

5 APPROACH TO ENVIRONMENTAL IMPACT ASSESSMENT

5.1 Introduction

5.1.1 Wardell Armstrong LLP is committed to the delivery of effective practice in EIA. As a registrant of the Institute of Environmental Management and Assessment's (IEMA) EIA Quality Mark, Wardell Armstrong's EIA practice is independently reviewed in accordance with best practice.

5.1.2 This Environmental Statement (ES) has been prepared with regards to the requirements of the EIA Regulations, which apply to the Proposed Development, as set out in this Chapter.

5.2 Requirement for EIA

5.2.1 Prior to planning consent being granted, there is a statutory requirement under the EIA Regulations to undertake an EIA and prepare an ES for any development that is likely to result in a significant adverse effect upon the environment.

5.2.2 Schedule 1 of the EIA Regulations lists all development types for which an EIA is mandatory. Schedule 2 of the EIA Regulations lists all development types for which EIA is not mandatory, but which may be appropriate, depending on the scale and nature of the proposed project, and the sensitivity of the site and its surroundings.

5.2.3 The Proposed Development falls under Schedule 2(10b) of the EIA Regulations (Urban Development Projects), the threshold criteria for which is a development that includes:

- more than 1 hectare of urban development which is not dwellinghouse development; or
- more than 150 dwellings; or
- the overall area of the development exceeds 5 hectares.

5.2.4 Due to the size and scale of the current proposals and following a review of the environmental effects considered within planning applications submitted for similar developments in the surrounding area, it is considered that an EIA is required.

5.2.5 As such an EIA has been undertaken, and an Environmental Statement prepared and submitted in support of the hybrid planning application.

5.2.6 The EIA has been undertaken in accordance with the EIA Regulations, having regard to Schedule 4 which sets out the information for inclusion within an Environmental Statement. Paragraph 5 of Schedule 4 states that the description of likely significant effects in the EIA should identify *“direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development”* on the environment.

5.3 Scope of the EIA

5.3.1 Schedule 4 of the EIA Regulations sets out specific requirements for the content of an ES. Whilst every ES should provide a full and factual description of the effect(s) of a given development, Schedule 4 places an emphasis upon identifying ‘likely significant effects’. Other effects that are not significant or of little significance need only a brief reference within the ES in order to indicate that their potential significance has been considered.

5.3.2 Schedule 4 states that an ES should provide a detailed description of the development, and an outline of the reasonable alternatives considered by the Applicant. The outline of alternatives should include an indication of the main reasons for the choices made, taking into account the environmental effects.

5.3.3 Schedule 4 also states that a Non-Technical Summary (NTS) of the ES should be provided. To this end, the ES is accompanied by a separate stand-alone NTS produced using non-technical language.

5.3.4 In accordance with Schedule 4, likely significant effects of the development on the environment should be considered, in particular effects on: population, human health, biodiversity (e.g. fauna and flora), land, soil, water, air, climate, material assets, cultural heritage, landscape and the interrelationship between the above factors.

5.4 Scoping Process

5.4.1 The scope of this ES has been developed in consultation with Cardiff Council and other statutory consultees.

5.4.2 A Scoping Report (Appendix 5.1) was prepared and submitted to Cardiff Council on 17th June 2021 as a formal request for a Scoping Opinion, outlining the proposed scope of the EIA in order to engage consultees within the EIA process.

- 5.4.3 The Scoping Report included consideration of the existing environmental baseline, identification of sensitive receptors and consideration of potential mitigation measures which could be embedded within the design of the scheme.
- 5.4.4 At the time of writing, Cardiff Council’s formal Scoping Opinion has not yet been received. Comments received in response to the Joint Applicant’s pre-application request and individual consultee responses on the scope of the ES have been shared by Cardiff Council in the interim, including scoping comments from Natural Resources Wales (NRW) which were provided in July 2021 (Appendix 5.2).
- 5.4.5 In accordance with the Scoping Report, pre-application request feedback and individual scoping response comments, Table 5.1 sets out the topics considered within this ES, and the authors of each technical chapter.

Table 5.1: Scope of the EIA		
ES Chapter No.	Topic	Author
7	Traffic and Transport	WSP
8	Water Resources	Wardell Armstrong LLP
9	Ground Conditions	Arup
10	Biodiversity	Phlorum
11	Air Quality	Wardell Armstrong LLP
12	Noise and Vibration	Wardell Armstrong LLP
13	Cultural Heritage	Archaeology Wales
14	Socio-economics	Arup
15	Health	Arup
16	Townscape and Visual Amenity	Wardell Armstrong LLP
17	Climate Change	Wardell Armstrong LLP
18	Materials and Waste	Wardell Armstrong LLP
19	Wind Microclimate	Arup
20	Daylight, Sunlight and Overshadowing	Arup

- 5.4.6 In accordance with Regulation 17(4) of the EIA Regulations, the EIA has been undertaken, and the ES prepared, by competent experts. A statement outlining the relevant expertise and qualifications of the team involved in the EIA is set out within the Statement of Expertise included at the end of this ES.

5.5 Approach to EIA

Evaluation of Significant Effects

5.5.1 The ES sets out the assessment methodologies relevant to each environmental topic, based on recognised guidance and good practice. Each technical assessment has considered potential effects of the Proposed Development, and evaluated the significance of these effects.

5.5.2 To evaluate the significance of effects, consideration of the sensitivity of a receptor, and the magnitude of change that could affect that receptor, is required.

Receptor Sensitivity

5.5.3 The sensitivity or value of a receptor may be classified by its proximity to the Proposed Development, its use, or its importance, as informed by legislation, policy, and guidance, and qualified by professional judgement.

Magnitude of Change

5.5.4 The magnitude of change that could affect a receptor as a result of the Proposed Development would be identified on a scale of change from minor alterations to major change or loss of a receptor. For some environmental topics, guidance on levels of acceptability means such change is based on quantitative parameters whilst for other topics this can be informed by professional judgement using qualitative parameters.

Determining Significance

5.5.5 Significance is determined with reference to the sensitivity of receptors that could be affected, together with the magnitude of change likely to occur. This is often determined across the environmental topics through a significance evaluation matrix.

5.5.6 For some environmental topics, variations in this approach may be applicable and where relevant this is detailed in the assessment methodology section of each ES chapter.

5.5.7 Definitions for the categories used within the matrix have been derived for each environmental topic and outlined in each ES chapter, along with descriptions of receptor sensitivity, magnitude of change and levels of significant effect.

5.5.8 Table 5.2 outlines the overall significance matrix that has been used for the EIA. Effects can be beneficial or adverse.

Table 5.2 Matrix for Evaluating Significance						
		Magnitude of Change				
		Very Low	Low	Medium	High	Very High
Sensitivity	Very Low	Negligible	Negligible	Negligible	Minor	Minor
	Low	Negligible	Negligible	Minor	Moderate	Moderate
	Medium	Negligible	Minor	Moderate	Major	Major
	High	Minor	Moderate	Major	Major	Major
	Very High	Minor	Moderate	Major	Major	Major

5.5.9 Major effects, where accepted limits or standards are exceeded have been determined as significant in EIA terms.

5.5.10 Moderate effects, within accepted limits or standards, but close to reaching the relevant threshold may be determined as significant, although there may be scenarios where such effects are considered not significant based on the specific circumstances being considered and professional judgement.

5.5.11 Minor effects, well within accepted limits or standards, or negligible effects, have been determined as not significant.

Assessment Scenarios

5.5.12 The EIA considers the likely significant effects of the Proposed Development during construction and upon completion / operation of the development, assuming a likely ‘worst case’ scenario for the purposes of assessment.

5.5.13 The EIA considers the Proposed Development as a whole (both outline and detailed elements) as well as assessing likely significant effects following completion of the first phase of development (the Arena and Hotel development).

5.5.14 Unless otherwise stated within each technical chapter, a baseline scenario of 2021 has been considered, with work anticipated to commence in 2022.

5.5.15 In order to assess likely significant effects arising during construction, a peak construction scenario has been considered based on peak construction traffic movements and activity in order to assess a worst-case scenario.

5.5.16 The phased works for the Proposed Development as set out in Section 3.4 of this ES are anticipated to be completed in 2032 and this fully operational scenario is considered within the EIA.

5.6 Cumulative Effects Assessment

5.6.1 In accordance with Schedule 4 of the EIA Regulations, the ES considers potential significant effects arising from the cumulation of effects with other existing and / or approved projects.

5.6.2 Within the assessment of cumulative impacts, there are two aspects to consider:

- Intra-cumulative effects (i.e. those occurring as a result of the Proposed Development in isolation); and
- Inter-cumulative effects (i.e. those occurring as a result of the Proposed Development in combination with other development).

5.6.3 Chapter 21 summarises both the significance of any residual effects detailed within the technical ES chapters and any likely significant cumulative effects.

Intra-cumulative Effects

5.6.4 The EIA has considered where a significant residual cumulative impact is expected to occur on a particular receptor as a consequence of collective actions, aspects or effects of the Proposed Development. Chapter 21 summarises the residual impacts likely to be experienced for each type of receptor and assesses the significance of these cumulative effects.

Inter-cumulative Effects

5.6.5 Schedule 4 states that an ES should include a *“description of the likely significant effects of the development on the environment, resulting from... the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources”*.

5.6.6 The ES has considered the schemes set out within Table 5.3, within the assessment of cumulative effects.

- 5.6.7 A review of planning applications submitted to Cardiff Council between 2016 and July 2021 has been undertaken to identify potential development schemes that could give rise to in-combination effects with the Proposed Development.
- 5.6.8 The EIA Regulations outline cumulative schemes as being “*other existing and / or approved development*” therefore the schemes in Table 5.3 are either permitted schemes (under construction or not yet implemented), submitted schemes (with the potential for applications to be determined prior to submission of the Proposed Development application), and schemes subject to appeal procedures with potential to be determined prior to submission of the Proposed Development application).
- 5.6.9 Of these potential cumulative schemes, consideration has been given to those which have also been determined as EIA development and thus likely to give rise to potentially significant environmental effects. Small development schemes in close proximity to the Site have also been considered due to their location.

Table 5.3 Schemes for consideration within Cumulative Effects Assessment		
Scheme	Description	Status
16/00660/MJR The Wharf, Schooner Way, Atlantic Wharf	Mixed use residential development of 180 dwellings with A1 (retail) and A3 (food and drink) use to ground floor and associated works.	Under construction
17/01292/MJR Land at Suffolk House, Trade Street, Butetown	Outline planning permission for the demolition of existing buildings and re-development of the site for new student residential accommodation.	Planning permission granted February 2018
17/01906/MJR Custom House, Custom House Street and former York Hotel, City Centre	Redevelopment of the site to provide a 248-bed hotel (class C1) and ancillary restaurant (class A3), including partial demolition of Custom House, retention and restoration of the Custom House Façade, demolition of the former York Hotel and associated access, parking and ancillary works.	Under construction
17/01300/MJR East Bay Close, Atlantic Wharf	Erection of student block to form 711 No student rooms and ancillary accommodation plus landscaping and car parking.	Under construction



Table 5.3 Schemes for consideration within Cumulative Effects Assessment		
Scheme	Description	Status
17/02615/MJR Land on the north and south side of John Street, Callaghan Square, Butetown	Hybrid application comprising of full application for the proposed mixed use commercial building on the south site No. 1 John Street outline application proposed mixed use commercial & leisure hotel for the north site No. 2 John Street including associated parkin, public realm and landscape works.	Under construction
18/00735/MJR Brains Brewery, Crawshay Street, Butetown	Full planning application for an office building providing business (use class B1) floorspace, with ancillary gym (use class D2), marketplace / retail (use class A1) and food and drink (use class A3) uses; a multi-storey car park (sui generis) with ancillary retail (use class A1); and public realm, access, drainage and other infrastructure works required for the delivery of Central Quay (Phase 1)	Under construction
18/01280/MJR Land adjacent to 12 – 14 Drake Walk, Atlantic Wharf	Six storey serviced accommodation comprising serviced apartments with ground floor commercial / amenity space, re-routing of public riverside walkway and renovation of existing dock feeder footbridge.	Planning permission granted August 2020
18/01705/MJR Site of former Marland House and NCP Car Park, Central Square	Erection of a transport interchange with an associated concourse and ancillary retail / commercial units (use classes A1 / A2 / A3), 305 residential apartments (use class C3), 10,318sqm (GIA) office floorspace (use class B1), a 249-space car park, public realm and related infrastructure and engineering works.	Under construction
18/02634/MJR Plot J, Capital Quarter, Tyndall Street, Atlantic Wharf	Full planning application for 307 private rented sector (PRS) units and associated works.	Under construction
19/00632/MJR Part of land at Schooner Way, Atlantic Wharf	Proposed mixed-use development comprising residential (12 units), office (use class B1 520sqm), local needs retail (use class A1 two units x 117sqm each), café (use class A3 120sqm), restaurant (use class A3 360sqm), plus undercroft parking.	Awaiting decision
19/01930/MJR Crawshay Court,	188-unit apartment building with ancillary areas, parking, public open space, A1 / A3 unit(s) and a residents roof terrace.	Planning permission



Table 5.3 Schemes for consideration within Cumulative Effects Assessment		
Scheme	Description	Status
Curran Road, Butetown		granted July 2020
19/02851/MJR Site adjacent to St Mary the Virgin Church, Bute Street, Butetown	New build 2 form entry primary school & flying start and special resource base to replace existing St Mary the Virgin CIW Primary School.	Permitted May 2020
20/00102/MJR The Brewery, Crawshay Street, Butetown	Refurbishment and extensions to former brewhouse for a mixed-use development and retention of associated chimney.	Planning permission granted May 2020
20/00204/MJR 1, 2 and 3-7 Percy Street and Penarth Road, Butetown	Demolition of former BMW car showroom, workshop and offices along with five residential units fronting onto Percy Street.	Approved March 2020
20/00262/MNR Part of Canal Park adjacent to Cardiff and Vale College, Dumballs Road, Butetown	Construction of 3G pitch with floodlighting and spectator seating plus changing facilities with external pathways all within fenced enclosure.	Under construction
20/00384/MJR Cardiff and Vale College, Dumballs Road, Butetown	Construction of multi-use games area sports pitches with airdome cover plus changing pavilion and amendments to parking layout.	Under construction
21/00783/MJR Land at Curran Embankment, Butetown	Demolition of existing buildings / structures and the comprehensive mixed-use redevelopment to provide up to 2,500 new homes (class C3), business space (class B1) and a mix of complementary leisure, food and drink, hospitality, retail and health and wellbeing uses (class A1, A2, A3, C1, D1 and D2); creation of new open space (including a new riverside park and water taxi stop); new pedestrian, cycle and vehicular access points; pedestrian footbridge; vehicular and cycle parking facilities; landscaping; public realm and other associated ancillary and highways works. all matters reserved other than vehicular access.	Application validated April 2021



Table 5.3 Schemes for consideration within Cumulative Effects Assessment		
Scheme	Description	Status
<p>21/01666/MJR Land at Channel View, Grangetown</p>	<p>Hybrid planning application for mixed-use development. Outline permission for: The redevelopment and extension of part of the Channel View Estate for up to 319 residential apartments and houses, up to 285sqm of retail floorspace (Use Class A1), communal gardens incorporating allotments and picnic areas, formal and informal children’s play space, landscaping, cyclepaths/footpaths, drainage infrastructure, roads and parking; The regeneration of the Marl public open space to include new/improved sports pitches, children’s play space, a new ‘beach’, water features, landscaping, and cyclepaths/footpaths; The provision of a new bus/cycle/pedestrian link between Channel View Road and South Clive Street and a new cycle/pedestrian link between South Clive Street and Ferry Road; The provision of a new parking area; Together with associated works (all matters reserved for future consideration). Full planning permission is sought for a first phase of development comprising of new tower blocks (8-13 storeys) providing 81 elderly-persons (over 55s) community-living accommodation units, a 115sq.m community cafe, communal gardens incorporating allotments and picnic areas, landscaping, drainage infrastructure, footpaths, roads, parking and associated works.</p>	<p>Application validated July 2021</p>

5.7 Mitigation

5.7.1 Mitigation measures to avoid, reduce or offset the consequences of the Proposed Development will be embedded within its design whilst others may require adherence to particular constraints on construction methodology or mode of operation. The final assessment of significance has taken into account the mitigation measures and constraints that have been incorporated into the Proposed Development (i.e., the assessment of residual effects).

5.8 Aspects to be scoped out of the EIA

5.8.1 Specific chapters / assessments have not been included for the following topics, as it is considered that these are addressed sufficiently elsewhere within the ES or planning

application, and / or the Proposed Development is unlikely to result in significant environmental effects relevant to these topics.

Risks of Major Accidents and / or Disasters

- 5.8.2 The EIA Regulations state that an EIA should consider the vulnerability of the development to risks of major accidents and / or disasters, relevant to the project concerned.
- 5.8.3 ‘Risk’ can be defined as ‘the likelihood of an impact occurring, combined with effect or consequence(s) of the impact on a receptor, if it does occur’; a ‘Major Accident’ can be defined as ‘events that threaten immediate or delayed serious damage to human health, welfare and / or the environment’; and a ‘Disaster’ can be defined as naturally occurring hazards such as extreme weather events (e.g. storm, flood, temperature) or ground-related hazard events (e.g. subsidence, landslide, earthquake) or man-made / external hazards with the potential to cause an event or situation. Disaster and natural disaster are often used interchangeably.
- 5.8.4 Owing to the nature of the Proposed Development, it is considered that the likelihood of it resulting in / causing an event to occur that threatens (either immediate or delayed) serious damage to human health, welfare and / or the environment is low.
- 5.8.5 The design of the Proposed Development incorporates measures to reduce the vulnerability of the development to naturally occurring extreme weather events (i.e., flooding, storms and extreme temperatures) and / or ground related hazard events (e.g., subsidence, earthquakes and ground contamination).
- 5.8.6 Such scenarios have been considered across the relevant environmental topics of the ES, for example the Water Resources, Ground Conditions, Climate Change and Health chapters.
- 5.8.7 Secure by Design principles have also been incorporated into the design of the Proposed Development including a number of proposed safety and anti-terrorism features including CCTV coverage, external barriers / strengthened perimeters and discouraging bins within crowded areas. The landscaping proposals have been designed in collaboration with a Counter Terrorism Security Advisor to ensure that extraordinary threats related to terrorist attacks can be mitigated. The landscape measures proposed include a mix of native trees and native understorey planting and anti-terrorism street furniture around the arena to add interest and mitigate impact.

The landscaping proposals have also been designed to balance the security requirements for the arena by reducing opportunities for hiding / entrapment spaces, obscure signage, lighting or CCTV, or potential climbing aids into properties.

5.8.8 The topic of major accidents and / or disasters is therefore scoped out as it is considered sufficiently elsewhere within the ES / planning application and a standalone chapter is not required.

5.9 Planning Policy

5.9.1 In February 2021, Future Wales: The National Plan 2040 was published, which forms the National Development Framework for Wales, setting out the direction for development to 2040. The National Plan aims to provide a clear, long term spatial strategy for Government policy, action and investment in Wales.

5.9.2 Alongside the National Plan, Planning Policy Wales (PPW) was republished in February 2021 (Edition 11). PPW outlines land use planning policies, supported by topic based Technical Advice Notes, and has been designed to ensure the planning system supports the delivery of sustainable development and improves social, economic, environmental and cultural well-being.

5.9.3 Cardiff Council's Local Development Plan (LDP) was adopted on 28th January 2016 and is the basis for decision making on land use planning in Cardiff. The purpose of the LDP is to guide and manage development in Cardiff through to 2026. The LDP is supported by Supplementary Planning Guidance (SPG) covering a range of planning-based topics. The Council is currently in the process of preparing a new LDP for Cardiff to replace the existing Local Development Plan. The new plan will be called the Cardiff Replacement Local Development Plan and will shape Cardiff over the period 2021 to 2036.

5.9.4 The planning policy and guidance relevant to each environmental topic is outlined in the relevant chapters of this ES. A Planning Statement has also been produced to support the hybrid planning application.