Howard J Wroot
Chartered Surveyor

240 Wharf Road
Ealand
Scunthorpe
North Lincolnshire
DN17 4JN

Tel 01724 711068
Mob 07947 226577
Email howard@howardjwroot.com

North Lincolnshire Council
Development Control
Church Square House
30-40 High Street
Scunthorpe
DN15 6NL

Date: 2 August 2022

Your ref
Our ref

Dear Sir,

Proposal:	Outline Planning Application for two building plots at
Site Location:	67 Wharf Road, Crowle, Scunthorpe, DN17 4HZ
Application ref:	**Resubmission of PA/2021/1385**
Applicant:	Mr & Mrs R Boggis

FLOOD RISK ASSESSMENT

1. National Planning Policy Framework

1.1 Section 10 of the National Planning Policy Framework sets out the requirements for applications/developments to meet climate change flooding and coastal change.

1.2 This guidance directs LPA's that inappropriate developments in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary making it safe without increasing flood risk elsewhere.

2. Site Location

2.1 As can be seen from the accompanying site location plans and maps plus the Environment Agency Flood Risk Map below the proposed new dwellings will be sited within Flood Zone 2/3a.

Environment Agency Flood Risk Map

SFRA 2011

3.Compatible and Proposed Use

3.1 The existing use of the site is residential and the proposed uses is residential, however this application is for an additional two dwellings.

3.6 Table 2 to the NPPF sets out definitions for land uses with “buildings used for dwelling houses” classed as a more vulnerable use.

3.2 From table 1 in the NPPF technical guide then in flood zone 3a a more vulnerable uses are compatible and appropriate in this flood zone, but subject to the Exception Test.

Table 1

Zone 3a - high probability

Definition
This zone comprises 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.

Appropriate uses
The water-compatible and less vulnerable uses of land (table 2) are appropriate in this zone. The highly vulnerable uses should not be permitted in this zone.

The more vulnerable uses and essential infrastructure should only be permitted in this zone if the Exception Test is passed. Essential infrastructure permitted in this zone should be designed and constructed to remain operational and safe for users in times of flood.

Flood risk assessment requirements
All development proposals in this zone should be accompanied by a flood risk assessment.

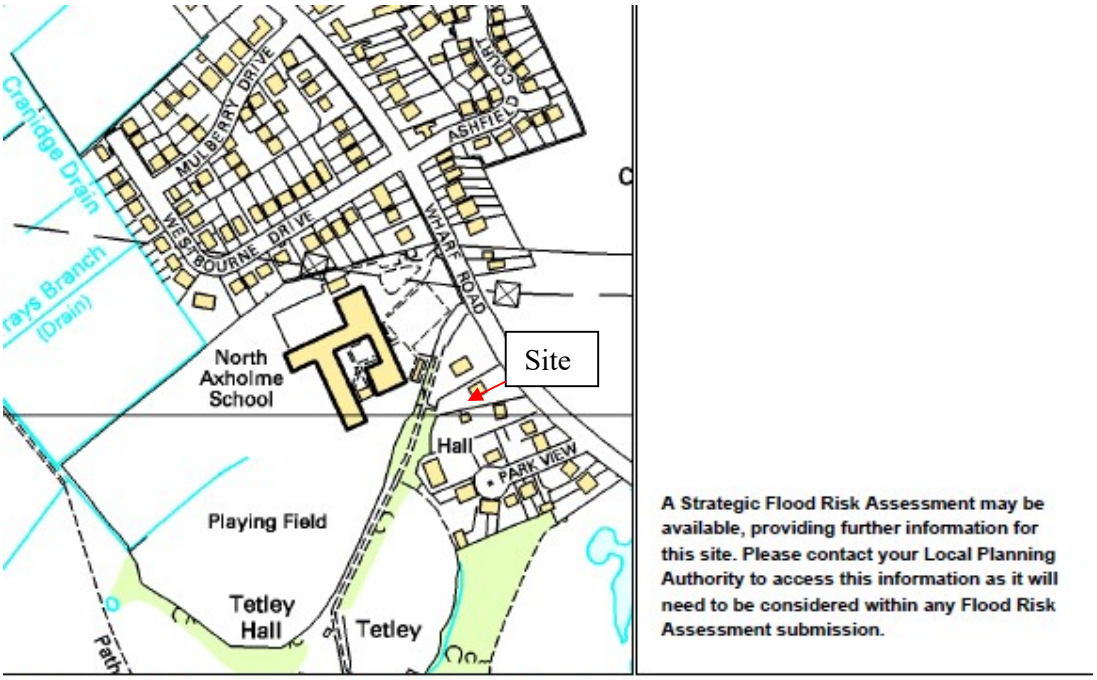
Table 2: Flood risk vulnerability classification

Essential infrastructure • Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. • Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood. • Wind turbines.
Highly vulnerable • Police stations, ambulance stations and fire stations and command centres and telecommunications installations required to be operational during flooding. • Emergency dispersal points. • Basement dwellings. • Caravans, mobile homes and park homes intended for permanent residential use[3]. • Installations requiring hazardous substances consent[4]. (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as "essential infrastructure")[5].
More vulnerable • Hospitals. • Residential institutions such as residential care homes, children's homes, social services homes, prisons and hostels. • Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels. • Non–residential uses for health services, nurseries and educational establishments. • Landfill and sites used for waste management facilities for hazardous waste[6]. • Sites used for holiday or short-let caravans and camping, *subject to a specific warning and evacuation plan*.[7]

4. Overtopping and Breach Maps provided by EA

4.1 Notwithstanding the above SFRA 2011 contemporary mapping supplied by Environment Agency following a FIA request shows the site not to be affected by flooding in a 1 in 100 year plus 50% allowance for Climate Change from both the Rivers Trent and Torne and North Soak Drain.

4.2 Please see copy of map below.



506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

5. Exception Test

5.1 Where a land use classified under the NPPF as being either highly vulnerable or more vulnerable then if within a flood zone 3a area the NPPF states that the Exception Test must be passed. Residential development is classified as more vulnerable and as the subject site is within a flood zone 3a area then the Exception Test applies.

5.2 The exception test requires two conditions to be met before it can be said to have been passed,

A. The site specific FRA must show the development is safe from flood.

i) The North Lincolnshire SFRA contains critical flood levels for this area and site in particular, therefore this critical flood level which is a fluvial 1 in 100 return period and a tidal 1 in 200 return period with allowances for climate change. Refer Table 1 below.

Table 1 - Critical Flood Level (mAOD)

Water Level	Ground Level
4.10	4.00 – 4.60

This table shows the critical flood level for the site is 4.1m AOD. This means that during a 1:100 year event with allowance for climate change water level at the site could be expected to reach 4.1m AOD.

ii) From the Plan submitted with the Planning Application it can be seen that the site is at 3.45m AOD. The proposed new dwellings FFL will be set at 4.4m AOD

iii) The Environment Agency have confirmed that providing a freeboard of 300mm is sufficient to protect the buildings from flood thus the FFL of both proposed dwellings will set at 4.4m AOD which is 300mm above the critical level of 4.1m AOD.

B. The development provides wider sustainability benefits to the community that outweigh flood risk.

i) This development will benefit the community of Crowle in the following ways and thus show that it will indeed provide wider sustainability benefits to the community, not withstanding the fact that the development will be safe in terms of flood risk.

a) *Social*

1. The construction of the dwellings will provide employment for local tradesmen of all ages thus local skills will be enhanced, local employment created, increased opportunities for the employment of apprentices thus improving chances of longer term employability.
2. The new dwellings will be within walking distance of all local facilities this will thus promote a healthier community.
3. The dwellings will be designed in accordance with Police guidelines to minimise possible burglaries and thus reduce crime in the area.
4. The site is closely located to Schools and other local facilities and amenities including bus routes and the railway station. It will therefore help to create and utilise a thriving local community and atmosphere.
5. The adjacent and neighbouring housing mix varies from terraced houses to semi detached and detached houses and bungalows, there is therefore no firm housing type.

b) –*Environmental*

1. There is no risk of flooding of the proposed dwellings when built in accordance with this FRA.
2. The new proposed dwellings will be carbon efficient and have lower than average emissions thus making a contribution to the improvement of air quality
3. The site is within walking distance of all facilities and amenities plus local bus routes thus this will contribute to the reduction in private vehicle use and emissions.
4. All additional housing within rural villages will contribute to the use of public transport and thus additional demand will enhance it's long term provision.
5. The houses will be built to Code 3 level Sustainable Housing which is above the required level of energy efficiency required by the Building Regulations and thus further contribute to a reduction in the carbon footprint of new housing provision..
6. All materials used in the construction of the building will be sourced locally thus promoting sustainability in the construction process.

c) *Economic*

1. Construction of the new dwellings will provide much needed new jobs and play a part in small degree in the governments stated intention to build the country out of recession.
2. All local rural villages need vibrant centres and the construction of a new family dwellings will bring additional children into the village which will promote use of the local school, shops, doctor's surgery etc.

5.3. I would refer to the appeal decision APP/Y2003/A/11/2167029 at 17 Washinghall Lane, Eastoft planning application ref PA/2011/0789. This was a building plot application refused on flood risk grounds being in flood zone 3a.

5.4. At paragraph 13 the Inspector stated "Because the risks associated with potential flooding are low, notwithstanding the location within flood zone 3a, I find that the sustainability benefits of the provision of an additional dwelling would be sufficient to outweigh these risks and thus satisfy the exception test and the NPPF".

5.5 It must be recognised that buildings can provide significant protection against Flood Risks where it may be safe to remain within them and if necessary seek refuge on upper floors or escape rooms if necessary. However in the first instance evacuation of the building in the event of flood must be the first priority an evacuation plan and route is set out at section 7.

6. Mitigation measures

6. 1 Additional flood proofing measures are set out below.

6.2 FFL set at 4.4m AOD

6.3 Flood proofing measures carried up to 1.2m of FFL

Feature	Considerations To Improve Flood Proofing
External Walls	Careful consideration of materials: use low permeability materials to limit water penetration if dry proofing required. Avoid using timber frame and cavity walls. Consider applying a water resistant coating. Provide fitting for flood boards or other temporary barriers across openings in the walls.
Internal Walls	Avoid use of gypsum plaster and plasterboards; use more flood resistant linings (e.g. hydraulic lime, ceramic tiles). Avoid use of stud partition walls.
Floors	Avoid use of chipboard floors. Use concrete floors with integrated and continuous damp proof membrane and damp proof course. Solid concrete floors are preferable; if a suspended floor is to be used, provide facility for drainage of sub-floor void. Use solid insulation materials.
Fitting, Fixtures and Services	If possible, locate all fittings, fixtures and services above design floor level. Avoid chipboard and MDF. Consider use of removable plastic fittings. Use solid doors treated with waterproof coatings. Avoid using double-glazed window units that may fill with flood water. Use solid wood staircases. Avoid fitted carpets. Locate electrical, gas and telephone equipment and systems above flood level. Fit anti-flooding devices to drainage systems.

7. Evacuation Planning

7.1 The Environment Agency have a range of Flood Warnings available and my clients will subscribe to them, please refer below.

7.2 Due to the site's distance from the Navigation Canal and that it is not tidal any catastrophic flood event from the canal and River Trent busting it's banks is discounted in terms of immediate flood risk to the site, and thus the Environment Agency/DEFRA Report FD 2321 will not be used with regard to the steps to be taken in terms of Evacuation for the reason that in applying this model it can be seen that there is no danger in terms of a breach.

7.3 Therefore any flooding event will come from a gradual build up over a prolonged period of very heavy rain, which it must be said did not occur in 2012 one the wettest years on record. However taking this scenario a gradual rise in water level of the canal will be observed giving more than adequate time to implement an evacuation plan.

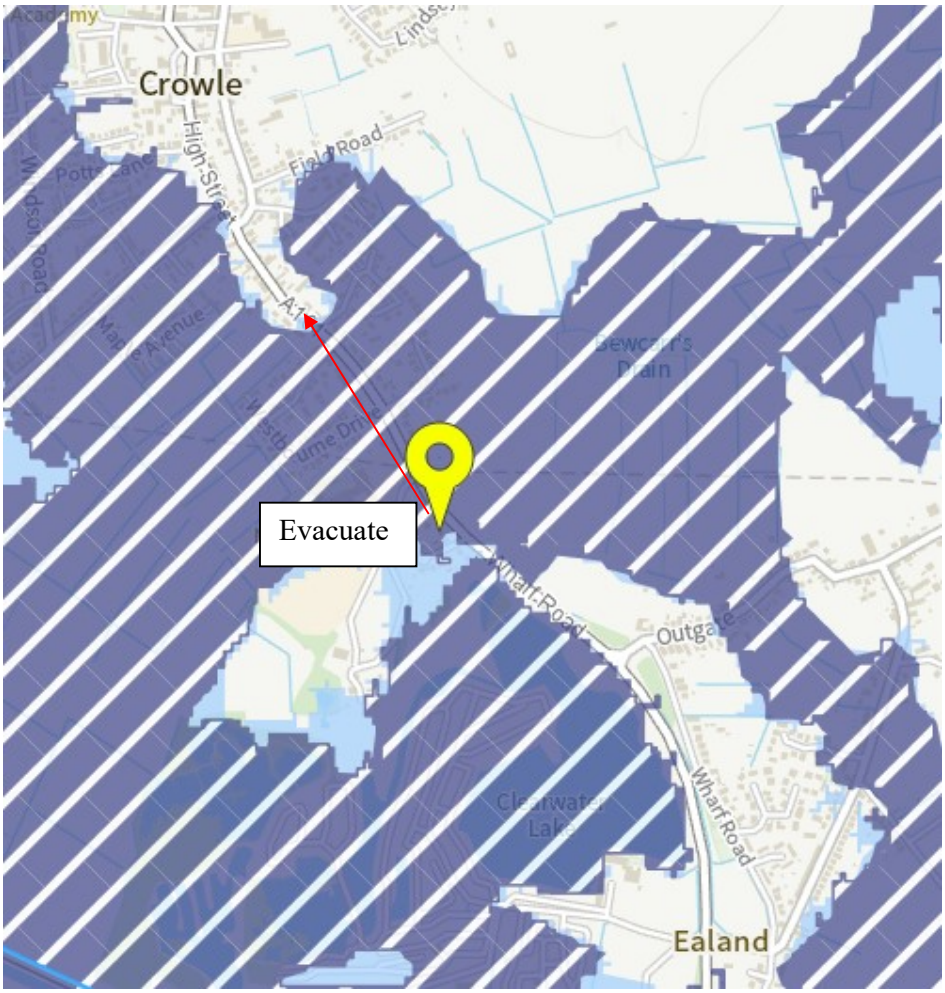
7.4 The Environment Agency have various warning systems in place and my client will subscribe to these, please see above.

7.5 Therefore given that the Environment Agency Flood Warning system has given the required notice and that by visual surveillance of surrounding water levels similar conclusions are reached that an evacuation of the site will be necessary within a decided time span. Then enough time will have been decided upon so as to safely move people to an area of safety.

7.6 The area of safety to which occupiers would evacuate to would be to Crowle Market Place which is in Flood Zone 1 and deemed safe from flood.

7.7 Thus due the proximity of a Flood Zone 1 area a safe evacuation of the premises can be simply and easily carried out.

7.8 An alternative would be for occupants to remain within their homes in a First Floor Room to be designated the “Escape Room”.



8. Conclusion

8.1 The occupants of the development can deemed to be safe in terms of Flood Risk.

8.2 The development will not increase flood risk elsewhere as new buildings will discharge surface water to soakaways.

8.3 The Exception Test is passed

8.4 I therefore conclude that the proposal should not be refused on grounds of Flood Risk.

8.5 Ground 3 of the refusal ref PA/2021/1385 stated that the development did not pass the Exception Test. The Environment Agency consultation response dated 12th August 2021 approved the both the FRA and Exception Test in that they considered the development to be safe from flood.

8.6 This therefore only leaves the 2nd condition to be met that the development provides wider sustainability benefits to the community that outweigh flood risk. It is argued that the benefits listed above have been persuasive in approaching 100 planning applications that as sustainability benefits they do indeed outweigh Flood Risk.

8.7 I would refer to the Appeal Decision APP/Y2003/A/11/2167029 appeal allowed for a 2 storey dwelling on land off Washinghall Lane Eastoft. In this decision – with the main issue being whether the development would be acceptable having regard to policies relating to the development of land at risk of flooding the Inspector found that in respect of the condition requiring that "the development provides wider sustainability benefits to the community that outweigh flood risk" that at paragraph 13 "Because the risks associated with potential flooding are low, notwithstanding the location within flood zone 3a, I find that the sustainability benefits of the provisions of an additional dwelling would be sufficient to outweigh these risks and thus satisfy the exception test.

8.8 It should be noted that this decision was made at a time when NLC's 5 year housing land supply had not been examined at Appeal and found not to be the case and thus having an out of date Development Plan and that applications for sustainable development having a presumption in favour of approval.

8.9 It is very clear that this proposal meets and passes the Exception Test