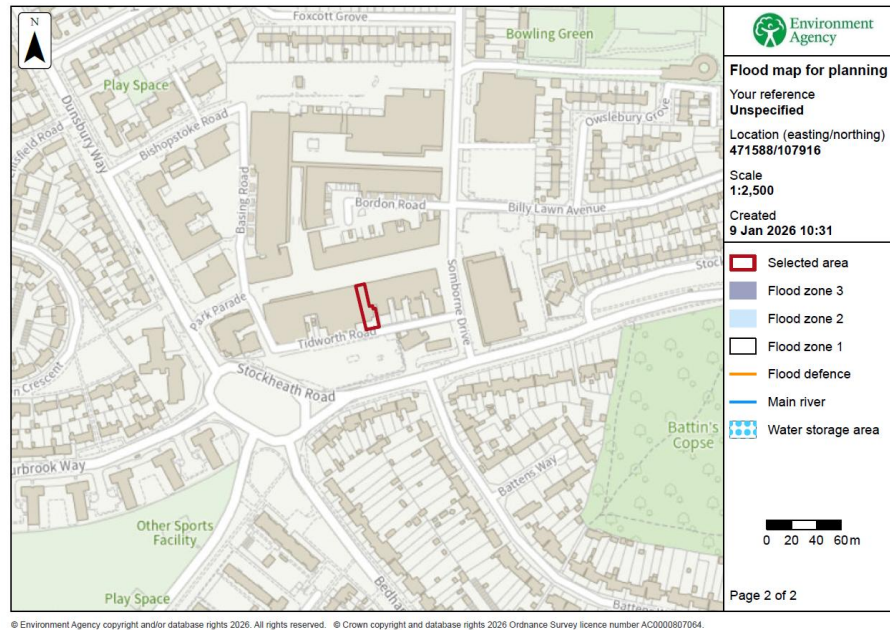


Figure 4: Flood Map for Rivers and Seas

Fluvial / Tidal Flood Risk

- 5.1 The EA long-term flood risk and from rivers and seas mapping shows that the site is considered to be very low risk of flooding from rivers and seas (Yearly chance of flooding between 2036 and 2069). Refer to figure 5 below.

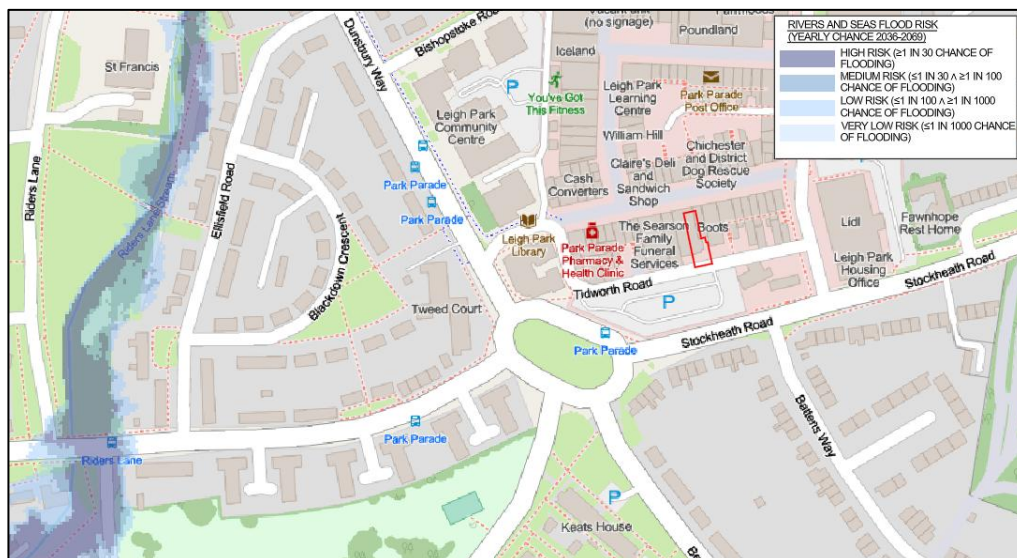


Figure 5: Long-term flood risk from rivers and seas map

Fluvial/tidal flooding – Residual Risk

- 5.2 The site is considered to be at very low risk of flooding from rivers and seas.

Reservoirs Flood Risk

- 5.3 The EA long-term flood risk mapping identified areas susceptible to flooding from reservoirs for events where river levels are normal and when there is also flooding from rivers.
- 5.4 The EA long-term flood risk from reservoirs shows that the site is not considered to be at risk of flooding due to reservoirs. Refer to figure 6 below.

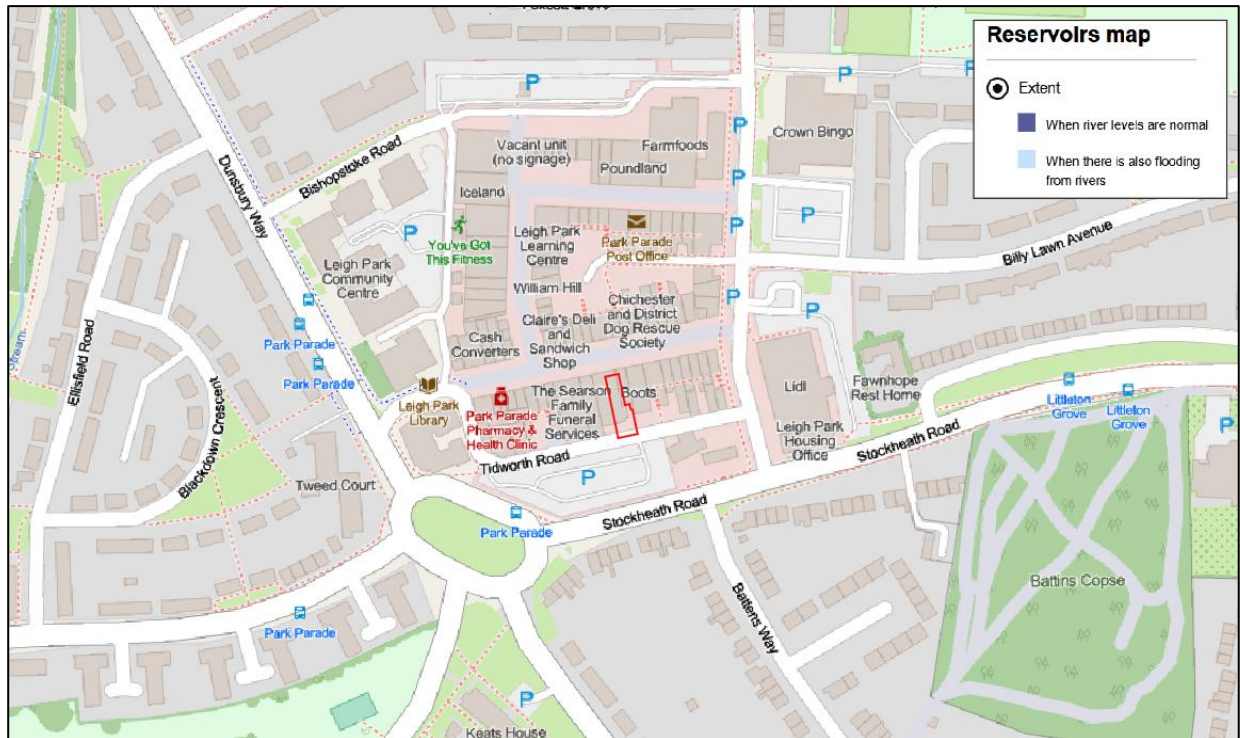


Figure 6: Long term flood risk from reservoirs map

Reservoirs – Residual Risk

- 5.5 Based on the above mapping the site is not considered to be at risk of flooding from reservoirs.

Surface Water Flood Risk

- 5.6 Surface water or 'pluvial' flooding results from rainfall running over ground before eventually entering a watercourse or sewer. It is usually associated with high intensity rainfall events but can also occur with lower intensity rainfall or melting snow where the ground is already saturated, frozen, developed (for example in an urban setting), or otherwise has low permeability.
- 5.7 The EA long term flood map for surface water plus climate change is shown in **Figure 7** and indicates that the site is at low likelihood of flooding from surface water. With an area of high flood risk located on Tidworth Road.

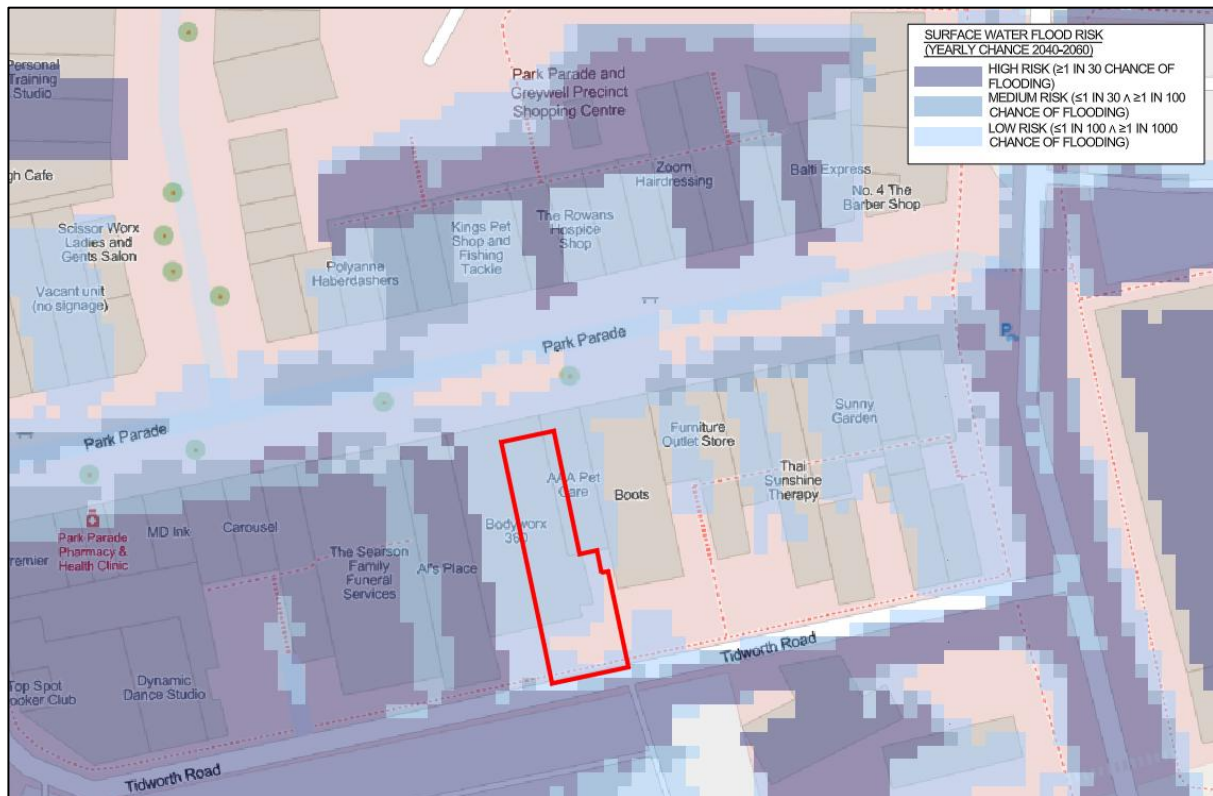


Figure 7: EA Long term flood risk from surface water

5.8 The EA long term flood mapping shows that the site is identified as having very low risk of flood at 0.2m in depth. Shown below in **Figure 8**.

5.9 Therefore, all the flooding shown in **Figure 7** will be below 0.2m in depth.

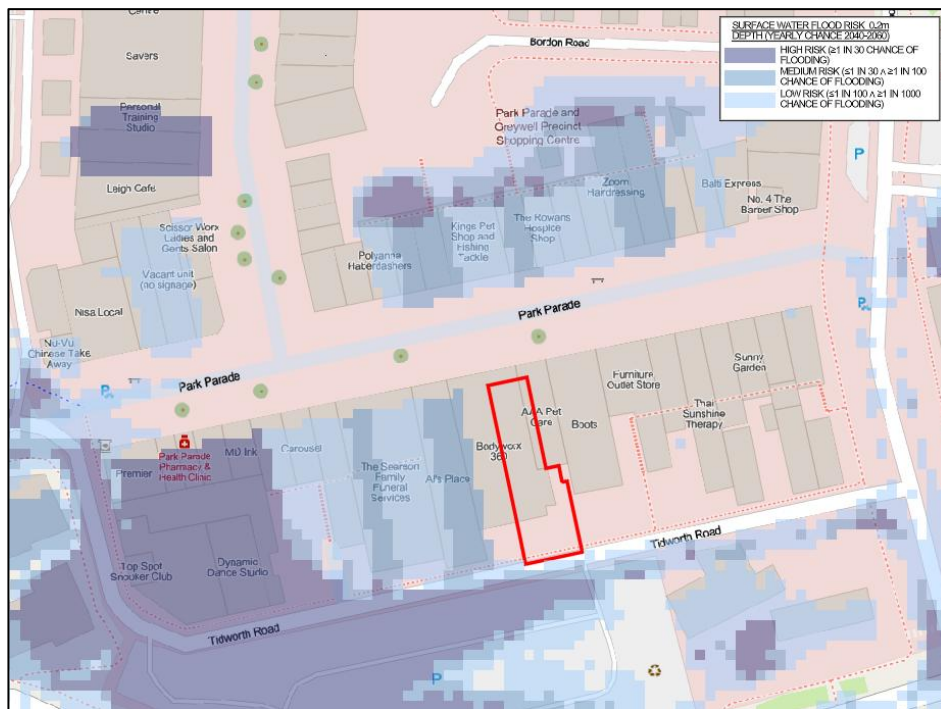


Figure 8: EA Long term flood risk from surface water for 0.2m depth

5.10 The EA Flood hazard mapping indicates that there is a hazard rating of less than 0.75 i.e. a low water hazard from surface water including climate change shown in **Figure 9**. The hazard is classified as Low shown in **Figure 10**

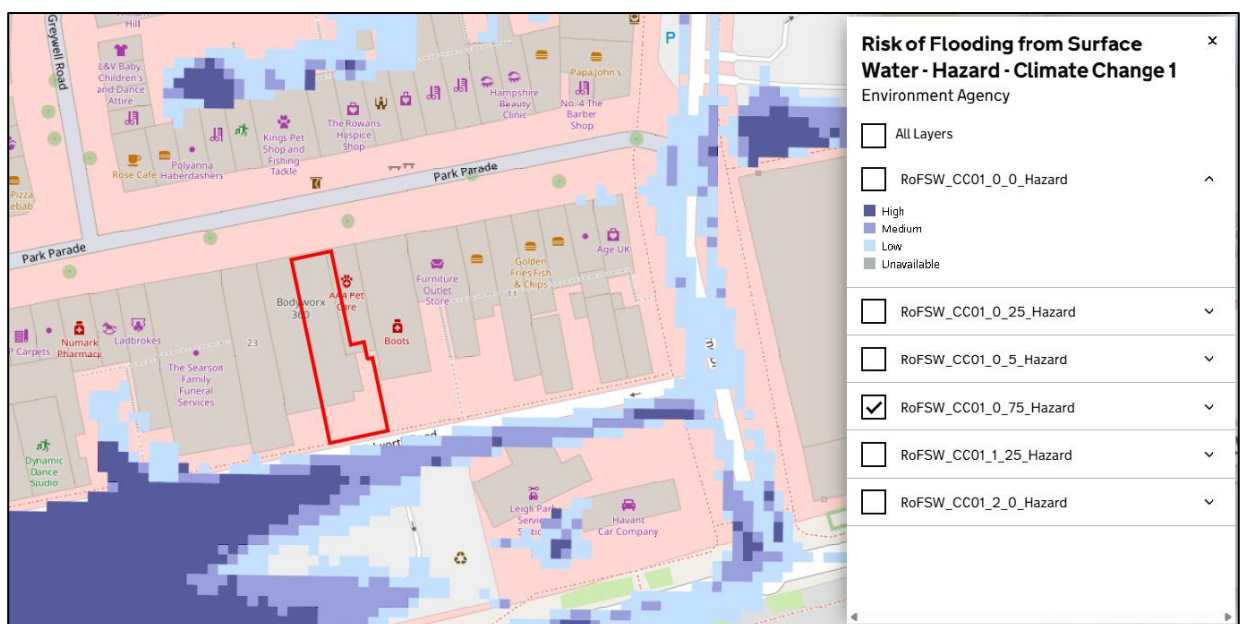


Figure 9: Flood Hazard mapping at 0.75 Hazard rating.

Thresholds for Flood Hazard Rating $H = d \times (v + 0.5) + DF$		Degree of Flood Hazard	Description
FD2321	FD2320		
<0.75	<0.75	Low	Caution - "Flood zone with shallow flowing water or deep standing water"
0.75 - 1.25	0.75 - 1.25	Moderate	Dangerous for some (i.e. children) - "Danger: Flood zone with deep or fast flowing water"
1.25 - 2.5	1.25 - 2.0	Significant	Dangerous for most people - "Danger: flood zone with deep fast flowing water"
>2.5	>2.0	Extreme	Dangerous for all - "Extreme danger: flood zone with deep fast flowing water"

Figure 10: Flood Hazard classification

5.11 The Havant Borough Council SFRA indicates that the site is considered to be very low risk of flooding from surface water. Shown below in **Figure 11**.

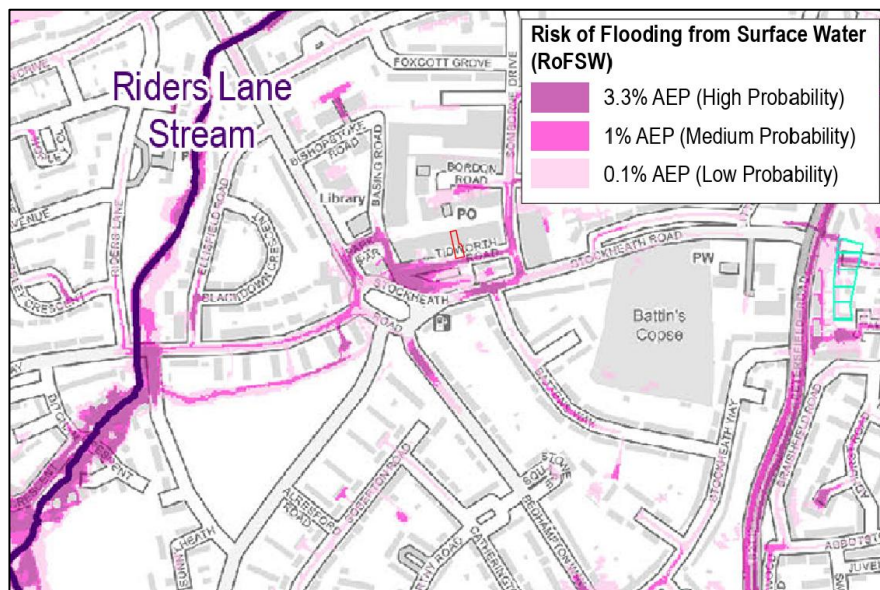


Figure 11: Havant Borough Council SFRA extract - Surface Water Flood risk

Surface Water – Mitigation Measures and Considerations

- 5.12 The proposed development is for first-floor and ground floor apartments. There is a low likelihood of shallow surface water flooding, below 0.2m, around the building access. As such, emergency access and egress will always be possible during the design flood.
- 5.13 EA surface water hazard mapping, which includes an allowance for climate change, indicates that the hazard rating will be 0.75 or less. This is classified as a very low hazard which would not pose a risk even to vulnerable groups.

- 5.14 It is recommended that the building owner and/or operator prepares and implements a Flood Response and Flood Mitigation Plan to manage the risk of flooding, particularly for surface water events resulting in flood depths of up to approximately 200 mm. The plan should identify appropriate temporary flood protection measures, such as deployable flood barriers, removable door guards, non-return valves, and the protection of vulnerable services and equipment, to be installed in advance of and during flood events.
- 5.15 In addition, it would be prudent for the building owner and/or operator to register for the Met Office National Severe Weather Warning Service and other relevant flood alert services. Early access to weather warnings would support timely deployment of temporary flood measures and improve overall preparedness and response to forecast extreme rainfall or flooding events.

Surface Water – Residual Risk

- 5.16 Based on the above information the proposed development is considered to be at low risk of flooding from surface water.

Groundwater Flood Risk

- 5.17 The British Geological Survey (BGS) borehole records show a borehole (REF: SU70NW139) located approximately 660m to the east of the site. The borehole indicates that the groundwater level was 2.4m below ground level.
- 5.18 The EA long term flood map considers “This location is outside of groundwater flood alert area.” as shown in **Figure 12**.

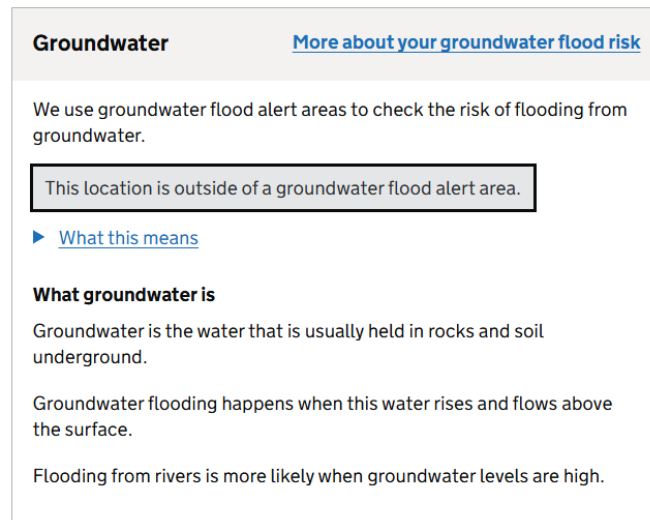


Figure 12: EA Long-term flood mapping - Groundwater

- 5.19 The Havant Borough Council SFRA identifies the site as “having limited potential for groundwater flooding to occur. Refer to figure 13.

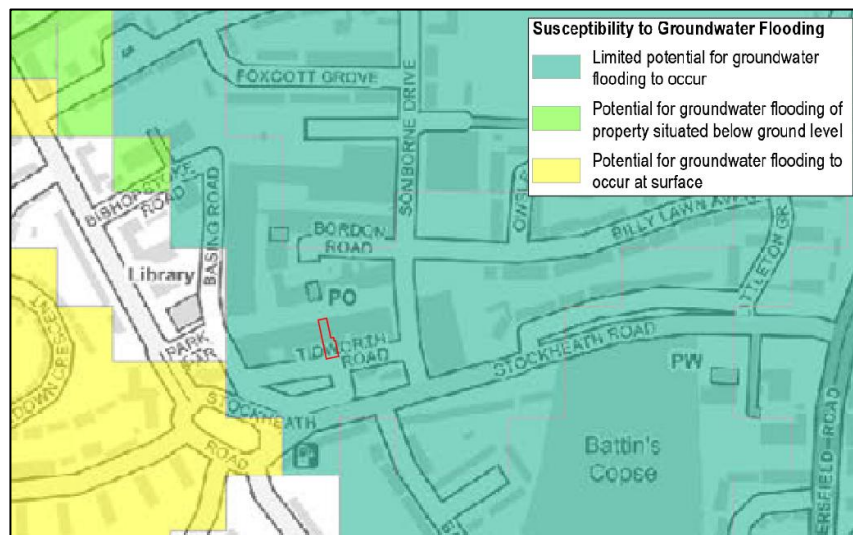


Figure 13: SFRA Susceptibility to groundwater flooding (BGS) extract

Groundwater – Residual Risk

- 5.20 Based on the above information the site is considered to be low risk of flooding from groundwater

Public Sewer Flood Risk

- 5.21 The Southern Water BRAVA risk maps for Sewer flooding in 1 in 50-year storms, identifies the site as being within band 2 (Very significant). This means that the performance of the network is potentially below the minimum threshold set by Southern Water and indicates there is a risk that warrants more investigation.
- 5.22 The SFRA identifies locations of historic Southern Water flooding between 2018 and 2020. There are 4 locations of recorded flooding within approximately 500m of the site. As shown in *Figure 14*.

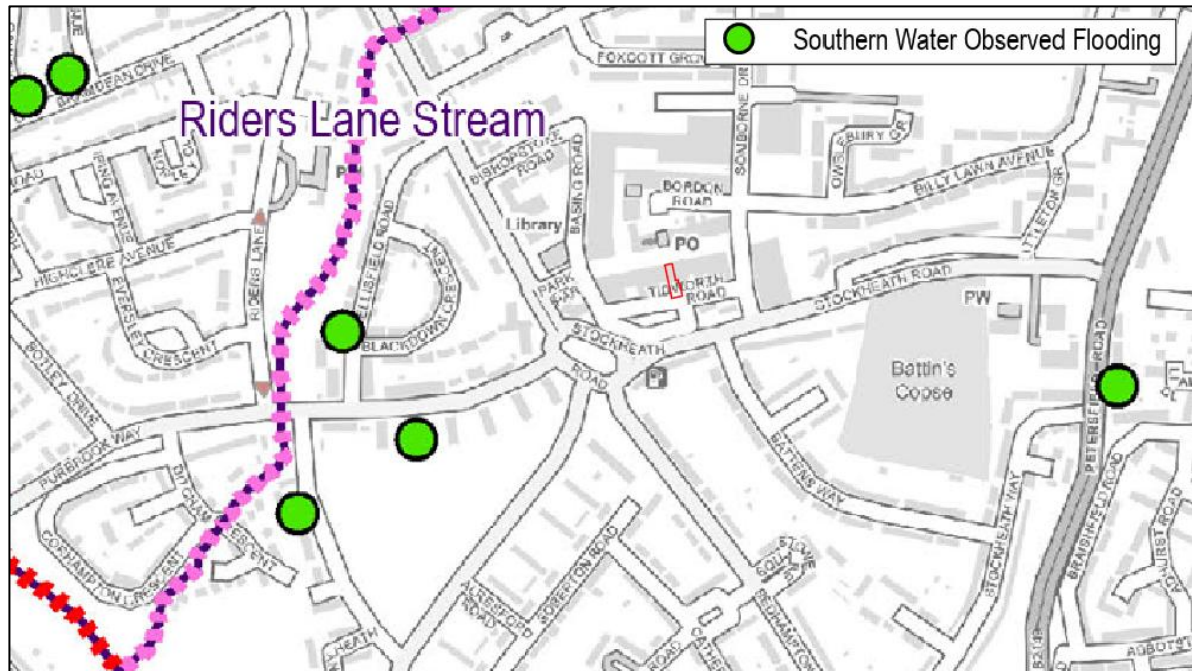


Figure 14: SFRA Southern Water Observed Flooding

Public Sewer – Mitigation Measures and Considerations

- 5.23 The identified Southern Water Sewer flood event did not occur within close proximity to the proposed development. As such, in the event of sewer flooding reoccurring in one of these prior locations the impact on the site would be minimal.

Public Sewer – Residual Risk

- 5.24 Based on the above information the development is considered to be at low risk of flooding due to public sewers.

6. RESIDUAL FLOOD RISK

6.1 Table 3 outlines the initial qualitative assessment of risk posed by the potential sources of flooding, the mechanisms for flooding and the likely consequences. It also includes a review of possible mitigation measures and the effect that the proposed mitigation measures are likely to have on the residual risk posed by the potential flood source.

Flood Risk	Flood Mechanism and Possible Consequences	Existing Assessment of Risk	Mitigation Measures	Residual Risk
Fluvial / Tidal	Flooding driven by tidal surges and rivers exceeding their capacity	Very Low	N/A	Very Low
Reservoirs	Flooding caused by increase in reservoir water levels	N/A	N/A	N/A
Surface Water (Pluvial)	Localised heavy rainfall on impermeable or already saturated surfaces	Low	<p>The proposed development is for first-floor and ground floor apartments. The dwellings are not at risk from flooding. There is a low likelihood of shallow surface water flooding, below 0.2m, around the building access. As such, emergency access and egress will always be possible during the design flood.</p> <p>EA surface water hazard mapping, which includes an allowance for climate change, indicates that the hazard rating will be 0.75 or less. This is classified as a very low hazard which would not pose a risk even to vulnerable groups.</p>	Low
Groundwater	Flooding caused by a rising in groundwater level	Low	N/A	Low
Public Sewers	Flooding caused by an escape of water and sewage from a public sewer.	Low	The identified Southern Water Sewer flood event did not occur within close proximity to the proposed development. As such, in the event of sewer flooding reoccurring in one of these prior locations the impact on the site would be minimal.	Low

Table 3: Summary of Existing and Residual Flood Risk

7. SUMMARY AND CONCLUSION

- 7.1 This Flood Risk Assessment (FRA) has been prepared by Paul Basham Associates on behalf of PDP Architecture LLP to support a planning application for the change of use from a gym into residential apartments. The proposed development is located on the first floor and ground floor of the building; the ground floor will be retained as a gym/commercial unit.
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- 7.4 The development is in Flood Zone 1 and has been categorised as "more vulnerable"; therefore, in accordance with NPPF, the proposals are acceptable, and the site will not require an exception test.
- 7.5 Residual flood risk from:
- Fluvial and tidal flooding is considered to be **Very Low**
 - Reservoir flooding is considered to be **Very Low**
 - Surface water flooding is considered to be **Low**
 - Groundwater flooding is considered to be **Low**
 - Public sewer flooding is considered to be **Low**
- 7.6 the proposed development would benefit from a clear flood response plan incorporating temporary flood protection measures to manage potential surface water flooding of up to 200 mm depth, alongside practical preparedness actions. Registration with the Met Office weather warning service is also recommended to provide advance notice of severe weather, enabling timely implementation of mitigation measures and reducing overall flood risk to the building.
- 7.7 As a result of the proposals, there will be no increase to flood risk on or off the site and therefore the development is considered suitable from a flood risk perspective.