

Large-Scale Residential Development Appeal Correspondence Form

Case No: ABP 320049-24Please treat correspondence received on 30/7/24 as follows:

1. Update Plean-IT with new agent of Applicant/Appellant

2. Acknowledge with LRD 203. Keep copy of Board Letter ☐

1. Return to sender with LRD _____

2. Keep Envelope ☐3. Keep Copy of Board Letter ☐Amendments/Comments: Applicant's response to
appeal rec'd by email.Case NarrativeTask 320049-24 to Applicant ~~SP~~ LRD 20LID 31/7/244. Attach to File ☒(a) LRD Unit ☐(b) Inspector ☐Return to EO ☐Plans Date Stamped ☐Date Stamp Filled in ☐EO: Karen HickeyAA: Dan MooreDate: 31/7/24Date: 2/8/24

Karen

Dillon Corcoran

From: Cora Savage <csavage@mhplanning.ie>
Sent: Tuesday 30 July 2024 14:53
To: Appeals2
Cc: Tom Halley
Subject: ABP-320049-24 - Response to 3rd Party Appeal
Attachments: LTR_240730_Response to 3rd Party Appeal_CS.pdf

Caution: This is an **External Email** and may have malicious content. Please take care when clicking links or opening attachments. When in doubt, contact the ICT Helpdesk.

Good Afternoon,

We act on behalf of the applicant, Marina Quarter Limited, and wish to respond to the third party appeal lodged by Keith Sutton on behalf of the Bennettstown Residents, Bennettstown, Dunboyne, Co. Meath against Meath County Council's notification of decision to grant permission for a Large Scale Residential Development comprising 267 no. residential units, creche, and ancillary development work at Dunboyne North, Co, Meath (Meath County Council Ref. 23/60290).

Please find attached our response to the third party appeal.

We trust that this submission will be taken into account in the Boards assessment of the proposed development. Please contact the undersigned if you require any further information.

Kind Regards,
Cora

Cora Savage
Senior Planning Consultant
McCutcheon Halley
CHARTERED PLANNING CONSULTANTS
Mobile: +353 (0)86 457 0183

Cork
6 Joyce House, Barrack Square,
Ballincollig, Cork,
P31 YX97
Tel: +353 (0)21 420 8710

Dublin
4th Floor, Kreston House,
Arran Court, Arran Quay,
Dublin 7, D07 K271
Tel: +353 (0)1 804 4477

Bantry
1st Floor, The Old Schoolhouse,
Summerhill, Bantry, Co. Cork,
P75 VP95
Tel: +353 (0)21 420 8710



www.mhplanning.ie

The information transmitted in this email is intended for the addressee only and may contain confidential and/or privileged material. Any review, retransmission, dissemination, reliance upon or other use of this information by persons or entities other than the addressee is prohibited. Please contact the sender and delete the material if you receive this in error.

The Secretary
An Bord Pleanála
64 Marlborough Street
Dublin 1

30 July 2024

**Re: Appeal Reference – ABP-320049-24 – Response to 3rd Party Appeal.
Development comprising permission for a Large Scale Residential Development (LRD) consisting of the construction of 267 no. residential units, a creche and all associated ancillary development works principally located in Bennetstown (townland) to the south of the M3 Parkway Park and Ride and Rail Station and also extending into Pace & Dunboyne (townlands), Dunboyne North, Co. Meath.**

Dear Sir/Madam,

We act on behalf of the applicant, Marina Quarter Limited, and wish to respond to the third party appeal lodged by Keith Sutton on behalf of the Bennettstown Residents, Bennettstown, Dunboyne, Co. Meath against Meath County Council's notification of decision to grant permission for a Large Scale Residential Development comprising 267 no. residential units, creche, and ancillary development work at Dunboyne North, Co. Meath (Meath County Council Ref. 23/60290).

In considering this appeal, it is important to point out that the application was accompanied by a detailed and comprehensive set of supporting plans/material, including an Environmental Impact Assessment Report (EIAR) and detailed Site-Specific Flood Risk Assessment (SSFRA). The Council's decision to grant permission demonstrates that all items raised by the appellants in their objections were comprehensively addressed and as stated by the area planner in his report, the proposed development:

"Is supported by the CDP, can be accommodated by the Core Strategy, accords with the land use zoning objectives of the CDP and the requirements of the Master Plan."

In considering this appeal, it is also important to point out that in the Council's request for further information (RFI), the applicant was specifically asked to review and respond to the content of the third-party submissions which related to flood risk (RFI item 1(i)). A comprehensive response was submitted to the Council at RFI stage which clearly demonstrated that the development would in no way increase the flood risk to any residential properties in the area and that flood risk was comprehensively assessed and mitigated. As part of this response to the third-party appeal, IE Consulting Engineers have again provided a comprehensive response to the issues raised by the third parties in relation to flood risk (see Appendix 1). Further to direct engagement between the applicant and the Bennettstown residents, a further Advisory Note is included as Appendix B of the IE Consulting Engineers Response. This provides further clarity as to the nature of the issues that the residents experience, which are unrelated to the subject application but give useful context and understanding of their baseline position.

The third-party appeal raises issues relating to flood risk, traffic (including the proposed link to the Old Navan Road), environmental assessment and cumulative impacts, future maintenance of areas to be taken in charge and pedestrian/cycle connectivity. As some of the issues raised are interconnected, we have summarised our response to the issues below and will provide one composite response to the Board under the following headings:

- 1. The proposed development in Dunboyne North is supported by Strategic FRA (as part of the Development Plan process) and a comprehensive SSFRA which clearly demonstrates that there will be no negative impact nor increase in flood risk to the dwellings on the Old Navan Road.**
- 2. The proposed development is fully in accordance with National and Local Planning Policy, and in particular with the transport objectives of the Dunboyne North Masterplan.**
- 3. The planning application was accompanied by a very comprehensive list of supporting material which were prepared to a very high standard and contain all the information required/sought by the planning authority.**

Our response to the grounds of appeal is outlined below.

Grounds of Appeal

- 1. The proposed development in Dunboyne North is supported by Strategic FRA (as part of the Development Plan process) and a comprehensive SSFRA which clearly demonstrates that there will be no negative impact nor increase in flood risk to the dwellings on the Old Navan Road.**

The appellant has raised concerns regarding flood risk and has stated that *"it is our belief that the 20% surplus allowed within the submitted design calculations is inadequate and the predicted 1 in 100-year flood event scenario will occur with much greater frequency."* This point was raised by the appellants in their submission to Meath County Council (MCC) and a comprehensive response was provided in Appendix B of the SSFRA by IE Consulting at Further Information stage.

The SSFRA was prepared in compliance with all relevant guidelines and took account of information/data on past flood events and was also robustly future proofed in terms of future flood risk scenarios. In relation to the 20% surplus allowed within the submitted design calculations, this is based on the requirements set out in Table 3-1 of the OPW 'Climate Change Sectoral Adaption Plan, Flood Risk Management (2015-2019)'. The 20% Mid-Range Future Scenario (MRFS) was applied to this study for peak flood flows during a 1 in 100-year flood event. The MRFS was also applied to the surface water drainage design, which allows for an additional 20% to be added to rainfall depths. In addition to testing the impacts of climate change a more extreme event has been simulated with the development proposal in place. The 0.1% AEP event has a 66% uplift on the 1% event, and significantly greater than any published climate change uplifts. In that test both the development is outside the floodplain and the risk of exceeding the berm in front of the appellants properties is very low. The balancing effect of the floodplain upstream of their properties ensures that the risk to these properties is managed to acceptable levels. The frequency of inundation will remain the same and the volume is only insignificantly reduced by the new bridge abutments.

The appellant also raises concerns regarding climate change and soil saturation. As outlined in the SSFRA, the development does not alter the manner in which sub surface drainage will occur within the lands surrounded by the Tolka defences (which was installed after the 2002 flood event). The development does not increase river levels downstream and drainage paths will remain unaffected.

The SSFRA also acknowledged that the right hand (western) bank of the River Tolka floods regularly. In response to this the hydraulic model was used to assess a more frequent flood event such as the 1 in 2-year flood event, which has a 50% probability of occurring in any given year. This issue was comprehensively analysed and addressed in the SSFRA.

The appellants also state that *"neither the proposal of the developer nor conditions set out by Meath County Council address how footings for the proposed Tolka Bridge will be constructed without undermining the existing flood defence"* – this is not the case. The interaction between the bridge and the existing berm/flood defence was very carefully considered and designed. No drawing was provided however, but as the Board will note, in response to the Council's RFI, it was decided that the existing flood defence/berm would remain in-situ and that the bridge would not alter the existing structure i.e. the bridge/soffit clears the berm and the locations of the footings/supports were very carefully chosen so as not to impact on the berm or the river and were fully considered as part of the flood modelling for the site. Construction details of the bridge, including foundations, supports, deck, embankments etc will be submitted to the Council in accordance with Condition no. 16 of the Council's notification of decision to grant permission. It has been assumed that piled foundations (worst case) will be used unless localised site investigations at construction stage indicate an alternative construction methodology. Regardless of the construction methodology used, the footings for the proposed Tolka Bridge will be constructed without undermining the existing flood defence.

The appellants also state that *"the methodology of such construction or timing of construction has not been set out."* The phasing of the proposed development is clear from the submitted phasing plan by John Fleming Architects that the proposed bridge is to be constructed in Phase 1 of the development. Section 5 of the submitted Construction and Environmental Management Plan by Paul McGrail Consulting Engineers breaks down this phasing even further and clearly outlines that the construction of the bridge over the river Tolka will take place within Phase 1c of development and will take 2 years to complete. During construction of the bridge and associated works, the integrity of the flood defences will be maintained to ensure no change in protection for the existing Bennetts town residents.

The Council noted, in their report dated May 30th, 2024 that *"the Planning Authority's concerns pertaining to flooding have been addressed satisfactorily."* The Council's Environment, Flooding and Surface Water Section also stated in their report that *"the applicant met with the relevant departments of Meath County Council has submitted an amended SSFRA and has satisfactorily addressed all the points in the FI request" and "from a flood perspective, I have no objections to the proposed development."*

It is submitted that the SSFRA and associated material/information provided as part of the planning application and RFI response comprehensively dealt with flood risk, however as part of this appeal response and in response to the specific issues raised by the appellant, IE Consulting have provided a further response to the issues raised which reinforce our position that the proposed development will not result in a negative impact nor increase the risk of flooding in the area.

Therefore, we would ask the Board to uphold Meath County Council's decision to grant permission as the proposed development will not have a negative impact and increase the risk of flooding in the area.

2. The proposed development is fully in accordance with National and Local Planning Policy, and in particular with the transport objectives of the Dunboyne North Masterplan.

The appellants claim that the proposed development is at odds with the relevant policy and objectives pertaining to the site, specifically in relation to the route of the link road between the Old Navan Road and the R157. In the third-party appeal it is stated that *"the Dunboyne North Masterplan MP22 clearly sets out the proposed route of the link road between the Old Navan Road and the R157 through the subject lands however the subject application ignores this."* This is not the case. The route of the link road (and

other infrastructure) in the MP22 is indicative and subject to further refinement as part of the detailed design process. This is also an iterative process in consultation with MCC.

As part of the planning application process, AtkinsRéalis worked closely with MCC to determine the most appropriate route and alignment of the link road. During this consultation, MCC emphasised the importance of including measures to make the link road unattractive to through traffic so that it would not become a 'rat-run' between Dunboyne and the R157 - see minutes of meeting with MCC dated 15/06/2021.

Following this meeting AtkinsRéalis developed a junction and road alignment that would make the link road unattractive to through traffic. This involved a T-junction with the Old Navan Road and an alignment on the link road which would discourage through traffic. These measures were put forward by MCC and incorporated by the applicant's design team to protect the existing residents on the Old Navan Road from excessive amounts of through traffic and to limit the use of the link road to local traffic only.

The measures included along the link road to ensure it is unattractive to large volumes of traffic, particularly HGVs, include a 30 km/h speed limit, narrow carriageway lanes, tight radius bends, raised tables, signalised crossings, localised chicanes and the T-junction with the Old Navan Road which removes priority for vehicles on the new link road. All these measures have been included in the microsimulation traffic model which showed that a small volume of vehicles use the proposed new link road in both AM and PM peaks with the majority of traffic being local in nature. This is outlined in section 8.1.3, 8.2.3 and 8.3.3 of the submitted Traffic and Transport Assessment by Atkins.

In response to the provisions of the 2018 Transportation Study and following the meeting with MCC on 15/06/2021, the connection to the Old Navan Road was set out as a T-junction at all subsequent meetings (including the section 247 and 32B pre-planning meetings), and all scoping and traffic modelling was based on this junction arrangement. The T-junction formed part of a suite of measures included to make the link road unattractive to through traffic towards Dunboyne. This was discussed at length and in detail with MCC and agreed prior to lodging the application.

The appellants claim that the proposed link road will give rise to road safety, road hierarchy and light and noise pollution issues and states that *"the proposed link road opens up access for heavy goods traffic from the M3 motorway to Dunboyne Business Park. This is a residential cul-de-sac ... it is not suitable for exposure to the primary road traffic that is proposed."* As outlined above, the link road has been designed to make it unattractive to through traffic in order to protect the existing residents. Altering the alignment of the link road in accordance with that advocated by the appellants would potentially undermine this approach and increase the volume and speed of traffic on the link road.

The existing link along the Dunboyne Business Park is currently a cul-de-sac at Thorntons Recycling Centre at the western edge close to the R157. It is proposed to extend this link on its western side where it would join the R157 at a newly designed priority junction. The design of this junction was recently granted Part 8 Planning permission (see Figure 1). This Part 8 will help further mitigate traffic in the Dunboyne North area and is a much better route for commercial and/or through traffic between Dunboyne and the R157.





Fig 1: Proposed Design of Business Park link / R157 Junction.

The route for the link road the subject of this appeal response was assessed by MCC's Transportation Section who deemed it to be *"compliant with the Transportation Study at Dunboyne and Environs and the approved Masterplan"* and *"should provide a safer environment for all users and are considered acceptable measures."* The link road was also assessed as part of the EIAR submitted with the application which found that there would be no negative impact in terms of light and noise pollution.

Notwithstanding the above, the applicant would be willing to provide an appropriate boundary treatment to the green opposite the proposed junction/ fronting the Bennettstown residences, which is the control of MCC, to include screen planting and fencing. This would fully secure this green space and remove any perception of exposure to the proposed new road arrangement.

The appellants have also stated that the proposed development is also non-compliant with policy as it *"offers no pedestrian nor cycle link to Dunboyne Village"*. Again, we disagree with this statement. The proposed development includes pedestrian and cycle links throughout the development which connect with the existing/proposed links within the surrounding area. In the Planners' report dated November 14th states that *"I am satisfied that the scheme provides a dedicated, well designed overlooked walking and cycle route through the scheme which links the future residents to the train station as required by the Master Plan. This route will connect directly to the facilities to be provided on the Old Navan Road."* The proposed connections were also assessed by Meath's Transportation Department who concluded that *"pedestrian and cycle links along the proposed Link Road to the Navan Road which are proposed to join with existing facilities. This is acceptable."* As is detailed in the Planners report and in the minutes of the meeting with MCC dated 15/06/2021, pedestrian and cyclist links to Dunboyne Village on the existing section of the Old Navan Road, will be developed and provided by MCC. This forms part of a much wider scheme which is currently being progressed by MCC under the Dunboyne and Clonee Pedestrian and Cycle Scheme.

In considering this appeal, it is important to point out that MCC comprehensively assessed and addressed the appellants traffic concerns in the report dated May 30th, 2024, stating that *"the Planning Authority considered that this item has been addressed satisfactorily. As a number of third-party submissions raised transport issues, I also reference the report of MCC transportation which expresses no objections to the proposed development."* The planner in his report concluded that the proposed development *"is supported by the CDP, can be accommodated by the Core Strategy, accords with the land use zoning objectives of the CDP"*

and the requirements of the Master Plan." We firmly believe that the proposed development is fully in accordance with the Meath County Development Plan, the Dunboyne North Masterplan MP22 and the specific policies and objectives pertaining to the site, and we would therefore ask the Board to uphold the Council's decision to grant permission for the proposed development.

3. The planning application was accompanied by a very comprehensive list of supporting material which were prepared to a very high standard and contain all the information required/sought by the planning authority.

The appellants have questioned MCC's assessment of the proposed development and claim that their concerns were not adequately addressed. The appellants state that *"Meath County Council also failed to address issues raised by us which may have been beyond the remit of Marina Quarter"* and *"we firmly believe the conditions attached to the grant of permission fail to acknowledge or address our legitimate concerns regarding this development."*

As can be seen from the comprehensive assessments (including RFI stage) of the planning application, including the third-party submissions, all material was very carefully considered by MCC. Only relevant matters were raised in the further information request by the Planning Authority, the Council did not revisit all items raised by the third parties (e.g. the link road), as they were satisfied with the approach taken in the planning application material. The Council have clearly stated in both the report dated November 14th and May 30th that all third-party submissions have been considered and addressed.

The appellants have also questioned the validity of the submitted EIAR stating that *"we contend that the environmental impact of the future phases should have formed part of this application."* We completely disagree with this statement as the submitted EIAR does consider the cumulative impacts of all permitted and planned projects in the vicinity of the subject site including future phases of development on the applicants' lands.

Particularly in relation to the proposed infrastructure it was imperative that all future phases were taken into account as it was necessary to know the full impact of all the development around the area in order to ensure the correct infrastructure was provided. This is linked to the Dunboyne Environs Transport Study which required which required all future development to be identified and assessed. The submitted EIAR was carefully considered by MCC who concluded that the *"cumulative impacts of the proposed development in conjunction with other planned projects in the vicinity are considered in each relevant chapter of the EIAR"* and *"I am satisfied that the content of same represents a reasonable assessment of the environmental impacts of the proposed development."*

The appellants have also raised concerns in relation to the taking in charge status of the public open space stating, *"who is going to take in charge and maintain these public amenity areas into the future."* It is clear from the submitted taking in charge layouts submitted with the application that all the public open space areas are to be taken in charge by MCC who will be responsible for the maintenance of these areas. These areas will be maintained by the developer until such time that they are taken in charge by MCC. This is standard practice for all residential developments. Maintenance requirements for the floodplain open space zoned lands between the development and the river are not expected to be significant and will be limited to occasional mowing.

The documents contained in the planning pack that were submitted to MCC were prepared to a high standard by an experienced design team and contained all the relevant information required in relation to the proposed development. A full set of architectural drawings, engineering drawings, and landscaping drawings were also submitted. MCC requested Further Information on November 16th, 2023, seeking additional material in response to the appellants submissions all of which were comprehensively addressed by the applicant.

MCC assessed the submitted documents and were satisfied that the material submitted at both initial planning application stage and further information stage provided them with all the relevant information required to approve the development. Moreover, the planning application was developed in a collaborative approach with MCC where discussions took place prior to both the application and further information being lodged to ensure a high standard of development for the area.

Summary and Conclusion

To conclude, MCC's decision to grant permission for the proposed development was made on the basis that it was fully consistent with policy and suitable in terms of use and overall design. The fact that permission was granted for the proposed development by MCC is a testament to the quality of the proposal. We do however acknowledge the Appellant's ongoing issues with groundwater in the vicinity of their homes and can confirm that there is no increase in flood risk to those properties as a result of the proposed development. We refer the Board and Bennettstown residents to the enclosed IE Consulting Letter and the Advisory Note appended thereto (Appendix B), which provides further detail of this. Whilst there may be ways of improving existing conditions for the residents, any such remedy is outside the remit of the applicant and the current planning application.

In relation to the grounds of the third-party appeal against MCC's decision to grant permission under Ref. 23/60290 our response to the issues raised are summarised as follows:

- 1. The proposed development in Dunboyne North is supported by Strategic FRA (as part of the Development Plan process) and a comprehensive SSFRA and clearly demonstrates that there will be no negative impact nor increase in flood risk to the dwellings on the Old Navan Road.**
- 2. The proposed development is fully in accordance with National and Local Planning Policy, and in particular with the transport objectives of the Dunboyne North Masterplan.**
- 3. The planning application was accompanied by a very comprehensive list of supporting material which were prepared to a very high standard and contain all the information required/sought by the planning authority.**

We trust that this submission will be taken into account in the Boards assessment of the proposed development. Please contact the undersigned if you require any further information.

Yours sincerely,



Cora Savage
McCutcheon Halley

- Encl. 1) Supplementary Flood Risk Assessment by IE Consulting Engineers.
 2) Minutes of meeting with MCC dated 15/06/2021.



McCutcheon Halley
CHARTERED PLANNING CONSULTANTS

Our Ref: IE2510/NOM/6212

Your Ref: ABP-320049-24

Planning Ref: 2360290

Date: 24th July 2024



The Secretary

An Bord Pleanála

64 Marlborough Street

Dublin 1

Dear Sir/Madam,

Re: Appeal of Permission for Large-Scale Residential Development consisting of 267 residential units and ancillary works. Principally located in Bennetstown (townland) to the south of the M3 Parkway park and ride and rail station, and also extending into Pace & Dunboyne (townlands), Dunboyne North, Co. Meath. Planning Reference Number 2360290.

This letter has been prepared by IE Consulting in response to an appeal made by Bennettstown Residents c/o Mr Keith Sutton against the decision made by Meath County Council to grant conditional planning permission (2360290) to Marina Quarter Ltd, dated 4th June 2024. This report specifically addresses the items pertaining to flood risk only.

A separate Advisory Note has also been included in Appendix B herein, which provides additional information that is relevant to the Bennettstown Residents.

The development proposed is as follows:

Permission for the following Large-Scale Residential Development consisting of: i) 267 no. residential units comprising 145 no. dwelling houses and 122 no. apartments/duplexes providing a mix of 1, 2, 3 and 4-bed units. The dwelling houses range in height from 2-3 storeys. The apartments/duplexes are in 8 no. blocks (i.e. Blocks A-H, with Blocks B and C joined) ranging in height from 3 to 5 storeys; ii) a single storey creche; iii) modifications to the R157 regional road including changes to the existing carriageway/traffic lanes and the replacement of an existing roundabout with a new signalised junction; iv) a new signalised junction and link road (including new bridge over the River Tolka) connecting the R157 and the Old Navan Road; v) the provision of footpaths, cycle lanes and 2 no. pedestrian crossings on the existing M3 Parkway access road, vi) a foul pumping station and connection to the existing public sewerage system via the Old Navan Road; vii) a watermain connection to the north of the site at Pace (townland); viii) 3 no. ESB substation/kiosks and the undergrounding/re-routing of existing electricity lines; ix) reprofiling of land and relocation of existing berm adjoining the River Tolka as part of flood mitigation measures; and x) all associated ancillary development works including footpaths, cycle lanes, car and bicycle parking, drainage, public lighting, bin storage, boundary treatments and landscaping/amenity areas at this site measuring 14.17 hectares principally located in Bennetstown (townland) to the south of the M3 Parkway park and ride and rail station, and also extending into Pace & Dunboyne (townlands), Dunboyne North, Co. Meath. Access will be via 2 no. new vehicular access points along the new link road between the R157 and the Old Navan Road. Pedestrian access will also be provided on to the existing M3 Parkway access road. An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) has been submitted to the planning authority with the application. Significant further information/revised plans submitted with this application.

Grounds for Appeal

The following has been presented by the Bennettstown Residents as their Grounds For Appeal specifically in relation to Flood Risk:

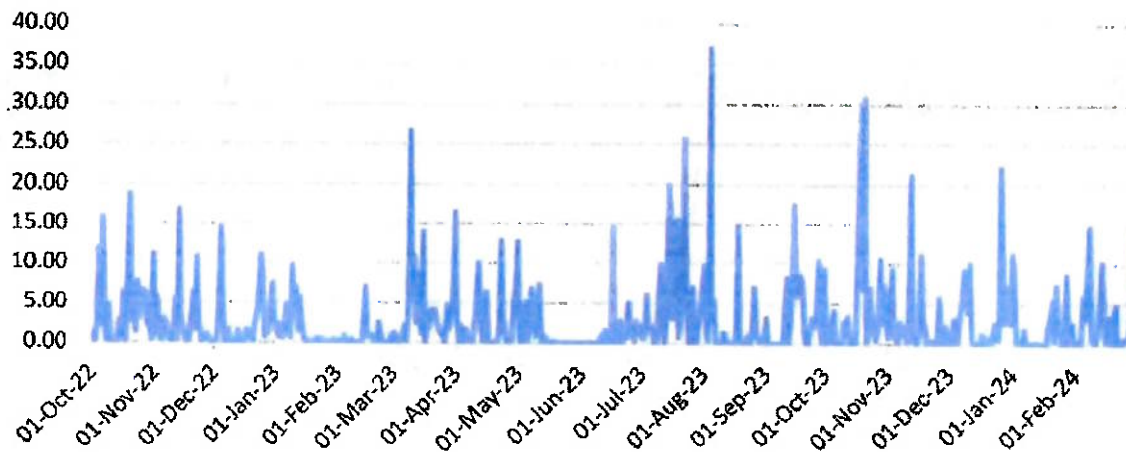
1. Flood risk to existing dwellings.

Despite the desktop surveys and modelling carried out in the Site Specific Flood Risk Assessment (SSFRA) submitted as part of the planning application local knowledge and experience is undeniable. The majority of the subject lands are a flood plain. The best means to demonstrate the extent to which the subject lands regularly flood is by means of video footage. To this end we enclose drone footage taken on 21st October 2023 some 3 days prior to our original submission.

Rainfall data available from Met Eireann (<https://www.met.ie/climate/available-data/historical-data>) documents that rainfall at Fairyhouse Weather Station on the day prior to this footage being captured was 30mm. This is by no means an exceptional deluge and in the previous 20 years at this weather station the data demonstrates that rainfall levels exceeded 30mm on no less than 25 occasions which is more than once a year (refer to Appendix 6 for 20 year graph). Bear in mind these are single day measurements and do not account for consecutive wet days and the resultant cumulative effects.

The level of flooding shown in the video is by no means exceptional for this area and this is before any of the granted development occurs. It should also be borne in mind that this is Phase 1 only of the Masterplan lands. We have also included in Appendix 7 images of flooding of the subject lands on dates since the planning application was lodged clearly demonstrating the frequency with which this flooding occurs

Daily Rainfall @ Fairyhouse Weather Station (mm)
Oct 22 to Feb 24



The effects of climate change are such that weather events are acknowledged as becoming more extreme and it is our belief that the 20% surplus allowed within the submitted design calculations is inadequate and the predicted 1 in 100 year flood event scenario will occur with much greater frequency.

Neither the proposal of the developer nor conditions set out by Meath County Council address how footings for the proposed Tolka Bridge will be constructed without undermining the existing flood defence. Plans show that the footings will be constructed mere metres from the existing berm. The methodology of such construction or timing of construction has not been set out within either the proposal or the conditions and allows the development carte blanche for its construction. We should note that during ground investigations in adjacent fields one of the trial pits collapsed under water ingress (Refer to TP04) and was subsequently abandoned. Surely similar is possible adjacent to the existing flood defence.

Response to Appeal Item 1

Flood risk to existing dwellings

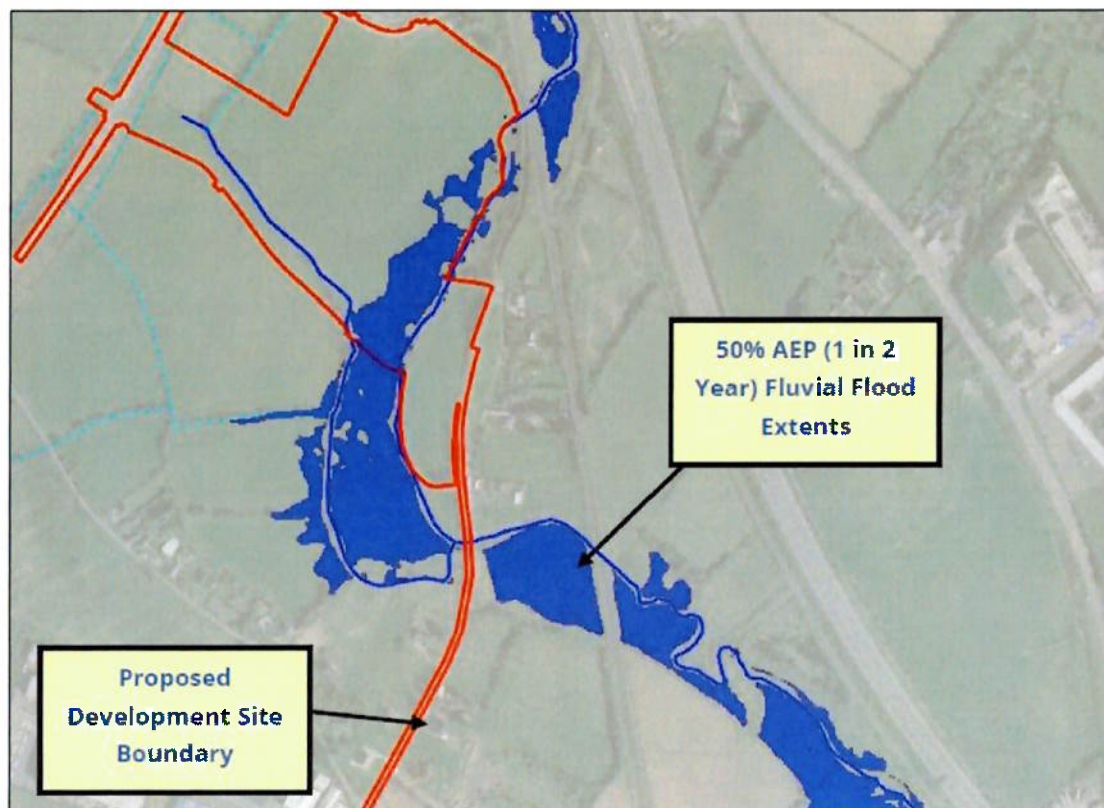
The grounds to appeal on flood risk grounds has focused on a number of points that will be dealt with through this response. They can be broken down as follows:

Frequency of floodplain inundation and whether this undermines the SSFRA

A detailed hydrological and hydraulic analysis has been undertaken as part of the Site Specific Flood Risk Assessment prepared by IE Consulting for the development proposed. The methodology utilised in assessing the primary flood risk posed by the River Tolka has been undertaken using the same level of detail and type of hydraulic modelling (1d-2d linked hydraulic model) as was undertaken for the Dunboyne AFA Study prepared on behalf of the OPW. This level of detail is also in line with current best practice methodology for Stage 3 Detailed Site Specific Flood Risk Assessments. It has been informed by local knowledge provided by the residents and our own observations on site.

It is acknowledged that the Appellant has witnessed flooding in this area of Dunboyne. This is to be expected for this area of floodplain. It is flat and connected to the river system, restricted in its width downstream by the crossing of the railway and its embankment. The OPW flood maps and the SSFRA acknowledge that this area floods frequently and extensively.

Similar points were raised regarding this area being prone to flooding by the Appellant as part of their submission dated 23rd October 2023. A response to this submission was provided by IE Consulting as part of the further information provided in Appendix B of the response. This response prepared by IE Consulting stated that *"It is noted that the right hand bank of the River Tolka floods regularly... The hydraulic model was used to assess a more frequent flood event such as the 1 in 2 year flood event, which has a 50% probability of occurring in any given year. The extent of flooding during this event is shown in Figure 4 below, which may appear similar to that of a more extreme flood event such as the 1 in 100 year event."*



SSFRA Appendix B - Figure 4 - 50% AEP (1 in 2 year) Fluvial Flood Extents

For comparison purposes the 1 in 2 year (50% AEP) flood extents has been overlain onto the 1 in 100 year (1% AEP) flood extents as shown *Figure 1* below. As illustrated below in *Figure 1* the extent of flooding within the proposed development site boundary during a 1 in 100 year (1% AEP) fluvial flood event is not significantly greater than the extent during a 1 in 2 year (50% AEP) fluvial flood event. While the extent is not significantly greater there is a significantly larger volume of water within the site boundary. During the 1 in 2 year (50% AEP) flood event there is a volume of $\sim 1386\text{m}^3$ within the site boundary, while during a 1 in 100 Year (1% AEP) flood event there is a volume of $\sim 6098\text{m}^3$.

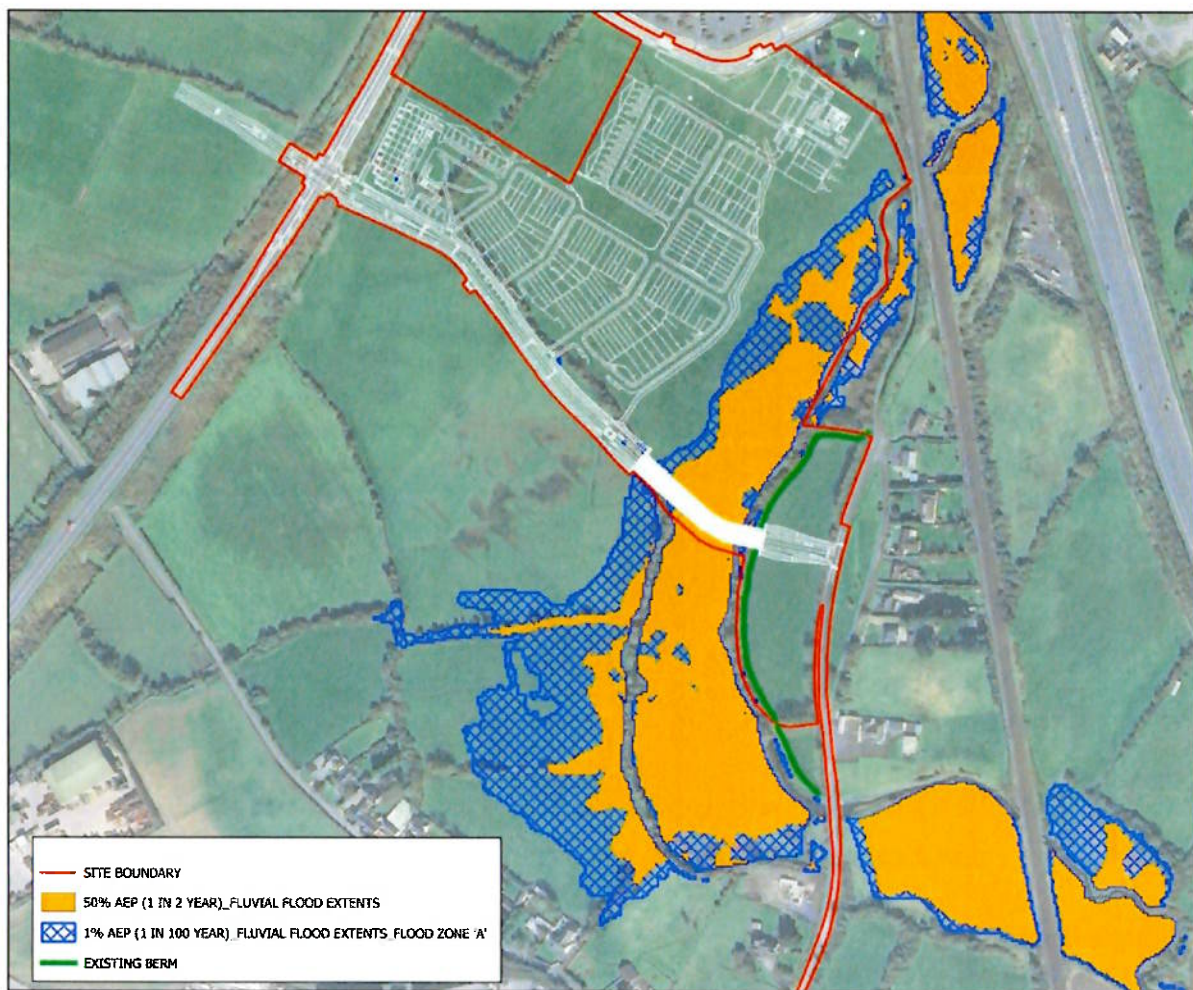


Figure 1 – Comparison of 1 in 2 year and 1 in 100 year Flood Extents

The 1 in 2 year (50% AEP) event flood levels have also been compared to the 1 in 100 year (1% AEP) flood levels along the length of the existing berm as shown in *Figure 2* below. The long section shows that there is not a significant difference in water levels between the 1 in 2 year and 1 in 100 year flood events, particularly upstream of the proposed bridge location. This shows that the overall floodplain easily absorbs the increase in flood flows for the more extreme flood events.

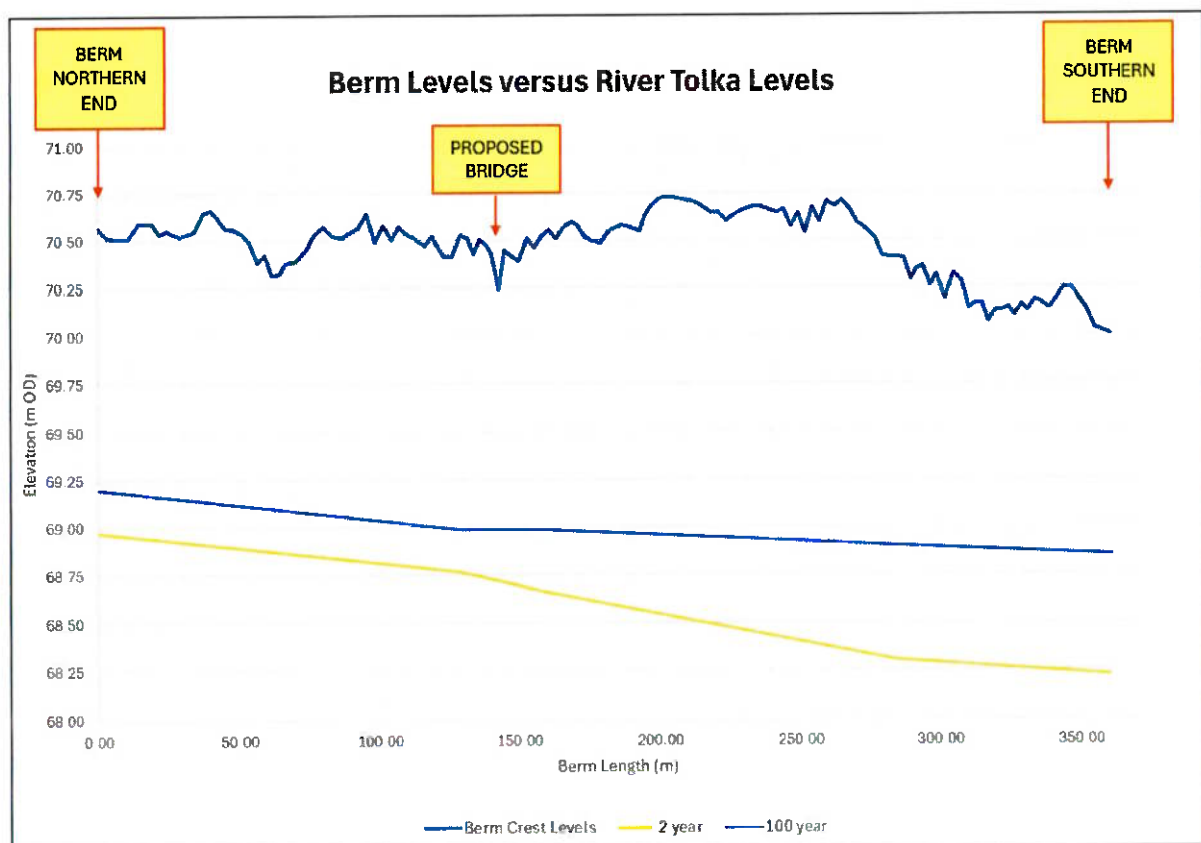


Figure 2 – Long Section of 1 in 2 year and 1 in 100 year Flood Levels adjacent to Existing Berm

The Appellant has provided photographs of flooding in the vicinity of the site dated 21st October 2023. A copy of these photos is shown in *Appendix A* herein. These are helpful in showing how well the hydraulic model replicates the observed extent of flooding. The photographs have been compared to the 1 in 2 year flood event as shown below in *Figure 3*. These photographs compare well with the 1 in 2 year flood extents in all locations, which suggest that the flooding that occurred in October 2023 was closer to that of a 1 in 2 year event than say an extreme 1 in 100 year event. It also demonstrates that the flood berm on the left hand bank is not required to withhold flood waters during the events witnessed in October 2023, which is confirmed at Photo 1.

The important issue to note is that the development does not intend to build within the known and predicted floodplain of the Tolka. As a result there can be no possible impact on adjacent lands and change in flood risk. It is acknowledged that the development contains a bridge crossing of the floodplain, which again has been tested and designed to ensure there is insignificant impact on flood levels adjacent to the flood berm.

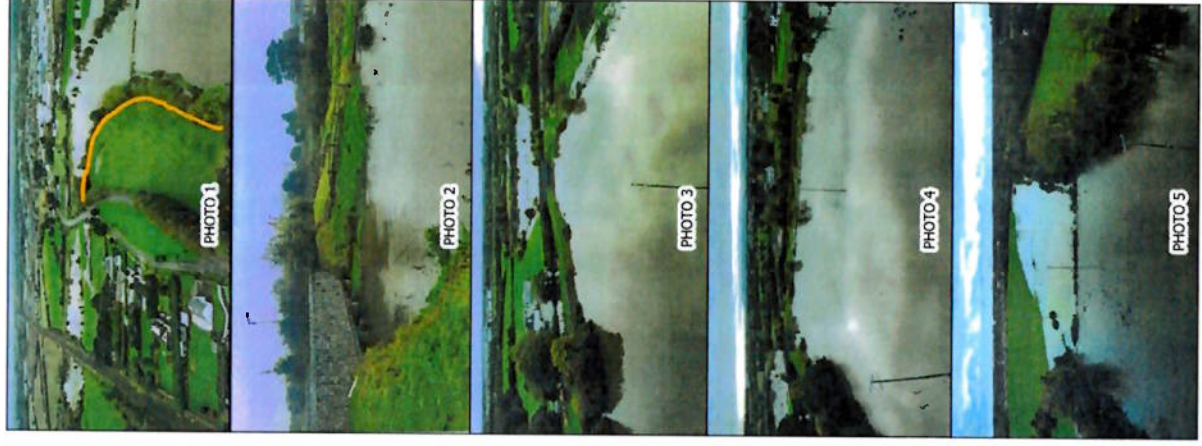
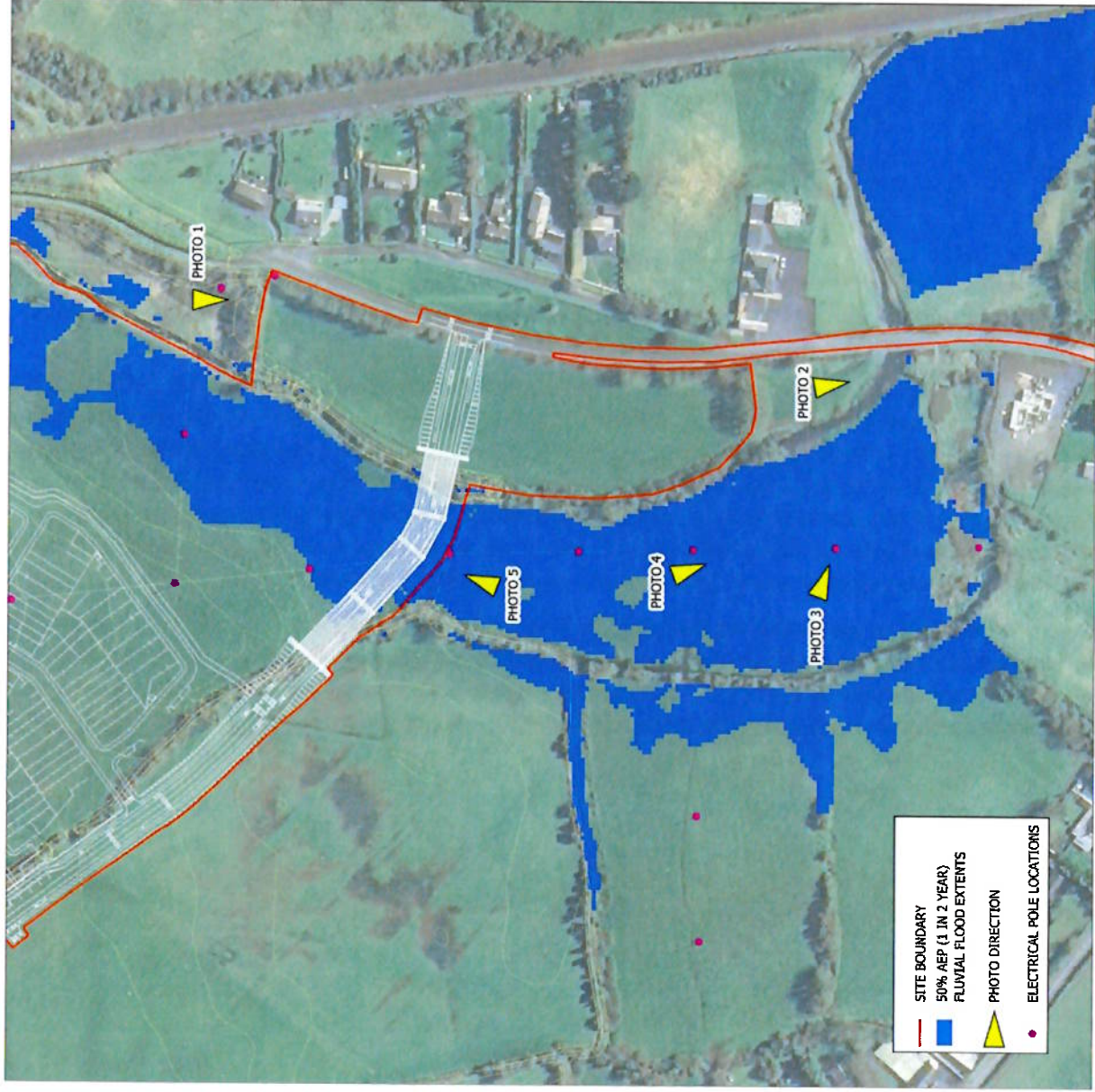


Figure 3 – Comparison of 1 in 2 year Flood Extents with October 2023 Flooding Photographs

Frequency of floodplain inundation has been raised as an issue that seeks to undermine the validity of the SSFRA. We believe this is not the case and the photographic information provided has been helpful to confirm our understanding. It is often a common concept to relate rainfall depths to event severity. For a flood event to occur a number of other factors need to be in place, such as antecedent conditions (such as previous events), multiple events in quick succession. It is recognised by the residents and Met Éireann that the winter of 2023 was very wet. The rainfall totals recorded in October created flood events in a number of East Coast catchments. Once the soils became saturated after the autumn rains in 2023, small rainfall events caused a pronounced response and filling of river floodplains. What was observed in the repeated filling of the Tolka floodplain is not unexpected.

A gauging station has recently been installed by OPW at Clonee Weir, further downstream on the Tolka. This is a more representative indicator of the flood events that have occurred last year, for which the residents collected rainfall data from a local gauge. The flow gauge shows that there were 4 peak events from July into December 2023, with a peak in late October for Storm Babet as shown in *Figure 4* below. This was the highest on record, albeit the gauge was only installed in 2021.



Figure 4 – Clonee Weir Gauging Station Water Levels July 2023 to January 2024

The gauged flow obtained for that event was $13.9\text{m}^3/\text{s}$, which is between a 1 in 5 to 1 in 10 year event according to OPW CFRAM data. This matches the flood extents simulated by the model and the observations made by the residents. The recorded rainfall depth of 30mm only produced a moderate flood event, and all the other rainfall events noted by residents did not produce a significant flood peak. Thereby confirming that rainfall is not a perfect indicator of event severity or frequency.

As we have proven the floodplain depth does not alter dramatically with large events (refer to *Figure 2* above) and the flood volume attenuated is significant. The proposed development does not alter this function. The more frequently inundated areas of floodplain will provide a diverse habitat and form an important component of the open space. Active access in these areas would not be provided as part of the development.

Climate Change

A response to the points raised regarding climate change by the Appellant was previously provided by IE Consulting. This stated *"Climate change for this assessment has been applied based on the OPW 'Climate Change Sectoral Adaption Plan, Flood Risk Management (2015-2019) to define how climate change will impact flow rates on the watercourses included in this assessment. The Mid-Range Future Scenario (MRFS) was applied to this study, which in accordance with Table 3-1 of the OPW Plan includes for an additional 20% to be added to peak flood flows during a 1 in 100 year flood event. The MRFS has also been applied to the surface water drainage design, which allows for an additional 20% to be added to rainfall depths."*

The OPW 'Climate Change Sectoral Adaption Plan, Flood Risk Management (2015-2019)' is the accepted and relevant information available for the application of climate for fluvial flood analysis. We are aware that EPA have recently released their Translate climate projections for Ireland. This more detailed assessment of future rainfall patterns and intensities suggests that the OPW allowance of 20% fits the Cordex climate model output. Other models suggest slightly higher uplifts, but it should be noted that the development foot print and the bridge design accounts for the 0.1% AEP event, where the flow uplift is 66%. The development is not impacted by any further increases in flood flow as a result of climate change and nor will it impact on adjoining land.

Bridge Construction

Please refer to the response provided by Atkins in relation to the bridge construction.

Yours sincerely

Niamh O'Malley



Senior Engineer

For IE Consulting

Paul McShane



Director

For IE Consulting

Appendix A. Flooding Photos October 2023



Figure A1 - Photo 1



Figure A2 - Photo 2



Figure A3 - Photo 3



Figure A4 - Photo 4



Figure A5 - Photo

Appendix B. Advisory Note

Advisory Note

Bennetstown, Dunboyne North, Co. Meath



July 2024

Advisory Note

Client: Marina Quarter Ltd

Location: Bennetstown, Dunboyne North, Co. Meath

Date: 24th July 2024

Copyright © IE Consulting 2024

This report or its contents must not be reproduced for any purpose without written permission. It is to be used only for the purpose for which it is supplied. In any event, IE Consulting accepts no responsibility for any costs, liabilities or losses arising as a result of the use of or reliance upon the contents of this report by any person other than the client as identified above.

Document Control

PROJECT NUMBER: IE2510		DOCUMENT REF: IE2510_Report_6222			
2.0	ISSUE-01	NOM	MOF	PMS	24-07-2024
1.0	DRAFT-01	NOM	MOF	PMS	23-07-2024
Revision	Purpose Description	Originated	Checked	Reviewed	Date

Contents

1.	Introduction	1
1.1.	SSFRA Report	1
2.	Existing Flooding Issues at Bennetstown	2
2.1.1.	November 2002 Flooding	2
2.1.2.	Works Completed Since 2002	2
2.1.3.	October 2023 Flooding	3
2.1.4.	Present Day Hydrological Regime at Bennetstown	3
3.	Summary & Conclusions	7

1. Introduction

The following document has been prepared by IE Consulting to advise Marina Quarter Limited regarding existing issues pertaining to flooding that have been experienced by the residents at Bennetstown at Dunboyne North, Co. Meath.

Specifically, this relates to the concerns raised by the Bennettstown Residents as part of their appeal against the decision made by Meath County Council to grant conditional planning permission (2360290) to Marina Quarter Ltd, dated 4th June 2024. In addition, further information was provided by the residents directly to Marina Quarter Limited at an in person meeting held with the residents on the 16th of July 2024.

1.1. SSFRA Report

A detailed hydrological and hydraulic analysis has been undertaken as part of the Site Specific Flood Risk Assessment (SSFRA) prepared by IE Consulting for the proposed Phase 1 LRD Application at Bennetstown. The methodology utilised in assessing the primary flood risk posed by the River Tolka has been undertaken using the same level of detail and type of hydraulic modelling (1d-2d linked hydraulic model) as was undertaken for the Dunboyne AFA Study prepared on behalf of the OPW. This level of detail is also in line with current best practice methodology for Stage 3 Detailed Site Specific Flood Risk Assessments.

The assessment demonstrates that the development does not increase flood risk to surrounding lands and specifically in relation to the Bennettstown Residents there is no increase in flood risk to these properties as a result of the development proposed. There is no notable change in the level of freeboard along the existing berm as a result of the proposed development, including at the proposed link road crossing of the River Tolka Floodplain. The proposed link road will also not undermine the integrity of the berm during or post construction.

The important issue to note is that it is not the intention to build the residential development within the known and predicted floodplain of the Tolka. As a result there can be no possible impact on adjacent lands and change in flood risk. It is acknowledged that the development contains a bridge crossing of the floodplain, which again has been tested and designed to ensure there is insignificant impact on flood levels adjacent to the flood berm.

2. Existing Flooding Issues at Bennetstown

It is acknowledged that the Bennettstown Residents have witnessed repeated flooding upstream of the Old Navan Road Bridge in this area of Dunboyne. This is to be expected for this area of floodplain. It is flat and connected to the river system, restricted in its width downstream by the crossing of the railway line and its associated embankment. The OPW flood maps and the SSFRA acknowledge that this area floods frequently and extensively.

2.1.1. November 2002 Flooding

A significant flood event occurred within the River Tolka catchment in November 2000. As a result of this event the River Tolka Flooding Study was commissioned by the Office of Public Works together with Meath County Council, Dublin City Council and Fingal County Council in 2001. During the course of this study a further and more significant flooding event occurred on the 15th and 16th of November 2002. This event caused extensive flooding within the Tolka catchment including Dunboyne. The River Tolka Flooding Study report states that *"Significant flooding occurred in the flat low lying areas of the rural catchment, affecting agriculture, local roads and land flooding. Some local property flooding occurred in the Bennetstown area as a result of local drainage systems"*.

The River Tolka Flooding Study estimated that over 100mm of rainfall fell in the Dunboyne area over a period of 1.5-2 days, which was estimated to be greater than a 1 in 100 year rainfall event. It is noted that a 1 in 100 year rainfall event is not necessarily equivalent to a 1 in 100 year flood event in the River Tolka. However, it can be stated that the 2002 event was likely an extreme flood event within the River Tolka catchment.

2.1.2. Works Completed Since 2002

The Dunboyne AFA report includes details of the works undertaken following on from the River Tolka Flooding Study. This included approximately 7km of flood walls and embankments were constructed between 2003 and 2009 in Dublin City, Fingal, and Meath.

The works carried out in the Dunboyne area included:

- Road Bridge replacement and repairs,
- Railway Bridge underpinning
- Stream upgrade
- Embankments and Walls
- General channel maintenance

Specifically in relation to the Bennetstown area an embankment/berm was constructed along the left hand bank of the River Tolka. It is also likely that the bridge under the Old Navan Road was upgraded as part of the flood improvement works as it looks like a recent construction, although this has not been confirmed. This bridge includes three opening spans that are each 3m wide and 3m high.

In addition, a bridge under the rail line was upgraded as part of the M3 Parkway project, which is located downstream of the Old Navan Road Bridge crossing. There are no specific details of the original bridge size, however the new bridge crossing includes twin box culverts with two 2.7m wide spans and heights of 2.3m and 5.5m respectively. A similar crossing was constructed approximately 350m downstream of the railway crossing at a farm access crossing of the River Tolka as part of the M3 Clonee to Kells motorway construction works.

2.1.3. October 2023 Flooding

The Bennetstown Residents have provided photographs of the River Tolka flooding in this area of Dunboyne, dated 21st October 2023. These photographs are helpful in providing a comparison between the SSFRA hydraulic model results and the flooding observed at that time. The photographs have been compared to the 1 in 2 year flood event, which compare well in all locations. This suggests that the flooding that occurred in October 2023 was closer to that of a 1 in 2 year event than say an extreme 1 in 100 year event. It also demonstrates that the flood berm on the left hand bank is not required to withhold flood waters during the events witnessed in October 2023.

2.1.4. Present Day Hydrological Regime at Bennetstown

The following are observations made regarding the present day hydrological and hydrogeological regime of the Bennetstown area:

- The construction of the earth berm has increased the level of protection to residential properties at Bennetstown from a significant flood event in the River Tolka.
- The berm may trap surface water runoff behind the berm following prolonged or intense rainfall. This would contribute to waterlogging of the soils in area of the Bennettstown Residents properties.
- The Old Navan Road Bridge has a greater hydraulic capacity than that of the railway and farm access crossings located downstream.
- The construction of the berm and upgrade of the Old Navan Road Bridge results in a more concentrated flow downstream between the Old Navan Road Bridge and the railway bridge. This results in backing up of flood waters and posing an increased flood risk to residential properties, in particular the Nestor property.
- The October 2023 flood event in the River Tolka is estimated to be between a 1 in 2 year and 1 in 10 year flood event. This flood event did not result in any property flooding. However, the Bennettstown Residents stated that there were problems with septic tanks becoming waterlogged and gardens remaining wet for a period of time.
- In July 2024 the River Tolka channel was observed to be heavily vegetated and silted upstream and downstream in of the Old Navan Road Bridge. This may contribute to a reduced channel capacity for more frequent flood events such as the 1 in 2 year food event. The hydraulic model was utilised to determine the impact of increased vegetation and silt build up. The increase in water levels would be approximately 100mm for the 1 in 2 year event immediately upstream of the Old Navan Road Bridge.
- The groundwater mapping (from GSI) shows the subsoils are Highly Permeable in the area of the Bennettstown Residents and the River Tolka. This means the groundwater levels would be highly sensitive to changes in river levels and that there is connectivity between groundwater and river levels.

It is likely that the issues pertaining to the septic tanks are directly impacted by changes in water levels in the River Tolka. The underlying subsoils are designated as 'highly permeable' from GSI mapping so any changes in the river levels even for a 1 in 2 year event, which is equivalent to the mean annual event, will likely cause issues at any septic tanks and percolation areas in this location. A heavily vegetated river channel is likely to exacerbate this issue with increased water levels (~100mm) anticipated in the river channel adjacent to the Nestor property.

To demonstrate that this is likely the case, two cross sections have been drawn across the floodplain for the 1 in 2 year and 1 in 20 year flood events in the River Tolka. These are shown in *Figure 1* and *Figure 2* below. The results are not based on a heavily vegetated channel scenario, which would further increase the water levels by up to 100mm for the 1 in 2 year event adjacent to the Nestor property.

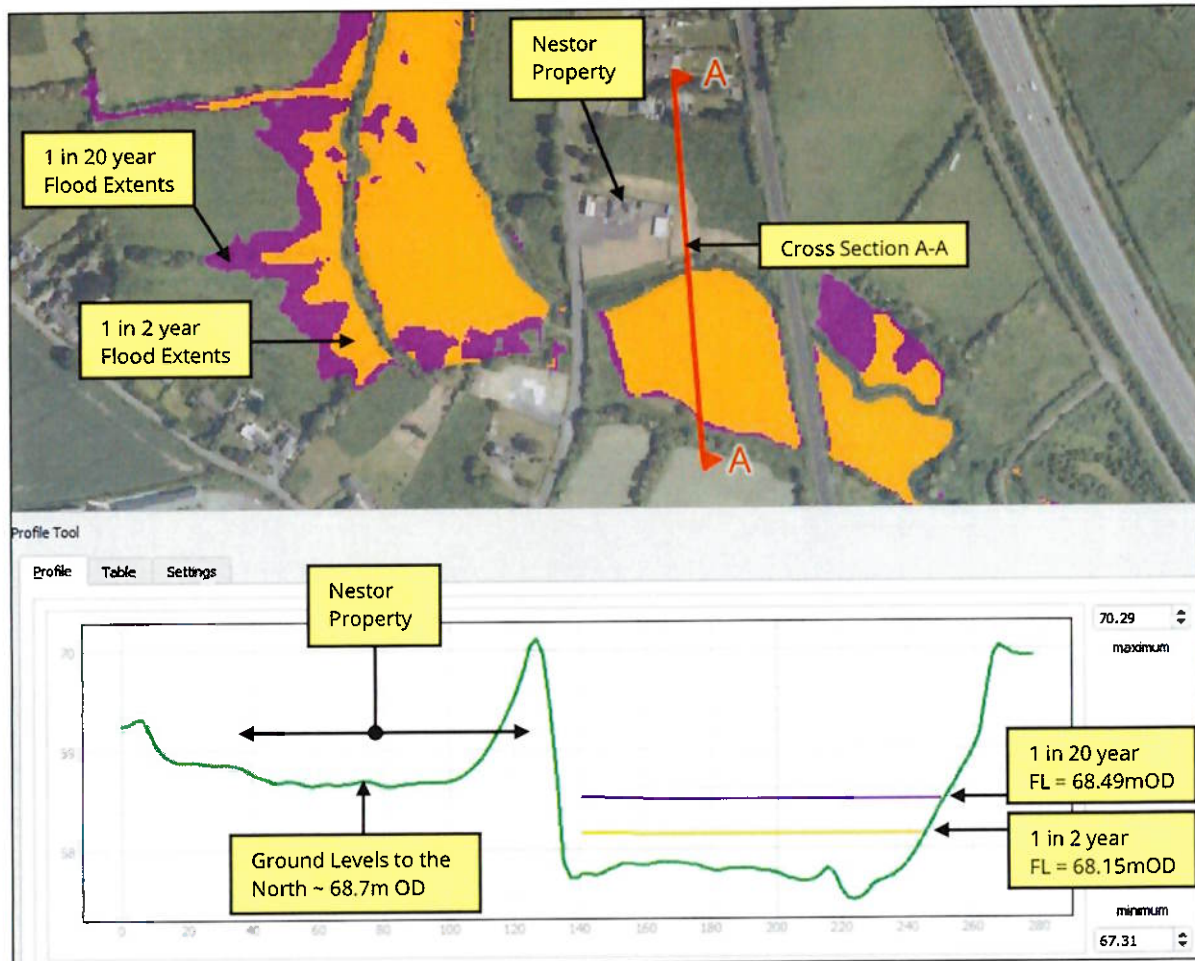


Figure 1 - Cross Section A-A: River Tolka with 1 in 2 year and 1 in 20 year Flood Levels

At Cross Section A-A above, which is in the location of the Nestor property, there is approximately 550mm between the 1 in 2 year water level and existing ground levels within the Nestor property. This would have ongoing implications for any septic tanks and percolation systems in the area, and would be worsened by a heavily vegetated river channel.

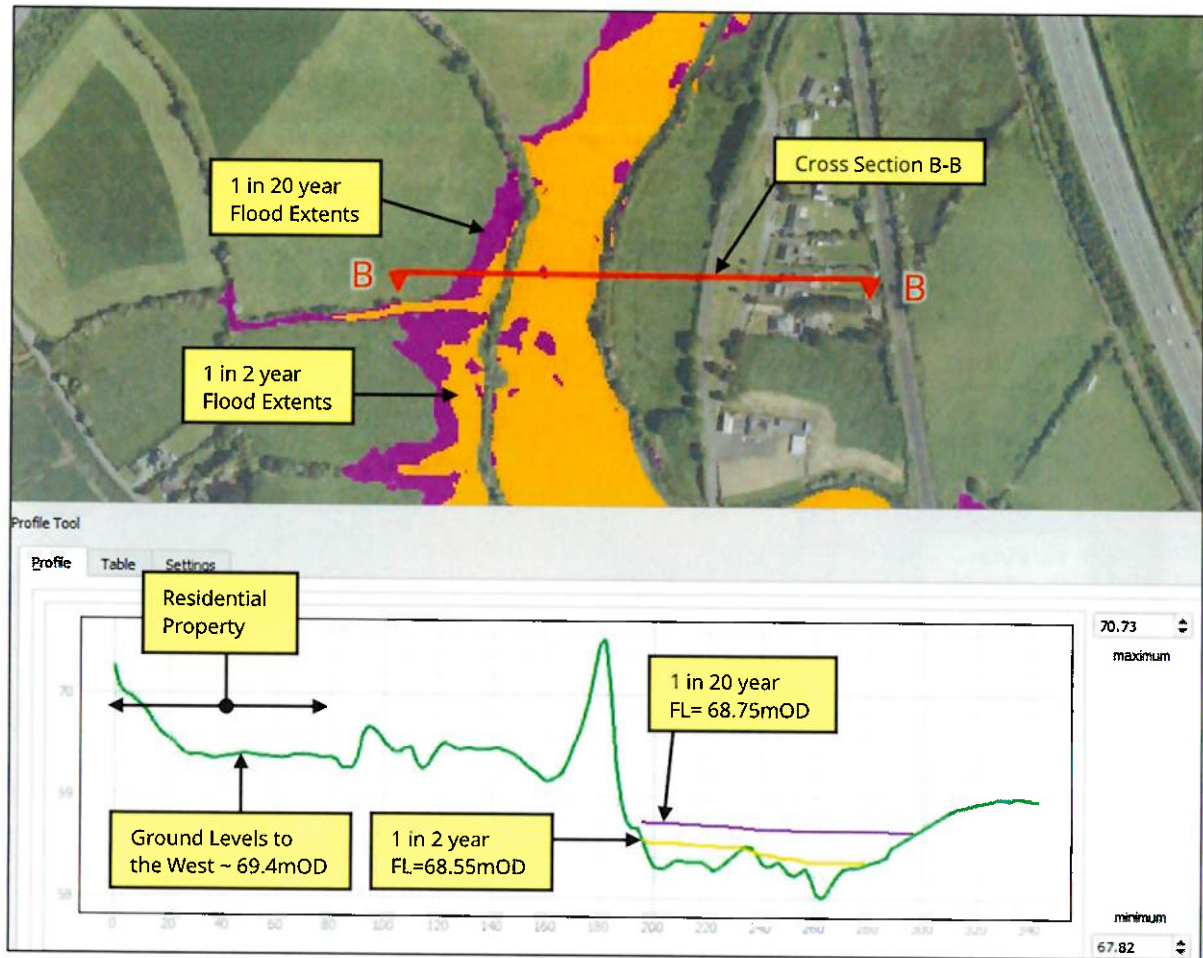


Figure 2 - Cross Section B-B: River Tolka with 1 in 2 year and 1 in 20 year Flood Levels

Similarly at Cross Section 2 (shown above in *Figure 2*) there is approximately 850mm between the 1 in 2 year water level and existing ground levels within the residential properties at this location.

Percolation areas are typically constructed less than 1m below existing ground level. As the subsoils in this area are deemed highly permeable, the water levels in the River Tolka are likely to closely match the surrounding water table level. Therefore, a high water level in the River Tolka would represent a high groundwater level within the vicinity of the Bennettstown Residents properties. The high ground water table in turn would impact the functionality of the percolation systems on an on-going and seasonal basis and would be worsened by a heavily vegetated river channel.

3. Summary & Conclusions

- An SSFRA was prepared by IE Consulting for the proposed Phase 1 LRD Application at Bennetstown in accordance with current best practice methodology.
- The SSFRA submitted demonstrates that the development does not increase flood risk to surrounding lands and specifically in relation to the Bennettstown Residents there is no increase in flood risk to these properties as a result of the development proposed.
- The Bennetstown area of Dunboyne has experienced flooding from the River Tolka, specifically in November 2002.
- Works have been undertaken since 2002 to increase the level of flood protection for the Bennettstown Residents and their properties.
- Flooding that occurred in October 2023 did not flood any properties. It is estimated that this event was between a 1 in 2 year and 1 in 10 year flood event.
- The Bennettstown Residents have on-going issues with their septic tanks and percolation areas becoming waterlogged.
- The subsoils in the Bennetstown area are highly permeable and therefore would be highly sensitive to changes in river levels.
- The 1 in 2 year water level in the River Tolka are 550-850mm below the ground levels in the residential properties in the Bennetstown area. Percolation areas are typically less than 1m below existing ground level therefore a high groundwater level would impact the functionality of the system on an on-going and seasonal basis.
- A heavily vegetated river channel would worsen the issues experienced in relation to septic tanks and percolation areas.



Meeting Notes

Project: 5205505

Subject: Dunboyne North - Road Infrastructure Discussion

Meeting place: Teams

Meeting no: 5205505MINUTES0007

Date and time: 15/06/2021 14:00

Minutes by: Stephen Wyse

Present: Nicholas Whyatt
Joe McGarvey
Kieran Boyle
Stephen Wyse

Representing: MCC
MCC
Atkins
Atkins

ITEM	DESCRIPTION AND ACTION	RESPONSIBLE
1.	Discussion regarding link from proposed development into Dunboyne via Old Navan Road – MCC agreed that this should not be a primary traffic route for traffic from the R157 but would serve the new residential areas and provide walking and cycling links.	Note
2.	MCC suggested that measures along the proposed road (R7 in Dunboyne Environs Transport Assessment) should be considered to make it less attractive to through traffic. MCC suggested active frontage, however Atkins stated that the open space provision to the north is required to maintain the existing ditch line while the southern side is designated as Warehouse/Logistics use. Atkins to consider other measures to achieve the desired outcome.	Atkins
3.	MCC stated that the proposed link through the Dunboyne Industrial Estate and new junction on the R157 (R8) should function as the primary route for traffic. A Part 8 for this section is intended to be progressed later this year. The form of this junction has not yet been definitively decided.	Note

Next meeting:

Distribution: All Attending

Date issued: 17 June 2021

File Ref: 5205505MINUTES0007

NOTE TO RECIPIENTS:

These meeting notes record Atkins understanding of the meeting and intended actions arising therefrom. Your agreement that the notes form a true record of the discussion will be assumed unless adverse comments are received in writing within five days of receipt.



ITEM	DESCRIPTION AND ACTION	RESPONSIBLE
4.	MCC accepted that they would need to develop the proposed cycle/footpath link along the Old Navan Road with Glenveagh/MOR providing the new link as far as the intersection with the existing road only. MCC to forward on details of previous plan for this cycle/pedestrian link.	MCC
5.	MCC suggested that it would be prudent to include the R8 proposal in the VISSIM modelling. Inclusion of the remaining Eastern Distributor Road (R9) and the proposed developments in this area (c. 1000 units) to be discussed further as more information becomes available.	Atkins
6.	MCC to revert with reasoning behind full dualling of R157, particularly between the two new signalised junctions where Atkins have provided 3 lanes allowing for reasonably long right turn lanes for both directions. MCC stated that their intention was to provide any additional lanes within the existing carriageway extent, i.e. without widening of the road or embankments	MCC
7.	MCC stated that agreement on the Dunboyne Environs Transport Assessment was obtained from various Stakeholders including TII & NTA. Road infrastructure proposals should be in line with those set out in the above report.	Note

