



An
Bord
Pleanála

Inspector's Report ABP-306725-20.

Development

River Poddle Flood Alleviation Scheme.

Location

From the upper reaches of the river in Tymon North, Tallaght to Merchant's Quay Dublin. In the townlands of Tymon North, Limekilnfarm, Whitehall, Perrystown, Roebuck, Templeogue, Crumlin and Kimmage in the administrative area of South Dublin County Council and Perrystown, Kimmage, Tonguefield, Argus, Haroldscross West, Haroldscross and Merchant's Quay in the administrative area of Dublin City Council.

Applicant

South Dublin County Council and Dublin City Council.

Type of Application

Local Authority Non-Road - Application for approval under Section 175 and 177AE of the Planning & Development Act 2000, as amended.

Observers

1. Alan Massey for Mount Jerome Cemetery

2. Caroline and Brian Keohane
3. College and Wainsfort Residents Association
4. Cormac McMullan
5. Deirdre Fagan
6. Irish Wildlife Trust
7. Jane McKeivitt
8. Margaret Docherty
9. Mary Dunne
10. Mary O'Hagan and James Corbett
11. Michael Dempsey and Siobhan O'Connor
12. Mick Dougan
13. Orla Daly and Victor Karmanski
14. Orlette McGrath Massey
15. Our Lady's Hospice and Care Services
16. Patrick Costello T.D. and Others
17. Peter Sweetman and Associates for Wild Ireland Defence
18. Recorders Residents Association
19. Residents of Wainsfort Drive.
20. Roisin McAleer and Laure Duez
21. Cllr Tara Deacy
22. Tom O Meara
23. Vincent Cahill
24. Violet Dempsey

Prescribed Bodies

1. Department of Culture, Heritage and the Gaeltacht.
2. Transport Infrastructure Ireland.
3. An Taisce

Dates of Site Inspection

26th April 2020, 30th March 2021 and 11th August 2022

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1.0 Overview and Procedures

1.1. Overview

- 1.1.1. This is an application to the Board for approval for the Poddle Flood Alleviation Scheme (PFAS). It is being advanced by both South Dublin County Council and Dublin City Council.
- 1.1.2. The 10 km long river Poddle rises to the north of Tallaght village, flows in a north-easterly direction and discharges to the Liffey at Wellington Quay. The most relevant area in terms of the works proposed is a 6 km section of the Poddle between Timon Park (west of the M50) and Harold's Cross.
- 1.1.3. The purpose of the scheme is, primarily, to provide protection against river flooding in a 100-year flood event. The scheme design incorporates a mix of flood protection, flood storage and flood prevention measures.

1.2. Procedures

- 1.2.1. The application pursuant to Section 175 and 177AE is accompanied by a Natura Impact Statement (NIS) and an Environmental Impact Assessment Report (EIAR).
- 1.2.2. The application was received by the Board on 21 February 2020. Valid observations were received from the persons / groups listed on the cover of this report.
- 1.2.3. The Board issued a request for further information on 17 July 2020. This related to the scheme design, environmental impact assessment (EIA) and appropriate assessment (AA). The applicant was also invited to respond to observations.
- 1.2.4. The applicant's response was received on 19 October 2020. The Board considered that the information was significant and requested revised public notices.
- 1.2.5. Copies of public notices were received on 19 November. These notices provided for submissions or observations to be made to the Board up to 7 January 2021.
- 1.2.6. Further submissions were received from observers, most of whom had previously made submissions.

- 1.2.7. On 13 January 2021 the Board invited the applicant to respond to the further submissions. The applicant was also notified of the submissions of TII and An Taisce, which had not been previously forwarded.
- 1.2.8. The applicant's further information response was received on 5 February 2021.
- 1.2.9. On 15 January a draft judgement issued in a legal case commonly referred to as the Gorumna case. This related to the Board's powers under the Water Framework Directive (WFD) in evaluating cases where the water body status is 'unassigned'.
- 1.2.10. The Board wrote to the EPA on 3 December 2021 requesting that information be provided relating to the status of the Poddle River, which was 'unassigned'. On 23 February 2022 the EPA stated that the Poddle had been assigned a 'poor' status.
- 1.2.11. On 8 March the Board requested that the applicant provide an assessment of the impacts of the proposed development for the status of the Poddle under the WFD.
- 1.2.12. The applicant's response was received on 29 April 2022. The Board deemed this was significant further information and requested that revised notices be published. Two further submissions were received.

2.0 Site Location and Description

- 2.1. The River Poddle is located in the southwest of Dublin and is stated to be 11 km in length with a catchment area of approximately 16.4 km². The application relates to a site of stated area of 12 hectares.
- 2.2. The Poddle rises in Cookstown at a location north of Tallaght village near the Institute of Technology. In its upper catchment it flows initially eastward through Tymon North before taking a course to the north-west through Tymon Park and then passes under the M50 at Greenhills. The route again takes a generally easterly direction until it crosses the R112 from which location it continues along a north easterly course through Kimmage and on to Haroldscross. At Mount Jerome Cemetery the Poddle takes a directly northerly route until the Grand Canal, under which it passes. The river then follows to the north-west before diverting again to the north-east / north for the remaining 1 km of its length before discharging to the Liffey at Wellington Quay.

- 2.3. For much of its length the river is underground. It passes largely unnoticed through or in the vicinity of many well-known and highly populated areas including traditional suburban residential areas and apartment complexes at St Teresa's Gardens. However, there are also many locations where the River Poddle flows at the surface passing through amenity parks and other open spaces and contributing to amenity, biodiversity and landscape character. These areas include the regional Tymon Park, local parks Ravensdale Park and St. Martin's Drive, lands to the rear of Whitehall Park and open space adjacent Wainsfort Manor Green.
- 2.4. The overall catchment is highly urbanised and the majority of the flow in the Poddle is stated to come from surface water collection at approximately 60 points along the length of the river. Some of these flows are sometimes negative - meaning that there is a loss of water from the Poddle. Early on in a significant rainfall event flows into the river are positive but as the river level rises water backs into the surface water system resulting in a negative flow at some locations. At other locations the river level rises result in flows over the riverbank.
- 2.5. There are three controlled outflows along the length of the river; Lakelands Overflow which is downstream of Templeville Road, and which diverts water to Terenure College lakes; the Grand Canal Sewer Overflow; and the River Liffey into which the Poddle discharges. At other locations along its length there are culverts that restrict flows, and these include one at the downstream end of Ravensdale Park and downstream of Camden Close where the river enters a culvert system flowing through a siphon under the Grand Canal. Just beyond the siphon is the Grand Canal Sewer Overflow. In general, the downstream sections of the Poddle are culverted underground as far as the discharge point at Wellington Quay.

Photographs which were taken by me at the time of inspection are attached.

3.0 Proposed Development

- 3.1. The development is described as relating to the development of existing recreational lands and urban green spaces along the River Poddle for a flood alleviation scheme and to provide an integrated construction wetland at Tymon Park.
- 3.2. The scheme is designed to provide protection against river flooding in a 100-year flood event (1% annual exceedances probability (AEP)). Its aim is to minimise the

risk of flooding by introducing flood protection, flood storage and flood prevention measures. These include flood walls and flood embankments as well as the installation of drainage flap valves and culvert screens and the sealing of manholes. The main areas of flood storage are at Tymon Park and Ravensdale Park as well as linear defences along the river.

- 3.3. The **main focus of works is the 5.2 km stretch** of the River Poddle from Tymon Park (north of the M50) to Mount Argus close to Haroldscross. At three locations substantial works are proposed in green spaces and in parks including Tymon Park where the main flood storage embankment is to be constructed and an integrated constructed wetland is also planned, at Whitehall Park where a channel realignment is proposed in a linear open space and at Ravensdale Park where walls are to be constructed to provide flood protection and storage. Works at St Martins Drive / Poddle Park are also noteworthy.
- 3.4. Works to seal manholes in the vicinity of Poddle Park and Ravensdale Park and in St Teresa's Gardens and Donore Avenue are proposed. A new manhole access is required at the National Stadium.
- 3.5. The **main elements of the development** as described in the public notices are:
- Construction of flood defence embankments in Tymon Park (west and east of the M50).
 - Demolition of an existing flow control structure and footbridge and construction of a flood storage defence spillway with passive flow control structure and replacement footbridge at Tymon Lake in Tymon Park (east of M50).
 - Construction of an integrated constructed wetland in Tymon Park (east of M50).
 - Channel realignment and embankments and flood defence walls on both banks of the River Poddle adjacent to the Lakelands Overflow at an open space located at Whitehall Park, east of Templeville Road.
 - Construction of a flood defence wall on the left bank of the River Poddle at the rear of properties on Whitehall Road and Glendale Park.
 - Demolition of existing walls and construction of new flood defence walls on the right bank of the river at the rear of properties on Fortfield Road south of Kimmage Crossroads.

- Construction of flood defence walls and demolition and replacement of a footbridge at Ravensdale Park.
- Construction of a flood defence wall on the right bank of the River Poddle at the end of St Martin's Drive.
- Construction of a flood defence wall on the right bank of the River Poddle at Mount Argus Close.
- Rehabilitating or replacing manholes in public roads at the junction of Ravensdale Park and Poddle Park and in the vicinity of St Teresa's Gardens and Donore Road and at the rear of the National Stadium.

3.6. **Ancillary works and associated development** include:

- Drainage channel clearance and removal of trees as required.
- Rehabilitating or installing culvert screens in locations as required.
- Installing flap valves in all culverts draining to the River Poddle.
- Biodiversity enhancements including installation of floating nesting platforms in Tymon Lake in Tymon Park.
- Landscape mitigation and restoration at Tymon Park, Whitehall Park, Ravensdale Park and St Martin's Drive including public realm improvements, biodiversity enhancements, tree planting and landscaping.

3.7. **Temporary works** include:

- Establishing a main construction compound in Tymon Park with access off Limekiln Road which will operate for the duration of the works.
- Temporary work/set down areas at Wainsfort Manor Crescent, Ravensdale Park and St Martin's Drive which will be in use for the duration of the works to be carried out at these locations.
- Stockpiling of excavated earth in designated areas of Tymon Park (west and east of the M50).
- Temporary channel crossings in Tymon Park (west and east of M50).
- Channel diversions at Tymon Park and Whitehall Park to enable the works along the river channel to be carried out.

4.0 Application

4.1. Application Overview

4.1.1. Documentation submitted with the application received by the Board on 21st of February 2020 included the following:

- Application form, cover letter and letters of consent.
- Copies of letters to prescribed bodies under A.121 of the PDR 2001 as amended.
- Copies of public notices and schedule of location of 17 no. site notices.
- Planning Report.
- Planning Drawings.
- Environmental Impact Assessment Report.
- Natura Impact Statement.
- Planning Report.

4.1.2. The published notice appeared in newspapers on the 13th of February 2020. The notices advised that an EIAR and a NIS have been prepared in respect of the proposed development and that submissions / observations could be made to An Bord Pleanála up to and including the 16th of April 2020. This was subsequently extended to the 11th of June 2020.

4.1.3. The applicant has provided a confirmation notice from the Department of Housing, Planning and Local Government confirming that the required information was uploaded to the EIA Portal on the 13th of February 2020.

4.1.4. The applicant has also notified that the documentation will be available for viewing on a standalone website and in offices of the local authorities and main libraries.

4.1.5. Letters of notification of the application were issued on the 20th of February 2020 to the following statutory bodies:

- Minister for Culture, Heritage and the Gaeltacht
- Minister for Communications, Climate Action and the Environment
- An Taisce

- The Heritage Council
- Inland Fisheries Ireland
- National Transport Authority
- Transport Infrastructure Ireland
- Environmental Protection Agency.

4.1.6. Regarding the consent to undertake works, the applicant indicates that agreement will be sought with property owners. Where such agreement is not possible the local authorities may seek to use their powers of entry onto lands under section 4 of the Local Authorities Works Act, 1949. One letter of consent relating to the gaining of access to the rear of 1-29 Fortfield Road, Terenure is provided.

4.2. **Environmental Impact Assessment Report**

4.2.1. The EIAR accompanying the application was prepared by Nicholas O' Dwyer Ltd on behalf of South Dublin County Council and Dublin City Council.

4.2.2. The EIAR is set out in 4 no. volumes.

- Volume 1 – non-technical summary.
- EIAR Volume 2 – main report.
- EIAR Volume 3 – figures and photomontages.
- EIAR Volume 4 – appendices.

4.2.3. Supplementary information relating to the EIAR was submitted as part of the response to a request for further information.

4.2.4. In the further submission (described as further information no. 2) to the Board the applicant submitted a Water Framework Directive assessment report and an updated report on winter bird and mammal surveys.

4.3. **Natura Impact Statement**

4.3.1. The NIS accompanying the application was prepared by NM Ecology on behalf of the applicant.

4.3.2. The revised NIS was submitted as part of the further information response.

5.0 **Written Submissions**

5.1. **Prescribed Bodies**

5.1.1. **An Taisce**

Original submission

There is conflicting information in relation to Brent geese. The NIS fails to assess potential impacts on Brent geese. A flock was observed by SDCC's Heritage Officer and they use the lands at Tymon Park.

Regarding St Martin's Drive, Option 1 is preferred for reasons of biodiversity and protection of the riparian zone. The transparency of this decision is queried. Planning decisions for the river must reflect the needs of the wider public who use the park.

Ravensdale Park is heavily used. The centrally placed concrete retaining wall will be visually imposing and reduce the amount of contiguous usable space and bisect the park. The design is inappropriate given the very limited green space in the area.

The park in its entirety should be considered as the flood zone and allowed to flood every 5 to 10 years.

Further submission

The further information has provided clarification and addressed many of the points. Outstanding items relating to St Martin's Drive and Ravensdale Park are described.

5.1.2. **Department of Culture, Heritage and the Gaeltacht**

The scheme is in an area of high archaeological potential and adjacent to numerous zones established around a number of recorded monuments including tower houses, mills and weirs and the Dublin City Watercourse, which are subject to statutory protection. A number of conditions are recommended.

The comments submitted in relation to nature conservation include:

- The approach which has been adopted in evaluating and mitigating impacts on flora and fauna of the River Poddle as well as avoiding impacts on downstream Natura 2000 Sites is welcomed.
- The provision of refuges and breeding places should be extended to otters.

- 2 no. planning conditions are recommended. These relate to the provision of otter holts and to the timing of the removal of trees and shrubs.

5.1.3. **Inland Fisheries Ireland**

Original Submission

The following recommendations are presented:

- Requirement for a detailed CEMP and that mitigation be conditioned.
- Detailed method statements to be agreed with contractor.
- Detailed design to be agreed in respect of permanent channel replacement and replacement footbridges.
- Conditions relating to an Invasive Species Management Plan, a Waste Management Plan and a program of maintenance.

Further submission

The need for a robust maintenance programme of debris removal is reiterated. The final construction methodologies must be agreed with the statutory bodies in advance. The Outline Surface Water Management Plan should be subject to condition. Post construction monitoring requirements.

5.1.4. **Transport Infrastructure Ireland**

Original Submission

The River Poddle passes under the M50 through the Poddle River Culvert. It is important that flood alleviation work measures safeguard the safety and strategic function of this critically important national infrastructure. In this respect a hydraulic analysis should be undertaken to identify the potential impact on the hydraulic capacity of the culvert and the potential for scour at the structure, which may result from increased flows through the structure.

Secondly there is a concrete pipe 450mm in diameter which protrudes through the abutment of the culvert which appears to carry surface water run-off from the M50. Any additional flow through the culvert as a result of the PFAS could lead to the

culvert running at full bore with the potential for the pipe to be blocked resulting in backing up of the surface water outfall.

Further submission

The further information received does not address the comments of TII, and additional clarification is required. In particular the potential for scour at the structure has not been addressed and an assessment for scour and other hydraulic actions should be undertaken and preventive measures required. Secondly the response does not address the issues raised by TII relating to the concrete pipe which carries surface water from the M50 the culvert. While the Black and Veatch report includes information on the run-off from the M50 entering the culvert there is no specific mention of the impacts on the drainage of the M50.

Final submission

The position of TII is unchanged.

5.2. **Other Third-Party Submissions**

Common themes

There are a number of recurring themes and matters, which are raised in a majority of submissions.

The common themes from the observations include:

- Excessive removal of mature trees in an area where there is an inadequate cover of trees. Based on an inadequate and / or inaccurate tree survey. Replacement planting will not be sufficient remedy for the loss of biodiversity and visual amenity. Contrary to SDCC tree management policy and DCC tree strategy and to the aims of CFRAM and WFD. The removal of trees is a common theme particularly with respect to works at St Martin's Drive and Ravensdale Park but also at the overall project level.
- The previous flooding related to lack of maintenance. Some observers state that the proper maintenance of drains and culverts would obviate the need for the scheme.

- Others reference the need for the proposed scheme to be properly maintained. If dumping continues and culverts are blocked the flood defence walls will not be adequate. There is a lack of trust that maintenance will be undertaken.
- Other observers accept the need for flood defence walls but indicate concerns relating to detailed design. Defence walls and elements of the scheme will result in increased anti-social behaviour. General concern relating to this issue including illegal dumping. The scheme design excludes the possibility of maintenance due to limitations on access as a result of high walls.
- Welcome for natural flood management measures.
- Need to increase upstream storage volume and tree cover as an alternative to works in local parks.
- Significant objection to works at local parks due to design detail and tree loss. Focus in particular on St Martins Drive area and Ravensdale Park.
- Failure to consider in-combination effects including of Bus Connects.
- Public consultation is described as inadequate or selective in terms of who was consulted, particularly in relation to the communities at either side of the Poddle at St Martin's Drive. General concern including with respect to the operation of and advertisement of events and use of websites and social media.
- Wildlife survey is inaccurate and omits red listed birds and rare flora and fails to record many natural occurring pollinators. There are a number of specific comments in this regard in relation to the use of local parks by species which are considered to be inadequately described in the application submissions. The biodiversity of the park adjacent to St Martin's Drive and the options for this area is a significant concern in observations.

Individual Submissions

The summaries of the individual submissions below aim to highlight the more unique elements of each contribution. I also refer to the content of a number of the submissions in the assessment section of my report.

Alan Massey

On behalf of Mount Jerome Cemetery, this recounts the devastation to property and loss of life in the Haroldscross area on the night of the flood of 24th of October 2011. Welcomes the scheme.

Caroline and Brian Keohane

The proposed flood walls will divide the communities from each other. The local parks have acted as safe havens for local people during the restrictions of lockdown.

College and Wainsfort Residents Association

A number of houses within the catchment area of our association were flooded in 2011. We formally express our support.

Cormac McMullan

Not opposed in principle to the building of flood defences. There are flaws however in the plans at Ravensdale Park. The previous flooding was due to blockage of the culvert entrance. Elements of the design of the proposed development are discussed in detail. The proposed design will make it harder to unblock the culvert and will obscure views and encourage more dumping.

Consultation was inadequate and did not inform me of the proposed containment of contaminated water in Ravensdale close to my home.

Further submission

The 2011 event was not due to the volume of water but to the illegal dumping compounded by an upturned tree, which was in place for a day and which trapped debris. The blockage was near 100% and the 60% blockage in the design is noted and the likely effectiveness queried. If there is a full blockage water will spill out. The applicant has not responded to other comments made including with respect to the design and the difficulty of removing blockages. Health impacts arising from flood storage and the park have not been assessed.

Deirdre Fagan

Objection relates to proposed works at Wainsfort Crescent. The small habitat is valued in this urban context and is of ecological value. There has been a lack of creative thinking and destruction of wildlife habitat.

No photomontage has been provided to inform residents of the changes at this area.

Irish Wildlife Trust

Restoration of natural flood landscapes must be a priority. The scheme is an example in this regard and the use of nature-based solutions is welcomed.

Serious concerns regarding tree loss in Ravensdale Park, St Martin's Drive and Wainsfort Manor Crescent areas. Many are Class A trees, which are effectively irreplaceable. Compensatory planting is an adequate mitigation.

Further submission

The significant changes at St Martin's Drive mean that previous stakeholder engagement is not now based on the project as proposed.

Jane McKeivitt

Mitigation measures regarding the realignment of the river at Whitehall are inadequately described. Diversion of the river is of concern.

Overall loss of social amenities due to the extensive flood walls will degrade wildlife corridor and separate communities. Crumlin will suffer further deprivation.

Margaret Docherty

There is a need for clarity regarding the nature of works in Wainsfort Manor and no visuals have been provided. Concerned about the removal of 36 mature trees from an aesthetic and functional perspective.

Mary Dunne

The observer writes in support of the scheme. Three flood events since 1978 caused psychological stress and property damage. The Poddle is particularly susceptible to blockages from accumulated debris and fly tipping at the structures along its course.

Mary O'Hagan and James Corbett

Due to the pandemic restrictions stakeholders have not had equal access to engage in the submission process and the result is inequitable, undemocratic and unfairly excludes sectors of the community.

Cutting off the river in an insensitive way and using alien materials will degrade the wildlife corridor and its unique green fabric.

Michael Dempsey and Siobhan O'Connor

In addition to the space lost due to Bus Connects the PFAS proposes to slice off approximately a quarter of Ravensdale Park for flood storage. The volume which will be stored being only 1% of that planned for Tymon Park is not worth the loss of this area. Pedestrians will be wedged between a bike lane on one side and a high concrete structure on the other.

Further submission

The updated plans involve an extension of the area of tree loss at St Martins by 40m and this is without explanation or communication or justification. The hidden information in the “updated” Poddle FAS documents to ABP is of grave concern.

Mick Dougan

At Wainsfort it is not clear to me what is actually intended other than the reference to construction of flood walls and cutting down of 36 trees. There are no visuals. Removal of each individual tree needs to be justified.

Orla Daly and Victor Karmanski

As a professional ecologist residing opposite St Martin’s Drive Park, there is a need for a flood alleviation solution that protects the integrity of the river system and its function as an urban wildlife corridor. The area is of importance for pollinators, birds and for foraging and commuting.

The extent of survey undertaken is queried. The bird survey is inadequate and fails to acknowledge two red-listed species. Macro-invertebrates should have been incorporated into the baseline ecological surveys and subsequent monitoring programme. The effect of the removal of trees on downstream water quality and European sites has not been properly considered.

Regarding St Martin’s Drive Park and the two options, the most destructive option from an environmental point of view was selected. Arborists report attached.

The duration of monitoring of invasive species has not been specified and further information is required relating to species currently not listed in the Third Schedule.

Particular habitats are referenced including with respect to whether they are Annex I.

Further submission

Regarding option 1, the ecologist noted that no in-stream or bank side works will be required and less trees will be lost. The reasons for selecting between options 1 and 2 are refuted. It is unclear as to why the length of the wall has increased by 40m.

The principles of net biodiversity gain include doing everything possible to avoid and minimise impacts on biodiversity only as a last resort and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided.

Final submission

The conclusion in the WFD that there would be an overall impact of 'improved' is refuted. The retention of the existing riparian woodland which filters nutrients, provides shade and prevents erosion is preferred over the proposed wall. There was insufficient regard to the value of the willow dominated riparian habitat. The guiding principles from the 'Net Biodiversity Theory' includes avoidance and minimising impacts on biodiversity in the first instance. The preferred option remains option 1.

Orlette McGrath Massey

The flood alleviation scheme is a once-in-a-lifetime opportunity to prevent such a repeat nightmare as the 2011 flood, which is described. The scheme should be permitted in its entirety.

Our Lady's Hospice and Care Services

This submission is in support of the scheme, which will reduce flooding in the area.

Patrick Costello T.D. and others

Major tree felling will occur in Tymon Park and this is the area of greatest concern. The project outlines the replanting of trees at a ratio of 2:1. If this represents a spatially reduced area then the replanting ratio in Tymon Park should be at least 3:1.

There is no plan to replace tree loss at Manor Crescent. Replanting in a nearby green or at Tymon Park would be of no immediate value to the local community.

Detailed comments in relation to Ravensdale Park and St Martin's Drive Park.

Policy provisions are described.

There is a degree of habitat enhancement. The wetland should provide a valuable addition to the overall biodiversity of the park.

Further submission

We are broadly supportive of the approach taken in the design and engineering and welcome certain commitments including to plant additional trees in Poddle Close. We remain concerned that there would be an unacceptably high negative impact on the area around Ravensdale and St Martin's Drive. We remain unconvinced that Option 1 would lead to antisocial behaviour or that it is unworkable and consider that it protects more of the established trees and riparian zone.

Peter Sweetman and Associates for Wild Ireland Defence

Commission notice "Managing Natura 2000 sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC" (2018) is referenced and section 3.6.6. is quoted. The mitigation measures in the Natura Impact Statement do not comply with the document and therefore do not comply with European law.

Recorders Residents Association

The Residents Association represents 356 homes, many of which have suffered direct flooding. The proposed development increases the chance of floodwater being held back at Tymon Park, involves the creation of two wetlands which will provide meanders and bring back much of the flora and fauna and birdlife. Claims that the problem relates to the blocking of grids are uninformed and cloud the reality and the far more serious issues.

Residents of Wainsfort Drive

The loss of some trees is regrettable, but we fully support the application, which has no significant ongoing adverse impact on the environment.

Further submission

We have reviewed the significant additional data and remain fully in support.

Observation 19 - Roisin McAleer and Laure Duez

Site notices were not completely erected or maintained notably at Templeville, Wainsfort, Tymon Park and Fortfield and some were not updated regarding the extended deadlines for submission during Covid-19.

An independent arborist report of CMK is provided.

Further submission

In response to the further information submission, it is stated that the developer has commenced work without any permission being given.

Cllr Tara Deacy

Submission is made as a resident and elected representative. There is inadequate tree cover in this area. Has consideration been given to an urban drainage system for this project, similar to that in Crumlin village and can this be looked at now? Has there been any consideration given to increasing the number of street trees in the area? For reasons outlined proposals for Ravensdale Park need to be altered.

I and my neighbours are supportive of flood alleviation measures being implemented. Substantial change and tweaking are essential for this to be a workable and community friendly project. If our community is heard and part of the process, they will fully support measures, but tokenistic engagement is not useful.

Tom O Meara

In agreement with the scheme in principle but the finer details will result in detrimental long-term problems for residents including with respect to antisocial behaviour. My property at the rear of 186 Whitehall Rd requires further protection and detailed comments are made about this area.

Opening up the riverbank on the Whitehall Park side will increase antisocial behaviour, particularly creating an opening in the wall with a lockable gate. A planning notice should have been erected at Whitehall Park.

Vincent Cahill

My house and life were destroyed by the catastrophic flood event in October 2011, and we live with the risk of another catastrophic flood. I have examined the scheme in detail and consider that it is critical for safety and is sympathetic to the impacted areas that the Poddle flows through. Trees can never be prioritised over loss of life.

Violet Dempsey

Inadequate public consultation is the main issue. Attached correspondence also refers to tree removal and construction of a wall at St Martin's Road. It is suggested that a small group of people requested and support the selected option.

6.0 Further information and related correspondence

6.1. Further information request

- 6.1.1. The Board issued a request for further information on 17 July 2020 as follows.
- 6.1.2. **Observations.** The applicant was invited to respond to observations in a comprehensive manner and advised that the opportunity might be taken to address any relevant changes in policy, planning history or baseline information.
- 6.1.3. **Scheme Design.** Matters raised related to inputs to the Poodle and the option to increase upstream storage, capacity to deal with blockage, issues related to the construction phase, details on proposals at Whitehall Park and St Martin's Drive.
- 6.1.4. **Environmental Impact Assessment.** The applicant was requested to review the EIAR, to assess biodiversity improvements, to clarify the optional ecological enhancement measures, to clarify other matters and to provide additional information relating to construction noise.
- 6.1.5. **Appropriate Assessment.** The applicant was requested to submit any screening report prepared. Regarding the content of the NIS more detailed description of the development and risk of accidents, mitigation and timing of works was requested. Possible ex situ disturbance effects on light bellied Brent geese to be considered.

6.2. Response to further information request

- 6.2.1. Following an extension of time, the response to further information requested (RFI) was received on 19 October 2020.
- 6.2.2. **Response to observations.** The applicant notes that 8 no. of the observations were in support of the scheme, 2 no. partially in support and 13 no. in opposition. The response includes in Appendix 1 a line by line reply to the 25 no. observations and in relation to trees, the project arborist provided an independent response report. In response to comments relating to consultation a supplementary report is provided.
- 6.2.3. **Natural Flood Management.** To supplement information relating to natural flood management a separate report prepared by Black and Veatch was submitted as Appendix 3. The benefits arising from natural flood management measures are

described. However, in a highly urbanised area it cannot fully replace grey infrastructure.

- 6.2.4. **Outline Surface Water Management Plan.** An outline surface water management plan is attached as Appendix A to the revised NIS.
- 6.2.5. **Proposals for Whitehall Park.** It is clarified that IFI had requested that a meander be introduced, and it is noted that the original proposals were to finish the slopes with a terrace to add public realm improvements and provide access through to Winsford Manor Crescent. As a result of further consideration of feasibility and local residents concerns regarding increased permeability the proposal was amended to plant a native wildflower meadow and reduce the terracing to enable mowing and maintenance.
- 6.2.6. **St Martin's Drive options.** The response describes Option 1 and Option 2. It also addresses other alternatives including demountable structures and transparent defences. It is acknowledged that Option 2 does remove 13 no. more trees.
- 6.2.7. **Updated information on EIAR.** The aim is to clarify likely impacts during the construction phase and strengthen commitments to mitigation measures and described the circumstances where deviations from normal working conditions are anticipated.
- 6.2.8. **EIAR update** The RFI includes an updated schedule of mitigation measures which provides strengthened commitments including in relation to trees, biodiversity and noise. Additional measures relating to the management of surface water and pollution prevention are included in the Outline Surface Water Management Plan appended to the revised NIS.
- 6.2.9. **Net biodiversity gain.** In the absence of a standard method to evaluate and measure net biodiversity gain a qualitative assessment is provided.
- 6.2.10. **Ecological enhancement.** It is clarified that the provision of sand Martin and Kingfisher nesting banks are a confirmed component of the project. In response to the submission of NPWS otter holts are now proposed at three locations.
- 6.2.11. **Replacement tree planting and other landscape enhancements.** These are addressed in detail in terms of the proposals in the two administrative areas. The

overall conclusion is that the replanting will more than compensate for any trees that are removed for the construction of the proposed scheme.

- 6.2.12. **Water quality update and review of Hydraulic Report.** Since 2009 SDCC have monitored the Poddle and share the results with the EPA. Aquafact in August 2020 undertook an electro-fishing survey and Q value analysis. Further water quality sampling was completed in May 2020 to get baseline information for the design of the ICW. The ICW will improve water quality towards the aim of achieving 'good' status. A non-technical summary and brief review of the Hydraulics Report prepared by Black and Veatch is provided. The report is provided as Appendix 3.
- 6.2.13. **Duration of construction.** A more accurate estimate of the construction programme is presented in table 12–1. All of the durations are estimated maximum construction periods and are given in cumulative months. The duration of works at Tymon North and Tymon Park associated with the contractor's compound is 24 months. Other works at this location will have a maximum duration of seven months.
- 6.2.14. **Construction noise impacts.** As a supplement to the noise impact assessment in the EIAR, information is provided to show the location of properties which may experience construction noise impacts and clarification is provided on noise criteria and requirements for night-time working. This response includes Appendix 7.
- 6.2.15. **Difficulties encountered in the preparation of EIAR.** It is confirmed that no particular difficulties were encountered by any of the project team or specialists.
- 6.2.16. **Topic of land.** It is clarified that this is considered to be addressed in section 6.3.1.1 and elsewhere in the EIAR.
- 6.2.17. **Appropriate Assessment Screening.** It was clarified that the AA screening was carried out by NM Ecology Ltd on behalf of and accepted by DCC and SDCC.
- 6.2.18. **Revised Natura Impact Statement.** A revised NIS includes a more detailed description of the development and of the mitigation strategy.
- 6.2.19. **Light bellied Brent geese.** The conclusion in the revised NIS is that the park is used infrequently by Brent geese and in this context possible ex-situ disturbance on any geese that may use the site during construction works is assessed.

6.3. Observations on Response to Further Information

- 6.3.1. The observer's further comments in response to the further information are included under the heading of further submissions above. In all comments were received from 10 no. observers, two of which were from prescribed bodies (An Taisce and TII).

6.4. Applicant's further comments.

- 6.4.1. The document received by the Board on 8th February 2021 responds to the 10 no. further observations. The response addresses inter alia the consideration given to Ravensdale Park and allowing the entire park to flood, the issues raised by TII regarding the M50, the detail of works adjacent Mr Tom O'Meara's house and the proposed gate at Whitehall Park. In addition, the need for alteration to the existing channel at Ravensdale Park and the detail of the proposed trash screen are addressed and comments provided relating to the future Bus Connects proposals. It is confirmed that there is no change to the length of the defence wall proposed for St Martin's and the yellow line shown is the existing left bank wall. It is not the proposed defence wall, which is on the right bank. It is reiterated that consultation with residents focused on areas which would be directly affected.

6.5. Further information – WFD assessment

6.5.1. Request

- 6.5.2. On foot of the legal situation arising from the Gorumna decision the Board notified the applicant as follows by letter dated 08 March 2022.
- 6.5.3. I refer to the Board's request to the Environmental Protection Agency as the competent authority under the Water Framework Directive to assign a status for the River Poddle. This request was issued by the Board on 3 December 2021 in the context of the High County judgement [2021] IEHC 16 between Peter Sweetman and An Bord Pleanála, Ireland and the Attorney General and Bradán Beo Teoranta, Galway County Council.
- 6.5.4. The EPA advised the Board by letter dated 23 February 2020 that the River Poddle (Poddle_10) has been assigned a 'poor' status. A copy of that submission has been circulated by the Board to all parties in this application.

- 6.5.5. You are requested to provide an assessment of the implications of the proposed development on the status of the River Poddle under the Water Framework Directive. In the event that you consider that there is a need to provide updates to any aspect of the documentation submission in support of the application, you may take this opportunity to do so’.
- 6.5.6. **Response**
- 6.5.7. The report entitled *River Poddle Flood Alleviation Scheme – Water Framework Directive (WFD) Screening Assessment* of cbec-eco engineering UK Ltd April 2022 refers.
- 6.5.8. The report aims to assess the potential impacts of the proposed scheme on the WFD status of any affected waterbodies.
- 6.5.9. The River Poddle is a candidate Heavily Modified Water Body (HMWB) and the WFD target status is ‘good ecological potential’. This definition takes account of practical and financial constraints and aims for best possible Biological Quality Elements status given the limitations on remedial action to a waterbody. The available information as listed was reviewed by expert freshwater specialists and consideration given to the direct and indirect effects of the scheme on the River Poddle and receiving waters. The report concludes that the overall impact of the scheme can be considered as neutral or beneficial from a WFD perspective provided that the mitigation measures are implemented.
- 6.5.10. The report entitled *Winter bird and mammal surveys 2022 – River Poddle Flood Alleviation Scheme 20 April 2022* presents the results of surveys carried out in 2021 and 2022 and considers whether any aspects of the biodiversity chapter of the EIAR or the NIS need to be updated. The 2022 survey results are described as similar to the 2018 surveys and therefore there is no requirement for changes to the impact assessments or mitigation strategies previously presented in the EIAR and NIS.
- 6.5.11. **Observations on Further Information Response no. 2**
- 6.5.12. Orla Daly and Victor Karmanski and TII have provided supplementary comment in response to the applicant’s submission received by the Board on 29 April 2022. These are summarised above under the headings ‘Final Submission’.

7.0 Planning History

- 7.1. Section 7.1.5.2 of the EIAR and Section 4.3 and 2.5 of the revised Natura Impact Statement identifies a number of planning applications which may be considered to be relevant for the purposes of potential in combination effects for EIA and AA. I have also referred to the planning register maps and the Board's internal mapping records to identify other potentially relevant planning applications. Taking into account the likely impacts and the scale of permitted developments and likely connectivity I consider that the relevant applications are as listed below.
- 7.2. At two large sites upstream of the works at Tallaght there are a number of recent relevant applications:
- **ABP-306705-20** relates to an application subject to EIA for 502 apartments and other development at the former Gallagher's cigarette site at Airton Road and Greenhills Road. In granting permission, the Board considered that the main significant direct and indirect effects included potential indirect effects on water which will be mitigation during occupation by the development of the proposed surface water system and drainage to the public foul system and during construction by appropriate management measures to control the emissions of sediment to water. ABP-305291-19 relates to the pre-application case. On inspection of the Airton Road area in August 2022 I noted that some site clearance had commenced.
 - **ABP-313590** relates to a large site at the opposite side of Airton where a proposed development under SHD for 197 residential units is under consideration by the Board and due for decision by 05 September 2022. Accompanying documentation includes a Construction Site Environmental / Waste Management Plan which contains an assessment of and mitigation measures relevant to site drainage and surface water and related matters including ground contamination. All discharge consents will be in place prior to work commencing on site.
- 7.3. Residential development at Mount Argus apartments through which site the watercourse flows. Application reference ABP -309442 for retention of various works at Mount Argus and ABP-308842 for 21 no. residential units. In the grounds of nearby Mount Argus Church ABP-312274-21 relates to a live appeal relevant to a proposed development of 22 no. apartments.

- 7.4. Relevant also is a number of smaller residential developments including many proposals relevant to single dwellinghouses, some of which will be pursued as exempted development.
- 7.5. Kimmage to city centre is one of the BusConnects corridors. The application has not been made at the time of writing.

8.0 Legislative and Policy Context

8.1. European and Irish Legislation and Guidance

EU Water Framework Directive 2000/60/EC has as its core objective the protection and restoration of water quality and sets specific requirements relating to ground and surface water quality which shall be met by specified dates. Implementation of the directive is true programmes of measures set out in River Basin Management Plans. The assessment of water body status relate to ecology, chemical and hydromorphological criteria.

European Communities Environmental (Surface Waters) Regulations 2009 requires that all works that modify a surface waterbody or have the potential to impact on the water environment shall comply with the objectives of the WFD.

EU Floods Directive 2007/60/EC on the assessment and management of flood risks requires Member States to assess watercourses and coasts which might be at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to address flood risk.

EU Habitats Directive (92/43/EEC): This Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) and 6(4) require an appropriate assessment of the likely significant effects of a proposed development on its own and in combination with other plans and projects which may have an effect on a European Site.

European Communities (Birds and Natural Habitats) Regulations 2011: These Regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, and address transposition failures identified in CJEU judgements.

Planning and Development Acts 2000 (as amended): Part XAB of the Planning and Development Acts 2000-2017 sets out the requirements for the appropriate assessment of developments which could have an effect on a European site or its conservation objectives.

Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment August 2018. Amongst the issues noted in the guidance is the consideration of cumulative effects with relevant existing and / or approved projects.

Guidelines on the Information to be Contained in Environmental Impact Assessment Reports – EPA– June 2022. The document draws on legislation and case law to set out the requirements for the EIAR. Baseline information should be provided as relevant to the assessment of likely significant impacts and information not relevant to the scope of the EIAR should not be included. Interactions and cumulative effects should be described and should be considered for the purposes of mitigation. It is noted that the examination of plans through Strategic Environmental Assessment can reduce the number of cumulative effects that need to be considered in an EIAR. In consideration of cumulative effects, it can be prudent to have regard to the likely environmental loadings arising from the development of zoned lands in the immediate environs of the proposed project. The consideration of cumulative effects should have regard to cumulation of effects with those of other projects that are existing or are approved but not yet built or operational.

8.2. National and Regional Plans and Policy

Project Ireland 2040:

National Planning Framework. *National Strategic Outcome 9* seeks to co-ordinate EU Flood Directive and Water Framework Directive implementation and statutory plans across the planning hierarchy, including national guidance on the relationship between the planning system and river basin management. Local authorities, DHPLG, OPW and other relevant Departments and agencies working together to implement the recommendations of the CFRAM programme will ensure that flood risk management policies and infrastructure are progressively implemented.

National policy objective 57 and 58 seek the integration of flood risk management and green infrastructure into development proposals.

National Development Plan *National Strategic Objective 8 Transition to a Climate Neutral and Climate Resistant Society* the CFRAM Programme is identified in the context of strategies for flood risk management. All flood relief schemes are designed to be adaptable to the impacts of climate change scenarios, in line with the Government's Climate Change Sectoral Adaptation Plan for Flood Risk Management 2019-2024. National funding is supporting a range of schemes across all counties and in urban and rural areas some of which are listed.

Climate Change Sectoral Adaptation Plan for Flood Risk Management 2019-2024 published by Office of Public Works in September 2019

This considers the impacts of climate change on flooding, flood risk, and on flood risk management. Amongst the 21 adaption actions identified are the following.

Objective 2.B that the brief for the detailed development of flood relief schemes include a requirement for a Scheme Adaptation plan that will set out how climate change has been taken into account during the design and construction, and what adaption measures might be needed and when into the future (from 2019).

Objective 3.B that the stakeholders will continue to enhance knowledge and capacity with regard to Natural Water Retention Measures (NWRMs) and will assess the potential for NWRMs as part of the development of future flood relief schemes.

Climate Action Plan 2021 This identifies risks resulting from climate change including the increased likelihood and scale of river and coastal flooding. There will be an observed increase in pluvial flooding. Future flood information should be obtained through a Flood Risk Assessment that is used to inform suitable adaptation requirements. It is an objective to continue to enhance knowledge and capacity with regards to Nature-based Catchment Management Solutions and to assess their potential to be part of future flood relief schemes.

River Basin Management Plan for Ireland, 2018 – 2021. This seeks to protect waterbodies and improve water quality in line with the WFD. The physical condition of waterbodies can be significantly impacted by flood relief schemes. Mitigation measures including improved assessment, water and planning guidance are set out. A greater role for participation by IFI is suggested. The Poddle is within the Dodder

subcatchment. The Poddle is not specifically referenced but the Dodder is identified as a priority area for action.

Eastern and Midlands Regional Economic and Spatial Strategy 2019 - 2031

RPO 5.7 is co-ordinate across local authority boundaries to identify, manage, development and protect regional Green Infrastructure, to enhance strategic connections and develop a Green Infrastructure policy in the Dublin Metropolitan Area. This is framed in the context of a discussion of the natural features of the city region including water corridors such as the Poddle.

RPO 5.8 is to support the promotion and development of greenway infrastructure and facilities in the Dublin metropolitan area and to support the expansion and connections between key strategic cycle routes and greenways as set out in the NTP Cycle Network Plan.

The Poddle is listed in Table 7.1 as being amongst the strategic natural, cultural and green infrastructure assets in the region under the heading of lakes, rivers and canals.

RPO 7.13 is that EMRA will work with local authorities, OPW and other relevant departments and agencies to implement the recommendations of the CFRAM programme to ensure implementation of that flood risk management policies and infrastructure.

RPO 7.15 is to ensure that local authorities take opportunities to enhance biodiversity and amenities and the protection of environmentally sensitive sites and habitats, including where flood risk management measures are planned.

Eastern CFRAM Study. The Poddle falls within the Liffey – Dublin Bay Hydrometric area (HA09) and has been identified as a high priority within the study programme and one for which flood risk management options should be advanced. Within the Eastern CFRAM Study there have been a number of studies and publications including publication of an NIS for the Camac and Poddle Prioritised Works.

Eastern CFRAM Study – Poddle Options Report This reports on flood risk, costs and benefits, option types and details of possible future schemes. The importance of maintenance and a number of specific measures are set out in table 8.3 which is accompanied by photographs. Option 2 involving defences, sealing manholes and

upstream storage emerged as the preferred option. Option 3 which included diversion to the Dodder was also deemed to be viable.

8.3. **South Dublin County Development Plan 2022-2028**

The plan came into force on August 3 2022. It has been subject to strategic environmental assessment (SEA) which is supported by a strategic flood risk assessment (SFRA). It has had regard to the Council's Climate Change Action Plan 2019-2024 whose principles include actions in the area of flood resilience.

IE4 objective 4 is to support and facilitate delivery of flood alleviation schemes including the Poddle Flood Alleviation Scheme and others listed, in as environmentally sensitive a way as possible and to ensure that zoning or development proposals do not impede or prevent the progression of these measures.

Green Infrastructure GI1 Policy Overarching is to protect, enhance and further develop a multifunctional GI network, using an ecosystems services approach, protecting, enhancing and further developing the identified interconnected network of parks, open spaces, natural features, protected areas and rivers and streams that provide a shared space for amenity and recreation, biodiversity protection, water quality, flood management and adaptation to climate change.

Supporting objectives include :

GI Objectives 1 relates to establishing a coherent and integrated GI network.

GI Objective 3 is to facilitate the development and enhancement of sensitive access to and connectivity between areas of interest for residents, wildlife and biodiversity.

GI Objective 7 relates to the development of linked corridors of small urban native mini woodlands in suitable built-up areas and in low grade parkland.

Biodiversity GI2 Policy Overarching is to strengthen existing GI network and ensure all new developments contribute towards GI in order to protect and enhance biodiversity across the county.

Supporting objectives include :

G12 Objective 1 to reduce fragmentation and enhance the GI network by strengthening ecological links.

G12 Objective 3 to retrospectively repair habitat fragmentation and provide for regeneration of flora and fauna where weaknesses are identified in the network through the implementation of new GI interventions.

G12 Objective 7 to enhance the biodiversity value of publicly owned hard infrastructure areas by incorporating planting of new trees and other species.

Sustainable Water Management G13 Policy Overarching is to protect and enhance the natural, historical, amenity and biodiversity value of the county's watercourses and require their long-term management and protection as significant elements of the GI network. To accommodate flood waters as far as possible during extreme flooding events and enhance biodiversity and amenity to the designation of riparian corridors and application of appropriate restrictions to development within these corridors.

Supporting objectives include :

G13 Objective 3 to promote and protect native riparian vegetation along all watercourses.

G13 Objective 4 to uncover existing culverts where appropriate and in accordance with relevant river catchment proposals to restore water course to acceptable ecological standards for biodiversity where possible improving habitat connection and strengthening the GI network.

Climate Resilience G15 Policy Overarching is to strengthen the county's GI in both urban and rural areas to improve resilience against shocks and disruptions arising from a changing climate.

Supporting objectives include:

GI 15 Objective 1 to protect and enhance biodiversity and ecosystems in accordance with the ecosystems services approach enabling mitigation of climate change impacts, by absorbing excess floodwater and providing a buffer against extreme weather events.

GI 15 Objective 2 to protect and enhance the natural regime of the river courses of the county to more efficiently capture their flood resilience value.

Human Health and Wellbeing G16 Policy Overarching is to improve the accessibility and recreational amenity of the GI network in order to enhance human health and well-being while protecting the natural environment within which the recreation occurs.

Supporting objectives include :

G16 Objective 5 to support the provision of new walkways and cycleways in suitable locations to improve the recreational amenity of GI corridors in a manner that does not compromise ecological functions.

G16 Objective 6 to minimise the environmental impact of external lighting within the GI network.

G16 Objective 7 to enhance publicly owned open spaces with further appropriate GI including nature-based interventions to improve and diversify the services they provide.

Landscape, Natural, Cultural and Built Heritage G17 Policy Overarching is to protect, conserve and enhance landscape, natural, cultural and built heritage features.

Tymon Park is identified as a 'Major Core Area' within the county's GI framework. These are important centres of biodiversity in their own right and serve as important recreational assets for the county's residents and visitors. Within the GI network a number of strategic corridors are identified. Strategic corridor 2 is the M50 corridor where it is recognised that there are opportunities for GI enhancement and where the natural assets defined include the Poddle and Tymon Park.

Protected structures and recorded monuments include Tymon Park Castle (site of), Poddle River between Templeville Road and Kimmage Road West and a watercourse, mill, weir, mill race at Wainsfort Manor Crescent.

Prospects to the south and south-east from Tymon Park which are identified in the development plan include a range of hill ranges from Verscholye's Hill and Saggart Hills in the southwest to Montpellier and Cruagh hills to the southeast. Separately, the **Landscape Character Assessment** includes views to the Dublin Mountains from major parks.

8.4. **Dublin City Council Development Plan 2016-2022**

This plan remains in force and the final round of public consultation is ongoing and will conclude on 1 September 2022.

Policy **SI8 is to mitigate the effects of floods** subject to environmental assessments.

Section 9.5.3 refers to flood risk management and amongst the primary sources of flooding is the river Poddle.

GI1 and GI4 relate to developing a green infrastructure network throughout the city interconnecting strategic natural and semi-natural areas with other environmental features and coordinating open space, biodiversity and flood management requirements in progressing a green infrastructure network.

Volume 2 appendix 11 refers to flood defences and contains reference to the river Poddle stating that there is a requirement for extra defences in Mount Argus, St Martin's Drive, Poddle Park and Ravensdale Park as well as storage in South Dublin County Council to provide estimated flood protection to the hundred-year flood level.

GI16 is to protect and improve the unique natural character and ecological value of all rivers.

Between Ravensdale Park and Camden close the river is defined as a **zone of archaeological potential** and two locations (Mount Argus close and the green space at St Martin's Drive) are listed as sites of archaeological potential.

9.0 **Planning Assessment**

I consider that the key planning issues can be considered under the following headings:

- Principle and scheme design
- Detailed design
- Biodiversity
- Residential amenity
- Water Framework Directive

- Archaeological, Architectural, and Cultural Heritage
- Material assets
- Conclusion.

9.1. Principle and Scheme Design

In this section of this report, I address the following:

- need and policy
- scheme overview and alternatives
- flood storage, maintenance and scheme effectiveness.

9.1.1. Need and Policy

9.1.2. The need for a flood scheme for the Poddle is set out in submissions from residents and property owners of the area and in the EIAR and other application documentation. Observers attest to the level of property damage and ensuing disturbance from flood events in past decades. The most recent significant event reported dates to 2011, during which a woman lost her life. The flooding is stated to have caused considerable anxiety to all who witnessed the extent and devastation wrought. The EIAR lists the other notable flood events over the last thirty years, dating from 1986 and including 1993, 2000 and 2008.

9.1.3. I consider that there is strong policy and legislative support for the proposed development including in the following:

- The EU Water Framework Directive which seeks to achieve good status for all water bodies. As discussed further below I consider that the approach to the scheme design strongly adheres to the objectives of the WFD as it incorporates design measures which will enhance water quality and improve hydromorphology.
- The National Planning Framework particularly *Outcome 9*. The proposed development implements the recommendations of the CFRAM programme and provides flood protection infrastructure.

- The Climate Action Plan 2021 which includes the increased likelihood and scale of river and coastal flooding as amongst the risks resulting from climate change and promotes Nature-based Catchment Management Solutions as part of future flood relief schemes. As discussed below the scheme design incorporates a strong emphasis on this approach.
- Eastern and Midland Regional Spatial and Economic Strategy RPO 7.13 which provides that the EMRA will work with the local authorities and other agencies to implement the recommendations of the CFRAM programme to ensure the flood risk management policies and infrastructure are progressively implemented and the identification of the river Poddle Flood Alleviation Scheme under the Regional Flood Risk Appraisal.
- The South Dublin County Development Plan 2022 – 2028 IE4 Objective 4 which specifically identifies the delivery of the Poddle flood alleviation scheme. Other relevant objectives support multiple uses of open spaces, integration and enhancement of green infrastructure and biodiversity. I consider that the development is in keeping with these objectives.
- The Dublin City Development Plan 2016 – 2022 which references under Objectives SI011 and SI012 working together with neighbouring local authorities and the development of cross boundary flood management work programmes and ensure that each flood risk management activity is examined to determine actions required to embed and provide for effective climate change adaption.

9.1.4. I consider that there is a demonstrated need for a flood scheme to alleviate the impacts arising from recurring and significant flooding in this urban area, that there is ample policy support for the scheme and that it is in keeping with the legislative context, which is addressed further below.

9.1.5. I also return to the ‘do nothing’ scenario later as some observers have suggested that better maintenance by the local authorities would obviate the need for a flood scheme.

9.1.6. I conclude that the development in principle complies with the national, regional and local policy framework.

9.1.7. **Scheme overview and alternatives.**

- 9.1.8. In terms of the scheme design, its primary purpose is to alleviate fluvial flooding. The main detailed assessment of how to achieve this aim were contained in the Eastern CFRAM Study Poddle Options Report. Following consideration of a comprehensive list of flood risk management options, three main options identified namely hard defences and manholes sealing (option 1), option 1 with upstream storage and option 1 with diversion of flood waters to the Dodder. The scheme adopted for this application comprises option 1 with upstream storage at the lakes at Tymon Park (developed by construction of embankments at existing lakes) and also at locations downstream at Whitehall where river meanders and ground modelling will be introduced and at Ravensdale where the existing park will be amended to function to provide stormwater storage.
- 9.1.9. In terms of the standard of protection which will be achieved the scheme designed caters for a 1% AEP plus 60% blockage. The scheme will function during a 1% AEP event by holding back floodwaters in the upper and middle reaches of the Poddle and where there is no alternative flood defences will protect properties. Increased storage will act to reduce the impact of significant flood events and it is the applicant's submission that linear defences are proposed only where required and where there are no other reasonable alternatives.
- 9.1.10. The scheme design is based on modelling undertaken for the 2011 CFRAM. This was updated to incorporate additional residential and non-residential developments and drainage modifications and utilised information gathered from water level recorders installed since 2011 and flow monitoring equipment installed in 2018. In addition, as part of the design of the scheme a comprehensive blockage scenario analysis was undertaken for the structures along the watercourse. A useful plan of the modelled catchment is provided in figure 2–1 of the report of Black and Veatch provided in Appendix 3 to the response to further information (RFI).
- 9.1.11. Utilising updated information, the preferred option for the scheme was modelled to determine the height of defences and optimise the amount of storage required at Tymon Park. The additional storage included at Ravensdale Park is stated to have provided for significant reductions in the heights of linear defences compared with earlier iterations of the scheme. Utilising the updated model, it was possible to produce maps showing the extent of flooding from the river and surface water network for different percentages AEP and with and without climate change. The

model simulates flooding onto the ground when the pipe drainage capacity is exceeded or water in the river is above bank level and flow routes are calculated based on LiDAR data.

9.1.12. Based on the above description of the PFAS and the design process I am satisfied that the following may be concluded:

- use of natural flood management measures is intrinsic to the scheme design and the scheme is innovative particularly in the context of an urban setting
- there has been consideration of a comprehensive range of options
- the design has evolved as updated level and flow data became available
- the storage and slowing of waters minimises the need for riverside flood defence structures
- there are locations where hard engineering approaches are necessary
- the scheme overall is sensitive to the Poddle and its environs
- the general approach to the scheme design is in keeping with best practice and current thinking on flood management.

9.1.13. In relation to the above conclusions, I note that some observers support the general approach adopted. National Parks and Wildlife Service states that the scheme incorporates nature conservation to the extent that this is feasible. The Irish Wildlife Trust, while expressing concerns about localised impacts welcomes the use of nature-based measures particularly at Tymon Park and considers that the scheme is innovative and progressive in this respect. It is also relevant to point out that the use of natural flood management measures involving works in the middle stretch of the Poddle (notably at Ravensdale Park) has resulted in objections from local residents. I address the specific impacts on the local parks later in this report.

9.1.14. In conclusion in terms of the strategic approach, the types of scheme and alternatives I consider that this matter has been comprehensively and appropriately assessed. I conclude that the broad principles on which the PFAS is based constitute best practice. In the context of the urban environment, I consider that a scheme of this type is innovative and welcomed.

9.1.15. On the specific matter of alternatives, I consider that the options have been well considered. The option of limiting the scheme to engineered hard flood defences would not be in keeping with best practice and would be likely to raise issues in relation to visual and residential amenity, tree removal and biodiversity. While the context of the Poddle is of a heavily urbanised catchment, it does contain lands which provide options for slowing and storing floodwaters and these have been utilised, which is appropriate and in accordance with the proper planning and sustainable development of the area.

9.1.16. **Flood storage, maintenance and scheme effectiveness**

9.1.17. In terms of the scheme design and its operation the key issues raised by observers are considered below. The main issues relate to the adequacy of upstream storage, maintenance and the effectiveness of the scheme.

9.1.18. In terms of the **volume of storage** to be provided within the scheme, the most significant works and the largest storage volumes will be at Tymon Park. Observers question whether or not more upstream storage could have been achieved, thus reducing the need for works at smaller local parks further downstream.

9.1.19. The report of Black and Veatch addresses the option of increased upstream storage. It was prepared by the specialist consultants who undertook relevant hydrological and hydraulic modelling underpinning the EIAR and the scheme design. The report notes that the main sources of inflow to the river are from the surface water drainage system at 60 points and also that there are three controlled outflows, Lakelands Overflow, Grand Canal Sewer Overflow and into the Liffey at Wellington Quay. The location of the flood storage at Tymon Park allows for a significant portion of the catchment run-off to be controlled; 20% of the catchment area is upstream of Tymon Park. By limiting the contribution of these flows to the downstream sections of the Poddle, it is stated that there will be more capacity to manage the inflows further downstream. Figure 2–1 of the report assists in understanding of this point. It shows the location of all of the main areas of the scheme. I refer also to Table 2–1 which shows the modelled peak flows and volumes entering the Poddle during a 1% AEP event. In summary, the proposed additional storage at Tymon Park will relieve the middle and lower reaches of the river in a flood event.

- 9.1.20. In more detail the following information is provided. Table 3–1 shows that in a 1% AEP event the flow entering Tymon Park is and will be 6.59 m³ per second. While 5.79 m³ per second would exit Tymon Park in a ‘do-nothing’ scenario, under the proposed development the peak flow exiting Tymon Park would be reduced to 0.75 m³ per second. This constitutes an 87% reduction in flow downstream of Tymon Park, equivalent to a 50% AEP flow. This level of flow should be naturally contained within a riverbank. Clearly therefore the works at Tymon Park will benefit areas adjacent the middle and lower reaches of the River Poddle.
- 9.1.21. As to the adequacy of the amount of storage at Tymon Park, the applicant’s case is that it was established under the Eastern CFRAM that if measures were put in place to control the flow at the outlet weir at Tymon Lake to 50% AEP, then there would be positive effects in terms of reducing the height and extent of flood defences in downstream sections of the Poddle. This conclusion was reinforced in the further modelling. The design of the additional flood storage at Tymon Park was taken forward on that basis.
- 9.1.22. I consider that it is reasonable to conclude that the PFAS by reason of the increased floodwater storage at Tymon Park, amounting to an 87% reduction in flow at the outlet weir in a 1% AEP event contributes significantly to the alleviation of flooding in the areas east of the M50. It appears to me that the modelling is robust and utilises up-to-date information.
- 9.1.23. As part of the RFI and as further set out in the report of Black and Veatch the option of introducing a larger volume of upstream storage was considered but was excluded for reasons relating to safety, effectiveness, feasibility and impacts on surrounding areas. I accept the applicant’s conclusion that the use of the footprint of existing lakes in Tymon Park is the preferred option in terms of upstream storage.
- 9.1.24. As already noted, the area upstream of Tymon Park is only 20% of the catchment. As such, in a flood the Poddle will receive significant inputs from the middle and downstream catchment, or the lower 80% of catchment. The 87% reduction in peak flow leaving Tymon Park has been referenced. However, the further one travels downstream the greater the potential for flooding from hydraulic inputs from the local area, mainly through the surface water drainage system. Inevitably, this leads to a requirement for flood relief works in a tight urban environment where options for

natural flood management are limited and defences can have significant adverse effects.

9.1.25. In the context of the urban environment, it appears to me that the decision to utilise the available green spaces in the middle reaches of the Poddle for natural storage is appropriate in principle, having concluded that the reasonable and appropriate level of storage upstream of Tymon Park had been utilised and given the source of flood inputs. In relation to Ravensdale Park in particular I note that there are 23 inflow points between Tymon Park and Ravensdale Park, although a large number of these are very small volumes. The RFI notes that if the proposed flood containment area for Ravensdale Park (which provides 700 m³ to 800 m³) was not utilised this volume would have to be contained in the narrow river channel within Ravensdale Park. The applicant's position is that to contain these waters during a flood event would require walls of height of excess of 2.4 m. While there may be arguments in relation to the option of 2.4 m high walls as the only alternative, I consider that the basic point which is made in the RFI is well-founded. Ravensdale Park provides an opportunity to develop a flood storage area at a location just upstream of the significant input from Perrystown and as such allows for a reduction in peak flows in the river at and downstream of this location, avoiding the need to protect property downstream through the provision of heavily engineered defensive structures. Similar arguments can be made in relation to Whitehall Park. In the absence of other available green spaces of significant scale, of which there are none, it is reasonable to conclude that unless Whitehall Park and Ravensdale Park, in particular are utilised to slow and contain floods, there will be a greater need to rely on heavily engineered flood defence structures.

9.1.26. Regarding the option of better maintenance of the Poddle by the two local authorities as the sole solution to catchment flooding, this is addressed in the EIAR as the 'do-nothing' scenario. I agree with the applicant that potential impacts on human health, roads and transportation networks, wastewater and surface water collection networks, commerce and other services would arise and that the option is untenable. The objectors set out a range of detailed design issues which they say will militate against good maintenance and will result in further blockages and I address these matters below.

- 9.1.27. In terms of the overall issue of blockages, the applicant acknowledges that the 2011 flood was exacerbated by a number of blockages. The blockage at Ravensdale Park, which has been subject of comment in many observations is acknowledged. Other blockages were noted at culverts at Lakelands and Kimmage Manor and the largest at Gandon close caused the wall to collapse and a large area downstream to be flooded.
- 9.1.28. I consider that the applicant's response as set out in section 4 of the Black and Veatch report demonstrates that maintenance has improved since the 2011 flood. In this regard I refer to the installation by the local authorities of new trash screens, CCTV and level alarm monitors and biweekly inspection of critical sites, response to complaints and annual inspections. I note that a number of observers state that there is no trust in future maintenance by the local authorities. I am satisfied that both local authorities have in place a number of avenues for the public to identify potential blockages and that sufficient measures are in place to respond to community concerns. At the time of my inspections, I did not note a significant level of illegal dumping at any location. In response to the comments of IFI however I recommend a planning condition relating to maintenance notwithstanding that the local authorities have given commitments as part of this application.
- 9.1.29. The modelling for the PFAS has taken into account the risk of blockage due to fallen trees from storm winds. This risk is described as significant and one which could occur during a large storm event. As such the modelled scenarios looked at the effect of blockage at 12 critical culverts along the watercourse, which were places with a history of blockage, with screens in place and which are less than 1 m wide. Flooding was predicted at these critical culverts even without any additional blockages, which demonstrates the need for flood alleviation measures. The do-nothing scenario including maintenance would not be sufficient to alleviate flooding. The scheme is designed for a 1% AEP event with 60% blockage at the key structures and the level of proposed defences set to ensure that they would not be over topped. Furthermore, the scheme incorporates structural changes such as replacement bridges where these are necessary and feasible.
- 9.1.30. Finally, in terms of the effectiveness of the scheme the benefits will extend to an estimated 921 properties in the two local authorities, out of a total of 1377 properties which are at risk from flooding in the catchment. The scheme addresses the fluvial

flood risk but will also have indirect benefits for some areas which are at risk from pluvial flooding and where works are planned to be undertaken by the local authorities to improve the surface water drainage.

9.1.31. **Conclusions**

9.1.32. In principle the development of flood alleviation for the Poddle has strong policy support.

9.1.33. I consider that the need for the PFAS is demonstrated having regard to the series of significant flooding events over the last few decades. The proposed development will protect 921 properties in the two local authorities, out of a total of 1377 properties which are at risk of flooding in the Poddle catchment in a 1% AEP event.

9.1.34. The scheme design has been long in planning and a number of alternatives have been examined. The utilisation of natural flood management combined with necessary flood defence measures is in line with best practice and may be described as innovative in the context of the built-up urban environs.

9.1.35. I am satisfied that the principle of utilising Ravensdale and Whitehall Parks as a natural flood storage areas is appropriate and that optimum volumes will be contained at Tymon Park under the scheme designed. It is reasonable to conclude that the scheme proposed relies substantially on natural flood management measures. It is appropriate that it resorts to standard engineering flood defence approaches only where necessary. I later consider the design at the level of local parks.

9.1.36. The 'do nothing' option involving better maintenance has been modelled as being an unsuitable to address predicted future flood events. A number of measures are in place since the 2011 flood event, which provide warning and prevent flooding being exacerbated by blockages. The PFAS has been designed for 60% blockage in a flood event. Commitments have been given by the local authorities relating to ongoing maintenance.

9.1.37. In my opinion the applicant's submissions demonstrate that the scheme design is based on good knowledge of local circumstances and suitable modelling. This is the basis for the decisions relating to storage volumes, height of defences and other works which constitute the scheme. I am satisfied that the analysis is robust.

9.1.38. I conclude that the PFAS will address the flood risk to high proportion of houses in the Poddle catchment for a 1% AEP event and that the general thrust of the scheme design is suitable and proportionate and maximises opportunities for natural flood management.

9.2. Detailed design

9.2.1. This section considers the proposed development at a local level, describes the nature of works and their impacts and responds to the significant points made in observations. The observers' concerns relate largely to detailed design issues and impacts on local parks, including by way of tree loss and landscape design. Biodiversity issues also arise in this respect.

9.2.2. Tymon Park and Tymon North

9.2.3. Tymon Park is a large-scale park located at either side of the M50. The Poddle flows through both sides of the park and through several lakes. The river character has an open naturalistic flow. The overall lands comprise a landscaped park and contain quite extensive pockets of woodland as well as areas which are managed as recreational grassland. The origins of the landscape in place includes the development of lakes for the purposes of flood water attenuation.

9.2.4. Tymon Park north of the M50 is the main area of flood storage proposed as part of the scheme. At this area the main flood storage embankment will be constructed, and an Integrated Constructed Wetland (ICW) will be developed. Other elements of the works project at this area include construction of a flood storage defence spillway with passive flow control and a replacement footbridge at Tymon Lakes. To facilitate these works a large construction compound will be in place for up to 24 months.

9.2.5. Due to the extent of works this area will be subject of the greatest landscape change associated with the overall scheme. In terms of the detail of the design the proposed development including the ICW, the replacement footbridge and the embankments and associated landscaping, I consider that the works are sufficiently described and are in keeping with and in due course will enhance the landscape character.

9.2.6. I consider that the removal of trees and woodlands at this area constitutes the most significant of potential adverse impacts associated with the proposed development.

Tree loss is quantified as comprising removal of 72 no. trees in 8 tree groups (3 no. B1 class and 68 no. B2) at Tymon Park north of the M50 and 54 no. trees in 3 no. tree groups at Tymon Park south of M50 (all class B2). As mitigation it is proposed to plant a total of 350 standard trees together with patches of mini- woodland comprising approximately 10,500 trees at Tymon Park north and south of the M50. In addition, at Tymon Park a further 92 replacement trees and smaller patches of woodland and marginal planting is proposed. The applicant acknowledges that in the short term the removal of trees will have a slight negative effect on habitats. I note that the trees to be removed are not mature woodlands or specimen trees with particularly high biodiversity or landscape values. As described in the further information submitted the proposed mini woodlands will mimic a natural habitat with the canopy layer, understorey or shrub layer underground layer and the method used will encourage rapid growth. I am satisfied that having regard to the level of replacement planting in the amount of 2:1, the use of native species, and the proposals for mini woodland planting the landscape and biodiversity loss will be short term.

9.2.7. Later, I address in more detail the water quality and biodiversity impacts. At this point I note that the works at Tymon include a broad measure of ecological enhancements for birds and mammals. In particular, the proposed ICW which will constitute a new landscape feature as well as benefiting water quality and biodiversity.

9.2.8. To conclude I consider that the extensive nature of the works at Tymon Park and the removal of trees and woodlands will constitute a significant and negative impact in the short term in terms of landscape change, visual amenity and biodiversity. In the medium-term however I am satisfied that the proposed development at Tymon Park will have a significant positive effect. I consider that this conclusion may be drawn having regard to the replacement tree and woodland planting, the construction of the ICW and the suite of ecological enhancement measures proposed.

9.2.9. **Ravensdale Park**

9.2.10. Ravensdale Park is a small urban park which runs to the west of Kimmage Road Lower. The park essentially comprises two triangular areas, the northern most of which is subject of works under the scheme. At this part of the park, the Poddle

passes in a channel along the western side, where a footbridge is positioned. In considering the issues relating to Ravensdale Park I address:

- the functioning of the scheme,
- the extent of tree removal,
- the nature of the proposed interventions and
- the cumulative effects combined with the proposed Bus Connects scheme.

9.2.11. In terms of the **functioning of the scheme** I refer the Board in particular to the submission of local resident Cormac McMullan. This detailed observation describes the history of flooding at this location and the proposed design. He states that in 2011 the main cause was lack of maintenance rather than the volume of water exceeding the size of the culvert entrance. He refers in particular to a high wall which is proposed to be located at the entrance to the culvert and states that in the event that the culvert becomes blocked again the high wall around the entrance will prevent and hamper access by machinery to clear the blockage. In 2011 blockage included an upturned tree, which is photographed in his second submission. In his opinion the depth of water which will result due to the construction of a high wall will further hamper access in such events and militate against blockage clearance thereby exacerbating flooding. Combined with this he states that the building of a high wall around the culvert and at the entrance to the culvert will only encourage more dumping and antisocial behaviour and make it more difficult to maintain. Further, it is stated that properties which never previously flooded will now be flooded and the entrance to Ravensdale Drive and Brookfield Estates blocked.

9.2.12. The applicant has provided a detailed response and accepts that blockage contributed to the 2011 event. However, the applicant relies on the Hydraulic Report presented and notes that this has determined that the risk of flooding at this area exists irrespective of blockages at the culvert. I have earlier confirmed by support for the methodology and assessment underpinning the proposed development. I have considered the role of Ravensdale Park in the overall scheme and noted the location of inputs to the river. I consider that the fundamental conclusion relating to the potential for flooding as set out by the applicant in technical reports should be accepted and, in this regard, I accept that works are required at Ravensdale Park and that storage of floodwater at this location is a positive feature of the scheme. In

the absence of this approach there would need to be a series of 2m high walls adjacent the culverted river at Ravensdale Park, which would be inappropriate in terms the landscape and the enjoyment of the park.

- 9.2.13. The key function of Ravensdale Park in the PFAS is as part of the natural flood management of the river. At times of flood it would act as a storage area. The flood walls include a feature wall positioned within the centre of the park, a wall at the outer side of the Poddle (western side of park) and would also use short sections of demountable features to close off the space. At the north-west corner of the park the flood walls will reach a height of 1.5 m and they taper down to a height of 0.7 m in the centre. I accept that the height of the defence walls has been properly considered under the modelling undertaken. I consider that there is no basis for supporting the suggestion that other lands in the vicinity which never previously flooded would be adversely impacted by the PFAS.
- 9.2.14. An Taisce has queried whether the option of allowing the entire park to flood was considered or if it would be hydrologically viable. This comment is made in the context of its concerns regarding the design and the introduction of the flood defence wall in the centre of the park as well as the scope for improving natural flood measures. The applicant in the document received on 5 February 2021 addresses this matter noting that containing the entire park within flood defence walls would impact tree root systems and at the northern end of the park require the introduction of an access ramp. I am not convinced of the merits of the suggestion of An Taisce.
- 9.2.15. I conclude that in terms of the functioning of the scheme, I consider that the works at Ravensdale Park are necessary and that it has been properly designed to contain waters during a 1% AEP flood. I find no evidence to conclude that it would in any way exacerbate flooding of lands in the vicinity.
- 9.2.16. Regarding the **extent of tree removal** at Ravensdale Park as indicated in the updated tree report 20 no. trees are in direct conflict with the proposed development and are to be removed for this reason. In the immediate vicinity of the main area of works at the north of Ravensdale Park there is a row of trees adjacent the existing footpath. The removal of 6 no. of trees including 3 no. Class A2 lime trees and 1 no. Norway Maple will diminish the amenity of biodiversity value of the park. In addition, I note the removal of a willow tree which is a Class A1 tree located near the

footbridge. I consider that in the context of the overall scheme the impacts at Ravensdale Park are significant, involving the removal of 5 no. class A trees. Only at one other location, nearby Fortfield Road, is there a proposal to remove any other Class A trees, in that case an elm which is a Class A1 specimen. Notwithstanding that point, I am not convinced that the amenity or biodiversity value of Ravensdale Park will be severely impacted, and, in this regard, I note that the majority of existing trees in the park are to be retained and protected as part of the scheme.

- 9.2.17. Referring again to the suggestion of An Taisce that consideration be given to a proposal to allow the entire area to flood, I am not convinced that this would be beneficial in terms of the amenity of the area or provide for significant reduction in tree loss in this park. I note item 4.19 of the response to observations provided by the applicant, which references proposals from CFRAM Options Report to construct a defence wall around the western northern and eastern perimeter involving walls up to 2.3 m high and cutting off the northern and western entrances to the park. I consider that it was appropriate that this option be rejected. Consideration was also given to an earthen embankment, which would be a wide structure and would impact on trees and would be difficult to replant. I consider that it is reasonable to conclude that both options would be unsuitable including with respect to the impact on trees.
- 9.2.18. There is in my opinion a justified requirement for flood defence walls at Ravensdale Park. A number of options have been considered by the applicant. A flood wall at an alternative location further towards the main road would be likely to impact other trees and an embankment would take up too much space. The loss of good quality trees at Ravensdale Park is significant but appears to me to be unavoidable and justified. In my opinion the works at this park when considered as part of the system of flood defence for the river are demonstrated to be necessary. When considered in terms of the alternatives, the loss of trees is preferable to other possible flood defence remedies which would otherwise be warranted to protect properties in this vicinity. Therefore, in terms of the protection of trees I consider that the proposed design constitutes a reasonable approach.
- 9.2.19. Regarding the **nature of the proposed interventions** some observers including An Taisce have expressed concern regarding what is described as a proposal to bisect the park with a concrete retaining wall which is considered to detract from the

amenity value of the park and to reduce the amount of contiguous playspace. The wall is also described as visually imposing.

- 9.2.20. The proposed development introduces to the centre of the park a 0.7m high flood defence wall which is designed as a landscape feature, and which are shown in photomontage PM 07 and PM 05. The wall to be constructed at the northern end of the park is shown in PM 04. PM 06 shows a stone clad wall to be positioned at the western side adjacent the culverted river.
- 9.2.21. I am satisfied that the design and height of the wall in terms of its location in the centre of the park will ensure that it functions as a seating and possibly a play area and that there would be visibility across it. The nature of the park is such that it is already divided by a well-used footpath which would limit its value for active recreation including ball games. I do accept that the 1.5 m height which would be developed at the north-west of the park near the culverted river will constitute a feature of some significance and will give rise to landscape change. However, the structure is to be well finished and will not significantly reduce the open space in the park and having regard to its function in the protection of properties from flooding and having considered alternatives, I am satisfied that it is an acceptable intervention.
- 9.2.22. In relation to the existing structures I note and agree with the applicant's comments that the existing footbridge constitutes a flood hazard due to its flat deck nature and railings and that it allows overflow waters to exit the park onto Ravensdale Drive. I am satisfied that the replacement of this bridge as part of the scheme with an arched deck bridge with parapet walls will provide for better conveyance of flood waters and prevent spillage outwards and thus addresses these issues. I am satisfied that the footbridge is of acceptable design aesthetic and will have enhanced functionality as part of the PFAS.
- 9.2.23. Regarding statements made that the height of the walls will encourage antisocial behaviour including dumping, I note that it is also stated by observers that this area is very heavily used as an amenity and also as a through route. I also consider that the height of the walls at 1.5 m maximum (and generally much lower) should not give rise to unnecessary concerns in this respect. In terms of the function of the park I noted in my second inspection, on a very fine day in March at lunchtime, only one

person was in the park as such while one other adult and child sat on the wall at the northern end of the park overlooking the road. Even on this very fine day the main use of the park seemed to be as a through route. On my final inspection on a sunny day at the height of the holiday season I noted that use of all parks seemed to be below average and two people were using the upper part of Ravensdale Park.

9.2.24. In conclusion I consider that the overall character of this small urban park will largely remain as it is because the dominance of trees and grass will be retained. I am satisfied that in this context and having regard to their design that the new footbridge and the walls will integrate satisfactorily. There would be no reduction in the amount of open space and its use for active play purposes is already reasonably limited. In conclusion I consider that the scheme design is acceptable.

9.2.25. Regarding the potential for cumulative effects particular reference has been made to the proposed development combined with the proposed Bus Connects scheme. Two main themes are offered by observers namely that the design of Ravensdale Park was altered to facilitate future widening of the main road as part of Bus Connects and secondly that the cumulative impacts have not been considered and that they would be significant and adverse. As a general principle I consider it reasonable for the purposes of long-term planning to leave some reservation at the eastern side adjacent the main road. The applicant refutes that the scheme design has been driven by the interface with the Bus Connects proposals. Various information has been provided by the applicant and the observers in relation to the timing of revisions to the PFAS in the context of the emerging Bus Connects. I consider that the matter for the Board is to adjudicate on the proposal presented including in the context of reasonable alternatives, rather than how those alternatives emerged. I am satisfied that the proposed development is acceptable. I revert to the cumulative impacts under the EIA section below.

9.2.26. Other matters have been raised in relation to Ravensdale Park including lack of consultation which I address under the EIA section of this report and proposals for maintenance. Related to the topic of maintenance is also a general objection to the use of the area as a flood attenuation system on the basis that the debris in the aftermath will affect the amenity of the park. I consider that the benefits greatly outweigh any temporary loss of amenity resulting from short-term closure and soiling of Ravensdale Park related to flood events and I note the commitments of the local

authorities regarding clean-up of the aftermath of flooding and the short-term duration of impacts.

9.2.27. **St Martin's Drive**

9.2.28. The two main issues which have been outlined in relation to St Martin's Drive are the loss of biodiversity and matters relating to the failure to consult with residents on the Crumlin side. I refer the Board to the detailed information presented by observers relating to the consultation which took place. In considering the issues relating to St Martin's Drive I address:

- the baseline environment
- the merits of the two options
- other alternatives
- other issues.

9.2.29. Regarding the **baseline environment**, this part of the Poddle traverses an established residential area. The Poddle river channel is dominated by large willow trees and there are views into the natural habitat from a footbridge and elsewhere. In the context of the city environment and indeed relative to other parts of the Poddle River, I agree with the observers that this section is noteworthy as a wildlife habitat. The comments of local resident and ecologist Orla Daly are of particular relevance in terms of third-party submissions on the value of the baseline ecology. She describes the proposed development as affecting a riparian habitat which is seminatural in character and dominated by large multi-stemmed willows, which have an important stabilising and ecological value. She describes the area as being of importance for pollinators, birds including little egret and other rare species and for foraging and commuting for mammals.

9.2.30. The value of the Poddle at this location is assessed as being of local importance, which I consider is supported by the information in the EIAR. I would share the observers' view of the river channel as an amenity value to local residents and to the wider area. I note that the amenity grassland adjacent St Martin's Drive is visible in the foreground to the wooded river channel and that the view is presently uninterrupted.

- 9.2.31. Regarding **Options 1 and Option 2** for flood defences at this location, Option 2 was selected, and Option 1 is also described in the EIAR. As part of the request for further information the applicant was asked to provide more information regarding Option 1 including an assessment by the project ecologist of the two options and to consider other alternatives.
- 9.2.32. Option 1 provided for a flood defence wall adjacent the footpath along the amenity grassland. The wall would step down from the 1.1 m high wall at the end of the cul-de-sac and to a height of 0.5 m and run for further distance of 70m. Most of the trees along the riverbank would be retained. No in stream or bank side works are required. The amenity grassland and habitats which would be impacted are described as being of negligible ecological importance.
- 9.2.33. Option 2 provides for a flood defence wall along the riverbank. The foundations of the flood defence wall will be directly adjacent the river and partially within the stream and constructed using coffer dams or similar technique. Tree removal would include a mixture of native trees and non-native species.
- 9.2.34. The proposed development presented Option 2. That option is stated to have been chosen as residents of St Martin's Drive on the Kimmage side expressed concern relating to the construction of a proposed flood defence wall on the grounds that it would attract antisocial behaviour and on grounds of visual amenity. The applicant in the response to submissions on significant further information received by the Board on 5 February 2021 has reiterated the support of the two local authorities for the proposed development as presented in the application (Option 2), but has not provided any clarification as to why that option is preferred by the local authorities. The strong objection to proposals put forward for St Martin's Drive relating to tree loss and impacts to biodiversity interests are acknowledged by the applicant who also states that those impacts are greater in the proposed Option 2. However, the applicant in light of the persistent resident objections and on the basis that both options will deliver the same degree of flood protection, now suggests that the Board considers Option 1 for the scheme. The applicants also pledged to work with the local residents regarding the final design of the proposals for this option.
- 9.2.35. I note that in the case of both options there are proposals for replacement tree planting and I also consider that in time the habitats would be reinstated and the

area recolonised. However, Option 2 provides for instream works and more widespread tree loss than Option 1 which mainly comprises the provision of a low wall adjacent an amenity open space. I consider that the preferred option is Option 1.

9.2.36. It is relevant to note that those in favour of Option 2 are likely to have had less input in the application process on the basis that they were satisfied with the scheme as presented in the application. The Board's decision should take into account the merits of both options rather than the strength of feeling or number of objections made. I recommend that the Board by condition require that works at St Martin's Drive be in accordance with Option 1.

9.2.37. In terms of the other options available, the do-nothing scenario has been addressed by the applicant. With no protection measures in place waters would over top the channel at the cul-de-sac to the south and would affect houses at St Martin's Drive including complete inundation of properties around the northern end of the cul-de-sac as well as other properties along Kimmage Road Lower. I am satisfied that there is a need for works at this location and I consider that no substantive argument has been presented which would support the do-nothing scenario.

9.2.38. The applicant in section 7.1.7 of the further information response addresses other flood protection options which were discounted. A flood embankment would have required all trees to be removed and precluded replanting. Transparent or glass wall defences if vandalised would be costly to repair and when undergoing repair would not provide any flood protection. Demountable fences would be particularly unsuitable in this catchment due to the short time to respond to rainfall events. Glass wall and demountable options would be considerably more expensive to install in addition and have a shorter lifespan than the reinforced concrete walling proposed. I consider it may be concluded that the selected approach involving reinforced concrete walls is appropriate.

9.2.39. There are a number of other issues, which I address below. These relate mainly to procedural and related matters.

9.2.40. I note that observers commenting on the submitted further information state that there is a 'new' proposal has not been made known to the public. I refer for example to the submission of Michael Dempsey and Siobhan O'Connor which states that 'under the new plans it appears the proposed concrete wall and associated tree loss

at St Martin's has been extended north by 40m'. As clarified in the applicant's response Table 8.3 of RFI No. 7 erroneously shows a proposed wall line in yellow – that is in fact the existing wall. The applicant apologises for any oversight and concern caused but confirms that there is no change to the proposed length of defence wall. I accept this clarification.

9.2.41. In relation to whether the recommended planning condition would be contrary to fair procedures and public participation, I consider such arguments are not sustainable in the context of the revised public notices. Furthermore, the two options were outlined in the EIAR and in the context of the overall scheme the variations between the options at St Martin is a relatively minor issue. An alteration of this scale could be addressed by condition of the decision if the Board deemed that appropriate. The fact that it has been presented in further detail as part of the further information is immaterial in terms of the opportunity for public comment and at all times the public has been invited to offer observations.

9.2.42. In conclusion, I consider that there is a need for flood defences at this area and that the selected approach involving construction of reinforced concrete flood defence walls is appropriate.

9.2.43. I recommend that the Board adopt Option 1.

9.2.44. **Whitehall Park**

9.2.45. Whitehall Park is the name I will use to describe the open grassland area which is located to the rear of two residential areas and abuts Templeville Road to the south and open space at Wainsfort Manor Crescent to the north. The land is presently under a wild meadow through which the river flows and it does not appear to be maintained by the local authority. Due to the elevation of the channel beds which exist at present there is no functional floodplain.

9.2.46. In response to a request from Inland Fisheries Ireland during the pre-application consultation period, a meander is to be introduced to encourage natural channel restoration. The original proposal considered involved provision of slopes and public realm improvements as well as public access. For a range of reasons this was altered and the amended proposal is to create a two-stage channel with a low channel and inset floodplain where large wood structures will be introduced and pre-

established coir rolls installed. A wetland feature incorporated involves creating a deeper pond and shallower marginal areas and this is provided with water flows from a backwater connecting channel. It is set at an elevation which will allow water to enter the wetland during peak flow periods. The new re-profiled and realigned channel will have a more sinuous and stable bed geometry and will contain alternating pool – riffle morphological units. The emphasis in the revised design therefore is more focused on biodiversity creation and enhancement – an earlier proposal focused on creation of an area for use by the public.

9.2.47. There is no existing pedestrian through route along the river from Whitehall Park and no proposal to develop one. There is an existing pedestrian access at the site and a worn path along the river. Notwithstanding the development plan objectives which focus on integrating the green infrastructure within and between counties, it appears that there is no demand for such a connection and that it was opposed by local residents. Given that flood prevention is the primary purpose of the scheme I do not recommend that the Board adopt a condition to provide a connection along the Poddle from Whitehall.

9.2.48. I consider that the design proposed at Whitehall constitutes best practice in the form of natural flood management. It has been prepared by an award-winning specialist in river and floodplain restoration. I am satisfied that there will be benefits in terms of aquatic ecology, water quality and biodiversity and that the feature will function to slow and contain water in the event of a flood.

9.2.49. I note that the works at Whitehall Park have not attracted a significant level of comments from observers. One local resident Mr Tom O'Mara did highlight some particular issues. The proposed gate which the observer references will provide access to the left bank for the purposes of maintenance only and it will be a secure structure. Thus, there is no change in the access arrangements to the left bank. Mr O' Mara also raises an issue to do with flood protection of his property and the applicant has confirmed that the flood defences will extend to this area and that the existing gabions, which were installed by the landowner will not be relied upon.

9.2.50. I consider that the proposed works at Whitehall Park will constitute a significant benefit to the area in terms of its landscape and biodiversity assets as well as functioning as part of the flood relief system. I am satisfied that there would be no

diminution in residential amenity along this stretch of the Poddle and that these houses will benefit from flood protection.

9.2.51. Wainsfort Manor Crescent

9.2.52. This area, which is to the north-east of and downstream of the lands at Whitehall Park is separated from Whitehall Park by existing walls. These are to be retained as noted above. At this location the scheme largely involves replacement of existing / reinforcement walls using precast walls where possible and functionally replacing the existing walls which are not fit for purpose in terms of flood defence. The aim is to provide a flush flood defence wall at the left bank of the river, the construction of which will be undertaken from the right bank at Wainsfort.

9.2.53. The character of the lands at Wainsfort are of managed landscaped area, which is typical of many suburban developments. Residents in this area have expressed general support for the scheme (e.g. College and Wainsfort Residents) or have queried some detail of the works including in relation to excessive tree removal, which issues were raised by Deirdre Fagan and others. In the further information response, the applicant addressed concerns relating to tree removal at Wainsfort Manor Crescent. Through detailed design review and refinement of the construction works involving working through gaps between the large specimen and high-value trees with selective tree surgery / removal under the direction of the arborist and other measures, the number of trees to be lost is reduced from 36 no. to 20 no trees. Full details are presented in section 8 of the response to further information. I consider that the applicant has demonstrated a good understanding of the construction phasing and approached the matter with due care. The measures to protect trees are likely to be successful. Of the trees to be removed all are classed as of Moderate quality. I consider that it is demonstrated that there will be minimal removal of trees and that any resultant adverse impacts are unavoidable in the context of reinforcing flood walls at the opposite side of the river.

9.2.54. Other observers concerns in relation to works at this location relate to the lack of photomontages and it is also stated that there is no plan to replace trees which will be lost. Having regard to the nature of the works I do not consider that a photomontage would add significantly to the understanding of the proposed development at this location. The nature of the works largely concern

reinforcement/replacement of existing walls at the opposite side of the river and do not require explanation by way of visual aids. In relation to replacement trees I note that Wainsfort is amongst the areas identified for additional tree planting including 20 trees along the river corridor.

9.2.55. **Conclusion**

9.2.56. In conclusion, in relation to the detailed design of individual open spaces, I consider the revised proposal presented in the further information constitutes a significant improvement in terms of protection of trees and that the applicant's response successfully addresses concerns raised. In view of the proposed replacement planting and the efforts to minimise tree removal, I consider that no significant adverse long-term impacts will result. Tymon Park and Ravensdale Park would be subject to most significant adverse impacts in the short term but I am satisfied that the mitigation proposed is appropriate and sufficient. The works at Whitehall Park are also noteworthy but the open space is not a valued or used amenity and on completion it will be enhanced.

9.3. **Biodiversity**

9.3.1. **Overview**

9.3.2. As a prelude to this section I refer to the description by the applicant of the scheme as a multi-faceted project in existing green infrastructure. The scheme will provide benefits other than flood management as it also provides for water quality improvement measures involving the construction of an integrated construction wetland at Tymon Park and for other habitat enhancement measures. It is the applicant's position that the scheme will provide for a net biodiversity gain. Issues raised by observers include detailed comments in relation to the impact on local parks and associated biodiversity.

9.3.3. Earlier in this report I set out my views in relation to the incorporation of natural flood measures and my opinion that these are well considered and undertaken to the greatest degree possible. I consider that a suitable and holistic approach to the matter of flood management in this urban environment has been undertaken. The nature of this approach is largely compatible with minimal interference with

biodiversity and biodiversity improvements. However, but there are also negative biodiversity impacts arising from the construction phase and associated mitigation measures are presented, the identification of which is the focus of this section of this report.

9.3.4. I address issues related to biodiversity under the following headings:

- tree loss
- impacts and mitigation
- water and aquatic environment
- other comments.

9.3.5. **Tree loss**

9.3.6. I consider that tree loss is likely to constitute the most significant adverse biodiversity impact. The applicant notes that as mitigation the number of trees to be planted will be more than twice the number removed and that in some locations there are limited opportunities for replacement tree planting. Observers consider that this mitigation is insufficient and that the scheme involves loss of trees and woodland which are irreplaceable for biodiversity and in the context of climate change and flood management.

9.3.7. I consider it relevant to note at the outset that the application documentation addresses the impact on trees, tree lines, hedgerows and groups of trees in considerable detail. The CSR Updated / Tree Survey Report and Arboricultural Impact Assessment contains some revisions on the original scheme. It incorporates changes in the number of trees to be felled at Wainsfort Manor Crescent, Ravensdale Park and St Martin's Drive. In all, 217 trees are to be felled of which 59 are in the DCC area and 158 in the SDCC area. A total of 609 trees are to be replanted over the whole scheme both in woodland pockets and in the form of amenity planting along pathways as well as along the river channel and in hedgerows.

9.3.8. I note the submission of an independent arborists report as part of the submission of Roisin McAleer and Laure Duez which was received by the Board on 10 June 2020. Subsequent to this the applicant has provided (as appendix 4 of the further

information response) CSR Updated / Tree Survey Report and Arboricultural Impact Assessment was presented by the applicant. I am satisfied that the submitted document on this topic is of acceptable standard and suitably comprehensive.

- 9.3.9. As set out in the application documentation tree felling is necessary to facilitate the development as a number of trees are in direct conflict with the proposed development. The applicant anticipates that there will be no further tree loss as a result of indirect impacts subject to protective measures set out. I am generally satisfied that the design has taken due account of the presence of trees and woodlands and that there are no obvious opportunities to revise or amend the scheme in a manner which further minimises tree loss. I accept the statement made by the applicant in relation to protective measures.
- 9.3.10. In strictly numerical terms the proposed replacement tree planting may be considered to constitute significant mitigation. In particular I note the detailed consideration which has been given to the development of the mini-wood lands and the extent of the area devoted to this habitat. However, as observers have referenced the ecological and other values associated with mature trees cannot be easily replicated, at least in the short term.
- 9.3.11. In fact, very few mature trees would be affected by the scheme. Of the trees to be removed the majority (197) are Class B trees and are reasonably described as being of moderate value. The remaining lifespan of most of the trees to be removed is over 40 years. As noted earlier there are in total 6 no. Class A trees to be removed and these are all at Ravensdale Park or nearby. As noted in the CSR report the value of groups of trees which was attributed in the report reflects the greater visual and ecological value of groups. Many of the trees which are identified for removal are at Tymon Park and within a setting which is designed to provide a seminatural environment. It is at that location also that the majority of new tree planting will take place including the creation of mini-woodlands and mainly using native broadleaf species.
- 9.3.12. Following examination of the design and the issues raised and submissions, I consider that it may be concluded that the applicant has availed of all reasonable opportunities to undertake replacement tree planting. The applicant acknowledges the limitations in terms of land available, which I accept. Commitments have been

made to plant trees in the general vicinity of the scheme where it is not possible to replace them directly within the site.

9.3.13. I note in general that the undertaking of a flood scheme of this nature involving use of natural flood management approaches is highly beneficial including to ecology. It is necessary and reasonable that a large amount of that storage take place at Tymon Park and a lot of the tree loss is associated with the works in that area. I have earlier referenced the loss of Class A trees at Ravensdale Park which is the second significant flood water storage area. I have also made recommendation relating to St Martin's Park which I am satisfied would address observers concerns and would have a positive outcome in the avoidance of impacts on trees. I agree with observers comments that the retention of the riparian conditions formed by the dominance of Willow in particular would benefit the river by providing shade and control of silt and prevention of erosion. There are other areas including at Fortfield Road and Wainsfort Manor Crescent where tree loss is a consequence of works related to necessary flood defence construction and in my opinion, impacts have been minimised.

9.3.14. In conclusion, I consider that the loss of trees and broadleaved woodland together with the associated habitat disturbance is a negative outcome arising from the proposed development. However, I consider that the impact is one which is unavoidable, and that the applicant's mitigation measures avail of all reasonable opportunities for replanting, and I am satisfied that in the medium-term the residual effects would be at least neutral and most likely to be positive. I consider that the CSR report which identifies particular measures relating to avoidance of indirect impacts is robust.

9.3.15. I note that the Schedule of Mitigation measures in the EIAR does not adopt the recommendations of the CSR report in their entirety. I have recommended a condition to this effect in view of the importance of the issue. In the context of my conclusions above, I disagree with the observers who state that the proposed development contravenes the tree management/development plan policies.

9.3.16. **Impacts and mitigation**

9.3.17. The construction of the PFAS will result in a variety of direct impacts on habitats and dependent species during the construction phase. Significant amongst the works are

tree removal and site clearance, stream diversion and works which have the potential to give rise to adverse water quality impacts and noise. Water quality impacts are separately addressed. Noise impacts will be limited to general disturbance and in this regard, I note that the original proposal to utilise sheet piling at Tymon Park is now omitted.

- 9.3.18. The EIAR notes that while a range of habitats within the development footprint will be impacted, the area of most significant impact will be the managed natural habitat at Tymon Park and environs where there is a wealth of habitats and species. The large ponds known as Tymon Lakes which are between 0.2 ha and 1.8 ha contain Reed swamps and tall herb swamps. The habitat is species rich and of importance for birds and fauna. Features of this size and diversity are relatively rare in the city. It is relevant to note that the areas impacted have an assigned ecological value of county level.
- 9.3.19. There would be no loss of the county value habitats around the lakes and the planting of additional patches of marginal wetland vegetation will have a positive ecological impact. The extensive works at Tymon Park will include the construction of embankments on an area of species rich dry meadow located to the north and east of Tymon Lakes. This impact will be mitigated by removal, safe storage and reinstatement. The proposed ICW will also impact the species rich dry meadow and the same mitigation measures apply. Unavoidable impacts to flowering rush plants is deemed to be highly likely and provision for protection and/or translocation is included in the schedule of mitigation measures.
- 9.3.20. Tymon Park and Tymon Lakes are of some importance for migratory birds and also for breeding birds. It can be concluded that the fluctuating water levels in the operation phase may adversely affect water birds if nests are inundated. Floating nesting platforms are to be installed as a mitigation measure and expert guidance is to be sourced to ensure successful design and implementation. I consider that this measure is likely to be successful and that it will provide safe nesting sites for birds that usually use the lakeside and island at this location.

As Brent geese are qualifying interests of European site I deal with the species and other qualifying interests under the Appropriate Assessment section of this report.

- 9.3.21. I note and concur with the recommendation by NPWS that any grant of permission be accompanied by a condition relating to the timing of tree and hedgerow removal to ensure no impact on breeding birds.
- 9.3.22. A number of matters have been raised by observers in relation to the suitability and adequacy of information presented in terms of the baseline environment. I note the reference in observations to lack of consideration/identification of birds including little egret, Kingfisher and others and the response of the applicant which is to reference section 7.4.2.6 of the EIAR. I am satisfied that the bird surveys undertaken, and the expert assessment presented in the application submissions provide sufficient information in relation to impacts on birds. Indeed, I consider that this conclusion may be drawn in relation to the overall assessment of biodiversity. I find that there is nothing to support one observer's query regarding potential wet woodland Annex I habitat at Tymon Lakes – section 12.19 of the response to observations addresses this matter adequately. I note that NPWS did not raise any concerns in terms of the baseline surveys or the applicant's assessment in general.
- 9.3.23. Regarding badger and other mammals, the applicant submits there would be no significant impacts. I consider that the presence of badger setts has been addressed sufficiently. Three species of bats are present with a high level of activity around lakes at Tymon Park and the Poddle and the associated lake/pond woodland and scrub habitats are likely to be a key foraging and commuting area for bats in the south-west of the city. The construction of the ICW will provide increased foraging resources for bats but removal of trees will result in further fragmentation severing commuting or feeding areas. The conclusion in the EIAR is that this will be an imperceptible effect on bats as the species present will readily cross gaps of several metres. This appears to me to be a reasonable conclusion. Measures are set out relating to the installation of artificial bat boxes at various specified locations along the Poddle. There would be no impact on bat roosts and no potential roost features were identified within the trees, which were all inspected.
- 9.3.24. Regarding otter, while the original surveys did not find any evidence of otter or otter holts, the possibility of occasional use of the Poddle by the species was not ruled out. The surveys of September 2020 however report the possible recent finding by local authority staff in the Tymon Park area of a possible otter holt. The status of the possible otter holt will continue to be monitored and will be reassessed before and

during construction works. No direct impact from the scheme is anticipated. Suitable measures are set out in section 8.5.13 of the further information response which will ensure protection during the construction period if the species is present, and commitment is given to liaison with NPWS.

- 9.3.25. In response to the submission of NPWS otter holts are to be introduced as part of the PFAS. Otter are present on the nearby Dodder and occasionally visit the Poddle. The Poddle is not of importance for fish and in order to support otter it is likely that significant improvements in fish stocks would be required. The water quality improvements as a result of the removal of nutrients and pollutants due to the ICW is likely to have a significant positive effect on aquatic ecology. An updated report which assessed fish stocks noted the presence of one species only (three spined stickleback) and also indicated that it is hydro-morphological issues rather than water quality which influence the limited value of the Poddle for fish. Amongst these constraints are culverts in the lower reaches which prevent salmonids migrating. Nevertheless, if successful, the extended habitat for otter in this urban area would constitute a significant positive impact.
- 9.3.26. I am satisfied that the measures relating to impacts on mammals have been suitably assessed and that there is no likelihood of significant adverse effects in the short term and possible moderate positive effects in the medium term as a result of provision of additional bat roosting opportunities and otter holts.
- 9.3.27. The potential for spread of invasive species is addressed in the application documentation and a requirement set out for the preparation of an invasive species management plan for the purposes *inter alia* of control of Nuttall's waterweed.
- 9.3.28. In conclusion, I support the assessment by the applicant in relation to the biodiversity which would be impacted by the proposed development and consider that no impact on biodiversity valued higher than county level is likely. Having regard to the nature of the works and their location relative to ecological receptors subject to further consideration of water quality impacts below, I am satisfied that the construction phase impacts on biodiversity would be short-term and amenable to mitigation. It is also reasonable to conclude that the scheme would be likely to result in moderate positive impacts in the medium-term.

9.3.29. **Water and aquatic ecology**

- 9.3.30. In general, I consider that the interventions arising as a result of the PFAS would constitute largely positive effects on water quality subject to suitable control of impacts during the construction phase. As a general principle the incorporation of natural flood management approaches is sympathetic to the protection of water quality in so far as during flood events disturbance in the watercourse channel is lessened and scouring and other effects are minimised. In addition, the scheme contains two elements which will have a significant positive effect on water quality and associated aquatic ecology namely the proposed ICW and the works at Whitehall Park.
- 9.3.31. At the time of inspection, I noted that the base of the river is dominated by silty material. The ICW concept targets treatment of a wide range of common parameters especially ammonia, phosphorus, nitrate and additional parameters such as suspended solids, BOD and a variety of metals. Improvements in water quality are expected to result as time progresses and as the ICW becomes established. It will function with a narrow fast flowing channel converted into a wide shallow vegetated wetland cell which will provide immediate improvements in water quality as well as biodiversity and amenity. The ICW in itself subject to proper design and maintenance will be a supporting habitat including for aquatic ecology. It will constitute a habitat of value which will enhance the ecology of the area and complement the existing species rich reedbeds and tall herb swamps at the ponds.
- 9.3.32. I note that the works at Whitehall Park notably the inclusion of the meander was undertaken following consultation with the IFI. The creation of a variety of habitats as proposed is likely to contribute to improved biodiversity. In this respect I note the revised iteration incorporates more of an emphasis on the natural environment which I consider will benefit water quality and dependent aquatic ecology.
- 9.3.33. In conclusion I am satisfied that the proposed development subject to compliance with the construction practices and mitigation measures described in the EIAR can be constructed without significant adverse water quality impacts and that in the operational phase the PFAS will benefit water quality and supporting biodiversity.
- 9.3.34. **Other comments**
- 9.3.35. I have noted above that the PFAS includes a range of ecological enhancement measures. I have referred above to the ICW and Whitehall Park, which are

significant positive interventions. Other habitat enhancement measures are directed at particular species and include provision of artificial sandbanks to encourage nesting by sand martins and kingfishers on Tymon Lakes and provision for otter holts, including at Tymon Lakes and at Whitehall Park.

9.3.36. In response to impacts associated with the development the applicant has set out a range of mitigation and monitoring measures. Mitigation measures including with respect to meadow habitats, trees, nesting birds and water quality effects have all been suitably considered and relate largely to the construction phase. The provision of nesting platforms has been referenced also as a mitigation measure to address operational phase issues associated with possible changes in water level at the ponds. I am satisfied that the applicant's submissions address the likely significant impacts on biodiversity and that the mitigation measures are suitable and adequate.

9.3.37. In terms of whether or not the scheme constitutes a net biodiversity gain, I consider difficult to draw conclusions on this issue in the context of limited application of this concept in the Irish planning system to date. However, I consider that it is reasonable to conclude that the scheme design where possible avoids impacts and provides for the protection of flora and fauna and that it includes a range of habitat enhancement measures. Some local areas will benefit more than other areas in this respect. The loss of trees as a biodiversity and amenity will impact some locales and the compensatory planting will take time to have effect and to regain their amenity and biodiversity value. Nevertheless, when the length of the Poddle River is considered in its entirety I am satisfied it is reasonable to conclude that the flood scheme incorporates a carefully considered approach to biodiversity and that losses of biodiversity are likely to be short-term and will largely be related to tree and woodland removal.

9.3.38. **Conclusion**

9.3.39. The loss of trees and woodland and the associated habitat disturbance will constitute a loss of biodiversity which I consider is a significant short-term adverse impact.

9.3.40. Short-term disturbance to birds and mammals and impacts on habitats have been minimised.

- 9.3.41. Any adverse effects have to be considered in the context of the ecological benefits arising from the overall scheme, which contains a range of enhancement measures have been incorporated notably the construction of the ICW, the works at Whitehall Park and the measures to increase habitat availability for otter, sand Martins, Kingfisher, nesting wild birds and other species.
- 9.3.42. I consider that the documentation presented sets out suitable mitigation measures to remedy adverse effects where they occur and to ensure that no unforeseen additional impacts arise.
- 9.3.43. In conclusion, I consider that the development is acceptable in terms of biodiversity.

9.4. **Residential amenity and related**

I address the broad topic of residential amenity in terms of the following issues:

- impacts on local parks
- noise during construction
- other construction phase impacts.

9.4.1. **Impacts on local parks**

Observers have raised a common theme which refers to the social, recreational and aesthetic value inherent in local parks and open spaces and their value for local residents. Under the heading of detailed design above I have considered the impact of the proposed development on local parks, which is relevant also to the broader issue of residential amenity. I have concluded that the proposed development is acceptable in terms of the impacts on the visual and recreational amenity functions associated with these spaces. Having regard to the proposal before the Board, I am satisfied that the proposed PFAS would not result in any diminution in the value or availability of local parks and open space and the tree loss has been minimised. Notwithstanding the landscape change and temporary disruption and tree removal, the scheme has been designed to ensure the continued value of local parks and open spaces for use by residents. I have concluded also that some spaces will be enhanced in terms of their general amenity and biodiversity, notably Whitehall Park. I have made recommendation relating to St Martin's Drive, which I consider addresses

the concerns set out in observations. I have considered elements of the scheme in terms of potential for antisocial behaviour and concluded that there are no significant issues. I have considered the matter of maintenance in normal circumstances and after a flood and concluded that the PFAS does not present any opportunities for improvement. I therefore conclude that in the PFAS would not give rise to any significant adverse effects on local and open spaces and parks which would diminish their value for residents.

9.4.2. **Noise impacts**

- 9.4.3. As part of the further information, I requested clarification on noise impacts during the construction phase. As a result, the EIAR was supplemented by a further noise impact assessment which provided clarification on the duration of construction phases and the predicted noise impacts at the different locations. Of the five main construction areas, those which are located in close proximity to residential areas are at Whitehall Park/ Wainsfort Manor Crescent, at Fortfield Road/Ravensdale Park, St Martin's Drive and Mount Argus and at Poddle Park/St Teresa's Gardens. The estimated maximum construction period in terms of cumulative months is between two months and seven months as set out in table 2-1.
- 9.4.4. The significant element in the further information submitted comprises a more detailed assessment of noise impacts at defined locations. It is demonstrated that the residual noise impacts will be negligible – slight adverse. It is clarified that a small number of noise sensitive receptors may experience a moderate adverse residual impact, which will be short term and will occur during intermittent construction activities. The potential for these residual effects is identified throughout the scheme.
- 9.4.5. Having regard to the proposed working primarily during daytime hours and noting the ambient noise levels, which are typically 55 – 60 dB LAeq during daytime, and the significance of impact (moderate at worst) I consider that the development is acceptable. In this regard I note that a moderate effect is one where the receptor may deem the noise to be intrusive and which is likely to provoke action such as closing windows or speaking more loudly.
- 9.4.6. The EIAR indicated a proposal to allow for some flexibility in terms of night-time working. It has been clarified by way of the updated noise impact assessment that

evening and night-time working is not expected to take place but that limited 24 hours working may be required on occasion and shall take place with the prior agreement of the local authorities. Such works would include site security inspections and related activities, concrete pouring/finishing, and over pumping operations and running of pumps as required. Having regard to the nature of these works, the limited durations and the proposed fitting of pumps with acoustic enclosures to ensure that the night-time threshold of 45 dB LAeq, at the façade of the nearest residential properties is achieved and the proposal for prior agreement with the local authorities, I consider that minimal disturbance to local residents will result.

9.4.7. I conclude that the construction of the scheme will not give rise to unacceptable noise impacts.

9.4.8. **Other construction phase impacts**

9.4.9. Finally, in terms of impacts on residential amenity I note that there will be a level of general disturbance in the construction phase including by reason of localised dust effects, traffic congestion. Subject to standard construction mitigation measures, which are amply provided for in the application, these measures would be not significant, would be of short duration and generally if they do occur would be largely acceptable and unavoidable in the context of a major construction project in an urban area. Changes in landscape character and typical construction phase impacts will occur in the vicinity of the construction compounds, which are to be located close to houses and within open spaces or parks which are used on a daily basis by local residents. The applicant has clarified the location of the construction compounds and the duration of their use. I am satisfied that no significant issues arise in this respect and note that it is not been subject of comment in observations.

9.4.10. In conclusion I consider that subject to the mitigation measures set out in the EIAR there is no likelihood of significant adverse construction phase impacts and that the impact on the residential and other amenities is acceptable.

9.5. Water Framework Directive

- 9.5.1. The water quality status of the River Poddle had been unassigned since 2009 and previously had been Poor. Following a request of An Bord Pleanála to the EPA in the context of the Gorumna decision a status of Poor was assigned in 2022. The waterbody is being considered by the EPA as a candidate Heavily Modified Waterbody. Under the Water Framework Directive, the Poddle is within the Liffey and Dublin Bay catchment and specifically within the Subcatchment Dodder_SC_010. As set out in the 2018-2021 River Basin Management Plan the Dodder is identified as a priority area for action – there is no specific reference to the Poddle itself. In relation to subcatchment issues in general for the Poddle nutrients are the significant issue and multiple diffuse urban sources of pollution the significant pressure. These factors contribute to the identification of the waterbody as ‘At Risk’ of not meeting its WFD objectives.
- 9.5.2. The applicant was requested to provide an assessment of potential impacts of the proposed scheme on the WFD status of any affected waterbodies taking into account the information provided by the EPA. The applicant’s response comprises the report entitled Water Framework Directive Screening Assessment for the proposed River Poddle Flood Alleviation Scheme. This examines the elements of works which are proposed as part of the scheme, draws conclusions in respect of the likely overall impact of those works and comments on mitigation measures. It utilises a scoring system to assess the active interventions proposed to be undertaken in the channel and the riparian zone.
- 9.5.3. In general, I find that the conclusions drawn in the expert report are clear and do not require explanation or justification. A sample of the commentary provided includes:
- the planned introduction at various locations of coir rolls will encourage growth of marginal vegetation resulting in conditions which will improve the biological quality elements
 - risks during construction are to be managed
 - placement of wood structures instream is recommended at various locations
 - careful consideration of reintroduced gravels will benefit the riverbed

- channel restoration at Whitehall Park is described as having both positive and negative impacts – mitigation in the form of adding large wood structures to diversify the physical habitat is recommended – overall these works would improve the WFD status by creating habitat and improving hydromorphology
- the proposed ICW at Tymon Park is described as a positive feature for water quality but needs to be subject to assessment of the flow control structure for fish passage.

9.5.4. I am satisfied that the report has been undertaken by a suitably qualified and experienced specialist. I consider that the report provides sufficient information for the Board and that the report can be relied on in terms of the requirements to adhere to the objectives of the WFD. I also consider that the report contains useful recommendations relating to mitigation and it should be specifically mentioned in a planning conditions. I do not consider that it would appropriate to overly prescriptive and for this reason I have not recommended detailed conditions.

9.5.5. Notwithstanding the contents of the report, I remain unconvinced that the works planned at St Martin's Park involving instream works and removal of willow trees is warranted in the context where there is a suitable alternative which will provide flood protection without such a high level of intrusive works. The further submission of Orla Daly and Victor Karmanski addresses this matter also. The expert report concludes that at many of the sites the planned works involve replacement of existing bankside walls with new more robust versions and as these are replacements their effect on the hydromorphological processes can be viewed as neutral – it is not however evident to me that there is a clear justification for the proposed new structures at St Martin's. I note that the new retaining wall would be accompanied by introduction of new coir rolls which would benefit or biological quality elements, but I am not convinced that this option is preferable to retaining the existing conditions.

9.5.6. Overall, I consider that it may be concluded that the proposed development includes measures which enhance habitats and water quality and that in the long term the changes to hydromorphology will positively influence the WFD status. I agree with the overarching conclusion of the expert report that the PFAS can be considered to be neutral or beneficial subject to the implementation of mitigation measures. I

consider that the Board can conclude that the proposed development complies with the legal requirement to meet the objectives of the Water Framework Directive.

9.6. Archaeological, architectural, and cultural heritage

- 9.6.1. The section of the River Poddle which will be subject of works contains a wealth of archaeological, architectural and cultural heritage assets dating from the mediaeval period onwards. A number of interventions proposed may impact on these assets.
- 9.6.2. Archaeological sites and monuments which could be impacted include a tower house at Tymon Park, the City Watercourse, the zones of notification for Donore Castle, for a windmill near Poddle Park and a weir at Mount Argus. The City Watercourse is described in interesting detail in the documentation presented and the industrial activities associated with the Poddle in the past are noteworthy.
- 9.6.3. Regarding architectural heritage there are no built heritage assets within any of the construction boundaries therefore there are no predicted impacts. The EIAR references the protected structures / NIAH listed structures and does not identify any impacts to their settings.
- 9.6.4. Three cultural heritage assets identified within the proposed construction areas relate to post-mediaeval mills and mill features as well as one designed landscape.
- 9.6.5. Table 11 – 8 of the EIAR sets out a range of mitigation measures which will be implemented prior to and during the works associated with the construction of the scheme. In general, archaeological monitoring followed by further mitigation such as preservation in situ or by record is to be undertaken. Any further mitigation will require approval from the National Monuments Service. There is a further recommendation regarding a location where it is proposed to divert the watercourse of the river and it is stated that a wade survey should be carried out along that stretch of the Poddle prior to commencement of construction activities.

The submission of the Department of Culture, Heritage and the Gaeltacht recommends detailed conditions relating to archaeological monitoring, predevelopment testing at Cutlers Mill and Cutlers Weir, and a Wade and Detection survey. In general, these are compatible with the mitigation measures in Chapter 11 of the EIAR. The applicant concludes that there will be no residual impacts to the archaeological, architectural, or cultural heritage resulting from the proposed

development. I concur with this conclusion, which is reasonable subject to the condition below.

9.7. Material assets

- 9.7.1. Having regard to the objectives of the PFAS it may be concluded that the proposed development will give rise to positive effects on material assets due to the enhanced protection from flood events notably the protection of the majority of houses which are at risk of flooding in the catchment.
- 9.7.2. TII has raised an issue with respect to potential impacts on the M50 which warrants consideration. The River Poddle passes under the M50 through the Poddle River Culvert. TII notes the importance that flood alleviation work measures safeguard the safety and strategic function of this critically important national infrastructure. TII identifies a concern which relates to potential impact on a concrete pipe which protrudes through the abutment of the culvert, and which appears to carry surface water run-off from the M50. It is stated that any additional flow through the culvert resulting from the scheme could lead to the culvert running at full bore with potential for the pipe to be blocked and surface water outfall backing up such that it may not drain effectively from the motorway. In this respect TII states that a hydraulic analysis should be undertaken to identify potential impact on the hydraulic capacity of the culvert and the potential for scour.
- 9.7.3. The applicant's response received by the Board on 8 February 2021 addresses the matter. The significant point is that the majority of flood relief works are being undertaken downstream of the M50 and therefore there is no effective change to the existing flow regime through the M50 culvert. In this regard the applicant confirms that the hydraulic modelling which was undertaken shows that the performance of the 450 mm concrete drainage pipe is unchanged.
- 9.7.4. In relation to the matter of the hydraulic modelling I consider that it is adequate in terms of the inclusion of all hydraulic structures in the model including the M50 culvert and the drainage from the M50. I note in addition that the applicant refers to the surveying of the culvert as part of the preparation of the scheme design and that there was no hydraulic impediment to flow recorded and no visible sign of scour.

Ultimately the applicant refers to the responsibility for maintenance for this motorway structure being with TII.

9.7.5. I accept the broader point set out by the applicant that there is no likelihood of significant change to the flow regime through the culvert as the amount of works upstream are very limited.

9.7.6. I conclude that the development is acceptable in terms of impacts on material assets.

9.8. **Conclusion**

9.8.1. I am satisfied that the scheme has been designed in a manner which is sensitive to the urban environment including its biodiversity and recreational assets and that it minimises adverse impacts and avoids unnecessary flood defence infrastructure.

9.8.2. Through the incorporation of natural flood management measures as a key driver for the design of this scheme I consider that the Poddle Flood Alleviation Scheme puts biodiversity and the natural environment to the fore. The proposed development also incorporates a range of ecological enhancement measures which will enhance the attractiveness of the Poddle for enjoyment by residents, will benefit water quality and biodiversity and be in keeping with the objectives of the Water Framework Directive.

9.8.3. I am satisfied that the basis for the scheme including with respect to the modelling and detailed design is robust and that it will be effective in its primary objective which is to protect the majority of properties at risk of flooding in the Poddle catchment.

9.8.4. I consider that the proposed development complies with planning policy and guidance at national, regional and local level.

9.8.5. I conclude that the proposed development is in accordance with the proper planning and sustainable development of the area.

10.0 **Environmental Impact Assessment**

10.1. **Introduction**

10.1.1. This section of this report comprises an assessment of the likely significant effects of the Poddle Flood Alleviation Scheme as proposed in the application submitted to the

Board. It should be read in conjunction with remainder of the report and considered in the context of the nature and character of the area and its environmental assets.

10.1.2. The requirement for EIA arises as the project is of a type and scale identified under Schedule 5 Part 2 of the Planning and Development Regulations 2001 as amended. The type and class of project falls under Schedule 5, Part 2 (10)(f)(ii):

Canalisation and flood relief works... where the length of river channel on which the works are proposed would be greater than 2 km.

10.1.3. I am satisfied that the information contained in the EIAR complies with Article 94 of the Planning and Development Regulations 2001, as amended, and the provisions of Article 5 of the EIA Directive 2014.

10.2. **Compliance with Legislation**

10.2.1. The legislative requirement to submit an Environmental Impact Assessment Report is met in this instance as described below.

10.2.2. The EIAR comprises the following documentation:

Volume 1: EIAR Non-Technical Summary

Volume 2: EIAR Main Report

Volume 3: Figures and Photomontages

Volume 4: Appendices which provide technical data and survey reports

10.2.3. At the outset I note the request for further information which was issued and the response of the applicant. In terms of what is relevant to the matter of EIA, the further information received by the Board on 19 October 2020 addressed:

- natural flood management and the scheme hydrology
- construction details including an outline surface water management plan
- details of particular elements of the development
- mitigation and monitoring
- biodiversity issues and other environmental impacts
- the topic of land, difficulties encountered and other issues.

- 10.2.4. I have considered the totality of the submissions by all parties.
- 10.2.5. I consider that the EIAR identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (c) land, soil, water, air and climate; (d) material assets, cultural heritage and the landscape and that it considers the interaction between the factors referred to in points (a) to (d).
- 10.2.6. In accordance with Article 5 and Annex IV, the EIAR provides a description of the project comprising information on the site, design, size, characteristics and other relevant features of the project. It also provides a description of the likely significant effects of the project on the environment and a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.
- 10.2.7. The EIAR includes a non-technical summary of the information referred to in Article 5 (a) to (d) and additional information specified in Annex IV relevant to the specific characteristics of the overall project and project type and to the environmental features likely to be affected. In this regard, the EIAR provides a description of the evidence used to identify and assess the significant effects on the environment. The EIAR provides an adequate description of forecasting methods/ evidence used to identify and assess the significant effects on the environment. Any difficulties which were encountered in compiling the required information are described.
- 10.2.8. The features of the project and/or mitigation measures envisaged to avoid or prevent what might otherwise be significant adverse effects on the environment are set out under each environmental topic considered. The potential impacts and mitigation measures are presented in each chapter and are summarised in Chapter 17 of the main report. Within each topic chapter the residual impacts are described. Where proposed, monitoring arrangements are also outlined. Environmental interactions are addressed in Chapter 16 of Volume 2.
- 10.2.9. In relation to the documentation presented I consider that it is comprehensive, sufficient and targeted. I particularly note the comprehensive nature of the hydraulic modelling underpinning the scheme, the assessment of alternatives and the manner

in which the applicant has responded to consultations including during the course of this application. I am satisfied that the EIAR has been prepared by competent experts.

10.2.10. My assessment below is based on the information provided by the applicant, including the EIAR as supplemented by the further information submitted, the reports and submissions made in the course of the application by the planning authorities, prescribed bodies and observers and the applicant's response.

10.2.11. I am satisfied that the information provided in the EIAR is sufficiently up to date. In this respect I refer in particular to the applicant's submission in the revised further information request which provides further information on winter bird and mammal surveys from 2022. This was received by the Board on 29 April 2022.

10.2.12. I conclude that the EIAR is adequate for the purposes of the environmental impact assessment to be undertaken.

10.3. **Public participation**

10.3.1. In terms of the public participation element of the process I note that many objectors have referenced the consultation was either inadequate or selective. Various comments are made in relation to the restrictions caused by the pandemic and the lack of equity resulting from a reliance on online formats and rescheduling of planned events.

10.3.2. I consider that it is evident including with respect to the consultation report presented by the applicant that there were a number of formal events as well as leaflet drops. I also note that the project manager appears to have given generously of his time and personally responded to individual queries. The project has been long in planning. During that time there have been many rounds of consultation with members of the public and other stakeholders. I consider that there is evidence that the applicant attempted to respond in a meaningful way to views expressed and that this approach continued during the planning application process.

10.3.3. I conclude that the consultation undertaken was meaningful and thorough.

10.4. Description of the Proposed Project

10.4.1. The project comprises the following main elements:

- Construction of flood defence embankments in Tymon Park.
- Demolition of an existing flow control structure and footbridge and construction of a flood storage defence spillway with passive flow control structure and replacement footbridge at Tymon Lake.
- Construction of an integrated constructed wetland in Tymon Park.
- Channel realignment and embankments and flood defence walls on both banks of the River Poddle at an open space located at Whitehall Park.
- Construction of a flood defence wall on the left bank of the River Poddle at the rear of properties on Whitehall Road and Glendale Park.
- Demolition of existing walls and construction of new flood defence walls on the right bank of the river at the rear of properties on Fortfield Road south of Kimmage Crossroads.
- Construction of flood defence walls and demolition and replacement of footbridge at Ravensdale Park.
- Construction of a flood defence wall on the right bank of the River Poddle at the end of St Martin's Drive.
- Construction of a flood defence wall on the right bank of the River Poddle at Mount Argus Close.
- Rehabilitating or replacing manholes in public roads in the junction of Ravensdale Park and Poddle Park and in the vicinity of St Teresa's Gardens and Donore Road and at the rear of the National Stadium.

10.5. Alternatives

10.5.1. The EIA Directive requires that an EIAR contain a description of reasonable alternatives studied by the developer, which are relevant to that project, including, as appropriate, an outline of the likely evolution of the current state of the environment without implementation of the project (baseline scenario), as a means of improving

the quality of the environmental impact assessment process and of allowing environmental considerations to be integrated at an early stage in the project's design.

- 10.5.2. Throughout the documentation there are references to alternatives which were considered in terms of detailed design. I consider that there is ample evidence that all reasonable alternatives relevant to the project were considered and that environmental considerations were integrated throughout all stages of the project design. I consider that it is clear that the selection of the alternative chosen has taken into account environmental effects of the project. I note that in responding to the further information a detailed assessment of alternatives at St Martin's was provided and the applicant proposed revisions in response to public comment.
- 10.5.3. The do-nothing scenario is considered in the EIAR and rejected on the basis that it will not provide for the prevention of flooding which is a significant concern in the region. I have also addressed this matter earlier in the context of observers' comments that the scheme is not needed if proper maintenance was undertaken. The assessment of this scenario is a legislative requirement under the EIA Directive. I consider that the do-nothing scenario/reliance on maintenance would give rise to major negative impacts on material assets and that the applicant's rejection of that scenario was appropriate.
- 10.5.4. I consider that the legal requirement to provide a description of the reasonable alternatives studied by the developer has been met.

10.6. Conclusion on EIAR Compliance with Legislation

- 10.6.1. I am satisfied that the information provided in the EIAR as supplemented by the further information submitted is sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment to be incorporated into its decision on the planning application. I am also satisfied that the information contained in the EIAR complies with the provisions of Article 3, 5 and Annex (IV) of EU Directive 2014/52/EU amending Directive 2011/92/EU.

10.7. Likely Significant Effects on the Environment

10.7.1. Introduction

10.7.2. In this section, I consider the direct and indirect significant effects of the development against the factors set out under Article 3(1) of the EIA Directive 2014/52/EU:

- a) population and human health;
- b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
- c) land, soil, water,
- d) air and climate;
- e) material assets, cultural heritage and the landscape;
- f) the interaction between the factors referred to in points (a) to (d).

10.7.3. I address the proposed development under the above factors.

10.7.4. I have carried out an examination of the information presented by the applicant including the written reports, drawings and the EIAR and the further information submitted. I have considered all of the written submissions made by the planning authorities, prescribed bodies and observers. Population and Human Health

10.7.5. Population and Human Health

Existing Environment

10.7.6. The study area is an urbanised setting which is suburban in character, and which contains residential, commercial and recreational uses primarily. Educational and community facilities include a number of primary and secondary schools and a crematorium and hospice. Recreational buildings and facilities are concentrated at Tymon Park as well as local parks such as Ravensdale and St Martin's and amenity open spaces such as at Wainsfort Manor Crescent. The smaller urban parks are valued resources in the locality which residents describe is generally lacking in tree cover and open space. Observers note that these areas have a heightened value since the changes occurring from the pandemic.

10.7.7. Within the study area are a number of footbridges including at Mount Argus and at Ravensdale Park and at Tymon Park and some high-capacity bus routes operate along the main arterial routes in the city.

10.7.8. In addressing the topic of human health for the purposes of EIA the requirement, which is set out in national guidance is to consider human health in the context of other factors in Article 3(1) of the Directive. As such this section should be read in conjunction with those on noise, air and vibration and water.

Potential Impacts

10.7.9. I consider that the potential impacts on population and human health are:

1. Provision of flood relief infrastructure will support development of new residential and employment in an area where land is generally zoned for such purposes and where services are available. This would be a significant positive long-term impact.
2. Provision of flood relief infrastructure will protect 921 homes and alleviate residents of fear of flooding and associated stress. This is a significant positive long-term impact on population and human health.
3. Short-term reduction in the landscape and biodiversity associated with parks and residential open space including by the removal of trees and the construction impacts. At the smaller urban parks, the impact of construction will be most evident. The closure of Ravensdale Park during the construction of the scheme for the duration of works is required in the interest of health and safety. This is a significant negative short-term impact.
4. The loss of Class A trees at Ravensdale Park combined with the introduction of new walls will be a significant impact which I classify as a neutral impact.
5. The greatest landscape change will be at Tymon Park, which will result on impacts on population. Due to the scale of the works, requiring closure of footpaths and replacement of a footbridge and the construction traffic associated with the large compound which will be in place for 24 months there will be direct and indirect impacts on the use of these recreational lands. Impacts will affect a small proportion of the overall park, which is of regional scale, but the area concerned is distant from the traffic noise associated with the M50 and appears

to be highly used. Access to the eastern and southern ends of the park will be maintained which will minimise severance for the local community. This is a negative temporary impact, which I consider is significant.

6. Through use of the existing available green infrastructure and open spaces the parks and green spaces will continue to function as amenities for local residents and biodiversity in the long term. The provision of the ICW and the landscaping at Tymon Park and at Ravensdale Park will benefit the population in the medium-term.
7. The impacts on some residents at individual houses, including as a result of construction phase working relating to construction of flood defence walls at the boundaries of those properties is a slight negative temporary impact. Night-time noise is not likely to be significant.
8. While the movement of construction phase HGVs would be perceptible as would the scale of the construction works, I consider that impacts would be slight and not generally significant, having regard to the existing character of the area and the nature and position of the development. Some residential open spaces will however be directly impacted including for example at Wainsfort Manor Crescent. In general, however I consider that the impact on resident, working and visiting populations would not constitute significant impacts as a result of landscape changes or impacts on amenities.
9. Positive effects include employment (direct and indirect) but the number of posts would not be described as a significant impact.
10. Regarding the use of Ravensdale Park as a flood storage and the potential health hazards from associated detritus, any such adverse health impacts would be a consequence of all flood events. The containment of soiled waters in smaller areas will facilitate more rapid clean-up. Therefore, in my opinion this is not a significant impact.

Mitigation

- 10.7.10. The following mitigation measures are presented in the EIAR to address the significant negative and temporary impacts on population and human health:

- Measures relating to the construction and operational periods will address noise, dust and HGV effects which could impact on the amenity and health of the resident population. The scheme specific CEMP will be a key element.
- The significant tree planting and landscaping works associated with the proposed development to include where necessary tree planting in the wider area.

Conclusion on Population and Human Health

10.7.11. I am satisfied that the residual impacts on population and human health from the scheme will be positive in the longer term. The protection of 921 properties which are vulnerable to flooding will give rise to positive impacts on the population. A residual flood risk will affect about 200 properties which is subject to separate measures outside of this application. The works including tree planting and hard landscaping are well considered, undertaken in line with best practice and highest available expertise.

10.7.12. I am satisfied that the proposed development will not result in long-term adverse impacts on amenity areas. There will be short-term negative impacts on residential open spaces and park lands used by the resident population, including closure for the construction period of Ravensdale Park and sections of Tymon Park. Ravensdale Park does not appear to be heavily utilised and there are large amounts of alternative space at Tymon Park and for these reasons I would not describe these impacts as significant.

10.7.13. I am satisfied that the proposed development would not have any unacceptable significant direct or indirect impacts on population and human health. I conclude that following mitigation the **significant effects on population and human health** are as described below.

Positive long-term impacts to population and human health from the provision of a flood alleviation scheme which will relieve residents of the consequences of flooding.

Long-term significant neutral impact at parks including Tymon Park and Ravensdale Park due to the loss of trees combined with the visual and landscape changes, which is mitigated by the design of the proposed development and replacement planting.

Short term construction related disturbance which can be mitigated by measures to minimise emissions and to manage construction traffic as set out in the EIAR and subject to implementation of a Construction Environmental Management Plan incorporating a Construction Traffic Management Plan.

10.7.14. **Biodiversity**

Existing environment

10.7.15. The Poddle is a highly modified river which has hydro-morphological constraints, limited fisheries and good water quality as indicated by macro invertebrate surveys. The adjacent lands in the study area includes trees and woodlands which will be impacted by the development. Habitats, present includes mixed broadleaved woodland, wet willow alder ash woodland, dry meadow habitat, Reed swamps and tall herb swamps at the margins of the ponds at Tymon Park. These artificial ponds support overwintering birds and are noteworthy in the urban environment for their size. Rare or protected flora which it is present includes Galingale, broadleaved helleborine and flowering rush. Invasive plant species present includes giant rhubarb, Nuttall's knotweed and Japanese knotweed. Fauna which are present include otters including a possible recently identified otter holt, badgers and three species of bats which forage and commute along the watercourse. No potential bat roost features were uncovered in surveys. Occasional use of playing fields at Tymon Park by Brent geese occurs. Other overwintering waterfowl were recorded at the ponds at Tymon Park . In general, other sections of the Poddle is of limited importance for overwintering birds. Breeding waterfowl nest at Tymon Park in summer months. Other species present throughout the river channel include grey wagtail, grey heron. Observers referred to the importance of the Poddle for Kingfisher and the presence of little egret. Smooth newt may be present at Tymon Park and Mount Argus. Some habitats are important for terrestrial invertebrates.

10.7.16. In relation to the information provided and the response to the observers' comments I note that the results of the surveys from 2021/2022 confirm the earlier surveys which formed the basis of the EIAR and I agree with the applicant's conclusion that changes to the impact assessment or mitigation are not warranted.

10.7.17. I consider that having regard to the information contained in chapter 7 of the EIAR as supplemented by the further information submitted and taking into account the observations, the ecological features of importance are:

- Habitats including rivers, ponds, reedbeds and tall herb swamps, woodland, tree lines and hedgerows, scrub, species rich dry meadow, recolonising bare ground.
- Rare flora.
- Mammals including foraging and commuting bat species, other terrestrial mammals and otter including a an active and an inactive holt.
- Wintering and breeding birds present in Tymon Park.
- Other birds including grey wagtail, dipper, grey heron, little egret, Kingfisher and other nesting species throughout the study area.
- Smooth newt and common frog.
- Invertebrates.

Potential Significant Impacts

10.7.18. The potential significant impacts construction phase impacts on ecological receptors are:

- Direct impact on species rich dry meadow, broadleaved woodland and tree lines and individual trees and on recolonising bare ground, all of which are described as of local value.
- In terms of the biodiversity impacts the works at the urban parks including St Ravensdale Park and Wainsfort Manor Crescent would not be considered significant in terms of biodiversity. I have made a recommendation in relation to St Martin's Drive which will ensure no significant biodiversity impact.
- Disturbance to bats, other mammals including potentially otter and birds due to noise and vibration, disturbance or habitat loss.
- Impacts on water quality in the event of sediment mobilisation or spillage. These would have short term consequences as described in the WFD assessment report.

- Spread of invasive species. The Japanese knotweed is of sufficient location from the site works (250m) to rule out any potential impacts. Giant rhubarb is not considered to be invasive at the eastern side of the country. The main concern therefore relates to Nuttall's waterweed.
- Disturbance to breeding birds.

10.7.19. In the operational phase the potential significant impacts are:

- Impacts on aquatic habitats and species due to fluctuating water levels at the ponds at Tymon Park. This would not be a significant change from existing conditions, and it is likely that habitats and species are accustomed to such events.
- Loss of broods of mute Swan, Mallard, coot and moorhen if nests are inundated by fluctuating water level, resulting in a slight adverse effect on local populations.
- Positive water quality from ICW once it is established, which will benefit water quality and aquatic ecology downstream and provide additional habitat including for foraging bats.

Mitigation measures

10.7.20. The EIAR mitigation measures relevant to this topic are:

- Use of best practice construction measures, undertaking of works under a site-specific CEMP and the engagement of an Ecological Clerk of Works are significant measures which will minimise adverse ecological impacts during construction and avoid unnecessary disturbance to ecological receptors.
- All works will be suitably planned and if being undertaken within 50 m of the river corridor shall be recorded in a method statement. Various pollution prevention measures to ensure avoidance or remediation of sedimentation or pollutants entering the watercourse. All instream works to comply with IFI guidance.
- The timing of works to be adapted to avoid impacts on ecological receptors.

- The protection and replanting of species rich dry meadow will be undertaken. Impacts on habitats generally to be compensated by reinstating disturbed areas within equivalent type.
- Impacts on rare flora will be avoided and if that is not possible flora will be translocated. Populations of rare flora will be monitored for three years and suitable methods put in place to assist the plants if necessary.
- Replacement tree planting at a ratio of 2:1 and creation of mini woodlands in accordance with a detailed design which is set out which will secure a three-layered canopy and fast growth. Majority of tree and shrub planting to be of native species. Where there is no alternative replacement of trees lost in local parks replanting will be made in the locality. Specimen tree planting proposed in such areas. Monitoring will take place to ensure re-establishment of vegetation and if necessary, to replant trees or shrubs that have failed.
- Installation of nesting platforms to provide an alternative habitat to address the possibility of damage to nests by fluctuating water levels. To be undertaken using specialist advice. To be monitored for three years and if necessary, to be adapted.
- Ecological enhancement to include sand Martin and Kingfisher artificial nesting sites at specified locations. Artificial bat boxes also to be installed at specified locations throughout the river corridor.
- All tree and shrub removal to be timed to avoid disturbance of nesting birds and breeding mammals.
- Detailed measures are set out for otters including preconstruction survey of the holt which was identified in the winter of 2020/2021 to confirm its status and activity levels. The updated information reports that there is one active holt location 63m from the works and one inactive holt which is 136m from the works. Depending on the status of the holt at the time of construction measures will be undertaken including prohibiting and/or restricting and controlling works and consultation with NPWS. If breeding otters are present works will be delayed until the breeding is completed. Seasonal restrictions may be undertaken and only as a last resort would

otters be excluded. The requirement for derogation licence may arise. It is proposed to put 3 no. artificial holts along the river.

- Measures to control invasive species spread, especially of Nuttall's waterweed. Monitoring will be undertaken to ensure that the species has not spread.

Residual Impacts and Conclusions

10.7.21. Having regard to the above, I am satisfied that the adverse impacts identified would be avoided, managed or mitigated by measures forming part of the proposed development. I am therefore satisfied that the proposed development would not have any unacceptable significant direct or indirect impacts on Biodiversity. I have previously addressed the benefits from the ICW and the adverse impact due to the removal of trees and woodlands, the majority of which are of moderate value at most. In the medium term I am satisfied that trees and woodlands and their biodiversity value will be re-established.

10.7.22. I conclude that the significant residual effects on Biodiversity are as described below.

Adverse impacts on biodiversity through the loss of trees and woodlands, which will be mitigated by replacement planting.

Positive impacts once the works at Whitehall Park and the ICW are established, which will benefit hydromorphology, water quality and biodiversity.

10.7.23. **Land, Soil, Water, Air and Climate**

Land, Soil and Hydrogeology - Existing environment

10.7.24. Baseline soils and geology was established through desktop research and drilling of boreholes and geophysical surveys. The development impacts a 12-hectare area of land in all. In the northern half of the study area due to urbanisation of the catchment the soil cover is generally classified as made ground. In the catchment apart from Tymon Park natural soils and sub-soils are limited. Some river derived sediments and gravels are identified at Tymon Park. Some patches of bedrock at surface are present at Kimmage – Harold's Cross. The underlying

geology generally comprises limestone. There are no regional faults mapped within the catchment. There are no sites of geological heritage within the catchment.

10.7.25. Groundwater wells close to Kimmage Crossroads are reported to have moderate to excellent yields. The groundwater body has been classified as having Good status and not at risk. Groundwater vulnerability is classified as high to extreme.

Land, Soil and Hydrogeology - Potential impacts

10.7.26. I consider the potential significant impacts in terms of land, soil and hydrogeology are:

- Temporary impacts related to the construction phase activity could have significant impacts on soils and hydrogeology. This would include possible hydrocarbon leakage or spillages including of cement material. A moderate short-term negative impact would result.
- Impacts on soils will be limited by re-use of available material where possible.
- Groundwater flow paths are not likely to be significantly impacted.
- Potential for partial or permanent removal of bedrock which would be considered a neutral permanent minor impact.
- In the operational phase it would not be expected that there would be further impacts.

Land Soil and Hydrogeology - Mitigation measures

- In general, the aim will be to minimise impacts including through standard construction methodology and the measures which are set out in the EIAR including the adoption of a detailed site-specific CEMP.
- Re-use of soils and subsoils as appropriate will be undertaken and the estimate is that 50% of material excavated at Tymon Park will be reused at that location.
- Protection of soil and subsoil structures through good working techniques including storage / stockpiling and handling and appropriate surface water and construction management to ensure soils are not contaminated.

- Excavations opened will be backfilled as soon as possible. Storage of potentially polluting material in bunded areas. Spill kits to be available at machinery refuelling areas.
- There will be no discharges effluent to groundwater during the construction phase and all wastewater stored for removal of site for disposal and treatment.

Land, Soil and Hydrogeology - Residual Impacts and Conclusions

10.7.27. Subject to mitigation I consider that it may be concluded that after mitigation there are no significant residual impacts on Land, Soils and Hydrogeology.

10.7.28. I am satisfied that the impacts identified would be avoided, managed or mitigated by measures forming part of the proposed development and that the development would not have any unacceptable significant direct, indirect or cumulative impacts on Land, Soils and Hydrogeology.

Water - Existing Environment

10.7.29. This section of this report deals with hydrology and hydromorphology.

10.7.30. The EIAR describes the baseline conditions including:

- The highly urbanised catchment of the river Poddle and the fact that the majority of flow into the river originate from the surface water network.
- The history of flooding and the measures undertaken after the 2011 event including installation of water level measuring data.
- The report of Black and Veatch provided with the further information provides detailed assessment of inputs and off takes which include significant flows in the middle reaches of the river.
- In terms of its hydromorphology the river is highly modified including by the introduced lakes at Tymon, an overflow weir at Lakelands and various culverts and canalisation sections. In its final reaches the Poddle continues underground from the canal to Wellington quay.

Water - Potential Impacts

10.7.31. I consider the most significant potential impacts during construction on hydrology and hydromorphology are:

- Site preparation works including at the location of the construction compound and access roads, which will include stripping of soil and creating bases for access tracks and compounds and could give rise to silt laden run-off entering the river or to spillages of hydrocarbons or other pollutants. These impacts have the potential for moderate short-term negative impacts on water quality.
- Site preparation works for the construction of the embankments, flow control structure and ICW at Tymon. This could give rise to silt laden pollution and pollutants entering the water. The additional risk would relate to the requirement at this location for excavation to bed level of the river for the development of the ICW.
- During construction of wing walls and the flow control structure involving channel diversion there is further potential for impacts associated with resuspension of nutrients and trace metals. The pumping of concrete into formwork could give rise to spillage of uncured concrete.
- Works at Whitehall Park involving reprofiling and realignment of the channel of the river. There is potential for adverse effects in the event that silt and/or pollutants enters the watercourse. The extent of works is noteworthy.
- Construction of flood defence walls at various locations including the excavation for foundations will generally be undertaken with use of a coffer dam. This gives rise to potential adverse effects in the event that silt and/or pollutants enters the watercourse and for concrete spillages unless precast structures can be used.

10.7.32. I consider the most significant potential impacts during operation on hydrology and hydromorphology are:

- When the flood scheme is in operation i.e., during a flood event the floodwater will accumulate nutrients, suspended solids and silt from land which will have the effect of increasing the loading of these substances to the river. A moderate short term negative impact on water quality would result.

- Outflow from the lake through the flow control structure has potential to impact locally in terms of bed and bank erosion. The flow control structure will be designed to minimise hydraulic transience and bed and bank stabilisation will be utilised if appropriate.
- The ICW downstream of the flow control structure will improve water quality in the river. The ICW through absorption, adsorption, precipitation, sedimentation and sequestration will treat a wide range of common parameters particularly nutrients and also suspended solids, BOD and metals. Its inclusion is stated to be an effort to achieve good water status under the WFD.
- Hydromorphological changes at Whitehall will have long-term benefits.
- Potential to alter the flow regime as a result of this largescale project. This could give rise to increased erosion and/or deposition of sediment in the catchment. Localised changes in flow patterns around the flood defence walls during high flow events may have a localised minimal impact. During flood events the flow will be contained will within the channel and would not give rise to water quality effects.

Water – Mitigation

10.7.33. I consider the most significant mitigation measures proposed as relevant to hydrology and hydromorphology are:

- Detailed measures are set out in relation to works on the riverbank which will be subject to a specific method statement agreed in advance with relevant authorities and which will incorporate measures to control silt and avoid pollution.
- UK CIRIA guidance will be adhered to.
- Particular measures are described where in river works are required. This will include measures to minimise suspension immobilisation of sediment through use of silt barriers and coffer dams and creation of a dry working area for pouring of concrete.
- As part of the response to further information the EIAR is supplemented by a Surface Water Management Plan.

- Measures are also identified in relation to avoidance of work such as site clearance when heavy rain is forecast and installation of silt fences as appropriate and storage of material outside the flood zone. Other standard measures relating to hydrocarbon interceptors, refuelling and concrete pouring are presented.
- While the timing of in river works is not restricted seasonally as it is a non-salmonid river, it is nevertheless preferable to carry out certain works in low flow periods.
- In support of the above mitigation measures a robust programme of monitoring of the scheme in the operational phase to ensure the structures are clear and functional is referenced. The flow control structure and embankment at Tymon Lake will require periodic checks by an all panel reservoir engineer.

Residual Impacts and Conclusion

10.7.34. Subject to the implementation of the mitigation measures which are set out in the EIAR as supplemented by further information submitted the impacts of construction and operation of the scheme will be localised and short-term. This conclusion may be drawn on the basis that the measures which are presented are outlined in sufficient detail and largely constitute best construction practices and techniques which would be well understood and capable of successful implementation.

10.7.35. I have earlier addressed the functioning of the flood scheme in more detail and noted its limitations in terms of the protection of properties. It is outlined in 8.9.1 of the EIAR that the residual flooding will occur as a result of localised fluvial flooding and that the issue and solution lies with works to the existing surface water network. It is stated that the two local authorities have made commitments to develop solutions for these areas, which works are outside the scope of the PFAS.

10.7.36. I am satisfied that the impacts identified would be avoided, managed or mitigated by measures forming part of the proposed development and that the development would not have any unacceptable significant direct, indirect or cumulative impacts on Hydrology or Hydromorphology.

10.7.37. I consider that through the creation of improved habitat and a naturalised channel at Whitehall Park and the development of the integrated constructed wetland which will benefit water quality, there will be significant positive permanent impacts on hydrology and hydromorphology which will contribute towards the attainment of the objectives of the Water Framework Directive.

10.7.37.1. Air and Climate

Existing Environment

10.7.38. The existing air quality is considered to be good based on reported nitrogen oxide and particulate background concentrations from Rathmines and Tallaght EPA air quality monitoring stations. I consider that the EIAR relies on available good quality data and that the selection of the EPA monitoring sites is appropriate. In terms of the standard for assessment the objectives from the Air Quality Standards Regulation and the CAFE Directive are set out as well as the TA Luft criteria for possible or very likely nuisance associated with dust levels.

Predicted Impacts

10.7.39. During construction the likely significant impacts are related to dust. Emissions from construction plant and equipment will be short-term and insignificant.

10.7.40. In relation to dust the movement of earth is the most significant potential source. Various elements of the proposed development in the construction phase are relevant in this regard including soil stripping to create the main compound, works to create the embankments and the ICW, the works at Whitehall Park and works on flood defence walls and manhole chambers throughout the scheme.

10.7.41. In terms of the large works areas proposed at Tymon there are residential areas close to the proposed ICW and the main site compound and there is potential for dust impacts to be relevant in these areas. In addition, construction of flood defence walls in some locations will be about 20 m from the nearest sensitive receptors but would be of short duration. On that basis there is the potential for dust impacts at the locations identified in Table 13-9 of the EIAR:

- Relating to the construction of the ICW works including tree removal, temporary diversion of the river, excavation of topsoil and other works

have the potential to give rise to dust emissions which could impact houses at Limekiln Road, which are 50m from the works area.

- Associated with the construction and operation of the main site compound there is potential for impacts on houses at Limekiln Road which are 25 m to the north.
- At Tymon North and Tymon Park stockpiling and landscape restoration has the potential to give rise to dust impacts which could affect residents at Limekiln Road, St Aongus Crescent and St Aongus Grove.
- At Whitehall Park and Grosvenor Court dust emissions may result from works associated with tree removal, temporary diversion, excavation and landscape works at the realigned river channel.

10.7.42. The construction of the development or its operation would not give rise to any impacts on climate. In this respect in particular I note the minimal contribution of vehicle emissions associated with the construction and future maintenance of the scheme.

Mitigation

10.7.43. The EIAR in Chapter 13 as supplemented in the CEMP describes a range of mitigation measures including:

- Measures relating to the topsoil stripping and general handling of material to minimise dust generation. These include careful co-ordination of stockpiling and maintaining a low profile of stockpiles. During working including embankment construction the stockpiles shall be profiled and compacted and not disturbed in windy conditions.
- General employment of dust mitigations to minimise construction dust impacts including use of water bowser for dampening down of areas.
- Particular measures and procedures relating to the creation and release of dust generated by transport activities and from activities at all roadways and hard surfaces to avoid fugitive dust. These include sweeping or wetting of roads and areas within the construction compounds, application of suitable on-site speed limits and careful loading of vehicles.

- General measures which will apply throughout will include maintenance of high standard of housekeeping and systems for monitoring, responding to and reporting incidents including complaints from neighbouring properties.
- Employment of the dust management plans set out in Table 13–10.

Residual Impacts and Conclusion

10.7.44. I consider that dust emissions from construction are amenable to mitigation and that sufficient mitigation measures are presented in the EIAR.

10.7.45. I conclude that there will be no significant residual impacts on air and climate.

10.7.46. Material Assets, Cultural Heritage and the Landscape

10.7.46.1. Material Assets

Existing Environment

10.7.47. The site context and the variety of land uses is such that there is a large range of infrastructure, lands and activities which fall to be considered under the heading of material assets. The development has the potential to significantly affect material assets in particular including residential and commercial properties, transport infrastructure and public utilities.

10.7.48. There is potential for significant impacts on:

- Residential and commercial property and development lands. These impacts will be largely positive as a result of the operation of the scheme. In addition, as described in section 15.5.1.1 the scheme will impact on the boundaries and boundary walls of 45 no. residential properties, on a Building Providers at Ravensdale Drive and a sports club. As these works are for the purposes of provision of flood defences at these properties the benefits would greatly outweigh any adverse short-term effects.
- Transport infrastructure. The main transport effects would be associated with the movement and turning of HGVs into the main works areas. At some locations this would be anticipated to have a very significant impact and notable in this respect would be disruption in the context of schools traffic and the operation of Dublin bus routes. Notable areas to be

impacted would be at and close to Tymon Park and Whitehall Park / Templeville Road. There are some areas where road closures will be required for example and disruption will occur during manhole sealing at St Teresa's Gardens and Donore Avenue.

- TII has raised the possibility that the scheme could impact in the operational phase on the functioning of surface water drainage from the M50. I have addressed this earlier and determined that it is not significant.
- The EIAR has highlighted a number of utilities including wastewater, water supply, electricity supply, gas networks and telecommunications infrastructure which are present in the study area, and which potentially could be impacted. There is some requirement as a result of the development for the relaying/diversion of some of these utilities. All surface water outfalls along the length of the Poddle channel will have flap valves installed. Surface water drains at the rear of residential properties where defence walls and embankments are being constructed will have outfalls included in the new defences. There would be a requirement for diversion of cables at Tymon North.
- Waste management impacts. It is clarified in the applicant's submission that there would be no direct impacts on any waste facility.
- Public open spaces will be impacted in terms of access and use of car parks.

Mitigation measures

- Traffic and transport mitigation measures will be addressed primarily by the Traffic Management Plan to be prepared and implemented which will minimise construction related traffic. This will include planning and timing of works to avoid site queues and to ensure rush-hour is avoided. Measures relating to maintenance of the roadways during construction are set out and all measures are to be put in place in consultation with the local roads authority and the public transport operators.

- Diversions, where required, will be undertaken under the supervision of the relevant utility provider and advance notice given to residents and businesses of disruptions to services as necessary.
- Notices will put in place to advise users of planned disruptions to parks.
- Waste generated during the construction phase will be subject of a project specific Waste Management Plan.
- The overarching CEMP will contain a range of measures which will minimise impacts on material assets.

Residual Impacts and Conclusion

10.7.49. I conclude based on the presented in the EIAR that there is limited potential to adversely affect utilities supplies and transport. The development of a major scheme in a built-up urban area will inevitably give rise to traffic congestion which the applicant has acknowledged and in relation to which mitigation has been proposed. In general the material assets in the area will be positively affected. The significant impacts on material assets arising from the PFAS are listed below.

10.7.50. The provision of a flood alleviation scheme to serve an established urban area will constitute a major positive residual benefit on material assets through the protection of 921 houses and zoned serviced lands.

10.7.51. Potential impacts on the use of recreational parks which are minimised through use of signage and notifications. Short-term slight adverse impacts as a result of closures and changes to facilitate construction will result.

10.7.52. Construction traffic will result in short-term significant impacts as a result of increased congestion notably in the vicinity of Tymon Park and Whitehall Park/Templeville Road. This can be mitigated by adoption of a CEMP incorporating a traffic management plan.

10.7.52.1. Cultural Heritage

Existing Environment

10.7.53. The area in which the proposed development is to be developed contains a wealth of sites of archaeological interest and areas of archaeological potential.

10.7.54. There is potential for significant archaeological impacts on:

- Castle – tower house at Tymon Park. Within the zone of notification for this castle there will be construction of an embankment involving removal of trees and stripping of topsoil. A direct moderate negative impact on remains which may survive.
- The City Watercourse. Works along the watercourse including all excavation works associated with the diversion of the river at Whitehall Park and construction of new flood defence walls and flood defence embankments may have a direct moderate negative impact on the historic watercourse.
- The zone of notification for a windmill north of Poddle Park. Works within this zone of notification includes removal of existing trees and construction of a retaining wall. A very small area of the zone of notification for the windmill is within the works area and impacts are not considered to be significant.
- A weir south of Mount Argus Way. Works adjacent to the weir include construction of flood defence wall within the zone of notification for the monument. No direct impact to the weir structure.
- The zone of notification for the site of Donore Castle and the zone of archaeological potential for Dublin city. In these areas works include manhole chamber ceiling or replacement, which may have a direct moderate negative impact on remains should they survive.
- There is potential for previously unknown archaeological remains particularly in greenfield areas which have had limited previous disturbance, such as at Tymon Park.

10.7.55. The potential significant impacts to cultural heritage assets are:

- Potential for moderate negative direct impact on Ravensdale Mills and its mill pond as a result of reinforcing existing walls and construction of new walls and replacement of footbridge and other works at Ravensdale Park and sealing of manholes in Poddle Park.
- Works which may impact on Cutler's mill and its mill race include the realignment of the river channel and reinforcing of existing walls, construction of a flood defence embankments and infilling of existing course of river at

Whitehall Park. The scheme may have a significant negative direct impact on these cultural heritage assets should remains exist.

- Kimmage House demesne landscape is greatly altered and due to the minimal scope of the works predicted impacts are not considered significant.

10.7.56. There is no potential for significant impacts on architectural heritage.

Mitigation Measures

10.7.57. The mitigation measures include:

- Archaeological monitoring of excavation works at the zone of notification for the castle – tower house DU022 – 007, for the weir DU 018 – 043003, the windmill DU 022 – 078, for the site of Donore Castle DU 018 – 047001, for the zone of archaeological potential for Dublin city DU 018 – 020, for Ravensdale Mills and mill pond CH 01 and CH 06, and for greenfield areas.
- Wade survey and archaeological monitoring of works around the zone of notification for the City Watercourse.
- At Cutler’s mill and Cutler’s mill race archaeological testing will be undertaken in the first instance and will be carried out by an archaeologist under licence. If features are discovered further measures may be required and any further mitigation shall require approval from NMS.
- At all locations if features are discovered further archaeological mitigation may be required such as preservation in situ or by record along with archaeological monitoring. Approval from NMS would be required.

Residual Impacts

10.7.58. The prescribed bodies comments support the conclusion in the EIAR that after mitigation there would be no residual impacts to the archaeological, architectural or cultural heritage resulting from the proposed development.

10.7.58.1. Landscape and Visual

Existing Environment

10.7.59. There are no specific landscape designations along the river corridor and no protected views within the river corridor. There are a number of locations where the

river comprises a key feature of open spaces and commands natural qualities and is of value to residents and recreational users as an amenity.

10.7.60. Due to the location of the Poddle which flows through a park of regional scale and suburban areas and the location of the works associated with the PFAS which affect the river channel and associated open spaces, there is potential for significant impacts on these resources.

10.7.61. In terms of the sensitivity of these resources the regional park would be of high sensitivity in view of the nature of the activities carried out there and the reasons for people visiting as well as the high level of usage. The smaller local parks are important to residents and would be considered of medium sensitivity to landscape change.

Potential Impacts

10.7.62. I consider that the potential landscape impacts of significance are:

- The works at Tymon Park particularly around the lakes will result in significant landscape change as will the proposed construction of the ICW. The works to the north of the M 50 involving the embankments for the attenuation of flood waters will include a 230m long embankment of up to 2.7 m high and some tree removal and will give rise to low-medium magnitude of landscape change. In the context of the scale of the park the landscape effects can reasonably be described as slight to moderate adverse effects. As the landscape matures and the ICW becomes established landscape effects would remain slight impacts and of neutral character.
- At Whitehall Park and Wainsfort Manor Crescent the realignment of the river channel and tree removal will result in a change in character of moderate extent. The removal of trees at Wainsfort Manor is a slight adverse effect. The realignment of the river and the associated landscaping works will be neutral-positive in character.
- At Ravensdale Park the removal of trees and construction of a flood defence wall result in impacts of low magnitude of change. The extent of tree removal is not large although the trees to be removed although the trees have an aesthetic value due to their maturity and visibility from the footpath. The hard-

landscaping features notably the wall will not significantly alter the character of the park. It is reasonable to conclude in my opinion that the works at Ravensdale Park will give rise to slight neutral effects. In coming to that conclusion I have taken into account the fact that the works including the introduction of new structures will constitute an upgrade to the facilities and will provide for additional seating area, a modern design aesthetic and a stronger sense of place.

- At St Martin's Drive subject to the recommendation to select option 1 the removal of trees and construction of the low flood wall would give rise to a slight, neutral effect. I note the assessment in the EIAR that the effect would be moderate and adverse - this relates to the other alternative.

10.7.63. The construction phase visual effects of significance are likely to be most pronounced at the location of the major works namely at Tymon Park. At this location there would be significant adverse visual effects, which would be temporary in nature.

10.7.64. In the context of the small-scale landscapes notably at Whitehall Park, Wainsfort, and Ravensdale Park the visual effects associated with the construction period would be temporary but would be moderate and adverse effects.

10.7.65. Again, subject to the adoption as recommended of Option 1 at St Martin I consider that the works may reasonably be described as having a negligible magnitude of change of visual effects.

10.7.66. I consider that the operational phase visual effects are neutral or imperceptible.

10.7.67. The assessment of the PFAS in the EIAR is accompanied by high quality photomontages at specified locations where significant landscape changes can be anticipated. The viewpoints selected are representative of the range of views which are likely to be experienced.

10.7.68. In section 10.8.5 there is a detailed assessment given of the 11 no. viewpoints. I note the assessment of each of these individual viewpoints and the significance of effect which in all cases is slight to moderate and in some cases is considered adverse in quality. The summary of visual effects is presented in table 10

– 8 for these viewpoints. I have considered this information together with the supplementary submissions of the applicant and I conclude that the relevant visual effects associated with the PFAS are as listed below.

10.7.69. Users of certain locations will experience slight to moderate or neutral to adverse visual effects at Tymon Park. These will be most pronounced around Tymon Lake but would not be widespread throughout the large park. The construction of the spillway and embankments around the lakes is likely to have most visual effect. The effect on that view is described as moderate adverse. Elsewhere within Tymon Park the view significance can be described as slight neutral.

10.7.70. Sensitive receptors using residential open spaces at Ravensdale Park and Poddle Park/St Martin's Drive will experience visual effects ranging from slight to moderate which are described in the EIAR as being neutral in quality. I consider that this conclusion is valid in the context of my recommendation relating to St Martin's Drive and Option 1.

10.7.71. The green space at Whitehall Park is little used and visible mainly to local residents and pedestrians on Templeville Road. I consider that the statement that the visual receptors will experience slight neutral effects is a reasonable conclusion. Similarly, in view of the small scale of works proposed at Wainsfort Manor Crescent and the distance from houses I consider that a slight neutral effect would also result.

Landscape and Visual - Mitigation

10.7.72. Mitigation measures relating to landscape and visual effects include avoidance measures which have been incorporated in the PFAS notably:

- Avoidance where possible of tree removal. Replacement tree planting where trees are removed. Where on site tree replacement is not possible trees will be constructed in the vicinity.
- At Tymon Park the removal of trees was minimised, and significant replanting is proposed. This includes creation of extensive areas of mini woodland.
- The ICW is a landscape enhancement measure as well as having other functions. It will add diversity and character to this large park.

- Works proposed at Ravensdale Park and various alternatives were considered. The floodwall design ensures that it will have a functional aspect and a positive aesthetic.
- Subject to the adoption of option 1 as recommended there is no requirement for significant mitigation at St Martin's Drive to reduce the effects of tree removal.
- At Wainsfort Manor further consideration of the construction methodology has reduced tree removal thereby minimising visual effects.
- Visual permeability and passive surveillance were considered throughout with the aim of ensuring that flood defence walls did not result in undue visual effects and earlier alternatives which would have required construction of high walls were eliminated.

Landscape and Visual - Residual Impacts

10.7.73. In general, I consider that after mitigation the landscape and visual impacts would be no more than slight or imperceptible once the replanting has been in situ for a few years and vegetation re-established. The residual impacts are acceptable in my opinion and the resulting development would be associated with a neutral quality of effects.

10.7.73.1. Conclusion on Material Assets, Cultural Heritage and Landscape

10.7.74. Having regard to the above, I am satisfied that the impacts identified would be avoided, managed or mitigated by measures forming part of the proposed development, proposed mitigation measures and matters to be addressed in planning conditions. I am satisfied that the proposed development would not have any unacceptable significant direct or indirect impacts on Material Assets, Cultural Heritage and Landscape. The main significant impact is:

The provision of a flood alleviation scheme which is of innovative design by reason of its use of nature-based solutions and which will serve an established urban area will constitute a major positive residual benefit on material assets through the protection of 921 houses and zoned serviced lands.

10.7.75. **Cumulative Impacts and Interactions**

10.7.76. I am satisfied that the assessment of cumulative impacts in the EIAR as revised by the further information provides sufficient examination of the projects which it is considered have potential to overlap with the PFAS and to give rise to cumulative impacts.

10.7.77. I have earlier referenced the relevant guidelines which are the EPA “Guidelines on the Information to be contained in Environmental Impact Assessment Reports” published in 2017 and the “Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment” August 2018 published by the Department of Housing, Planning and Local Government.

10.7.78. As described in the EPA EIA Guidance cumulative impacts refers to the addition of many minor or significant effects including the effects of other projects to create larger more significant effects. In this regard it is stated that it may be necessary to assist cumulative impacts generated by other existing, permitted or planned projects. I note that this is a broader remit than the DHPLG 2018 publication which refers to existing or permitted developments. The newly adopted EPA guidance make certain suggestions with respect to the ‘do nothing’ alternative and cumulative impacts under section 3.4.2 - with respect to planned development it may be appropriate to consider largescale proposals where the application has been made but the consent not granted. I do not consider that planned developments need to be addressed with respect to alternatives. Section 3.7.3 relates to the topic of cumulative effects in particular and indicates that it may be appropriate to take into account planned developments. Based on the earlier discussion relating to alternatives I consider that it is reasonable to interpret ‘planned developments’ on the basis that they have commenced the planning process by the making of the application.

10.7.79. In this case having regard to the planning history and the matters raised by observers I consider that there is a need for discussion of some matters with respect to potential cumulative impacts in relation to (i) permitted developments at Airton Road / Greenhills and (ii) the planned Bus Connects.

10.7.80. The lands at Airton are close to and in the upstream reaches of the Poddle. There is a large, permitted development and another nearby live application for a

large residential developments at two large sites, which could give rise to surface water emissions in particular which could impact the river downstream and potentially result in cumulative effects in conjunction with construction of the PFAS. These developments may also be associated with increased noise, traffic and air emissions but there is no likelihood of health impacts due to the nature of the developments and having regard to the land uses in the vicinity of Airton which does not contain significant residential component in the immediate vicinity. Potential surface water and associated biodiversity impacts thereby comprise the only potential cumulative impacts in my opinion.

10.7.81. In the determination of the case under ABP-306705, which was subject to EIA, the Board was satisfied that mitigated during construction by appropriate management measures would control the emissions of sediment to water. In the event that the permitted development is under construction at the same time as the PFAS I am satisfied that there would be no likelihood of adverse water quality effects and thereby no potential for significant cumulative effects. It would be anticipated that the development at the adjacent site, if permitted, would be subject to similar conditions and that the same conclusion could be drawn. In coming to the conclusion that there is no reasonable likelihood of cumulative effects from these residential developments in combination with the PFAS I have taken into account the regulatory requirements, the nature of the developments and the separation from the Poddle.

10.7.82. A number of observers have made comments relating to the cumulative effects on Ravensdale Park arising from the PFAS and the Kimmage BusConnects. There are various comments relating to the options under consideration for the planned bus route, including one which indicated that it might have an associated cycle route through Ravensdale Park. comments also reference that the BusConnects may result in further tree loss and impacts on the functionality of the park. The FI response provided by the applicant addresses this matter and shows some sketch drawings and the different iterations which have been presented. I have carefully considered the EPA guidance relating to the matter of cumulative effects and have concluded that in the absence of the application being made it is not within the Board's remit to assess cumulative impacts where an application has not been made to date and in the circumstances where the design may evolve further.

- 10.7.83. In the consideration of the Bus Connects project I note the entirely separate nature of the flood relief and Bus Connects projects. It cannot be argued that the Bus Connects project is in any way integral to the application before the Board and there can be no issue in relation to project splitting and, in any event, an EIAR accompanies this application.
- 10.7.84. In terms of the overall PFAS I note that the observers have referenced the cumulative effect arising from the removal of trees at different locations throughout the project. This is not a cumulative effect *per se* within the meaning of EIA and I do not propose to comment further on the issue.
- 10.7.85. In relation to the potential for permitted scale residential development to give rise to significant water quality impacts which could have cumulative effects, I note that none of the permitted developments are within or adjacent to the proposed working areas or involve further modification of the watercourse. Therefore, it may be concluded that none of the permitted developments is likely to give rise to significant cumulative effects on water or biodiversity.
- 10.7.86. I consider that the principle cumulative impacts and environmental interactions are as described below.
- 10.7.87. In terms of population and human health construction phase impacts from the proposed development and other projects if undertaken at the same time could in theory give rise to increased noise, traffic and air emissions, which could give result in cumulative effects on residential properties and potentially on health. In view of the nature scale and location of these potential sources of impact relative to the position of residential properties I consider that there is no reasonable likelihood of significant cumulative impacts.
- 10.7.88. In view of the separation distance of other permitted developments and the mitigation measures there are no potential water quality impacts from the PFAS which would result in cumulative impacts with other proposed projects.
- 10.7.89. I have considered the potential for significant cumulative landscape impacts and concluded that this may be relevant to Ravensdale Park where such effects may arise but under the relevant guidance it is not relevant to consider projects which have not yet entered the planning process.

10.7.90. The main interactions which are likely are as described in chapter 16. I consider that the most significant interactions are those listed below.

- Population and human health and interactions. Various impact types which have been assessed above are of particular relevance in terms of impact on human beings notably in this case material assets and landscape and visual as well as noise. The interaction with material assets constitutes a long-term positive impact in terms of the protection of property but is negative in relation to access to parks during construction phase. Noise impacts are likely to result in potential short-term negative impacts which are not significant. Landscape and visual effects in the construction stage has potential to lead to negative interactions between human beings. Significant landscape change will be introduced in some areas which is reduced by landscape mitigation which minimises predicted impacts and interactions. It may reasonably be concluded that the proposed development will lead to a positive interaction with human beings apart from short-term impacts some of which are adverse in character.
- Biodiversity interactions. Tree removal and alterations to or disruption of habitats including habitat loss and potential habitat change including potential for inundation of nesting sites may be considered to constitute negative interactions related to water, soil, landscape, and noise. After mitigation these interactions will be negated or significantly minimised. No ongoing negative impacts on biodiversity would be anticipated subject to mitigation.
- Hydrology and hydro-morphology interactions. The main interaction is with biodiversity. In the construction phase surface water quality impacts would interact with biodiversity. In the operation phase fluctuating water levels would impact with biodiversity. Subject to mitigation as described minimal or negligible interactions occur with biodiversity.
- Soils, geology and hydrogeology interactions. Potential for adverse effects on air and water quality leading to negative interactions between geology and air and water. This will be mitigated by suitable construction and landscape restoration. Mitigation will negate significantly reduce the geology and hydrogeology interactions.

- Archaeology, cultural heritage and built heritage interactions. Potential for negative impacts in the construction phase. Interactions between cultural heritage and archaeology and landscape and visual will be mitigated and/or negated by the measures set out.
- Air quality interactions. Subject to mitigation of dust particles no significant interactions between air quality and other environmental aspects including human beings and biodiversity are anticipated.

10.7.91. To conclude, I am satisfied that the impacts including those arising from interactions, indirect and cumulative impacts can be avoided, suitably managed and / or adequately mitigated by the measures which are presented by the applicant in the EIAR as supplemented by the further information received, which would form part of the proposed development if permitted. In addition I refer to the planning conditions which are set out below to address further matters which have arisen. I am satisfied that consent for the development can be permitted having regard to the significant effects, the resulting interactions between the environmental factors and the cumulative impacts.

10.8. **Vulnerability of projects to major accidents and/or natural disasters**

10.8.1. The requirement to address the vulnerability of projects to major accidents and / or natural disasters under the EIA Directive is addressed by the applicant in the EIAR in Chapter 5.

The potential major risks and/or disasters described are:

- Failure of the flood storage embankment.
- Overtopping of the flood defence structures.
- Failure of flood walls.

10.8.2. I note that the NIS properly includes other risks which would be relevant and considered major in the context of appropriate assessment. Some of these events, for example accidents when pouring concrete would not be considered to constitute major accidents and/or natural disasters for the purposes of EIA.

10.8.3. The failure of the flood storage embankment is mitigated by the embedded design which has followed rigorous reservoir analysis and testing under the supervision of a

UK All Reservoirs Panel Engineer. Qualitative assessment of potential impacts of such an event provided describes that it would result in the volume of water stored behind the embankment being released downstream of Tymon Park with consequences for flooding of properties downstream. It is noted that the flow control structure is likely to be functioning in such an event but that severe flooding of residential properties would nevertheless be anticipated. The consequences of such an event would be mitigated by the additional attenuation capacity at Whitehall Park and Ravensdale Park.

10.8.4. Overtopping of flood defence structures could arise in the event of the scheme design of a 1% AEP event being exceeded. The flood storage embankment will act as the spillway in such events thereby controlling the release of excess water. Any water which would be released over the spillway would result in localised flooding.

10.8.5. Failure of flood walls could result in flooding of adjacent properties. A robust programme of maintenance will be instituted. Following periodic checks of the walls and the identified remedial works will be carried out.

10.8.6. I consider that the applicant has complied with the requirements to address vulnerability of projects to major accidents and/or disasters. These are considered to be unlikely or in the case of large-scale events such as failure of the flood storage embankment, to be extremely unlikely events.

10.8.7. I conclude that there is no significant likelihood that the proposed development would give rise to a risk of major accidents and/or disasters.

11.0 Appropriate Assessment

11.1. Introduction

11.1.1. The requirements of Article 6(3) as related to appropriate assessment of a project under the Planning and Development Act 2000 (as amended) are considered fully in this section. The areas addressed in this section are as follows:

- Compliance with Article 6(3) of the EU Habitats Directive
- Screening the need for appropriate assessment
- The Natura Impact Statement and associated documents

- Appropriate assessment of implications of the proposed development on the integrity of each European site.

11.2. Compliance with Article 6(3) of the EU Habitats Directive

11.2.1. The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site before consent can be given.

11.2.2. The proposed development is not directly connected to or necessary to the management of any European site and therefore is subject to the provisions of Article 6(3).

11.3. Screening

11.3.1. The requirements of Article 6(3) as related to screening the need for appropriate assessment of a project under part XAB, section 177U of the Planning and Development Act 2000 (as amended) are considered fully in this section.

11.4. Background on the Application

11.4.1. The applicant has submitted a Natura Impact Statement as part of the application submission. A revised Natura Impact Statement for the River Poddle Flood Alleviation Scheme was submitted to the Board as part of the response to the further information requested. This document was received on 16 November 2020 and is the basis for my assessment below. The NIS outlines the background to the decision to undertake appropriate assessment and refers to previous appropriate assessments of related developments. It notes that at an early stage the screening for AA undertaken adopting a precautionary approach determined that appropriate assessment was required.

11.4.2. The previous studies undertaken include a NIS prepared in 2016 for the 'Camac and Poddle Prioritised Works'. Thus, as described in the further information response 17.1 the basis for the decision of the local authorities to proceed with this application under part X, section 177AE was the AA Screening Report prepared by NM Ecology and dated 25 November 2019.

11.4.3. The conclusion of the AA Screening Report as found in section 5 Screening Statement is:

“Article 42 (7) of the European Communities (Birds and Natural Habitats) Regulations 2011 states that: “The public authority shall determine that an Appropriate Assessment of a plan or project is not required [...] If it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on European site”.

To assist with this process, we have provided supporting information including: a description of the proposed development; an outline of its environmental setting; details of European sites within the potential zone of impact; and an assessment of potential impacts. We have identified four European sites that have distant hydrological connection with the proposed development site: South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, North Bull Island SPA and North Dublin Bay SAC. In a worst-case scenario, it is possible that a large-scale pollution event (e.g. an accidental spill of hydrocarbons) could cause adverse effects on the conservation status of the qualifying interests of these European sites.

Therefore, the risk of significant impacts on European sites cannot be ruled out at Stage I of the Appropriate Assessment process, and it should proceed to Stage 2. A Natura Impact Statement will be submitted as part of the planning process, which will include mitigation measures for the avoidance or management of potential pollution incidents.”

11.4.4. In terms of the information presented by the applicant I consider that this is in line with current best practice guidance and provides a description of the proposed development and identifies European Sites within a possible zone of influence of the development. I note the range of studies undertaken which included detailed

hydrological modelling and ecological surveys of the Poddle catchment, which informed the NIS as well as the EIAR.

11.4.5. Having reviewed the documents and submissions, I am satisfied that the information allows for a complete examination and identification of any potential significant effects of the development, alone, or in combination with other plans and projects on European sites.

11.5. Screening for Appropriate Assessment- Test of likely significant effects

11.5.1. 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).

11.5.2. 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.

11.6. Brief description of the development

11.6.1. The applicant provides a description of the project section 2.2 of the AA Screening Report, in section 2 of the Revised NIS and in chapter 5 of the EIAR. In summary, the development comprises:

- Construction of flood defence embankments in Tymon Park. Demolition of an existing flow control structure and footbridge and construction of a flood storage defence spillway with passive flow control structure and replacement a footbridge at Tymon Lake in Tymon Park. This will be the main flood storage in the scheme.
- Construction of an integrated constructed wetland in Tymon Park to improve water quality.
- Channel realignment and regrading at Whitehall Park which will provide flood protection for nearby properties and biodiversity enhancements.

New, replacement or reinforced flood defence walls on both banks of the River Poddle at various locations including adjacent to the Lakelands Overflow at an open space located at Whitehall Park, east of Templeville Road, on the right bank

of the river at the rear of properties on Fortfield Road south of Kimmage Crossroads and on the right bank of the River Poddle at Mount Argus Close.

- Construction of flood defence walls and other works including demolition and replacement of footbridge at Ravensdale Park.
- Construction of a flood defence wall and other works at the end of St Martin's Drive.
- Rehabilitating or replacing manholes in public roads in the junction of Ravensdale Park and Poddle Park and in the vicinity of St Teresa's Gardens and Donore Road and at the rear of the National Stadium.

Ancillary works and associated development include:

- Drainage channel clearance and removal of trees as required.
- Rehabilitating or installing culvert screens in locations as required.
- Installing flap valves in all culvert draining to the River Poddle.
- Biodiversity enhancements including installation of floating nesting platforms in Tymon Lake in Tymon Park.
- Landscape mitigation and restoration at Tymon Park, Whitehall Park and Ravensdale Park and St Martin's Drive including public realm improvements, biodiversity enhancements and tree planting and landscaping.

Temporary works include:

- Establishing a main construction compound in Tymon Park with access off Limekiln Road which will operate for the duration of the works.
- Temporary work/set down areas at Wainsfort Manor Crescent and Ravensdale Park and St Martin's Drive which will be in use for the duration of the works to be carried out at these locations.
- Stockpiling of excavated earth in designated areas of Tymon Park (west and east of the M 50).
- Temporary channel crossings in Tymon Park (west and east of M 50).
- Channel diversions at Tymon Park and Whitehall Park to enable the works along the river channel to be carried out.

11.6.2. The development site and the environmental setting are described in section 2.1 of the revised NIS and in the EIAR including chapter 7, chapter 8 and chapter 9. The setting of the scheme comprises the highly modified urban watercourse which is the river Poddle. The proposed working area covers the section of the watercourse between Tymon North in Tallaght and St Teresa's Gardens in Merchant's Quay. Sections of the river are extensively modified including by culverting under roads and residential areas. In general, the green open spaces are managed as landscaped parks which function as recreational amenity areas. At Tymon Park / Tymon Lakes in particular there is also active management for nature conservation and enhancement. Some of the lands adjacent the Poddle are unmanaged and of value for wildlife.

11.6.3. Taking account of the characteristics of the proposed development in terms of its location and the scale of works, the following issues are considered for examination in terms of implications for likely significant effects on European sites:

- Construction related -uncontrolled surface water/silt/ construction related pollution
- Habitat loss/ fragmentation
- Habitat disturbance /species disturbance.

11.7. Submissions and Observations

11.7.1. Submissions of prescribed bodies and others are summarised earlier in this report. In relation to the particular matter of Appropriate Assessment I note the comments of An Taisce in relation to use of lands at Tymon Park by light bellied Brent geese.

11.7.2. Other comments which are offered are relevant to biodiversity but not to the qualifying interests of European sites which could be affected by the PFAS.

11.8. Identification of potential impact pathways and indirect impacts

11.8.1. I have considered the potential for pathways between the site of the proposed development and European sites. Having regard to the nature of the development and the distance between the works area of the Poddle and the European sites, I consider that there is no likelihood of groundwater, air or land pathways and no

likelihood of indirect impacts from such pathways. I consider that this conclusion is relevant to both the construction and operation phases of the scheme.

- 11.8.2. The project construction involves working in or near the river Poddle, which constitutes a pathway between the proposed development site and the European sites. The nearest European sites are all 10 km downstream when measured along the river channel. This is a significant distance. Nevertheless, the proposed development will involve major earthworks within or in the vicinity of the river and these construction activities have potential to generate pollutants including suspended silt or sediments, concrete/cement and hydrocarbons and other chemicals. Such spillages could harm aquatic fauna and birds and potentially alter the flow of water courses. There is potential that in a worst-case scenario involving a large-scale pollution event there could be significant effects on the downstream European sites.
- 11.8.3. In the operation phase once landscaping has taken hold, there is no likelihood of silt, sediment or any other materials entering the river in normal circumstances. The new footbridges, walls and other structures will be resistant to erosion and even in flood events will not result in discharge of building material to the river. The possibility of major accidents has been outlined in the NIS including failure of embankment structures which is a highly unlikely scenario. The ICW will result in water quality improvements. There is no likelihood of significant effects on the downstream European sites in the operation phase.
- 11.8.4. With respect to the potential for cumulative impacts I note and agree with the point made in the NIS that while none of the permitted/likely future developments are within the river Poddle it cannot be ruled out that these developments if undertaken together would give rise to potential in combination effects which could affect the site.

11.9. **European Sites**

- 11.9.1. The development site is not located in or immediately adjacent to a European site. The closest European sites are at a significant distance downstream in Dublin Bay. I note the comment in the screening report that the hydrological pathway between the river Poddle and European sites in Dublin Bay is rather tenuous as any pollutants

would be diluted by approximately 10 km of intervening river and coastal works and it is considered highly unlikely that any pollutants generated by the construction works could reach Dublin Bay in high enough concentrations to cause adverse effects on qualifying interests. I consider that there is some merit to this comment, but I also share the applicant's view that significant effects could not be discounted.

11.9.2. A summary of European Sites that occur within a possible zone of influence of the proposed development is presented in the table below. Where a possible connection between the development and a European site has been identified, these sites are examined in more detail.

Table 1. Summary Table of European Sites within a possible zone of influence of the proposed development.

European Site name and code	List of Qualifying interest /Special conservation Interest	Connections (source, pathway receptor) – likely significant effects.
Glenasmole Valley SAC (1209)	Orchid-rich Calcareous Grassland* Molinia Meadows Petrifying Springs*	In catchment of the river Dodder, no possible hydrological connection. Due to distance there is no reasonable likelihood of groundwater, air or land pathways. No possibility of significant effects.
South Dublin Bay and River Tolka Estuary SPA (4024)	Brent Goose Oystercatcher Ringed Plover Grey Plover Knot Sanderling	Hydrological connection 10 km downstream. Likely significant effects cannot be ruled out. Due to distance there is no reasonable likelihood

	<p>Dunlin</p> <p>Bar-tailed Godwit</p> <p>Redshank</p> <p>Black-headed Gull</p> <p>Roseate Tern</p> <p>Common Tern</p> <p>Arctic Tern</p> <p>Wetlands</p>	<p>of groundwater, air or land pathways.</p> <p>Ex situ effects cannot be ruled out.</p>
<p>South Dublin Bay SAC (0210)</p>	<p>Tidal Mudflats and Sandflats</p> <p>Annual vegetation of drift lines</p> <p>Salicornia and other annuals colonising mud and sand</p> <p>Embryonic shifting dunes</p>	<p>Hydrological connection 10 km downstream.</p> <p>Likely significant effects cannot be ruled out.</p> <p>Due to distance there is no reasonable likelihood of groundwater, air or land pathways.</p>
<p>North Dublin Bay SAC (0206)</p>	<p>Tidal Mudflats and Sandflats</p> <p>Annual Vegetation of Drift Lines</p> <p>Salicornia and other annuals colonising mud and sand</p> <p>Atlantic Salt Meadows</p> <p>Mediterranean Salt Meadows</p> <p>Embryonic Shifting Dunes</p> <p>Marram Dunes (White Dunes)</p> <p>Fixed Dunes (Grey Dunes)*</p> <p>Humid Dune Slacks</p> <p>Petalwort</p>	<p>Hydrological connection 10 km downstream.</p> <p>Likely significant effects cannot be ruled out.</p> <p>Due to distance there is no reasonable likelihood of groundwater, air or land pathways.</p>
<p>North Bull Island SPA (4006)</p>	<p>Light-bellied Brent Goose</p> <p>Shelduck</p> <p>Teal</p> <p>Pintail</p> <p>Shoveler</p> <p>Oystercatcher</p> <p>Golden Plover</p>	<p>Hydrological connection 10 km downstream.</p> <p>Likely significant effects cannot be ruled out.</p> <p>Due to distance there is no reasonable likelihood</p>

	Grey Plover Knot Sanderling Dunlin Black-tailed Godwit Bar-tailed Godwit Curlew Redshank Turnstone Black-headed Gull Wetland and Waterbirds	of groundwater, air or land pathways. Ex situ effects cannot be ruled out.
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11.10. Mitigation measures

11.10.1. No measures designed or intended to avoid or reduce any harmful effects of the project on a European Site have been relied upon in this screening exercise.

11.11. Screening Determination

11.11.1. The proposed development was considered in light of the requirements of 177U of the Planning and Development Act 2000 as amended. Having carried out Screening for Appropriate Assessment of the project, it has been concluded that the project individually (or in combination with other plans or projects) could have a significant effect on European Sites No. 4024, 0210, 0206, 4006, in view of the site's Conservation Objectives, and Stage 2 Appropriate Assessment is therefore required.

11.12. Appropriate Assessment – Stage 2

11.12.1. Following the screening process, it has been determined that Appropriate Assessment is required as it cannot be excluded on the basis of objective information that the River Poddle Flood Alleviation Scheme individually or in combination with other plans or projects will not have a significant effect on the following European sites:

- South Dublin Bay and River Tolka Estuary SPA (4024)

- South Dublin Bay SAC (0210)
- North Bull Islands SPA (0206)
- North Dublin Bay SAC (4006).

11.12.2. The possibility of significant effects on other European sites has been excluded on the basis of objective information.

11.12.3. **The Natura Impact Statement**

11.12.4. The application documentation included a NIS, which was revised in response to the request for further information, which identified a need to incorporate a more detailed description of the development and assess how any identified adverse impacts will be addressed by the mitigation measures.

11.12.5. The “Revised Natura Impact Statement - River Poddle Flood Alleviation Scheme” is referred to below as the NIS. It examines and assesses potential adverse effects of the proposed development on the following European Sites:

- South Dublin Bay and River Tolka Estuary SPA (4024)
- South Dublin Bay SAC (0210)
- North Bull Islands SPA (0206)
- North Dublin Bay SAC (4006).

11.12.6. The basis for the NIS is set out in section 1.4 which refers to up-to-date guidance and which notes the desk-based studies which were undertaken. In addition, the field data collected between September 2018 and September 2020 as reported in Chapter 7 of the EIAR and in Appendix 6 of the RFI.

11.12.7. The basis for the information presented included consultation with SDCC Heritage Officer, who referenced use of Tymon Park by Brent geese and Inland Fisheries Ireland, who indicated that the river has limited fisheries value with no recent records of salmonids or other fish listed on Annex II of the Habitats Directive. I consider that these consultations resulted in identification of the main ecological receptors relevant to appropriate assessment.

- 11.12.8. In the preparation of the NIS desktop and walkover surveys were undertaken and use made of public data, which is referenced. Two specific studies are highlighted namely “Winter Habitat Study of Tymon and Bancroft Parks”, 2018, which is presented in Appendix 7 – 1 of the EIAR and “Mammal, Bird and Botanical surveys relating to the Poddle River Flood Alleviation Measures within the boundary of Dublin City Council” which is in Appendix 7-2 of the EIAR.
- 11.12.9. NM Ecology also undertook fieldwork of the overall scheme. Particular work was undertaken in relation to the survey of winter birds including 14 no. surveys between January and mid-April 2018 and other surveys in March 2019. Mammals including otters and bats were subject of separate survey, which included preliminary ground level roost assessment of all mature trees and built structures. No bat roosts were found. A transect survey was also undertaken in August 2019.
- 11.12.10. Supplementary information relevant to the NIS is incorporated in the Further Information Response. Item 19 of the RFI addresses the particular issue of ex situ disturbance effects on light bellied Brent geese. The further studies which were undertaken in 2021 / 2022 and which are reported upon in *Winter bird and mammal surveys 2022 – River Poddle Flood Alleviation Scheme 20 April 2022*. This presents the results of surveys carried out in 2021 and 2022 and considers whether any aspects of the biodiversity chapter of the NIS need to be updated. The survey results indicate that the conclusions previously drawn remain relevant.
- 11.12.11. The applicant also provided further details of the nature of the works proposed, how construction work will be undertaken and has addressed the potential impacts and provided an Outline Surface Water Management Plan. In addition, the scenario of a failure of the flood storage embankment at Tymon Lakes has been assessed as well as failure of flood walls and risk of large-scale pollution events. Maintenance of the scheme is further considered in section 2.4 of the NIS.
- 11.12.12. I consider that all of this information provides a strengthened understanding of the project and the potential for significant adverse effects on European sites.
- 11.12.13. In terms of how the main elements of the works will be constructed I would highlight the following information which is presented in the NIS:
- Where there is a requirement for temporary river crossings geotextile membrane will be placed along the regraded bank profile and a short length of concrete pipe

placed in the channel and backfilled to below the top of the bank. When complete the backfill and pipe will be removed, and the banks reconstructed by compacting.

- Materials will be stockpiled at suitable location and at no more than 2 m height and will be sealed and fenced to avoid erosion and cross contamination.
- The construction of earth and embankments will involve use of uncontaminated locally sourced materials where possible. Prevention of seepage may involve driving sheet piles into the core of the embankment.
- The flow control structure at the embankment at Tymon Lakes will be put in place after piles are installed. A coffer dam will be constructed around the footprint of the flow control structure to permit the river to flow during possible extreme events. Installation of this structure will require pumping of water and use of silt controls. Concrete will be poured in sections and pumping discontinued when this is taking place close to groundwater.
- Construction of the ICW will require a temporary river management system, which is described. A temporary river management system will be established during the earthworks. The ICW will first be constructed outside of the river channel and temporary bunds erected along the existing route to contain river flows. On completion the river will be diverted into the ICW and temporary bunds removed. Careful timing of construction stage scheduling will be required and ideally all instream works should be carried out in low flow periods. The base of the ICW cell will be completely level to promote dispersal. Access will be provided to allow for future monitoring and maintenance.
- Channel realignment at Whitehall Park will be achieved with the temporary diversion of flows through use of sheet piles.
- A variety of construction methods will be used at flood defence walls depending on ground condition, condition of existing foundations and/or walls, and other matters. Vegetation clearance on both banks and some movement of material will be required.
- Reinforcement of walls involving construction of scour protection beams will require channel flows to be temporarily diverted through a settlement tank and silt

bag. Concrete will be poured into a shuttered area and the work done in 20m runs. At other locations existing boundary walls will be retained and a new wall constructed adjacent to them using underpinning.

- New or replacement walls where required will have a precast base and will be constructed in situ. Flow will be diverted through silt controls.
- Replacement footbridges will involve craning in a precast concrete bridges following demolition of the existing bridge and excavation of foundations.
- Regarding the duration and sequencing of construction there is a priority to carry out construction of the embankment at Tymon Lakes and works in instream or adjacent to stream works during low flow periods of May to September.
- The contractor will be obliged to prepare a Construction Environmental Management Plan. An outline CEMP has been prepared and is in Appendix 5.1 of the EIAR and an Outline Surface Water Management Plan has been prepared and is appended to the NIS. These plans are considered to be mitigation measures in the context of AA. There would be an obligation on the contractor to take account of relevant legislation and best practice UK CIRIA guidance. The obligations on the contractor will extend to preparation of construction method statements and compliance with mitigation measures in the application.
- The risk of major accidents and/or disasters has been incorporated in the NIS and this includes a risk of large-scale pollution events, some of which are relevant to AA. These could include the collapse of a section of riverbank sediment stockpile, accidents when pouring concrete or failure of shuttering and a major spill during refuelling of construction vehicles. These are considered to be unlikely or in the case of large-scale events, highly unlikely but are considered as a worst-case scenario in accordance with the precautionary principle.

11.12.14. In terms of how the scheme will be maintained the following is stated:

- Ongoing maintenance is an important element of the operation of the scheme. Existing measures and the maintenance programme are described in brief. When the scheme is complete a robust programme of maintenance will be instituted by the local authorities to ensure culvert screens and channels are kept clear and that the scheme functions properly in a storm event.

- A register of the flood defence assets will be compiled to ensure that they are not removed or altered without proper review. It is the duty of the local authority to respond in a timely fashion to complaints regarding illegal dumping.

11.12.15. Potential in combination effects were reviewed by reference to live and recently approved planning applications in the vicinity of the river. I have reviewed and updated this based on the public planning register. The most significant of the applications include large developments at Airton. There are also smaller developments including small scale residential schemes and extensions. While the developments are all outside the proposed working areas associated with the PFAS, if multiple sites were concurrently constructed it is possible, they could lead to cumulative impacts on water quality in the Poddle and thus on downstream European sites.

11.12.16. The NIS concluded as follows:

This NIS will provide supporting information to assist the competent authority with an AA of the proposed development. We have identified two SACs and two SPAs that have distant hydrological connections to the proposed development site. In a worst-case scenario there is a risk of adverse impacts on the qualifying interests of one or more sites (e.g. intertidal mud flats, overwintering wildfowl). In response, series of mitigation measures have been recommended by the project's ecologist and hydrologist. These are best practice measures that are regularly used in construction sites, and that are known to be effective. Their implementation will be monitored by an environmental management and Ecological Clerk of Works, allowing any issues to be addressed. The results will be documented and made available for third-party review.

Incorporation of these measures in full and their subsequent implementation on site will remove any residual risk of significant effects on the River Poddle or downstream European sites, beyond reasonable scientific doubt. It is therefore the considered opinion of NM Ecology, as the author of this NIS, that, in making its AA in respect of the proposed development, An Bord Pleanála, as the Competent

Authority in this case, should determine that, given the full and proper implementation of the mitigation prescribed in this NIS, the proposed development, either individually or in combination with other plans or projects, will not adversely affect the integrity of the South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, North Bull Island SPA and North Dublin Bay SAC or any other European site.

11.12.17. I consider that the studies, surveys and consultations undertaken, together with the further information and updated survey reports supplied demonstrate an understanding of the receiving environment and the feasibility and potential impacts of constructing the PFAS in and adjacent the river, which is the pathway to downstream European sites. I consider that the potential for ex-situ impacts on birds has been fully addressed including by reason of the most recent surveys. In addition, the long-term consequences of the scheme have been fully considered, including with respect to water quality improvements, ongoing maintenance and major accidents.

11.12.18. Having reviewed the documents and submissions, I am satisfied that the information allows for a complete assessment of any adverse effects of the development, on the conservation objectives of the following European sites alone, or in combination with other plans and projects:

- South Dublin Bay and River Tolka Estuary SPA (4024)
- South Dublin Bay SAC (0210)
- North Bull Islands SPA (0206)
- North Dublin Bay SAC (4006).

11.12.19. **Appropriate Assessment of implications of the proposed development**

11.12.20. The following is a summary of the objective scientific assessment of the implications of the project on the qualifying interest features of the European sites using the best scientific knowledge in the field. All aspects of the project which could result in significant effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are considered and assessed.

European Sites

11.12.21. The following sites are subject to Appropriate Assessment:

- South Dublin Bay and River Tolka Estuary SPA (4024)
- South Dublin Bay SAC (0210)
- North Bull Islands SPA (0206)
- North Dublin Bay SAC (4006).

11.12.22. A description of the sites and their Conservation and Qualifying Interests/Special Conservation Interests, including any relevant attributes and targets for these sites, are set out in the NIS and summarised in Table 1 above. I have also examined the supporting documents for these sites available through the NPWS website (www.npws.ie).

The potential impacts of the proposed development.

11.12.23. I consider that the main potential impacts of the proposed development that could adversely affect the conservation objectives of European sites include;

- impacts to water quality in the construction and operation phases
- noise, vibration or visual disturbance impacts on birds.

Water quality impacts

11.12.24. I consider that it may be concluded based on the available information that potential changes in water quality in the construction of this major scheme including earth and embankments, works to flood defence walls, flood storage ponds and flow control structure and creation of a new integrated construction wetland and river channel alignment has potential to generate pollutants including suspended silt sediment, concrete/cement and hydrocarbons and chemicals.

11.12.25. Notwithstanding the dilution effect of intervening rivers and coastal waters, in accordance with the precautionary principle it must be assumed for the purposes of appropriate assessment that a possible worst-case scenario involving a large-scale pollution event such as an accidental spill of hydrocarbons could cause adverse effects on the conservation status of the qualifying interests of the downstream European sites. Surface water pollution could give rise to water quality effects which could alter the flow of water courses or cause direct harm to birds and aquatic fauna.

11.12.26. Water quality changes in the operation phase will not be significant and to the extent that they would be likely to occur, are likely to be positive as a result of the effect of the ICW. The operation of the development would not therefore cause any significant adverse impacts on water quality and would thereby not affect European sites.

11.12.27. The potential for in combination effects cannot be ruled out in the event that one or more major developments in the catchment was to be constructed at the same time as the PFAS.

Noise, vibration or visual disturbance impacts on birds

11.12.28. Due to the importance and scale of the lakes at Tymon Park, and the availability of playing fields which have previously attracted large flocks of Brent geese and the presence of some other overwintering species, which are special conservation interests for European sites, the matter of disturbance of overwintering birds in the construction phase needs to be assessed.

Consideration of qualifying interests

11.12.29. I consider that the qualifying interests of **South Dublin Bay SAC**:

- Annual vegetation of drift lines
- Salicornia and other annuals colonising mud and sand
- Embryonic shifting dunes

may be described as terrestrial habitats which would not be affected by any major water quality impact of the type described above. As such these qualifying interests can be ruled out from further consideration.

11.12.30. However, the qualifying interest tidal mudflats and sandflats would be at risk of potential impacts.

11.12.31. Regarding the **North Dublin Bay SAC**

- Annual Vegetation of Drift Lines
- Salicornia and other annuals colonising mud and sand
- Atlantic Salt Meadows
- Mediterranean Salt Meadows

- Embryonic Shifting Dunes
- Marram Dunes (White Dunes) Fixed Dunes (Grey Dunes)*
- Humid Dune Slacks
- Petalwort

would be considered to be terrestrial habitats which would not be affected by any major water quality event of the type described above. As such these qualifying interests can be ruled out from further consideration.

11.12.32. However, the qualifying interest tidal mudflats and sandflats would be at risk of potential impacts.

11.12.33. **Tidal mudflats and sandflats** are widespread within the SACs. They are the habitats of greatest importance to the bird species that inhabit the overlapping SPAs and would be used by birds from other nearby SPAs.

11.12.34. The conservation objective which applies to both sites is to maintain the favourable conservation condition of mudflats and sand flats not covered by sea water at low tide in the SAC, which is defined by a range of attributes and targets. The habitats are considered to be of inadequate conservation status nationwide due to long-term problems with water quality and aquaculture and the main threats to their conservation status are considered to be residential or recreational activities and structures generating marine pollution, agricultural activities generating marine pollution, marine aquaculture generating marine pollution.

11.12.35. Regarding **South Dublin Bay and River Tolka Estuary SPA** and **North Bull Island SPA** these together cover extensive intertidal areas south of the River Liffey and extending to the north of Dublin Bay. They protect a range of overwintering birds and breeding and other populations of terns. The SPAs also cover lands and structures which are not subject to marine water influence. Furthermore, some of the special conservation interests utilise lands outside the designated area as secondary habitats, notably the use of grasslands by Brent geese.

11.12.36. The conservation objective for the intertidal/wetland habitats within the SPAs is to maintain the favourable conservation condition of these habitats in the SPAs as a resource for regularly occurring migratory water birds that utilise it. This is defined

by the attribute and target that the permanent area occupied by the wetland habitat should be stable other than changes that occur from natural patterns of variation.

Regarding the conservation objective that applies to overwintering bird species in the SPAs is to maintain the favourable conservation condition of overwintering waterfowl which is defined by a list of attributes and targets relating to long-term population trend is and the range, timing or intensity of use of areas. There are 18 overwintering species for which the sites were designated namely light bellied Brent geese, shelduck, teal, pintail, ringed plover, grey plover, shoveller, oystercatcher, golden plover, knot, sanderling, dunlin, black tailed godwit, bar tailed godwit, curlew, redshank, turnstone and black headed gull. Feeding for these species mainly takes place within the intertidal sandflat and mudflat habitats. Regarding the population trends and conservation status:

- shoveller, grey plover, golden plover and black headed gull have a long-term declining population trend and are of unfavourable conservation status
- shelduck and pintail have long-term declines and are of intermediate unfavourable conservation status
- the remaining species including Brent geese have stable or increasing populations.

11.12.37. There are separate conservation objectives for tern populations including breeding tern species which use the mooring structures in the Dublin Docklands and other locations.

Use of site and nearby lands by special conservation interests

11.12.38. The information provided by the applicant in the RFI response document and in the EIAR in relation to use of lands within or close to the proposed development site by special conservation interests of the two SPAs is discussed below.

11.12.39. During the 13 surveys undertaken between January and mid-April 2018 which included survey of the north-west of Tymon Park, a traditional feeding area for **Brent geese**, no geese were noted other than observations of geese flying overhead. A further survey was undertaken in early March 2019 in response to an observation by the SDCC heritage officer on 4 April 2019 of a flock of Brent geese on the playing fields in the north-west of the park. The findings were confirmed again in the winter

surveys 2021/2022 which did not record brent geese and during which period the staff of SDCC did not record the species.

- 11.12.40. I consider that there is no evidence for any use other than very infrequent use of playing fields at Tymon Park by Brent Geese. All the evidence points in this direction. There is a dog enclosure in this zone of the park which is considered to have contributed significantly to the reduced use from 2008 and 2009 when large flocks (up to 1200 Brent geese) used this part of the park.
- 11.12.41. Regarding the observations the original An Taisce submission refers to potential discrepancies relating to information presented regarding Brent geese. The second submission appears to indicate satisfaction with the response presented in relation to use of Brent geese by this area.
- 11.12.42. Regarding **other overwintering waterfowl** the NIS contains a summary of the peak counts for all species and notes that the ponds at Tymon Park are used by a number of waterbirds, including several winter migrants. Of these, four species were identified which are associated with the European sites considered under this appropriate assessment namely **Brent geese, teal, shoveller and black headed gull**. The potential impacts arising from the proposed development and these special conservation interests needs to be assessed.
- 11.12.43. It may be concluded that there is potential for impacts on these bird species, if present during the construction phase by reason of noise, vibration and/or visual disturbance. The main source of potential noise, vibration and disturbance to Brent geese would be from the temporary construction compound and working areas. As presented in figure 2 of the NIS this is separated by distance and by intervening development including houses and a dog walking area from the playing fields which might be used by Brent geese. In addition to this physical layout most of the work around Tymon Lakes will take place in summer months when Brent geese and other overwintering bird species will not be present. There is a commitment in the NIS that monitoring to be undertaken will include monitoring of the activity of Brent geese, if present for disturbance by construction works and the undertaking of appropriate action by the ecological clerk of works. I consider that the proposed cessation of work if necessary is feasible given the limited duration and that the measure will protect any use by Brent geese of the playing fields.

- 11.12.44. In relating to overwintering birds in general I note again the seasonality of the proposed works at the ponds which attract the birds. I consider that it can be concluded that due to the undertaking of works in the summer months there is no reasonable likelihood of significant effects on the species by reason of noise, vibration or disturbance.
- 11.12.45. For these reasons I consider that the risk of disturbance or displacement of the special conservation interests of the South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA can be eliminated.
- 11.12.46. In relation to the use by special qualifying interests of habitats in the middle reaches of the Poddle channel I consider that taking into account the submissions and observations and the survey work which has been presented there is sufficient information to conclude that none of the other special conservation interests of South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA or any other European site use or rely on the available lands to warrant being brought forward for further assessment.
- 11.12.47. In summary it may be concluded that the potential for impacts on the European sites relates to water quality (construction phase) effects on mudflats and sand flats and that mitigation of this risk is required, notwithstanding that it is a low risk.

Mitigation

- 11.12.48. The information set out in the EIAR and including the CEMP and SWMP presented includes a range of mitigation measures which I consider are well understood, robust and capable of successful mitigation by measures which include:
- Putting in place pollution prevention measures prior to commencement of any other construction work and keeping them in place until the work is complete.
 - Employment of an Ecological Clerk of Works to oversee the implementation of mitigation measures and provide reports and written correspondence as requested to demonstrate compliance. ECoW will liaise with the contractor to assist with preparing a detailed CEMP and its implementation and advise on all works close to the river.

- Implement the SWMP in relation to which included measures relate to timing of works to avoid wet conditions, use of silt fences and catch nets, appropriate handling and storage of soil, concrete, hydrocarbons and other chemicals, measures to contain spillages and avoid potentially polluting compounds entering subsurface and aquifer.
- In addition, specific method statements will be required for approval and will ensure minimal suspension and mobilisation of sediment downstream of the working area, promote short duration periods where in-river work is required, ensure alien species are not moved from one section of the river to another and other standard measures.
- All instream works to comply with current best practice notably the IFI guidelines and protection of fisheries during construction and TII guidelines for crossing of water courses. Compliance with a range of other standards which are listed, and which would be considered to constitute best practice.
- Other measures set out include undertaking of toolbox talks, preparation, and proper documentation in an environmental operating plan and during the construction programme the undertaking of a review of the CEMP and SWMP.
- Control of suspended solids will be undertaken, and risk of erosion minimised by careful planning of construction routes. Waste from chemical toilets will be removed to a licensed facility. Other waste management measures are set out.
- Monitoring including of evidence of Brent geese and of surface water quality will be undertaken. Appropriate responses are set out in the NIS. Water quality monitoring points will be upgrading and down gradient of each works area and daily visual inspection would be undertaken and recorded. Sampling of suspended solids, dissolved oxygen and pH will be undertaken weekly or depending on prevailing circumstances.

11.12.49. I am satisfied that the measures presented will avoid or minimise the risk of pollutants reaching the river and thereby remove residual risk of negative impacts from pollutants including suspended solids, hydrocarbons, other pollutants, and concrete. The measures which are set out in addition will provide for the identification and resolution of any significant events in the form of adverse water quality in the Poddle and thereby provide further protection for the downstream

European sites. I consider that the residual risk of negative impacts on the river Poddle and thereby on the downstream European sites in Dublin Bay is removed by reason of the mitigation measures which are presented.

11.12.50. In relation to overwintering birds, I have address this earlier and consider that the mitigation of avoidance in terms of the timing of works as well as the engagement of the ECoW will remove any residual risks of negative impacts on the European sites.

Integrity test

11.12.51. Following the appropriate assessment and the consideration of mitigation measures, I am able to ascertain with confidence that the project would not adversely affect the integrity of South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, North Bull Islands SPA and North Dublin Bay SAC in view of the Conservation Objectives of this site. This conclusion has been based on a complete assessment of all implications of the project alone and in combination with plans and projects.

Appropriate Assessment Conclusion

11.12.52. The Poddle Flood Alleviation Scheme has been considered in light of the assessment requirements of the Planning and Development Act 2000 as amended.

11.12.53. Having carried out screening for Appropriate Assessment of the project, it was concluded that it may have a significant effect on European Sites No. 4024, 0210, 0206, 4006. Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying features of those sites in light of their conservation objectives.

11.12.54. Following an Appropriate Assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of European Sites No. 4024, 0210, 0206, 4006, or any other European site, in view of the sites' Conservation Objectives. This conclusion is based on a complete assessment of all aspects of the proposed project and there is no reasonable doubt as to the absence of adverse effects.

12.0 Conclusion and Recommendation

- 12.1.1. Through the incorporation of natural flood management measures as a key driver for the design of this scheme I consider that the Poddle Flood Alleviation Scheme puts the natural environment to the fore in the context of the primary purpose of alleviating flooding.
- 12.1.2. I consider that the design approach taken is in line with best practice the scheme and the resulting development will constitute a positive intervention in the urban environment.
- 12.1.3. Taking into account the ecological and water quality enhancement measures including the creation of new habitats for species and the integrated constructed wetland, and the mitigation measures which will address the main adverse impact namely loss of trees and woodland, I conclude that the proposed development would not adversely impact on the biodiversity of the area.
- 12.1.4. The scheme will alleviate flood risk to a majority of residential properties in the Poddle catchment and thus significantly benefit the residential population which has suffered a number of major adverse flood events.
- 12.1.5. I conclude that the proposed development which is supported by the prevailing planning policy is in accordance with the proper planning and sustainable development of the area.
- 12.1.6. I conclude that the submitted evidence supports the applicant's conclusion that the proposed development is in keeping with the objectives of the Water Framework Directive.
- 12.1.7. I therefore recommend that the Board APPROVE the River Poddle Flood Alleviation Scheme in accordance with the documentation submitted and based on the following reasons and considerations and subject to the conditions set out below.

Reasons and Considerations

In coming to its decision, the Board had regard to a range of matters including the following:

European legislation including:

Directive 2014/52/EU amending Directive 2011/92/EU (EIA Directive) on the assessment of the effects of certain public and private projects on the environment.

Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directives) which set the requirements for Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union.

Directive 2000/60/EC (Water Framework Directive) for establishing a framework for Community action in the field of water policy.

Directive 2007/60/EC (Floods Directive) relating to the assessment and management of flood risk.

National legislation and guidance including:

Section 175 of the Planning and Development Act 2000, as amended, which sets out the provisions in relation to local authority projects which are subject to Environmental Impact Assessment (EIA).

Section 177AE of the Planning and Development Act 2000, as amended, which sets out the provisions in relation to local authority projects which are subject to Appropriate Assessment (AA).

Guidelines on the Information to be contained in Environmental Impact Assessment Reports published by the EPA in June 2022.

National and regional plans and policy including:

Project Ireland 2040 - National Planning Framework particularly National Strategic Outcome 9 which seeks to coordinate EU Flood Directive and Water Framework Directive implementation.

Climate Action Plan 2021 which identifies risks resulting from climate change including the increased likelihood and scale of river flooding and also sets an objective to promote Nature-based Catchment Management Solutions and to assess their potential to be part of future flood relief schemes.

Regional Spatial and Economic Strategy for the Eastern and Midlands Region which supports the national policy objectives in respect of the implementation of adaptation responses in vulnerable areas.

Local planning policy including:

The policies and objectives of South Dublin County Development Plan 2022-2028.

The policies and objectives of Dublin City Development Plan 2016-2022.

The following matters:

The documentation that accompanied the application for approval and reports and submissions from observers and prescribed bodies and the further submissions made by the applicant including the additional information submitted and the responses to same.

The likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on a European Site.

The conservation objectives, qualifying interests and special conservation interests for the European Sites.

The nature and extent of the proposed works as set out in the application.

The range of proposed mitigation measures set out in the submitted Environmental Impact Assessment Report and Natura Impact Statement (incorporating Appropriate Assessment Screening) as amended by the further information submitted.

The submissions and observations received in relation to the proposed development.

The report and recommendation of the person appointed by the Board to make a report and recommendation on the matter.

Appropriate Assessment

The Board agreed with the screening assessment and conclusion carried out in the Inspector's report that the South Dublin Bay and River Tolka Estuary (site code

4024), South Dublin Bay SAC (site code 0210), North Dublin Bay SAC (site code 0206) and North Bull Island SPA (site code 4006) are the only European Sites in respect of which the proposed development has the potential to have a significant effect.

The Board considered the Natura Impact Statement received by the Board on 16 November 2020 and associated documentation submitted with the application for approval, the mitigation measures contained therein, the submissions and observations on file, the responses to further information and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the affected European Sites, namely the South Dublin Bay and River Tolka Estuary (site code 4024), South Dublin Bay SAC (site code 0210), North Dublin Bay SAC (site code 0206) and North Bull Island SPA (site code 4006) in view of the sites' conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment. In completing the appropriate assessment, the Board considered, in particular, the following:

- i. the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,
- ii. the mitigation measures which are included as part of the current proposal, and
- iii. the conservation objectives for the European Sites.

In completing the appropriate assessment, the Board accepted and adopted the screening and the appropriate assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Site, having regard to the site's conservation objectives.

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the sites' conservation objectives.

Environmental Impact Assessment

The Board completed an environmental impact assessment of the proposed development taking account of:

- (a) the nature, scale, location and extent of the proposed development,
- (b) the Environmental Impact Assessment Report (EIAR) and associated documentation submitted in support of the application, including the further information submitted,
- (c) the submissions received from the prescribed bodies, and
- (d) the Inspector's report.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development, and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment. The Board agreed with the examination, set out in the Inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made in the course of the application. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

Positive long-term impacts to population and human health from the provision of a flood alleviation scheme.

Major positive residual benefits on material assets entailing the protection of 921 houses and zoned serviced lands.

Long-term significant neutral impact at parks including Tymon Park and Ravensdale Park due to the loss of trees combined with the visual and landscape changes, which is mitigated by the design of the proposed development and replacement planting.

Short term construction related disturbance which can be mitigated by measures to minimise emissions and to manage construction traffic as set out in the EIAR and subject to implementation of a Construction Environmental Management Plan incorporating a Construction Traffic Management Plan.

Adverse impacts on biodiversity through the loss of trees and woodlands, which will be mitigated by replacement planting.

Positive impacts once the works at Whitehall Park and the ICW are established, which will benefit hydromorphology, water quality and biodiversity.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures proposed, and subject to compliance with the conditions set out below, the effects of the proposed development on the environment, by itself and in combination with other plans and projects in the vicinity, would be acceptable.

Proper planning and sustainable development:

It is considered that subject to compliance with the conditions set out below the proposed development would accord with European, national, regional and local planning and related policy and would provide for the protection from flooding of the majority of houses in the Poddle catchment.

The implementation of a flood alleviation scheme which is of innovative design by reason of its use of nature-based solutions in an established urban area is in accordance with objectives relating to biodiversity and the Water Framework Directive.

The proposed development would not have an unacceptable impact on the environment including water and ecology, would not seriously injure the visual or residential amenities of the area or of property in the vicinity, would not have a significant adverse impact on local parks and would be acceptable in terms of cultural heritage impacts and traffic safety and convenience.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Conditions

1. The proposed development shall be carried out and completed in accordance with the plans and particulars, including the mitigation measures specified in the Environmental Impact Assessment Report and Natura Impact Statement, submitted with the application with the application, as amended by the further plans and particulars submitted on the 19th day of October 2020, 19th day of

November 2020, 5th day of February 2021, 16th day of November 2021, 29th day of April 2022 and the 20th day of May 2022, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be prepared by the local authority, these details shall be placed on file prior to commencement of development and retained as part of the public record.

Reason: In the interest of clarity and the proper planning and sustainable development of the area and to ensure the protection of the environment.

2. The works at St Martin's Drive / Poddle Park shall be in accordance with Option 1 as shown on Figure 7-2 of the response to further information which was received by the Board on the 19th day of October 2020.

Reason : In the interest of minimising impacts on the river and biodiversity and in the interest of the proper planning and sustainable development of the area.

3. The mitigation measures and monitoring commitments identified in the Environmental Impact Assessment Report including the revisions to same, and other plans and particulars submitted with the application shall be carried out in full except as may otherwise be required in order to comply with other conditions.

Reason: In the interest of clarity and protection of the environment during the construction and operational phases of the proposed development.

4. The mitigation measures and monitoring commitments identified in the Natura Impact Statement including the revisions to same, and other plans and particulars submitted with the application shall be carried out in full except as may otherwise be required in order to comply with other conditions.

Reason: In the interest of clarity and protection of the environment during the construction and operational phases of the proposed development.

5. The mitigation measures contained in the CSR Updated / Tree Survey Report and Arboricultural Impact Assessment shall be adopted in full and incorporated into the Schedule of Mitigation.

Reason : To minimise adverse effects on trees.

6. The recommendations of the Water Framework Directive Assessment Report shall be adopted in full and incorporated into the Schedule of Mitigation.

Reason : To ensure that the development complies with the objectives of the Water Framework Directive.

7. The following shall be subject of consultation with Inland Fisheries Ireland and shall apply in relation to the construction, detailed design, monitoring and operation of the proposed development.
 - (a) The timing of in-stream works.
 - (b) A programme of monitoring, including post construction monitoring to be prepared in consultation with the contractor, the local authorities and relevant statutory agencies and the programme to be implemented thereafter.
 - (c) Works to be in accordance with a finalised Surface Water Quality Management Plan.
 - (d) Detailed method statements in respect of the significant aspects of the scheme.
 - (e) Detailed design in respect of permanent channel replacement and replacement footbridges.
 - (f) Post construction monitoring to include a repeat of the baseline fish and invertebrate survey 3 years after completion.

Reason: In the interest of the protecting of receiving water quality, fisheries and aquatic habitats.

8. A robust program of maintenance, which shall include ongoing and exceptional maintenance shall be agreed between the local authorities. The agreed program shall be recorded and retained in a location accessible to members of the public, which may include a website. The implementation of the program of maintenance shall be recorded.

Reason : To ensure the successful implementation of the scheme and the availability of information to members of the public.

9. The local authorities and any agent acting on their behalf shall facilitate the preservation, recording, protection or removal of archaeological materials or features that may exist within the site.

Prior to the commencement of development, following consultation with the National Monuments Service, the following matters shall be addressed, and a report prepared

outlining the pre-construction strategy which shall be placed on the file prior to commencement of development and retained as part of the public record:

- (a) Archaeological monitoring of all ground disturbance and river disturbance works shall be undertaken. This archaeological monitoring should be under licence and shall consist of the following:

In order to ensure the preservation of potential archaeological sites and features the applicant shall engage the services of a suitably qualified archaeologist to monitor all disturbance works associated with the development. The archaeological monitoring shall be licenced under the National Monuments Acts 1930-2004.

A detailed method statement shall accompany the licence application and shall include details on the proposed works, duration, monitoring team and a finds retrieval strategy.

Should archaeological material be found during the course of monitoring, the archaeologist shall have the work in that area suspended, pending a decision as to how best to resolve the archaeology. The applicant shall be prepared to be advised by the Department of Culture, Heritage and the Gaeltacht with regard to any necessary mitigation action. The applicant shall facilitate the archaeologist in recording any material found.

The Department of Culture, Heritage and the Gaeltacht shall be furnished with a report describing the results of the monitoring.

- (b) Predevelopment testing shall consist of the following:

The applicant is required to engage the services of a suitably qualified archaeologist (licensed under the National Monuments Acts 1930-2004) to carry out predevelopment testing at Cutlers Mill and Cutlers Weir as recommended in the EIAR. No subsurface works to be undertaken in the absence of the archaeologist without his/her express consent.

The archaeologist is required to notify the department in writing at least four weeks prior to the commencement of site preparations.

The archaeologist shall carry out any relevant documentary research and may excavate test trenches at locations chosen by the archaeologist, having consulted the proposed plans.

Having completed the work the archaeologist shall submit a written report to the local authorities and to the Department of Culture, Heritage and the Gaeltacht.

Where archaeological material is shown to be present, avoidance, preservation in situ, preservation by record and/or monitoring may be required. The Department of Culture, Heritage and the Gaeltacht will advise the local authorities in these matters.

No site preparation or construction works to be carried out until after the archaeologist's report has been submitted and permission to proceed has been received in writing from the Department of Culture, Heritage and the Gaeltacht.

(c)A Wade and Detection Survey shall be undertaken as follows:

The applicant is required to engage the services of a suitably qualified archaeologist to carry out a Wade and Metal Detection Survey in areas where the Poddle riverbed shall be disturbed by the works. This shall be licensed under the National Monuments Act 1930 – 2004.

The metal detection survey shall be carried out under licence granted under section 2 of the National Monuments Act 1987.

Having completed the work the archaeologist shall submit a written report to the Department of Culture, Heritage and the Gaeltacht for review.

Where archaeological material or features are shown to be present, preservation in situ, avoidance, preservation by record archaeological monitoring may be required. The applicant shall be prepared to be advised by the Department of Culture, Heritage and the Gaeltacht in this regard.

In default of agreement between the applicant and NMS regarding compliance with any of the requirements of this condition, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.

10. The location of the proposed artificial otter holts and their design shall be subject to consultation with the National Parks and Wildlife Service of the Department of Culture, Heritage and the Gaeltacht.

Reason : To enhance the habitat for otter and in the interest of biodiversity.

11. Any clearance of vegetation shall be within the period September to February inclusive.

Reason : To ensure that no clearance of vegetation takes place within the main bird nesting season and thus avoid impacts on birds.

12. Prior to commencement of development, the local authorities and any agent acting on their behalf shall undertake a pre-construction invasive species survey and following same shall update the Invasive Species Management Plan for the development site.

Reason: In the interest of protecting the environment and in the interest of public health.

13. Prior to commencement of development, the local authorities and any agent acting on their behalf shall finalise a Construction Environmental Management Plan which shall incorporate a Traffic Management Plan.

Reason: In the interest of protecting the environment and to minimise disturbance.

Mairead Kenny
Senior Planning Inspector
28 September 2022