

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

ADDENDUM REPORT

PROPOSED RESIDENTIAL DEVELOPMENT

AT

Clonburris Phase 1A SDZ

Prepared by



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In Conjunction with

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LIST OF ABBREVIATIONS

AA	Appropriate Assessment	DAHG	Department of Arts, Heritage and the Gealtacht
ABP	An Bord Pleanála	DCENR	Department of Communications, Energy and Natural Resources
CDP	County Development Plan	DEHLG	Department of Housing, Planning and Local Government
CMP	Construction Management Plan	EIA	Environmental Impact Assessment
CSO	Central Statistics Office		

EIAR	Environmental Impact Assessment Report	NPWS	National Parks and Wildlife Service
EMP	Environmental Management Plan	NRA	National Roads Authority
EPA	Environmental Protection Agency	NPF	National Planning Framework
ESRI	Economic and Social Research Institute	OPW	Office of Public Works
FMP	Forest Management Plan	RMP	Record of Monuments and Places
GDP	Gross Domestic Product	RPG	Regional Planning Guidelines
GSI	Geology Survey Ireland	RPS	Record of Protected Structures
IAA	Irish Aviation Association	SAC	Special Area of Conservation
IEEM	Institute of Ecology and Environmental Management	SMR	Sites and Monuments Record
IFI	Inland Fisheries Ireland	SPA	Special Protection Area
MCC	Meath County Council	SUDS	Sustainable Drainage System
NHA/pNHA	Natural Heritage Area / proposed Natural Heritage Area	TMP	Traffic Management Plan
NIAH	National Archive of Architectural Heritage	WFD	Water Framework Directive

1.0 INTRODUCTION & METHODOLOGY

1.1 INTRODUCTION

This Environmental Impact Assessment Report (EIAR) addendum relates to the construction of 563 no. dwellings, comprising 171 no. houses, 148 duplex apartments, 244 no. apartments, a creche, and commercial hub, Community floorspace, along with open space (4.1 hectares), internal roads, and associated infrastructure (including haul routes) all on a site of c. 17.02 hectares, located within the Clonburris SDZ, and Planning Scheme Clonburris South West Development Area within the townlands of Cappagh, Clonburris Little & Kishoge, Co. Dublin, all on wider lands bounded generally by undeveloped lands and the Dublin-Cork railway line to the north, undeveloped lands and the Grand Canal to the south, the R113 to the east and the R136 to the west.

This document contains additional and updated information on the predicted environmental effects of the proposed development as reported in the original EIAR, which was submitted with the planning application on the 12th of December 2021 (PRR SDZ21/0022) arising from the changes to design arising from the request for Further Information.

This EIAR Addendum must be read in conjunction with the original EIAR document, Volumes 1, 2 and 3. The various parts of this addendum will refer back to the respective original EIAR sections to ensure clarity and accurate cross-referencing.

This EIAR Addendum has been prepared to address the proposed changes to the layout arising from the request for Further Information.

The design team consulted with the Planning Authority which has informed the content and Further Information Response.

1.2 Structure and Content of this EIAR Addendum

Each section of this EIAR Addendum examines the discrete pieces of additional design and assessment work to be undertaken in relation to specific environmental aspects of the proposal and its potential impacts. Environmental aspects considered include:

Chapter	Title
3	Population and Human Health
4	Biodiversity
5	Land and Soils
6	Water
7	Air Quality and Climate
8	Noise and Vibration
9	Landscape & Visual Impact
10	Material Assets - Traffic
11	Material Assets – Waste Management
12	Material Assets – Utilities
13	Archaeology and Architectural and Cultural Heritage
14	Risk Management for Major Accidents and / or disasters
15	Interactions of the Foregoing
16	Summary of Mitigation and Monitoring Measures

1.3 EIAR Addendum Study team

This EIAR Addendum document was prepared by Rory Kunz Executive Director, of John Spain Associates who has a Masters in Environmental Resource Management and a Diploma in EIA Management (both from UCD) as well as a Masters in Town and Country Planning. In addition, Rory is a corporate member of the of the Irish Planning Institute and has 19 years of experience of Environmental Impact Assessment and urban development.

This EIAR Addendum was prepared by the same study team led by John Spain Associates, who were responsible for the overall management and co-ordination of the document. The full team and section of the EIAR are listed below:

Table 1.1 – EIAR List of Competent Experts

Organisation	EIAR Specialist Topics / Inputs
John Spain Associates, Planning & Development Consultants, 39 Fitzwilliam Place, Dublin 2, D02 ND61 T: 01 662 5803 Rory Kunz, BA (MOD), MScERM, MAT&CP, Dip EIA Mgmt	Introduction and Methodology Project Description and Alternatives Examined Population and Human Health Interactions of the Foregoing Principal Mitigation and Monitoring Measures Non-Technical Summary
Bryan Deegan (MCIEEM) Managing Director Altamar Ltd. Marine and Environmental Consultants	Biodiversity
Dr Tina Auhney Bat Eco Services Licenced Bat Specialist - Honours degree in Environmental Science from NUI Galway and Ph.D.	Biodiversity (Bats)
Thomas Carrigg, Civil Engineer, DBFL Consulting Engineers & John Carr, Chartered Civil Engineer [B.Eng MSc CEng], DBFL Consulting Engineers.	Land and Soils/ Population and Human Health
Thomas Carrigg, Civil Engineer, DBFL Consulting Engineers & John Carr, Chartered Civil Engineer [B.Eng MSc CEng], DBFL Consulting Engineers	Water and Hydrogeology Population and Human Health
Danny Pio Murphy, Senior Engineer Transportation DBFL Consulting Engineers	Material Assets-Traffic
Byrne Environmental Ian Byrne Managing Director, MSc, MIOA, Diploma in Environmental & Planning Law	Material Assets (Waste Management)
Margaret Dolan, Tech Cert, BSc (Hons), CEng, MIEI, Chartered Engineer of Waterman Moylan Consulting Engineers	Material Assets (Utilities)
Byrne Environmental Ian Byrne Managing Director, MSc, MIOA, Diploma in Environmental & Planning Law	Air Quality and Climate (Population and Human Health)
Byrne Environmental Ian Byrne Managing Director, MSc, MIOA, Diploma in Environmental & Planning Law	Noise and Vibration (Population and Human Health)
Jim Bloxam Senior Associate MLA MILI, Murray & Associates landscape architecture Mark Boyle, Director of Murray & Associates Landscape Architecture	Landscape and Visual Impacts
Thomas Carrigg, Civil Engineer, DBFL Consulting Engineers	Risk Management
Faith Bailey MA, BA (Hons), MCIfA Associate Director.	Archaeology, Architectural and Cultural Heritage

2.0 PROJECT DESCRIPTION AND ALTERNATIVES EXAMINED

This chapter of the EIAR Addendum provides a summary of the proposed amendment to the scheme resulting from the changes to the layout. It should be read in conjunction with Chapter 2 of Volume II of the EIAR submitted with the planning application.

2.1 Information on the site, Design and Size of the proposed development

The Revised Site Layout Plan (figure 2.1) prepared by Murray Associates shows the overall layout in context.

Figure 2.1 – Landscape Site Plan



The revised scheme includes the following to the layout:

- Block 1 redesign to provide park frontage
- Reconfiguration of Homezones to provide off curtilage street trees
- Reconfiguration of Local streets to provide planting strip at outer edge of footpath for off curtilage street trees
- Provision of Cycle / Pedestrian link facing Urban square adjacent to block 2
- Realignment of link street crossing point to correspond with cycle / ped link
- Connection of southernmost street facing the canal as per NTA feedback
- Provision of "own door" units at ground floor of all apartment blocks
- Amendment to house types F2s / F3s to provide brick elevation
- Amendment to the local node to provide flexible community floorspace and a combined "community" floor space (including creche) of 600sqm.
- Change of materials to Urban Grain Typologies

The revised scheme includes the following amendments to the engineering layouts and details:

- The amount of swales, bioretention areas/rain gardens and permeable paving has been increased to provide additional SuDS features throughout the site
- SuDS tree pits have been added throughout the site at the back of footpaths and on the footpath within homezones to intercept surface water runoff from the road
- Bioretention areas have been added to areas within the detention basins for surface water to be routed to from adjacent roads.

- Surface water pipes, drainage pipes and water supply pipe alignments have been updated in homezones as a result of the introduction of SuDS trees in these zones
- The 450mm Foul water pipe south of Apartment Block A has been moved to south and is now under the carriageway in order to comply with Irish Water building offset requirements
- The section of road north of the north-western attenuation basin has been included in the design
- Provision of Cycle / Pedestrian link facing Urban square adjacent to block 2
- Realignment of link street crossing point to correspond with cycle / ped link
- Connection of southernmost street facing the canal as per NTA feedback
- All associated Landscaping amendments.

2.1.1 Demolition

There is no demolition of habitable or any other structures relating to the proposed development.

2.1.2 Residential Development

The revisions will result in the construction of 563 dwellings, a creche, innovation hub, flexible community room and open space as follows:

- A) 171 no. houses comprising 6 no. 2 bedroom houses, 153 no. 3 bedroom houses and 12 no. 4 bedroom houses (145 no. dwellings in CSW-S4 consisting of 6 no. 2 bedroom houses, 127 no. 3 bedroom houses & 12 no. 4 bedroom houses & 26 no. 3 bedroom dwellings in CSW-S3); all 2 no. storey comprising semi-detached, terraced, end terrace units (with parking and private open space);
- B) 148 no. duplex apartments/apartments (88 no. in CSW-S4 & 60 no. in CSW-S3) comprising 74 no. 2 bedroom units and 74 no. 3 bedroom units, in 16 no. 3 no. storey buildings. In CSW-S4 Duplex Blocks A,B,C,D,E,F,G,J,K, comprise 8 no. units (4 no. 2 bed & 4 no. 3 bed units), Duplex Block H comprises 16 no. units (8 no. 2 bed & 8 no. 3 bed units); In CSW-S3 Blocks L, N & O comprise 8 no. units (4 no. 2 bed & 4 no. 3 bed units), Block M comprises 14 no. units (7 no. 2 bed & 7 no. 3 bed units), Block P comprises 10 no. units (5 no. 2 bed & 5 no. 3 bed units), Block Q comprises 12 no. units (6 no. 2 bed & 6 no. 3 bed units), all to have terraces/pitched roof;
- C) 244 no. apartments as follows: within CSW-S4, Block 1 consists of 168 no. apartments (60 no. 1 bedroom, 103 no. 2 bedroom and 5 no. 3 bedroom apartments), in a 2-building arrangement western block 5 storeys and eastern block 5 and 6 no. storeys in height. Within CSW-S3, Block 2 (4 storeys) comprises 16 no. 1 bedroom apartments and 22 no. 2 bedroom apartments, Block 3 (4 storeys) comprises 16 no. 1 bedroom apartments and 22 no. 2 bedroom apartments (all apartments to have terrace or balcony).
- D) Provision of an commercial hub (664.6 sq. m) and creche (c. 534 sq. m) along with a Community Multi-purpose room of c. 74 sq. m in a part 3/4 storey 'local node' building in CSW-S4;
- E) Vehicular access will be from the permitted Clonburris Southern Link Street (SDZ20A/0021) and R113 to the east (along with provision of internal haul routes (for construction) to connect to the R136 to the west);

Table 2.1 – Overall Residential Development Mix

	1 bedroom	2 bedroom	3 bedroom	4 bedroom	Overall	
Houses		6	153	12	171	30.4%
Apartments	92	147	5		244	43.3%
Duplex Apartments		74	74		148	26.3%
	92	227	232	12	563	
Overall Mix	16.3%	40.3%	41.2%	2.1%		

Source: MCORM Architects

A wide variety of dwelling typologies are included in the proposal, including 2 storey houses, duplex apartments and apartments.

In addition to the above it is proposed to provide a creche of c. 534 sq. m along with an innovation hub of c. 664.6 sq. m including a community multi-purpose room of c. 74 sq. m., located centrally within Development Area CSW-S4.

Across the 2 no. Development Areas, it is proposed to provide some 4.12 hectares of public open space in a series of well-distributed large-scale parks. It is also proposed to provide communal open spaces of some 0.36 hectares.

2.1.3 Development Area CSW-S4

Within DA CSW-S4 it is proposed to provide 401 no. dwellings, comprising 168 no. apartments, 88 no. duplex units, and 145 no. houses all within a site of c. 9.75 hectares.

Table 2.2 – Overall Dwelling Mix – Development Area CSW-S4

	1 bedroom	2 bedroom	3 bedroom	4 bedroom	Overall
Houses		6	127	12	145
Duplex Apartments/Apartments		44	44		88
Apartments	60	103	5		168
Overall Mix	60	153	176	12	401
	14.9%	38.2%	43.9%	2.9%	

Source: MCORM Architects Schedule of Areas

2.1.3.1 Houses

The houses are designed as two storey family dwellings, in semi-detached and terrace configurations. Individual plot layouts provide good separation to ensure privacy and minimise overlooking. The end-row and end terrace house types have been used to turn corners, with front doors and windows giving activity and passive supervision to the sides and avoiding large blank gables.

The house types are as follows:

Table 2.3 – House Types – Development Area CSW-S4

House Type	Typology	Height	No.
House Type F1	3 Bed - Mid Terrace	2 Storey	33
House Type F2	3 Bed - End Terrace	2 Storey	30
House Type F2s	3 Bed - Terrace Side Entry	2 Storey	8
House Type F3	3 Bed - Semi D	2 Storey	16
House Type F3s	3 Bed - Semi D Side Entry	2 Storey	4
House Type G1	3 Bed - Mid Terrace	2 Storey	8
House Type G2	3 Bed - End Terrace	2 Storey	8
House Type G3	3 Bed - Semi D	2 Storey	6
House Type H1	3 Bed - Mid Terrace	2 Storey	10
House Type H2	3 Bed - End Terrace	2 Storey	4
House Type J3	4 Bed - Semi D	2 Storey	6
House Type J3S	4 Bed - Side entry	2 Storey	6
House Type K1	2 Bed - Mid Terrace	2 Storey	6
			145

Source: MCORM Architects Schedule of Areas

The variety of house types provides for a wide choice to suit all potential occupiers and many household types, as well as permitting a very efficient site layout. The mix of house type in any one row creates visual interest and contribute to the specific character of the development, both overall and in each street.

Figure 2.2 – CGIS



Source: 3D Design Bureau

2.1.3.2 Apartments CSWS4

It is proposed to provide 168 no. apartments in Block 1 which is located in the eastern part of the Development Area; addressing the internal east-west street and the Fonthill Road to the east. The high pressure Gas Networks Ireland gas wayleave is located between the Fonthill Road and the proposed apartments.

Figure 2.3 – Apartments Entrance to Scheme

Source: 3D Design Bureau

Table 2.4 – Apartments – Development Area CSW-S4

Type	Description	No.	Size
Type AP_1B	1 Bed (2 Person)	60	49.80
Type AP_2A	2 Bed (3 Person)	5	70.75
Type AP_2B	2 Bed (3 Person)	15	73.00
Type AP_2D	2 Bed (3 Person)	8	78.40
Type AP_2E	2 Bed (4 Person)	20	78.64
Type AP_2F	2 Bed (4 Person)	16	79.40
Type AP_2G	2 Bed (3 Person)	6	74.80
Type AP_2J	2 Bed (4 Person)	11	82.15
Type AP_2L	2 Bed (4 Person)	8	86.40
Type AP_2Q	2 Bed (4 Person)	5	78.46

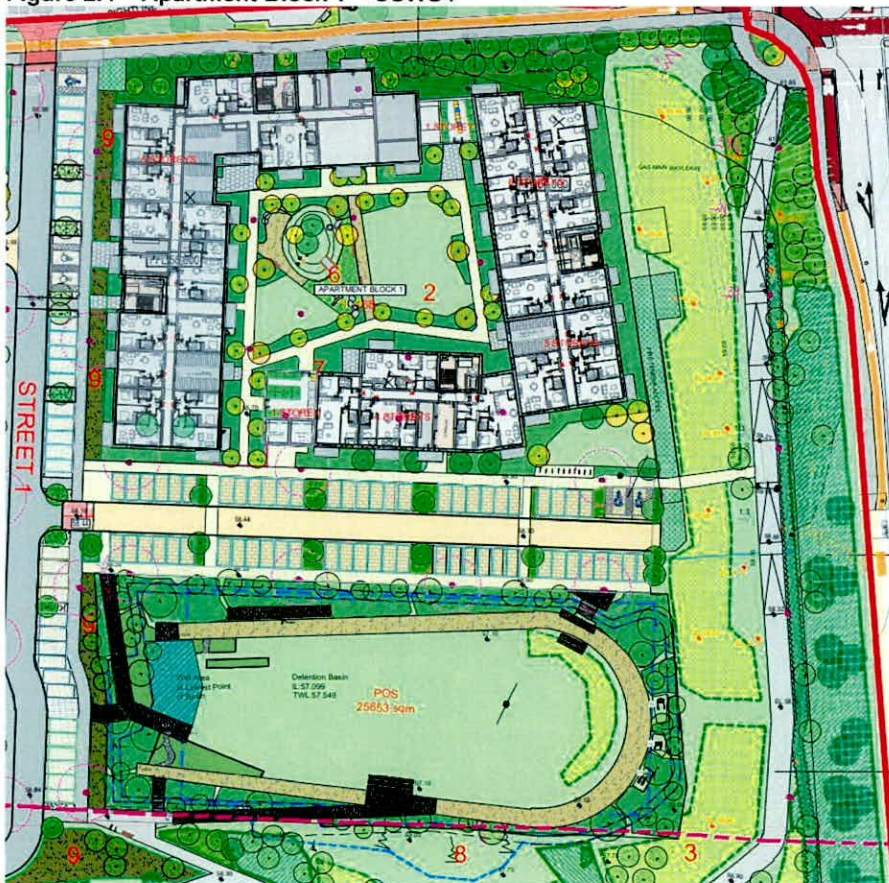
Type AP_2S	2 Bed (4 Person)	6	80.80
Type AP_2R	2 Bed (4 Person)	3	83.17
Type AP_3A	3 Bed (5 Person)	4	105.69
Type AP_3C	3 Bed (5 Person)	1	117.35
		168	

Source: MCORM Architects Schedule of Areas

Block 1 consists of 168 no. apartments (60 no. 1 bedroom, 103 no. 2 bedroom and 5 no. 3 bedroom apartments), in a 2-building arrangement (western block 5 storeys and eastern block 5 and 6 no. storeys in height).

In addition, communal open space is provided, with a southerly aspect of c. 1,380 sq. m located centrally. Surface car parking is provided to the south and to the west along with a bike/bin store along the southern part of the communal open space. In addition there are extensive areas of open space located to the east, and further to the south which will link to the wider east-west Grand Canal Park. The open space along the eastern boundary will link ultimately to the north to a future landscaped area (as part of Phase 1B).

Figure 2.4 – Apartment Block 1 – CSWS4



2.1.3.3 Duplex Apartment Buildings

Within Development Area CSW-S4, it is proposed to provide 88 no. duplex units (44 no. 2 bedroom units and 44 no. 3 bedroom units) in 10 no. 3 storey buildings, which will front onto the permitted Clonburris Southern Link Street.

Figure 2.5 –Elevation

Source: 3D Design Bureau

2.1.3.4 Communal Open Space

Communal open space is provided within the Development Area consisting of 2,191 sq. m, comprising 1,380 sq.m for the apartments, and 811 sq. m for the duplex units.

2.1.3.5 Car Parking and Bicycle Provision

It is proposed to provide 482 no. car parking spaces. It is proposed to provide 426 no. cycle spaces (for the duplex units and apartments) and 90 visitor spaces for Development Area CSWS4 (516 no. provided).

2.1.3.6 Local Node

Figure 2.6 – Local Node Building Location



It is proposed to provide a two storey creche of c. 534sq. m along with an external play area, within the local node building, which is located centrally within the CSWS4 Development Area. The local node building also includes commercial space of c. 664.6 sq. m comprising commercial hub office space, as well as a community room of c. 74 sq. m in an overall building of part 3/part 4 storeys.

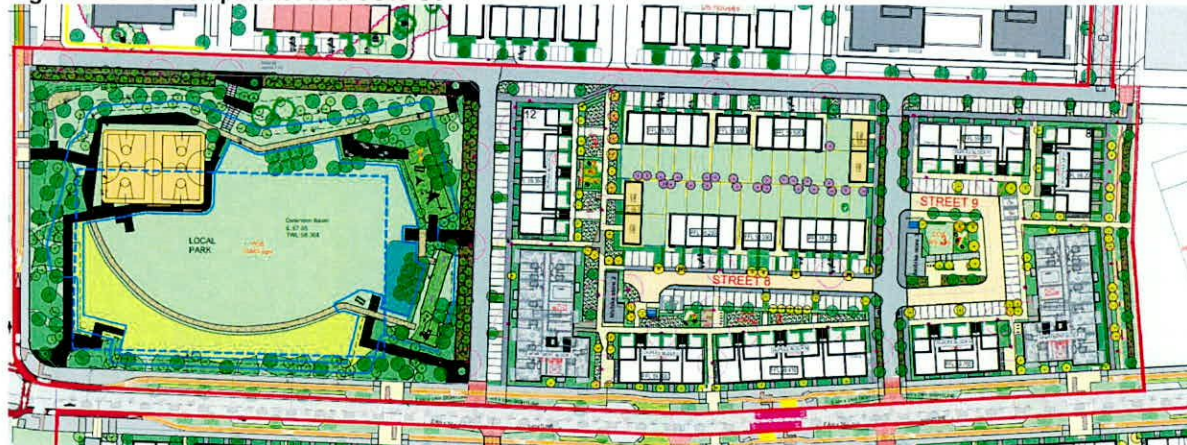
Figure 2.7 – Local Node Building Elevation



2.1.4 Development Area CSW-S3

The proposed development includes the southern portion of the Development Area CSW-S3 which is located to the north of the permitted Clonburris Southern Link Street and includes 2 no. 4 storey apartment buildings, 6 no. 3 storey duplex buildings and 2 storey houses. The duplex buildings front onto the Clonburris Southern Link Street which in turn are bookended by the 2 no. apartment buildings. To the west of the proposal, is a substantial local park which includes a MUGA. In addition, communal open space areas are provided close to the apartments and duplex apartments.

Figure 2.8 – Development Area CSW-S3



Within DA CSW-S3 it is proposed to provide 162 no. dwellings, comprising 76 no. apartments, 60 no. duplex units, and 26 no. houses all within a site of c. 4.37 hectares.

Table 2.5 – Overall Dwelling Mix – Development Area CSW-S3

	1 bedroom	2 bedroom	3 bedroom	4 bedroom	Overall
Houses			26		26
Duplex Apartments/Apartments		30	30		60
Apartments	32	44			76
Overall Mix	32	74	56		162

	1 bedroom	2 bedroom	3 bedroom	4 bedroom	Overall
	19.6%	45.7%	34.6%		

Source: MCORM Architects Schedule of Areas

Table 2.6 – House Types – Development Area CSW-S3

House Type		Height	No.
House Type C3	3 Bed - Semi Detached	2 Storey	4
House Type F1	3 Bed - Mid Terrace	2 Storey	10
House Type F2	3 Bed - End Terrace	2 Storey	8
House Type G3	3 Bed - Semi Detached	2 Storey	4
			26

2.1.4.1 Apartments CSWS3

It is proposed to provide 76 no. apartments (32 no. 1 bedroom apartments) and 44 no. 2 bedroom apartments in 2 no. 4 storey apartment buildings.

2.1.4.2 Duplex Buildings

The duplex buildings are located primarily along the southern edge of DA CWSS3 along the Clonburris Southern Link Street and along the eastern and western sides of the development cell.

2.1.4.3 Communal Open Space

Communal open space is provided within the Development Area consisting of 1,370 sq. m, comprising 902 sq.m for the Duplex buildings, and 234 sq. m for Block 2 and 234 sq. m for Block 3.

2.1.4.4 Car Parking and Bicycle Provision

It is proposed to provide 170 no. car parking spaces and 238 no. cycle spaces (for the duplex units and apartments) and 30 visitor spaces for Development Area CSWS3 (268 no. provided).

2.2 Alternatives

A series of alternatives were considered as part of the proposed development (chapter 2 of EIAR Volume II submitted with the planning application). Alternative site layouts and siting progressed throughout the design process in order to minimise the impact on the receiving environment at the earliest opportunity. The initial stage involved a constraints analysis of the land within the proposed development site to identify all high-level constraints and aggregate them against the site to allow a suitable layout to be developed.

The final layout proposed is not considered to give rise to any significant adverse environmental impacts. Mitigation measures to be implemented at construction and operational phases of the project are summarised in Chapter 16 (Summary of Mitigation and Monitoring Measures).

With reference to Population and Human health (and Biodiversity), the potential impacts are broadly similar with the preferred alternative providing additional open space in the eastern portion of CSWS4, and therefore slightly more positive.

With regard to Landscape and Visual Impact, the preferred alternative would result in a similar landscape and visual impact compared to Alternative no. 1.

Air and noise impacts from the alternatives are broadly similar. Principally these impacts will occur as a result of the construction phase of the development as operational impacts would be largely restricted to traffic and these volumes are generally low. As these impacts can be largely mitigated through good construction practices, the residual impact is considered low and temporary in all cases.

The inclusion of pedestrian links through the site, facilitating access to the southern open space along the Canal, which will link to a strategic network of open spaces, is a positive aspect of the proposal. The potential impacts relating to archaeology are considered to be broadly similar as the previously unrecorded features, will be preserved *in situ*. With regard to Material Assets (Utilities and Waste Management), it is considered the alternatives are similar as they would require servicing and also ESB etc.

With reference to the final layout, the iterative process outlined above, which included alternative site layouts were considered with the objective of producing a new high quality residential development, which has undergone a robust consideration of relevant alternatives having regard to the comparison of environmental effects and meets the requirements of the EIA Directive, based on the multidisciplinary review across all environmental topics.

3.0 POPULATION AND HUMAN HEALTH

This chapter, prepared by John Spain Associates presented an assessment of the impacts of the proposed development on Population and Human Health.

The impact of the revised scheme design on Population and Human Health will not be significantly different from that presented in the original impact assessment report.

The remedial and mitigation measures presented in the EIAR report submitted with the planning application will still be applicable to the subject site in the revised scheme, and adherence to these measures will ensure that the proposed development has a negligible and imperceptible impact on the environment.

The impact of the revised scheme design in respect of Population and Human Health will not be significantly different from that presented in the original EIAR.

The implementation of the range of remedial and mitigation measures included throughout this EIAR document is expected to have the impact of limiting any adverse significant and likely environmental impacts of the operational phase of the proposed development on population and human health.

The remedial and mitigation measures presented in the EIAR will still be applicable to the revised scheme and adherence to these measures will ensure that the proposed development has a negligible impact on the environment.

4.0 BIODIVERSITY

This section of the Environmental Impact Assessment Report (EIAR) addendum was carried out by Altemar Ltd. Altemar Ltd. is an established environmental and ecological consultancy that is based in Greystones, Co. Wicklow that has been in operating in Ireland since 2001.

Bryan Deegan MCIEEM is the Managing Director of Altemar Ltd. and holds a M.Sc. Environmental Science, BSc (Hons.) in Applied Marine Biology and a National Diploma in Applied Aquatic Science. He has over 26 years' experience as an environmental consultant in Ireland and was the lead ecologist for this project. Previous projects where Altemar were the lead project ecologists include the Lidl Ireland GmbH regional distribution centres in Newbridge and Mullingar, 18 airside projects for daa at Dublin Airport and 7 fibre optic cable landfalls in Ireland including the New York to Killala cable project in 2015. Altemar carried out the biodiversity related elements within the previous submission including the Biodiversity Chapter of the EIAR and AA Screening. As a result they are familiar with all elements of the project including the proposed addendum.

This section provides an update for the assessment of the potential impacts on biodiversity arising from the proposed amendments to the scheme in respect of the amendments to the layout arising from the Further Information request.

4.1 Characteristics of the Proposed Amendments

The revisions will result in the construction of 563 dwellings, a creche, innovation hub, flexible community room and open space as follows:

- A) 171 no. houses comprising 6 no. 2 bedroom houses, 153 no. 3 bedroom houses and 12 no. 4 bedroom houses (145 no. dwellings in CSW-S4 consisting of 6 no. 2 bedroom houses, 127 no. 3 bedroom houses & 12 no. 4 bedroom houses & 26 no. 3 bedroom dwellings in CSW-S3); all 2 no. storey comprising semi-detached, terraced, end terrace units (with parking and private open space);
- B) 148 no. duplex apartments/apartments (88 no. in CSW-S4 & 60 no. in CSW-S3) comprising 74 no. 2 bedroom units and 74 no. 3 bedroom units, in 16 no. 3 no. storey buildings. In CSW-S4 Duplex Blocks A,B,C,D,E,F,G,J,K, comprise 8 no. units (4 no. 2 bed & 4 no. 3 bed units), Duplex Block H comprises 16 no. units (8 no. 2 bed & 8 no. 3 bed units); In CSW-S3 Blocks L, N & O comprise 8 no. units (4 no. 2 bed & 4 no. 3 bed units), Block M comprises 14 no. units (7 no. 2 bed & 7 no. 3 bed units), Block P comprises 10 no. units (5 no. 2 bed & 5 no. 3 bed units), Block Q comprises 12 no. units (6 no. 2 bed & 6 no. 3 bed units), all to have terraces/pitched roof;
- C) 244 no. apartments as follows: within CSW-S4, Block 1 consists of 168 no. apartments (60 no. 1 bedroom, 103 no. 2 bedroom and 5 no. 3 bedroom apartments), in a 2-building arrangement western block 5 storeys and eastern block 5 and 6 no. storeys in height. Within CSW-S3, Block 2 (4 storeys) comprises 16 no. 1 bedroom apartments and 22 no. 2 bedroom apartments, Block 3 (4 storeys) comprises 16 no. 1 bedroom apartments and 22 no. 2 bedroom apartments (all apartments to have terrace or balcony).

D) Provision of a commercial hub (664.6 sq. m) and creche (c. 534 sq. m) along with a Community Multi-purpose room of c. 74 sq. m in a part 3/4 storey 'local node' building in CSW-S4;

E) Vehicular access will be from the permitted Clonburris Southern Link Street (SDZ20A/0021) and R113 to the east (along with provision of internal haul routes (for construction) to connect to the R136 to the west);

The biodiversity chapter of the previous EIAR provided details on the impact of the proposed development, the mitigation measures that would address these impacts and the residual impacts of the proposed development. It should be noted that freshwater crayfish were noted within the canal over overflow and the Heritage Officer stated that *'crayfish are recorded as being present within the canal overflow stream and within the Grand Canal itself. Any proposals in the vicinity of the overflow stream that are likely to impact on this species are to be avoided. Impacts can arise from physical disturbance of the stream bed or stream banks, by littering, or by soil movement.'* It should be noted that no instream works or high impact works are proposed in the vicinity of the overflow and a tree protection zone is in the vicinity of the overflow. In addition, robust mitigation have been outlined in the Biodiversity Chapter of the previous EIAR including a detailed section on mitigation to prevent downstream impacts. No additional mitigation measures would be required to prevent significant impacts on the canal overflow or biodiversity within the overflow including freshwater crayfish.

4.2 Potential Impacts

The potential impacts arising from the proposals are similar to that already examined in the original EIAR (section 4 volume II) submitted with the application as detailed previously and no further impacts or modification to the level of impacts are identified.

4.3 Residual Impacts Conclusion

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on the sensitive receptors. The overall impact on the ecology of the proposed development will result in a not significant low adverse impact on the ecology of the area and locality overall, with not significant adverse impact on birds in the long term. This is primarily as a result of the loss of terrestrial habitats on site, supported by strong construction and operational phase mitigation and the creation of additional biodiversity features and complexity within a strong biodiversity targeted landscaping strategy.

5.0 LAND AND SOILS

Various bodies including; Transport Infrastructure Ireland (TII, formally National Roads Authority); the Institute of Geologist Ireland (IGI); and the Environmental Protection Agency (EPA) provide detailed guidance to the preparation and content required for an EIAR in relation to the geological environment.

The existing site is predominately greenfield. Overall, the topography of the site is relatively flat. There is a slight fall with a gradient of approximately 0.5% from east to west over the majority of the site. A number of drainage ditches are located throughout the site.

Topsoil was encountered in all the exploratory holes and was present to a maximum depth of 0.40m BGL. The results showed a brown slightly sandy gravelly topsoil.

Limestone bedrock underlies the entire site. The bedrock is described in geological mapping as a Dark Limestone & Shale.

No existing areas of contaminated ground have been identified within the subject site. Environmental testing carried out as part of ground investigations indicate that soils would be classed as inert under the EPA Waste acceptance Criteria.

The proposed development will alter the current land use from vacant land to residential development, creche and public open space and landscape areas. The impact on land, soil, geology, and hydrogeology from accidental spillages of fuel and lubricants used during the construction phase of the development is predicted to be minimal when stored and used in a responsible manner. After implementation of the mitigation measures recommended above for the construction phase, the proposed development will not give rise to any significant long term adverse impact.

Implementation of the measures outlined in Section 5.6 of Volume II of the EIAR, will ensure that the potential impacts of the development on soils and the geological environment are minimised during the construction phase and that any residual impacts will be short term, and imperceptible.

Residual Impacts from earthworks haulage and the risk of contamination of groundwater are deemed to be of minor risk. The residual impacts for a residential housing development, creche and open space are deemed to be imperceptible post construction (during the operational phase).

Implementation of the mitigation measures will ensure that potential significant effects of the proposed development on land, soils and geology do not occur during the construction phase and that any residual effects will be short term and not significant.

The remedial and mitigation measures presented in the EIAR will still be applicable to the revised scheme and adherence to these measures will ensure that residual impacts will be short term and not significant.

6.0 WATER

The existing site is predominately greenfield. Overall, the topography of the site is relatively flat. Much of the primary road network bounding the site is situated at a significantly higher level. There is a slight fall with a gradient of approximately 0.5% from east to west over the majority of the site. A number of drainage ditches are located throughout the site. There are 2 no. local high points on site. One located to the southwest and another to the east north of the future CSLR.

The overall Clonburris SDZ is within the River Liffey Catchment. The study area affects two primary hydrological sub-catchments, the Griffeen & the Camac. The subject site for this development is located within the "Camac" sub catchment (EPA Ref: IE_EA_09C020500). The Grand Canal is located to the south of the subject site.

The River Liffey is approximately 3.8km to the north of the subject site. A canal overflow channel runs alongside the canal towpath north of the canal before re-entering the canal downstream, it does not appear that local drainage connects to this overflow channel.

There are a number of existing drainage ditches located throughout the site. These ditches are noted to generally have extremely flat or inconsistent gradients and are poorly maintained and appear to discharge beneath the R113 to the east.

The lands east of the R113 and south of the railway, drain to the south-east to existing stormwater networks on Ninth Lock Road, as per Figure 6.4 below. The drainage run continues south on Ninth Lock Road where it splits into parallel runs along Station Road which later merge and discharge to an open watercourse within the industrial estate and eventually discharge to the Camac River.

The existing site is greenfield. It appears that surface water run-off drains via infiltration and to the existing drainage ditches dispersed across the site.

Groundwater was encountered at a depth of 2m during the Preliminary Ground Investigations for the overall Clonburris SDZ. Groundwater Vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. Groundwater vulnerability is classed as "High" or greater on the proposed site due to the shallow depth to bedrock. Areas of highest vulnerability correspond to areas of near surface bedrock and thin soil depths. It is noted that the aquifer vulnerability classification does not consider the nature of the underlying 'receiving' aquifer with respect to resource value or significance of pollution occurring and is only a reflection on the protection afforded to the aquifer by overlying deposits.

As part of the desktop study, historic and predicted flood risk mapping published by the OPW on the Flood Hazard Mapping Website <http://www.floodinfo.ie/> was reviewed.

Historical flood maps/data indicate there are no recorded flood events within the proposed site boundary. There are no recorded recurring flood events within 1km of the proposed site. The first is a recurring flood event at the

Cappaghmore Culvert located approximately 500m to the east of the site. The Second is located at the Beech Row Bungalows approximately 380m to the east of the site.

The Eastern CFRAM (Catchment Flood Risk Assessment and Management) study details the predicted risk for a variety of fluvial and coastal flood scenarios. The mapping does not include the watercourse reaches affected by the proposed scheme and only maps downstream flooding. The proposed development is therefore outside of the Q100 and Q1000 flood extents and is therefore in within Flood Zone C (low risk of flooding).

It is considered that by implementing the proposed construction and operational phase mitigation measures in Section 6.6 of the EIAR Volume II, that the significance of the identified impacts will be reduce to a “Not significant” residual impact on the identified hydrological/ hydrogeological receptors.

The remedial and mitigation measures presented in the EIAR will still be applicable to the revised scheme and adherence to these measures will ensure that residual impacts will be short term and not significant.

7.0 AIR QUALITY AND CLIMATE

Byrne Environmental Consulting Ltd have assessed the potential air quality and climatic impacts that the proposed Phase 1A development may have on the receiving environment during the construction and operational phases of the project. The assessment includes a comprehensive description of the existing air quality in the vicinity of the subject site, a description and assessment of how construction activities and the operation of the development may impact existing air quality, the mitigation measures that will be implemented to control and minimise the impact that the development may have on local ambient air quality and finally to demonstrate how the development shall be constructed and operated in an environmentally sustainable manner.

The impact of the revised scheme design on the environment in terms of Noise and Vibration will not be significantly different from that presented in the original EIAR.

The remedial and mitigation measures presented in the EIAR will still be applicable to the revised scheme and adherence to these measures will ensure that the proposed development has a negligible and imperceptible impact on the environment.

8.0 NOISE AND VIBRATION

Byrne Environmental Consulting Ltd have assessed the potential noise and vibrational impacts that the proposed development may have on the receiving environment during the construction and operational phases of the proposed development. The assessment includes a comprehensive description of the existing ambient baseline noise climate in the vicinity of the subject site, a description of how construction activities may impact the ambient noise climate and finally, the mitigation measures that shall be implemented to control and minimise the impact that the development may have on existing ambient noise levels.

The impact of the revised scheme design on the environment in terms of Noise and Vibration will not be significantly different from that presented in the original EIAR.

The remedial and mitigation measures presented in the EIAR will still be applicable to the revised scheme and adherence to these measures will ensure that the proposed development has a negligible and imperceptible impact on the environment.

In addition to the measures in the original EIAR; in response to item no. 16A of the FIR which sought:

“An Acoustic Design Statement as part of a good acoustic design process must be submitted in order to demonstrate how the potential of a significant adverse noise impact will be avoided in the finished development from traffic noise and Dublin – Cork railway line noise. The statement should outline in detail the mitigation measures and specification of glazing and other design features to be used in order to reduce the impact of excessive noise on residents of the finished development..”

additional mitigation is outlined:

“8.7.2 Operational Phase Noise & Vibration Mitigation

N&V OPERA 1: External noise can enter rooms within dwellings through windows, ventilators, walls, roof and doors. In most cases, however, windows provide the main path and therefore, mitigation by design has focused on this building element to ensure that their insulation is adequate. Specific units along the northern and eastern aspects of the site shall have acoustically rated windows to prevent breakthrough of external transportation noise. In addition, Heat Recovery and Mechanical Ventilation systems will be incorporated into the design thus there will be no requirement for passive air vents.

Glazing Systems

Residential Units located facing towards the Northern (Dublin-Cork Rail Line) and Eastern (Fonthill Road) site boundaries will require appropriately performing acoustically rated glazing with to achieve the required BS8233 internal noise criteria. The minimum Weighted Sound Reduction Index for glazing units shall be no less than 4039Rw.

Ventilation Systems

The ventilation strategy for the development will be in accordance with Part F of the Building Regulations. The apartment units shall include mechanical heat recovery ventilation systems which will negate the requirement for passive wall vents in bedrooms and living spaces which would otherwise allow the transfer of external noise into the building through the air gaps in the passive vents. However, windows may remain openable for rapid or purge ventilation, or at the occupant's choice. The minimum sound insulation that ventilations shall have will be No less than 42 Dne,w."

9.0 LANDSCAPE AND VISUAL

9.1 Introduction

The EIAR chapter was prepared by Jim Bloxam of Murray & Associates Landscape Architecture, who has more than eight years of experience in Landscape and Visual Impact Assessment.

This section provides an update of the Landscape and Visual Impact chapter submitted with the planning application and the proposed amendments to the scheme. This section was prepared by Mark Boyle, Director of Murray & Associates Landscape Architecture, with more than 20 years' experience.

The site consists of c. 17.02 hectares of historically agricultural lands with associated hedgerow and drainage features. The Dublin-Kildare rail line runs east/west is approximately 170 metres to the north of the development area. The Grand Canal is adjacent to the south of the site, also running east/west. To the east the Fonthill Road (R113) runs north/south with the Clondalkin Fonthill Railway Station approximately 300 metres to the north-east. To the west the agricultural lands are bounded by the elevated R136 roadway running north/south.

The site is relatively flat overall, with gentle undulations over the extent of the land. There is a larger level difference between the site and the raised northern bank of the Grand Canal in some areas, between two and three metres.

Within the site the existing vegetation is mainly comprised of hedgerows and associated tree lines. More recent planting is evident as a result of new infrastructural roadway development (R113 and R136).

Much of the land between the hedgerows has reverted to scrub or re-colonised bare ground following the cessation of agricultural activity or management over the recent decades.

The Grand Canal to the south has significant and established vegetated zones with matures trees on both sides of the water body.

The entire site is within the Clonburris Strategic development Zone (SDZ) Planning Scheme of 2019. The planning scheme states that SDZs are 'a robust and important mechanism in providing for growth and urban expansion in the medium to long term.'

Key underlying principles within the SDZ include:

- To protect, enhance and develop an interconnected green and blue infrastructure network of parks, open spaces, hedgerows, grasslands, protected areas, rivers and streams for amenity and recreation, biodiversity protection, flood management and adaptation to climate change;

- To retain and improve key landscape and ecological features such as hedgerows, the Grand Canal and the Griffeen River;
- To incorporate new elements of Green and Blue Infrastructure such as tree planting, parks and natural open spaces and sustainable urban drainage systems;
- To connect parks and areas of open space with ecological and recreational corridors to aid the movement of biodiversity and people and to strengthen the overall Green Infrastructure network;
- To support native plant and animal species and encourage corridors for their movement; and
- To seek to retain hedgerows, aquatic habitats and established tree lines wherever possible.
- To aid the retention and protection of existing habitat there is a required setback for all buildings from the boundary of the Proposed Natural Heritage Area associated with the Grand Canal. As stated within the SDZ Planning Scheme document,

'Development proposals on the SDZ lands close to the Grand Canal shall protect and incorporate high value natural heritage features including watercourses, wetlands, grasslands, woodlands, mature trees, hedgerows and ditches and include for a 50m setback for all buildings and a 30m set-back distance for development (with the exception of bridges and footpaths) from the pNHA boundary to facilitate the continuity of the Grand Canal as a corridor for protected species, biodiversity, and a fully functioning Green Infrastructure network.'

- A Parks and Landscape Strategy (incorporating a Biodiversity Management Plan) has been prepared for the entire SDZ area that has informed the design of the Cairn Lands to the south-east.

Further planning context within South Dublin County Council development plans include:

- Views and Prospects

There are no listed or protected views within the vicinity

- Green Infrastructure

Within the County Development Plan Policy 6 (New Development in Urban Areas) has specific objectives with regards to hedgerows and associated ecological features (G6 Objective 1). Also included are objectives dealing with connections to wider green infrastructure network (G6 Objective 2) and open space provision within new developments (G6 Objective 3).

- Protected Trees

There are no tree protection orders on trees within the site.

- Protected Structures

There are no protected structures within the site. There is a visual link with the Omer Lock House (a protected structure) to the north of the Grand Canal.

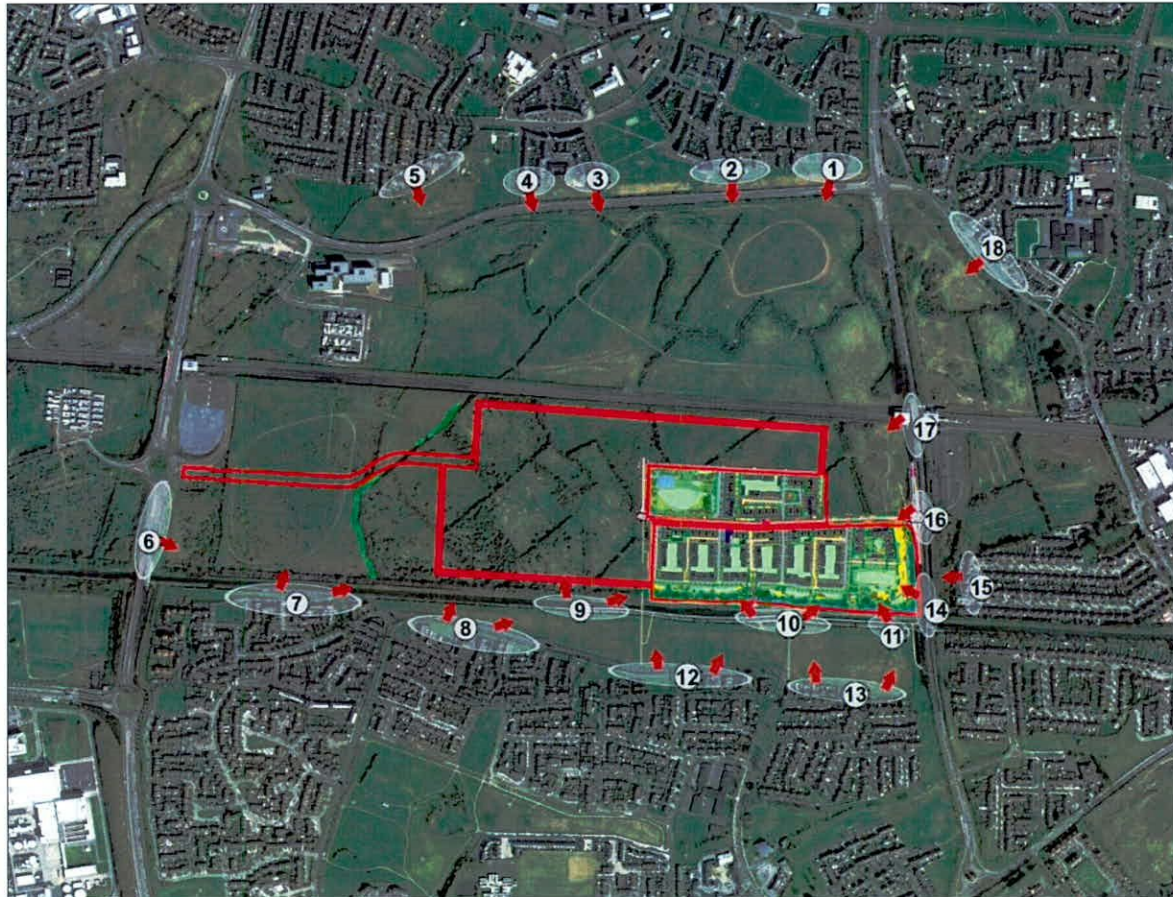
- Architectural Conservation Areas

There are no Architectural Conservation Areas within the site.

The site sits in the Urban Character Area, as defined by the LCA (*Landscape Character Assessment, May 2015, Minogue & Associates*) of South Dublin County.

The proposed site sits in the Urban area, of which a sensitivity is not defined by the LCA. The Urban area can be defined as transitional lands that were largely rural, transforming into suburban or urban derived land use. Development radiates from established settlements and are close to transport links. Land use is generally built land comprising transport, retail/business parks, quarries and urban derived housing. It can be considered that sensitivity within the Urban area can be considered generally to be low.

Figure 9.1 – Map of Potentially Sensitive Visual Receptors



The site is adjacent to the Grand Canal proposed Natural Heritage Area (pNHA), which is judged to have a low-to-medium landscape sensitivity. This is due to the existing SDZ zoning, and the existing abrupt edge conditions along the extent of the canal adjacent to the site. There are some historic elements such as the towpath, locks and Omer Lock House, but generally the historic landscape is no longer present, with late modern large-scale expansion represented by the urban fabric to the south in proximity to the canal. It can be noted that the original purpose for which the canal was constructed was primarily practical, for transport of agricultural and industrial products, and that the landscape around it is not of aesthetic or designed landscape significance in the traditional sense. The amenity and landscape values that are now ascribed to the linear canal corridor, with cycle and pedestrian routes as well as habitats that have developed to a level where they are now protected, are due to changes in industrial practice, logistics and indeed the lifestyles of people.

Therefore, despite the presence of the Grand Canal pNHA, the landscape sensitivity of the immediate area of the site adjacent to the pNHA boundary can still be seen as low-medium, and low towards the northern boundary of the site further away from the pNHA boundary, and the visual sensitivity is medium to high adjacent to the canal, and low where the visual receptors are over 100 metres from the site.

During the construction phase, tree Protection Measures to existing trees to be retained will protect the important ecological corridor to the Grand Canal.

Screening measures implemented will not significantly change the assessment due to the distance from the site of the majority of receptors. The greatest visual impact from mitigation will be to the Grand Canal towpath, a site hoarding element. This is specified for site protection and prevention of access and gives a small amount of amenity screening gain.

In the longer term, the assessment concludes that there will be some not significant negative visual impacts to receptors to the south-west and south of the site with some imperceptibly negative visual impacts to the remaining residential receptors to the north and east.

The visual impact to the users of the R113 and R136 will be not significant negative in the medium to long term. The mitigation measures in Section 9.6 of Volume II of the EIAR, will have only a small effect on the residual impacts on viewpoints that are further away from the site (over 100m).

The development has a moderately negative effect on views from the Canal towpaths due to the proximity and scale of the adjacent development and the medium to high visual sensitivity assigned to this pNHA area. The residual impacts on views from the canal are impacted by the proposed removal of portions of the existing hedgerow and vegetation to create usable public open space, as defined within the Clonburris SDZ Planning Scheme and the associated Parks and Landscape Strategy (by Dermot Foley Landscape Architects, submitted to South Dublin County Council) and facilitate pedestrian links with the development from the canal towpath. This removal is mitigated by the inclusion of additional tree planting, hedgerow planting, woodland planting, resulting in a slight improvement in screening measures to the towpath, though not significant enough to change the assessment.

It was noted in the preparation of this addendum that the numbering of the views in the Landscape and Visual Impact Assessment chapter of the EIAR did not match with the numbering of the Verified Views prepared by 3D Design Bureau. These views have been updated to reflect changes in the scheme brought about by the responses across the various design disciplines to the request for further information and the numbering has also been updated to be consistent with the Landscape and Visual Impact Assessment chapter of the EIAR, and the numbering in the table below and at Figure 9.1 above.

Table 9.1 – Predicted Visual Effects

View EIAR	Quality	Significance	Magnitude	Probability	Duration	Sensitivity
VP1	Neutral	Imperceptible	Not appreciable	Likely	Long-Term	Low
VP2	Neutral	Imperceptible	Not appreciable	Likely	Long-Term	Low
VP3	Neutral	Imperceptible	Not appreciable	Likely	Long-Term	Low
VP4	Neutral	Imperceptible	Not appreciable	Likely	Long-Term	Low
VP5	Neutral	Imperceptible	Not appreciable	Likely	Short-Term	Low
VP6	Negative	Not Significant	Low	Likely	Long-Term	Low
VP7	Negative	Not Significant	Low	Likely	Long-Term	Low
VP8	Negative	Not Significant	Low	Likely	Long-Term	Low
VP9	Negative	Moderate	Medium	Likely	Long-Term	Medium/High
VP10	Negative	Moderate	Medium-high	Likely	Long-Term	Medium/High
VP11	Negative	Moderate	Medium-high	Likely	Long-Term	Medium/High
VP12	Negative	Not Significant	Low	Likely	Long-Term	Low
VP13	Negative	Not Significant	Low	Likely	Long-Term	Low
VP14	Negative	Not Significant	Low	Likely	Long-Term	Low
VP15	Neutral	Imperceptible	Low	Likely	Long-Term	Low
VP16	Negative	Not Significant	Medium	Likely	Long-Term	None
VP17	Negative	Not Significant	Low	Likely	Long-Term	None
VP18	Neutral	Imperceptible	Low	Likely	Long-Term	Low

In summary, the changes to the proposed development brought about by the local authority request for further information and subsequent minor design changes have had a negligible effect on the landscape and visual assessment as conducted in the EIAR and there are no changes to the assessment conclusions.

10.0 MATERIAL ASSETS – TRAFFIC

This addendum to the EIAR covers changes to the design arising from the Further Information Request.

The subject site is located within the Clonburris Strategic Development Zone lands. The subject site is bounded to the east by the R113 Fonthill Road North and to the south by the Grand Canal. The site is bounded by the Dublin Cork Railway Line to the north, and greenfield sites to the west.

The SDZ is located to the west of Dublin City Centre and the M50. It is conveniently positioned between Lucan to the north-west, Clondalkin to the south-east and Liffey Valley to the north-east. The lands are intersected in an east-west orientation by the Kildare railway line and by the Grand Canal to the south.

The Clonburris SDZ lands have an approximate land area of 280 hectares and is predominately agricultural in nature or greenfield sites. In recent years, Lucan East Educate Together National School and two secondary school; Griffeen Community College and Kishoge Community College, have been constructed on the lands. The lands also contain a number of private residences, together with traveller accommodation which has been provided by South Dublin County Council. There are two train stations constructed within the SDZ; the Clondalkin-Fonthill station which is currently operational whilst the Kishoge station is constructed but has not been operational to date.

Clonburris is located to the west of Dublin City Centre and is well connected to the National Road Network, served by several key strategic routes. The Clonburris SDZ boundary is broadly bounded by the Arterial corridors of Adamstown Avenue and Thomas Omer Way to the north, Ninth Lock Road to the east, the Arterial corridor of Newcastle Road to the west, the Grand Canal to the south.

Figure 10.1 – Existing Road Corridors in Clonburris SDZ lands (Source: Google Maps)

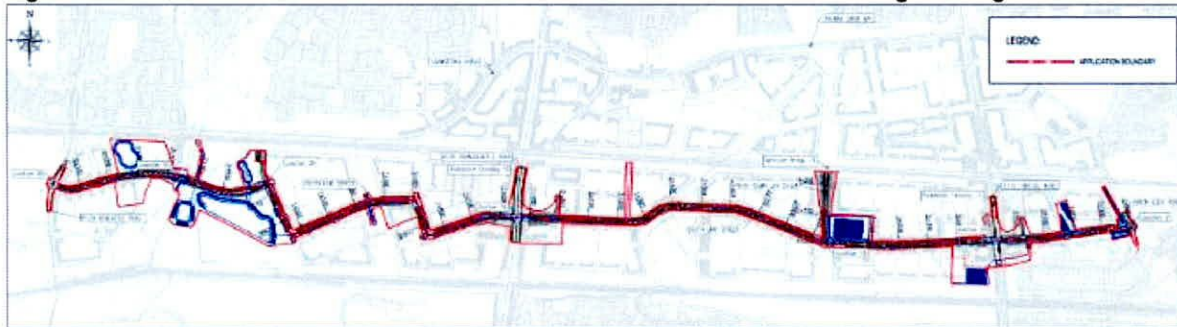


At present, the Clonburris SDZ lands are largely a greenfield site and as such there is limited cycle network within the lands. However, the Grand Canal Greenway, which links Adamstown to the City Centre, passes through the area along the Grand Canal.

There are a number of roads in the immediate area that have bus priority in the form of Quality Bus Corridors (QBC's).

The proposed development is situated on the Kildare railway line. At its intersection with the Fonthill Road North lies the Clondalkin-Fonthill station. This station is served by commuter services to Heuston Station. Intercity trains do not serve this station. Following the recent upgrading of the Phoenix Park Tunnel, services calling at Clondalkin-Fonthill Station now offer connections to Drumcondra, Connolly, Tara Street, Pearse and Grand Canal Dock.

The permitted Clonburris Southern Link Street (CSLS) Scheme is a cited objective of the South Dublin County Council Development Plan 2016-2022 under the Plan's 'Strategic Road and Street Network' and the proposed scheme forms part of the Clonburris SDZ Planning Scheme (2019) as road infrastructure to support the development of SDZ lands in conjunction with the Clonburris Northern Link Street. The Clonburris Southern Link Street has recently been granted planning permission allowing the southern lands of the SDZ to be opened up for development and allowing access for the road network for future residents. The Link Street will transverse through the subject development.

Figure 10.2 – Permitted Clonburris Southern Link Street Scheme and Surrounding Existing Road Network

Having regard also to the minor reduction in the number of units (2 no.), it is considered that the changes are marginal and does not have an impact on the outcome of the traffic analysis presented in the EIA submitted with the application.

It is considered that the mitigation measures outlined in Chapter 10.0 of Volume II of the EIA, are still applicable and that there are no additional likely significant impacts arising from the amendments and no additional mitigation measures required.

The remedial and mitigation measures presented in the EIA will still be applicable to the revised scheme and adherence to these measures will ensure that the proposed development has a negligible impact on Traffic during construction and operation.

Accordingly, with regard to the proposed amendments, there are no reasons in relation to traffic and transportation aspects why this revised scheme should not be granted planning permission.

11.0 MATERIAL ASSETS – WASTE MANAGEMENT

This chapter was prepared by Ian Byrne MSc, MIOA, Dip Environmental & Planning Law and presents the Waste Management Plan for the control and management and monitoring of waste associated with the proposed residential development at Phase 1A, Clonburris during both the Construction and Operational Phases of the development.

The construction and operation of the proposed residential development will introduce new volumes of waste into the local area in terms of the short-term generation of construction waste and the longer-term generation of domestic waste when the development is occupied.

The closest recycling centre in the local South Dublin area is Ballymount Civic Amenity.

The Construction and Operational Waste Management Plans prepared as part of the application shall be implemented throughout the construction phase and operational stage of the development to ensure the following:

- That all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials.
- To ensure that all waste materials generated by site activities are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved waste licensed / permitted facilities in compliance with the Waste Management Act 1996 and all associated Waste Management Regulations.
- The Operational Phase Waste Management Plan, a copy of which accompanies this application, for the development which will ensure that users of the development are provided with sufficient facilities to store, segregate and recycle waste.

The management of wastes generated during the construction of the proposed development will be in accordance with a Site-Specific Construction Phase Waste Management Plan. With regard to how it has been demonstrated how

construction wastes will be managed through design, management and waste reduction and recycling initiatives at the proposed development, it is predicted that the impact of the construction phase of the development will not have an adverse impact on the receiving environment, existing material assets and local and regional waste management services.

The mitigation measures outlined in the original EIAR will still be implemented to reduce the impact of waste materials during the construction and operational phases of the development.

With the implementation of the proposed mitigation measures:

The Table below summarises the identified likely significant effects of the proposed development during the construction phase post application of mitigation measures.

Table 11.1 – Summary of Construction Phase Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Regional Construction Waste Infrastructure	Negative	Not Significant	Regional	Likely	Short-Term	Residual

The development shall be designed to provide adequate domestic waste infrastructure and storage areas for all apartments. This will promote the appropriate segregation at source of domestic generated waste from all residential units at the development and thus reduce the potential for the generation of mixed un-recyclable domestic waste streams.

The Table below summarises the identified likely significant effects of the proposed development during the operational phase post application of mitigation measures.

Table 11.2 – Summary of Operational Phase Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Regional Construction Waste Infrastructure	Negative	Not Significant	Regional	Likely	Long-Term	Residual

12.0 MATERIAL ASSETS – UTILITIES

The proposed development site is located in the Local Authority area of South Dublin County Council (SDCC) and is part of the Clonburris Strategic Development Zone (SDZ). The subject site for this development is situated in the southern area of the Clonburris SDZ lands to the south of the Kildare/Cork railway adjacent to the R113 Font Hill Road. The Grand Canal forms the southern boundary of the site.

The topography of the subject site is reasonably flat. Much of the primary road network bounding the site is situated at a significantly higher level. Site levels outside road embankments and watercourses generally range between 58m – 62m. There are a number of existing drainage ditches located throughout the subject site. These ditches are noted to generally have extremely flat or inconsistent gradients and are poorly maintained appearing to discharge beneath the R113 to the east.

The lands east of the R113 and south of the railway, drain to the south-east to existing stormwater networks on Ninth Lock Road. The drainage run continues south on Ninth Lock Road where it splits into parallel runs along Station Road which later merge and discharge to an open watercourse within the industrial estate and eventually discharge to the Camac River. A canal overflow channel runs alongside the canal towpath north of the canal before re-entering the canal downstream, it does not appear that local drainage connects to this overflow channel.

According to wastewater drainage records from Irish Water, there is an existing network of three 600mm foul sewers located to the south of the Grand Canal, to the south of the subject site. There is a network of existing 225mm foul sewers to the south-east of the subject site within the Cappaghmore development which cross under the canal and discharge to a 900mm diameter sewer to the south.

To the north of the subject site, a foul sewer ranging from 750mm to 900mm runs in a west to east direction along the length of Thomas Omer Way to the Fonthill Road where it connects to the 1050mm diameter 9B sewer running southwards along the R113 Fonthill Road. The 9B sewer then turns east through the SDZ lands north of the railway line and outfalls to the east towards Ringsend Wastewater Treatment Plant. The existing 9B sewer has been identified as the main outfall for the overall future SDZ development.

There is an existing 600mm watermain running adjacent to Fonthill Road at the bottom of the road embankment on the west side of the R113.

There are existing ESB Networks (ESBN) infrastructure within the site in the form of Medium Voltage overhead power lines which traverse south east corner of the site.

Eir and Virgin Media have been contacted and the existing network maps for the area surrounding the proposed development have been obtained.

Gas Networks Ireland (GNI) have been contacted and an existing gas network map for the area surrounding the proposed development has been obtained. There is an existing gas transmission line which runs parallel to R113 in the form of High Pressure (70bar) mains pipework.

Implementation of the measures outlined in Section 12.6 of Volume II of the EIAR, will ensure that the potential effects of the proposed development on infrastructure, services and public utilities do not occur during the construction phase and that any residual effects will be short term and not significant.

As surface water drainage, foul water drainage, watermain and utilities design has been carried out in accordance with the relevant guidelines, there are no predicted significant negative residual effects on the drainage and water supply arising from the operational phase. All utilities ducting and diversions will be carried out as per the supplier instructions, therefore no predicted residual effects are expected from the operational phase.

Findings related to utilities have not changed from the original EIAR document.

13.0 ARCHAEOLOGY, ARCHITECTURE AND CULTURAL HERITAGE

The proposed development area is located within the townlands of Kishoge, Clonburris Little and Cappagh, within the Clonburris SDZ, Dublin 22. There are two recorded monuments located in close proximity to the haul roads associated with the development, both of which are listed as enclosures (DU017-035 and DU017-036). Neither possess any upstanding remains.

There are no protected structures located within the proposed development area, although three structures are located within 250m of the development. All three of these features are also listed in the NIAH Survey and relate to the Grand Canal, which bounds the site to the south. There is one former demesne landscape partially within the proposed development area. The demesne of Clonburris Cottage is located to the north of the southern stretch of the proposed haul route within the proposed development area and extends south into within the site boundary.

A programme of archaeological testing has been carried out as part of the now permitted infrastructure works for the Clonburris SDZ (O. Neill 2020, Licence 20E0390). This resulted in the identification of three areas of post-medieval brick production and three areas of archaeological potential comprising small pits or charcoal production sites, two of which are partially within the proposed development area (AA1, AA2) and one which is within the proposed haul route (Kiln Area 3). Metal detecting was also carried out during the course of testing, but no archaeological artefacts were recovered. These sites will be subject to preservation by record as part of the permitted development.

A bronze axehead (IA/163/1996) is recorded in the topographical files of the National Museum of Ireland as potentially originating from within the Clonburris SDZ, although no detail as to the circumstances of the find is contained in the record.

Cartographic sources depict the proposed development area as primarily agricultural greenfield throughout the post-medieval period. A number of townland boundaries traverse the proposed development area, including the Cappagh-

Clonburris Little boundary and the Clonburris Little- Kishoge boundary. Both of which are substantially extant. The Clonburris Little-Kishoge townland boundary also marks the Barony boundary between Uppercross and Newcastle.

A field inspection has been carried out as part of the assessment. The site of both the recorded monuments were inspected and no upstanding archaeological remains were identified. No other areas of archaeological potential were noted. The lands are overgrown and scrubby in nature with no active management in recent years. Omer Lock House, which is a protected structure, is located to the immediate south of the development area and whilst the structure is upstanding, it is overgrown and is very poor condition. The Grand Canal and associated locks (also listed in the RPS) remain present and in good condition. No additional structures of architectural merit were noted in the development area or its study area.

Following implementation of mitigation measures, no impacts are predicted upon the archaeological resource.

The proposed development is predicted to have an indirect moderate positive impact on the Grand Canal and Omer Lock House. This is due to the fact that the heritage features will be utilised by the residential development and this may also lead to the re-use or restoration of the Omer Lock House, which is an RPS and in very poor condition.

Following implementation of mitigation measures, there are no impacts predicted upon the cultural heritage resource.

Archaeology

No additional impacts are anticipated by the proposed revisions to the scheme.

Architectural heritage

No residual impacts on architectural heritage resources are expected arising from the proposed revisions.

14.0 RISK MANAGEMENT

The surrounding land usage consists of a mix of residential and agricultural. It does not include any man-made industrial processes (including SEVESO II Directive sites (96/82/EC & 2003/105/EC) which would be likely to result in a risk to human health and safety.

The construction phase of the proposed development may give rise to short-term impacts associated with construction traffic, migration of surface contaminants, dust, noise, and littering. Secondary impacts may include resulting increased traffic arising from hauling building materials to and from the proposed development site which are likely to affect population and human health distant from the proposed development site, including adjacent to aggregate sources and landfill sites. Potential spillage (diesel and petrol) has the potential to occur.

Construction impacts are likely to be short term and are dealt with separately in the relevant chapters of this EIAR document and will be subject to control through the Outline Construction Management Plan. The construction methods employed, and the hours of construction proposed will be designed to minimise potential impacts. The development will comply with all Health & Safety Regulations during the construction of the project. Where possible, potential risks will be omitted from the design so that the impact on the construction phase will be reduced.

The main risk identified during operation is the risk of fire. It should be noted that the proposed uses are considered normal hazard fire risks as would be encountered in most residential developments and do not include any hazards which would be regarded as presenting an exceptional environmental fire hazard.

The Outline Construction & Environmental Management Plan and the Health and Safety Plan, in addition to good housekeeping practices, will limit the risk of accidents during construction. Fire safety will be dealt with under the Fire Safety Code at design and construction stage.

The proposed development will involve the ground works to facilitate the proposed development. A site investigation has been carried out and has not identified any hazardous material. Further testing will be carried out prior to construction to inform the detailed design. In the event that any hazardous material is identified the appropriate measures will be taken in accordance with the requirements of the EPA. The excavation and movement of soil from the site will be undertaken by a registered specialist contractor and removed to a licensed facility.

The main risks arise during the construction period. Consequences may be limited but severe for the individuals concerned. Geographical widespread environmental consequences are not anticipated.

Through the implementation of mitigation measures, there are no additional identified incidents or examples of major accidents and or natural disasters that present a sufficient combination of risk and consequence that would lead to significant residual impacts or environmental effects, arising from the proposed amendments to the scheme, relating to the Further Information Response.

14.1 Direct and Indirect Effects Resulting from Use of Natural Resources

Details of significant direct and indirect effects arising from the proposed development are outlined in Chapters 6-15 which deal with 'Aspects of the Environment Considered'. No significant adverse impact is predicted to arise from the use of natural resources arising from the proposed development including the proposed amendments and associated changes to the layout.

14.2 Direct and Indirect Effects Resulting from Emission of Pollutants, Creation of Nuisances and Elimination of Waste

Details of emissions arising from the development together with any direct and indirect effects resulting from same have been comprehensively assessed and are outlined in the relevant in Chapters 6-15 which deal with '*Aspects of the Environment Considered*'. There will be no significant direct or indirect effects arising from these sources arising from the proposed development including the proposed amendments to the layout.

14.3 Forecasting Methods Used for Environmental Effects

The methods employed to forecast the effects on the various aspects of the environment are standard techniques used by each of the particular individual disciplines. The general format followed was to identify the receiving environment, to add to that a projection of the "*loading*" placed on the various aspects of the environment by the development, to put forward amelioration measures, to lessen or remove an impact and thereby arrive at net predicted impact.

14.4 Technical Difficulties Encountered in compiling any specified information

No particular difficulties, such as technical deficiencies or lack of knowledge, were encountered in compiling any of the specified information contained in this report such as that a prediction of impact has not been possible.

15.0 CUMULATIVE IMPACTS

The EIAR where relevant the EIAR also takes account of other development within the area. These impacts have been addressed in the relevant chapters of the EIAR. There are no additional impacts/effects on the environment arising from the proposed amendments to the proposed development, from a cumulative perspective.

16.0 INTERACTIONS BETWEEN ENVIRONMENTAL FACTORS

Chapter 15 of the EIAR (Volume II) provides detail on the interaction and interdependencies in the existing environment. John Spain Associates in preparing and co-ordinating this EIAR ensured that each of the specialist consultants liaised with each other and dealt with the likely interactions between effects predicted as a result of the proposed development during the preparation of the proposals for the subject site and this ensures that mitigation measures are incorporated into the design process. This approach is considered to meet with the requirements of Part X of the Planning and Development Act 2000, as amended, and Part 10, and schedules 5, 6 and 7 of the Planning and Development Regulations 2001 (as amended). The detail in relation to interactions between environmental factors is covered in each chapter of the EIAR.

The preceding chapters of this Addendum to the original EIAR identify the potential likely significant environmental impacts that may occur as a result of the proposed revisions to the development.

All of the potential likely significant impacts of the proposed development and the measures proposed to mitigate them have been outlined in the relevant sections of the EIAR Addendum. However, it may be the case that for any

development with the potential for likely significant environmental impact there is also the potential for interactions amongst these impacts.

Although elements of the scheme have been amended relating to changes to Block1 and road layouts, no potential for further interactions between the impacts of the minor amendments and additions to the overall scheme in the various chapters has been identified.

17.0 SUMMARY OF EIA MITIGATION AND MONITORING MEASURES

Chapter 16 of the EIA (Volume II) provides a summary of all the mitigation and monitoring measures proposed throughout the EIA document for ease of reference for the Planning Authority.

There are no additional mitigation measures proposed arising from the amendment to the scheme.

18.0 NON-TECHNICAL SUMMARY

18.1 Description of Development (Revisions to scheme)

This document contains additional and updated information on the predicted environmental effects of the proposed development as reported in the original EIA, which was submitted with the application. This document provides an update from the EIA consultants to the proposed revisions arising from the Further Information request.

18.2 Human Beings

The impact of the revised scheme design in respect of Population and Human Health will not be significantly different from that presented in the original EIA.

The implementation of the range of remedial and mitigation measures included throughout the EIA document submitted with the application is expected to have the impact of limiting any adverse significant and likely environmental impacts of the operational phase of the proposed development on population and human health.

The remedial and mitigation measures presented in the EIA will still be applicable to the revised scheme and adherence to these measures will ensure that the proposed development has a negligible impact on the environment.

18.3 Biodiversity

The proposed amendments to the scheme result in no appreciable change to the predicted impacts on biodiversity.

The potential impacts arising from the proposals are similar to that already examined in the original EIA (section 4 volume II) submitted with the application as detailed previously and no further likely significant impacts are identified.

The proposed remedial and mitigation measures presented in the EIA will still be applicable to the revised scheme.

18.4 Lands and Soils

The remedial and mitigation measures presented in the EIA will still be applicable to the revised scheme and adherence to these measures will ensure that residual impacts are deemed to be of minor risk, as the proposal for apartment type residential accommodation would not be seen as a potential high-risk development post construction.

18.5 Water

It is considered that by implementing the proposed construction and operational phase mitigation measures in Section 6.6 of the EIA Volume II, that the significance of the identified impacts will be reduced to a "Not significant" residual impact on the identified hydrological/ hydrogeological receptors.

The remedial and mitigation measures presented in the EIA will still be applicable to the revised scheme and adherence to these measures will ensure that residual impacts will be short term and not significant.

18.6 Air Quality and Climate

The impact of the revised scheme design on the environment in terms of Noise and Vibration will not be significantly different from that presented in the original EIAR.

The remedial and mitigation measures presented in the EIAR will still be applicable to the revised scheme and adherence to these measures will ensure that the proposed development has a negligible and imperceptible impact on the environment.

18.7 Noise and Vibration

The impact of the revised scheme design on the environment in terms of Noise and Vibration will not be significantly different from that presented in the original EIAR.

The remedial and mitigation measures presented in the EIAR will still be applicable to the revised scheme and adherence to these measures will ensure that the proposed development has a negligible and imperceptible impact on the environment.

18.8 Landscape and visual

In respect of the potential impact on visual amenity the original photomontages submitted were reviewed in the context of the proposed amendments to the scheme.

In summary, the changes to the proposed development brought about by the local authority request for further information and subsequent minor design changes have had a negligible effect on the landscape and visual assessment as conducted in the EIAR and there are no changes to the assessment conclusions.

18.9 Material Assets- Traffic

The Material Assets Chapter update outlines that the changes are marginal and does not have an impact on the outcome of the traffic analysis presented in the EIAR submitted with the application.

Accordingly, with regard to the proposed amendment, there are no reasons in relation to traffic and transportation aspects why this revised scheme should not be granted planning permission.

18.10 Material Assets - Waste Management

The mitigation measures outlined in the original EIAR will still be implemented to reduce the impact of waste materials during the construction and operational phases of the development.

18.11 Material Assets – Archaeology, Architecture and Cultural Heritage

No additional residual impacts on architectural heritage resources are expected arising from the proposed revisions.

18.12 Risk Management

The Construction Management Plan, submitted with the application, as well as good housekeeping practices will limit the risk of accidents during construction. No additional residual impacts arise.

18.13 Cumulative Impacts

The EIAR where relevant the EIAR also takes account of other development within the area. These impacts have been addressed in the relevant chapters of the EIAR. No additional cumulative impacts are predicted arising from the proposed amendments to the scheme.

18.14 Direct and Indirect Effects Resulting from Use of Natural Resources

No significant adverse impact is predicted to arise from the use of natural resources arising from the proposed development including the proposed amendments and associated changes to the layout.

18.15 Direct and Indirect Effects Resulting from Emission of Pollutants, Creation of Nuisances and Elimination of Waste

There will be no significant direct or indirect effects arising from these sources arising from the proposed development including the proposed amendments to the layout.

18.16 Forecasting Methods Used for Environmental Effects

No change compared to EIAR submitted with application

No particular difficulties, such as technical deficiencies or lack of knowledge, were encountered in compiling any of the specified information contained in this report such as that a prediction of impact has not been possible.

