Inspector's Report

ABP-311183-21

Development	The demolition of a single-storey building in use as a medical/dental clinic and removal of carparking for 29 cars and the construction of two-storey building to accommodate a crèche (289sq.m) at ground floor level, and office space (114sq.m) at first floor level. Parking for 22 cars and 10 bicycles would be provided to the front of the building along with associated site works include landscaping and SuDS drainage.
Location	The Leinster Clinic, Dún Sion, Maynooth, Co. Kildare W23 FW77.
Planning Authority	Kildare County Council
Planning Authority Reg. Ref.	21814
Applicant(s)	Kerrie Leonard.
Type of Application	Planning Permission.
Planning Authority Decision	Refuse Permission.

Type of Appeal	First Party
Appellant(s)	Kerrie Leonard.
Observer(s)	Thomas J and Marie Murphy Brendan and Moira Baxter Maeve Farrington
Date of Site Inspection	14th July 2022.
Inspector	Elaine Sullivan

Contents

1.0 Site Location and Description

1.1. The site has an area of 0.267 hectares and is located on a short cul-de-sac off the R148/Kilcock Road on western side of Maynooth. It is approximately 100m to the west of the Maynooth University Campus and is positioned within a row of detached houses. The site is rectangular in shape and is currently occupied by The Leinster Clinic; a detached single storey building which originally appears to have been a house. The building is set back from the front boundary by c. 100m with a large area of hardstanding for vehicular circulation and car parking to the front, side and rear. Two grassed areas are in place on either side of the front driveway and, on the occasion of the site visit, they were overgrown and unkempt. The topography of the site is mainly flat with a gentle slope from north to south. The area to the front of the site also appears to be at a lower level to the adjacent R148.

1.2. To the north, west and east the site boundary comprises hedgerows with some trees and to the front of the site is a low-level wall with an ungated entrance. There are two detached houses between the site and the university campus to the east and, to the west there are another four detached houses along the sul-de-sac. To the north of the site are agricultural fields. A Mill Race stream and the Lyreen River are located to the south of the site and on the opposite side of the R148. The watercourses run from west to east and are approximately 22m and 60m respectively, from the front of the site.

2.0 Proposed Development

2.1. Planning permission is sought for the demolition of a single storey building of 490m2, which is currently in use as a medical/dental clinic and the construction of a two-storey building to accommodate a creche of 289m2 at ground floor level with associated play area and garden area to the rear, and an office space of 114m2 at first floor level. Access to both areas would be through a shared lobby to the front of the building.

2.2. The existing parking area to the rear of the building would be removed and a set-down area and parking for 22 cars and 12 bicycles would be provided to the front of the new building.

2.3. It is also proposed to decommission the existing septic tank and install a wastewater treatment system, (WWTS), comprising a mechanical aeration system and polishing filter with an area of 332m2 to the rear of the building and in the northern corner of the site. The works proposed would also include a surface water drainage system including a rainwater harvesting system, attenuation tank, SuDS drainage works and landscaping.

3.0 Planning Authority Decision

3.1. Decision

Planning permission was refused by the PA for the following reason,

1. Having regard to the high-water table and concentrated soakage and percolation areas, combined with the potential risk of flooding, it is considered that the proposed development could give rise to the contamination and pollution of the surface water system. The Planning Authority is not satisfied, on the basis of the documentation submitted, that the site would be suitable for the on-site disposal of wastewater generated by the proposed development. The proposed development would, therefore, be prejudicial to public health and would be contrary to the proper planning and sustainable development of the area.

3.2. Planning Authority Reports

3.2.1. Planning Reports

The decision of the PA was informed by the report of the Planning Officer dated the 23rd July 2021 which contains the following,

- The site is zoned objective 'E'. Within this zoning, childcare is permitted in principle and office use is open for consideration.

- The proposed office use would not conflict with the general objectives for the zoning objective and can be considered on its merits.
- The building design is contemporary in nature and its design is considered to be acceptable.
- Regarding the proposed wwts for the development, it is not clear how the soakage system combined with the treatment system percolation area will work with the high water table and associated pluvial flooding, which is to be expected.
- A refusal is recommended due to the high-water table, concentrated soakage and percolation areas combined with the risk of pluvial flooding which would be prejudicial to public health.

3.2.2. Other Technical Reports

- Water Services – Refusal recommended. A series of drains in vicinity to the site feed into the River Lyreen, which is prone to flooding. Due to these features the ground water level in the area is high and very near the surface when the water bodies are in flood. The site cannot therefore dispose of either surface water or the percolation area in an adequate manner. There is a danger that both will mix and overflow into adjoining drainage ditches which would result in the discharge of effluent to the River Lyreen. The roadway drainage is not designed to accommodate drainage run off from the site….any porous paving would need a minimum of 500mms granular fill below the porous paving, (500+100=600mms), and the water table would render this granular fill ineffective as it would be water logged.
- Transportation Department – Further information is recommended regarding the level of parking proposed for each use and the provision of a footpath within the site.
- Maynooth Municipal District – No objection to the development subject to conditions.
- Environment Section – The report of the Planning Officer notes that further information is required from the Environment Section. However, this report was not furnished with the appeal and is not on the public record.

3.3. Prescribed Bodies

Irish Water – No objection.

3.4. Third Party Observations

A number of third-party observations were received. The issues raised are summarised as follows;

- Increased in local traffic to and from the development,
- Will cause additional demand for parking in the area,
- The scale of the site is unsuitable for the development,
- Drainage issues on the site and the surrounding area,
- The site is prone to flooding and is unsuitable for an on-site wwts,
- It would result in pollution to nearby watercourses and to the nearby SAC.

4.0 Planning History

ABP-306537-20, (PA Ref. 191225) – Planning permission refused by the Board on the 30th day of July 2020, for demolition of the existing medical/dental clinic and the construction of a two-storey building containing student accommodation with 4 no. 6-bedroom student accommodation apartments, (24 bedspaces), with new WWTS and all associated site development works). The development was refused for two reasons as follows:

1. Having regard to the nature and design of the proposed development on a restricted site, it is considered that the proposed development, notwithstanding the zoning objective for the site in the Kildare County Development Plan 2017- 23 for Community and Education, would represent a substandard form of student accommodation, lacking in the range of ancillary support, amenity and leisure facilities associated with such developments and would be contrary to the Guidelines on Residential Accommodation for Third Level Students issued by the Department of Education and Science in 1999

and to Section 17.6 of the Kildare County Development Plan 2017-23. The proposed development, would, therefore, be contrary to the proper planning and sustainable development of the area.

2. Having regard to the high water table and concentrated soakage and percolation areas, combined with the potential risk of flooding, it is considered that the proposed development could give rise to the contamination and pollution of the surface water system. The Board is not satisfied, on the basis of the submissions made in connection with the planning application and appeal, that the site would be suitable for the on-site disposal of wastewater generated by the proposed development. The proposed development would, therefore, be prejudicial to public health and would be contrary to the proper planning and sustainable development of the area.

PA Ref. 191225 – Planning permission refused by the PA on the 24th day of September 2019 for the demolition of the existing medical/dental clinic and the construction of a two-storey building containing 4 no. six-bedroom student accommodation apartments etc. Planning permission was refused for 4 reasons as follows;

1. The development was contrary to Policy HP 6 of the Maynooth Local Area Plan 2013-2019 which seeks to *'restrict apartment developments generally to the University campus and town centre locations or suitably located sites adjoining public transport connections'*.
2. Having to regard to its height, scale and siting the development would seriously injure the residential and visual amenities of adjoining properties and be out of character with existing development,
3. The site is in an area at risk of flooding and, in the absence of a site-specific flood risk assessment, it had not been demonstrated the proposed development would not be at risk of flooding and,
4. It had not been demonstrated that the site is suitable for on-site disposal of wastewater

5.0 Policy Context

5.1. Development Plan

5.1.1. Kildare County Development Plan 2017-2023, (KCDP), is the operative development plan for the site.

5.1.2. Maynooth is identified as a 'Large Growth Town II' in the Settlement Hierarchy and Typology for County Kildare, (Table 2.2).

5.1.3. The following sections of the KCDP are relevant to the proposed development:

- Chapter 7 – Infrastructure
- Chapter 11 – Social, Community and Cultural Development.
- Chapter 17 – Development Management Guidelines

  Section 17.5 – Childcare facilities

  Table 17.9 – Car Parking Standards:

  - Creche – 0.5 per staff members, plus 1 per 4 children
  - Office Town Centre – 1 per 30m2 gross floor area.

  Table 17.10 – Cycle Parking Standards

  - Creche – 1 space per 5 staff, plus 1 space per 10 children.
  - Office – 1 space per 50m2 gross floor area.

  Section 17.8 – Surface Water / Flooding - All new developments shall be designed and constructed to meet the following minimum flood design standards - For urban areas – the 1% AEP storm event + a 20% allowance for climate change. (Annual Exceedance Probability (AEP) represents the probability that a given rainfall total accumulated over a given duration will be exceeded in any one year).

5.2. Maynooth Local Area Plan 2013-2019

5.2.1. The site is in an area zoned 'Objective E; Community and Educational'. The zoning objective is to protect and provide for the development of community and educational facilities.

5.2.2. The zoning objective provides for community and educational facilities including schools, the University, St. Patrick's College, religious orders, health care, childcare, meeting halls and other community facilities. In relation to the university, this zoning is intended to facilitate its existing and evolving requirements including the university campus, associated student accommodation, recreational and cultural facilities and tourism and commercial development associated with the university.

5.2.3. Within the 'E' land use zoning, childcare is listed as 'permitted in principle' and office use is 'open for consideration'. Where uses are 'open for consideration' the Council must be satisfied that the proposed use would not conflict with the general objectives for the zone and the permitted or existing uses.

5.2.4. The site is within the boundary on Map Ref. 2 (Strategic Flood Risk Assessment Map) which requires development proposals to be the subject of a site-specific Flood Risk assessment appropriate to the type and scale of the development being proposed.

5.3. National Guidelines

- The Planning System and Flood Risk Management Guidelines 2009.
- EPA Code of Practice, Domestic Waste Water Treatment Systems (Population Equivalent ≤10), 2021.
- EPA manual, Wastewater Treatment Systems for Small Communities, Leisure Centres and Hotels, (1999).

5.4. Natural Heritage Designations

No designations apply to the subject site.

5.5. EIA Screening

Having regard to the nature and scale of the proposed development and the nature of the receiving environment, on the outskirts of an urban location, there is no real likelihood of significant effects on the environment arising from the proposed development. The need for environmental impact assessment can, therefore, be

excluded at preliminary examination stage, and a screening determination is not required.

6.0 The Appeal

6.1. Grounds of Appeal

The grounds of appeal relate to the reason for refusal and include the following,

- There is no issue with the level of the groundwater table on the site. It has been proven that there is a 1.64m depth from ground surface to the water table where the proposed treatment and polishing filter will be installed. The minimum depth of unsaturated permeable subsoil required below the base of the polishing filter for a secondary treatment system, (i.e. minimum depth to unsaturated subsoil to bedrock and water table), is 0.9m. As the water table has been proven to be at 1.64m, it has been recommended that the soil filter bed be placed at 0.7m below ground level, and the treated effluent distributed into this gravel with 0.94m depth of unsaturated subsoil beneath the gravel itself, the 0.9m minimum depth can be met.
- The design of the system has been formulated on a bespoke basis to address the site characteristics. As a result, the proposed system will have no perceivable effect on groundwater in the subsurface aquifer.
- The proposed construction of the soil polishing filter accords with the EPA CoP, (Section 8.4). As the depth to water table will exceed the requirements of the EPA CoP, pollution will not occur as a result of the proposal.
- In terms of depth to water table, it a clear and incontrovertible fact that the proposal for the site complies with the requirements of the EPA CoP versions 2009 and 2021.
- Precedence has been set for a wastewater treatment and disposal system on a site 60m to the west under PA Ref. 14/761, where the ground level is lower and the water table is at a depth of 0.9m from the surface.

6.2. Planning Authority Response

- A response was received from the PA on the 21st September 2021. The PA have no further comment to make.

6.3. Observations

6.3.1. A number of observations have been received from the following:

- Brendan & Moira Baxter
- Thomas J. & Marie Murphy
- Maeve Farrington

The issues raised in the observations are similar in nature and can be summarised as follows:

- Scale of Development-
- The proposed height, scale and siting of the development is out of character and would be injurious to the residential and visual amenities of the adjoining properties.
- The development of office accommodation for 24 staff is not in accordance with the 'Community and Educational' zoning objective.
- The traffic and vehicular movements from the proposed development would exacerbate the ongoing parking issues associated with the university on the narrow access road. Kildare County Council have tried a number of initiatives to address this issue but to no avail.
- The university is undergoing a major expansion plan which will put more pressure on the surrounding areas for parking.
- The intensity of development is unsuitable for the site. The number of people using the site will increase from 15 to 89 people daily. This will result in c. 50 vehicles entering the site twice daily – on a cul-de-sac / unsuitable road.
- Flooding / Drainage -

- The Maynooth LAP 2013-2019 – Strategic Flood Risk Map indicates that the site/ area is at risk of flooding.
- A high water table and pluvial flooding occurs at the site from the middle of October to February annually when flood waters from the 65 acres of agricultural land to the rear of the clinic flows under the northern perimeter of the site and onto the cul-de-sac. This flooding is also evident in the rear gardens of the adjoining houses. Flood waters were also seen flowing through the site to the cul-de-sac during Storm Ciara in 2020.
- The 65 acres of agricultural land is drained by an open drainage stream which is fed by a T-shaped drain which traverses the land. This drain flows between the first and second house to the immediate west of the subject site and through a water escape hatch in the front wall of the house. It flows under the cul-de-sac and Kilcock Road before feeding into the Mill Race River, which merges with the Lyreen River on the southern side of the Manor Mills Shopping Centre.
- The Lyreen River flows into the Rye River to the north-east of the town and flows through a designated SAC in the Rye Water Valley at Carton Demense. The risk of effluent entering the river would increase the risk to the SAC and would be prejudicial to public health.
- Flooding has occurred on the cul-de-sac to the front of the site, with the most severe pluvial flooding occurring in October 2011 when the entire cul-de-sac was under water with some gardens also under water. Flooding will only intensify through global warming.
- Storm drains are in place on the cul-de-sac but they become overwhelmed through a combination of pluvial flooding and silt and debris build up and have to be cleared regularly by the PA and by private companies.
- It is suggested that given the existing hydrological conditions and the history of flooding that the site and the cul-de-sac should be categorised as Flood Zone B.

- The proposed development site has not been subject to an appropriate Flood Risk Assessment, and pluvial flooding and surface water runoff from the proposed development cannot be treated on site through SuDS.
- Ground water levels for the site characterisation test were taken in April, during the dry season when the water table was at its lowest.
- Previous planning history as set out in ABP-306537-20 noted that the depth of the water in the trial hole ranged from 1.25m on the site characterisation form to 0.9m during the PA's inspection.
- The site is unsuitable for the onsite disposal of effluent given the high water table, concentrated soakage and percolation areas, the lack of a mains sewerage outlet combined with the potential risk of pluvial flooding.
- Planning history for the site consistently finds the site conditions unsuitable for an on-site wwts.
- Planning precedence -
- The planning precedent referenced under PA Ref. 14/761 is for a domestic extension with new wwts for a maximum occupancy of 5 people. This cannot be compared to the level of development proposed. The documentation submitted with this application shows that trial holes excavated in July 2014 showed a depth of 0.97m from ground surface to water table and trial homes excavated in November 2014 showed the depth of the water in the trail hole was approx. 0.4m below ground level.
- The site noted in the precedent is partially drained by a stream on the eastern boundary, whereas the subject site for the Leinster Clinic is landlocked with the only surface water outlet through the front of the site and onto the adjoining roadway.

6.4. Further Responses

No further responses were received.

7.0 **Assessment**

7.1. Having examined the application details and all other documentation on file, inspected the site and having regard to relevant local/regional/national policies and guidance, I consider that the main issues in this appeal are as follows:

- Principle of Development
- Design and Layout
- Flood Risk
- Wastewater Treatment
- Appropriate Assessment

7.2. **Principle of Development**

7.2.1. The site is in an area zoned 'Objective E; Community and Educational'. The zoning objective is to protect and provide for the development of community and educational facilities. Within the 'E' land use zoning, childcare is listed as 'permitted in principle' and office use is 'open for consideration'. Where uses are 'open for consideration' the Council must be satisfied that the proposed use would not conflict with the general objectives for the zone and the permitted or existing uses. The Maynooth LAP states that zoning objective E provides for, *'community and educational facilities including schools, the University, St. Patrick's College, religious orders, health care, childcare, meeting halls and other community facilities. In relation to the university, this zoning is intended to facilitate its existing and evolving requirements including the university campus, associated student accommodation, recreational and cultural facilities and tourism and commercial development associated with the university'*.

7.2.2. The subject site is located approximately 100m to the east of the University Campus, within a row of detached residential houses. Within the prevailing residential context an office development could be considered to be an incompatible use. However, the office element of the proposal is relatively small in scale and would not be the primary use on the site. The 'Community and Educational' zoning objective and the proximity of the site to the university campus is also noted. Within this context, I am

satisfied that the proposal for an office development of 114m2 can be considered subject to an assessment of the standard planning considerations.

7.3. Design and Layout

7.3.1. I am satisfied that the design and layout of the proposal would be acceptable within the context of the site. The new building would be constructed in a similar position to the existing building but would have a smaller footprint. It would retain the front building line formed by the adjoining houses on either side and would be commensurate in height to the neighbouring houses. The building would be contemporary style with a blue/black slate roof, which cement render and aluclad windows. From the front, it would have the appearance of a single storey building with a pitched roof and tall windows with a vertical emphasis. The first-floor element would be positioned to the front of the building with windows at this level set into the rear roof plane. A single storey element would extend northward on either side of the building and wrap around a central courtyard / play area for the creche. The scale, height and external finishes would be acceptable within the context of the site and would not have a negative visual impact on the adjoining development.

7.3.2. I would have some concern regarding the visual impact of the level of parking and hard landscaping proposed to the front of the site, which would be increased by the current proposal. All 29 car parking spaces would be provided to the front, as well as a set down area to the front of the building. This would remove a large section of the grassed area on the right hand side of the site. The existing site boundaries to the east and west currently comprise tall hedges and trees which are to be retained as part of the landscaping plan. On the occasion of the site visit I also noted that the hedges provided efficient screening between the sites and as a result there was no intervisibility. The retention of the hedges would help to soften the visual impact of the car park and hard landscaping and would screen it from the residential development on either side.

7.3.3. Concerns were raised by third parties regarding the potential increase in traffic and parking demand in the area as a result of the development. Given the nature of the creche facility, there would be an increase in traffic movements to and from the site during the morning and evening. Operating hours for the creche have not been

stated in the application. However, it is not unusual for childcare facilities of this nature to open early and close later in the evening. This would allow for staggered drop off times and traffic movements. Parking spaces for 29 cars would be provided within the development. This would appear to be in excess of the maximum standards set out in Table 17.9 of the KCDP, which would yield 22 spaces, (creche = 0.5 per staff members, plus 1 per 4 children; office = 1 per 30m2 gross floor area in town centres / 1 per 20m2 in an office park). The application does not include any figures for anticipated staff numbers for the creche so the figure is estimated from the planning drawings, which show a capacity for 24 people in the office space, and from the Site Character Assessment Form which gives a capacity PE of 28 persons. I do not consider this to be a reason for refusal and should the Board be minded to grant permission for the development, the parking provision could be clarified through a planning condition. Overall, I am satisfied that the proposal will not result in excessive traffic movements to and from the site given the nature and scale of the proposal.

7.4. Flood Risk

7.4.1. The subject site is located within an area that requires a flood risk assessment, (Maynooth Local Area Plan 2013-2019). The closest watercourses to the site include the Lyreen River, (c. 60m from the site), and a Mill Race from the Lyreen, (c. 22m from the site). Both of the watercourses are located to the south of the site and flow from west to east. Third party submissions make reference to previous flood events that have taken place in the area as a result of fluvial and pluvial flooding. The Lyreen and Meadowbrook Flood Relief scheme was initiated in 2001 following a fluvial flood event in 2000 which is documented on the OPW website www.floodinfo.ie. The area to the front of the site and the agricultural lands to the north and west were included in this flood and are shown in photographs on the website, (Plate No. 4 of the Lyreen River Flood Relief Scheme, Preliminary Report Review, 2001). No recent flood events are documented in proximity to the site.

7.4.2. A Site Specific Flood Risk Assessment, (SSFRA), was submitted with the application. The OPW flood maps identify that a 10% Fluvial Annual Exceedance Probability, (AEP), high-probability event, slightly encroaches the southern boundary

of the site, adjacent to the public road. Therefore, the SSFRA categorised the site as Flood Zone A and has assessed it as such. Table 3.1 of the Planning and Flood Risk Management Guidelines, 2009, identifies developments which may be vulnerable to flood risk. A creche and a water and sewerage treatment facility are listed as 'highly vulnerable' development and an office development is categorised as a 'less vulnerable' development. A justification test is required for any 'vulnerable' development to be located within a Flood Zone A.

7.4.3. The source-pathway-receptor model used in the SSFRA identified a fluvial flood risk from the watercourses and the Lyreen River to the south of the site. Potential pluvial flood risk within the development site is identified with the potential to arise from future drainage networks serving the development due to overland flow from adjacent roads. There is also a potential for groundwater flood risk within the development during a prolonged rainfall event. The SSFRA states that groundwater has the potential to cause local flooding unless the surface water drainage system is designed to account for the high water table. Table 2 of the assessment states that the site yields a high water table with a depth of 1.5m below ground level, as per the Site Characterisation Form. However, the Site Characterisation Form states that water table was encountered at a depth of 1.64m and the discrepancy is not explained.

7.4.4. Section 3.2 of the SSFRA states that *'local shallow flooding is recorded on the cul-de-sac access road serving the site, it is noted that the level of the road is above the 1 in 100 year flood event and therefore it is evident this flooding is due to the topography of the road and the poor surface water drainage network'*. The SSFRA concludes that this shallow, localised flooding would not have a negative impact on the proposed development.

7.4.5. The flood risk for each of the potential events is assessed in Section 5.2 of the SSFRA. With regard to fluvial flooding the CFRAMS maps were consulted and showed that the 10% fluvial Annual Exceedance Probability, (AEP) event slightly encroaches the southern boundary of the site. An extract of the map is shown In Figure 5 of the SSFRA but the wrong site is outlined and the red line has been drawn around the adjoining site to the west. This may have been a drafting error and given the characteristics of both sites, is unlikely to make a material difference in the results of the assessment. In order to mitigate against potential fluvial flood events,

the finished floor level, (FFL), of the new building would be 58.65m AOD. This would be 1.54m above the level for a 1 in 100-year flood event, (57.11m AOD). The FFL would also be above the level of a 1 in 1000 year flood event, estimated to be 57.22m.

7.4.6. The risk from pluvial flooding is identified as coming from internal and external pipe networks and overland flows from short duration storms and blockages with the surface water management system. Third party submissions have noted that the subject site, and the adjoining sites, are prone to flooding during the winter months as a result of surface water runoff from the agricultural lands to the north and west. In an attempt to address this issue a drainage ditch has been installed between two houses to the west of the site and an 'escape hatch' for the surface waters has been built into the boundary wall of this property. These localised flood events are not referenced on the SSFRA.

7.4.7. The surface water management system for the site includes a combination of a soakaway system and a concrete attenuation tank. Due to the 10% fluvial AEP Flood Event encroaching the southern boundary of the site, the soakaway system would be located in the northern section of the site and the concrete attenuation facility be offset from the southern boundary, underneath the driveway. It is intended to address pluvial flooding from the internal and external pipe networks through the surface water storage area, which is designed to accommodate runoff from a 1% AEP, (1 in 100 year), flood event. The invert levels for the attenuation area, (57.14m AOD), would be set above the level for a 1% AEP flood event level, (which is estimated to be 57.11mAOD). A FFL of 58.65m AOD is proposed for the building, which allows for a minimum of 500mm freeboard allowance between the FFL and the top of the water level of the proposed attenuation tank, (57.64m). A 20% allowance for climate change has been built into the storage system. The FFL would also mitigate against any surcharges from external pipe networks. Adjacent road levels are generally set at 300m to 500m lower than the FFL. Overland flows from short duration storms and blockages in the surface water management system, would be directed away from buildings and towards open spaces and watercourses through the use of levels on the site, landscaping and dropped kerbs. The FFL's are designed to be above surcharge level for any manhole in danger of flooding.

7.4.8. Regarding the flood risk from groundwater, the SSFRA noted that during periods of prolonged rainfall there is a possibility that the groundwater level would rise and could seep to the surface. The SSFRA states that there is no known history of ground water / springs seeping to the surface and the consequence of such an occurrence would be ground water seeping to the surface, around the landscaping and building. Underground services may also be inundated from high water tables. The flood risk from groundwater flooding would be managed through the provision of adequate FFL's and the surface water drainage system which has been designed to direct any water not dealt with through attenuation, towards the southern section of the site and onto the public road.

7.4.9. As noted above, third party submissions outline the localised issues with surface water drainage during the winter months. This would also impact on ground water levels and would cause them to fluctuate during this period. Although the SSFRA notes that underground services may be inundated from rising ground water levels, no reference is made to the proposed wwts in the northern section of the site and if any surges in ground water or surface water would result in any risk to this system. It is noted that the surface water management system has been designed to direct water away from the building and towards the south section of the site to the public roads and the nearby watercourses. Given the local knowledge regarding the surface water drainage from the lands to the north during the winter months, this raises a concern regarding potential contamination of surface waters from the proposed wwts to the rear of the site which has not been addressed.

7.4.10. With regard to the Justification Test for the development the SSFRA follows the format laid out in Box 5.1 of the Flood Risk Management Guidelines and states the following:

- The subject lands are zoned for development and have zoning objective 'E – Community and Education'
- The Site Specific Floor Risk Assessment has found that the site currently discharges surface water unrestricted. The implementation of a surface water drainage system with a soakaway will decrease surface water runoff from the site.

- The proposed surface water drainage system will help to regularise surface water runoff which will help to minimise the flood risk to people, property, the economy and the environment as far as is reasonably possible.
- Measures to ensure that residual risks to the area and/or development have been included in the proposal. The risk of pluvial flooding will be reduced by the adequate design and sizing of the surface water drainage system which will reduce the risk of surcharging of the proposed on-site drainage system and will reduce surface water runoff from the site. Due to the clearance between the finished floor levels and surrounding roads the residual risk from flooding of the existing surface network is considered to be low. Risk from overland flooding from the subject site is minimised by providing adequate finished floor levels above the adjacent road network. Emergency access will be maintained.
- The SSFRA states that the development satisfies all criteria with regard to achieving wider planning objectives.

7.4.11. I am satisfied that risk of flooding would not be increased as a result of the development. However, it acknowledged that the site is prone to surface water flooding. Although the SSFRA identified a potential risk from pluvial flooding and a rise in groundwater levels, no reference was made to the proposed wwts and the large percolation area to the rear of the site, and no assessment was made as to the any potential risk to this area from rising groundwater or pluvial flooding.

7.4.12. Therefore, I am not satisfied that it has been adequately demonstrated that the proposed wastewater treatment system and percolation area would not be affected by the potential pluvial flood risk and fluctuating ground water levels which are known to occur in the immediate vicinity.

7.5. **Wastewater Treatment**

7.5.1. The sole reason for refusal relates to the suitability of the site for an on-site wastewater treatment system, in consideration of the high water table and concentrated soakage and percolation areas, and the combined risk of flooding. This area of Maynooth is not served by a public foul water system and the proposed

development includes the replacement of the existing septic tank with a new wwts which would comprise a mechanical aeration system and polishing filter of 332m2.

7.5.2. A Site Characterisation Form from the *EPA Code of Practice, Wastewater Treatment and Disposal Systems Serving Single Houses (EPA CoP), 2009* was prepared and submitted with the application. The form states that the maximum number of residents on the site would be 22 and that the Capacity Population Equivalent, (PE), for the Packaged Treatment System would be 28. This requires some clarification. Drawings submitted with the application show that the office layout that is capable of accommodating 24 people, which is more than the initial 22 residents, and, if the PE capacity of the packaged treatment system is 28, (as stated in Section 6 of the form), this would seem to omit all of the children to be accommodated in the creche.

7.5.3. The EPA CoP 2009 relates to the assessment of site conditions for wastewater systems for single houses with a PE less than or equal to 10. For dwellings with greater than 10 people, (i.e. guest houses or cluster developments), the relevant guidance is contained in the EPA manual, *Wastewater Treatment Systems for Small Communities, Leisure Centres and Hotels, (1999).* The Engineering Report submitted with the application states that the foul sewers were designed in accordance with the EPA *'Wastewater Treatment Manual; Treatment Systems for Small Communities, Business, Leisure Centres and Hotels'*, but no further reference is made to this document.

7.5.4. The site is located within a locally important, (LI), aquifer of moderate vulnerability. Groundwater was encountered at a depth of 1.64 metres and bedrock was not encountered in the 2.1 metres deep trial hole, which was excavated on the 12th April 2021. The response matrix as per the Code of Practice indicates that the site falls within the R1 response category where an on-site system is acceptable subject to normal good practice. However, the Site Characterisation Form states that past experience in the area noted that *'soils in the area are generally poorly drained with runoff dominating over infiltration'*. Trial holes were excavated in the northern section of the site and along the western boundary. Results showed that the site is not suitable for a conventional septic tank.

7.5.5. The T-test returned a result of 32.64 and the P-tests returned a result of 25.97. The P-test result indicates the site is suitable for a secondary treatment system with

polishing filter at ground surface or overground. The form states that separation distances as per Table 6.1 (Minimum Separation Distances in Metres) are achieved. However, the distances referred to are taken from EPA CoP 2009, which relates to on-site wastewater systems used to treat and dispose of domestic wastewater from single houses with a PE less than or equal to 10. The relevant EPA guidance for the proposed development is contained in the 'Wastewater Treatment Manual; Treatment Systems for Small Communities, Business, Leisure Centres and Hotels' published by the EPA. Table 4 of this document sets out the minimum distances that should be provided between a wwts and any other development, and states that the minimum separation distances for a system size with a P.E. of 10-40 is 28m. The proposed polishing filter would be c.19.5m from the house to the east and c. 17.5m from the house to the west and would therefore not achieve the required separation distance.

7.5.6. The information submitted in the first party appeal states that there is no issue with the groundwater table on the site, and that the water table is 1.64m below the existing ground level in the locality of the proposed soil polishing filter. However, no reference is made to the fluctuation of ground water levels that have been documented on the site. Planning history for the site is available on the public record and demonstrates that ground water levels on the site have fluctuated by up to 0.74m during different trial hole tests.

7.5.7. The site characterisation form submitted with ABP-306537-21 / PA Ref. 19/1225 showed that trial holes excavated on the 28th October 2019 encountered groundwater at a depth of 1.25m. These trial holes were investigated by the PA on the 2nd December 2019 and the groundwater level was found to be 0.9m. Trial holes excavated on the 28th June 2019 for a planning application submitted under PA Ref. 19/864, encountered groundwater at 1.6m below ground level. This would represent a variance of 0.74m between the highest, (0.9m), and lowest, (1.64m), ground water levels. It is also worth noting that the higher levels occurred in the winter months of October and December while the lower levels were measured in April and June.

7.5.8. Trial holes excavated for the historic planning applications were excavated in the green area towards the middle of the site and the trial holes for the subject application were excavated to the rear of the building along the north-western boundary of the site. Based on drawings submitted with the application the area to

the north of the site is c. 0.8m higher than the area towards the centre of the site so the results are not directly comparable. Notwithstanding this, the results of three separate investigations clearly demonstrate that the ground water levels on the site can fluctuate by up to 0.74m.

7.5.9. The soil polishing filter would comprise 400mm depth of pea gravel installed 0.7m below the current ground level on the site. This will be capped with 300mm topsoil. The appeal states that the difference between the invert level of the polishing filter, (0.7m) and the level of the groundwater, (1.64m), is in excess of the 0.9m minimum depth of unsaturated subsoil required beneath the gravel as per Figure 8.3 of the EPA CoP 2021. However, no reference is made to the fluctuations in groundwater levels that have been proven to occur on the site. The implications on the wwts of a variance in ground water levels of up to 0.74m is not considered in the appeal documentation or in the site characterisation assessment.

7.5.10. Based on the information submitted the separation distances required in Table 4 of the EPA 'Wastewater Treatment Manual; Treatment Systems for Small Communities, Business, Leisure Centres and Hotels', cannot be met. The information submitted does not demonstrate how the potential changes to the ground water level on the site has been considered in the overall design of the system. Therefore, I do not consider that the Board can be confident that the site is suitable for the on-site disposal of wastewater generated by the proposed development by virtue of the high water table, the percolation values and the potential for pluvial flooding which could result in surface water contamination.

7.6. Appropriate Assessment

7.6.1. A Stage 1 Screening report does not accompany the application. In accordance with obligations under the Habitats Directives and implementing legislation, to take into consideration the possible effects a project may have, either on its own or in combination with other plans and projects, on a Natura 2000 site; there is a requirement on the Board, as the competent authority in this case, to consider the possible nature conservation implications of the proposed development on the Natura 2000 network, before making a decision, by carrying out appropriate assessment. The first stage of assessment is screening.

7.6.2. The proposed development is for the demolition of existing single storey building in use as a medical centre and the construction of a creche with office use at first floor level. The existing septic tank would be replaced with an on-site wastewater treatment system along with surface water management system.

7.6.3. The project is not directly connected with or necessary to the management of a European Site and therefore it needs to be determined if the development is likely to have significant effects on a European site(s). The proposed development is examined in relation to any possible interaction with European sites designated Special Conservation Areas (SAC) and Special Protection Areas (SPA) to assess whether it may give rise to significant effects on any European Site in view of the conservation objectives of those sites.

7.6.4. The closest European site is the Rye Water Valley/Carton SAC, (Site Code – 001398), which is located approximately 2.5k to the north-east of the site. It is located downstream from the site and its qualifying interests are petrifying spring with tufa formation and two types of snail. There is no direct hydrological link between the subject site and the SAC. An indirect pathway exists through the surface water sewers which are located along the cul-de-sac and discharge to the Mill Race, which in turn discharges to the Lyreen River and then to the SAC via the Rye Water River.

7.6.5. Whilst an indirect hydrological connection existing thought surface water runoff, I consider that the distance between the sites would be sufficient to prevent any significant impact on the SAC. Hydrologically, the distance from the site to the SAC boundary is approximately 2.5km through the centre of Maynooth to the boundary of Carton Estate via the surface water drainage system, the Mill Race, the Lyreen River and the Rye Water River. In the event of a failure of the wastewater treatment system and a flooding issue that would give rise to the pollution of surface waters, I consider that, while this would clearly be a public health issue in the surrounding area, pollutants would be diluted to negligible concentrations by the point of entry to the SAC. In conclusion, I do not consider that the proposed development would be likely to have any significant impact on any Natura 2000 site or its qualifying interests.

7.6.6. I have reviewed the qualifying interests and conservation objectives of the nearest European sites and, having regard to the nature and scale of the proposed development and the separation distance to the nearest European site, no Appropriate Assessment issues arise. It is considered that the proposed development would not be likely to have a significant effect individually or in combination with other plans or projects on a European site.

8.0 **Recommendation**

8.1. I recommend that planning permission be refused for the development.

9.0 **Reasons and Considerations**

1. Having regard to the high water table and concentrated soakage and percolation areas, combined with the potential risk of flooding, it is considered that the proposed development could give rise to the contamination and pollution of the surface water system. The Board is not satisfied, on the basis of the submissions made in connection with the planning application and the appeal, that the site would be suitable for the on-site disposal of wastewater generated by the proposed development. The proposed development would, therefore, be prejudicial to public health and would be contrary to the proper planning and sustainable development of the area.

Elaine Sullivan
Planning Inspector

18th July 2022