

Flood Risk Access Statement

Proposed New Residential Development

For Mrs Denise Simpson

At

27 Central Drive
Elmer
PO22 7TT



IVON BLUMER ARCHITECTS

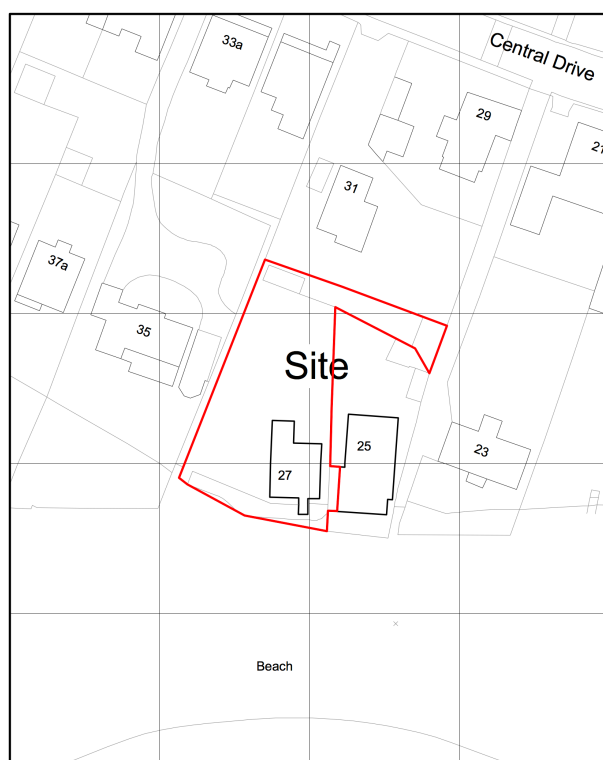
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INTRODUCTION

The proposed development is for demolition of the existing sub-standard single storey house, and the construction of a specially adapted 2 bedroom detached house for the sole use of the applicant who is elderly and disabled. The applicant wishes to connect the new dwelling to her existing property at No 25. The house has been designed with the main open plan accommodation located at first floor level, with self-contained accommodation for occasional use by the applicant's carer on the ground floor.

Location

The site is a residential site located on the sea front at No 27 Central Drive, Elmer.



Location Plan

Assessment of Physical Context and Flood Risk

The site (photo below) is located on the sea front at 27 Central Drive, Elmer, West Sussex and is currently owned by the applicant. The applicant also owns the adjacent property at No 25 Central Drive. The property is currently a private residence and was built in the mid 1930's, with a detached garage. The site is accessed from a shared private drive. The site is flat and is approximately 1,000 sq. m in size. There are no notable trees on the site. The site is mainly laid to lawn with shrub borders.

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Topographical site survey (see Appendix A) shows that the existing bungalow has a finished floor level of 4.11 AOD, with typical site levels across the site of 4.00 AOD. The site is protected from the foreshore by a substantial raised bank and shingle beach. The southern boundary of the site is raised to a level of 5.00 AOD by a stone wall, rising to a continuous foreshore bank along the Elmer Beach Estate frontage at a level of between 5.52 & 5.84 m, to a depth of 10 – 15 m. The site is further protected from wave action by the offshore rock islands.

Given the predicted sea level rises due to climate change the undefended site is at high risk during it's lifetime of flooding during an extreme high tide event. However, allowing for the presence of the existing banking between the site and the foreshore and the offshore islands, would reduce the risk to low.

Climate change in the lifetime of the development is predicted to increase peak rainfall by up to 40% compared with today. This is likely to increase the risk of surface water flooding on the site.

Fluvial flooding is not a risk to the site.

In the event of the site flooding this could have an impact on the resident's safety at the time, in order to safeguard their position they will have to take refuge at a level above the maximum predicted storm/flood level.



Rear Garden

Planning Policy & History

Planning History

M/67/16/PL	1 Replacement Dwelling	Approved 5/10/16
M/13/16/PL	1 Replacement dwelling	Refused 21/04/16

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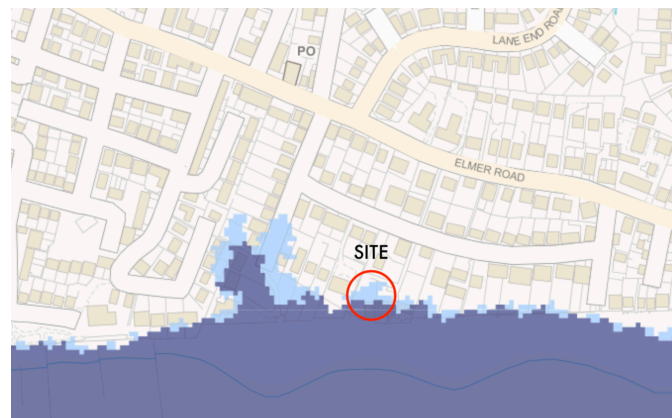
Site Layout

The proposed new property is to be positioned in a similar location as the adjacent property No 25 on the southern boundary of the site taking advantage of the exceptional sea views, as shown on the site layout below. The footprint is in the same location as the existing property.



Site Plan

Flood Map



The site would be in flood zone 2 & 3.

POTENTIAL FLOOD HASZARDS

- 1 Flooding from the sea.
- 2 Flooding from rivers, not applicable.
- 3 Flooding from groundwater, risk is considered low.
- 4 Flooding from sewers, not applicable.
- 5 Flooding from the land, the risk is considered low.

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Proposed Floor Levels to Mitigate The Risk of Flooding

To minimise the risk from flooding the primary habitable accommodation is to be located at first floor level, with some ancillary accommodation at ground floor level which will be used on a limited basis.

The EA's flood model indicates a 0.54% AEP (1 in 200 year event) undefended flood levels within the site in the year 2115 lie in the region of 4.94 AOD. The proposed first floor accommodation will be at a level of 7.00 min AOD, offering a freeboard of 2.0 m above the undefended tidal flood.

The ground floor level will be set at 4.41 m AOD, typically 400 mm above the existing site level. As this is below the predicted undefended tidal flood level by 550 mm, it is proposed that the first 600 mm of construction will be to a standard capable of withstanding the potential risk of flooding, with proprietary flood protection (Floodgate System) to all door openings. The habitable accommodation at this level is limited to overnight use by the owner's carer.

In the event of a flood, refuge would be taken at first floor, with the residents waiting out the storm event which would probably last no longer than 12 hours.

Whilst this report appraises the worst case it may be noted that the defended site flood levels are in the region of 4.50 AOD, giving an onsite predicted flood level of 400 mm.

Surface Water Runoff Assessment

It is proposed that all non-porous external surfaces and roof areas in this development will be designed to prevent surface water flooding above ground level during a 1 in 100 year storm event with an additional allowance of plus 40% for climate change to the year 2115.

Surface water will be disposed of by adequately sized cellular soakaways, as approved by Arun District Building Control.

Outline Foul Water Strategy

A preliminary assessment based on British Water's Cop flows and loads -3 indicates average dry weather flow would be in the order of 0.02 l/s. Such flows are considered low and would be discharged into the local foul water sewer in Central Drive

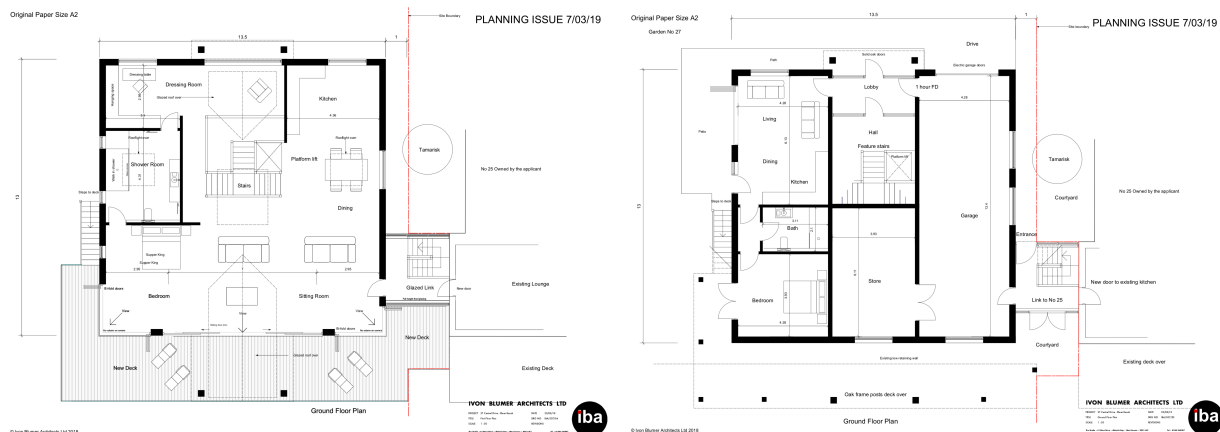
Proposed Floor Plans

As with the previous application it would be proposed that the new floor level would be set 300 mm above the existing finished floor level of the existing house.

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The main accommodation is located on the first floor, see floor plans below.



Emergency Flood Planning

The use of the flood protection measures (Floodgate devices) and proposed action in the event of a flood will be documented in The Health and Safety Manual, provided to the owner by the Principle CDM designer.

Conclusion

As the main first floor accommodation is set at 7.00 m AOD, well above the predicted undefended tidal flood level of 4.95, and that the secondary accommodation on the ground floor is set 300 mm above the existing FFL of the existing house at 4.41 AOD, with flood protection measures, the proposal is considered reasonably safe from flooding.

The site is defended by a substantial shingle bank on the foreshore, well above the existing site level, which will considerably reduce the risk of flooding.

Refuge at the first floor level provides adequate safety for residents in a storm/flooding event.

Given the proximity and extent of the undefended flood plain to the proposal the most likely course of action to be taken by residents during such an event would be to sit out the flood at first floor level, which would be expected to last no longer than 12 hours.

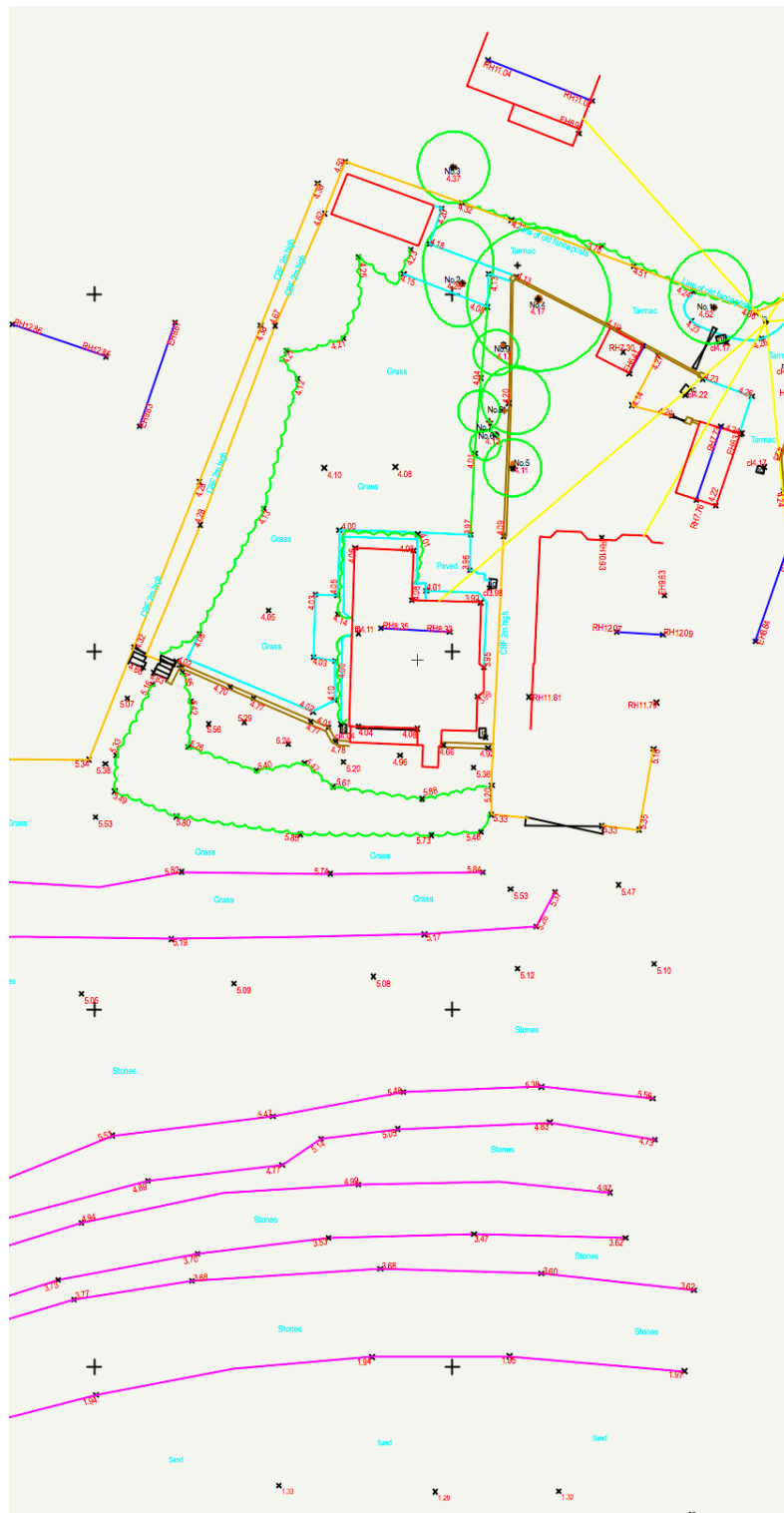
All site surface water will be managed on site to accommodate the worst case M100 + 40% storm event.

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Appendix A

Site Survey



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