

Flood Risk Assessment Note

Land adjacent to 10 Ormonde Way
Shoreham-By-Sea, BN43 5YB

Client

Empire Construction Group Ltd
339 Kingsway
Hove
East Sussex, BN3 4PD
Ref: 7945
Date: April 2019

Consulting Engineers

GTA Civils Ltd
Gloucester House
66a Church Walk
Burgess Hill
West Sussex RH15 9AS
Tel: 01444 871444

Issue	Issue date	Compiled	Checked
Preliminary Issue	16 April 2019	JP	MR

Report by: John Pakenham BSc (Hons)
Checked by: Martin Roberts I Eng, ACIWEM, MCIHT

1 Technical Note

1.1 This FRA Note has been prepared for Empire Construction Group Ltd in relation to land adjacent to 10 Ormonde Way, Shoreham-By-Sea, BN43 5YB. No responsibility is accepted to any third party for all or part of this study in connection with this or any other development. The objective of this Note is to support a Section 73 application.

1.2 This Note refers to the Stage 2 FRA report prepared in support of the original planning application (ref AWDM/1947/17).

1.3 The Applicant is seeking to vary the relevant planning condition (no' 4), which states that "No part of the ground floor of the building shall at any time be used as a habitable accommodation". The stated reason for this condition being imposed is that the site lies in coastal Flood Zone 3A which indicates land with a High Probability of flooding from the sea, in accordance with the National Planning Practice Guidance (PPG) (ref 7-065-20140306).

1.4 It is clear that the site lies in FZ3A and is at risk of flooding from the English Channel. However, the site benefits from defences up to the 1 in 100 years storm – set out in the original FRA report. It is recognised that this level of defence provides insufficient protection and flood mitigation is needed to compensate.

1.5 Additional mitigation will be provided to an additional 750mm above finished floor level (FFL). Flood resilient measures (materials and techniques) will be incorporated into the design. Such construction should/could include (but not necessarily limited to):

- Fully waterproofed (tanked) and waterproof walls tied in to (suspended) concrete beam/block ground floor;
- Waterproofing installed up to the critical level – ie 0.75m above FFL;
- Plasterboards will be installed in horizontal sheets rather than conventional vertical installation methods to minimise the amount of plasterboard that could be damaged;
- Limited or robust wood fixings below the critical level - protected by suitable coating(s);
- Insulation at low level to the external walls (if any) to be specified as rigid board which has impermeable foil facings that are resistant to the passage of water vapour and double the thermal resistance of the cavity;
- All service entries to be sealed where they pass through masonry walls and concrete floors.
- Electrical sockets positioned above the critical level;

- Electrical cabling run downwards from the ceiling;
- Boilers and meter cupboards placed above the critical level;
- Non-return valve fitted to the foul water drainage network.

1.6 The document "Improving the Flood Performance of New Buildings - Flood Resilient Construction" published by DEFRA/Environment Agency is a good source of information on resilient techniques.

1.7 No sleeping accommodation is proposed on the ground floor.

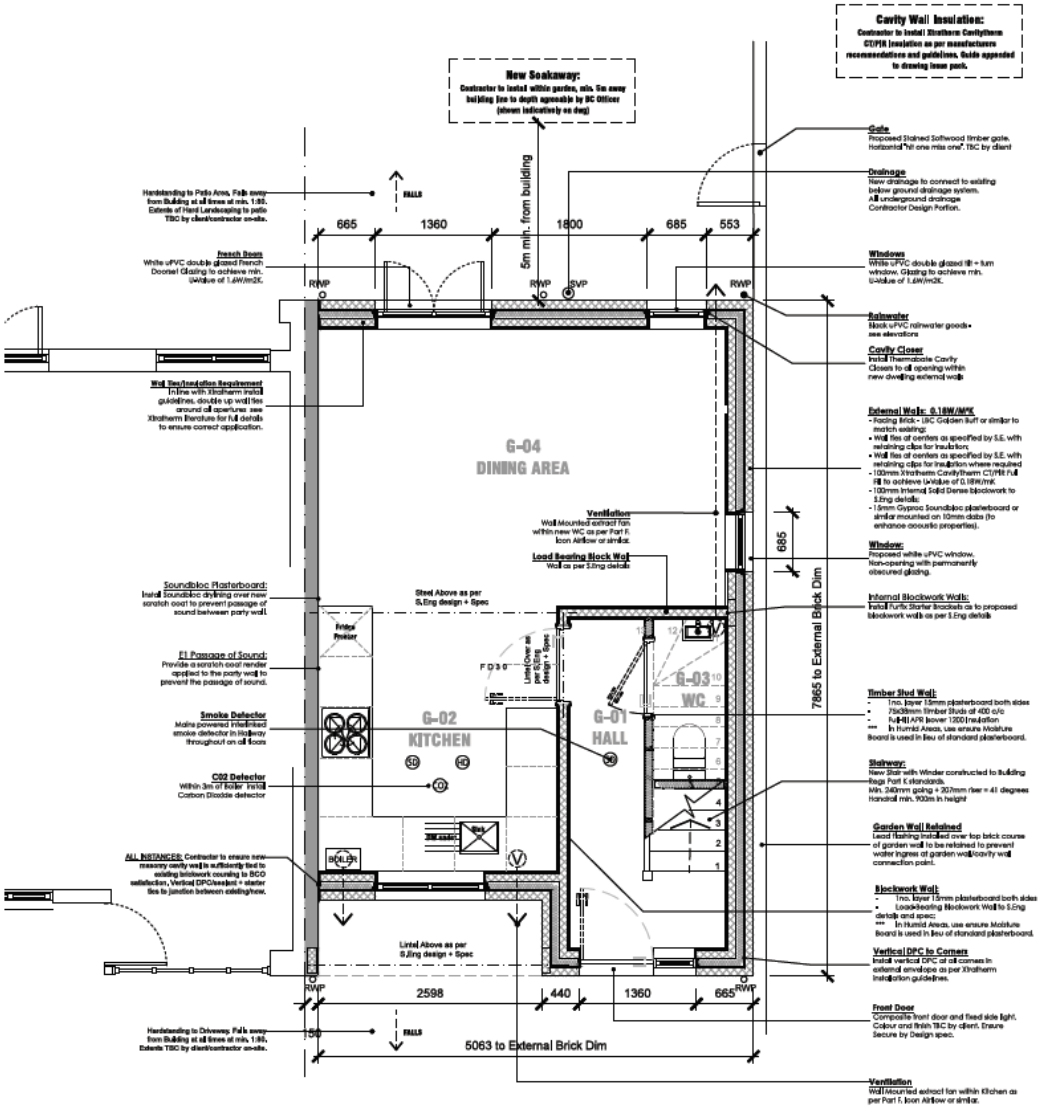
1.8 It has been noted by the Applicant that various of neighbouring dwellings in Ormonde Way have similar residential accommodation (open plan kitchen/dining rooms and similar) – without necessarily any additional flood mitigation.

1.9 <u>Conclusion:</u>

By providing resilient materials and techniques to 0.75m above FFL, it is contended that the development will comply fully with the PPG and NPPF. There is no need for non-habitable accommodation at ground floor level for compliance with the PPG/NPPF.

2 Appendix

Proposed Ground Floor Layout & Submitted FRA Report



Proposed Ground Floor Layout

10 Ormonde Way. Shoreham by Sea. West Sussex.
FLOOD RISK ASSESSMENT.
Erection of a new four storey house.

This flood risk assessment (FRA) has been prepared in order to support a planning application for development of a four storey dwelling house alongside an existing dwelling.
The subject site is located in an established residential area to the south of Shoreham by Sea and is the side garden to the end terrace of four houses.

The environment Agency (EA) flood map for planning indicates that the site lies within flood zone 3.
The site is protected by the shoreham to Lancing sea defences, which are designed to offer and approximately 1 in 100 year return period standard of protection. These sea defences are maintained by the EA and are currently in good condition (according to the EA themselves.)

The SFRA surface water map show the site to be within an area at very low risk of surface water flooding.
The SFRA Ground Water flood maps also suggest that there is only a very minor chance of the site being affected by flood water arising from ground water.
Additionally we have identified no other records of sewer flooding.

For a small scale development such as this on a site less than 0.1 ha it is impractical to undertake the sequential and exceptions test due to the large number of similar sites nearby.

As the site is already a developed area, used for residential purposes and has existing flood defences, the new, the new development is likely to be safe in its lifetime and not cause flooding elsewhere. It is also unlikely there would be any impact on any watercourse, flood plain or flood defences.

The new dwelling can have a raised ground floor approximately 600mm above ground level. Consequently the ground floor will be higher than all adjacent properties.

The surface water to the east will be disposed of with permeable paving.

ADUR & WORTHING
PLANNING SERVICES
PLAN AWDM/ 1947 /17
DATE VALID 27 DEC 2017

Water discharged from the new roof will be disposed of in a soakaway located to the south of the house, subject to a percolation test.

Foul water will discharge into the existing foul water drainage system in Ormonde Way.

In the unlikely event of extreme flooding the new house is three storey and allows residents to seek refuge on the first, second and third floor and wait for the water to subside.

All electrical sockets etc are to be located at least 450mm above the raised floor level, meaning these will be over a metre above ground level at all points.

In conclusion, although lying within flood plain 3, the site does not have a history of flooding. It is protected by existing sea defences and it is also understood that ADC and EA are to upgrade the flood defences to banks of the river Adur in Shoreham which will offer further protection to the application site.
The proposed residential development of this site would be considered and appropriate use given that it is within an existing residential area.
There would be no risk to occupiers of the property and nor would development of the site create a greater risk of flooding elsewhere.

gtaCivils
Consulting Engineers






Drainage - Flood Risk - Highways - Transport

GTA Civils, Gloucester House, 66a Church Walk, Burgess Hill, West Sussex, RH15 9AS
T: 01444 871444 F: 01444 871401 E: enquiries@gtacivils.co.uk www: gtacivils.co.uk

GTA Civils Limited, Registered in England No. 4192991. VAT Registration No. 777 5043 04