SITE CONTEXT

06

6.1 Physical description

The North Mall Campus site is bound to the south by the northern channel of the River Lee and to the north by an escarpment rising steeply up to the existing built-up area of Sunday's Well Road. The site is accessed from the north-east, via an entrance off North Mall, see Figure 6.2.

A watercourse, known as the Mill Race, divides the site in two parts. There is a small basin to the east of the site with a weir that retains the water when the river is in low tide. Part of the Mill Race is culverted.

Along the north channel, a band of mature and semi-mature trees form a strong landscape edge to the south and east of the site.

There are several existing buildings and structures on the site, including buildings linked to the site's former industrial use as a distillery. The former distillery Bottling Plant and Cooperage are located to the south of the Mill Race. The three storey Distillery House and VAT Store are situated in the north-eastern corner of the site, near to the entrance off North Mall.

There are also recent purpose-built university buildings and ancillary glasshouses located to the north of the Mill Race. There is no development to the western side of the site, which has been left overgrown.

The existing buildings on the site are in active use by UCC:

- St. Vincent's – Department. of Music.
- Butler Building – School of Biological, Earth & Environmental Science
- Enterprise Centre – School of Applied Psychology
- The Cooperage – School of Biological, Earth & Environmental Science
- Glasshouses - School of Biological, Earth & Environmental Science
- Distillery House – UCC Lecture, Seminar Rooms and Offices.

The Bottling Plant is owned jointly by UCC and MUH and is used by both for storage. The building is in a poor state of repair, and storage is limited to materials and goods which are for disposal, or which will not be damaged by damp.

Figure 6.3 illustrates the location of the site within the context of Cork City Centre, the Tyndall National Institute (TNI) at Lee Maltings and the Mercy University Hospital on Grenville Place. The full University College Campus map can be referenced at Campus map can be found at https://www.ucc.ie/en/media/siteassets/contentassets/maps/UCC_CAMPUS_MAP_23_11.pdf.

Figure 6.1: Aerial perspective view of subject site (Source: Google Earth)

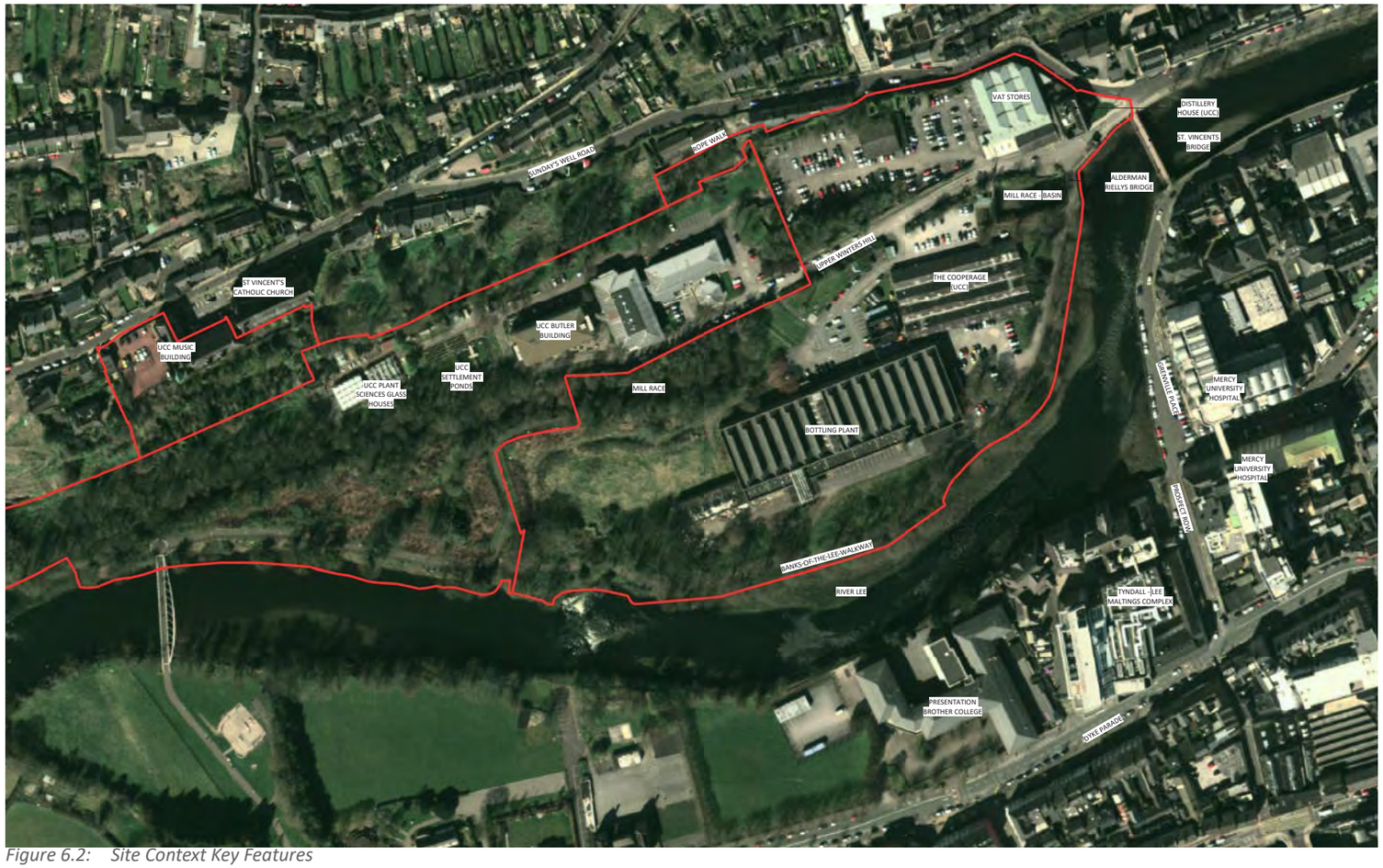

Figure 6.2: Site Context Key Features

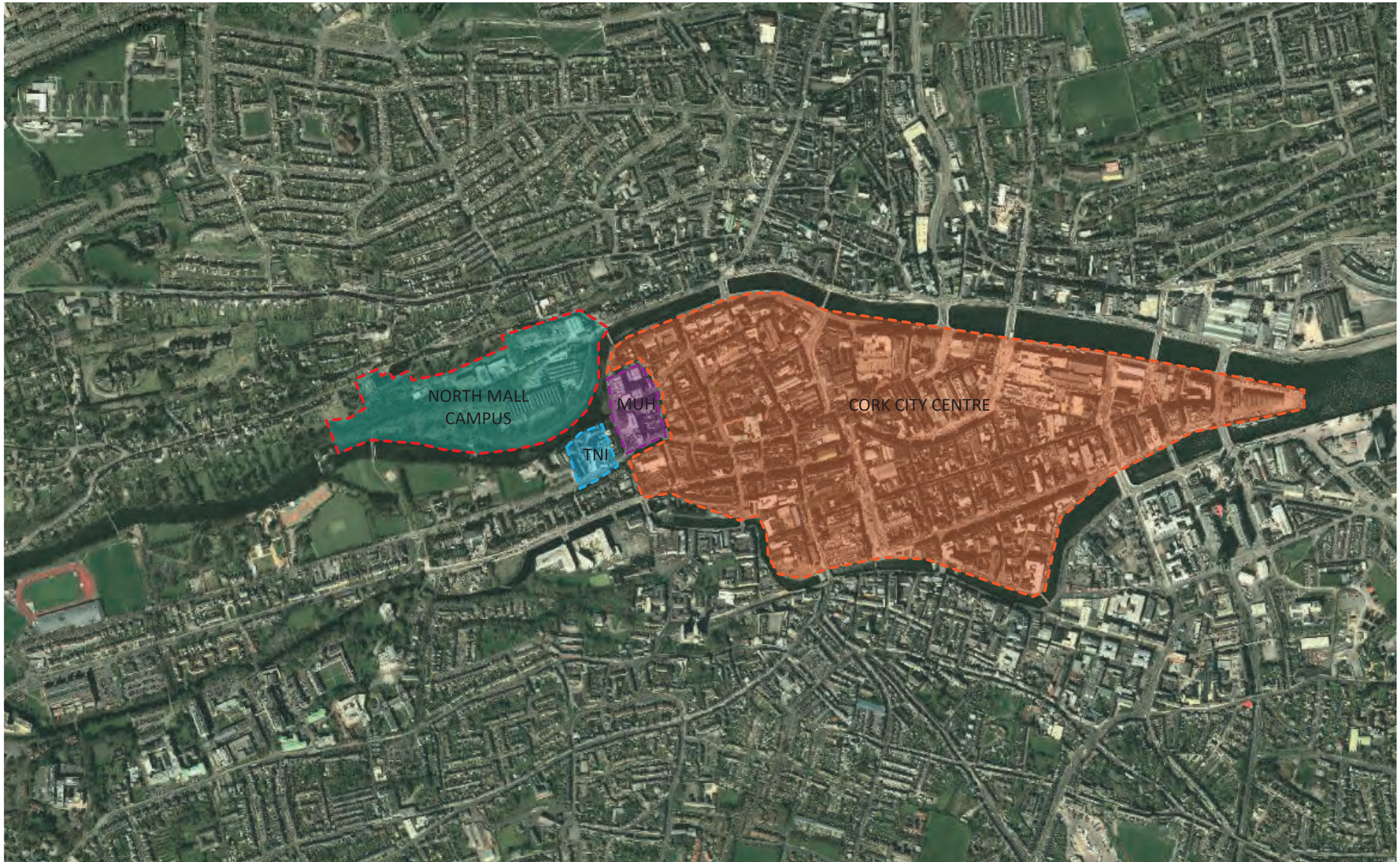

Figure 6.3: Site Location in Context with the City

6.2 Topography and Flood Risk

The topography of the North Mall Campus site is flat, ranging from 3.4m OD to 4.2m OD, with a southerly aspect. It sits below an escarpment, with Sunday's Well Road rising steeply to the north. The escarpment provides a strong physical backdrop to the site.

Parts of the site are subject to flood risk, as illustrated in Appendix B. Flood Relief works are proposed and in line with the development programme of the Office of Public Works. The flood relief works proposed as an integrated part of the North Mall Campus Masterplan are detailed in Chapter "04". The masterplan proposals have taken account of the proposed flood relief requirements and present an alternative design solution, which will achieve the same flood mitigation effects.

6.2.1 Planning System and Flood Risk Management Guidance

A Flood Risk Analysis has been carried out for the site. This task was undertaken taking cognisance of the guidance given in the Office of Public Works (OPW), the Department of Environment, Heritage, Local Government (DEHLG), the Planning System and Flood Risk Management (2009), the Lower Lee Flood Relief Scheme (LLFRS).

There are three types of levels of flood zones defined by the Planning System and Flood Risk Management:

- Flood Zone A where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);
- Flood Zone B – where the probability of flooding from rivers and the sea is moderate (be-tween 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding);
- Flood Zone C – where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all areas of the plan which are not in zones A or B.

The OPW CFRAMS mapping for the area indicates that the site is not subject to flooding in the 1 in 100-year storm event for fluvial (Figure 1.5) and 1 in 200-year storm event for tidal (Figure 1.6). The fluvial flooding case is the governing scenario.

Cork City Council requires to consider the climate change's effect for both fluvial and tidal current scenario. Reviewing the OPW online map with the additional increase of water level, the proposed site is subject to flooding (to Figure 6.6to Figure 6.9). Therefore, the site is located within Flood Zone A and is regarded to be at high risk from fluvial and tidal flooding.

The planning implications for each of the flood zones classification extract from the Planning System and Flood Risk Management Guidance) Flood Zone Classification are as follows:

Zone A - High probability of flooding. Most types of development would be considered inappropriate in this zone. Development in this zone should be avoided and/or only considered in exceptional circumstances, such as in city and town centres, or in the case of essential infrastructure that cannot be located elsewhere, and where the Justification Test has been applied. Only water-compatible development, such as docks and marinas, dockside activities that require a waterside location, amenity open space, outdoor sports and recreation, would be considered appropriate in this zone.

Zone B - Moderate probability of flooding. Highly vulnerable development, such as hospitals, residential care homes, Garda, fire and ambulance stations, dwelling houses and primary strategic transport and utilities infrastructure, would generally be considered inappropriate in this zone, unless the requirements of the Justification Test can be met. Less vulnerable development, such as retail, commercial and industrial uses, sites used for short-let for caravans and camping and secondary strategic transport and utilities infrastructure, and water-compatible development might be considered appropriate in this zone. In general however, less vulnerable development should only be considered in this zone if adequate lands or sites are not available in Zone C and subject to a flood risk assessment to the appropriate level of detail to demonstrate that flood risk to and from the development can or will adequately be managed.

Zone C - Low probability of flooding. Development in this zone is appropriate from a flood risk perspective (subject to assessment of flood hazard from sources other than rivers and the coast) but would need to meet the normal range of other proper planning and sustainable development considerations.

Although most of the site can be considered a 'Less Vulnerable' Development (Figure 6.4), a Clinical / Hospital use from the Mercy University Hospital might be included as part of the development. Therefore, the preliminary proposal is to be considered a 'Highly Vulnerable' Development. Because the site is located within Flood Zone A and it being a Highly Vulnerable Development, the development will need a justification test at the planning stage (Figure 6.5).

Vulnerability class	Land uses and types of development which include*:
Highly vulnerable development (including essential infrastructure)	Garda, ambulance and fire stations and command centres required to be operational during flooding; Hospitals; Emergency access and egress points; Schools; Dwelling houses, student halls of residence and hostels; Residential institutions such as residential care homes, children's homes and social services homes; Caravans and mobile home parks; Dwelling houses designed, constructed or adapted for the elderly or, other people with impaired mobility; and Essential infrastructure, such as primary transport and utilities distribution, including electricity generating power stations and sub-stations, water and sewage treatment, and potential significant sources of pollution (SEVESO sites, IPPC sites, etc.) in the event of flooding.
Less vulnerable development	Buildings used for: retail, leisure, warehousing, commercial, industrial and non-residential institutions; Land and buildings used for holiday or short-let caravans and camping, subject to specific warning and evacuation plans; Land and buildings used for agriculture and forestry; Waste treatment (except landfill and hazardous waste); Mineral working and processing; and Local transport infrastructure.
Water-compatible development	Flood control infrastructure; Docks, marinas and wharves; Navigation facilities; Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location; Water-based recreation and tourism (excluding sleeping accommodation); Lifeguard and coastguard stations; Amenity open space, outdoor sports and recreation and essential facilities such as changing rooms; and Essential ancillary sleeping or residential accommodation for staff required by uses in this category (subject to a specific warning and evacuation plan).

*Uses not listed here should be considered on their own merits

Figure 6.4: (Extract Planning System and Flood Risk Management Guidance) Classification of vulnerability of different types of development

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

Figure 6.5: (Extract Planning System and Flood Risk Management Guidance) Matrix of Vulnerability versus Flood Zone

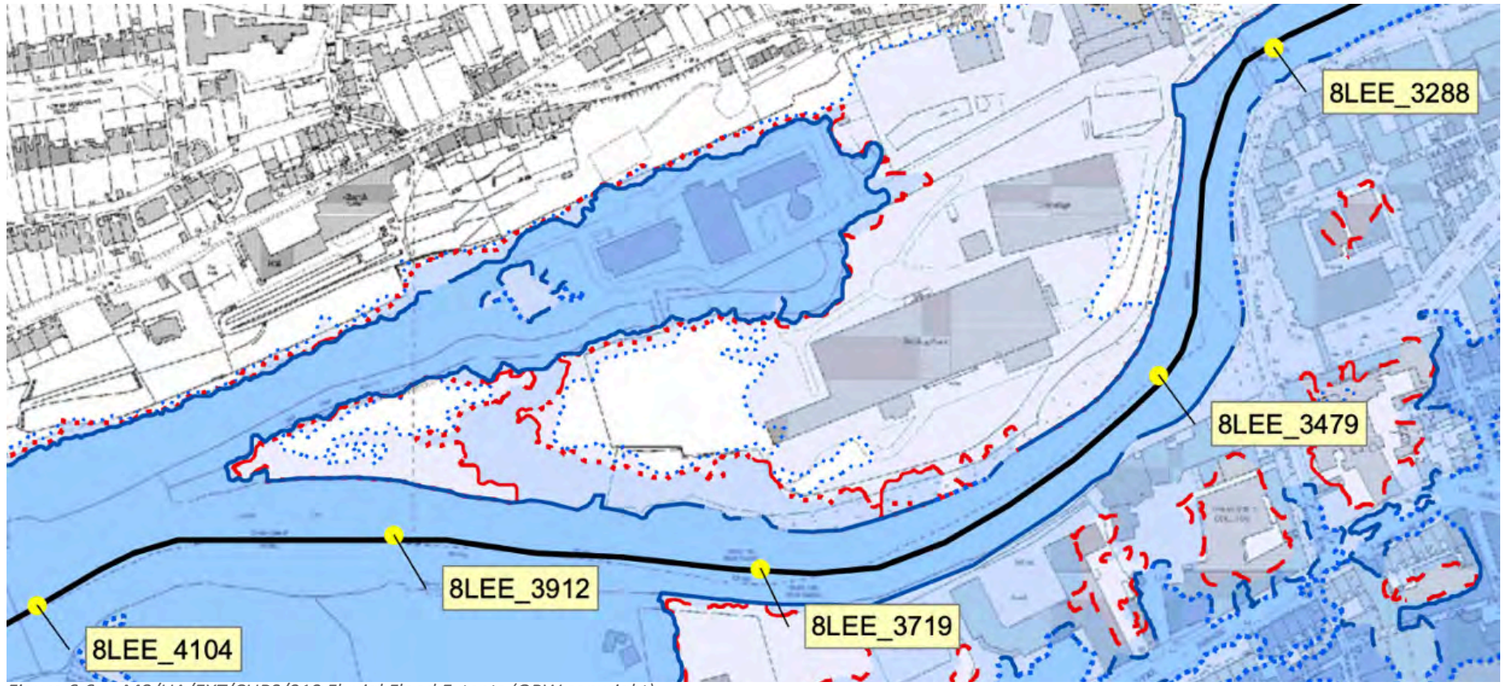

Figure 6.6: M8/UA/EXT/CURS/010 Fluvial Flood Extents (OPW copyright)

Node Label	Water Level (mOD) per AEP		
	WL 10%	WL 1%	WL 0.1%
8LEE_4491	3.64	4.20	4.73
8LEE_4291	3.60	4.17	4.70
8LEE_4104	3.44	4.09	4.63
8LEE_3912	2.66	3.72	4.37
8LEE_3719	2.57	3.59	4.20
8LEE_3479	2.57	3.61	4.22
8LEE_3288	2.40	3.45	4.00
8LEE_3099	2.25	3.30	3.84
8LEE_2859	2.11	3.10	3.50
8SOU_2997	3.88	4.51	5.04
8SOU_2871	3.80	4.41	4.94
8SOU_2705	3.43	4.04	4.61
8SOU_2516	3.31	3.99	4.59
8SOU_2253	2.96	3.70	4.31
8SOU_1977	2.80	3.61	4.24
8SOU_1807	2.63	3.43	4.07
8SOU_1588	2.48	3.26	3.79
8SOU_1297	2.22	3.05	3.50

10 % AEP Flood Extent (1 in 10 chance in any given year)
1 % AEP Flood Extent (1 in 100 chance in any given year)
0.1 % AEP Flood Extent (1 in 1000 chance in any given year)
Defended area
High Confidence (<20m) (10% AEP)
Medium Confidence (<40m) (10% AEP)
Low Confidence (>40m) (10% and 0.1% AEP)
High Confidence (<20m) (1% AEP)
Medium Confidence (<40m) (1% AEP)
Low Confidence (>40m) (1% AEP)
River Centreline
Node Point
Node Label (refer to table)

Figure 6.7: Fluvial Flood Extents Table and Legend (OPW copyright)

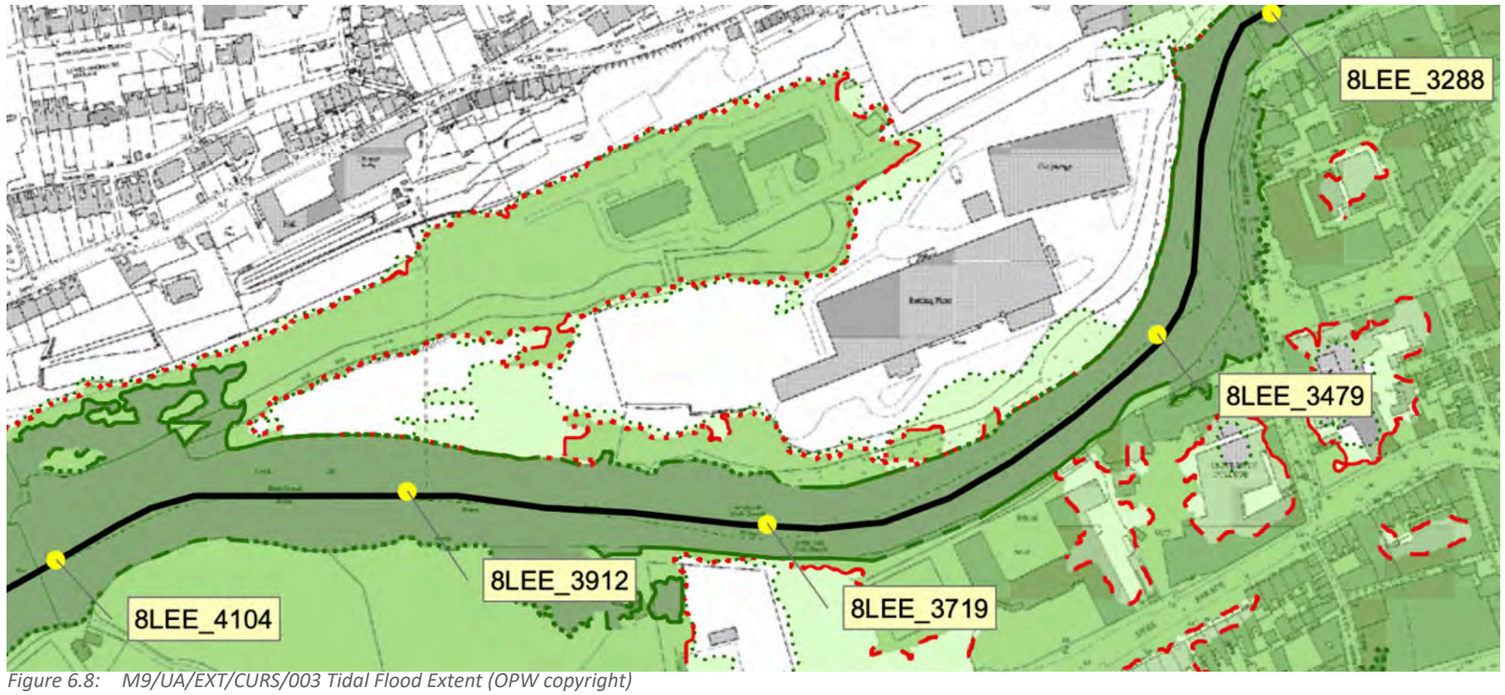

Figure 6.8: M9/UA/EXT/CURS/003 Tidal Flood Extent (OPW copyright)

Node Label	Water Level (mOD) per AEP		
	WL 10%	WL 0.5%	WL 0.1%
8LEE_4491	3.07	3.97	4.27
8LEE_4291	3.05	3.94	4.25
8LEE_4104	2.98	3.87	4.19
8LEE_3912	2.84	3.59	3.94
8LEE_3719	2.82	3.52	3.84
8LEE_3479	2.82	3.53	3.85
8LEE_3288	2.78	3.43	3.74
8LEE_3099	2.75	3.34	3.64
8LEE_2859	2.72	3.21	3.45
8SOU_2871	3.33	4.05	4.43
8SOU_2705	3.17	3.79	4.15
8SOU_2516	3.11	3.74	4.12
8SOU_2253	2.97	3.54	3.91
8SOU_1977	2.92	3.48	3.86
8SOU_1807	2.86	3.36	3.73
8SOU_1588	2.81	3.27	3.58
8SOU_1297	2.75	3.15	3.43

10 % AEP Flood Extent (1 in 10 chance in any given year)
0.5 % AEP Flood Extent (1 in 200 chance in any given year)
0.1 % AEP Flood Extent (1 in 1000 chance in any given year)
Defended area
High Confidence (<20m) (10% AEP)
Medium Confidence (<40m) (10% AEP)
Low Confidence (> 40m) (10% and 0.1% AEP)
High Confidence (<20m) (0.5% AEP)
Medium Confidence (<40m) (0.5% AEP)
Low Confidence (>40m) (0.5% AEP)
River Centreline
Node Point
Node Label (refer to table)

Figure 6.9: Tidal Flood Extent Table and Legend (OPW copyright)

6.2.2 Fluvial Current Scenario

Fluvial flooding occurs when the capacity of a watercourse is exceeded or the channel is blocked or restricted, and excess water spills out from the channel onto adjacent low-laying areas.

The Lee Catchment Flood Risk Assessment and Management Study (CFRAMS) shows the extent of fluvial flooding from the River Lee. Figure 6.6 shows "the current scenario" flood zone map for fluvial flooding for the site.

The east part of the whole site lies within an area classified as Flood Zone C indicating that the risk of flooding from rivers is low. The west area, because some areas get flooded for the 1 in 100 year storm event, lies within a Flood Zone B with a moderate risk of flooding. The land to the Northwest is classified as Flood Zone A with a high probability of flooding.

From the available information, the water level at the node points near the site for a 100-year flood event varies from 3.59m OD (8LEE_3719), 3.61m OD (8LEE_3479), 3.72m OD (8LEE_3912) and 4.09m OD (8LEE_4104). Refer to Figure 6.7 for fluvial extents level table and legend.

6.2.3 Tidal Current Scenario

Tidal flooding is the temporary inundation of low-lying areas, especially streets, during exceptionally high tide events, such as at full and new moons.

The Lee Catchment Flood Risk Assessment and Management Study (CFRAMS) shows the extent of tidal influence. Figure 6.8 shows the "the current scenario" flood zone map for tidal flooding for the site.

According to the map, most of the site is flood risk free. However, the southern river edge and the southwest parts are classified as Flood Zone C with a low probability of flooding. The areas to the north of the site and a strip to the south are within a Flood Zone B with a moderate probability of flooding.

From the available information, the water level at the node points near the site for a 200-year flood event varies from 3.52m OD (8LEE_3719), 3.53m OD (8LEE_3479), 3.59m OD (8LEE_3912) and 3.87m OD (8LEE_4104). Refer to Figure 6.9 for water level table and legend. Therefore, the fluvial flooding case is the governing scenario and it presents greater risk than tidal.

6.2.4 Future Scenarios

Cork City Council requires to consider the water levels in the future for both fluvial and tidal current scenario. Therefore, the OPW website has been consulted. In particular, the research has been focused on the Mid-Range Future Scenario (MRFS). This scenario consists in modelling the extents that take in the potential effects of climate change (increase in rainfall of 20% and sea level rise of 500mm).

The OPW website doesn't have available flooding maps regarding tidal and fluvial event for Mid-Range Future Scenario (MRFS). However, flooding.ie website has the possibility for the online maps showing the MRFS of the area without water levels. As shown in Figure 6.10 and Figure 6.11, the site is subject to flooding and therefore the site has to be considered lying within a Flood Zone A.

Cork City Council has advised that the water levels in the nearest CFRAMS nodes of the current scenario for both fluvial and tidal need to make allowance for freeboard (0.3m) and climate change (0.55m) factors in order to mitigate the risk of flooding.

Being the fluvial flooding case the governing scenario, the water level at the node points near the site for a 100-year flood event with the safety factors required by Cork City Council varies from 4.44m OD (8LEE_3719), 4.46m OD (8LEE_3479), 4.57m OD (8LEE_3912) and 4.94m OD (8LEE_4104).

6.2.5 Historic Flooding

Historical flood events are recorded on the Office of Public Works website. These land maps have been consulted regarding recorded flood events in the vicinity of the subject site. A map showing all flood events within proximity of the subject site was downloaded from the OPW website and is provided in Figure 6.12.

There have been no flood events in the immediate area that could have an impact on the subject site. This would suggest that there is little conveyance in this area at the extremity of a flood event.

6.2.6 Lower Lee Flood Relief Scheme

The purpose of the Lower Lee Flood Relief Scheme (LLFRS) is to assess and develop a viable, cost effective and sustainable flood relief scheme to alleviate flooding in Cork city, based on preferred options already identified in the Lee CFRAM Study. The scheme will provide protection to the properties against the risk of flooding up to the 0.5% AEP tidal event and 1% AEP fluvial event for current and future scenario.

This scheme would involve the construction of significant lengths of flood walls and embankments through Cork City. The site area will get relief from the LLFRS reducing the risk of flooding in future (Figure 6.13).

The site will benefit from the proposed LLFRS and will allow the site to be in a zone with a low risk of flooding (Figure 6.14). The LLFRS proposes for the site to raise a defence wall and two berms nearby the River Lee (Figure 6.15 and Figure 6.16). The berm to the west of the site will have a flood defence level of 5.15m OD while the berm in the central part will have a flood defence level of 4.9m OD. The proposed defence wall will have a top level of 4.6 m OD land it is located to the east side of the site (Figure 6.19). A bridge and penstock are proposed to the west part of the site (Figure 6.17). The penstock will shut during flood conditions.

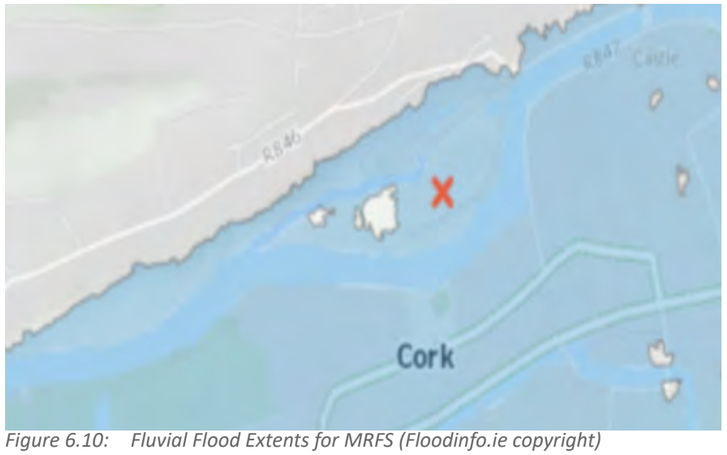

Figure 6.10: Fluvial Flood Extents for MRFS (Floodinfo.ie copyright)

Figure 6.11: Tidal Flood Extents for MRFS (Floodinfo.ie copyright)

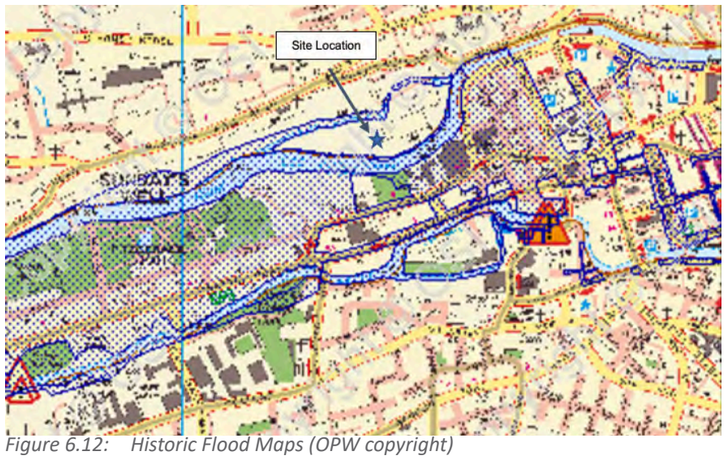

Figure 6.12: Historic Flood Maps (OPW copyright)

In order to comply with the future OPW's "Lower Lee Flood Relief Scheme" (LLFRS), the proposed flood defences levels for the site will be aligned as shown in the LLFRS documents. In particular, to minimize the impact of the future LLFRS on the site, we are required to raise the flood defence levels for our site to a maximum of 5.15m AOD. This will be achieved through the provision of landscaped terraces acting as berms and defence walls to be implemented as part of the masterplan proposals.

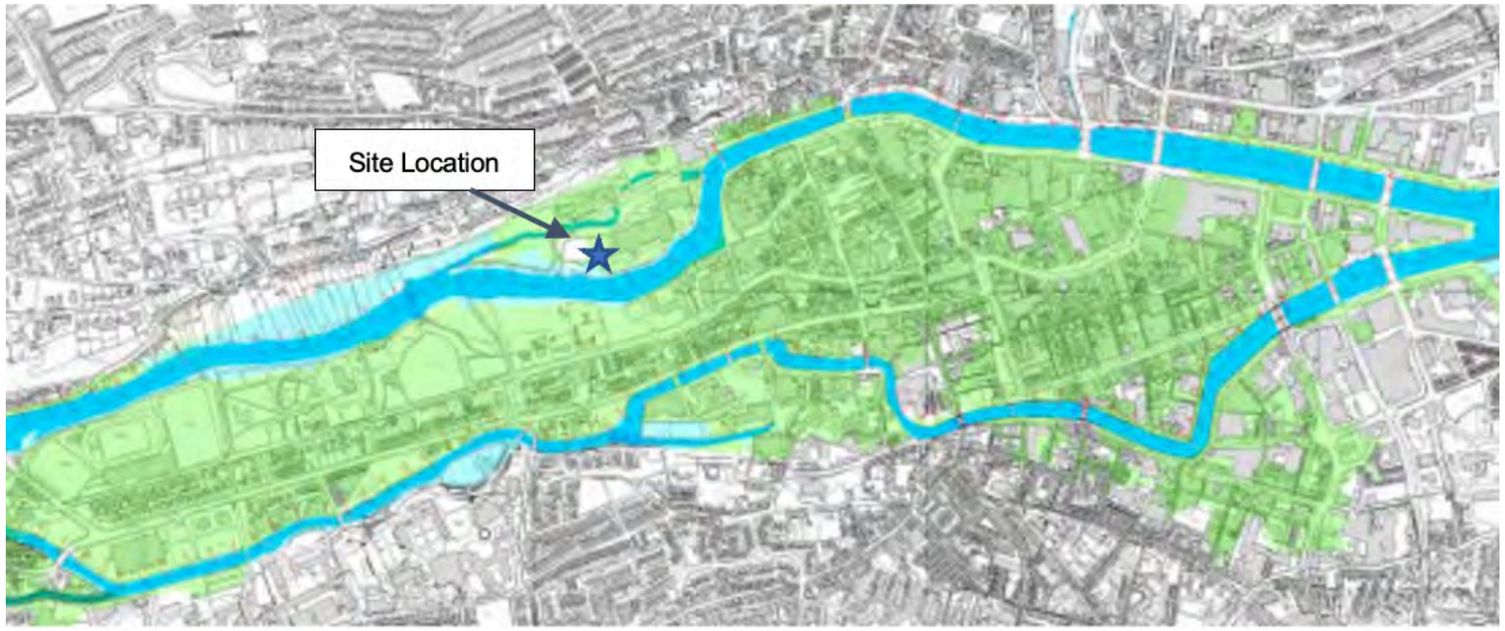

Figure 6.13: Diagram indicating the lands benefiting from the Lower Lee Flood Relief Scheme (OPW copyright)

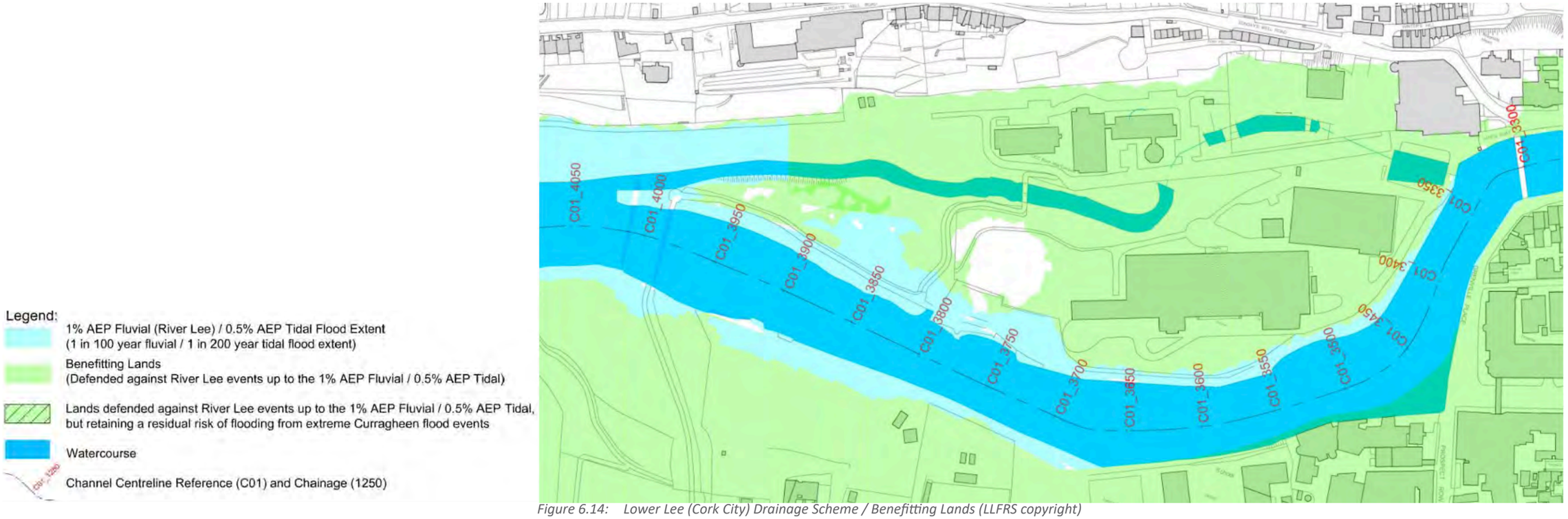

Figure 6.14: Lower Lee (Cork City) Drainage Scheme / Benefitting Lands (LLFRS copyright)

Key to Plan

- Watercourse
- C01_300 — Channel centreline, reference (C01) and chainage (300m)
- PM 01 — Photomontage (Location, Orientation and No.)
- CELL_B01 — Interference reference.
- CELL.1 / LL_301 — Location and reference of cross section
- 50 — Proposed works chainage (m)
- Flood defence wall
- Proposed flood defence embankment
- Proposed regrading of ground levels
- Land to be reclaimed
- Proposed bridge
- P — Proposed pumping station (surface water)
- Proposed manhole (surface water)
- Proposed drain (surface water)
- Proposed rising main (surface water)

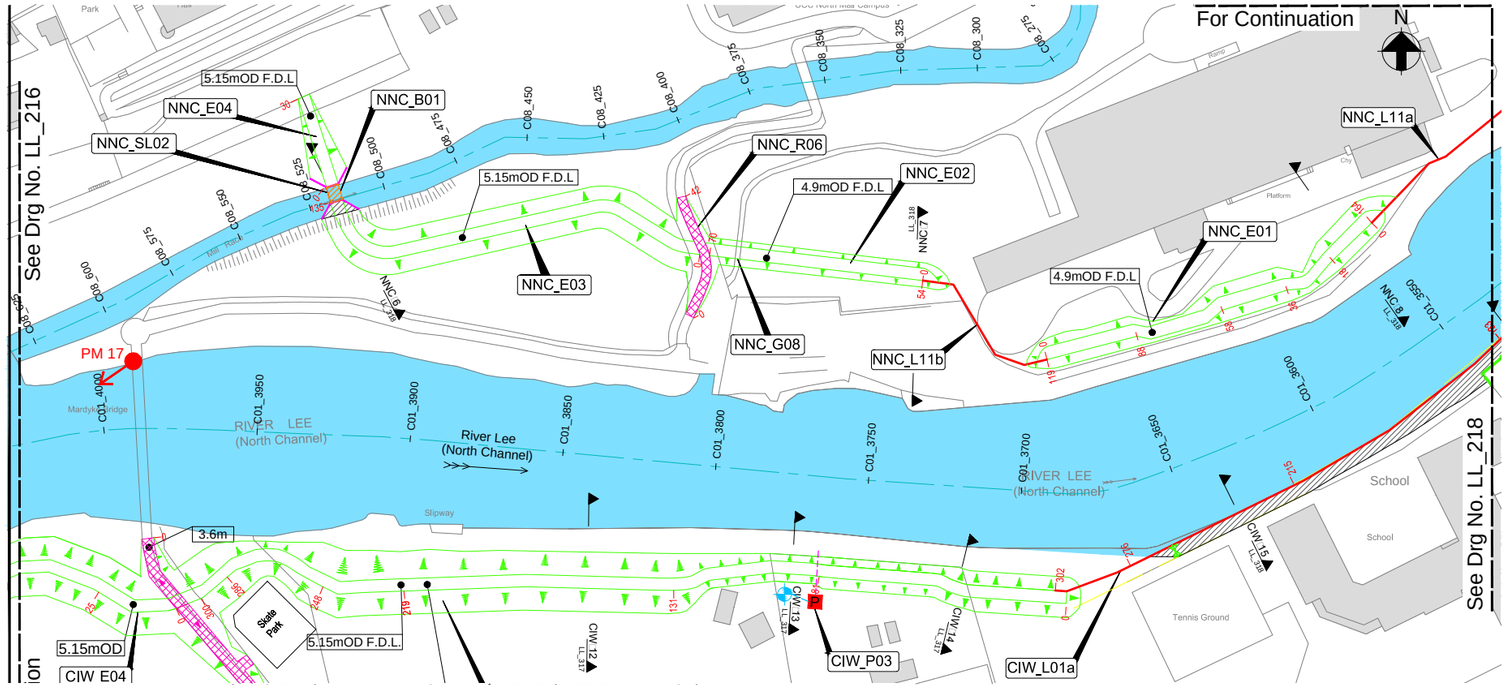

Figure 6.15: Lower Lee (Cork City) Drainage Scheme / LL217 (LLFRS copyright)

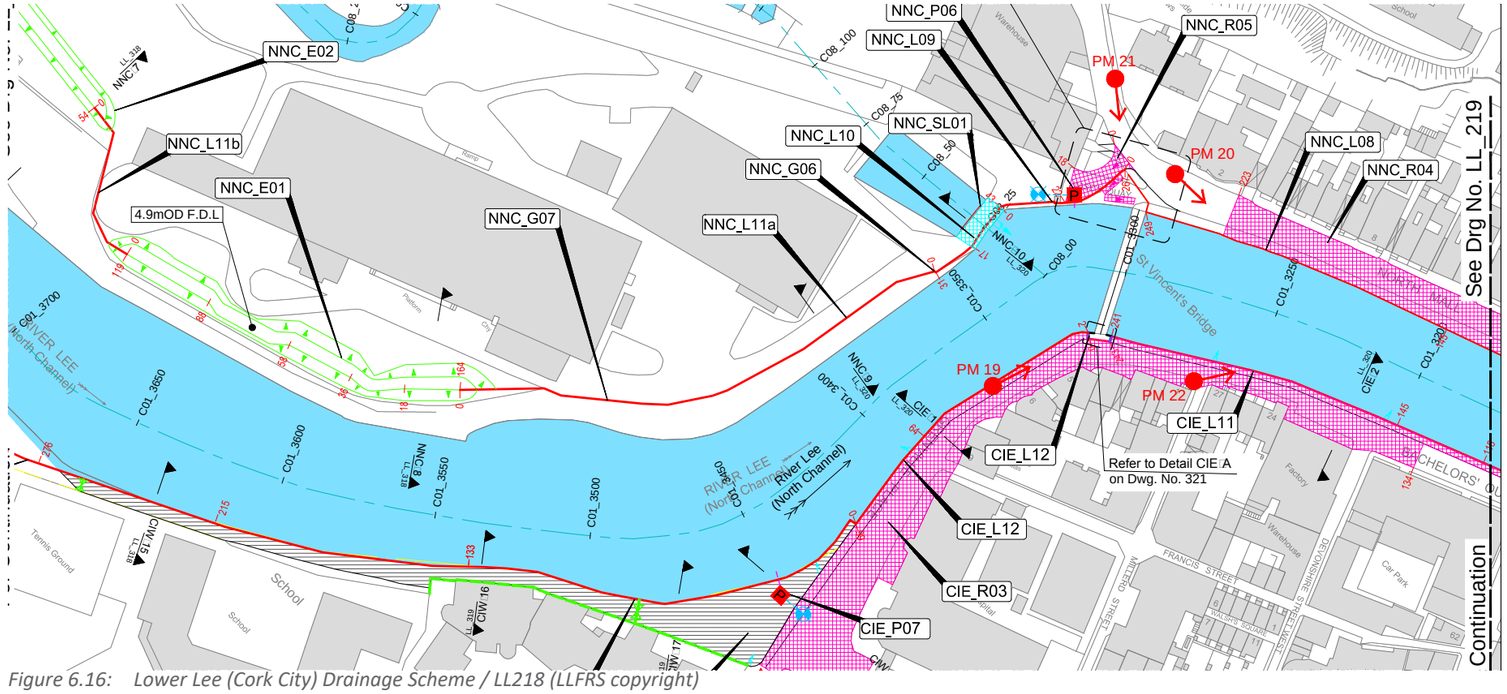

Figure 6.16: Lower Lee (Cork City) Drainage Scheme / LL218 (LLFRS copyright)

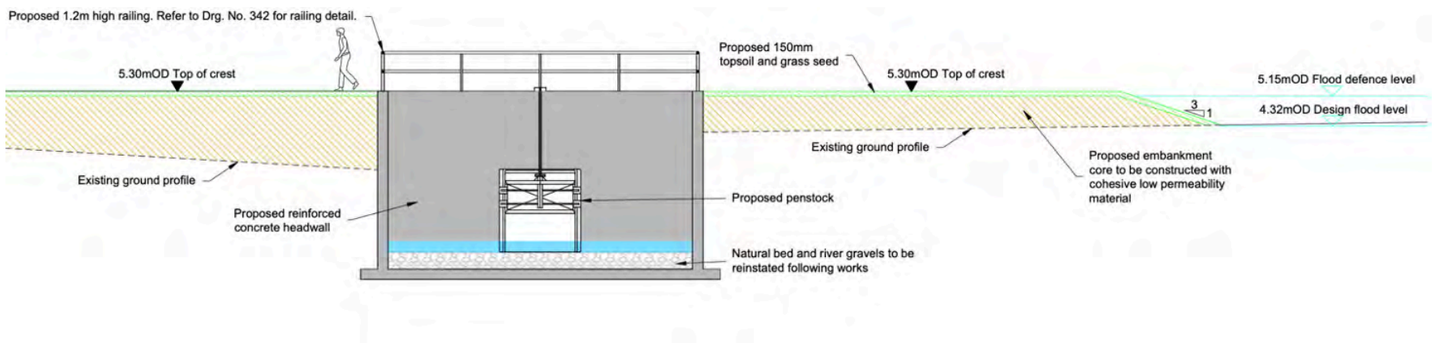

Figure 6.17: Lower Lee (Cork City) Drainage Scheme / Section NCC6 (LLFRS copyright)

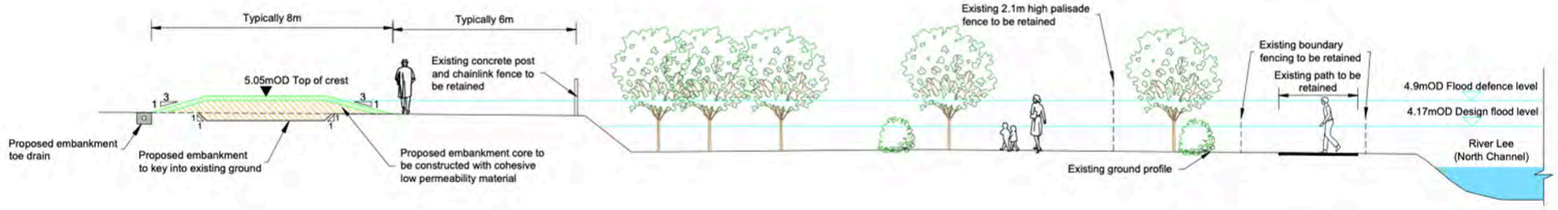

Figure 6.18: Lower Lee (Cork City) Drainage Scheme / Section NCC7 (LLFRS copyright

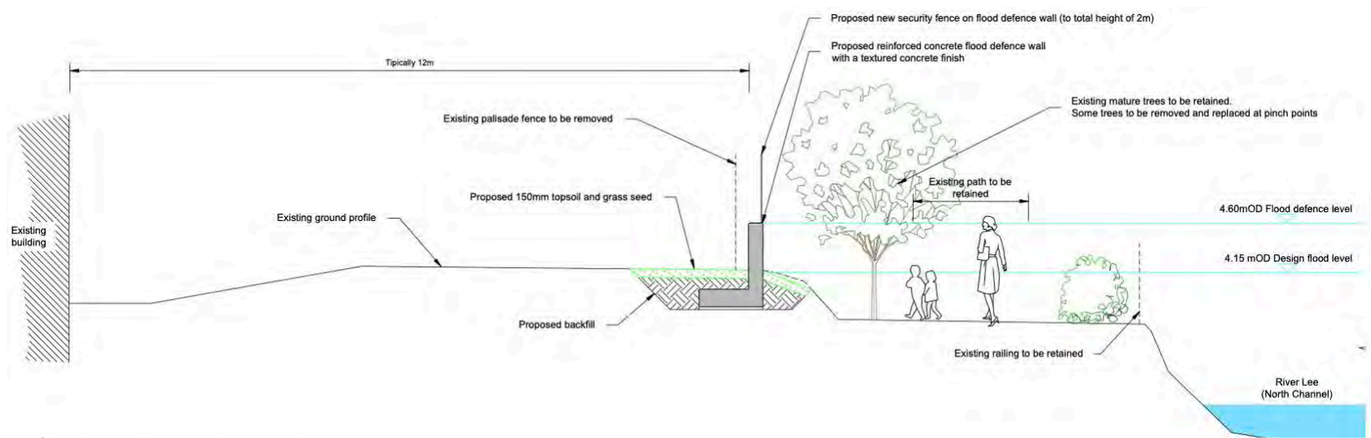

Figure 6.19: Lower Lee (Cork City) Drainage Scheme / Section NCC9 (LLFRS copyright)

6.3 Historic Context – industrial heritage.

6.3.1 Introduction

This subject site, North Mall Campus, is in an area predominantly comprised unreclaimed marshland throughout the medieval period. Reclamation of the southern and western portions of this area was not completed until the mid-nineteenth century, while areas to the north of the subject site were developed from the late eighteenth century as part of the North Mall/Wise's Distillery complex. The western portion of the subject site was largely undeveloped until the late 18th, early 19th century with developments along Sunday's Wells Road gradually increasing during this period. There are three protected structures within the subject site and a number of buildings listed by the National Inventory of Architectural Heritage as being significant. The site is partially located in the North Mall and Marsh and the Sunday's Well Architectural Conservation Areas.

6.3.2 Context

The subject site was previously the location of the North Mall Distillery and is currently occupied by a number of structures where are in use as the North Mall Campus of University College Cork, see section 6.1.

Legal & Policy Framework

The Heritage Act (1995) (as amended) defines architectural heritage as including: all structures, buildings, traditional and designed, and groups of buildings including streetscapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents.

Figure 6.20: Location of subject site circled in red (Source: Government of Ireland, Historic Environment Viewer)

The National Inventory of Architectural Heritage (NIAH) was established under the Architectural Heritage Act (1999), to record architectural heritage structures within the State and to advise local authorities in relation to structures of architectural heritage significance within their administrative areas. The conservation principles of care and protection of architectural heritage and the facilitation of the listing of significant buildings of architectural merit are set out in Part IV of the Planning and Development Act (2000). This requires Local Authorities to maintain a Record of Protected Structures (RPS) of structures with special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, to be included in City/County Development Plans. In addition, Local Authorities must provide for the preservation of townscapes etc. through designation of Architectural Conservation Areas (ACAs). Any changes that materially affect the character of a protected structure require planning permission.

There are three protected structures within the subject site.

- Distillery House and Chimney
  (RPS ref. no. PS813)
- Alderman Reilly's Bridge
  (RPS ref. no. PS814)
- St. Vincent's Roman Catholic Church and Seminary
  (RPS ref. no. PS797)

It is also noted that the Lee Maltings Complex on the southern bank of the river is listed as a protected structure (RPS ref. no. PS597).

Other protected structures within the vicinity of the subject site include:

- Former Mayoralty House now Mercy Hospital
  (RPS ref. no. PS 136)
- Nos. 1-9 Grenville Place
  (RPS ref. nos. PS 125-133)
- Saint Vincent's Bridge
  (RPS ref. no. PS 1132)
- Post box on North Mall
  (RPS1001)
- Nos. 2-17 North Mall
  (RPS ref. nos. PS 227, 229, 231,233, 201-212)
- Daly's Suspension Bridge, Sunday's Well Road
  (RPS ref. no. PS 722)
- Nos. 23, 32-40 Sunday's Well Road
  (RPS ref. nos. PS 723, PS 703-711)

Within the subject site, the NIAH have recorded the following buildings/ structures to be of architectural heritage significance:

- Cooperage, Irish Distillers, North Mall
  (NIAH Reference: 20500776)
- Alderman Reilly's Bridge, Wise's Quay
  (NIAH Ref. 20500786)
- Distillery House/University College Cork, Wise's Quay
  (NIAH Ref. 20500784)
- Warehouse, Irish Distillers, North Mall
  (NIAH Ref. 20500783)
- Monastery (in use as UCC building), Sunday's Well Road
  (NIAH Ref. 20866077)
- St. Vincent's Roman Catholic Church, Sundays Well Road
  (NIAH Ref. 20866078 & 20862116)

Other structures within the vicinity of the subject site listed by the NIAH include:

- Sarah Ville, Sunday's Well Road
  (NIAH Ref. 20862115)
- House/Office
  (NIAH Ref. 20862114)
- House
  (NIAH Ref. 20500778)
- House
  (NIAH Ref. 20500779)
- House
  (NIAH Ref. 20500278)
- House
  (NIAH Ref. 20500279)
- Hillcrest
  (NIAH Ref. 20500280)
- House
  (NIAH Ref. 20500281)
- Rock Well Lane Houses
  (NIAH Ref. 20500302-20500307)

Site Boundary

NIAH Registered Structures

NIAH and Protected Registered Structures

Building of Note

Zones of Notification (Archaeology)

Architectural Conservation Areas (ACAs)

Historic Context

No.	Name	NIAH Registration	Protected Structure
1	Distillery House	20500784	-
2	Irish Distillers Building - VAT Stores	20500783	PS813
3	Ritual Site - Holy Wheel	CO074-074	-
4	Alderman Reilly's bridge	20500786	PS814
5	Cooperage	20500776	-
6	St. Vincent's Bridge	20500785	PS1132
7	The Mercy Hospital - Infirmary	20500746	-
8	The Mercy Hospital - Cobbles/flags/paving	20500787	-
9	The Mercy Hospital - Infirmary	20500746	-
9.1	The Mercy Hospital - Infirmary	20500746	-
10	The Mercy Hospital - Chapel	20500767	-
11	The Mercy Hospital - Hospital	20500744	PS136
12	The Mercy Hospital - House	20500768	-
13	The Maltings Complex - Vent Pipe	20500798	-
14	The Maltings Complex - University	20500771	-
15	The Maltings Complex - University	20500770	PS597
16	The Maltings Complex - University	20500772	-
17	School	20503004	-
18	School	20503004	-
19	Irish Distillers Chimney (1875 - 1880)	20500781	PS813
20	1-2 Sunday's Well Road - House	20500307	-
21	3 Sunday's Well Road - House	20500306	-
22	4-6 Sunday's Well Road - House	20500305	-
23	7 Sunday's Well Road - House	20500304	-
24	8 Sunday's Well Road - House	20500303	-
25	9 Sunday's Well Road - House	20500302	-
26	Saint Vincent's Catholic Church - Chapel	20862116	-
27	Saint Vincent's Catholic Church	20866078	-
28	Department of Music (UCC)	20866077	-
A	Bottling Plant	20500774*	-

** The former Bottling Plant is not listed on the NIAH online register at www.buildingsofireland.ie however, it is noted in the NIAH Gaeltacht 2012 publication 'An Introduction to the Architectural Heritage of Cork City', as an example of 20th Century Industrial Architecture and given a reference number 20500774.*

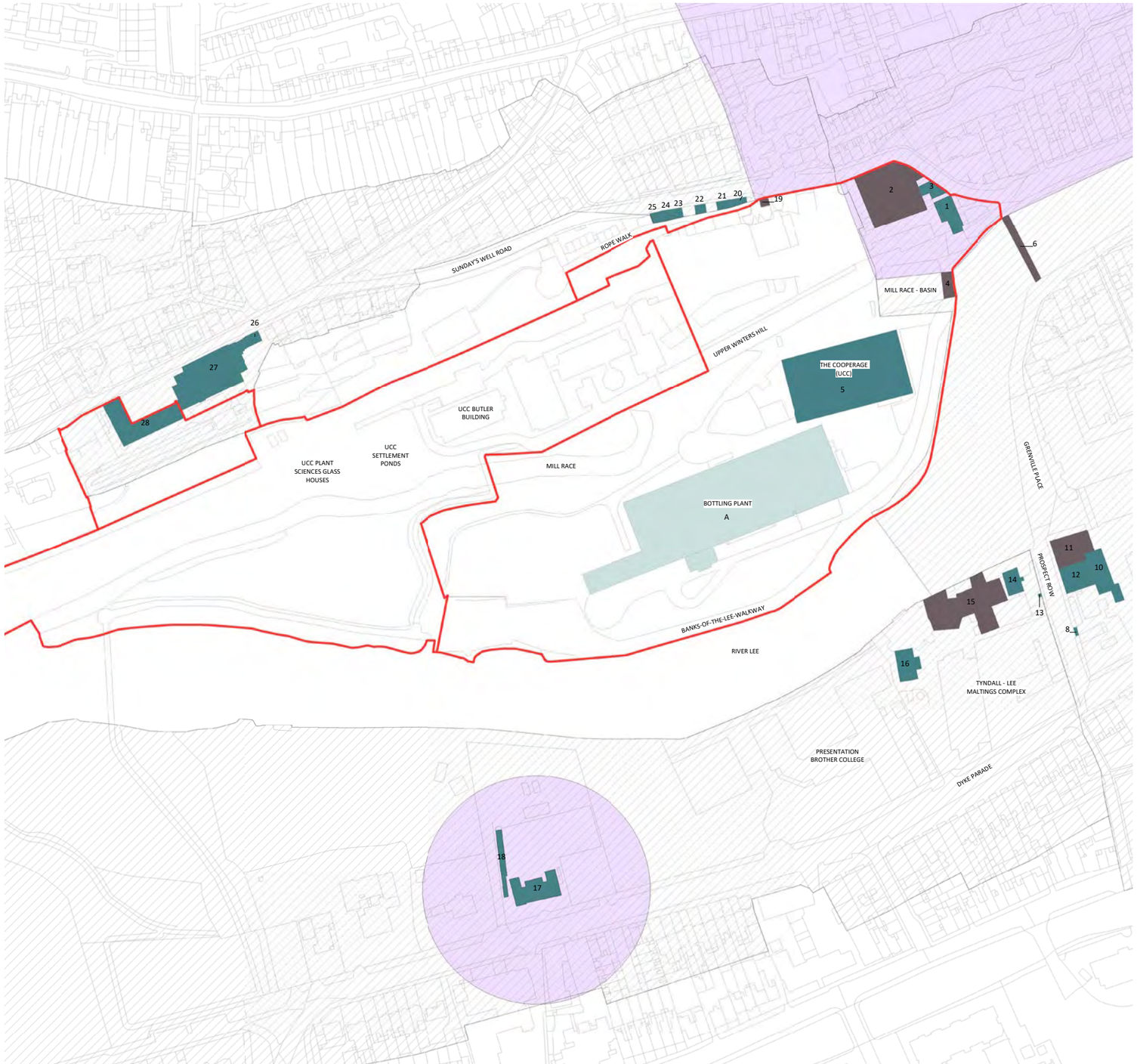

Figure 6.21: Architectural conservation areas (ACAs), shaded in purple, within the environs of the subject site (Source:www.corkcity.ie)

An architectural fragment is located in the wall of the former distillery at Wise's Hill which is a recorded monument (RMP no. CO074-074). It consists of a upper section of a double ogee-headed window embedded in the warehouse wall.

In addition, Local Authorities must provide for the preservation of townscapes etc. through designation of Architectural Conservation Areas (ACAs). Any changes that materially affect the character of a protected structure require planning permission. The eastern portion of the subject site is located within the dedicated architectural conservation area (ACA) of North Mall. The subject site also extends into the Sunday's Well ACA with Saint Vincent's Seminary located in the Sub-Area A which has a proposed extension in the Cork City Council Draft Development Plan 2022 – 2028 to encompass the area located to the south-side of Sundays Wells Road to the west of the former Saint Vincent's Church and Seminary. The site is bounded to the south, across the river, by the Mardyke ACA, to the north by the Sunday's Wells ACA and to the east by the North Mall & March ACA, (see extent of ACA designations in Figure 6.21). Due to the proposed extension of the Sunday's Wells ACA, the subject site is entirely enclosed by ACAs.

Finally, it is noteworthy that the subject site is located in an area zoned Area of High Landscape Value with Landscape Preservation Zones on the riverbank.

The subject site is included in the list of Landscape and Townscape Views as per Cork City Development Plan 2015-2021 as follows:

- Distillery Grounds-Sunday's Well Road (LT31)
- Distillery Grounds - Grenville Place (LT32)
- Distillery Grounds-Elizabeth Fort (LT33)

It is also included in the list of Protected Views within a panorama as per Cork City Development Plan 2015-2021.

- Elizabeth Fort -Distillery Grounds (EF6)
- Sunday's Well Road (SW3)
  (From Saint Albert's to Blair's Hill)-Elizabeth Fort

The Draft Cork City Development Plan 2022-2028 also presents a number of linear views of special amenity value. Section 6.7 provides further discussion of the visual sensitivity of the site.

The Cork City Development Plan 2015-2021 presents a number of objectives to ensure the protection of the architectural heritage resource within the city and these include:

- **Objective 9.23 Record of Protected Structures (RPS)**
  Cork City Council will maintain a Record of Protected Structures within the Cork City Development Plan, which shall include structures or parts of structures which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, and which it is an objective to protect.

- **Objective 9.24**
  Demolition of Protected Structures Proposals for demolition of a Protected Structure shall not be permitted except in exceptional circumstances and where it can be showed that a greater public interest will be served which outweighs the loss to the architectural heritage.

- **Objective 9.25 Recording of Protected Structures**
  Any alteration or demolition of a Protected Structure shall require a full record to Best Conservation Practice.

- **Alterations and Extensions**
  Any proposals for alterations or extensions to a Protected Structure should ensure that there is no damage to the special character of the Protected Structure. Any extensions should be appropriate in terms of architectural design, treatment, character, scale and form to the existing protected building/ structure.

- **Curtilage and Attendant Grounds - Setting of Protected Structures**
  Curtilage is normally taken to be the parcel of grounds associated with the protected structure. Attendant grounds are those areas that may not be immediate to the protected structure but are associated with them. Both the curtilage and attendant grounds of a Protected Structure are included for their protection within the definition of a Protected Structure as they are defining elements of the building/structure.

- **Objective 9.28 Protection of NIAH and other structures of built heritage interest**
  The City Council as planning authority aims to protect structures of built heritage interest. The "Ministerial Recommendations", made under Section 53 of the Planning Acts, asking the City Council to protect structures will be taken into account when the City Council as planning authority is considering proposals for development that would affect the historic interest of these structures of significance.

- **Objective 9.29 Architectural Conservation Areas**
  To seek to preserve and enhance the designated Architectural Conservation Areas in the City.

- **Objective 9.32 Development in Architectural Conservation Areas**
  Development in ACAs should take account of the following:
  - Works that impact negatively upon features within the public realm such as paving, railings, street furniture, kerbing etc. shall not be generally permitted;
  - Acceptable design, scale, materials and finishes for new developments;
  - Original materials and methods of construction should be retained. For example, timber barge boards, windows and doors should not be replaced with PVC, original roofing material types should be retained along with original forms and locations of openings etc.;
  - Features of historic or architectural value should not be removed

- **Objective 10.4 Areas of High Landscape Value**
  To conserve and enhance the character and visual amenity of Areas of High Landscape Value (AHLV) through the appropriate management of development, in order to retain the existing characteristics of the landscape, and its primary landscape assets. Development will be considered only where it safeguards to the value and sensitivity of the particular landscape. There will be a presumption against development where it causes significant harm or injury to the intrinsic character of the Area of High Landscape Value and its primary landscape assets, the visual amenity of the landscape; protected views; breaks the existing ridge silhouette; the character and setting of buildings, structures and landmarks; and the ecological and habitat value of the landscape.

- **Objective 10.5 Landscape Preservation Zones**
  To preserve and enhance the character and visual amenity of Landscape Preservation Zones through the control of development. Development will be considered only where it safeguards to the value and sensitivity of the particular landscape and achieves the respective site specific objectives, as set out in Table 10.2.

- **Site Specific Objectives**
  NW6 Sunday's Well (3) / North Mall Distillery B,C,D,E,G,I,Q
  - To create a publicly accessible riverside open space with significant ecological value as part of campus development;
  - To provide an additional public pedestrian bridge to access the development site at the eastern end of the distillery site from the Lee Maltings site;
  - To provide an additional public route along through the centre of the site along the Mill Stream.

- **Objective 10.6 Views and Prospects**
  To protect and enhance views and prospects of special amenity value or special interest and contribute to the character of the City's landscape from inappropriate development, in particular those listed in the development plan. There will be a presumption against development that would harm, obstruct or compromise the quality or setting of linear views of landmark buildings, panoramic views, rivers prospects, townscape and landscape views and approach road views. To identify and protect views of local significance through the preparation of local area plans, site development briefs and the assessment of development proposals on a case-by-case basis.

6.3.3 Historical Background

In the late seventeenth and early eighteenth centuries, Cork's Corporation were keen to promote the development of the extensive marshlands to the east and west of the medieval city. Large sections of this area were leased to its members and sometimes to non-members such as prominent Quaker families within the city. In order to reclaim areas of marshland an embankment would have first been built around them to stem the flow of tidal water into the marsh. Natural silt deposition further consolidated the areas before drainage channels were constructed and introduced fills, generally consisting of clays, gravels, and rubble, were deposited to raise the ground level further, thus creating 'made ground'. This 'made ground' is present beneath modern levels throughout much of Cork City centre.

The Distillery Fields area was one of the last sections of marshland to be reclaimed in the vicinity of Cork City centre. Documentary and historic cartographic sources indicate that, by the mid-eighteenth century, this area of marshland was in the ownership of Alderman John Reilly, who was the Lord Mayor of Cork in 1756. A bridge was built to provide access to the area from the North Mall by c.1770. The double-arched stone bridge was presumably commissioned by Alderman Reilly himself. The bridge spanned a watercourse which had historically been used as a millrace channel for a mill associated with the Franciscan Abbey (CO074-028002-), which was located in the area to the northeast of the subject site. John Rocque's 1773 map depicts 'Abby Mill' in an area to the west of the bridge, which is c.60m north of the eastern portion of the subject site. The mill channel was fed by a weir which diverted water from the north channel of the Lee to the west of the site. It has been postulated that the site of the weir and the mill channel are probably medieval in date, having a long association with the site of the Franciscan Abbey mill (Rynne, 1999, 61). The North Mall distillery was the only distillery in the city to draw its water-power requirements from the north channel of the River Lee.

Establishment of the distillery in the grounds to the north of the site is generally dated to 1779. It has been traditionally accepted that the Wise family were responsible for the foundation of the distillery, the first large distillery in the city, however, documentary sources provide no evidence of a Wise family connection with the site, or distilling in general, until 1782 (Rynne, 1999, 61). The distillery expanded rapidly and in the year 1833 had an output of 400,000 gallons annually. Little is known about the early physical development of the distillery which became the longest continually operating distillery in the city. It is known, however, that the areas located to the south and west of the mill channel were not fully reclaimed until the 1850's (Crowley et al, 2005, 41). Vestiges of the reclamation process can be seen along the banks of the Lee and the millrace channel where the remnants of stone walls can clearly be seen at low tide. These walls were built as part of the reclamation process with the area behind them being backfilled in order to raise the ground above the level of riverine and tidal floods. The company joined Cork Distilleries Co. in 1867 and the productivity continued to increase. Bernard, writing in the 1880s, gives a description of the site as having multi-storey corn stores, flour warehouses, large kilns and a maltings. The complex also had a large cooperage and smithy where they constructed many of their carts and the company built cottages for the distillery workers. Initially the complex had six chimneys, but these were demolished in the 1870s and replaced by a single new one c. 160 feet in height; the lower section of the chimney is still extant. A fire seriously damaged the distillery in 1920, the mill was destroyed and most of the production buildings was severely damaged and later demolished. The distilling operation was transferred to other sites and the site was adapted for bottling and storage. The millrace, bridge and a number of stores and a cooperage to the south are among the only other structures still extant associated with the former distillery.

The lands to the west of the distillery complex developed as suburban sites in the eighteenth/nineteenth centuries acting as residential quarters. This area is called Sunday's Well, the place name is believed to derive from

Figure 6.22: Etching of the former North Mall Distillery (Source: Bernard 1969)

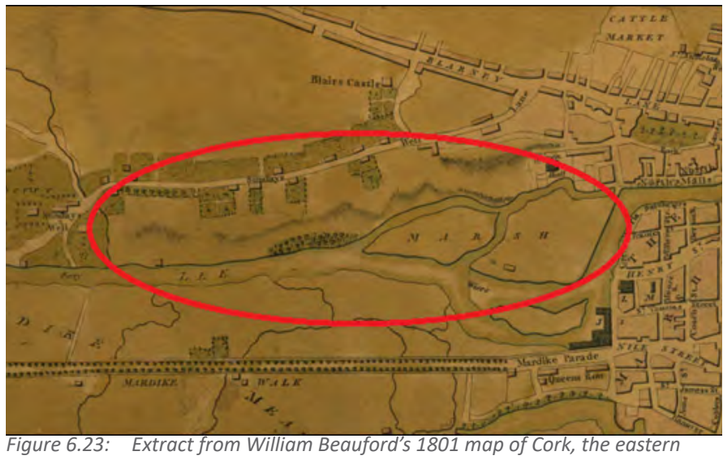

Figure 6.23: Extract from William Beauford's 1801 map of Cork, the eastern portion of the subject site (red oval) (Source: www.corkpastandpresent.ie)

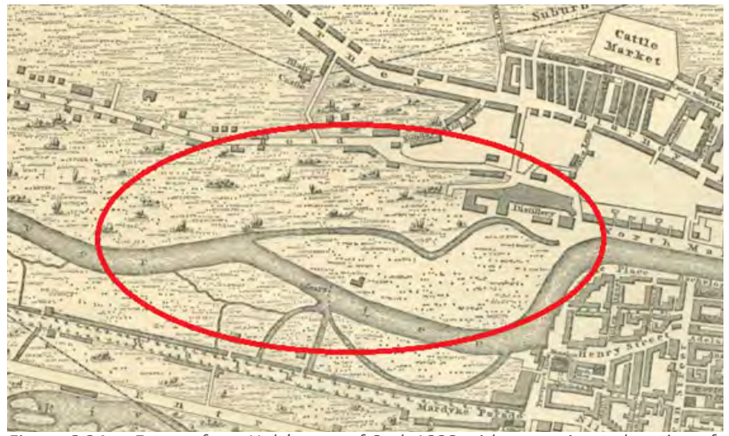

Figure 6.24: Extract from Holt's map of Cork 1832 with approximate location of subject site circled in red (Source: www.corkpastandpresent.ie)

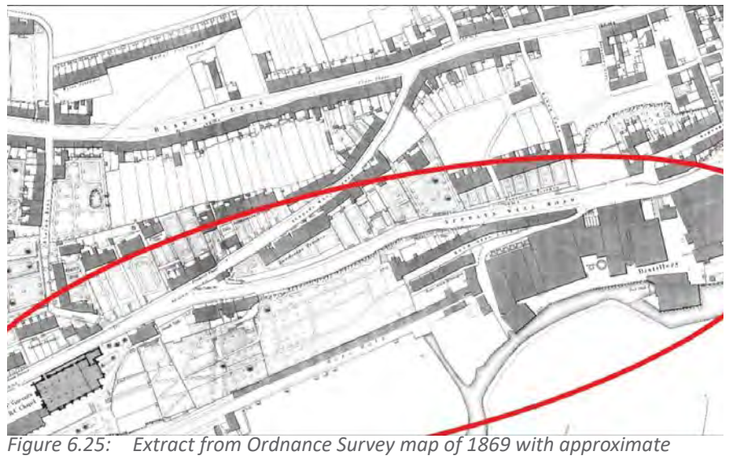

Figure 6.25: Extract from Ordnance Survey map of 1869 with approximate location of subject site circled in red (Source: www.digital.ucd.ie)

an ancient well now marked by Sunday's Well stone slab (Windele 1839). Residential homes developed gradually along Sunday's Well Road with St. Vincent's Roman Catholic Church being erected between 1850-1860 and attributed to architect Sir John Benson. The lands on which it was built were donated by Miss Mary MacSwiney giving way for the construction of the church and its adjoining missionary house, (NIAH). Sunday's Well during the eighteenth and nineteenth centuries was a desirable residential area for affluent citizens of Cork. The suburb saw the planting of a variety of vegetables and fruits, commonly known for its strawberries, paralleled in the place name 'Strawberry Hill' (Windele 1839).

Beauford's 1801 map (see Figure 6.23 where the red oval remains un-reclaimed marshland, two structures associated with the North Fishery are depicted within the western portion of the subject site as well as residential developments fronting Sunday's Well Road) depicts two small structures to the east of a widened watercourse which fed the millrace channel to the north. Later cartographic sources indicate that these buildings were associated with the 'North Fishery' which operated on this section of the Lee during the nineteenth and early twentieth centuries. The widened watercourse is fed by a weir which diverted water from the north channel of the Lee. This weir also diverted water into a channel which supplied the mills, maltings and brewery complex which developed on the present-day site of the Tyndall Institute from the late eighteenth century into the nineteenth century. Remnants of this weir survive to the present day within the north channel of the Lee to the southwest of the subject site. Although the marsh would be reclaimed by the mid-nineteenth century, the area which forms the southern portion of the site would remain predominantly undeveloped into the twentieth century. A mid-twentieth century former bottling facility, which remains extant, is the only significant structure to have been constructed on the southern portion of what was once known as O'Reilly's Marsh. The marsh lands within the western portion of the subject site also remained un-reclaimed into the twentieth century.

On Holt's map of 1832 (see Figure 6.24) the distillery is depicted but the marsh is still undeveloped at this time. There is one small structure associated with the weir to the west of the Distillery. The millraces to the north and south of the river channel are clearly depicted. The residential homes fronting Sundays Wells Road continue to be depicted.

The Ordnance Survey (OS) map of 1869 (see Figure 6.25) shows that some reclamation work had started with tree planning on the riverbank. A structure is located between the subject site and the distillery building in the location of the cooperage, although smaller than the existing building this may represent the initial stages of construction of the first bay of the cooperage.

On the 25-inch OS map c. 1900 (see Figure 6.27) labels the distillery as North Mall Distillery; the cooperage is depicted as the current four-bay structure and is in use as a bond store with a foot bridge leading to it across the millrace. A small structure is shown on this map edition to the south of the cooperage; this latter building is no longer extant and was demolished in advance of the building of the new bottling plant in 1964. St. Vincent's R.C. Church is now depicted (est. 1850-60) in the western portion of the subject site. Sunday's Well Road has developed gradually with further residential homes erected in comparison with Holt's 1832 OS map. This is as a result of the sprawling of residential homes for middle class citizens of Cork.

The bottling and storage plant was constructed by PJ Hegarty and Son to designs by Frank Murphy in 1964, constructed in concrete with glazed coloured bricks and a large concrete canopy covering the loading bay. The building was in use by Cork Distillers Co. until 2007 when the facility was closed.

Figure 6.26: Extract from the Ordnance Survey map of 1892 with approximate location of subject site circled in red (Source: www.digital.ucd.ie)

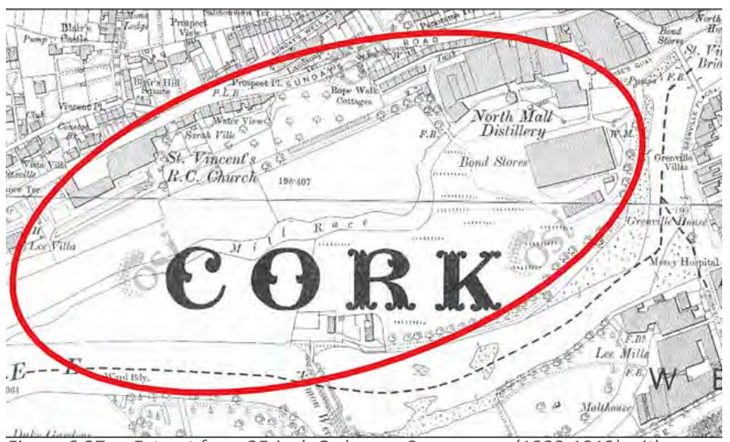

Figure 6.27: Extract from 25-inch Ordnance Survey map (1888-1913) with approximate location of site circled in red (Source: Government of Ireland, HEV)

Figure 6.28: Current photograph of the bottling plant built 1964

Figure 6.29: Late twentieth -century photograph of the bottling plant built 1964 (Source: http://archiseek.com)

Figure 6.30: Aerial view of the subject site in the late twentieth century showing new bottling plant and the cooperage to the right. (Source: http://archiseek.com)

6.3.4 Description of site

The North Mall Campus site encompasses the former grounds of the Irish Distillers Company and are proximate to the former St. Vincent's church and Seminary, which lie to the north west of the site. The site is occupied by a number of buildings as follows:

- Building A - Distillery House (RPS ref. no. PS813)
- Building B - Former Saint Vincent's Seminary (RPS ref. no. PS797)
- Building C - Former cooperage
- Building D - Former Bottling Plant
- Building E - Warehouse
- Building F - Alderman Reilly's Bridge (RPS ref. no. PS814)
- Building G - Remains of distillery chimney (RPS ref. no. PS813)

A number of modern buildings (of no heritage significance) also occupy the site:

- Building I - Cork Enterprise Centre
- Building J - Butler Building
- Building K - Glasshouses

These latter buildings are of modern construction and of no architectural heritage significance. Much of the remaining portions of the site is occupied by surface carparks and areas of grass and overgrowth, while the eastern and southern margin of the site is flanked by a recreational walkway and stands of mature deciduous trees.

Figure 6.31: Aerial view of subject site annotated with location of Buildings A-K (Source: Government of Ireland, Historic Environment Viewer)

Figure 6.32: Eastern elevation of Distillery House

Building A – Distillery House

Distillery House is a five-bay, three storey building occupying a corner site and currently in use as offices and conference centre with the remnants of distillery chimneys to the rear. The building is listed in Cork City Development Plan 2015-2021 as a protected structure, Distillery House and Chimney (RPS ref. no. 813). The building is also listed by the NIAH (NIAH Ref. 20500784) who described it as follows:

Detached five-bay three-storey former house, built c. 1800, now in use as university building. Hipped slate roof with rendered parapet having moulded cornice. Rendered walls. Segmental-arched window openings with timber sliding sash windows, and having tripartite timber sliding sash windows to south elevation. Round-headed door opening with timber panelled door and sidelights, flanked by engaged Ionic pilasters, having fanlight and moulded archivolt above. Wrought-iron arch with lamp bracket leading to front door. Cast-iron railings to site. Retaining interior features.

Appraisal This former house occupies a dominant position in the city and closes the vista at the west end of the North Mall. Built at the beginning of the eighteenth century, this house is representative of late Georgian domestic architecture in Ireland. The house was built by the Wise family, who established the North Mall Distillery. The building retains interesting features and materials, such as the timber sliding sash windows, wrought-iron lamp bracket arch, and interior fittings. The North Mall Distillery which was founded in 1779, was later renamed Cork Distilleries and remains partly in use as a distillery related complex.

Figure 6.33: Western elevation of Saint Vincent's Seminary

Building B – Former Saint Vincent's Church and Seminary

The former seminary occupies a prominent site overlooking the city adjacent to Saint Vincent's Church and now houses the UCC School of Music. The building is listed in Cork City Development Plan 2015-2021 as a protected structure, Saint Vincent's R.C. Church and Seminary (RPS ref. no. 797). The seminary, church and adjacent chapel are also listed by the NIAH who description is as follows:

Church (NIAH ref. no. 20866078)

Attached gable-fronted Roman Catholic church, began 1851, opened 1856, though incomplete. Comprising west facing gabled entrance front, seven-bay side aisles, clerestory, gabled entrance porch to north elevation and sacristy to east elevation. Pitched slate roof with cut limestone cross finials to gables, corner pinnacles to west elevation, limestone eaves course and cast-iron rainwater goods. Squared-and-snecked red sandstone walls with buttresses, limestone quoins and string courses. Paired pointed arch window openings to west elevation having bipartite ogee-headed lights with quatrefoil overlights and rose window above under arch hood moulding. Pointed arch window openings to west elevation side aisle with bipartite pointed arch window having circular overlight. Triple and paired pointed arch openings to side elevations with limestone block-and-start surrounds. Five light pointed arch window to east elevation with limestone surrounds and having pointed arch opening above with central and end pointed arch statue niches having carved statues flanking pointed arch windows. Leaded lattice and stained glass windows throughout. Pointed arch door opening to gabled slightly projecting limestone and sandstone porch having limestone coping and engaged marble colonnettes flanking opening supporting moulded limestone archivolts to double-leaf timber battened doors with cast-iron hinges. Plaque and blank circular openings to gable. Double-leaf half-glazed timber inner doors with sidelights and overlights. Pointed arch door opening to north porch with cut limestone hood-moulding and engaged limestone colonnettes supporting moulded archivolts to double-leaf timber battened doors with cast-iron hinges. Statue to porch gable apex in ogee-headed statue niche with hood moulding. Pointed arch arcading with moulded render arches on alternating octagon and circular bases separating nave and side aisles to interior. Ornate carved marble reredos to main and side altars with figure sculpture. Carved marble pulpit to south. Ribbed vaulted render ceiling. Timber gallery to rear (west) with piped organ. Set back from street.

Appraisal Begun by self-taught architect and engineer Sir John Benson in 1851, with the foundation stone laid by Bishop William Delaney, the building of this imposing church on its difficult site encountered some delays when it was partially blown down in 1853 during a severe storm. It was finally opened in 1856, though it remained incomplete. It was eventually completed by George Goldie and S.F. Hynes. The site, which was donated by local resident, Miss Mary MacSwiney, allows the church and its adjoining missionary house to make a strong visual impact in the urban landscape, as it is clearly visible from many parts of the city to the south below. It retains much of its original character and significant fabric to both the exterior and interior. Fine craftsmanship is seen throughout, particularly in the reredos and in the stone carving to the pulpit and entrance porches and the stained glass windows by Mayer of Munich.

Chapel (NIAH ref. no. 20862116)

Attached chapel, built c.1855, with projecting chancel and sacristy to west. Pitched artificial slate roof with crested ridge tiles, timber rooflight with pitched roof and crested detailing to trefoil-shaped side panels, limestone verge coping with pedimented kneelers, cross finial to eastern gable and cast-iron rainwater goods. Sandstone chimneystack to north elevation of sacristy with projecting back, limestone dressings and clay pot. Squared sandstone walls with limestone quoins, platbands and panels with trefoil recesses. Pointed arch window opening to east with limestone hood moulding, block-and-start surround and tracery window with stained glass. Pointed arch window opening to sacristy with limestone surround and leaded light with stained glass. Located to the east of the church.

Appraisal Built as part of St Vincent's Roman Catholic Church, which opened in 1890, this chapel forms part of a group which is highly visible from the south side of the city. It follows

a construction style seen throughout Cork, of sandstone walls embellished with limestone dressings. The stonework demonstrates skilled craftsmanship, particularly in elegant details such as the carved kneelers and panels to the walls. The stained glass window adds artistic interest.

Seminary (NIAH Ref. 20866077)

Attached L-plan three-storey over basement convent, commenced 1867 and dated 1872, now in use as university. Comprising nine-bay south block with eight-bay west block and four-stage corner turret to south-west corner. Pitched slate roof with ashlar limestone chimneystacks on stepped red sandstone bases, limestone coping to gables with wrought-iron cross finials and cast-iron rainwater goods on cut limestone eaves course. Copper spire to turret with weather vane to apex. Snecked red sandstone walls with cut limestone platbands, continuous sill course to second floor, plinth courses and buttresses to west and south facades. Paired pointed arch with multifoil, paired pointed arch, square-headed and shouldered window openings with limestone block-and-start surrounds and one-over-one pane timber sliding sash windows throughout. Leaded stained glass to ground floor north elevation and basement south elevation. Circular traceried window to north gable of western block. Pointed arch, square-headed and paired pointed arch windows with multifoil and marble colonnettes to turret. Full-height pointed arch stairwell window to south elevation having paired shouldered and ogee-headed windows with multifoil to apex and leaded stained glass windows. Pointed arch door opening to north with ashlar limestone surround, engaged colonnettes, plaques, statue and hood moulding to timber battened double-leaf door with cast-iron hinges. Pointed arch door openings to east and west elevations with cut limestone surrounds, hood mouldings, block-and-start limestone surrounds with multifoil and timber battened doors with cast-iron hinges. Set back from road.

Appraisal Built as part of group with the adjoining church, this former missionary house was designed by architect George Goldie , who also along with S.F. Hynes, was involved in the completion of the earlier church. The foundation stone was laid in 1867, and Barry McMullen was the selected builder. Together with the church, the pair of buildings form a square enclosed on three sides, which makes a handsome addition to the streetscape. The colour and textural interested created by the use of the local Cork red sandstone and grey limestone contrasts with the predominantly rendered buildings in the area. It retains many notable features and materials which add to its character.

Figure 6.34: Western elevation of the cooperage

Building C – Former cooperage

The former cooperage, although not specified as a protected structure, is part of the distillery complex. Built c. 1900, the building is recorded originally as a bond store. The building is currently in use as laboratories including the Aquaculture & Fisheries Development Centre. The building is listed by the NIAH (NIAH Ref. 20500776) who described it as follows:

Detached multiple-pile multiple-bay single-storey former cooperage, built c. 1880, now in use as warehouse. Pitched slate roof with cast-iron vents and rooflights. Brown brick walls with buttresses having limestone copings, red brick dressings to openings, red brick string courses and some limestone sills. Various fittings to openings, included louvred panels and metal casement windows, some with cast-iron grills.

Appraisal Built as part of a group with the related distillery structures to the west, this cooperage is an interesting contributor to the architectural heritage of the city. The North Mall Distillery which was founded in 1779, was later renamed Cork Distilleries and remains partly in use as a distillery related complex. The site retains buildings from the late eighteenth century to present day, and is notable for the diversity of architectural styles and materials utilised in their construction.

The building has been adapted to use as laboratories and offices for the university. Though much-altered internally, the cast-iron stanchions that provide support to the roof structure generally survive intact (frequently behind modern partitions).

Figure 6.35: Southern elevation of the bottling plant

Building D – Former Bottling Plant

The former bottling plant is not listed as a protected structure nor is it recorded by the NIAH. It was designed by Frank Murphy and built by P. J. Hegarty in 1964 for Irish Distillers, North Mall. The building is a detached multi-bay, double-height structure with a seven-bay, double-height central block with a saw tooth roof, vertical monitors and corrugated asbestos sheeting. There is an eight-bay, double height range to the east also with a saw tooth roof and a flat-roofed ten-bay, pitched roof range to the west; each block has a loading bay to the southern elevation. A single-storey, flat-roofed block to the front elevation of the central block and much of the eastern block houses the reception and offices. The building is constructed from cast concrete and structural steel; the front elevation has a continuous strip of aluminium glazing with casement windows and a centrally located glazed double door entrance to the reception. A flight of concrete steps leads to a raised pathway supported on cast concrete inverted triangular piers providing access to the reception and an external door to the offices to the front. The front elevation is faced with and yellow glazed bricks as is the chimney; the other walls on the front elevations present as rusticated blockwork. The loading bay to the central block has a double height cast concrete zig-zag profile canopy supported by a steel framework and two cast concrete columns to the front with corrugated sheeting and glazing to the upper section. The loading bay has a raised loading platform and a double shutter door manufactured by the Bolton Gate Company established in Bolton, England in 1924. Two other shutter doors are located in the western block. Another loading bay with a raised platform is located to the eastern end and provides access to the boiler room and the western block. Four shutter doors are flanked by double height glazed panels with glass blocks. The roof is of cast concrete beams supported by five concrete columns.

Interior

The central loading bay leads to the internal forklift loading and unloading

Figure 6.36: Northern elevation of warehouse on Wise's Hill

area; the zigzag profile canopy roof extends into the building and the walls are concrete. A passageway leads off the area to the east and west accessing the offices to the front. A large opening leads to the main open-plan floor area with concrete floors and steel trusses at either end; steel beams span the depth of the building supporting the bolted steel framework of the roof. The roof is clad in asbestos sheeting with some sections having suspended ceiling. The eastern and western multi-bay blocks are accessed from the central block.

Building E – Warehouse

The former warehouse is adjacent to the western elevation of Distillery House and was part of the distillery complex. The wall contains an architectural fragment of a double ogee-headed window which is a recorded monument. It is not listed as a protected structure but is recorded by the NIAH as follows:

> *Corner-sited multiple-bay two- and three-storey warehouse, built c. 1860. Hipped profiled metal sheet roofs. Roughly dressed sandstone walls having some limestone and red brick dressings. Segmental-arched and square-headed openings with timber matchboard doors.*
>
> *Appraisal Built as part of a group with the related distillery structures to the west, this warehouse is an interesting contributor to the architectural heritage of the city. The North Mall Distillery which was founded in 1779, was later renamed Cork Distilleries and remains partly in use as a distillery related complex. The site retains buildings from the late eighteenth century to present day, and is notable for the diversity of architectural styles and materials utilised in the construction of these building.*

Figure 6.37: Alderman Reilly's Bridge (RPS ref. no. 814)

Building F – Alderman Reilly's Bridge/ canals

The bridge was built c. 1770 to provide access to the distillery from the North Mall. The distillery drew water from the north channel of the River Lee by diverting it by a weir and a man-made canal to the distillery. The canal continues to run through the site. The bridge is listed in Cork City Development Plan 2015-2021 as a protected structure, Alderman Reilly's Bridge (RPS ref. no. 814). The bridge is also listed by the NIAH (NIAH Ref. 20500786) who described it as follows:

> *Double-arch stone road bridge over river, built c. 1770, with brick U-shaped cutwater. Ashlar limestone voussoirs with rubble stone walls and parapet.*
>
> *Appraisal This bridge was built in the late eighteenth century to connect Reilly's Marsh with the North Mall. The bridge is an interesting reminder of the form and materials which were utilised in the late eighteenth and early nineteenth century in the construction of these functional structures. The bridge later formed part of a group with the distillery related structures to the site. The North Mall Distillery which was founded in 1779, was later renamed Cork Distilleries and remains partly in use as a distillery related complex.*

Building G – Remains of distillery chimneys

The remains of the distillery chimneys can be seen to the rear of Distillery House and along the northern boundary wall to Sunday's Well Road. The chimney retains a plaque which reads,

> **North Mall Distillery. Founded 1772.**
>
> **This chimney was built by The Cork Distilleries Co. Ltd.**
>
> **1877-1878.**

Figure 6.38: Northern elevation of brick chimney on Wise's Hill

The chimney is listed in Cork City Development Plan 2015-2021 as a protected structure, Distillery House and Chimney (RPS ref. no. 813). The building is also listed by the NIAH (NIAH Ref. 20500784) who described it as follows:

> *Brick chimney, built 1877, as part of group with the related industrial structures to the south, east and west. Now disused and reduced in height. Limestone date stone to north elevation.*
>
> *Appraisal Built as part of a group with the related distillery structures to the south, east and west, this former chimney is an interesting contributor to the architectural heritage of the city. The North Mall Distillery which was founded in 1779, was later renamed Cork Distilleries and remains partly in use as a distillery related complex. The site retains buildings from the late eighteenth century to present day, and is notable for the*

diversity of architectural styles and materials utilised in the construction of these building. Though now reduced in size, this chimney is notable addition to the streetscape and is a physical reminder of nineteenth-century industrial power.

6.3.5 Conclusions and recommendations

The subject site at North Mall is of cultural significance and contains a number of buildings and structures that embody and reflect the former industrial use that the site was put to the use from the late eighteenth century.

In approaching the possible development of these lands, it is critically important to be aware of the legal protections afforded to the former complex and in particular the following buildings: There are three protected structures within the subject site.

- Distillery House and Chimney (RPS ref. no. PS813)
- Alderman Reilly's Bridge (RPS ref. no. PS814)
- St. Vincent's Roman Catholic Church and Seminary (RPS ref. no. PS797)

In addition, there are a number of other buildings of acknowledged heritage significance that require careful consideration in any proposed redevelopment of the site. These include.

- The former bottling plant (designed by Frank Murphy)
- Cooperage, Irish Distillers, North Mall
- Warehouse, Irish Distillers, North Mall
- Former Monastery (in use as UCC building), Sunday's Well Road
- Former St. Vincent's Roman Catholic Church, Sundays Well Road

An objective of any development scheme for this site should seek to conserve, integrate, and acknowledge the heritage significance of these extant elements. It is deemed that there is considerable scope to integrate new development within the site.

In tandem with the proposed development of the lands, a programme of site interpretation would be highly beneficial. An important by-product of any reuse of the site would be interpreting and signalling of the heritage aspects of the site to occasional visitors and frequent users of the facilities.

6.4 Urban Design Context

The surrounding environs.

The lands adjacent to the North Mall site accommodate several buildings of scale, see Figure 6.1:

- The Lee Maltings – this building houses the existing Tyndall institute and is built directly on the south bank of the River Lee. It is a 7-storey building at a height of approximately 27m, with a strong building line facing both the river and Dyke Parade.
- Presentation Brothers School – this is a large building of predominately 3 storeys. The plot ratio of the overall site is lower than surrounding areas due to on-site parking and playing fields associated with the school.
- Mercy University Hospital – MUH is a collection of buildings, ranging in height up to 7 storeys (approximately 27m) connected by an overpass of Henry Street. The hospital has a strong building line with surrounding streets and a high plot ratio, given scale of the buildings, and the limited provision of parking and open space associated with the site.
- North Mall & Sunday's Well Road – the building form by the entrance to the North Mall Campus site, on the North Mall & Sunday's Well Road, is dominated by 3 storey Georgian terraced buildings. At the entrance to the site, Distillery House provides a strong and imposing gateway. Sunday's Well Road then rises steeply, with a cliff escarpment providing a backdrop to the North Mall Campus site. This steep gradient rise along Sunday's Well Road gives the buildings in Sunday's Well a strong presence overlooking the City, the site, and the River Lee.

Figure 6.39: Mercy University Hospital

Figure 6.40: St. Vincent's Bridge, Distillery House and Entrance to the Site

Figure 6.41: Lee Maltings and Presentation Brothers School

6.5 Visual Sensitivity.

A number of views pass through the existing site, most notably for the landscape design being views LT31 - 33 which focus on the river and woodland on the river bank, and view SFC3 towards St. Finbarre's Cathedral.

Due to the site currently having a large amount of mature woodland it represents an important part of the Cork City landscape especially when compared to its more urban surroundings.

The following relevant definitions are in place for protected views:

- Cork City benefits from the prominent ridges which provide a series of striking viewing points of the city. This important resource helps to define the character and identity of the city. Given the development pressures associated with the planned growth of the City, the Cork City Council is faced with the challenge of managing development and protecting the city's valued landscape and views of same.
- Cork City Council has identified a number of existing views and prospects of special amenity value to the city. These special views are of strategic significance to Cork City and the City Council will seek to protect and enhance them, where appropriate. In order to fully appreciate and legislate for the unique size, scale and distinctive topography of Cork City, five different view types have been identified in the Cork City Development Plan.

The proposed development site is located within or close to the following types of protected views and prospects:

Linear Views of Landmark Buildings

These occur where a particular landmark/ building is the main point of focus. Views tend to be framed within relatively narrow viewing corridors such as laneways and streets. The views of landmark buildings are considered to be of particular importance and special amenity value. The majority of these views are from City Centre or inner city viewing locations.

Relevant views include:

- View of:
  - St. Finbarre's Cathedral
- Viewing Location:
  - Gurannabraher Road – SFC5

Panoramic Views

Panoramas are wide views of the city and suburbs (often from elevated sites) featuring a varying number of city's landmarks. These panoramic views from specified locations or 'Panoramic Assessment points' are considered to be of particular importance and are important reference points from which large development proposals can be assessed in terms of visual impact.

Relevant views include:

- Panoramic Viewpoint:
  - Sunday's Well Road (from St. Albert's, Blair's Hill)
- View To and Ref Codes:
  - St Finbarre's Cathedral – SW1
  - Callanan's Tower – SW2
  - Elizabeth Fort – SW3
  - St Nicholas Church – SW4
  - Holy Trinity Church – SW5
  - Domes of St Francis Church – SW6

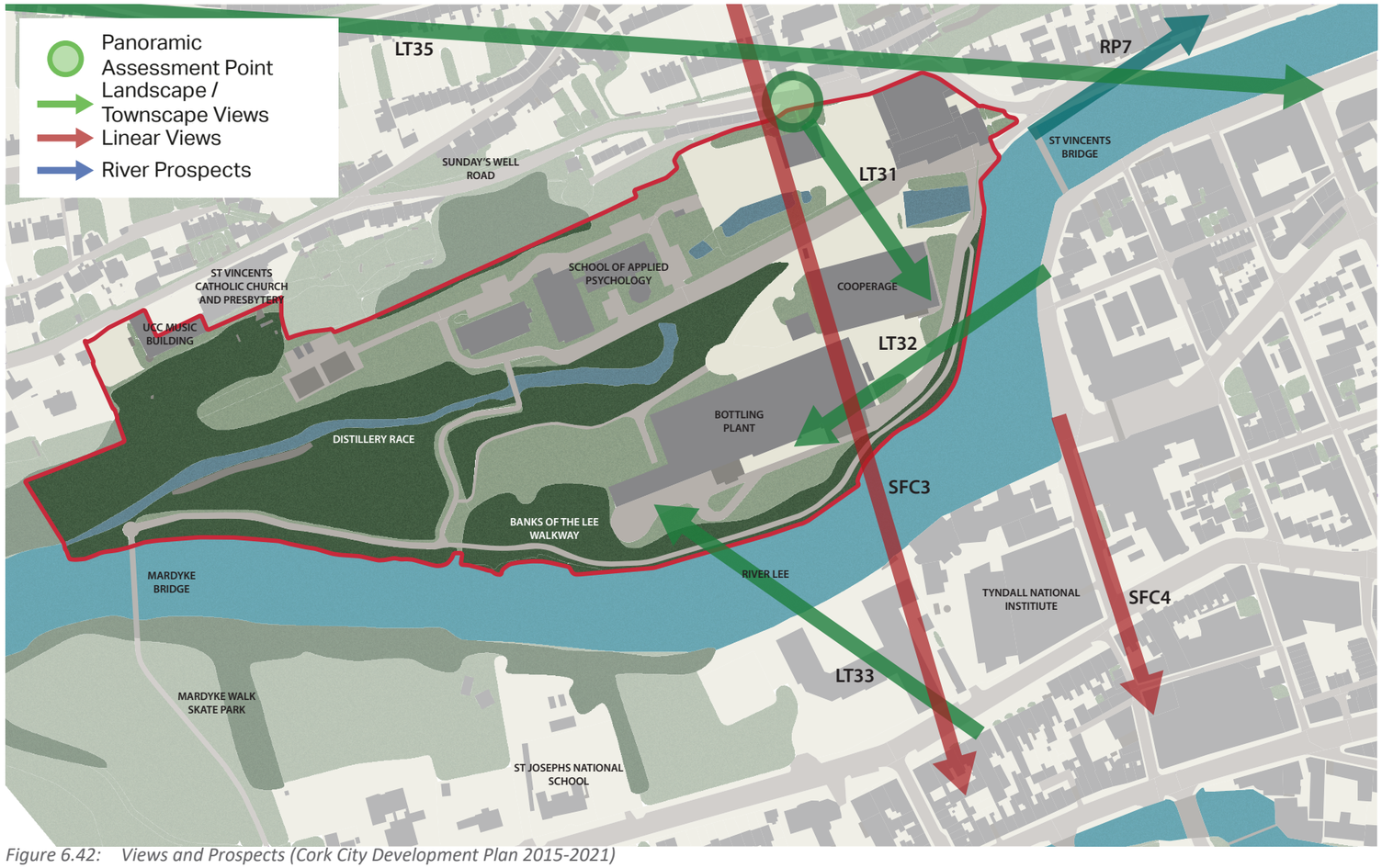

Figure 6.42: Views and Prospects (Cork City Development Plan 2015-2021)

River Prospects

River prospects are views of landmark buildings from bridges but also riverbanks and quaysides.

Relevant views include:

- Viewing Location:
  - St. Vincent's Bridge Downstream
- View To and Ref Codes:
  - St. Anne's Church – RP7

Townscape and Landscape Features

These are views of areas that have distinctive/ outstanding townscape or landscape features within the city including views of the city ridges.

Relevant views include:

- Viewing Location:
  - Distillery Grounds
  - View To and Ref Codes:
  - Sunday's Well Road – LT31
  - Grenville Place – LT32
  - Elizabeth Fort – LT33
- Viewing Location:
  - Bishop's Palace & Grounds
  - View To and Ref Codes:
  - Harbour View Road – LT35

The Cork City Development Plan provides that there will be a presumption against any development that threatens to obstruct strategic views or compromise the quality or setting of these views. In addition to the strategic views and prospects of special amenity value, local views of significance are also very important to the character and legibility of neighbourhoods.

Cork City Development Plan contains the following objective in relation to view and prospects:

Objective 10.6 Views and Prospects

To protect and enhance views and prospects of special amenity value or special interest and contribute to the character of the City's landscape from inappropriate development, in particular those listed in the development plan. There will be a presumption against development that would harm, obstruct or compromise the quality or setting of linear views of landmark buildings, panoramic views, rivers prospects, townscape and landscape views and approach road views. To identify and protect views of local significance through the preparation of local area plans, site development briefs and the assessment of development proposals on a case-by-case basis.

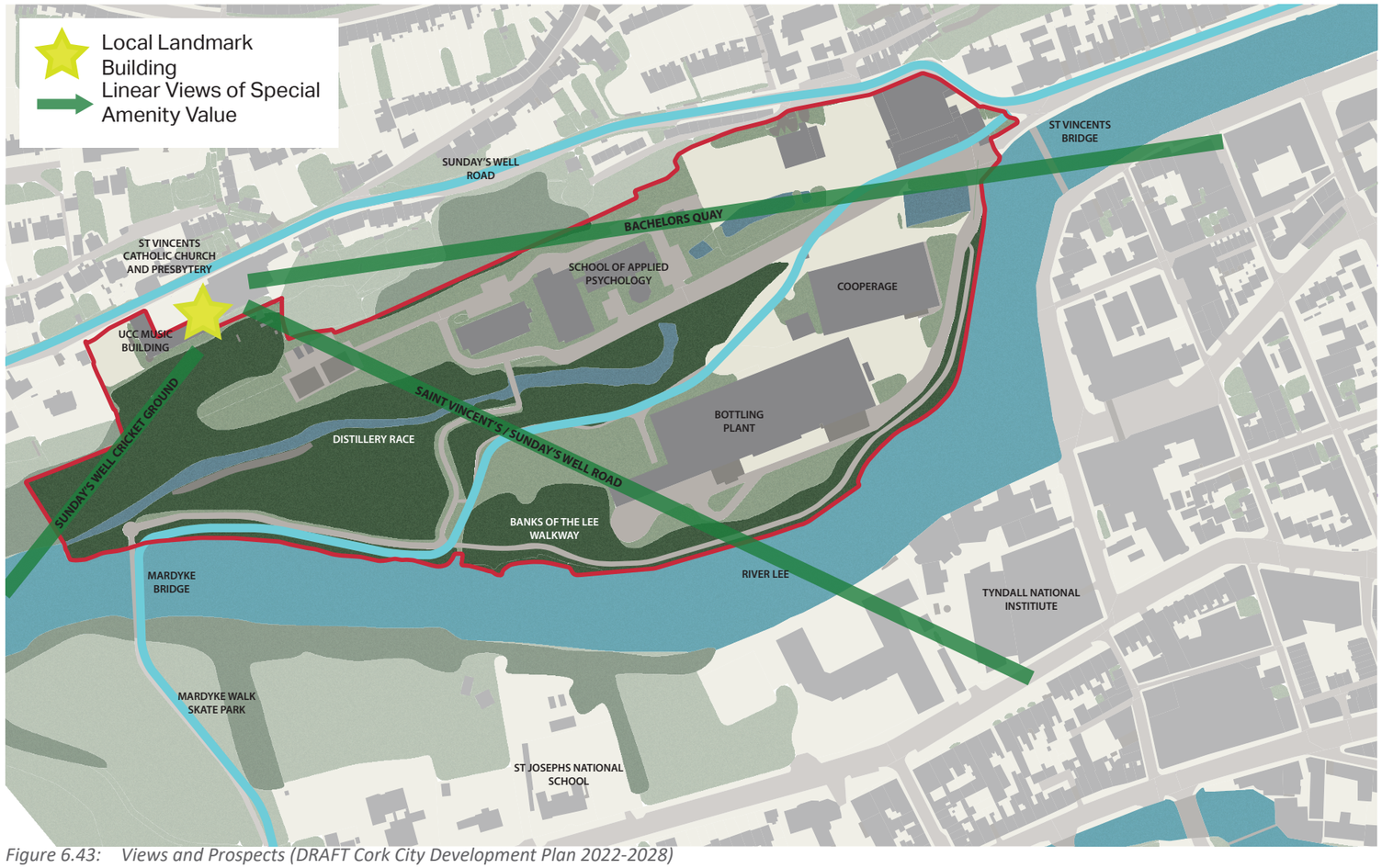

Figure 6.43: Views and Prospects (DRAFT Cork City Development Plan 2022-2028)

6.6 Landscaping Context

The southern boundary of the site is characterised by mature riverside tree planting, with an existing public walking route along the River Lee corridor. The site is predominantly located within the former grounds of the Irish Distillers Company.

The site currently has a large amount of existing vegetation especially mature woodland along the bank of the river Lee and along the corridor of the Mill Race.

The character created through this relationship of vegetation and river lends itself to the desire for pedestrians and cyclists to use the site as a through-way, and with the users of the site expected to increase with the construction of future development, these connections through the site should be enhanced through both added connectivity and retained or increased vegetation.

As identified above there are areas of high value broadleaved woodland which should be retained within the masterplan. In addition there are a number of high value stand alone trees within the recolonising bare ground to the west. These should also be retained where possible.

The entirety of the site currently exists as either a landscape preservation area or as an area of high landscape value, signifying the importance that this space and its mature woodland and amenity value has within Cork City.

Existing cycle and pedestrian routes currently exist through the site, which should be maintained and enhanced through appropriate landscape design.

This is especially true at the river bank where the proximity between the development creates a high potential for valuable landscape intervention.

Areas of High Landscape Value

Part of the site is designated as an Area of High Landscape Value (AHLV). The objective for AHLV designations is:

> *To conserve and enhance the character and visual amenity of Areas of High Landscape Value (AHLV) through the appropriate management of development, in order to retain the existing characteristics of the landscape, and its primary landscape assets. Development will be considered only where it safeguards to the value and sensitivity of the particular landscape. There will be a presumption against development where it causes significant harm or injury to the intrinsic character of the Area of High Landscape Value and its primary landscape assets, the visual amenity of the landscape; protected views; breaks the existing ridge silhouette; the character and setting of buildings, structures and landmarks; and the ecological and habitat value of the landscape.*

Figure 6.44: Alderman Reilly Bridge

Figure 6.45: Site Vegetation

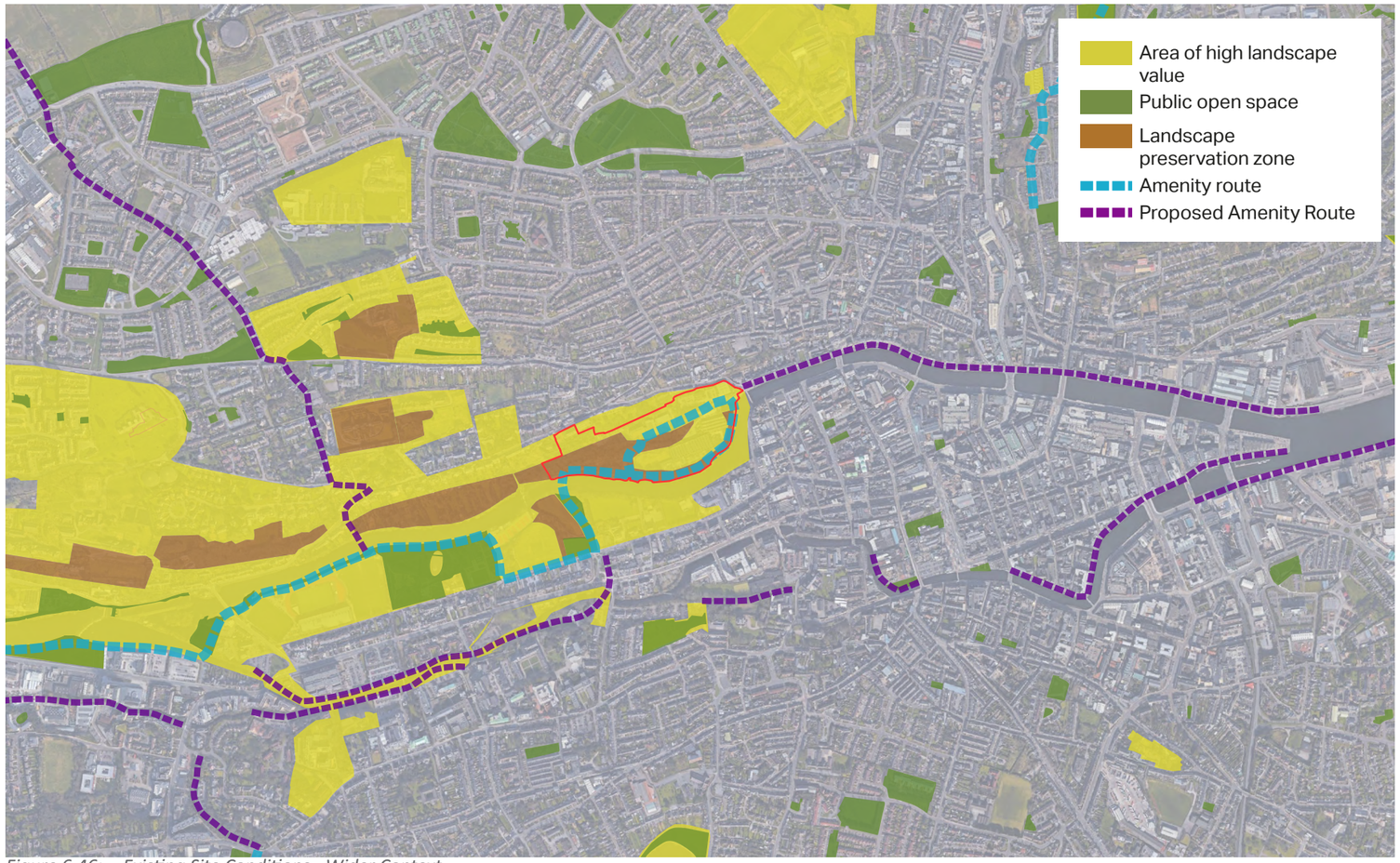

Figure 6.46: Existing Site Conditions - Wider Context

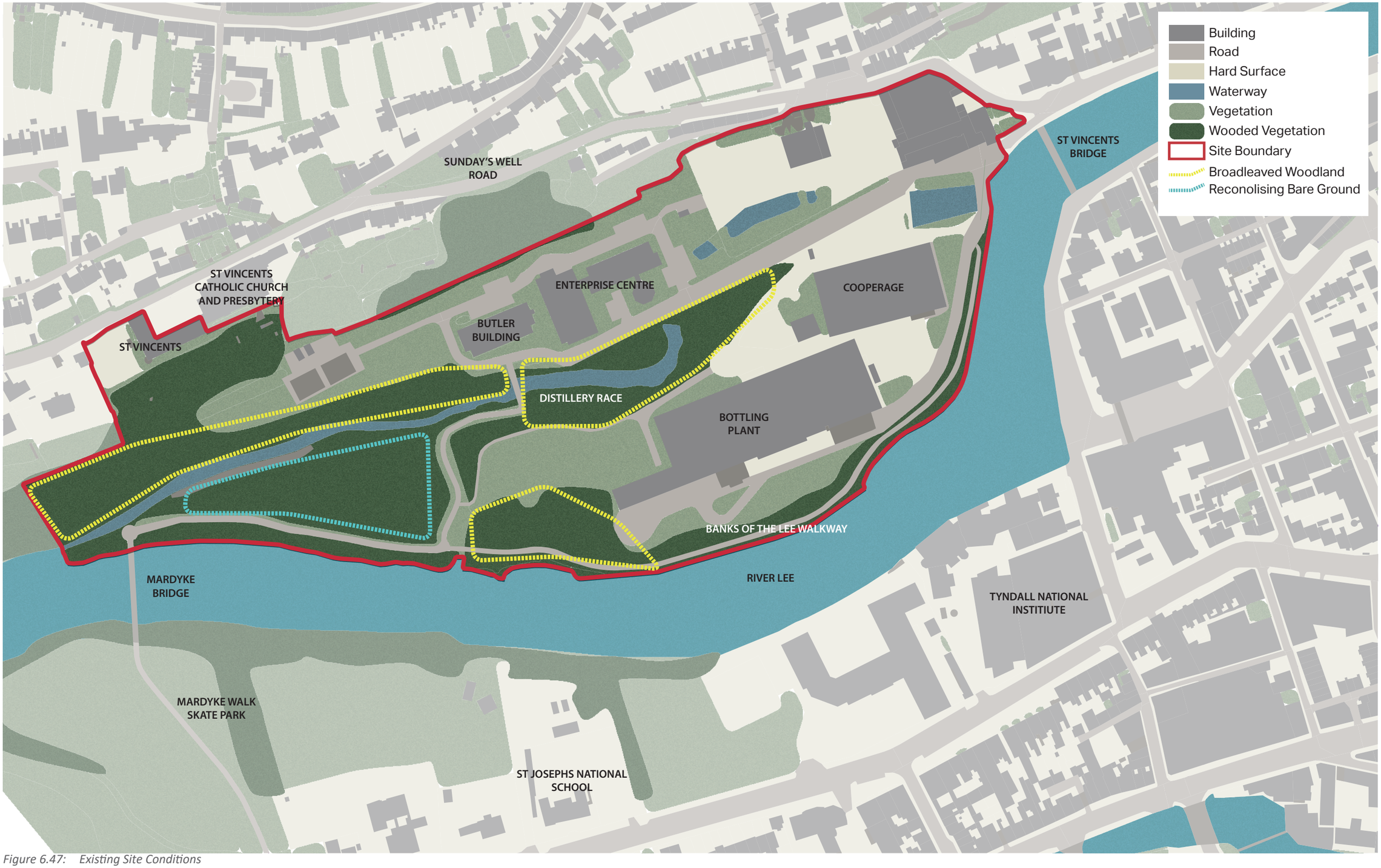

Figure 6.47: Existing Site Conditions

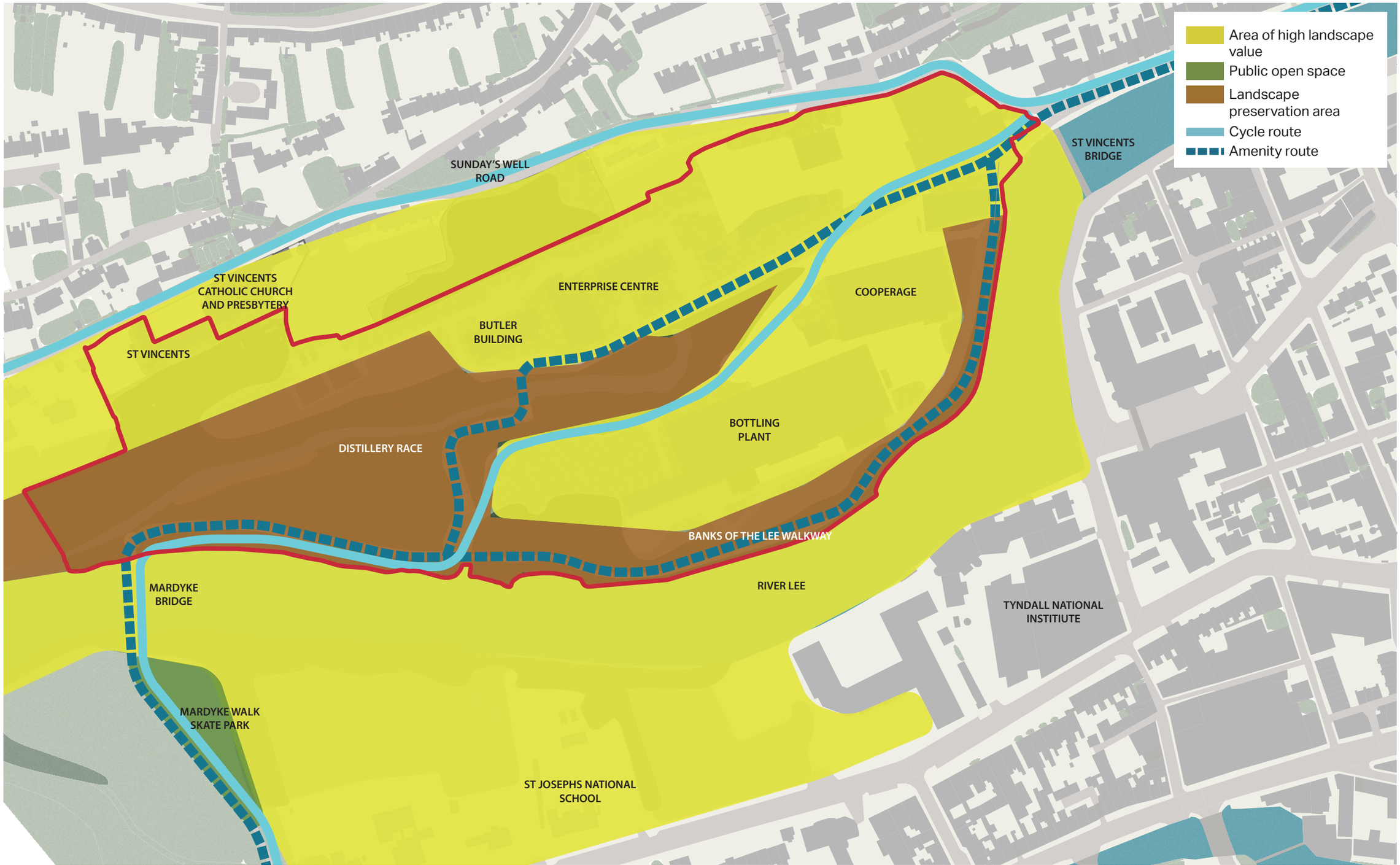

Figure 6.48: Existing Site Conditions - Areas of High Landscape Value

6.7 Traffic and Transport Context

6.7.1 Site Location

The masterplan proposal consists of a mix of education, research and health facilities located within a land bank adjacent to the River Lee in Cork City Centre. The site is bounded by Sunday's Well Road to the north, residential units on North Mall to the north-east, the River Lee to the south and east and residential units to the west.

Figure 6.49 shows the site location on a city-wide context, while a map showing the location of the proposed development in the context of the local road network is presented in Figure 6.50.

6.7.2 Local Road Network

A brief description of the local road network is provided below. The layout of the local road network is presented in Figure 6.50.

R846 (Sunday's Well Road): Sunday's Well Road is a single-lane two-way road. It runs for about 1.6km parallel to the northern boundary of the development and continues to the junction with Thomas Davis Bridge to the west. The road has a narrow carriageway, ranging from 5.4m in some sections to 6.9m elsewhere. Along the section to the east of Sunday's Well Avenue, there is only one footpath provided, located on the northern side of the road. To the west of this junction, footways are present on both sides of the road.

R846 (North Mall): North Mall is a single-lane two-way road that runs parallel to the River Lee connecting Sunday's Well Road with the Griffith (North Gate) Bridge/Shandon Street junction. The carriageway is approximately 6.7m wide and on-street parking is permitted on the northern side of the road. There are footpaths present on both sides of the carriageway.

R847 (Grenville Place/Bachelor's Quay): Grenville Place/Bachelors Quay runs from its junction with Henry Street/Prospect Row until the junction with Griffith (North Gate) Bridge/Kyrl's Quay. The section between Grattan St and Griffith Bridge is two-way and traffic approaching North Mall from the south-west will travel one-way northbound/eastbound between Prospect Row and Grattan Street. A footpath is present on the eastern/southern side of the road, with an at-grade shared footway and cycle track present on the western/northern side which is separated from the carriageway by flexible bollards.

Grattan Street: Grattan Street runs between its junction with Bachelor's Quay and its junction with Fenn's Quay/Sheares Street. The section between Peter's Street and Bachelor's Quay is two-way, and traffic departing North Mall heading south/south-west will travel one-way southbound on Grattan Street between Peter's Street and Fenn's Quay/Sheares Street. A footpath is present on both sides of Grattan Street.

Wise's Quay/Upper Winters Hill (Access/Egress Point): This existing site access point will provide access and egress to and from the North Mall masterplan lands, acting as a direct connection to the entire site with multiple internal streets feeding into it from the different buildings.

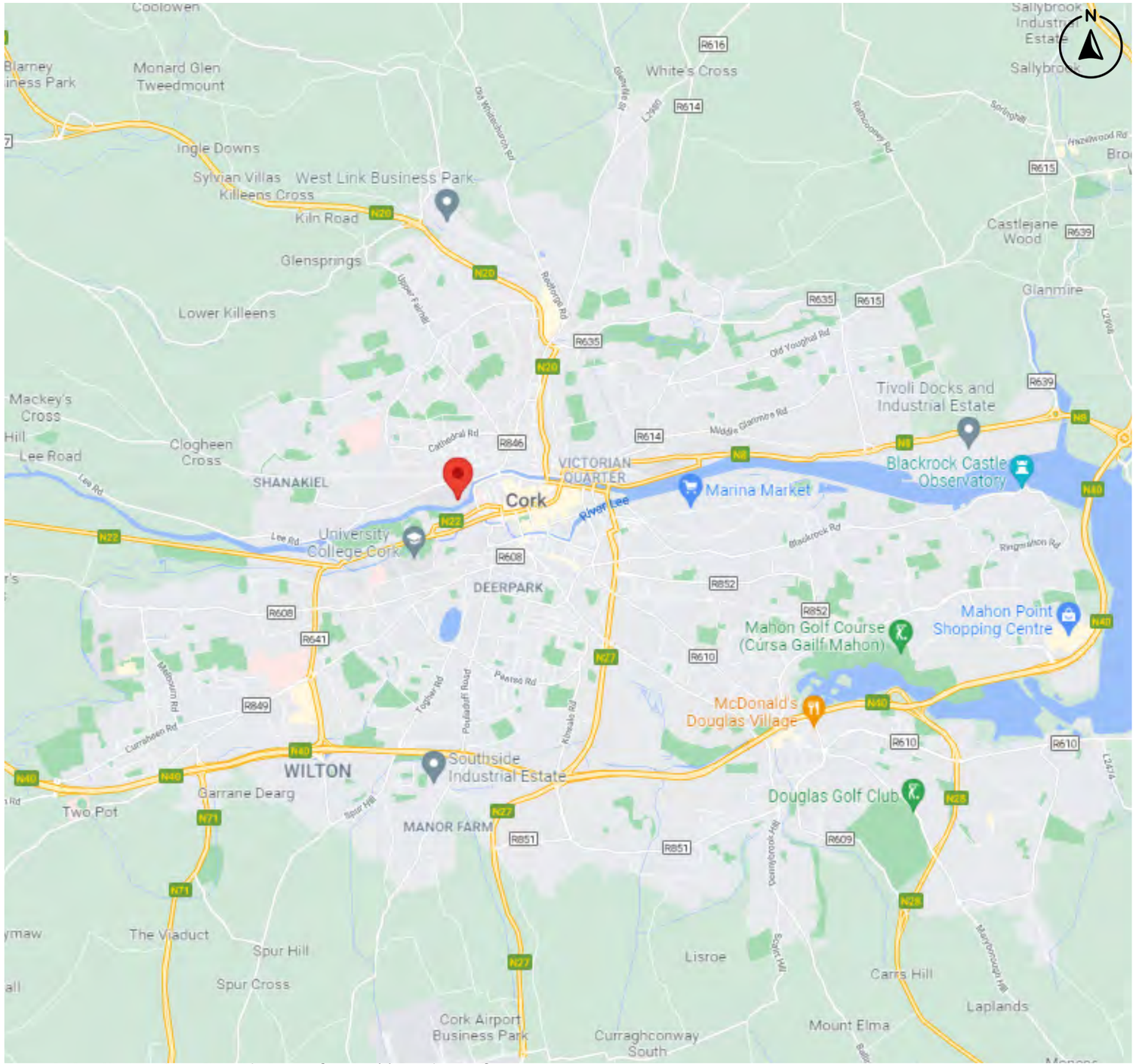

Figure 6.49: Site Location – City-wide Context [source: (c) Google Maps]

6.7.3 Pedestrians and Cyclists

Since the implementation of the City Centre Movement Strategy (CCMS) proposals, the pedestrian and cycling environment in the area has improved significantly, allowing greater access for pedestrian and cyclists around the city centre and the development.

Footpaths are provided on both sides of the majority of streets in the vicinity of the proposed development. There is one pedestrian bridge (St. Vincent's Bridge) connecting the site entrance directly to Cork City Centre and another connecting UCC to the masterplan lands at the western end.

Cyclist-priority infrastructure is also provided on many of the surrounding streets, including a facility on Grenville Place. The masterplan also proposes a new pedestrian bridge that will provide direct access from the masterplan lands to the south of the river and the City Centre.

Figure 6.51 shows the proposed cycling network for the surroundings of the masterplan lands as part of the Cork Cycle Network Plan (2017). A primary Greenway cycling route has been implemented in the area (CCC-GW2), travelling from UCC via the pedestrian bridge over the northern channel of the River Lee into the masterplan lands and ultimately reaching North Mall at Wise's Quay. A primary cycle route is proposed on North Mall (CCC-U7) and a secondary route is proposed on Sunday's Well Road (CCC-U43), both of which connect the development with the city centre.

6.7.3.1 Walking Accessibility

The masterplan lands are well served by existing pedestrian facilities. Figure 6.53 shows walking catchments to and from the proposed development. It can be seen in the accessibility map that much of Cork City Centre is within a 20-minute walk from the masterplan lands.

6.7.3.2 Cycling Accessibility

There is some provision of dedicated cycle infrastructure in the vicinity of the site at present.

Figure 6.54 shows a cycling catchment to and from the masterplan lands. It can be seen in the accessibility map that much of Cork City is within a 10-minute cycle to the masterplan lands and many suburbs and residential areas such as Bishopstown, Wilton, Togher, Douglas, Ballintemple, Mayfield and Hollyhill are within a 20-minute cycle of the masterplan lands.

6.7.4 Public Transport

6.7.4.1 Existing Public Transport Provision

The site is well served by public transport. The closest bus stops are located on Sheares Street and Dyke Parade, approximately 650m away to the south and accessible using two different pedestrian bridges as shown below inFigure 6.52. A bus shelter is provided at the Sheares Street bus stop.

The bus stops are served by the 205, 208, 220 and 220X city services. They are also served by the number 233 Cork-Ballincollig-Ballingeary regional bus

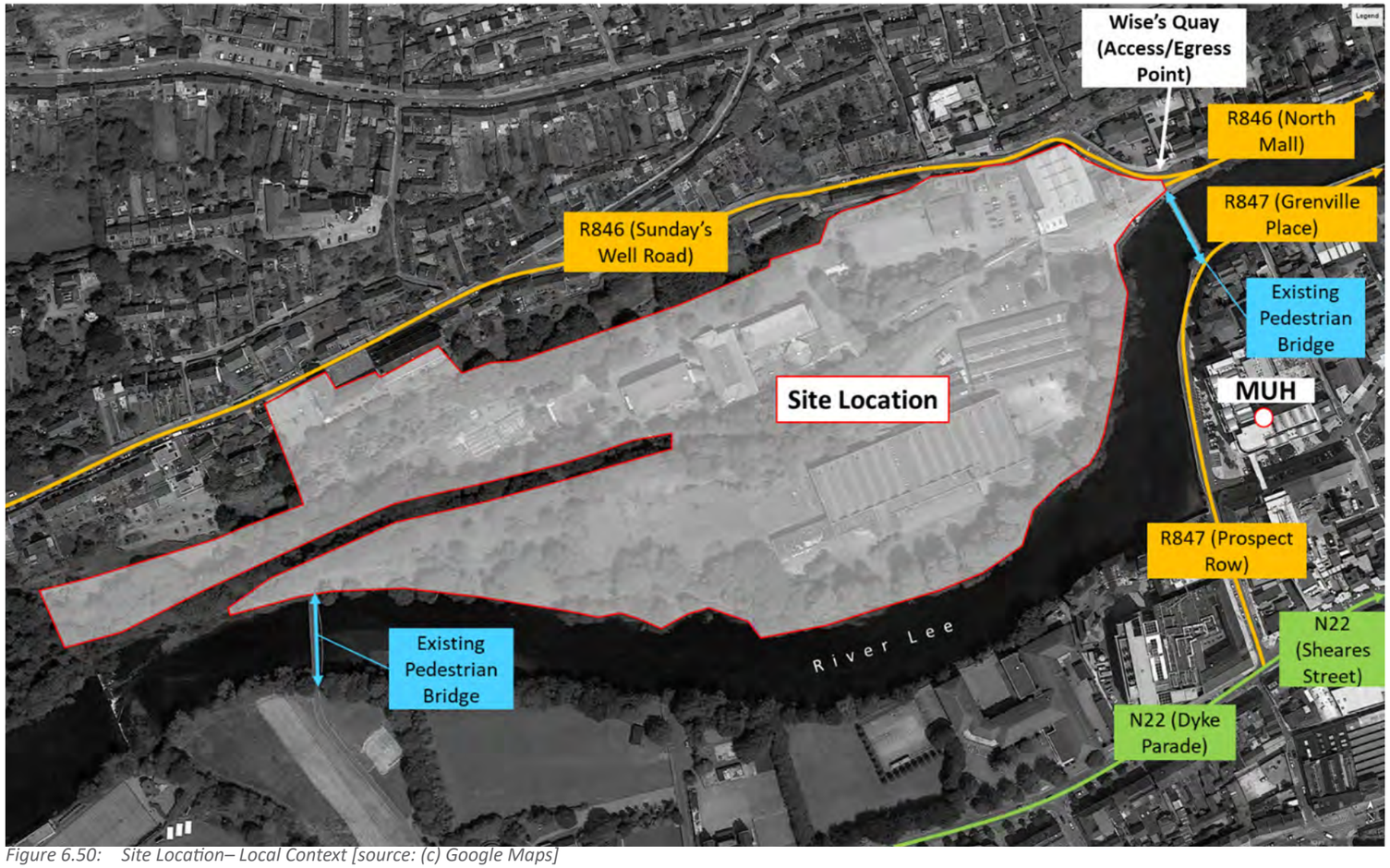

Figure 6.50: Site Location– Local Context [source: (c) Google Maps]

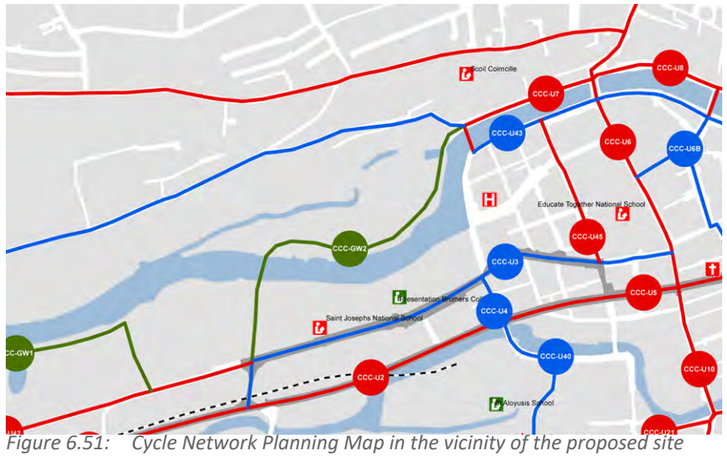

Figure 6.51: Cycle Network Planning Map in the vicinity of the proposed site

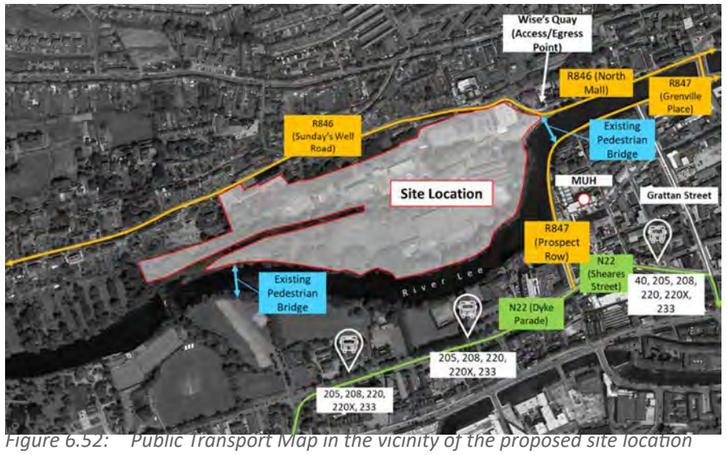

Figure 6.52: Public Transport Map in the vicinity of the proposed site location

service and the number 40 Tralee to Rosslare Europort regional Expressway service, in a drop-off service only at these stops. The approximate frequency of these services is presented in Table 6.1

The 220 service has in recent years been extended to operate on a 24-hour basis with increased frequency during the day. Bus Éireann has confirmed that a 60% increase in customer journeys has been observed since these changes were implemented. This is the first 24-hour service in Cork City and will provide excellent connectivity from the proposed development to Cork City and its surrounding suburban areas.

6.7.4.2 Public Transport Accessibility

Figure 6.55 and Figure 6.56 present illustrative Commuter Accessibility Maps, giving an indication of how accessible the proposed site is in terms of public transport. The maps illustrate 15-minute journey time contours to and from the site (for walking to a public transport stop and the subsequent journey by rail or bus), with a catchment area of up to 60 minutes for the morning and evening peak periods. This infographic has been produced using GIS Network Analyst, which is a multi-modal transport accessibility tool utilising nationwide general transit feed specification (GTFS) data.

The model identifies the accessibility and integration of transport facilities from the perspective of pedestrian users. The model calculates how accessible every transport facility is from each part of the street network (i.e. each bus stop or train station). The resultant time interval contours give an indication of how accessible a particular location is by public transport, and allows for a portion of walking time to the stop to be included. From the accessibility maps it can be seen that the majority of Cork City Centre and suburbs, including large residential areas such as Wilton, Bishopstown, Ballyphehane, Douglas, Togher, Ballinlough, Blackrock, Mahon, Mayfield, Sunday's Well, Knocknaheeny, and Blackpool, are within a 45-minute commute by public transport (including walking). Some of the major suburban settlements in Cork, including Ballincollig, Blarney, Glanmire, Carrigtohill, Midleton and Carrigaline are within a 1-hour commute of the proposed development by public transport.

6.7.4.3 Future Public Transport Provision

The Cork Metropolitan Area Transport Strategy (CMATS) includes significant plans for the improvement of the transportation network of Cork City. A key aspect of this is the proposed implementation of 'BusConnects', a series of high priority, high frequency bus corridors throughout the city. These corridors are to be delivered by 2027 and the planned routes are displayed in Figure 6.57. These BusConnects routes will increase public transport access to the site as they include the proposal for a new route on Sunday's Well Road and the North Mall, which will directly serve the site area.

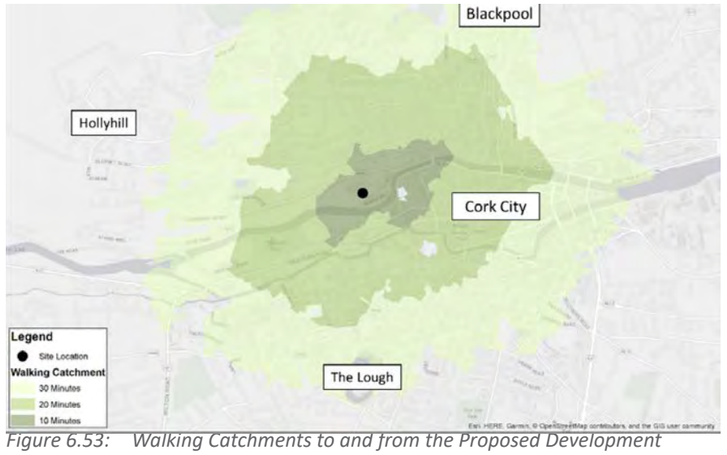

Figure 6.53: Walking Catchments to and from the Proposed Development

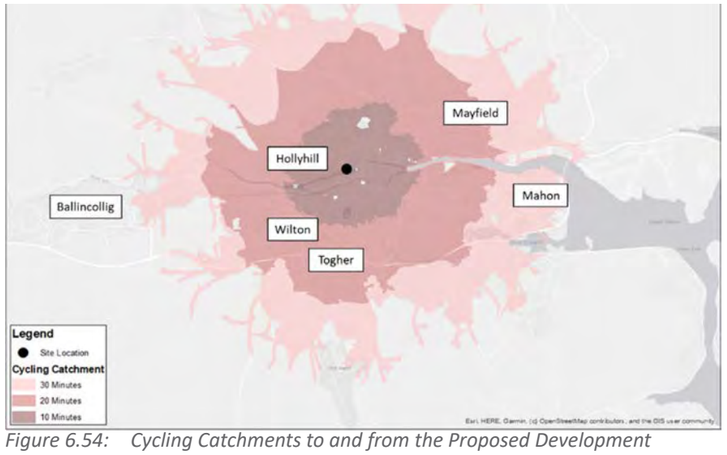

Figure 6.54: Cycling Catchments to and from the Proposed Development

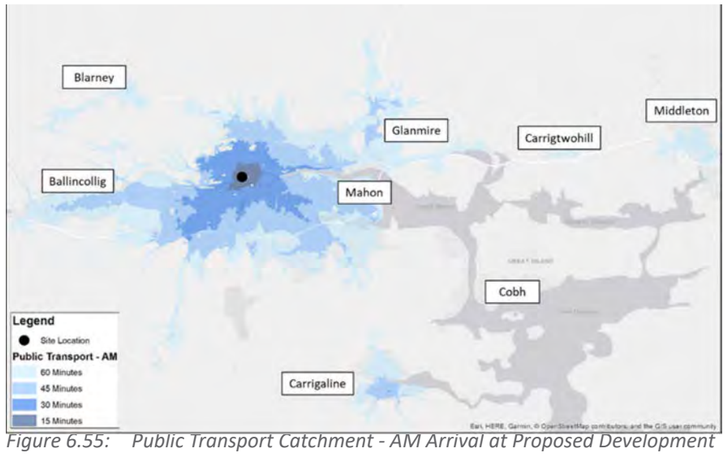

Figure 6.55: Public Transport Catchment - AM Arrival at Proposed Development

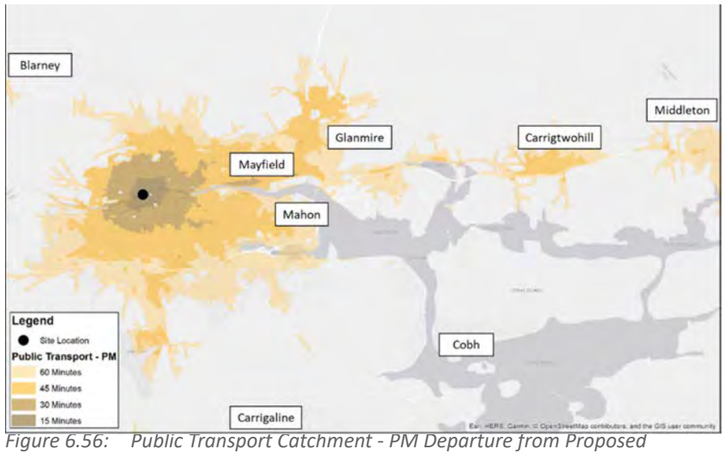

Figure 6.56: Public Transport Catchment - PM Departure from Proposed Development

Table 6.1 Public Transport Service Frequencies

Bus Service	Approximate Frequency
Bus No. 205 Kent Station – Munster Technical University (CIT)	Every 15 minutes for most of the day and every 30 minutes in evening time
Bus No. 208 Lotabeg - Mayfield - City Centre - Bishopstown - Curraheen	Every 10 minutes for most of the day and every 20 minutes in the evening
Bus No. 220/220X Carrigaline – Cork – Ballincollig	24-hour service operating every 15 mins from 06.15-23.30; every 30 mins outside of these times

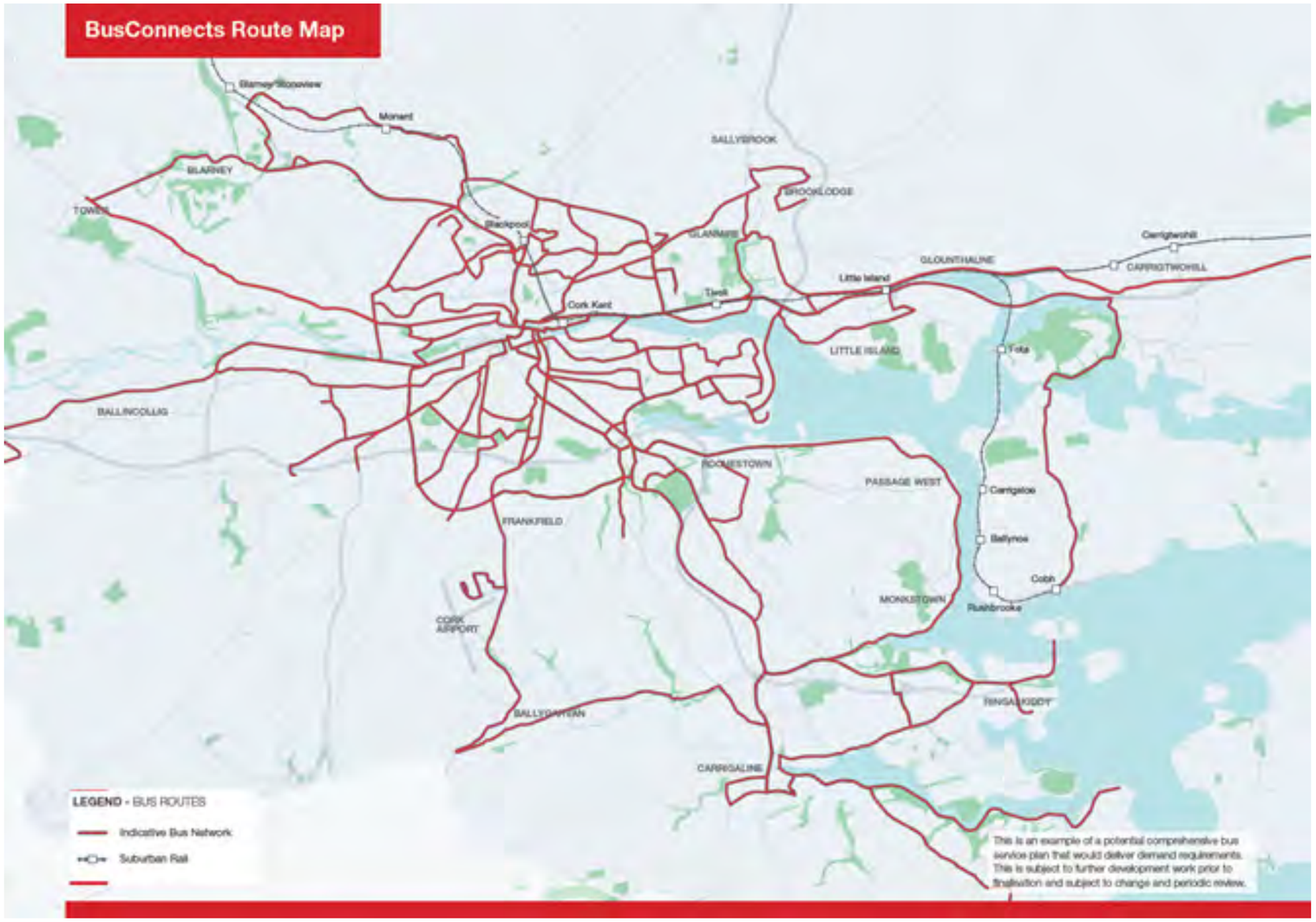

Figure 6.57: Proposed BusConnects routes for Cork City

6.8 Biodiversity

Figure 6.58: Map of Habitats identified within the North Mall Masterplan

6.8.1 Introduction

Ecologists from Malachy Walsh and Partners (MWP) were commissioned to undertake a baseline ecology report in order to inform the overall approach towards the future development of the North Mall Campus Masterplan.

The objectives of this section are to document the baseline ecology of the site using data collected from desktop study and field survey and to assess the ecological importance of ecological resources (habitats, features, assemblages, species or individuals that occur in the vicinity of a project and upon which impacts are possible) within and/or connected to the site.

For the full Ecological Report refer to Appendix C.

6.8.2 Methodology

The baseline ecology of the site and its connection to habitats and species in the wider environment were documented by carrying out a desk study and an ecological survey at North Mall Campus. The ecological importance of an ecological resource was determined using the ecological evaluation guidance given in NRA (2009).

A desk study was carried out of available information concerning the ecology of the site. The site lies within the Ordnance Survey National Grid hectad (10km square) W67. Floral and faunal species data recorded within this grid square was downloaded from the National Biodiversity Data Centre (NBDC) database (https://maps.biodiversityireland.ie/Map).

An ecological survey was undertaken by MWP ecologists on the 25th of May 2021. The purpose of the survey was to gain an overview of the site and to evaluate the ecological importance of habitats and species present. Habitats were classified according to 'A Guide to Habitats in Ireland' (Fossitt, 2000).

6.8.3 Site and Project Description

The 9.7ha site, situated northwest of Cork City centre on the banks of the north channel of the River Lee, is a diverse location containing a variety of habitats. The site comprises University buildings, the now-disused bottling plant, hard standing areas, grassland and woodland habitat, with the millrace channel flowing through the centre of the site.

6.8.4 Results

6.8.4.1 Designated Natura 2000 Sites

Natura 2000 sites are of International Importance and are protected under European legislation (the Habitats Directive 92/43/EEC, the European Communities (Birds and Natural Habitats) Regulations 2011 and the Birds Directive 2009/147/EC). While the site does not overlap with or lie adjacent to any designated Natura 2000 site, the north channel of the River Lee and the millrace channel provide a hydrological link connecting the site to two Natura 2000 sites present downstream: Cork Harbour SPA 004030 and Great Island Channel SAC 001058. Cork harbour SPA is designated for twenty-three species of waterbird and Great Island Channel SAC is designated for habitats comprising Tidal Mudflats and Sandflats and Atlantic Salt Meadows.

Figure 6.59: Site Photo of Otter Holt

Figure 6.60: Site Photo of Otter spraint directly in front of holt entrance

The main ecological risk to these Natura 2000 sites is a reduction in the water quality of the River Lee as a result of the construction or operation of the various developments, which could have negative indirect ecological consequences on the qualifying features of the SAC and SPA. Appropriate water quality protection measures will be required in order to avoid/ minimize impacts on water quality.

6.8.4.2 Habitats

It is considered that the site comprises a mosaic of semi-natural and artificial habitats of differing ecological importance (See Figure 6.58). The habitats considered to be of ecological importance within/connected to the site are outlined below.

Riverine Habitats

The north channel of the River Lee and the millrace channel have been classified as Tidal River (CW2) habitat. The north channel of the River Lee and the millrace channel are transitional watercourses that form part of the Lee (Cork) Estuary Upper transitional water body. The ecological importance of both watercourses are assessed as being of National Importance given that the River Lee supports Annex II listed species (Otter, Atlantic Salmon, Sea Lamprey, etc.) and that these watercourses act as a hydrological link to the designated Natura 2000 sites; Great Island Channel SAC and Cork Harbour SPA.

Woodland and Treeline Habitats

There are two woodland areas present within the site; one which encases the millrace channel and one directly southwest of the bottling plant. These areas of woodland have been classified as (Mixed) broadleaved woodland (WD1). During the ecological survey, a number of mature trees that made up the canopy were noted with Sycamore (Acer pseudoplatanus) the dominant tree species. Given the maturity of the trees present, the value of this habitat for a range of faunal species within an urban landscape, and the connection of this habitat to continuous woodland extending west of the site, the ecological importance of this habitat is assessed as being of **Local Importance (Higher Value).**

Two mature treeline habitats flank The River Lee Walk, bounding the southern edge of the site. These tree lines consist of a mix of broadleaved species including Sycamore, Lime, Ash, Horse-chestnut, Alder, Elm (Ulmus spp.) and Beech (Fagus sylvatica). During the ecological survey, it was noted that the location of these tree lines provides an ecological corridor for faunal species such as birds and bats. The ecological importance of this habitat is assessed as being of **Local Importance (Higher Value).**

Artificial Habitats

The site contains a number of heavily-modified artificial habitats, including Recolonising bare ground (ED3) and Buildings and artificial surfaces (BL3). It is considered that the majority of areas containing these habitats are of little to no intrinsic ecological value. However, certain buildings such as Distillery House may have some roosting potential for bat species and bird species such as swift. Dedicated bat surveys will be required during the optimal survey period (late May – early September). Protection and enhancement measures that specifically target bats can be incorporated into design. The ecological importance of this habitat (buildings within the site) is assessed as being of Local Importance (Lower - Higher Value).

6.8.4.3 Invasive Species

Japanese knotweed and Himalayan balsam were recorded within the site throughout the woodland areas and along the bank of the north channel of the River Lee. Both of these species are listed on the Third Schedule of

the 2011 European Communities (Bird and Natural Habitats) Regulations. Invasive plant species present within the site boundary are currently controlled under an ongoing management plan implemented by UCC.

6.8.4.4 Fauna

The site is likely to be used by a range of faunal species particularly in the higher value habitats present within and in proximity to the site. Several protected faunal species including bats and other mammals, aquatic species, and birds were recorded by the ecological surveys carried out as part of the proposed development and by previous ecological surveys within North mall Campus.

Otter or signs of otter have been regularly recorded associated with the millrace channel and the River Lee, within and in close proximity to the site. Evidence of Otter was recorded during the ecological survey of the site with a potential otter holt recorded on the south bank of the millrace channel (See Figure 6.58) and otter spraint recorded at the holt entrance (See Figure 6.59 and Figure 6.60). Otter is protected under Annex II and IV of the EU Habitats Directive and under the Wildlife (Amendment) Act 2000.

Within the site, there are numerous potential roosting locations in the form of mature trees, historic buildings and derelict structures. The watercourses (the north channel of the River Lee and the millrace channel), the woodland habitat and the tree line associated with The Lee Walk are important foraging and commuting habitats for bats. Hectad W67 which encompasses the site contains records for a number of bat species protected under the Annex IV of the EU Habitats Directive and under the Wildlife (Amendment) Act 2000. Detailed surveys to determine the level of bat activity within the site and the suitability of available roosting sites will be required.

The River Lee is a designated salmonid river under the EC (Quality of Salmonid Waters) Regulations of 1988 (SI 84 of 1988), implementing the Freshwater Fish Directive (78/659/EEC) from its source to Cork City waterworks, circa. 1.3km upstream of the site. The section of the River Lee within the site is suitable as a commuting habitat for a number of protected aquatic species such as adult Atlantic salmon, sea lamprey and river lamprey but does not support suitable spawning or nursery conditions for these species. The millrace channel does not contain suitable habitat for any of these protected fish species.

6.9 Existing Site Utilities

Surface Water

A ø750mm combined sewer is currently servicing the north of the site. The sewer runs from the west to the east. The site is also served by a private ø100mm Cast Iron Watermain which turns around the existing Bottling Plant building.

According to the topographical survey, there is an existing ø225mm and ø300mm surface water sewer which serves the Bottling Plant and Cooperage Building.

Revised drainage and watermain layout will be designed in conjunction with future detailed development proposals and associated planning applications. Separate foul and surface water sewers will be provided.

At masterplan level it is proposed that separate surface water drainage systems will serve each development block within the North Mall lands. The proposed sewers will discharge the surface water into the River Lee, at greenfield run-off rates. Non returning valves will be installed at all outfalls avoiding water backflow. The water runoff coming from any car parking spaces will be treated with a by-pass separator before discharge. The surface water drainage network system will provide for retention tanks to allow for storage of up to 24 hours in the event of an emergency event of no discharge into the River Lee (due to high river levels).

Foul Sewer

The foul sewer network will be developed in the context of future detailed development proposals and associated planning applications, in accordance with the requirements of the following technical design documents (or updated versions thereof):

- BS EN 752:2008 “Drainage and Sewer Systems Outside Buildings”
- BS EN 12056-2 2000 “Gravity Drainage Systems Inside Buildings”.
- Building Regulations Part H
- EPA Wastewater Treatment Manual ‘Treatment Systems for Small Communities, Business, Leisure Centres and Hotels’.

Mains Water Supply

Mains water supply is currently served by a private ø100m Cast Iron Watermain which runs around the site.

Future developments will be served by a new watermain connections, which will tie into the existing main water supply. Outdated supply piping will be abandoned and replaced to allow for future building construction.

Gas

An existing GNI distribution infrastructure traverses the site. Future detailed development proposals and associated planning applications will provide for the upgrading and alteration of this network as required.

Electricity

There is an existing ESB substation on the site, supplied via underground ESB networks cables. Future development proposals will require the provision of additional and or upgraded ESB substations and will be addressed in the context of detailed development proposals and associated planning applications.

Broadband, Data & Telecoms

EIR telephone lines traverse the site. Cable routes and additional ducting will be addressed in the context of detailed development proposals and associated planning applications.

LIST OF FIGURES

LIST OF TABLES

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