ElliottWood

Document Control			
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Date	11/04/2025	**Signature**	
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Signature		**Signature**	

Date: 11-04-2025

Subject: Saville Theatre, 135-149 Shaftesbury Ave Surface Water Flood Risk Technical Note

Introduction

This technical note has been prepared by Elliott Wood Partnership on behalf of Yoo Capital in support of the planning application for the redevelopment at 135-149 Shaftesbury Avenue, London, WC2H 8AH.

This report seeks to address the London Borough of Camden (LBC) as the Lead Local Flood Authority (LLFA) officer requirements discussed and set in the meeting dated 10/04/2025.

This technical note is to be read in conjunction with the previously produced Elliott Wood **Flood Risk Assessment 2240073-EWP-ZZ-XX-RP-C-00002**.

LLFA Requirements

The below comments to be addressed were received on the 10/04/2025:

Further to the meeting today I can confirm that for the proposed design and use of the 4 level basement as an entertainment venue, that due to the surface water flood risk identified with a medium risk of 30cm depth with climate change and a requirement of a 300mm freeboard (as set out in our SFRA) then we require:

- *At least a 600mm raised finished floor level (FFL)*
- *Additional flood protection around the foyer stairwell to the auditorium to prevent water ingress to the basement*
- *A Flood risk emergency plan*
- *Emergency access points away from 1 in 1000 flood levels with climate change*

It was however noted that the current front steps are 450mm above the pavement level. Therefore, if it can be shown that a 600mm FFL is not possible, then we would expect at least all of following measures:

- *maintaining the 450mm steps plus other resistance measures including:*
  - *Automatic flood shutters and*
  - *Raised step to stairs of at least 150mm and*
  - *Additional flood protection measures around the foyer stairwell to the auditorium to prevent water ingress to the basement*
  - *No level access for the new access points near St Giles Passage – assuming 450mm raised FFL for the new entrances in areas with flood risk*
  - *A Flood risk emergency plan*
  - *Emergency access points away from 1 in 1000 flood levels with climate change*

Further flood risk assessment

Following update in Environment Agency surface water flood risk mapping, it is presented that both Shaftsbury Avenue and the existing development is located within an area indicated as having a High probability (>3.3% annually) of surface water flooding. The adjacent roads to the west and east; Stacey Street and St Giles Passage respectively, shown to range from High probability closest to Shaftsbury Avenue reducing to Very Low probability toward New Compton Street at the rear of the development – see below figure.

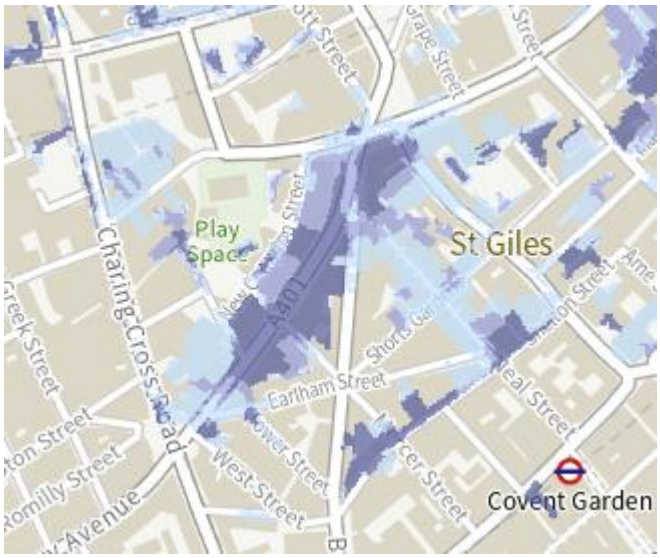

Figure 1: Extract from Environment Agency Long Term Flood Risk mapping – Surface Water

Following review of LBC SFRA 2024 guidance, it should be noted that the site is:

- Not in a critical drainage area,
- Not be on a Flooded Streets location where the Camden borough suffered widespread surface water flooding, in a location investigated as part of the Section 19 Flood Investigation Report for the July 12th and 25th 2021 flood events,
- Not located within the Counters Creek Catchment where LBC records indicate a greater number of properties flooded.
- Not located within a Local Flood Risk Zone.

Considering EA modelling considers topographical variances alone, based on lower detail LIDAR mapping and not accounting for any benefit provided by existing positive drainage within the highway, it is considered that the level of risk presented may not reflect reality. As such, a high level study has been undertaken of the existing building levels and topographic levels surrounding the site against depths for the 2040 – 2060 chance of flooding for respective flood events provided within Environment Agency Long Term Flood Risk – see below figure and **Appendix A** for reference.

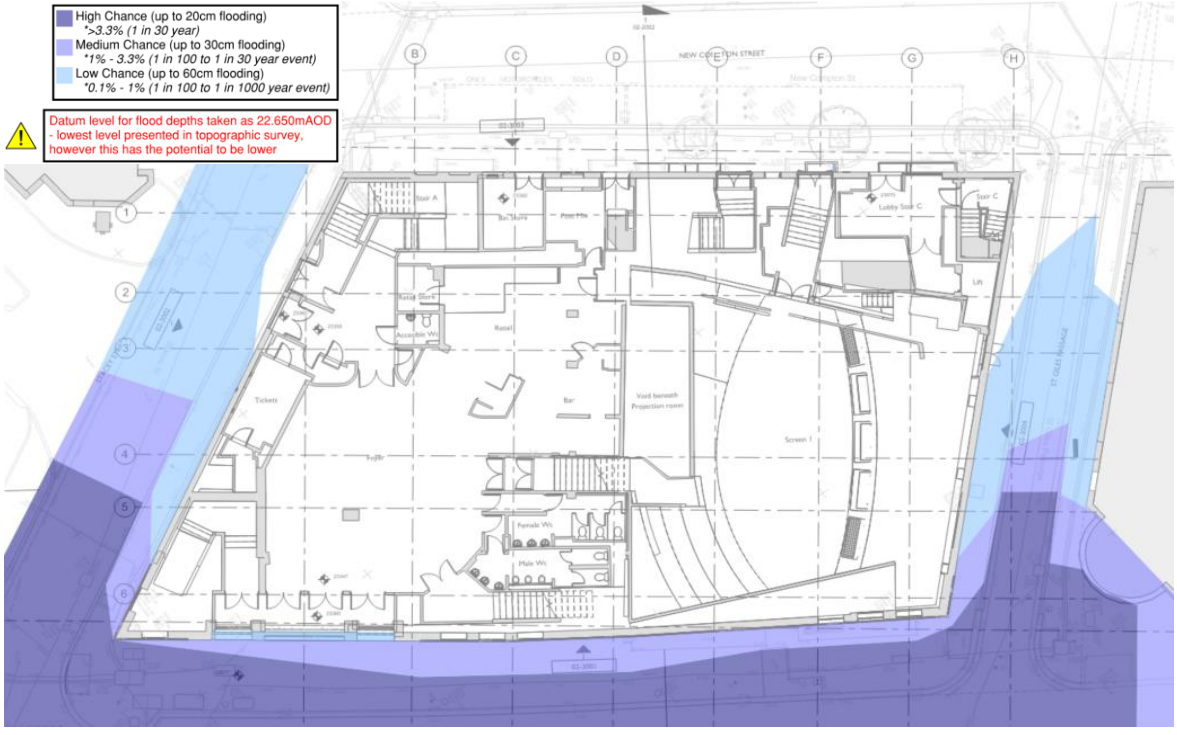

Figure 2: Assessment of existing topographic levels against Environment Agency 2040 – 2060 surface water flood depths

Considering flood depths from the lowest topographic level within the carriageway (22.650mAOD), this assessment presents the existing development would not be considered at High chance of surface water flooding as presented within latest Environment Agency mapping. In reality it is representative of previous Environment Agency mapping as shown within the previously produced **Elliott Wood Flood Risk Assessment 2240073-EWP-ZZ-XX-RP-C-00002**, with the existing FFLs (23.360mAOD) providing protection to the building up to the 1000 year event, equal to the 100 year + 300mm freeboard event (>600mm).

Not withstanding the above assessment, LBC officer comments have been taken on board and mitigation put in place to reflect as presented below.

Proposed flood risk mitigation

In order to provide resilience as requested by the LLFA, the below proposals have been put in place:

- Proposed FFLs raised to existing FFLs, providing the 450mm height atop the existing external entrance level. A Sesame access lift system to the left most portion of the existing stair set will be provided for disabled access at the front entrance.
- An additional ramped entrance at the stairwell down to basement level to provide the additional 150mm above existing FFL to meet the requested 300mm flood depth + 300mm freeboard
- Automatic flood shutters (Aquobex or similar) placed at the main entrance on Shaftsbury Avenue and side entrance to Stacey Street to achieve the full floor to ceiling height protection. Roller shutter operates automatically when a water level sensor detects that it is being encroached by flood water.
- Single Door Flood Barriers (Flood Protection Solutions or similar) placed on doorways on Shaftsbury Avenue and side entrance to St Giles Passage achieving a height of up to 600mm above existing external levels. Flood barriers to be set in place by site facilities team on first sign of flooding within the carriageway.
- A flood risk emergency plan with safe access / egress located above the 1 in 1000 flood levels with climate change

See below figure and **Appendix A** for reference.

Figure 3: Assessment of architectural proposals against Environment Agency 2040 – 2060 surface water flood depths inclusive of mitigation measures

Conclusion

Considering the above mitigation put in place, it is considered that the proposed development is protected up to the 100 year event + 300mm freeboard with an emergency flood risk safe access / egress located above the 1 in 1000 flood levels with climate change.

Appendix A – Existing and Proposed Surface Water Flood Risk Drawings

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.

DO NOT SCALE FROM THIS DRAWING.

ALL DRAWINGS TO BE PRINTED IN COLOUR

- High Chance (up to 20cm flooding)
  >3.3% (1 in 30 year)
- Medium Chance (up to 30cm flooding)
  1% - 3.3% (1 in 100 to 1 in 30 year event)
- Low Chance (up to 60cm flooding)
  0.1% - 1% (1 in 100 to 1 in 1000 year event)

⚠ Datum level for flood depths taken as 22.650mAOD - lowest level presented in topographic survey, however this has the potential to be lower

Rev	Date	By	Chk	Description
P1	04/04/25	GGo	KTr	Preliminary

Drawing title
Existing Surface Water Depths

Scale	EWP Project	Date	Drawn
NTS	2240073	April 2025	GGo

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Project
Saville Theatre
Shaftesbury Avenue,
Soho, London

Design Phase	Status	Revision
Preliminary	S2	P1

[Project]-[Origin]-[Function]-[Spatial]-[Form]-[Discipline]-[No.]
2240073-EWP - ZZ - XX - S2 - C - 00007

ADJACENT MULTI-LEVEL STRUCTURE

1
26-2002

25-3003

NEW COMPTON STREET

SECURITY SHUTTER

HOTEL BINS

444.9 sq m

GOODS LIFT

GOODS/ EVACUATION LIFT

CM ENTRY

SUBSTATION

HOTEL LOADING

THEATRE BINS

STAGE DOOR

ACCESSIBLE WC

LUGGAGE STORE

PROPOSED SCULPTURAL ARTWORK

FF EGRESS

FF/PASS

F/F LOBBY

EVAC

TOILETS / AMENITIES

BAR STORE

THEATRE BAR

THEATRE FOYER

FIRE CURTAIN

25-3002

25-3005

25-3001

1
26-2001

STACEY STREET

ST GILES PASSAGE

SHAFTESBURY AVENUE

23510

23360

23055

23035

New access / egress opening to be made to allow wheelchair exit in the event of a flood

Aquobex or similar Roller Shutter Flood Door to be introduced to full floor to ceiling height

- Roller shutter operates automatically when a water level sensor detects that it is being attacked by flood water

Stair access / egress from basement

Lift access / egress from basement

Ramped entrance to stairwell down to basement (150mm above existing FFL to meet the requested 300mm flood depth + 300mm freeboard)

Existing FFLs retained as per LLFA request (450mm above existing ground level at entrance)

New access / egress opening to be made to allow person exit in the event of a flood

Existing FFLs retained as per LLFA request (450mm above existing ground level at entrance)

Flood Protection Solutions or similar Single Door Flood Barrier achieving a height of up to 600mm above FFLs

- Flood barrier to be set in place by site facilities team on first sign of raising waters within the carriageway

Aquobex or similar Roller Shutter Flood Door to be introduced to full floor to ceiling height

- Roller shutter operates automatically when a water level sensor detects that it is being attacked by flood water

Flood Protection Solutions or similar Single Door Flood Barrier achieving a height of up to 600mm above FFLs

- Flood barrier to be set in place by site facilities team on first sign of raising waters within the carriageway

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ALL DRAWINGS TO BE PRINTED IN COLOUR

LEGEND

- Flood risk emergency route above the 1 in 1000 flood levels with climate change
- Roller Shutter Flood Door (Aquobex or similar)
- Single Door Flood Barrier (Flood Protection Solutions or similar)

- High Chance (up to 20cm flooding) *>3.3% (1 in 30 year)*
- Medium Chance (up to 30cm flooding) *1% - 3.3% (1 in 100 to 1 in 30 year event)*
- Low Chance (up to 60cm flooding) *0.1% - 1% (1 in 100 to 1 in 1000 year event)*

Datum level for flood depths taken as 22.650mAOD - lowest level presented in topographic survey, however this has the potential to be lower

Rev	Date	By	Chk	Description
P1	11/04/25	GGo	KTr	Preliminary

Drawing title

Existing Surface Water Depths Against Architectural Proposals - Defended

Scale	EWP Project	Date	Drawn
NTS	2240073	April 2025	GGo

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Project

Saville Theatre
Shaftesbury Avenue,
Soho, London

Design Phase	Status	Revision
Preliminary	S4	P1

[Project]-[Origin]-[Function]-[Spatial]-[Form]-[Discipline]-[No.]

2240073-EWP - ZZ - XX - S2 - C - 00012