Environmental Statement for City Quays

Non-Technical Summary

July 2010

TURLEY ASSOCIATES
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INTRODUCTION

This document is a Non-Technical Summary of the Environmental Statement (ES) which accompanies the outline planning application for a mixed-use development at a significant urban regeneration site known as ‘City Quays’ in the Clarendon Dock area of Belfast Harbour. The Non-Technical Summary is in an easily understood format to enable members of the public and all stakeholders to readily understand the proposals and the robust assessment process that the proposals have gone through.

The ES itself is a detailed report undertaken by the applicant’s professional consultant team which sets out the wider Environmental Impact Assessment (EIA) of the proposed development. It provides an assessment of the likely environmental effects of the proposals and their significance and describes mitigation measures which will be put in place to address any potentially adverse impacts of the proposal.

The Concept Masterplan for the site which accompanies the outline planning application and is included as an Appendix to the ES, has been informed and tested through this EIA process. A range of comprehensive technical studies were undertaken on the site by the appointed experts and this assisted in devising the form, type and configuration of the mix of uses proposed.

SITE AND SURROUNDINGS

The site is generally flat and low lying in relation to tidal levels in Belfast Lough, with levels ranging from approximately 1.05m Above Ordnance Datum (AOD) at the lowest point within the car park area between Corporation Square and the raised M2/M3 and around 3.00m AOD along the site’s eastern boundary with the River Lagan. The M3 and the Cross Harbour Bridge to the south are elevated above the site to approximately 12.8 m OD, at the highest point. Located within the site on its eastern side are two listed dry docks and the Clarendon wet dock.

Beyond the site to the north is the working Harbour Estate, to the west is an area of road infrastructure and mixed uses, and to the south beyond the Cross Harbour Bridge is an area of mixed uses and beyond that the traditional City Centre.

The City Quays site covers an area of approximately 10.1 hectares. It is bounded by the River Lagan to the east; Corporation Street to the west; Dock Street and Corry Link to the north; and the elevated M3 Cross Harbour Bridge to the south. The site forms part of the wider Harbour Estate and lies across the river from the Odyssey Complex and Titanic Quarter.

There are a range of uses including offices, residential, retail, public houses, leisure and public realm, the derelict SeaCat Ferry Terminal and a number of surface car parks currently within the site. The area is also of significant historical importance, retaining a number of historic and architecturally important buildings and docks.
PROJECT DESCRIPTION

The fundamental objective of the Concept Masterplan is to demonstrate that the application lands can be developed in a sustainable manner which is sympathetic to the surrounding context and can provide a quality living and working environment which will deliver important rejuvenation of the area for the benefit of the people of this part of the city.

The core elements of the application include:

- Commercial / office space;
- An hotel;
- Residential development;
- Retail / cafés / restaurants;
- Leisure / public realm; and
- Multi-storey car park

The outline application is described as:

“Mixed use development comprising a total of up to 215,563 sq m of floorspace including a maximum of 120 residential units (up to 22,870 sq m) with associated amenity space and surface parking (up to 1,720 sq m); an hotel (up to 26,850 sq m); Class B1 offices (up to 123,170 sq m); small scale retail and retail services (up to 950 sq m); cafés/restaurants (up to 1,003 sq m); and multi storey car parking (up to 21,000 sq m), plus associated works including basement car parking (up to 16,000 sq m); ancillary service area (up to 2,000 sq m); open space; and related infrastructure improvements”

The proposal above represents a ‘maximum floorspace’ and in the future the proposed buildings may be slightly reduced in size when they are designed in detail. Nonetheless, the maximum figures for each land use are assessed in the EIA.

The primary objective of the proposed new development is to breathe life back into a derelict and underutilised site to create a vibrant new area of the City Centre, with a defined context and can provide a quality living and working environment which will deliver important rejuvenation of the area for the benefit of the people of this part of the city.

The fundamental objective of the Concept Masterplan is to provide high quality public realm. activity both during and after construction, supporting job growth and environmental benefits. There will be increased economic benefit of the people of this part of the city.

The key elements of the City Quays Concept Masterplan are summarised below:

Waterfront Square
The Waterfront Square is the main ‘commercial address’ and also where the hotel entrance is located. The area along the waterfront is mainly hard landscaped with a variety of street furniture, water features and art installations. A continuous band of soft landscaping breaks up the hard landscaping and divides the waterfront into smaller areas. The level difference between the existing levels along the water’s edge and the rest of the square will be overcome using steps, ramps and green terraces so that most of the square is above the flood safe level.

Corporation Square
Corporation Square provides the setting for the Grade-A-listed Harbour Office. Although Corporation Square itself is outside the ownership of the Belfast Harbour Commissioners, it is important that its surface treatment is considered as part of the overall development. Although the square will continue to have a vehicular route through its centre, it is proposed that a clear formal space is designed though the use of hard landscaping and lighting to reflect the formal Italianate facade of the Harbour Office. The road surface and the pedestrian areas should be of the same material to create a unified appearance. The space should be further enhanced with street furniture, and soft and hard landscaping.

Central Heritage Zone
The area around the listed dry docks and Clarendon Dock is the maritime heritage heart of the proposed City Quays’ development. The longer term vision is to convert the listed Clarendon Buildings between the two dry docks into restaurant or café use although this is not part of the current planning application, as such a proposal would require detailed drawings for Listed Building Consent. The area already has some very high quality hard landscaping, however the space itself currently lacks enclosure. The Concept Masterplan proposes positioning new buildings to the east and west of the dry docks area allowing the creation of a much better defined public space. The space around the listed Harbour Office is used to create an appropriate green soft-landscaped setting for the listed building in contrast to the mainly hard-landscaped areas elsewhere.

Corporation Street Housing
A reduced density town house model is proposed in this area, with duplex apartments above. This housing form is a modern interpretation of the traditional Belfast terraced street. It is intended that all the houses can be entered from a front courtyard garden and will also be provided with a larger rear garden. The buildings are raised 2m so that all units are accessed from the flood safe level. The main entrances to the ground floor houses face the central heritage zone with entrances to the upper level duplexes via glazed entrance-ways accessed off Corporation Street.
Northern Zone

The harbour operations to the north of the site are a potential source of noise. To shelter the affordable housing from the potential early morning noise a commercial office, or call centre block, is located to the north, with housing positioned to the south facing onto Prince’s Dock Road. A raised landscaped courtyard is positioned between the two buildings with car parking beneath. The residential element is arranged as a group of four apartments around a single core, which avoids the need for unattractive corridors to access the residential units. This arrangement also encourages social interaction as it limits the number of residents sharing a stair core to a manageable number. The residential units are angled away from the street access to swing their orientation away from the adjacent existing tall buildings at the end of Prince’s Dock Road, so that daylight can be maximised. This arrangement also allows the balcony of each unit to be face away from the adjacent unit, maximising privacy of the external spaces.
PARAMETERS

The parameters plans show (a) the proposed roads and open spaces and the disposition, location and uses of buildings and, (b) their respective building heights. The plans were informed by an initial analysis of the opportunities and constraints of the site, together with the subsequent technical studies carried out by the ES consultant team. These parameters were fully tested through the EIA process. The plans provide the Department with clarity about what it is granting planning permission for.
CONSULTATION

Since the evolution of the project the Belfast Harbour Commissioners and the professional consultant team have been engaged with the Strategic Projects Team at Planning Service and other relevant agencies through the Pre-Application Discussions (PAD) process. On the 11 September 2009 the initial PAD meeting was held with the Department (and other statutory consultees) which signified the commencement of the PAD process. Subsequent PAD meetings were held on the 23 September 2009, 28 October 2009, 13 November 2009 and the 2 July 2010.

In addition during the preparation of the ES, the professional consultant team members responsible for individual chapters of the ES liaised directly with the appropriate experts in the relevant agencies.

The Belfast Harbour Commissioners and their planning consultants, Turley Associates, also engaged directly with a wide variety of key stakeholders throughout the process of developing the Concept Masterplan. This engagement included some 50 presentations and discussion about the draft masterplan proposals. Throughout the evolution of the Concept Masterplan the views and aspirations of the stakeholders were collated and integrated into the design development and those consulted were given feedback by the Belfast Harbour Commissioners.

By encouraging the participation of multiple agencies and other stakeholders in a broad debate about the proposed regeneration, the proposals continued to evolve with the final scheme responding appropriately to the site and its surroundings.

CONSIDERATION OF ALTERNATIVES

The site was partly regenerated in the 1990s by the Belfast Harbour Commissioners (BHC) as part of the Laganside strategy. The rest of the site is now ripe for regeneration and BHC put together a highly experienced professional team to plan the redevelopment and create a completed urban quarter connecting with the traditional City Centre. Doing nothing was not a realistic option as the site would continue to consist of unattractive derelict lands and surface car parking and would not realise its true potential.

The alternative options for the design of the redevelopment evolved through the Pre Application Discussion process and wider discussions with a range of stakeholders and in the context of current planning policies, the heritage value of the site and the client’s requirement for very high quality urban design and public realm. Studies undertaken by the ES team identified constraints to the site’s development, which subsequently informed the massing and configuration of land uses within the proposed development. The final masterplan is a culmination of design solutions to address public realm, heritage, and flooding issues. The finalised scheme is highly sustainable as it is a brownfield re-development; consists of a mix of uses and density; the orientation of buildings has taken into account daylight, natural ventilation and solar gain; the high quality public realm has been designed to minimise crime; the scheme includes provision for alternative modes of transport; and the latest standards and energy efficiency measures will be designed into the buildings at reserved matters stage in line with BHC’s commitment to sustainability principles.
PLANNING CONTEXT

The ES has been prepared in accordance with prevailing planning policy at both regional and local level. The proposed development fits comfortably with the Regional Development Strategy’s guidance in that it will create a high quality sustainable development within Belfast’s City Centre, making use of existing infrastructure. The proposed development has significant positive regenerative implications and will deliver a major enhancement for the area in physical and environmental terms. It represents a city centre mixed use scheme with imaginative city scale architecture and quality spaces, providing for commercial offices, small scale retail/retail services, leisure and employment uses in line with prevailing planning policy tests. It delivers an imaginative and innovative design approach which responds to the site and its setting and complies with flood protection policy.

The proposed development has no adverse impact on the natural heritage and protects and enhances the site’s built heritage and archaeological importance. It will facilitate sustainable forms of transport including walking and cycling and provide high quality public and private open spaces. It is designed to ensure that the traffic generated by the proposed development can be accommodated on the existing road network. The proposed housing elements of the scheme comply with the current planning policy in relation to quality residential environments.

The statutory development plan for Belfast is the BUAP which, although past its stated end date, remains a material consideration in the determination of this application. The majority of the site falls within the designated City Centre but outside the designated Main Office Area. The remainder of the site, i.e. north of the dry docks, is undesignated ‘whiteland’.

The draft Belfast Metropolitan Area Plan (dBMAP) has been through a public inquiry process but has not yet been adopted. The Concept Masterplan proposals comply with its policies, as amended in agreement with Planning Service during the course of the Inquiry. Most of the site now lies within the designated Belfast City Centre and Main Office Area (as agreed with Planning Service) with a very small portion lying within an area of existing employment/industry. A very small portion of the site to the southern end lies within the Tomb Street North Development Opportunity Site. Most of the site lies within the ‘fringe’ area of parking constraint. A proposed community greenway runs through the site.

All aspects of planning policy have influenced the range of land uses proposed and have been considered through the environmental impact assessment which is summarised on a topic basis below.
SOCIO ECONOMIC

This chapter of the ES provides an assessment by Turley Associates of the proposed development in terms of its impact on the economy, population and skills balance of the immediate locality (the Duncairn Ward), Belfast and the wider context of Northern Ireland. This assessment also considers the impact that the scheme itself will have upon employment opportunities; city centre living and the residential market; tourism and the city centre hotel market; and the availability of existing community facilities within 2km of the site.

Based on the proposed 120 residential units it is estimated that by 2021 the development will accommodate 234 people including 162 economically active. In total the proposal, comprising of some 215,563 sq m has the potential to create approximately 10,925 jobs including 6,928 FTE direct jobs and 3,997 FTE indirect or induced jobs in addition to approximately 800 temporary jobs. The creation of 11,725 jobs represents a significant beneficial effect. The re-development of the site will act as a catalyst for further development in the Duncairn Ward, with the many spin-off jobs that will also be generated by this. The impact on the local economy is considered beneficial.

The impacts on city centre living and the residential, tourism and hotel markets are considered to be beneficial. The impact of the development on the existing community facilities within 2km of the site is considered to be beneficial as a number of key facilities will be provided as part of the overall scheme.
INDUSTRIAL ARCHAEOLOGY

The assessment for the industrial archaeology chapter of the ES was undertaken by RSK Ireland Ltd and included desk-based research of the existing archaeological sites and monuments records, which identified any known sites within the area. The desk-based assessment was then backed up by a field reconnaissance survey to check potential impacts on known archaeology and identify previously unknown sites on the ground in relation to the proposed development.

The proposals do not adversely impact on any known archaeological remains. However, due to the buried and invisible nature of some archaeological remains it is not possible to be confident that all archaeological sites have been identified from these preliminary investigations. It is possible that further archaeological remains may be encountered during the construction works, in particular the site preparation works and thus further surveys may be required before and during construction.

In order to mitigate against this possibility and to identify any possible archaeological remains during the construction phase, archaeologists will be employed to carry out a watching brief, to ensure that no information is lost as a result of the construction works. If there are any major archaeological finds within the application site, contingency plans will be developed, and agreed with the relevant officers of the Northern Ireland Environment Agency (NIEA). Where possible archaeological remains will be preserved in-situ; if this is not possible, they will be archaeologically excavated and recorded to provide a permanent record.

The buildings that are to be demolished are of no heritage significance although it is recommended that these be fully recorded by measured drawings and photographs. Those buildings and structures of industrial heritage significance will be incorporated in the proposed development, thereby retaining them as physical reminders of the evolution of the Clarendon Dock area and the growth of Belfast.
This chapter of the Environmental Statement (ES), prepared by RPS Consulting, examines the potential highway impact arising from the proposed development and specifically considers all the potential transport effects associated with the movement of people to and from the proposed development. It is estimated that it could take approximately 20 to 30 years to complete the development which will be delivered in a total of five phases. This has been a key consideration as part of the Transport Assessment (TA) which also accompanies the planning application.

Vehicle parking of approximately 1,251 is to be provided including 908 spaces (multi-storey) and 343 spaces (basement) in accordance with the appropriate parking standards.

For analysis purposes there are three access points associated with the proposed development. The first access is to the multi storey car park via the priority junction of Corporation Square / Tomb Street. The second access will serve the residential units from Corporation Street. The third access is to the basement car park of the tower block and is served from Corporation Square. The proposed development will make use of the existing road network (largely unaltered) via Corporation Street, Corporation Square and Donegall Quay.

Traffic surveys were conducted in the vicinity of the development site to determine the existing traffic conditions during the morning and afternoon peak hour periods. A person trip model was used to determine the total number of pedestrian, cycling, public transport and private vehicle movements associated with the proposed development. The distribution and assignment of the proposed traffic is based on a one hour drive-time isochrone. The generated traffic was added to the redistributed traffic flows to produce the anticipated traffic flows.

Computer analysis was carried out to determine the effects of the development related on the surrounding traffic network. The junction assessment modelling indicates that the development traffic will not adversely affect the operational capacity of these junctions.
The analysis concludes that the site is accessible by all sustainable modes of transport, which can accommodate the additional trips generated by the proposed development. Excellent facilities exist for walking, cycling and public transport users in the vicinity of the development site. Although the car will remain as a travel choice for a number of site users, the parking restraint standards used in the Concept Masterplan are designed to deter use of the private car. Other methods will be investigated to encourage use of public transport by future occupants and workers. The analysis described above concludes that the surrounding highway network can accommodate the additional vehicle trips resulting from the proposed development.
Mitchell and Associates assessed the impact of the proposed development on the listed (and unlisted historic) buildings and structures on, and adjacent to, the applicant site and also the setting of these buildings and structures.

The heritage significance of the listed buildings and dry dock structures was evident from an early stage and the proposed development is underpinned by the retention of all listed buildings and dock structures and the protection of their settings.

Planning policy for development affecting the setting of Listed Buildings is contained in Planning Policy Statement 6 (PPS6).

The following are the listed buildings within the application site to be retained, the setting of which will be affected:

- HB26/50/090: Clarendon Dock Buildings and Harbour Estate, A listing; and

The following are the listed buildings adjacent to the applicant site:

- HB/26/50/093: Sinclair Seamen's Presbyterian Church, Corporation Square, B+ listing, including gates and railings;
- HB/26/50/095A: St. Joseph's R.C. Church, Princes Dock Street, B1 listing; and
- HB/26/50/095B: St. Joseph's R.C. Parochial House, 38 Pilot Street, B1 listing.

The form of the site and its surroundings originally emerged in the early part of the 19th century. Corporation Street, Tomb Street, Donegal Quay and the network of streets to the west of Corporation Street (later to be known as Sailortown) were all laid out, on an area known as Point Field. What is now Corporation Square was at that time Richie’s Dock, which was completed in 1800, as was Graving Dock No.1. Graving Dock No. 2 was built later as was the pump house/workshop buildings between graving docks Nos. 1 and 2, which was built in 1826. The first phase of the Harbour Commissioners’ Office on Corporation Square was built between 1852 and 1854, designed by George Smith. This was more than doubled in size when WH Lynn extended it only forty years later. Adjacent to the site, on Corporation Square, Charles Lanyon designed Sinclair Seaman’s Presbyterian Church in 1856. Adjacent to the site on Prince’s Dock Street, St. Joseph’s Roman Catholic Church was built in 1879-80 to designs by Timothy Hevey.

The proposals include a significant number of new buildings to be built on the site. Some of these will be built in close proximity to the footprint of existing listed buildings. All are located on vacant areas of the site.

Whilst a number of the new buildings are significantly higher than the existing historic buildings on the site or adjacent to it, consideration was given to ensuring that those adjacent to, or in close proximity with the listed buildings are of a comparable scale and proportion to the listed buildings. They also respect the building line where such exists and, in establishing a new building line, ensure that the listed building retains prominence.

As the application is only outline in nature, a detailed assessment of the materials used in the context of the listed buildings was not undertaken

The proposals for greening the area around the Harbour Office will have a positive impact on the setting of the Harbour Office as will the proposals for Corporation Square where it is proposed that the carriageway and the pedestrian areas be developed as a singular high quality space with a unified appearance.

The schedule of uses within the proposed development includes residential, commercial offices, hotel, retail/café/restaurant. These uses are a positive contribution to the setting, offering active day-time uses similar in nature to the existing uses in the location and offering ‘passive supervision’ to areas of public open space at all hours.

The redevelopment of the site will provide an impetus for the restoration and conservation of the Clarendon Docks and associated buildings with public appreciation and use. Proposals bring the former historic site into use in a way which complements its historic fabric, provides a well composed and well defined setting for the historic buildings, will animate the surrounding public realm and provide a safe and secure environment for these buildings.
Clarendon Dock Buildings: furnace house north and west elevations, from northwest

Clarendon Dock Buildings: main block from south
Given the range of previous land uses and the proposed mixed land use within the application site, the site was divided into 9 zones.

Following a Preliminary Risk Assessment, which identified a number of potential risks to human health and environmental receptors from the sites current and historic land use, an intrusive site investigation comprising the drilling of 31 boreholes within zones 1 - 7 was undertaken during March 2010.

Representative soil and groundwater samples were retrieved during the site investigation and subsequent groundwater monitoring in Spring 2010. Tidal assessment of underlying groundwater was determined for May 2010. Following the receipt of soil and groundwater analytical results, a Generic Quantitative Risk Assessment (GQRA) was undertaken.

The GQRA identified limited potential risks to the site end users and construction workers from contaminants within the soil in areas within zones 5, 6 and 7. The groundwater concentrations detected were minor and related to low levels of hydrocarbons,
and are not considered to represent any significant risk to the River Lagan or to shallow or deeper groundwater. The tidal data and salinity readings confirm that much of the site is underlain by tidal dominant seawater, with daily flushing regimes and significant neap tide response across the site centre. Where there is any contamination (which is limited anyway) it will be flushed out on a significant basis, daily.

Following six rounds of gas monitoring, a potential gas risk was identified to future site residents in zones 1, 3 and 5. The primary impacts identified during the GQRA are associated with human health and particularly relate to the exposure to contamination for construction workers during site works and subsequently future site residents. In addition, a potential impact from ground gases, including methane was also perceived.

Mitigation measures for the potential impacts include the use of a cover system in areas of soft landscaping and gardens to minimise potential exposure of the future site residents. In addition, it is recommended that simple gas protection measures be included in the design of the future site buildings in zones 1, 3 and 5.

The proposed development will have a positive impact on the subject site and surrounding areas. The implementation of the proposed remedial measures will minimise any potential risks to future site users.

HYDROLOGY AND DRAINAGE

This chapter of the Environmental Statement by White, Young and Green assesses the effects of the construction, operational and demolition phases of the proposed development on the existing hydrology and drainage regimes within the application site and in its immediate surroundings. Existing conditions were established to provide baseline information for comparison with those of the proposed development.

The development will generate significant volumes of foul sewerage in the area. Northern Ireland Water (NIW) has confirmed that the existing sewer serving the current development has sufficient capacity to carry the increased foul flow. Due to capacity restrictions at the Wastewater Treatment works (WwTW) at Duncrue Street the foul discharge will need to be limited and one, or a combination of, the following measures will be developed during the detailed design of the proposed development: on-site storage and night time release; on-site treatment; on-site partial treatment; or the expansion of the existing WwTW.

From a hydrological perspective, stormwater emanating from the application site currently discharges downstream from the Lagan Weir into Inner Belfast Lough. Inner Belfast Lough is classed as an area of Special Scientific Interest (ASSI), and is a Special Protection Area (SPA). Storm drainage arising from the proposed development, particularly stormwater from car parks and access roads, has the potential to impact upon the receiving water quality. However, given the extensive car parking on the existing site, the proposed development will not worsen the current impact.

Chemical residues in surface water run-off will be removed by the use of sub-surface interceptors, specifically petrol interceptors in this case. These will be installed on the storm sewer network, as close as possible to the source of potential contamination. Physical residue, in the form of sediment, will be removed by sediment traps which will be placed at appropriate points in the storm water drainage system prior to the point of discharge.

A further potential impact from the proposed development arises from fuel storage. Any such storage will be provided with bunding, to intercept discharges in the event of spillage, and will be designed in accordance with the pollution Prevention Guidelines (PPG). These measures will eliminate any potential impact.

Northern Ireland Water - existing public water and sewerage services
FLOODING

This chapter of the ES by RSK Ireland Ltd assesses the flood risk to the application site and recommends development levels for the proposed new site structures. Modelled tidal flood level information was provided by Rivers Agency which was extracted from the recent publication of its flood mapping for Northern Ireland. In addition the Strategic Flood Map for NI was also consulted. Site specific information was gathered by RSK Water during a site walkover in June 2009 and from a topographical survey undertaken by Land Survey Services in July 2009.

In line with Planning Policy Statement 15 and guidance set out in CIRIA Research Project 624 “Development and Flood Risk: Guidance for the Construction Industry”, the Flood Risk Assessment (FRA) identifies potential flood levels for the 1 in 200 year flood event. This included an allowance for the impacts of climate change.

Suitable mitigation measures have been identified to reduce the flood risk to the application site to an appropriate level including finished floor levels to be set at or above 4.2m AOD and roads to be set at 4.0m AOD. Other mitigation measures include ensuring that all entrances to underground car parks or ground levels leading to underground car parks are to be set at or above 4.2m AOD.

In addressing any issues regarding storm drainage, SuDs principles will be adopted for the site. These may include permeable pavements and the placement of an open-graded granular sub-base layer below the car park area could be used to provide the required attenuation volume.
ECOLOGY AND HABITAT

An ecological assessment was carried out by ATEC Consulting in June 2009 including a Joint Nature Conservation Council (JNCC), extended Phase 1 Habitat Survey and surveys for otters, badgers and birds. In addition, the suitability of the site for bat habitats was also assessed on 27 August 2009, 1 September 2009 and 16 September 2009.

The application site is a mosaic of waste ground, buildings and walls with plant growth restricted to gaps and cracks in hard surfaces. Small areas of amenity grassland and formal planting also occur as soft landscaping around commercial properties. The impact of the proposed development on habitats was assessed as being limited since the majority of the site is composed of hard surfaces and buildings and contains only small areas of vegetation. None of the plant species recorded is included in the ‘List of Species of Conservation Concern’ for Northern Ireland.

No evidence of badger or otter activity was noted within the application site and no suitable habitats for feeding bats. However, many of the buildings throughout the site were assessed as being largely suitable for roosting Bats. Comparatively few species of birds were noted within the application site. The most commonly encountered species were herring gull and feral pigeon. These species are common throughout Belfast and other urban areas. The walls adjacent to the River Lagan could provide potential nest sites for black guillemots.

To enhance the ecological value of the site and minimise the potential impact of the proposed development the following mitigation measures are recommended:

• Adding features that would benefit local wildlife such as sensitive landscaping with berry and nectar producing trees and shrubs.

• Incorporation of ‘green roofing’ areas should be considered within the detailed landscape plan at reserved matters stage.

• A full Bat survey should be carried out prior to the demolition of any of the buildings or structures.

• Any suitable holes or crevices that occur around the walls adjacent to the River Lagan should be filled outside the bird breeding season (October – February) to prevent further nesting of black guillemots and mitigate against potential disturbance.

• Erection of bird boxes, particularly swift boxes would encourage additional breeding birds to the site.

• Any removal of vegetation should occur outside the main bird breeding season which extends from early March until late September.

The application site is located 2.5km from the boundary of Belfast Lough SPA and approximately 1.5km from Inner Belfast Lough ASSI. There will be no loss of habitat as the development lies well outside the boundary of both the SPA and ASSI designations and currently accommodates a number of uses including offices, residential, public realm, derelict ferry terminal and a number of surface level car parks. There are not likely to be any impacts on the features of the SPA or ASSI as the area does not offer suitable feeding or roosting habitat for wintering wildfowl and is not currently used by any of the features of the SPA/ASSI.
AIR QUALITY AND CLIMATE

This section of the ES prepared by RPS Consulting considers the impacts of the increased traffic on local residents and other sensitive receptors living near local roads. Four scenarios were assessed including: 2008 with existing situation without development (baseline estimate), 2012 year of opening with development, 2012 year of opening without development and 2012 worst case.

The assessment (using the appropriate model) focused on locations where receptors are likely to be exposed to poor air quality conditions over the averaging periods of the appropriate objectives. The pollutants that have been addressed in detail include Nitrogen Dioxide (NO2) and Particulate Matter (PM10).

The major influence on air quality throughout the decommissioning phase of the proposed development is likely to be dust-generating activities and emissions from pre-construction machinery. At the construction phase of the proposed development the major influence on air quality is likely to be dust-generating activities such as movement of plant vehicles both on and around the working area. To reduce this impact a dust minimisation plan shall be place which will include the mitigation measures including site roads to be regularly cleaned and maintained, all vehicles existing the site to make use of a wheel washer facility, public roads outside the site to be regularly inspected etc. If the construction contractor adheres to good working practices and dust mitigation measures the levels of dust generated are assessed to be minimal and are unlikely to cause an environmental nuisance.

The impact on local air quality with the proposed development in place is predicted to be slight adverse for 2012 in terms of Nitrogen Dioxide (NO2) and negligible in relation to and Particulate Matter (PM10).
LANDSCAPE AND VISUAL

The assessment for this chapter of the ES was carried out by Mitchell and Associates. The application site is located within the Belfast/Lisburn Landscape Character Area 97 which encompasses the Belfast and Lisburn urban areas, together with their broader landscape setting.

Views to and from the site
Views to the north from within the application site are limited due to the existing series of buildings on Pilot Street, Albert Quay and Prince’s Dock Street. Views to the west from Clarendon Dock edge / Donegal Quay are more open with views to the Lagan River, Odyssey Arena and Titanic Quarter. The Harland and Wolff cranes stand tall on the skyline against the backdrop of the Hollywood Hills to east of Belfast. Views to the south are restricted due to the visual obstruction of the M2/M3 motorway and infrastructure. There are views under the bridge south along the Lagan River to the Lagan Weir and Queen Elizabeth Bridge. The Obel building, the tallest building in Belfast, currently under construction, is a significant visual element on the skyline, as is the Royal Mail building. From within the site at Clarendon Dock, the Belfast Harbour Office and the steeple of the Sinclair Seamans Church act as visual landmarks. There are views out to the Artillery Tower Blocks (between North Queens Street and New Lodge Street) to the west/north west of the site set against the topography of the Black Mountain, Divis Mountain and Cave Hill in the background.

Proposed Scheme
The Concept Masterplan proposals involve the removal of derelict elements of the existing site and the implementation of a mixed use development incorporating residential, commercial, retail, hotel, multi storey and underground car parking, and hard and soft landscaping with overall public realm improvements. The building heights will range from 2 storey residential developments to a 30 storey landmark commercial tower, a proposed 9 -14 storey hotel and an array of multi-storey commercial buildings. The 30 storey City Quays Tower is incorporated as the landmark of the overall development along the waterfront, with the adjacent buildings designed to stagger from the highest point to connect with the contiguous built form.

Impact on Landscape and Visual Amenity - Construction Stage
The completed development will alter the existing landscape character and visual amenity of the site. During the construction phase the landscape and visual effects will be largely confined to the application site, the contiguous area and from the eastern bank of the River Lagan (Odyssey). The landscape and visual impact will be caused by the visual presence of construction plant and machinery, including site hoardings, site offices, construction traffic, cranes, materials, partially constructed buildings etc., which will have a negative visual impact but will be seen as an acceptable impact during the construction phase of a project of this nature. The landscape and visual impact during the construction stage will also be short to medium term depending on the duration of construction.

Impact on Landscape and Visual Amenity - Post Construction Stage
In its existing condition several elements degrade the site, such as the surface car-parking, use of temporary palisade fencing, poor access and linkage to the adjacent City Centre, the adjacent derelict sites and adjacent derelict buildings. Therefore the landscape quality would be considered low when viewed locally. Following construction the landscape and visual impact from the surrounding area will generally be seen as an improvement given the existing site character and urban context. The taller elements of the scheme will be viewed against existing structures such as the Obel building and the existing built environment of Belfast City thus reducing the visual impact, while the proposed City Quays Tower on the Waterfront will act as a landmark building for the site.

Therefore, the insertion of the proposed high-quality designed mixed-use development will result in an overall improvement in terms of the landscape and visual character of the site.
A noise and vibration assessment was carried out by RPS Planning & Environment Consulting to determine the potential impacts from the proposed development. The assessment considered the following:

- Potential construction noise impacts;
- Impact from the increased traffic as a result of the proposed development;
- The suitability of the locations chosen for residential properties within the masterplan;
- Potential noise impact from plant/equipment, early morning deliveries; and
- Entertainment noise associated with the proposed development.

A noise monitoring survey was undertaken to determine if the locations proposed for residential development within the Concept Masterplan were suitable for that purpose. All measurements were taken in accordance with the most recent standards and guidance on environmental noise measurement.

During the construction phase, there is potential for significant noise impacts at the nearest noise sensitive receptors however mitigation measures have been included in the ES to ensure that the levels are reduced as much as practicable.

The proposed Concept Masterplan has been designed to minimise the potential noise impacts from the commercial, retail, café, restaurant and hotel land uses on the proposed residential units. In this way, the potential for plant/equipment, early morning delivery and entertainment noise has been greatly reduced. There is potential for such impacts at certain locations within the masterplan. These locations have been highlighted in the ES and mitigation measures have been suggested to ensure that no significant noise impacts are experienced at the nearest noise sensitive receptors.

The assessment of road traffic noise indicated that the majority of routes within the study area will experience traffic flow increases of less than 25% as a result of the proposed development. This equates to a noise level increase of less than 1 decibel, a noise level increase which would be imperceptible to the vast majority of people. Larger traffic flows increases are experienced at parts of Corporation Square, Clarendon Dock, Donegall Quay North and at Tomb Street. Site access in the proposed masterplan however these will not result in any significant noise impacts at nearby residential properties.

The assessment of the residential portions of the proposed development concluded that there is no significant problem with the location of the proposed residential units. On account of the city centre location, noise levels are generally quite elevated. A range of measures are required to ensure that all of the proposed residential units meet the required internal noise environments suitable for residential properties. These measures are outlined in detail in the Environmental Statement.
A wind microclimate assessment of the likely wind conditions was carried out by RWDI Anemos Ltd within and around the proposed development. A scaled model of the proposed development and surrounds was tested in a wind tunnel with the wind conditions at pedestrian head height measured at a number of locations around the site. The wind microclimate results were compared with the Lawson Comfort Criteria to describe the impact of the wind conditions for different pedestrian activities. The criteria have been used for over 30 years on numerous schemes across the UK and gives threshold values of wind speeds for different types of pedestrian activities. Six types are defined: sitting, standing or entering/existing a building entrance, leisure walking, business walking and roadway or car park use. If the measured wind conditions exceed the threshold then conditions are unacceptable for the stated pedestrian activity.

Three scenarios were tested including the existing site, the proposed development with existing surroundings and the proposed development with proposed future surrounding buildings.

The existing site, or ‘baseline’, is relatively open and exposed and this is reflected in the wind microclimate assessment because there are many locations where the wind microclimate is classified as suitable for leisure walking during the windiest season.

The results of the assessment are summarised below:

- For the windiest season, the wind conditions across the site can be divided into a relatively sheltered westerly zone, when compared with the existing conditions, and an eastern perimeter where there are localised zones which are windier than the existing.
SERVICES AND UTILITIES

This section of the ES was prepared by RSK Ireland Ltd and assesses the services and utilities of the application site in the context of the proposed development. It focuses primarily on the existing infrastructural services and utilities within the vicinity of the application site and identifies any potential impacts from, or on, the proposed development. Information reviewed as part of the assessment includes electricity services, water services, telecommunications, harbour related infrastructure and street and road lighting.

- Electricity supply - existing supply is via a 6.6KV underground cable with the electricity distributed via a number of transformers.

- Water services - a majority of the foul/storm/combined sewers are located on Clarendon Dock, Clarendon Road, Corporation Street and Pilot Street and these service smaller connections to the existing facilities on the site.

- Telecommunications - both BT and Virgin Media infrastructure exists within the application site, which is distributed to the various existing buildings via a number of joint boxes.

- Harbour related infrastructure - gas services are primarily associated with supplies to the Harbour Commissioners’ Office and Sinclair Seaman’s Church. Additional services are present in Pilot Street, Prince’s Dock Street, Garmoyle Street and Dock Street. There is no evidence to suggest that gas services are present within any of the car parks on site.

- Street and road lighting - DOE street lighting is associated with the existing car parks and also in the vicinity of the Harbour Commissioners’ Office. In addition there is street lighting not maintained by the DOE, particularly associated with the former ferry terminal.

It is likely that the proposed development will avail of the existing service and utilities present on the site. All works will be undertaken with permissions and approvals in place as necessary and appropriately qualified persons will carry out the work. The most likely impact associated with services and utilities is during the construction phase of the proposed development and the resultant excavations required to connect the services to the new developments. The impacts will be temporary and are unlikely to persist for the duration of the construction phase.

In an effort to minimise the impacts all new service and utility provisions will be co-ordinated to avoid multiple excavations and excavations will be restricted to footpaths and roadways where practicable. All services and utilities will be installed in accordance with the provider’s requirements and under their guidance to minimise accidental damage.
OVERALL ASSESSMENT

The proposed development on this brownfield site close to the traditional City Centre has evolved from analysis of the site’s constraints and opportunities, the planning policy context and a range of environmental assessments. The Concept Masterplan is a response to the findings of the environmental assessment process and extensive consultations with Planning Service, other government agencies and a large number of stakeholders. The Belfast Harbour Commissioners are committed to make this a high quality sustainable development which will attract inward investment in jobs and fully exploit this waterfront site’s tourism and leisure potential whilst retaining its very important heritage assets. The proposals also provide a quality residential environment which will complement both the housing developments already completed within Clarendon Dock and those proposed in the wider area.

Through the environmental impact assessment process any remaining potentially adverse impacts on the environment from the proposed development have been identified and mitigation measures set out in each chapter of the ES to minimise these impacts. The interactions between the various potential environmental impacts have been identified in the appropriate chapters of the ES (e.g. air quality, noise and traffic).

The long term impacts of the proposed development include:

• Re-use of underused and derelict brownfield lands in a unique, historic waterfront setting
• Consolidation of this 1990s harbour area redevelopment by well designed infilling of buildings and public realm to produce an identifiable and accessible part of the City Centre.
• Provision of a sustainable development with a mix of land uses and activity along the streets to provide a lively and safe urban environment for residents, employees and tourists
• Enhancement of the public perception of this part of the city and a renewed impetus for regeneration of the surrounding areas of Sailorstown and Little Italy and North Belfast generally
• The provision of additional well landscaped public open spaces and carefully sited private open spaces, along with enhanced streetscape
• Improved ground conditions by de-contamination works and flood mitigation through the implementation of higher road levels and finished floor levels
• Improvements to the site’s current ecological value
• Retention of the site’s current built heritage and improvement of its setting
• Careful recording of any archaeological findings during the construction process
• New office, retail and leisure jobs both during construction (800 jobs) and on completion of each phase of the development, with an estimated total of 10,925 full time equivalent direct, indirect and induced jobs on completion.
• Improvement to the site’s landscape character and visual impact through removal of existing surface car parking and dereliction, the careful siting of new buildings and open spaces and retention of key views into and out of the site.
The Environmental Statement may be inspected at Central Library, Belfast. Copies of the Environmental Statement may be purchased from the offices of Turley Associates, 29-31 Montgomery Street, Belfast, BT1 4NX (Tel: 028 90 897 400, e-mail: swalker@turleyassociates.co.uk) Price £400 inclusive of postage and packaging. Copies of the Concept Masterplan may also be purchase priced £75 inclusive of postage and packaging.