Kirklees Council | Turner & Townsend | Queensberry | ipw | Pegasus Group | FeildenCleggBradleyStudios

ARUP | re-form landscape architecture | counter context | Etude | Sustainable Construction Services | Jane Simpson Access

# KIRKLEES CULTURAL HEART

## ENVIRONMENTAL STATEMENT: VOLUME 1 MAIN REPORT AND FIGURES

Pegasus Group

Issue date : 30.09.22

# Contents.



# Figures (presented either within or at the end of each Chapter)

# Appendices (Bound separately in Volume 2).

# 1 INTRODUCTION

## 1.1 INTRODUCTION

1.1.1 This Environmental Statement (ES) has been prepared to accompany a full planning application (and 2no. Listed Building Consent applications) for a proposed mixed-use development known as 'Kirklees Cultural Heart' (the "Proposed Development") which has the following description of development:

> *"Application for 'Demolition of the existing Piazza shopping centre, part removal of elements of Queensgate Market, and demolition/retention of service tunnels; with redevelopment of the site to form new public realm space (including public park and gardens, play areas, public square/outdoor event space); refurbishment and change of use of existing Queensgate Market Hall into new food hall (Use Class E (b) Sale of food and drink for consumption, mostly, on the premises); refurbishment and extension of existing library and art gallery building to form a new museum (Use Class F.1); change of use of part existing market hall building and extension to form a new public library (Use Class F.1); construction of new indoor event venue incorporating multi-storey car park below (Sui-Generis); erection of new public gallery building (Class F.1); and associated infrastructure on land and buildings at Queensgate Market, Huddersfield Library and Art Gallery, and Piazza (and The Shambles) Shopping Centre, Huddersfield."*

1.1.2 The application site address has previously been known as 'land north and west of the A62-Queensgate, including Queensgate Market, Huddersfield Library and Piazza (and The Shambles) Shopping Centre, Huddersfield (the "Application Site")' but is now referred to within the planning application as '*land and buildings at Queensgate Market, Huddersfield Library and Art Gallery, and Piazza (and The Shambles) Shopping Centre, Huddersfield*.' The application has been prepared on behalf of Kirklees Metropolitan Borough Council (hereafter referred to as "Kirklees Council"). The project proposals include:

- *the retention and reuse of listed buildings within the site, principally Queensgate Market and the Library and Art Gallery;*
- *the demolition of buildings within the site, including the parade of shops within the Piazza, elements of the Market Hall fronting onto Peel Street, the Shambles shopping arcade and the retail units fronting Princess Alexandra Walk; this demolition being necessary in order to facilitate the scope, scale and ambition of the project;*
- *the demolition, adaptation and retention of service tunnels, where appropriate;*
- *a new library, located within the Market Hall (along with some extension works), of around 5,000sqm (Gross Internal Area);*
- *a new museum of around 6,000sqm (Gross Internal Area), located within the existing Library and Art Gallery building, with an extension upon its northern elevation;*
- *a gallery space fronting onto Queen Street, of around 3,000sqm (Gross Internal Area);*
- *a new venue space upon the site of the former multi-storey car park, accommodating around 2,200 people at approximately 8,000sqm of Gross Internal Area;*
- *a new multi-storey car park below the new venue, accommodating around 350 spaces (including EV charging stations);*

- *a new food hall, located within the Market Hall, of around 2,500sqm (Gross Internal Area);*
- *public realm and a new urban park, including an outdoor event space for around 3,000 people, linking the above-mentioned components of the scheme, including a new frontage to Queen Street (in lieu of the demolished buildings) and into the northern section of the site and leading up to King Street;*

1.1.3 linked to the above, a scheme of hard and soft landscaping measures across the site, including the retention of existing features, where possible. The Application Site is situated within the administrative area of Kirklees Metropolitan Borough Council. A site location plan showing the red line planning application boundary of the site is included within **Figure 1.1.**

## 1.2 EIA REGULATIONS AND PROCEDURES

1.2.1 An Environmental Statement (ES) is a document that sets out the findings of an Environmental Impact Assessment (EIA). An EIA is a process for identifying the likely significance of environmental effects (beneficial or adverse) arising from a Proposed Development, by comparing the existing environmental conditions prior to development (the baseline) with the environmental conditions during/following the construction, operational and decommissioning phases of a development should it proceed. The EIA is carried out prior to the submission of a planning application.

1.2.2 The statutory requirements for carrying out an EIA, the contents of the ES and the procedures for determining planning applications for 'EIA Development' are set out within the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 as amended (the "EIA Regulations").

1.2.3 Where an application is made for planning permission for EIA development the Local Planning Authority (LPA) is not permitted under the EIA Regulations to grant planning permission unless they have first taken the relevant environmental information into consideration.

1.2.4 In order to determine if it is necessary to undertake an EIA to accompany a planning application, Regulation 5 of the EIA Regulations makes provision for an applicant to apply to a LPA for a 'Screening Opinion' as to whether an EIA is required. This is discussed further below.

**Screening**

1.2.5 The EIA Regulations require that any proposed development falling within the categories set out within Schedule 2, should be considered as 'EIA Development', where the development is considered likely to have significant effects on the environment by virtue of such factors as its nature, size or location (Regulation 2).

1.2.6 The Proposed Development falls within the category of "Infrastructure Projects – Urban Development projects under Schedule 2, category 10 (b) and exceeds the threshold of 5ha and includes more than 1 ha of urban development which is not a dwelling house development.

1.2.7 Kirklees Council issued a formal Screening Opinion on 3rd March 2022 (Ref 2022/20030), confirming that:

> "*For the reasons explained in this Screening Opinion assessment, the development is not required to provide an Environmental Statement. This conclusion is contingent on the information submitted for the purpose of this Screening Opinion, which is limited, and which could be subject to change dependent on further details emerging of the design of*

*the Cultural Heart development. It is therefore recommended that, while the Local Planning Authority are of the opinion that the Cultural Heart development does not require an Environmental Statement prepared in accordance with the Environmental Impact Assessment Regulations 2017, this does not preclude a further Screening Opinion being sought by the applicant once the proposal's design is worked up in greater detail."*

1.2.8 It has therefore been determined that a voluntary ES is to be prepared for the Proposed Development.

**Scoping**

1.2.9 In order to determine the scope of an EIA, the EIA Regulations make provision for, but do not statutorily require, an applicant to request that the LPA provide a written opinion as to the information to be provided within the ES (Regulation 15).

1.2.10 A Scoping Request was made on 8th June 2022. Technical responses from Kirklees Council Officers covering Transport, Air Quality and Heritage matters were subsequently provided. Details on the scope of the technical chapters within this ES are set out in **Chapter 2 Assessment Scope and Methodology**.

## 1.3 STRUCTURE OF ENVIRONMENTAL STATEMENT

1.3.1 This ES comprises studies on each of the aspects of the environment identified as likely to be significantly affected by the Proposed Development (the 'technical chapters'), which are supported with figures and technical appendices where appropriate.

1.3.2 This ES is structured as follows:

- **Environmental Statement – Volume 1: Main Report and Figures -** Comprises the main volume of the ES, including 'general chapters' that describe the EIA context which, provide a description of the Application Site and Proposed Development, and set out the scope of the ES, followed by the 'technical chapters' for each environmental theme and concluding with a summary.
- **Environmental Statement – Volume 2: Appendices -** Comprises the associated Appendices which accompany the 'general chapters' and 'technical chapters'.
- **Environmental Statement: Non-Technical Summary (NTS)** – this provides a concise summary of the ES identifying the likely significant environmental effects and the measures proposed to mitigate or to avoid adverse effects of the Proposed Development.

1.3.3 The content of the ES Main Report comprises:

- Chapter 1 Introduction
- Chapter 2 Assessment Scope and Methodology
- Chapter 3 The Application Site
- Chapter 4 The Proposed Development and Alternatives Considered
- Chapter 5 Planning Policy Context
- Chapter 6 Socio-Economics
- Chapter 7 Cultural Heritage
- Chapter 8 Transport
- Chapter 9 Air Quality

1.3.4 For continuity, the Figures and Appendices are arranged and presented using the same reference numbers as the chapters as a means of providing supportive background and technical information.

**The EIA Consultant Team**

1.3.5 The ES has been coordinated and managed by Pegasus Group. Pegasus Group is certified under Institute of Environmental Management and Assessment ("IEMA") Quality Mark which is a mark of excellence in EIA co-ordination and management. Pegasus Group has obtained, and retained since inception, its EIA Quality Mark status which is assessed by IEMA.

1.3.6 The consultants who have contributed to the preparation of this ES are set out below and are referenced in the project directory at the front of this document, along with information demonstrating their "*expertise to ensure the completeness and quality of the ES"* in accordance with the EIA Regulations.

**Table 1.1 EIA Consultancy Team**

| Topic | Consultant |
|---|---|
| Socio-Economics | Pegasus Group |
| Cultural Heritage | Pegasus Group/FCBS |
| Transport | ARUP |
| Air Quality | ARUP |

## 1.4 OTHER DOCUMENTS

1.4.1 A number of other documents have been submitted to Kirklees Council as part of, and accompanying, the planning and Listed Building Consent application. These are set out in the covering letter to the planning application and summarised below:

- Planning Application Form;
- Planning & LBC Application Drawings (FCBS, Re-Form and technical consultants);
- Planning Statement (Pegasus Group);
- Statement of Community Involvement (Counter Context)
- Design and Access Statement (FCBS); and
- Health Impact Assessment (Pegasus Group)
- Socio-Economics Benefit Statement (Pegasus Group)
- Townscape & Visual Impact Assessment (Pegasus Group)
- Heritage Assessment (Above ground setting Assessment (Pegasus Group)
- Existing Library Thermal Enhancement Strategy (FCBS)
- Statement of Significance/Heritage Impact Assessment (FCBS)
- Arboricultural Impact Assessment (Brooks)
- Public Realm/Landscape Management Plan (Re-Form)
- Sustainability Report (Etude)
- Lighting Strategy (ARUP)
- Site Investigation Phase 1 Assessment/Coal Mining Risk Assessment (ARUP)
- Demolition and Remediation Strategy (ARUP)
- Structural Survey (ARUP)

- Utilities Impact Assessment (ARUP)
- Flood Risk Assessment (ARUP)
- Drainage Impact Assessment (ARUP)
- Drainage Management Plan (ARUP)
- Site Waste Management Plan 2 (Construction) (ARUP)
- Site Waste Management Plan 2 (Operational) (ARUP)
- Transport Assessment (ARUP)
- Travel Plan (ARUP)
- Preliminary Ecological Appraisal (ARUP)
- Biodiversity Net Gains Calculations (ARUP)
- Noise Assessment (ARUP)
- Air Quality Assessment (ARUP)
- Ventilation and Extraction Statement (ARUP)

## 1.5 ENVIRONMENTAL STATEMENT AVAILABILITY AND COMMENTS

**Availability**

1.5.1 This ES should be made available by Kirklees Council for public viewing during normal office hours. For details of where they can be viewed and the times they are available contact Kirklees Council's Planning Department:

- Telephone: (01484) 221000
- Email: local.development@kirklees.gov.uk
- Address: Civic Centre III
  Market Street
  Huddersfield
  HD1 2EY
- Website: https://www.kirklees.gov.uk/beta/planning-and-development.aspx

1.5.2 The ES and planning application documents may also be available via Kirklees Council's website once the planning application has been registered.

1.5.3 Alternatively, the ES may be purchased, the costs for which are set out below:

- Volume 1: Written Statement and Figures - £50
- Volume 2: Appendices - £50
- Non-Technical Summary (NTS) - £10
- Digital copies of the above documents on a CD - £10

1.5.4 For copies of any of the above please contact Pegasus Group (quoting reference P21-0731) at the following address:

Pegasus Group
Pavilion Court
Green Lane
Garforth
Leeds
LS25 2AF
Tel: 0113 2878200
Email: Leeds@pegasusgroup.co.uk

**Comments**

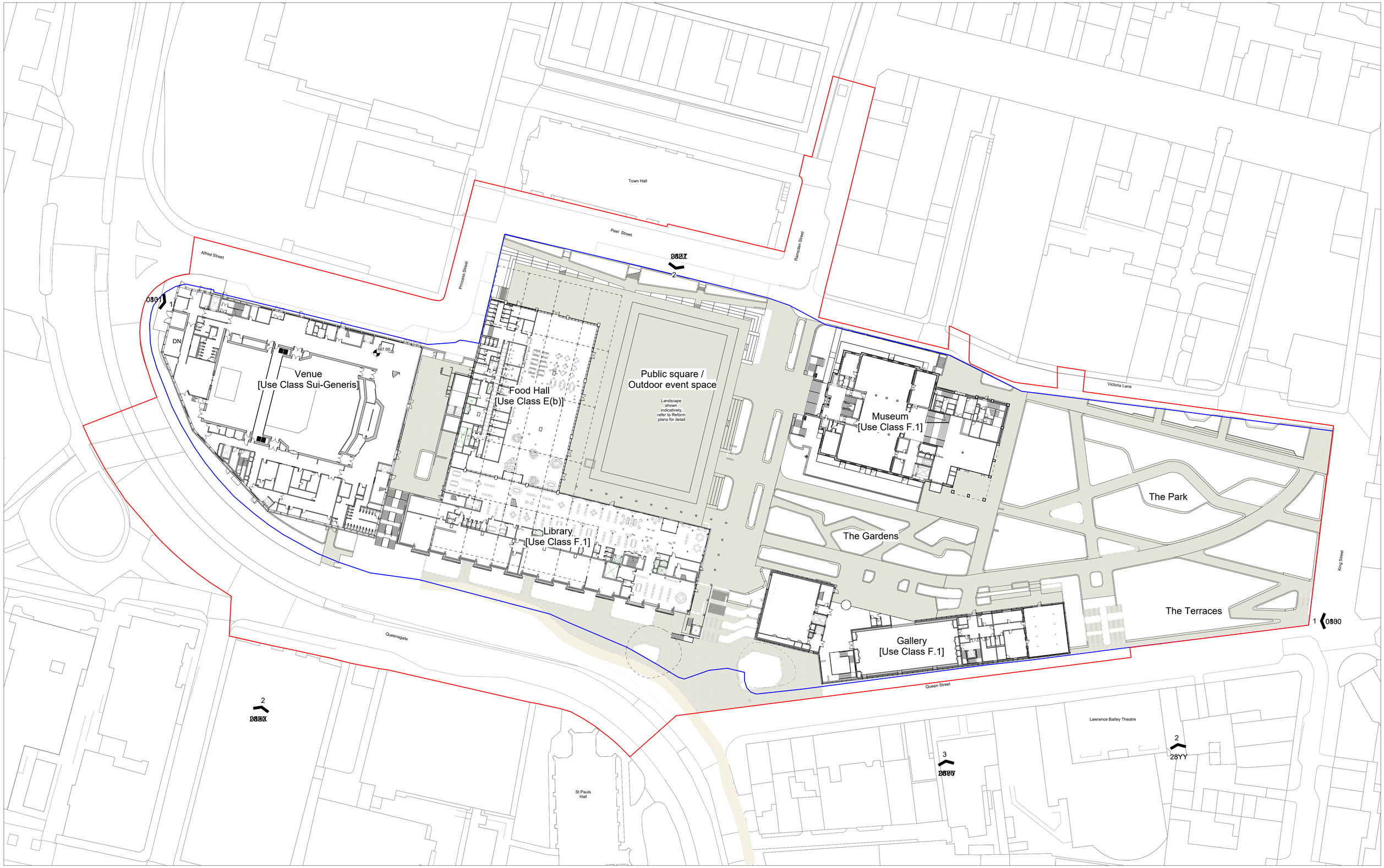
1.5.5 Comments on the planning application should made via Kirklees Council's Planning Public Access system on the Council's website or be forwarded to Kirklees Council's Development Management Department located at:

Planning & Building Control
Growth & Regeneration
Kirklees Planning
PO BOX B93
Civic Centre III
Huddersfield
HD1 2JR

1.5.6 Please do not send comments to Pegasus Group or the consultants who have contributed to this ES as these may not be taken into consideration.

**Figure 1.1**

**Site Location and Masterplan**




0 10 20 m

Scale 1:500

**Notes:**

- Dimensions are not to be scaled from this drawing. All discrepancies in this drawing are to be reported to Feilden Clegg Bradley Studios. Drawing only to be used for the purposes it was issued for. Do not modify any element of this CAD drawing. Landscape, public realm and neighbouring buildings shown indicatively. This drawing is copyright.
- Existing locations and footprints of surrounding buildings are taken from; (OS Map - Promap-1634985-1735589-720-0.dwg) received 2021.10.27; (21359-100-Topo-Millimetres.dwg) received from Maltby Surveys on 2022.02.23
- Development Boundary Line taken from Kirklees Council Ordnance Survey © Crown copyright 2020. All rights reserved. Licence number 100007514.
- Existing building plans and elevations are based on Maltby Surveys drawings received on 2022.02.18 and 2022.03.15

**Legend**

- **Site Ownership Boundary**
- **Planning Boundary discussed at meeting on 18/08/22**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| Rev | Status | | Date |
|---|---|---|---|
| P01 | S1 | Issued for Coordination | 13.09.22 |

Figure 1.1

Job/Drawing No: CDT430201-FCB-XX-00-DR-A-02-SK0184

Revision: P01

Kirklees Cultural Heart

Huddersfield Masterplan - Proposed Planning Boundary

Status: S1

Scale: As indicated@A1 | Drawn: London Studio

Date: 15.07.22 | Checked: AW Group

FCBS project no: CDT430201

Do not scale | All dimensions to be checked on site

# 2 ASSESSMENT SCOPE AND METHODOLOGY

## 2.1 INTRODUCTION

2.1.1 This chapter explains the methodology used to prepare the technical chapters of this Environmental Statement (ES) and describes its structure and content. In particular, it sets out the process of identifying and assessing the likely significant environmental effects of the Proposed Development, with each individual chapter of this ES stipulating its own specific assessment criteria.

## 2.2 GENERAL APPROACH TO ENVIRONMENTAL STATEMENT

2.2.1 This Environmental Impact Assessment has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as 'the EIA Regulations').

2.2.2 In accordance with the EIA Regulations (Regulation 18), an ES is a statement which includes at least:

> ***"(a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development;***
>
> ***(b) a description of the likely significant effects of the proposed development on the environment;***
>
> ***(c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely signifincant adverse effects on the environment;***
>
> ***(d) a description of the reasonable alternatives studies by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;***
>
> ***(e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); and***
>
> ***(f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.***
>
> ***(4) An environmental statement must –***
>
> ***(a) where a scoping opinion or direction has been issued in accordance with regulation 15 or 16, be based on the most recent scoping opinion or direction issued (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion or direction);***
>
> ***(b) include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment; and***

***(c) be prepared, taking into account the results of any relevant UK environmental assessment, which are reasonably available to the person preparing the environmental statement, with a view to avoiding duplication of assessment.***

***(5) In order to ensure the completeness and quality of the environmental statement-***

***(a) The developer must ensure that the environmental statement is prepared by competent experts; and***

***(b) The environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts."***

2.2.3 In accordance with Regulation 18 and Schedule 4 of the EIA Regulations this ES comprises the following information:

- A description of the development proposed comprising information about the site including the nature, size and scale of the development;
- The data necessary to identify and assess the main effects which the Proposed Development is likely to have on the environment, including a description of the relevant aspects of the current state of the environment (baseline) and forecasting methods used;
- A description of the likely significant effects of the Proposed Development (construction operation and vulnerability to risks from major accidents and/or disasters) covering direct effects and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects, explained by reference to the proposed Development's possible effect on: population, human health, biodiversity, land, soil, water, air, climate, material assets, cultural, architectural and archaeological heritage, landscape and the interaction between any of the fore-mentioned topics (as appropriate);
- Where significant adverse effects are identified with respect to any of the foregoing, mitigation measures will be proposed in order to avoid, prevent or reduce and if possible offset those effects.;
- A description of the reasonable alternatives studied, which are relevant to the Proposed Development
- A reference list of the relevant sources of information used;
- A summary in non-technical language of the information specified above; and
- A statement outlining the relevant experience of the experts who have undertaken the assessment and prepared the technical chapters within this ES (provided at the front of this document).

## 2.3 THE DEVELOPMENT ASSESSED WITHIN THIS ES

2.3.1 Full planning permission and Listed Building Consent is sought for a mixed use development including the retention of and in some cases, re-use of key civic buildings (refurbishing the existing Listed Queensgate Market Hall and Huddersfield Library), the demolition of elements of the Piazza Shopping Centre to reveal open views over new useable areas of public realm including an outdoor venue space, and the creation of new multi-functional high quality new buildings (a new indoor venue with multi-storey carpark and new library and gallery building). The proposals also include site access, including new connection onto Queensgate from the venue multi-storey car park. Further information on

these respective areas is provided within **Chapter 4: The Proposed Development and Alternatives**.

2.3.2 With regard to the parameters which have been assessed in the EIA, as would be expected with a development project of this nature, there remains the potential that the development may continue to evolve after the submission of the planning application. It was therefore considered important to seek to ensure that the assessments undertaken in the EIA were based on 'worst-case' parameters, to ensure that any potential significant effects were identified and that these assessments would remain robust following any minor amendments that may occur to the proposals.

2.3.3 As such, this has necessitated different topics within the ES considering different parameters. For the purpose of the consideration of Socio-economic effects, it was deemed appropriate at an early stage to provide an assessment of both the 'Business As Usual' scenario and the 'Preferred Way Forward', as they were defined within the Outline Business Case. The current development proposals include for overall building floor areas (23,674sqm) which are slightly bigger than those considered as part of the 'Preferred Way Forward' (22,510sqm), so the assessment of this scenario serves to represent an appropriate 'worst-case' position from a socio-economic benefits perspective, with the actual effects likely to be very slightly more beneficial than those set out.

2.3.4 On a similar basis, the same 'worst-case' approach has been taken to the parameters considered in the assessments of Transport and Air Quality. For these topics the 'worst-case' is different to when considering Socio-economic effects and requires a consideration of building floor areas which are larger than those ultimately proposed. On this basis, it was determined early in the EIA process to utilise building floor area figures which totalled 24,310sqm, to represent an appropriate 'worst-case' scenario. Given the actual proposed floor areas now total less than this, again the actual effects are likely to be very slightly less adverse than those set out.

## 2.4 CONSIDERATION OF ALTERNATIVES

2.4.1 Schedule 4, Paragraph 2, of the EIA Regulatuions requies that the ES contain:

> **"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer… and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects".**

2.4.2 In addition, the Planning Practice Guidance (PPG) on EIA (Paragraph 035) states that:

> **"where alternatives approaches to development have been considered, the Environmental Statement should include a description of the reasonable alternatives studied which are relevant to the proposed development and its specific characteristics and provide an indication of the main reasons for the choice made, including a comparison of the environmental effects"**

2.4.3 Accordingly, this ES contains a section within Chapter 4 setting out the main alternatives considered.

## 2.5 SCOPE OF ENVIRONMENTAL IMPACT ASSESSMENT

2.5.1 As set out in **Chapter 1: Introduction**, an EIA Screening Opinion request was made to Kirklees Council with a Screening Opinion received on 3rd March 2022 (Ref 2022/20030) (**Appendix 2.1**) stating that the Proposed Development would not require the submission of an EIA. Notwithstanding this, Kirklees Council ("the Applicant") have decided to submit a voluntary Environmental Statement.

2.5.2 In order to help determine the scope of the EIA a request for a Scoping Opinion was submitted by Pegasus Group, on behalf of the Applicant, to Kirklees Council on 8th June 2022. Technical responses from Kirklees Council Officers covering Transport, Air Quality and Heritage matters were subsequently provided

2.5.3 A summary of Kirklees Council's Scoping consultee responses is provided in **Table 2.1** below. This table also identifies where these comments, where relevant, are addressed within the ES. Any other discussions regarding the scope of the assessment that has been undertaken separately to the main EIA scoping process, is discussed within the relevant technical chapters.

**Table 2.1: Scoping Opinion Responses**

| Consultee | Summary of Comments/Discussion | Where Concerns Addressed (where relevant) |
|---|---|---|
| Kirklees Council Conservation and Design | The Conservation and Design is satisfied that the criteria within this document are suitable for the assessment, although we would suggest the following is included:<br><br>Along with national planning policies, the assessment should take into account Local Plan policies, particularly LP17, LP24 and LP35, as well as relevant SPD's including the Castle Hill setting study. Although the site is some distance from Castle Hill this needs to be assessed.<br><br>Listed buildings within the setting should include those within the university campus on Queensgate. These are identified on Figure 1 in the appendices and are directly in context with the site, in particular the proposed venue and car park.<br><br>The impact of the proposed car park and venue on the setting of surrounding listed buildings, including the recently revealed view from Queensgate to the town hall. We understand that the design detailing, scale and materials still need to be worked up and these are important factors to carry out a meaningful assessment of impact. However, the indicative scale of the building shows that this will be a substantial structure. The same applies for the proposed library building and the existing library extension. | See Chapter 7 – Cultural Heritage |

| Consultee | Summary of Comments/Discussion | Where Concerns Addressed (where relevant) |
|---|---|---|
| | The impact on the building performance, weathering details and structure of the Queensgate Market where alterations are proposed, including the removal of existing external elevations.<br><br>In summary, KC have no concerns about the content of the proposed assessment, subject to consideration being given to the comments above. | |
| Kirklees Council Environmental Health – Air Quality | KC would expect the Air Quality Impact Assessment to be undertaken in accordance with The West Yorkshire Low Emissions Strategy (WYLES) – Technical Planning Guidance, as well as the national guidance as quoted in the report. Our main concern is the impact of the development on the existing Kirklees Air Quality Management Area (AQMA 9) Huddersfield Town centre, during both the construction and operational phases.<br><br>KC also have concerns regarding dust during the construction phase due to demolition work, and the impact of this on the amenity of sensitive receptors living and working in the Town Centre.<br><br>For the operational phase, KC would expect the air quality assessment to include the cumulative impact from other nearby large, committed developments. Additionally, and in accordance with WYLES the Air Quality Assessment must also include a damage cost calculation and a mitigation scheme. This should detail costed mitigation measures to the value of the damage costs to off-set the impact of the development on the existing AQMA. Otherwise, the general proposals and methodology regarding air quality issues for both the construction and operational phases are satisfactory. | See Chapter 9 – Air Quality |
| Highways – Kirklees Council | Initially expressed reservations about creation of an additional junction at section of ring road but understands limitations of continuing use of the existing Queen Street South subway and accepts that other access options should be investigated.<br><br>Provided a number of comments on what should be included within the Transport Assessment and Travel Plan. Key issues are in relation to:<br><br>- The capacity of the new MSCP needs to be established | See Chapter 8 - Transport |

| Consultee | Summary of Comments/Discussion | Where Concerns Addressed (where relevant) |
|---|---|---|
| | and a review of the town centre parking strategy and provision carried out to ensure adequate parking provision is maintained for existing town centre uses and the cultural heart development.<br>- Produce of an area wide Travel Plan.<br>- Proposed methodology and model extents for highway assessment are acceptable in principle. New TRANSYNT model would be acceptable.<br>- Provide an updated analysis of traffic distribution and assessment periods given the number of vehicle trips also need to be modelled on a peak evening event. | |

2.5.4 Given the nature and intended longevity of the Proposed Development's operational life, decommissioning has not been considered as part of this study. This EIA focuses on the likely significant effects of the Proposed Development during the construction and operational phases only. Accordingly, the environmental themes scoped into or out of the EIA are given in **Table 2.2.**

**Table 2.2: Environmental Themes Scoped In / Out**

| Environmental Theme | Scoped In/Out | How/ Where Addressed / Reason for Scoping Out |
|---|---|---|
| Population | In | To be assessed within **Chapter 6 Socio-Economics** and to a lesser degree in other technical environmental chapters where impacts could affect human beings. |
| Human Health | In | To be assessed within a variety of chapters where relevant including **Chapter 13 Socio-Economics, Chapter 9 Air Quality and Chapter 8 Transport.**<br><br>A separate Health Impact Assessment (HIA) will also be submitted within the planning application package. |
| Biodiversity | Out | No potential for significant effects to arise. |
| Land (e.g. land take) and Soil | Out | No potential for significant effects to arise. |
| Water | Out | No potential for significant effects to arise. |
| Air | In | To be assessed within **Chapter 9 Air Quality** |
| Climate | Partly In and partly scoped Out | Given the location of the site, along with the nature of the proposals, it is not considered that the Proposed Development will have a significant impact on climate change. Consideration is given within other topics where relevant, for instance **Chapter 8 Transport**, specifically in relation to the measures suggested to encourage travel by sustainable means. |

| Environmental Theme | Scoped In/Out | How/ Where Addressed / Reason for Scoping Out |
|---|---|---|
| Material Assets | Out | It is not considered there are any further 'material assets' to those already addressed within other EIA topics. |
| Cultural Heritage | In | To be assessed within **Chapter 7 – Cultural Heritage** |
| Landscape | Out | No potential for significant effects to arise. |
| Risk of Major Accidents and Disasters | Out | Considering the nature, scale and location of the Proposed Development, it is not considered to be vulnerable to, or give rise to significant impacts in relation to the Risk of Accidents and Major Disasters. |
| Inter-relationship between above factors | In | The interrelationship of the above factors will be considered within each relevant topic chapter. |

## 2.6 EIA METHODOLOGY

2.6.1 The content of the ES is based on the following:

- Review of the baseline situation through existing information, including data, reports, site surveys and desktop studies;
- Consideration of the relevant National Planning Policy Framework (NPPF) and accompanying National Planning Practice Guidance (NPPG), and the statutory extant and emerging development plan policies;
- Consideration of potential sensitive receptors;
- Identification of likely significant environmental effects and an evaluation of their duration and magnitude;
- Expert opinion;
- Modelling;
- Use of relevant technical and good practice guidance; and
- Specific consultations with appropriate bodies.

2.6.2 Environmental effects have been evaluated with reference to definitive standards and legislation where available. Where it has not been possible to quantify effects, assessments have been based on available knowledge and professional judgment.

## 2.7 APPROACH TO DETERMININE SIGNIFICANCE

2.7.1 The EIA identifies the likely 'significance' of environmental effects (beneficial or adverse) arising from a Proposed Development. Each technical chapter defines discipline specific 'likely significant effects' by the use of pre-determined assessment criteria. Individual disciplines stipulate the specific assessment criteria used within their own technical chapters under Assessment Approach; however in broad terms, environmental effects can be described as adverse, beneficial or neutral on a sliding scale, for example, major-moderate-minor-negligible.

2.7.2 In many technical disciplines, significance reflects the relationship between two factors:

- The magnitude or severity of an effect (i.e. the actual change taking place to the environment); and
- The sensitivity, importance or value of the resource or receptor.

2.7.3 Specific separate criteria for determining the degree of 'magnitude' and the degree of 'sensitivity' (or importance or value) is clearly defined within each technical chapter, and again is often on a sliding scale (e.g. high-medium-low).

2.7.4 The significance of a particular effect can then be derived from the interaction of the receptor's sensitivity and the magnitude of change likely to be experienced.

2.7.5 An example of this 'matrix' process is indicated below in Table 2.3, however it should be noted that this is provided as a general guide only. Discipline-specific methodology is often used rather than generic criteria, as it is recognised that broad criteria does not always cater for particular disciplines, particularly where best practice and guidance require subtle differences. All significance criteria are clearly explained within each technical chapter under the heading of Assessment Approach.

**Table 2.3: Example Degrees of Significance based on Magnitude / Sensitivity**

| | **Sensitivity of Receptor** | | | | |
|---|---|---|---|---|---|
| **Magnitude of Change** | | **High** | **Medium** | **Low** | **Negligible** |
| | **High** | Major | Major | Moderate | Negligible |
| | **Medium** | Major | Moderate | Minor to Moderate | Negligible |
| | **Low** | Moderate | Minor to Moderate | Minor | Negligible |
| | **Negligible** | Negligible | Negligible | Negligible | Negligible |

2.7.6 A methodology section will be included in each of the relevant technical chapters which will also set out those effects that are considered to be significant or not significant in the context of EIA regulations.

2.7.7 Significance of effects is assessed both before and after mitigation where relevant (i.e. the residual effect following mitigation).

## 2.8 MITIGATION

2.8.1 Standard measures and the adoption of construction best practice methods to avoid, minimise or manage adverse environmental effects, or to ensure realisation of beneficial effects, are assumed to have been incorporated into the design of the Proposed Development and the methods of its construction from the outset. Further information on the standard measures and construction best practice is detailed in **Chapter 4: The Proposed Development and Alternatives.** Where outlined, the assessment is of the Proposed Development incorporating these measures.

2.8.2 Where mitigation measures are proposed that are specific to an environmental theme (i.e. ecological measures incorporated into the landscaping scheme, exclusion of areas of archaeological significance from development etc) and are purposely incorporated into the design, these are highlighted within the relevant technical chapter as 'mitigation by design' (or integral/embedded mitigation) and may be subject to appropriate planning conditions or obligations.

2.8.3 Where the assessment of the Proposed Development has identified potential for adverse environmental effects, the scope for mitigation of those effects, for example by way of

compensatory measures, has been considered and is outlined in the appropriate technical chapter. It is assumed that such measures would be subject to appropriate planning conditions or obligations.

2.8.4 Where the effectiveness of the mitigation proposed has been considered uncertain, or where it depends upon assumptions of operating procedures, then data and/or professional judgment has been introduced to support these assumptions.

## 2.9 CUMULATIVE AND IN-COMBINATION EFFECTS

**Cumulative Effects**

2.9.1 Within EIA, cumulative effects are generally considered to arise from the combination of effects from the Proposed Development and from other proposed or permitted schemes in the vicinity, acting together to generate elevated levels of effects. Examples of these kinds of effects that can be readily appreciated could include:

- Traffic generated from developments, affecting the surrounding road network; and
- Air quality effects from developments.

2.9.2 With respect to cumulative effects, the EIA Regulations state that consideration should be given to 'other existing and/or approved projects' Schedule 4, paragraph 5(e)). This is further supported by the NPPG which states "*There are occasions…..when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a proposed development*" (Paragraph: 024 Reference ID: 4-024-20170728).

2.9.3 It should be noted that the extent to which any developments need to be considered within each environmental discipline will inevitably vary depending on their nature, their proximity to the site and their stage in the planning process. In the case of this project, as where necessary the cumulative effects of various planned improvements to the strategic transport network have been considered. Further details are set out in Chapter 8 Transport.

2.9.4 Having reviewed the potential for other cumulative developments, given the Application Site's location, the nature of the Proposed Development, and the location of other potential developments in the vicinity, it is considered that there are no other development proposals with a submitted planning application which would require detailed consideration.

**In-Combination Effects**

2.9.5 In-combination effects arise where effects from one environmental element bring about changes in another environmental element. An Example of the types of interactive effect is the effects of traffic on air quality.

2.9.6 These effects are often incorporated into the general assessment of the Site and not separated out. Each discipline, where relevant, has explained within their chapters when/where such effects exist and how they have been assessed.

## 2.10 GENERAL ASSUMPTIONS AND LIMITATIONS

2.10.1 The principal assumptions that have been made and any limitations that have been identified in preparing this ES are set out below:

- Information received from third parties is complete and up to date;
- The design, construction and completed stages of the Proposed Development will satisfy legislative requirements; and
- Conditions will be attached to the planning permission with regards "mitigation", where considered necessary to make the development acceptable.

2.10.2 Each chapter also outlines any assumptions or limitations made as relevant to the specific technical disciplines.

**STRUCTURE OF TECHNICAL CHAPTERS**

2.10.3 Throughout the EIA process, the likely significant environmental effects of the Proposed Development will be assessed. Within each of the technical chapters the information which will inform the EIA process has generally been set out in the following way:

- **Introduction** – to introduce the topic under consideration, state the purpose of undertaking the assessment and set out those aspects of the Proposed Development material to the topic assessment;
- **Assessment Approach** – to describe the method and scope of the assessment undertaken and responses to consultation in relation to method and scope in each case pertinent to the topic under consideration;
- **Baseline Conditions** – a description of the baseline conditions pertinent to the topic under consideration including baseline survey information;
- **Assessment of Likely Significant Effects** - identifying the likely effects, evaluation of those effects and assessment of their significance, considering both construction and operational and direct and indirect effects;
- **Mitigation and Enhancement** - describing the mitigation strategies for the significant effects identified.
- **Residual Effects –**consideration of the significance of effects post mitigation.
- **Cumulative and In-combination Effects** - consideration of potential cumulative and in-combination effects with those of other developments; and
- **Summary** – a non-technical summary of the chapter, including baseline conditions, likely significant effects, mitigation and conclusion.

# 3 THE APPLICATION SITE

## 3.1 INTRODUCTION

3.1.1 This chapter of the ES (Environmental Statement) provides a description of the Application Site and the surrounding context.

## 3.2 APPLICATION SITE

3.2.1 The Application Site which is known as the 'Kirklees Cultural Heart' is located north and west of the A62, within the core of Huddersfield Town Centre - approximately 350 metres to the south-east of Huddersfield train station - and in close proximity to Huddersfield Town Hall to the west. The site is located within the Ring Road (A62 Castlegate / Queensgate / Southgate), and is bound by Queensgate A62 to the south and south-east; by Queen Street to the east; by King Street to the north and by Victoria Lane, Peel Street and Alfred Street to the west. The Site is situated within the administrative boundary of Kirklees Council. A site location plan showing the red line planning application boundary of the site is included as **Figure 1.1.**

3.2.2 The site is located within a densely-built urban area bordered by key transport routes and surrounded by medium- to large-scale buildings of various styles, eras and materials which serve a variety of social and commercial purposes. There is little in terms of existing soft landscaping immediately surrounding the study area.

3.2.3 The site covers an area of 3.93 ha and consists of the former (now demolished) multi-storey car park, the Queensgate Market (Grade II listed), the library and art gallery (Grade II listed) and the Piazza shopping centre. There is also an extensive network of underground service tunnels, predominantly below the Piazza, servicing the surrounding area and most notable the Piazza shopping centre and the market.

3.2.4 The site is located north and west of the A62 – Queensgate, within Huddersfield Town Centre. The A62 Queensgate frontage is largely characterised by the former site of the now demolished 4 storey multistorey car park and the eastern elevation of the Queensgate Market Hall and its artwork panels. The Market Hall is adjoined by the Piazza shopping centre, which wraps around the remainder of the sites eastern boundary and encloses around the Huddersfield Library and Art Gallery, which is located on (but within) the eastern edge of the site.

3.2.5 Whilst, the site sits between areas of open space, they are largely generally characterised with hard landscaping and limited street furniture and landscaping in terms of treatment within the public realm.

3.2.6 The site is overlooked by Huddersfield Town Hall and Concert Hall along the western boundary and further shopping areas which positively look out, into the site. The University of Huddersfield campus is located beyond the A62 to the South East, whilst the Lawrence Batley Theatre stands off Queen Street to the east.

*Context - The Huddersfield Blueprint*

3.2.7The Huddersfield Blueprint, produced by Kirklees Council, is a ten-year vision to create a thriving, modern-day town centre. The plan aims to deliver five key objectives for Huddersfield Town Centre: A vibrant culture, art, leisure and nightlife offer, thriving businesses, a great place to live, improved access and enhanced public spaces that will be and inclusive and family friendly area across all times of day.

3.2.8 It focuses on regenerating six key areas: Station Gateway, St Peter's, Kingsgate and King Street, New Street, the Civic Quarter and a new Cultural Heart in the Queensgate and Piazza area.

3.2.9 The plan identifies Queensgate as the cultural heart of Huddersfield. The plan states that Huddersfield's new vibrant Cultural Heart will be a catalyst for change in the town and is the most iconic vision within The Blueprint. It will act as a cultural hub for the town where families, visitors and residents can gather and enjoy leisure, arts and music, with activities spilling out into a high-quality public space.

3.2.10 Kirklees Council's Cultural Heart Programme is a key council led regeneration scheme, part of a wider blueprint for Huddersfield Town Centre. The Blueprint is a ten-year vision to create a thriving, modern day town centre:

3.2.11 The Cultural Heart will act as a cultural hub for the town where families, visitors and residents can gather and enjoy leisure, arts and music, with activities spilling out into a high-quality public space. Crucially, this will bring new people into the town centre and give those who already use the town centre a greater to stay for longer.

3.2.12 The Blueprint continues to state that "built around Queensgate and the library buildings, the new Cultural Heart will include a library, art gallery, museum and live music venue in the Piazza and Queensgate area". This will be supported by restaurants, bars, cafés and the Lawrence Batley Theatre.

3.2.13 The removal of buildings around the Piazza area and beyond shall create a large, inclusive and family-friendly open space for people to gather, offering a variety of hard and soft landscape features and seating areas.

3.2.14 It continues, "we want to better link the areas beyond the ring road with the town centre. Improved public space around Queensgate and the opening up of the Piazza to Queen Street will only be part of this ambition."

3.2.15 Finally, "there are a number of opportunities here which include new parking, a hotel or a youth zone. Whichever project is delivered at this site, the quality of the design is of utmost importance"

# 4 THE PROPOSED DEVELOPMENT AND ALTERNATIVES CONSIDERED

## 4.1 INTRODUCTION

4.1.1 This chapter of the ES sets out the description of the Proposed Development and identifies the main alternatives to the Proposed Development that have been considered and the main reasons for selecting the chosen option.

## 4.2 PROPOSED DEVELOPMENT

4.2.1 The Kirklees Cultural Heart is a key council-led regeneration scheme, which forms part of a wider blueprint for Huddersfield Town Centre. The 'Blueprint' is a ten-year vision to create a thriving, modern day town centre: A vibrant culture, art, leisure and nightlife offer, thriving businesses, a great place to live, improved access and enhanced public spaces.

4.2.2 Kirklees Cultural Heart is a flagship project within the Huddersfield Blueprint that will breathe new life into the area around Queensgate and the area presently occupied by the Piazza shopping centre. It has been designed to create an inclusive, cultural centre that celebrates the district and embraces the viable use of heritage assets within the site. It will introduce a significant amount of public realm that will appeal to a variety of users, encouraging improved health within a traffic-free environment to encourage friends and family to relax, gather and move within the buildings within the scheme. It will create a mix of uses, including a new flexible venue, outdoor events space, museum, art gallery, food hall and library, which alongside the new public realm shall provide more reasons for people to visit the town centre.

4.2.3 Considerable iterative and detailed design work has been carried out by the design team alongside, in consultation with Kirklees Council and other relevant stakeholders to produce a truly inclusive and vibrant development scheme. The progression of this scheme has been subject to significant public consultation and scrutiny and therefore the submission of a planning application for the Kirklees Cultural Heart represents a substantial milestone in the delivery of the scheme.

4.2.4 The planning application seeks 'full' planning permission for the proposed development, alongside applications for Listed Building Consent. It is the ambition of the Council, to bring forward the development comprehensively, although component parts can be brought forward at different phases, if required.

4.2.5 The planning application seeks planning permission for:

> *"Application for 'Demolition of the existing Piazza shopping centre, part removal of elements of Queensgate Market, and demolition/retention of service tunnels; with redevelopment of the site to form new public realm space (including public park and gardens, play areas, public square/outdoor event space); refurbishment and change of use of existing Queensgate Market Hall into new food hall (Use Class E (b) Sale of food and drink for consumption, mostly, on the premises); refurbishment and extension of existing library and art gallery building to form a new museum (Use Class F.1); change of use of part existing market hall building and extension to form a new public library (Use Class F.1); construction of new indoor event venue incorporating multi-storey car park below (Sui-Generis); erection of new public gallery building (Class F.1); and associated infrastructure on land and buildings at Queensgate Market, Huddersfield Library and Art Gallery, and Piazza (and The Shambles) Shopping Centre, Huddersfield."*

4.2.6 Drawing on from the above description, further details of the proposals are as follows:

- the retention and reuse of listed buildings within the site, principally Queensgate Market and the Library and Art Gallery;
- the demolition of buildings within the site, including the parade of shops within the Piazza, elements of the Market Hall fronting onto Peel Street, the Shambles shopping arcade and the retail units fronting Princess Alexandra Walk; this demolition being necessary in order to facilitate the scope, scale and ambition of the project;
- the demolition, adaptation and retention of service tunnels, where appropriate;
- a new library, located within the Market Hall (along with some extension works), of around 5,000sqm (Gross Internal Area);
- a new museum of around 6,000sqm (Gross Internal Area), located within the existing Library and Art Gallery building, with an extension upon its northern elevation;
- a gallery space fronting onto Queen Street, of around 3,000sqm (Gross Internal Area);
- a new venue space upon the site of the former multi-storey car park, accommodating around 2,200 people at approximately 8,000sqm of Gross Internal Area;
- a new multi-storey car park below the new venue, accommodating around 350 spaces (including EV charging stations);
- a new food hall, located within the Market Hall, of around 2,500sqm (Gross Internal Area);
- public realm and a new urban park, including an outdoor event space for around 3,000 people, linking the above-mentioned components of the scheme, including a new frontage to Queen Street (in lieu of the demolished buildings) and into the northern section of the site and leading up to King Street;
- linked to the above, a scheme of hard and soft landscaping measures across the site, including the retention of existing features.

4.2.7 The development has high sustainable development credentials and will target BREEAM (Excellent) standards and low, project specific, embodied and operational carbon targets developed for different building types. The building will have high levels of insulation and low energy use and will benefit from solar photovoltaic panels mounted on the roof of buildings, such as the venue. No gas is to be used across the proposal. The scheme will also incorporate the use of timber and stone being considered to lower embodied carbon. Consideration has been given to encouraging sustainable travel, utilising the nearby public transport, development of a Travel Plan and integration of Kirklees' proposed cycle routes along Queensgate. The new multi-storey car park will contain 350 parking spaces, with 20% electrical vehicle charging points (EVCP) and capacity for the remaining 80% to also be EVCP. Secure cycle parking (approximately 100 spaces across the development), lockers and changing facilities will be provided.

4.2.8 In heritage terms, the development also includes the application for Listed Building Consent for the refurbishment of 2no. Listed Buildings, including Queensgate Market and Huddersfield Library.

4.2.9 The full details of the proposed development are set out in the drawings and reports accompanying the submission. The Site Location and Masterplan is included as **Figure 1.1,** with

further relevant drawings and project information set out in **Appendix 4.1**, including details of proposed building elevations.

4.2.10 In addition, the application is supported by the following further supporting documents:

- Planning Application Forms, Certificates & Fee
- Planning Pack of Drawings
- Design and Access Statement
- Planning Statement
- Site Investigation Assessment
- Demolition and Remediation Strategy
- Structural Survey
- Utilities Impact Assessment
- Flood Risk Assessment
- Drainage Impact Assessment and Management Plan
- Site Waste Management Plan (Construction and Operational)
- Landscape and Public Realm Strategy
- Transport Assessment
- Travel Plan
- Preliminary Ecological Appraisal
- Biodiversity Net Gains Calculations
- Sustainability Report
- Noise Impact Assessment
- Air Quality Assessment
- Ventilation and Extraction Statement
- Lighting Strategy
- Desk based Archaeology and Built Heritage Setting Assessment
- Heritage Statement
- Arboricultural Impact Assessment
- Health Impact Assessment

- Socio-Economics Benefits Statement
- Townscape/Visual Impact Assessment

## 4.3 CONSTRUCTION

4.3.1 Planning for construction is necessarily flexible at this stage and subject to modification during site development. Consequently, the likely significant effects of the construction of the Proposed Development have been identified with the best possible degree of accuracy.

4.3.2 The proposed working procedures will be provided to Kirklees Council (and other relevant bodies) in the form of a Construction Management Plan (CMP) and/or Construction Environmental Management Plan (CEMP) prior to commencement of the works, to be subject to a suitably worded planning condition. This will include confirmation of working hours. The proposed measures would include for 'Standard measures and the adoption of construction best practice methods' as referred to in the Assessment Approach and presumed to be in place for the purpose of the technical assessments set out in the ES (see **Chapter 2**).

## 4.4 ALTERNATIVES

4.4.1 The EIA Regulations (Schedule 4, paragraph 2) require for inclusion in an ES:

> "***A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects"***

4.4.2 The main alternatives to the Proposed Development which the Applicant has considered include:

- The 'No Development' Alternative;
- Alternative Locations; and
- Alternative Designs.

**The 'No Development' Alternative**

4.4.3 The 'No Development' Alternative refers to the option of leaving the Application Site in its current use and physical state. This alternative would miss out on the opportunity to secure the benefits that the redeveloped site would bring and was deemed less preferable than a sustainable new scheme at the site.

**Alternative Locations**

4.4.4 As this is a redevelopment project, it was not considered viable to consider alternative locations. Furthermore, the location of the site at the heart of Huddersfield town centre is considered to be well placed to deliver benefits for the community.

**Alternative Sites and Designs**

4.4.5 The constraints and opportunities presented by the Application Site have been used to inform the design principles, which in turn have helped refine and structure the Proposed Development.

4.4.6 A Strategic Outline Case (SOC) was developed as the first stage in the business case development for the Cultural Heart scheme. During the SOC a total of 15 long-list options were developed and assessed. This included 13 project options, each comprising the core facilities required at varying scales (e.g. small, medium or larger Venue) and in different combinations on different parts of the site. A 'Business As Usual' option was also considered which comprised *"an investment of £22m to maintain the facilities in their current condition. This includes minimum works to the listed Library building which also houses the current Gallery and Queensgate market"*.

4.4.7 It was set out in the subsequent Outline Business Case (OBC) that this long list of options was assessed against 18 key criteria, using a RAG (Red, Amber, Green) methodology, during facilitated workshops. The assessment resulted in an option referred to as the 'Preferred Way Forward'. This option was costed at £220 million and included for the following elements:

- *The south site accommodating a new flexible multi-use venue with two halls that can combine to create a venue with a maximum capacity of 2,200 for entertainment.*
- *A multi-storey car park (MSCP) of 350 spaces on the south site.*
- *A Food Hall within the existing Market Hall.*
- *A Library built adjoining the old Market Hall with spatial connection to the Food Hall.*
- *A major new build element to the Library.*
- *A new Museum accommodated in the old Library building, to comprise of a stand-alone building located centrally in the public realm.*
- *A new standalone Gallery creating a strong edge to the masterplan and public realm.*
- *The buildings to be connected by the Urban Park which they would site within.*

4.4.8 This option has then since been refined and finessed with input from the Design Team and the Council. This has resulted in the proposed development proposals as described in earlier in this Chapter.

4.4.9 In addition, the submission follows formal pre-application discussions with Officers at Kirklees Council (ref: PREAPP/2022/20509), in addition to consultation with Local Councillors and key heritage stakeholders. Two phases of public consultation have also been carried out. In each case the feedback from the consultation contributed to the process of considering alternative options for the site. The pre-application consultation process and the comments arising are detailed within the Statement of Community Involvement (SCI) provided separately with the application submission.

4.4.10 As discussed further in the Design and Access Statement accompanying the planning application, the design process has been carefully considered so to balance the function of the proposals with their site context. The iterative design process has sought to avoid significant environmental effects where possible, by the inclusion of 'mitigation by design'.

# CHAPTER 5 PLANNING POLICY CONTEXT

## 5.1 INTRODUCTION

5.1.1 This chapter of the Environmental Statement (ES) provides a brief summary of the relevant development plan against which the planning application for the Proposed Development will be considered.

5.1.2 The scope of this chapter is to identify the relationship between the proposed development and the relevant national planning policy and guidance and local policy and guidance.

5.1.3 Further information in relation to the relevant planning policy is provided in the Planning Statement accompanying the planning application, with each technical chapter of this ES addressing the discipline specific policies.

## 5.2 PLANNING POLICY BACKGROUND

### National Planning Policy

National Planning Policy Framework (July 2021)

5.2.1 The revised National Planning Policy Framework (NPPF) was published in July 2021. The NPPF sets out the Government's planning policies for England and how these are expected to be applied.

5.2.2 The NPPF is a material consideration in planning decisions.

5.2.3 The Introduction to the NPPF reiterates that applications for planning permission should be determined in accordance with the development plan, unless material considerations indicate otherwise; that the NPPF is a material consideration in planning decisions; and that the Framework should be read as a whole.

5.2.4 **Paragraph 7** confirms that the purpose of the planning system is to contribute to the achievement of sustainable development.

5.2.5 **Paragraph 8** confirms that achieving sustainable development means that the planning system has three overarching objectives: economic, social and environmental.

5.2.6 **Paragraph 9** confirms that planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.

5.2.7 **Paragraph 11** sets down the presumption in favour of sustainable development, which for decision-taking means:

> **"…c) approving development proposals that accord with an up-to-date development plan without delay; or**
>
> **d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date (including where an application is for housing and the cannot demonstrate a five year supply of deliverable housing sites), granting permission unless:**

**i. the application of policies in the Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed (including habitats sites); or**

**ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole."**

5.2.8 **Paragraph 17** requires each planning authority to prepare strategic policies to address each local planning authority's priorities for the development and use of land in its area. **Paragraph 20** continues this theme by stating that strategic priorities should set out an overall strategy for the pattern, scale and quality of development, and make sufficient provision for employment and other commercial development. **Paragraph 22** requires strategic policies should look ahead over a minimum 15 year period from adoption to anticipate and respond to long term requirements and opportunities such as those arising from major improvements in infrastructure. **Paragraph 23** requires strategic policies to provide a clear strategy for bringing sufficient land forward, and at a sufficient rate, to address objectively assessed needs over the plan period, in line with the presumption in favour of sustainable development. This should include planning for, and allocating sufficient sites to deliver the strategic priorities of the area.

5.2.9 **Paragraph 38** states that local planning authorities should approach decisions on proposed development in a positive and creative way. They should use the full range of planning tools available and work proactively with applicants to secure developments that will improve the economic, social and environmental conditions of the area. Decision-makers at every level should seek to approve applications for sustainable development where possible.

5.2.10 Section 6 of the NPPF relates to 'Building a Strong, Competitive Economy'. **Paragraph 81** confirms that planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt where significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future.

5.2.11 **Paragraph 82** states that planning policies should:

**a) set out a clear economic vision and strategy which positively and proactively encourages sustainable economic growth, having regard to Local Industrial Strategies and other local policies for economic development and regeneration;**

**b) set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period;**

**c) seek to address potential barriers to investment, such as inadequate infrastructure, services or housing, or a poor environment; and**

**d) be flexible enough to accommodate needs not anticipated in the plan, allow for**

**new and flexible working practices (such as live-work accommodation), and to enable a rapid response to changes in economic circumstances.**

5.2.12 In respect to decision making **Paragraph 83** highlights how planning policies and decisions should recognise and address the specific locational requirements of different sectors. This includes making provision for clusters or networks of knowledge and data-driven, creative or high technology industries; and for storage and distribution operations at a variety of scales and in suitably accessible locations.

5.2.13 **Chapter 8** focuses on promoting health and safe communities**. Paragraph 92** states that planning decisions should aim to achieve development which is safe and accessible, and not susceptible to crime. New development proposals should also enable and support healthy lifestyles and address well-being needs.

5.2.14 **Paragraph 93** states that to provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should:

> *a) plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship) and other local services to enhance the sustainability of communities and residential environments;*
>
> *b) take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community;*
>
> *c) guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs;*
>
> *d) ensure that established shops, facilities and services are able to develop and modernise, and are retained for the benefit of the community; and*
>
> *e) ensure an integrated approach to considering the location of housing, economic uses and community facilities and services.*

5.2.15 **Paragraph 94** is particularly pertinent to estate regeneration. It states:

> *"Planning policies and decisions should consider the social, economic and environmental benefits of estate regeneration. Local planning authorities should use their planning powers to help deliver estate regeneration to a high standard."*

5.2.16 **Paragraph 97** states that planning policies and decisions should promote public safety and take into account wider security and defence requirements anticipating and addressing possible malicious threats and natural hazards, particularly in locations where large numbers of people are expected to congregate.

> *"Policies for relevant areas (such as town centre and regeneration frameworks), and the layout and design of developments, should be informed by the most up-to-date information available from the police and other agencies about the nature of potential threats and their implications. This includes appropriate and proportionate steps that can be taken to reduce vulnerability, increase resilience and ensure public safety and security."*

5.2.17 **Paragraphs 104 and 105** state that developments should be located where the need to travel will be minimised and uses of sustainable transport modes can be maximised. Development proposals also need to include safe means of access for all users.

5.2.18 **Paragraph 110** sets out that for specific applications for development, it should be ensured that appropriate opportunities for sustainable transport can be, or have been taken up; safe and suitable access to the site can be achieved for all users; the design of the streets, parking areas and other transport elements reflects current national guidance, including the National Design Guide and the National Model Design Code; and any significant impacts from the development on the transport network (in terms of capacity and congestion), or highway safety, can be cost effectively mitigated to an acceptable degree.

5.2.19 **Paragraph 112** states:

> *a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
>
> *b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
>
> *c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
>
> *d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
>
> *e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.*

5.2.20 **Paragraph 113** states that all developments which will generate significant amounts of new traffic movement should be required to be supported by a Transport Statement or Transport Assessment and a Travel Plan.

5.2.21 **Paragraph 119** states that strategic policies should set out a clear strategy for accommodating objectively assessed needs and promote an effective use of land, while safeguarding and improving the environment and ensuring safe and healthy living conditions. **Paragraph 120** goes on to confirm that planning policy and decisions should, amongst other matters, make as much use as possible of previously developed or brown field land, take opportunities to achieve net environmental gains and support appropriate opportunities to remediate despoiled, degraded, derelict, contaminated or unstable land.

5.2.22 **Paragraph 124** seeks efficient use of land, taking into account the identified need for different types of housing and other forms of development, and the availability of land suitable for accommodating it; local market conditions and viability; the availability and capacity of infrastructure and services – both existing and proposed as well as their potential for further improvement and the scope to promote sustainable travel modes that limit future car use; and the desirability of maintaining an area's prevailing character and setting, or of promoting regeneration and change.

5.2.23 **Paragraph 126** confirms that: the creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to

communities. **Paragraph 130** seeks to ensure that developments will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development; are visually attractive as a result of good architecture, layout and appropriate and effective landscaping; are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities); establish building types and materials to create attractive, welcoming and distinctive places to live, work and visit; optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development and support local facilities and transport networks; and create places that are safe, inclusive and accessible.

5.2.24 **Paragraph 152** states that development should support the transition to a low carbon future, taking advantage of opportunities to mitigate against the effects of climate change.

5.2.25 **Paragraph 167** states that local planning authorities should ensure that flood risk is not increased elsewhere (off-site) when considering development proposals.

5.2.26 **Paragraph 174 and 185** states that planning decisions should ensure that new development proposals are appropriate for their location, taking account of impacts of pollution, living conditions, the natural environment. Development proposals should mitigate against potentially harmful impacts of noise and light pollution.

5.2.27 **Paragraph 189** states that heritage assets are an irreplaceable resource and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations. Paragraph 197 sets out that when determining applications, the LPA's should take account of:

a) the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;

b) the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and

c) the desirability of new development making a positive contribution to local character and distinctiveness.

5.2.28 **Paragraphs 218 and 219** confirm that the NPPF should be taken into account as a material consideration from the day of publication. Where plans need to be revised this should be done as quickly as possible. Due weight should be given to existing policies, according to their degree of consistency with the Framework.

Planning Practice Guidance

5.2.29 Planning Practice Guidance ("PPG") is produced by the Government and provides a simple and clear guide to putting national planning policy into practice. The guidance is a web-based resource that is regularly updated and amended.

5.2.30 Other relevant national guidance and documents include:

- MHCLG: National Design Guide (2021)

**Local Planning Policy**

Kirklees Local Plan Strategy and Policies (adopted February 2019).

5.2.31 Section 38 of the Planning and Compulsory Purchase Act 2004 requires that planning decisions should be made in accordance with the Development Plan, unless material considerations indicate otherwise.

5.2.32 The relevant document forming the adopted Development Plan is the Kirklees Local Plan adopted on 27th February 2019.

5.2.33 Table 5.1 lists Local Plan policies relevant to this application. Discipline specific local plan policies are set out in more detail in the relevant chapters of the ES and Planning Statement.

**Table 5.1 Revelant Kirklees Local Plan Policies**

| Policy | Policy title |
|---|---|
| LP1 | Presumption in favour of sustainable development |
| LP2 | Place Shaping |
| LP3 | Location of new development |
| LP4 | Providing Infrastructure |
| LP5 | Masterplanning sites |
| LP7 | Efficient and effective use of land and buildings |
| LP9 | Supporting skilled and flexible communities and workforce |
| LP13 | Town centre uses |
| LP14 | Shopping frontages |
| LP16 | Food and drink uses and the evening economy |
| LP17 | Huddersfield Town Centre |
| LP19 | Strategic transport infrastructure |
| LP20 | Sustainable travel |
| LP21 | Highways and access |
| LP22 | Parking |
| LP23 | Core Walking and cycling network |
| LP24 | Design |
| LP25 | Advertisements and Shopfronts |
| LP26 | Renewable and low carbon energy |
| LP27 | Flood Risk |
| LP28 | Drainage |
| LP30 | Biodiversity and Geodiversity |
| LP32 | Landscape |
| LP33 | Trees |

| Policy | Policy title |
|---|---|
| LP35 | Historic Environment |
| LP43 | Waste Management Hierarchy |
| LP47 | Healthy, active and safe lifestyles |
| LP48 | Community facilities and services |
| LP51 | Protection and improvement of local air quality |
| LP52 | Protection and improvement of environmental quality |
| LP53 | Contaminated and unstable land |
| LP63 | New Open Space |

5.2.34 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that planning applications are determined in accordance with the Development Plan unless material considerations indicate otherwise. The statutory Development Plan for Kirklees is the Local Plan (adopted 27th February 2019).

5.2.35 The application site is within Huddersfield town centre (TCB1) and within the primary shopping area (PSA1) and includes 5no. primary shopping frontages set out below and as designated in the local plan:

Primary shopping frontages:

- PSF5 (part, 20- 24 King Street)
- PSF8 1 Princess Alexandra Walk to 20 Princess Alexandra Walk
- PSF9 1 The Shambles to 21 Princess Alexandra Walk
- PSF10 12 The Shambles to 11 Victoria Lane
- PSF12 (Queensgate Market)

5.2.36 The Case Officer considers that the most relevant Local Plan policies to this development are:

LP2 Place Shaping

LP3 Location of new development

LP5 Masterplanning sites

LP7 Efficient and effective use of land and buildings

LP9 Supporting skilled and flexible communities and workforce

LP13 Town centre uses

LP14 Shopping frontages

LP16 Food and drink uses and the evening economy

LP17 Huddersfield Town Centre

LP24 Design

LP47 Healthy, active and safe lifestyles

LP48 Community facilities and services

5.2.37 The following are relevant Supplementary Planning Documents or other guidance documents published by Kirklees Council;

5.2.38 Supplementary Planning Documents

- Highways Design Guide SPD (2019)
- Guidance documents
- Huddersfield Blueprint (2021)
- Biodiversity Net Gain Technical Advice Note (2021)
- Planning Applications Climate Change Guidance (2021)
- West Yorkshire Low Emissions Strategy and Air Quality and Emissions Technical Planning Guidance (2016)
- Waste Management Design Guide for New Developments (2020)

**Emerging Planning Policy**

5.2.39 Kirklees Council's adopted Local Plan is a housing an industry development strategy for the borough until 2031. As such, there is no emerging new Local Plan to consider at the moment, which would be considered a material consideration.

Local Plan Climate Emergency

5.2.40 As set out within para. 5.7 of the Case Officer's report to Planning Committee dated 11th August 2022, The Council approved Climate Emergency measures at its meeting of full Council on the 16th of January 2019, and the West Yorkshire Combined Authority has pledged that the Leeds City Region would reach net zero carbon emissions by 2038. A draft Carbon Emission Reduction Pathways Technical Report (July 2020, Element Energy), setting out how carbon reductions might be achieved, has been published by the West Yorkshire Combined Authority.

5.2.41 On the 12th of November 2019 the Council adopted a target for achieving 'net zero' carbon emissions by 2038, with an accompanying carbon budget set by the Tyndall Centre for Climate Change Research. National Planning Policy includes a requirement to promote carbon reduction and enhance resilience to climate change through the planning system, and these principles have been incorporated into the formulation of Local Plan policies. The Local Plan predates the declaration of a climate emergency and the net zero carbon target; however, it includes a series of policies which are used to assess the suitability of planning applications in the context of climate change. When determining planning applications, the council would use the relevant Local Plan policies and guidance documents to embed the climate change agenda.

# 6 Socio-Economics and Health

## 6.1 Introduction

6.1.1 This chapter determines the baseline socio-economic conditions and considers the likely socio-economic effects of the Proposed Development. The considerations of this chapter are mostly related to the effects of the Proposed Development on the human population who will live in the vicinity of the Proposed Development site.

6.1.2 This assessment is made by studying the potential effects arising from the Proposed Development and assessing the impact this could have on relevant economic and social baseline, services and facilities. It identifies the socio-economic baseline in relation to key economic and social variables. It then examines the potential effects that could occur, both direct and indirect, resulting from the Proposed Development during construction (temporary effects) and operation (permanent effects).

6.1.3 This assessment has been prepared by Richard Cook, Senior Director within the Economics Services team at Pegasus Group, and member of Institute of Economic Development (IED).

## 6.2 Assessment Approach

### Methodology

6.2.1 There is no specific guidance available which establishes a methodology for undertaking socio-economic effects of a Proposed Development in the context of an EIA. Accordingly, the approach adopted for this assessment is based on professional experience and best practice, and in consideration of the policy requirements/tests set out within the National Planning Policy Framework (NPPF), and the development plan framework.

6.2.2 The range of data sources used in the assessment include, but are not limited to:

- Census data (Census 2021, where available and applicable, otherwise Census 2011).
- Indices of Multiple Deprivation 2019 (IMD 2019).
- Annual Population Services.
- Office for National Statistics.
- Public health England.

### Scenarios

6.2.3 A number of scenarios have been tested and assessed within the context of the socio-economic and health ES chapter. The scenarios and the reason for their inclusion are presented in Table 6.1.

**Table 6.1: Scenarios to be assessed**

| Scenario no. | Scenario title | Justification for inclusion |
|---|---|---|
| 1 | Business As Usual (BAU) | This aligns with Option 1 'Do Nothing' outlined in the Outline Business Case in which it is expected that there would be investment to maintain the existing facilities in their current condition. This includes minimum works to the listed Library building which also houses the current Gallery and Queensgate market. This scenario ultimately presents the worst case option in respect of socio-economic and health effects.<br><br>The Outline Business Case produced for the Proposed Development estimates that the total investment for this option will be £30.7 million. For the purpose of this assessment, a construction cost of £14.9 million has been used, based on calculations by IPW…, and includes the cost of construction and makes allowance for contingencies and risk. |
| 2 | Preferred Way Forward (PWF) | This aligns with Option 3 'Preferred Way Forward' outlined in the Outline Business Case which involves the construction of a new Venue and Food Hall. There will be a new Library partly integrated into the Queensgate market combined with a new separate Gallery. The current Library will be refurbished to incorporate a new Museum.<br><br>The Outline Business Case produced for the Proposed Development estimates that the total investment for this option will be £210 million. For the purpose of this assessment, a construction cost of £146.4 million has been used, based on calculations set out within the Outline Business Case, and includes the cost of construction and makes allowance for contingencies and risk. |

6.2.4 Effects for both scenarios are presented in Section 6.4 Assessment of Likely Significant Effects.

**Assessment Criteria**

6.2.5 The first step in the assessment is to identify the sensitivity of the receptors. In socio-economic assessments, receptors are not sensitive to changing environmental conditions in the same way as many environmental receptors are. To address this, the assessment draws on a combination of measurable indicators and a consideration of the importance of the receptor in policy terms to gauge the receptor's sensitivity. For example, the number of jobs in the area may increase as new developments are completed and occupied by businesses. This is considered alongside the weight attached to these issues in local policy. For example, the Local Plan may identify that employment and business growth is a particular priority. **Table 6.2** shows the sensitivity criteria followed in this assessment.

**Table 6.2: Sensitivity Criteria**

| Sensitivity | Evidence for Sensitivity Assessment |
|---|---|
| High | Evidence of direct and significant socio-economic challenges relating to receptor. Accorded a high priority in local, regional or national economic regeneration policy.<br>Evidence of direct and significant socio-economic challenges including:<br>• Areas with levels of unemployment well in excess of / below regional / national averages and high levels of relative deprivation (i.e. top 10%).<br>• Areas with claimant count well in excess of / below regional / national averages.<br>• Areas with economic activity rate well in excess of / below regional / national averages.<br>• Areas with levels of crime well in excess of / below regional / national averages.<br>• Areas with life expectancy far lower than / above the regional / national averages.<br>• Areas with identified health inequalities well in excess of / below the regional / national averages, such as in respect of obesity and heart disease in the case of adults, and childhood obesity.<br>• Areas with physical activity levels well below the regional / national averages, in respect of adults or children, or both, as applicable.<br>• Areas with mental health indicators well in excess of / below regional / national averages. |
| Medium | Some evidence of socio-economic challenges linked to receptor, which may be indirect. Change relating to receptor has medium priority in local, regional and national economic and regeneration policy.<br>Some evidence of socio-economic challenges, including:<br>• Areas with levels of unemployment above / below regional / national averages and levels of relative deprivation (i.e. top 50%).<br>• Areas with claimant count well above / below regional / national averages.<br>• Areas with economic activity rate above / below |

| Sensitivity | Evidence for Sensitivity Assessment |
|---|---|
| | regional / national averages.<br>• Areas with levels of crime above / below regional / national averages.<br>• Areas with life expectancy below / above the regional / national averages.<br>• Areas with identified health inequalities above / below the regional / national averages, such as in respect of obesity and heart disease in the case of adults, and childhood obesity.<br>• Areas with physical activity levels below the regional / national averages, in respect of adults or children, or both, as applicable.<br>• Areas with mental health indicators above / below regional / national averages. |
| Low | Little evidence of socio-economic challenges relating to receptor. Receptor is accorded a low priority in local, regional and national economic and regeneration policy.<br>Little evidence of socio-economic challenges, including:<br>• Areas with levels of unemployment in line with regional / national averages and levels of relative deprivation (i.e. bottom 50%).<br>• Areas with claimant count in line with regional / national averages.<br>• Areas with economic activity rate in line with regional / national averages.<br>• Areas with levels of crime in line with regional / national averages.<br>• Areas with life expectancy in line with regional / national averages.<br>• Areas with identified health inequalities in line with the regional / national averages, such as in respect of obesity and heart disease in the case of adults, and childhood obesity.<br>• Areas with physical activity levels in line with the regional / national averages, in respect of adults or children, or both, as applicable.<br>• Areas with mental health indicators in line with regional / national averages. |
| Negligible | No socio-economic issues relating to receptor. Receptor is not considered a priority in local, regional and national economic development and regeneration policy.<br>No socio-economic issues relating to a receptor, including:<br>• Areas with levels of unemployment less than regional / national averages and low levels of relative deprivation (i.e. bottom 10%).<br>• Areas with claimant count higher than average regional / national averages.<br>• Areas with economic activity rate higher than average regional / national averages.<br>• Areas with minimal issues in respect of crime. |

| Sensitivity | Evidence for Sensitivity Assessment |
|---|---|
| | • Areas with higher than average life expectancy compared with regional / national averages.<br>• Areas with better than average health indicators compared with the regional / national averages, such as in respect of obesity and heart disease in the case of adults, and childhood obesity.<br>• Areas with physical activity levels above the regional / national averages, in respect of adults or children, or both, as applicable.<br>• Areas with mental health indicators above regional / national averages. |

6.2.6 The magnitude of change upon each receptor has been determined by considering the predicted deviation from baseline conditions, both before and, if required, after mitigation. The criteria used for the assessment of magnitude of change, which can be either positive (beneficial) or negative (adverse) are shown in **Table 6.3**.

**Table 6.3: Magnitude of Change Criteria**

| Magnitude of Impact | Description / Criteria |
|---|---|
| High | Proposed Development would cause a large change to existing socio-economic conditions in terms of absolute and/or percentage change.<br>• Greater than 5% increase / decrease on existing baseline levels of employment.<br>• Greater than 5% increase / decrease in GVA from baseline.<br>• Considerable increase in the likely eventuality of crime due to design / intended use of the proposals.<br>• Considerable increase / decrease in opportunities to exercise or involvement in leisure activities (impact on physical and mental wellbeing). |
| Medium | Proposed Development would cause a moderate change to existing socio-economic conditions in terms of absolute and/or percentage change.<br>• 1% - 5% increase / decrease on existing baseline levels of employment.<br>• 1% - 5% increase / decrease in GVA from baseline.<br>• Moderate increase / decrease in the likely eventuality of crime due to design / intended use of the proposals.<br>• Moderate increase / decrease in opportunities to exercise or involvement in leisure activities (impact on physical and mental wellbeing). |
| Low | Proposed Development would cause a minor change to existing socio-economic conditions in terms of absolute and/or percentage change.<br>• Limited increase / decrease on existing baseline levels of 0.1% - 0.99% increase / decrease on existing baseline levels of employment.<br>• 0.1% - 0.99% increase / decrease in GVA from baseline.<br>• Limited increase / decrease in the likely eventuality of |

| Magnitude of Impact | Description / Criteria |
|---|---|
| | crime due to design / intended use of the proposals.<br>• Limited increase / decrease in opportunities to exercise or involvement in leisure activities (impact on physical and mental health). |
| Negligible | No discernible change in baseline socio-economic conditions. |

6.2.7 In reporting the effects of significance resulting from the Proposed Development, at construction and operational stages, the assessment contextualises both the sensitivity of the receptor and the magnitude of change. The method uses the matrix shown in **Table 6.4**.

**Table 6.4: Significance of Effect Matrix**

| Magnitude of Change | Sensitivity of Receptor | | | | |
|---|---|---|---|---|---|
| | | **High** | **Medium** | **Low** | **Negligible** |
| | **High** | Major | Major | Moderate | Negligible |
| | **Medium** | Major | Moderate | Minor | Negligible |
| | **Low** | Moderate | Minor | Minor | Negligible |
| | **Negligible** | Negligible | Negligible | Negligible | Negligible |

6.2.8 Using this scale, effects identified as major or moderate are regarded as being significant in EIA terms. Effects of minor or lesser significance are also identified but regarded as not significant.

**Scoping and Consultation Responses**

6.2.9 A request for a Scoping Opinion was submitted to Kirklees Council in June 2022. Within that, Socio-Economics and Health were proposed to be scoped into the EIA. At the time of writing a formal Scoping Opinion had not been received from Kirklees Council.

6.2.10 The potential effects assessed within this chapter are as follows:

- Demolition and Construction:
    - Employment - direct, indirect and induced jobs based in the local and wider impact areas, growing employment levels in their respective economies.
    - Economic output – measured in gross value added (GVA, generated by the employment supported during the construction process.
    - Amenity impacts – potential impacts on health and wellbeing as a result of air quality, noise and neighbourhood amenity during the construction phase.

- Operation:

    - Employment - direct, indirect and induced jobs based in the local and wider impact areas, growing employment levels in their respective economies.

    - Economic output – measured in gross value added (GVA, generated by the employment supported once operational.

    - Health and well-being – considering the impact of the proposals on the potential change in overall health and well-being of future users including but not limited to consideration of community safety and access to amenity and activities which have potential to change baseline physical and mental health.

6.2.11 The assessment is informed by a Health Impact Assessment (HIA) which is appended to the chapter (**Appendix 6.1**). The HIA is aligned with the expectations presented in Kirklees Council Rapid Health Impact Assessment (HIA) for Spatial Planning Guidance Notes[1], as well as with relevant NPPF and Local Plan policies.

**Limitations to the Assessment**

6.2.12 Baseline information is derived from the latest available statistics, however, there is often a time-lag associated with the publication of this data. As such, a process of triangulation is utilized wherever possible and relevant whereby baseline data is collated and presented from a range of sources to ensure that as full and up to date picture as possible is presented.

6.2.13 The study area and build programme considered in respect of the cumulative effects are assumed to be the same as those considered in the assessment of the Proposed Development in isolation to enable a worse case assessment.

6.2.14 No additional residents would be generated by the Proposed Development and, as such, there would not be expected to be a change in demand on social infrastructure, for example, education and healthcare facilities. Therefore, this issue is scoped out of the assessment.

## 6.3 Baseline Conditions

6.3.1 The baseline looks at two different spatial scales: Kirklees and Huddersfield Town Centre:

- Kirklees includes the areas of Huddersfield, the Holme Valley, the Colne Valley, the Dearne Valley and North Kirklees (Dewsbury, Batley and Spen Valley), and is essentially the District in which the Site is located.

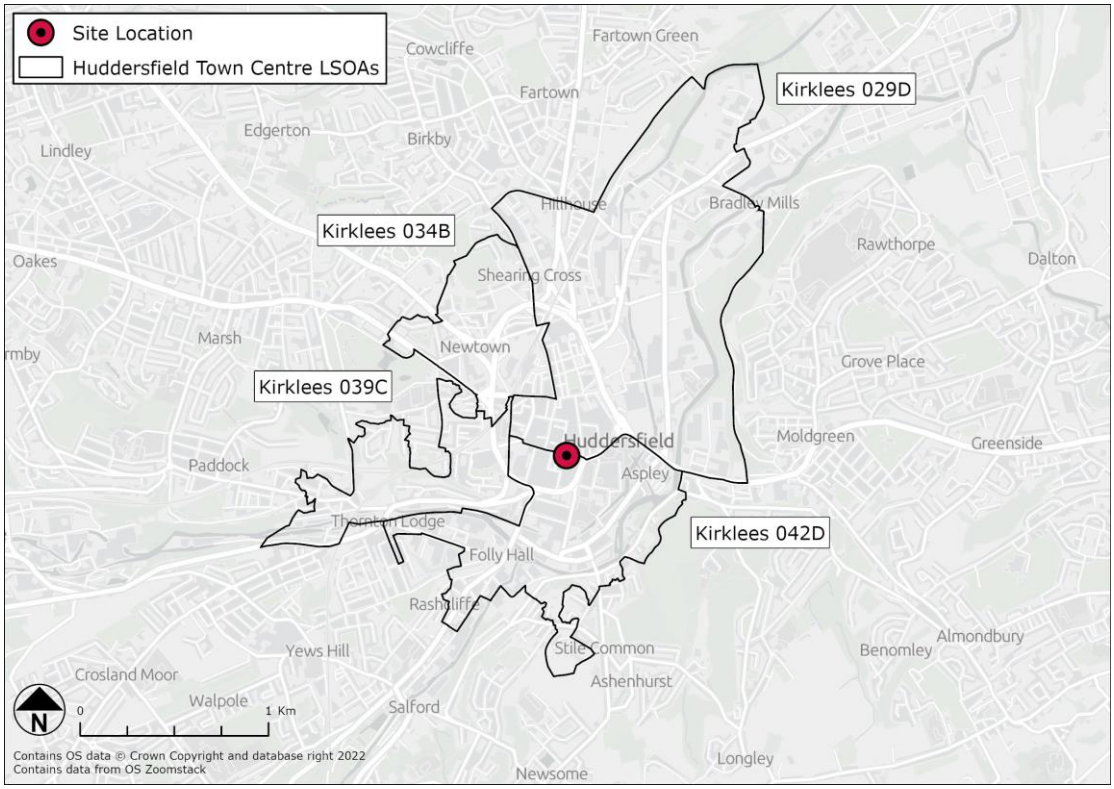
- Huddersfield Town Centre focuses on the immediate surrounding area of the Proposed Development and is a 'best fit' for the town centre of Huddersfield.

6.3.2 Figure 6.1 shows the Lower Super Output Areas (LSOAs) that have been used to represent Huddersfield Town Centre. Four LSOAs are utilized, namely Kirklees 029D, Kirklees 042D,

[1] *Kirklees Council Rapid Health Impact Assessment (HIA) for spatial planning Guidance Notes*: Kirklees Council, November 2020.

Kirklees 039C and Kirklees 034B. The Site falls roughly in the centre of this area, located across the boundaries of two of the LSOAs, specifically Kirklees 029D and Kirklees 042D.

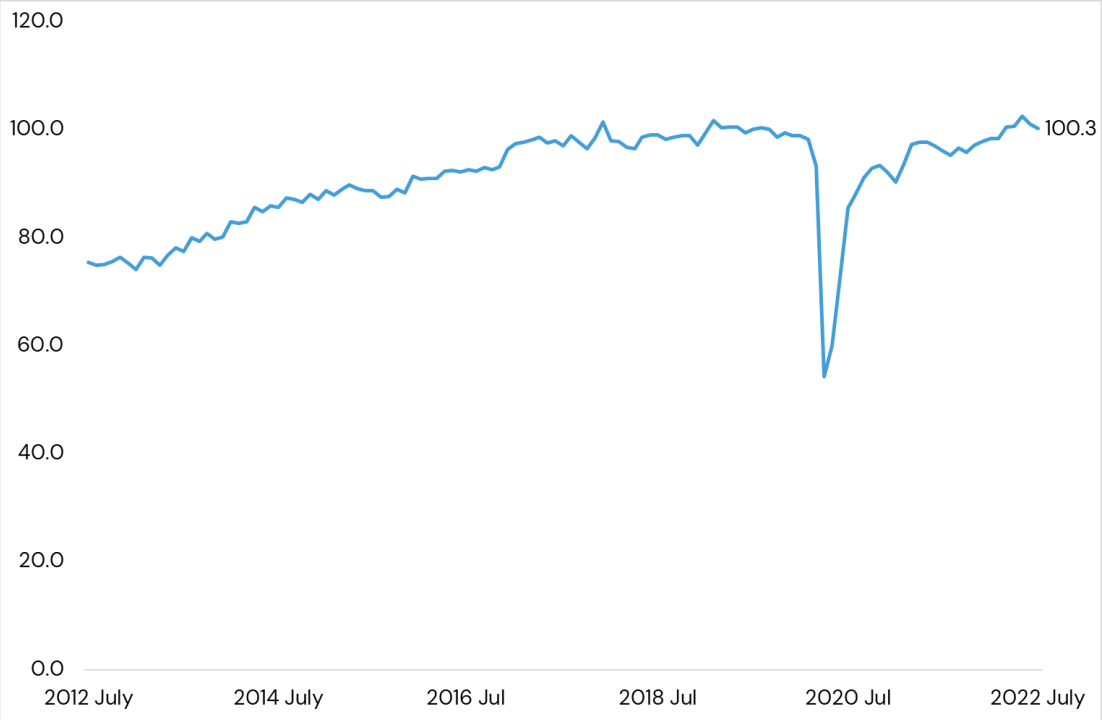
**Figure 6.1: Huddersfield Town Centre and Site Location**




**Construction**

6.3.3 The construction industry was severely affected by the pandemic with a sharp decline in construction activity in April 2020 following lockdown restrictions. Construction output decreased by 0.8 percentage points between June 2022 and July 2022.(see Figure 6.2).

**Figure 6.2**: UK Monthly Construction Output Index (2019=100)

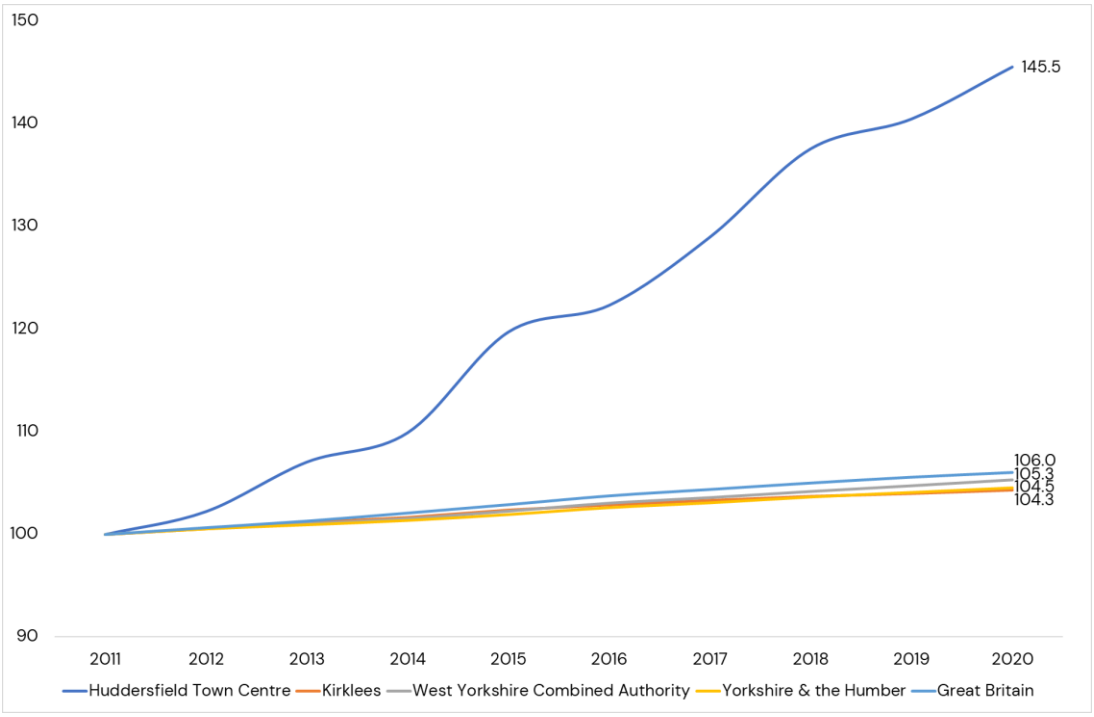



**Source**: ONS

**Population**

6.3.4 Based on ONS data, the population of Huddersfield Town Centre increased by 45.5% between 2011 and 2020, an absolute increase of 3,768 people. This compares to growth of 4.3% in Kirklees, 5.3% in West Yorkshire Combined Authority, 4.5% in Yorkshire and the Humber and 6% in Great Britain. Figure 6.3 shows the population changes in more detail.

**Figure 6.3:** Population Change, 2011-20 (2011=100)




**Source:** ONS, Population Estimates

6.3.5 The fastest growing age group in Huddersfield Town Centre between 2011 and 2020 were those aged 16-64 which increased by 55.3% (3,637). Of this, 51% (1,919) of the increase was a result of people aged 18-25. Based on data from the Higher Education Statistics Authority (HESA), as of the academic year 2020/21 there were 20,610 students at the University of Huddersfield. This represents an increase of almost 1,000 students since 2014/15. It is reasonable to assume that the increase in the younger population in Huddersfield Town Centre could, at least in part, be a result of the increase in the number of students studying and staying in Huddersfield. The number of people aged 0-15 in the Town Centre grew by 16.3% (169), whereas those aged 65 and over fell by 5.7% (38). In all other comparator areas, those aged 65 and over were the fastest growing age group with a rise of 22.1% in Kirklees, 17.7% in West Yorkshire Combined Authority, 18.3% in Yorkshire and the Humber and 19.6% in Great Britain.

6.3.6 Tables 6.5-6.8 show the population projections in Kirklees, West Yorkshire Combined Authority, Yorkshire and the Humber and England[2]. It is projected that the fastest growing age group in all areas were those aged 65 and over with a growth of 36.6% in Kirklees, 35.1% in West Yorkshire Combined, 36.3% in Yorkshire and the Humber and 40.8% in England. The number of people aged 0-15 declined in all areas with a fall of 6.8% in Kirklees. Kirklees also saw a decline of 0.6% in people aged 16-64.

**Table 6.5: Population Projections in Kirklees, 2018-38**

| | 2018 | 2038 | Absolute Change | % Change |
|---|---|---|---|---|
| 0-15 | 89,819 | 83,742 | -6,077 | -6.8% |
| 16-64 | 272,060 | 270,465 | -1,595 | -0.6% |
| 65+ | 76,848 | 104,995 | 28,147 | 36.6% |
| **Total** | **438,727** | **459,204** | **20,477** | **4.7%** |

**Source:** ONS, Population Projections

**Table 6.6: Population Projections in West Yorkshire Combined Authority, 2018-38**

| | 2018 | 2038 | Absolute Change | % Change |
|---|---|---|---|---|
| 0-15 | 476,813 | 464,777 | -12,036 | -2.5% |
| 16-64 | 1,460,576 | 1,493,893 | 33,317 | 2.3% |
| 65+ | 382,825 | 517,194 | 134,369 | 35.1% |
| **Total** | **2,320,214** | **2,475,866** | **155,652** | **6.7%** |

**Source:** ONS, Population Projections

**Table 6.7: Population Projections in Yorkshire and the Humber, 2018-38**

| | 2018 | 2038 | Absolute Change | % Change |
|---|---|---|---|---|
| 0-15 | 1,046,381 | 1,002,967 | -43,414 | -4.1% |
| 16-64 | 3,416,898 | 3,431,682 | 14,784 | 0.4% |
| 65+ | 1,016,336 | 1,384,927 | 368,591 | 36.3% |
| **Total** | **5,479,615** | **5,819,573** | **339,958** | **6.2%** |

**Source:** ONS, Population Projections

[2] Data at the LSOA spatial scale is not available in respect of population projections and therefore it is not possible to present projections for Huddersfield Town Centre.

**Table 6.8: Population Projections in England, 2018-38**

| | 2018 | 2038 | Absolute Change | % Change |
|---|---|---|---|---|
| 0-15 | 10,748,458 | 10,370,237 | -378,221 | -3.5% |
| 16-64 | 35,049,467 | 36,066,076 | 1,016,609 | 2.9% |
| 65+ | 10,179,253 | 14,329,964 | 4,150,711 | 40.8% |
| **Total** | **55,977,178** | **60,766,251** | **4,789,073** | **8.6%** |

**Source:** ONS, Population Projections

**Deprivation**

6.3.7 The 2019 Index of Multiple Deprivation provides an indication of the average levels of deprivation for Lower Layer Super Output Areas (LSOAs) across England. The index provides an overall assessment of the average levels of deprivation as well as an assessment against domains of deprivation. In total, England has 32,844 LSOAs, 258 of which fall within Kirklees.

6.3.8 The scheme falls within two LSOAs, these are Kirklees 029D, which has an overall rank of 2,928, putting it in the top 10% most deprived LSOAs in England and Kirklees 042D, which has an overall rank of 9,558, putting it in the top 30% most deprived LSOAs in England. When looking at individual domains of deprivation, Kirklees 029D has its highest rank in the crime domain with a rank of 2,488, putting it in the top 10% most deprived for this domain. Its lowest rank is in health where it ranks 6,409, however this is still in the top 20% most deprived LSOAs for this domain. Kirklees 042D has its highest rank in living environment where it ranks 1,300, putting it in the top 10% most deprived LSOAs for this domain and it has its lowest rank in employment, with a rank of 19,370, putting it in the top 50% least deprived LSOAs for this domain.

6.3.9 The full list of the domain rankings for Kirklees 029D and Kirklees 042D are set out in Tables 6.9 and 6.10 respectively below. The lower the number the more deprived the area is relative to other LSOAs nationally.

**Table 6.9: Kirklees 029D IMD 2019 Domain Rankings**

| IMD 2019 Domain | Kirklees 029D Rank (out of 32,844, 1 being the most deprived) |
|---|---|
| **Overall IMD** | **2,928** |
| Income | 3,753 |
| Employment | 4,566 |
| Education & Training | 5,096 |
| Health | 6,409 |
| Crime | 2,488 |
| Barriers to Housing and Services | 3,677 |
| Living Environment | 2,923 |

**Source:** Ministry for Housing, Communities & Local Government

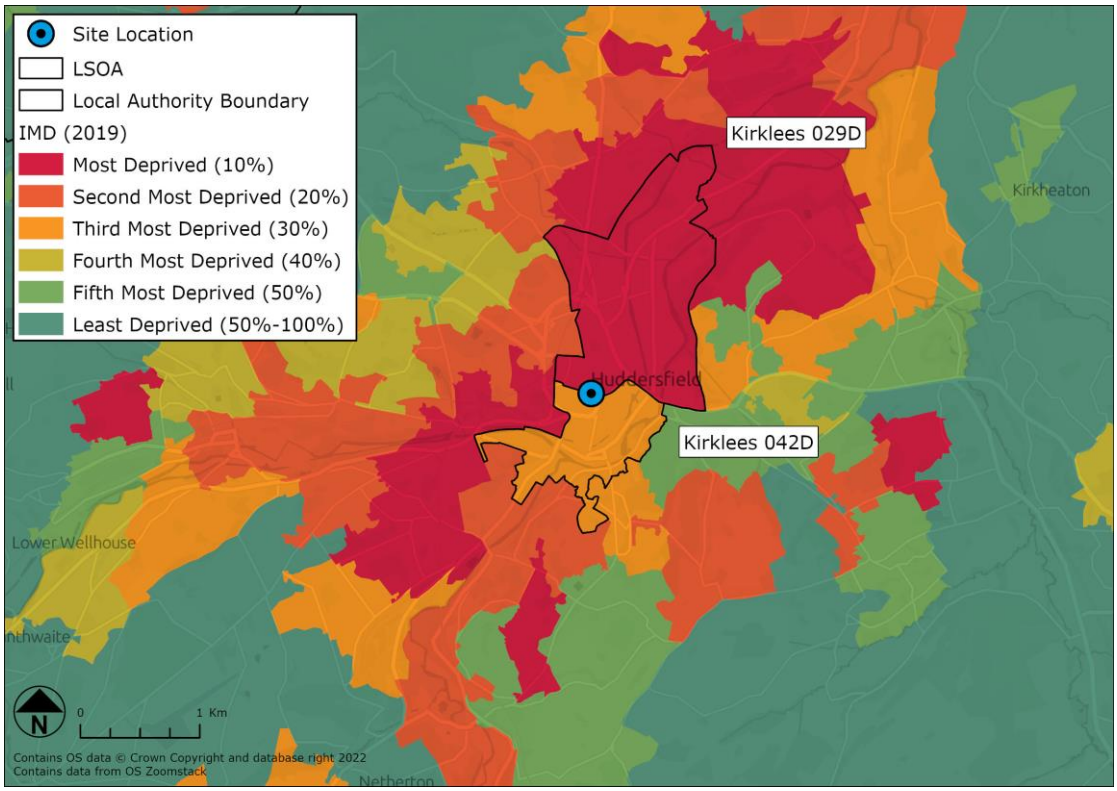
**Table 6.10: Kirklees 042D IMD 2019 Domain Rankings**

| IMD 2019 Domain | Kirklees 042D Rank (out of 32,844, 1 being the most deprived) |
|---|---|
| **Overall IMD** | **9,558** |
| Income | 17,587 |
| Employment | 19,370 |
| Education & Training | 10,382 |
| Health | 3,957 |
| Crime | 10,920 |
| Barriers to Housing and Services | 8,639 |
| Living Environment | 1,300 |

**Source:** Ministry for Housing, Communities & Local Government

6.3.10 Figure 6.4 shows the overall IMD rank for the site location, Kirklees 029D and Kirklees 042D. There are large areas of deprivation close to the site, with many of the LSOAs directly next Kirklees 029D and 042D and within Huddersfield Town Centre fall into the top 10% and top 20% most deprived LSOAs in England. Further out from the town centre, the levels of deprivation decline, with some LSOAs falling into the top 50% least deprived LSOAs in England.

**Figure 6.4: Index of Multiple Deprivation for Site Location**



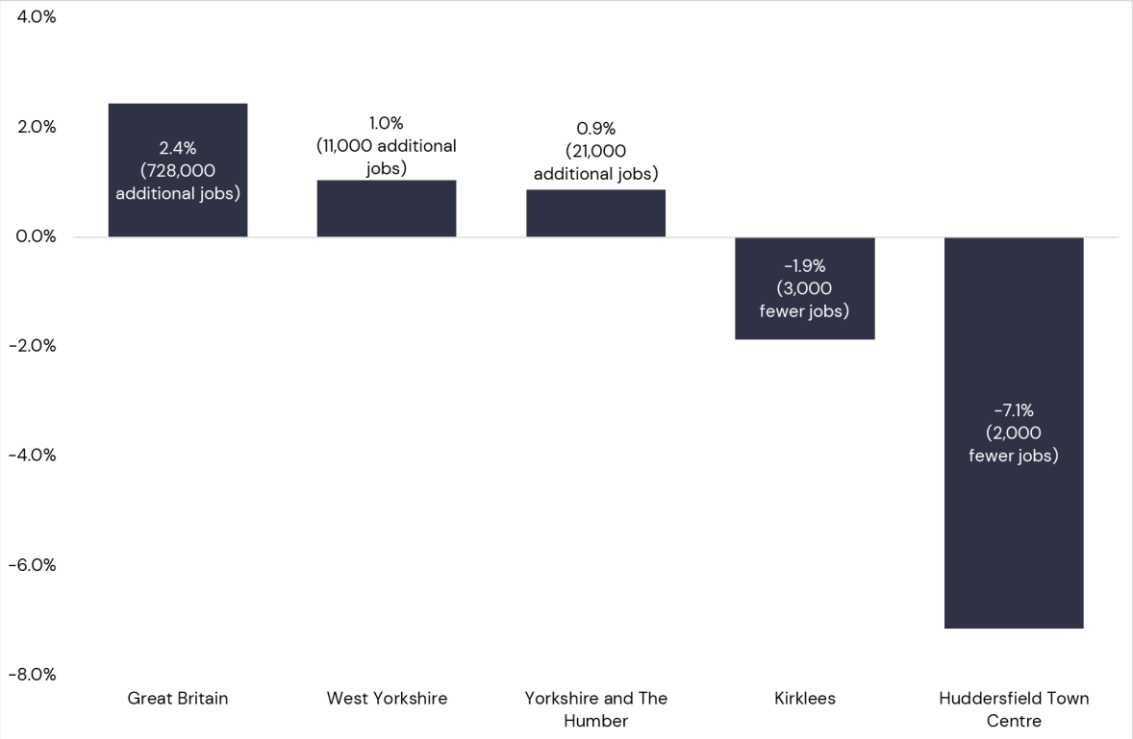

**Source:** Ministry for Housing, Communities and Local Government

**Employment**

6.3.11 Based on the most recent data from the Business Register & Employment Survey (BRES) published by ONS, in 2020 around 158,000 people worked in Kirklees (including the self-employed), of which 26,000 people work in Huddersfield Town Centre.

6.3.12 Between 2015 and 2020, both Huddersfield Town Centre and Kirklees LPA both experienced an employment decline of 7.1% (2,000 fewer jobs – see Figure 6.5) and 1.9% (3,000 fewer jobs). This compares to jobs growth of 1% (11,000 additional jobs) in West Yorkshire, 0.9% (21,000 additional jobs) in Yorkshire and the Humber and 2.4% (728,000 additional jobs) in Great Britain. Figure 6.4 shows the data in more detail.

**Figure 6.5: Employment Change, 2015-20**




**Source:** ONS, Business Register & Employment Survey

6.3.13 Figure 6.6 shows the employment change in Huddersfield Town Centre, Kirklees and comparator areas for 2019-2020, reflecting the impact of the Covid-19 pandemic on the labour market. Between 2015 and 2019, employment in Kirklees and in Huddersfield Town Centre remained at a similar level, however, the impact of the Covid-19 pandemic resulted in jobs declining in both Kirklees and Huddersfield Town Centre. The largest decline was seen in Huddersfield Town Centre, where jobs fell by 7.1% (2,000 fewer jobs). This compares to a fall of 2.5% (4,000 fewer jobs) in Kirklees, 2.2% (24,000 fewer jobs) in West Yorkshire, 2.1% (53,000 fewer jobs) in Yorkshire and the Humber and 1.7% (533,000 jobs) in Great Britain.

6.3.14 The sector most likely to benefit during the build phase of the Proposed Development is the construction sector which accounts for 5.7% of total employment in Kirklees and supported around 9,000 jobs in 2020.

**Figure 6.6: Employment Change, 2019-20**


**Source:** ONS, Business Register & Employment Survey

**Business Base**

6.3.15 In Kirklees, 17,930 businesses are recorded as of 2021, compared to 13,860 in 2011. This is an increase of 4,070 which equates to a rise of 29.4%. This growth rate was below the rate seen across West Yorkshire (30.6%), however it was above the rate for Yorkshire and The Humber (23.6%) and Great Britain (27%). Table 6.11 presents the data in more detail.

6.3.16 Of these 17,930 businesses in Kirklees, 25% (4,500) are businesses in the retail, accommodation and food services and the arts, entertainment and recreation sectors which are the sectors most likely to be supported by the Proposed Development. Businesses in all sectors grew between 2011 and 2021, with an overall increase of 23.8% (865).

**Table 6.11: Change in Business Number, 2011-2021**

| | 2011 | 2021 | Absolute Change | % Change |
|---|---|---|---|---|
| Kirklees | 13,860 | 17,930 | 4,070 | 29.4% |
| West Yorkshire | 73,100 | 95,490 | 22,390 | 30.6% |
| Yorkshire & The Humber | 184,470 | 227,970 | 43,500 | 23.6% |
| Great Britain | 2,464,265 | 3,130,100 | 665,835 | 27.0% |

**Source**: ONS UK Business Count

6.3.17 Of these 17,930 businesses around 84.3% are micro businesses (employing 0-9 people); 12.8% are small (10-49 employees); 2.6% are medium (50-249 employees); and only 0.3% are large (250+ employees). These figures are similarly aligned to the proportions in West Yorkshire, Yorkshire & The Humber, Great Britain. Table 6.12 presents business share by size data in more detail.

**Table 6.12: Business Share by Size, 2021**

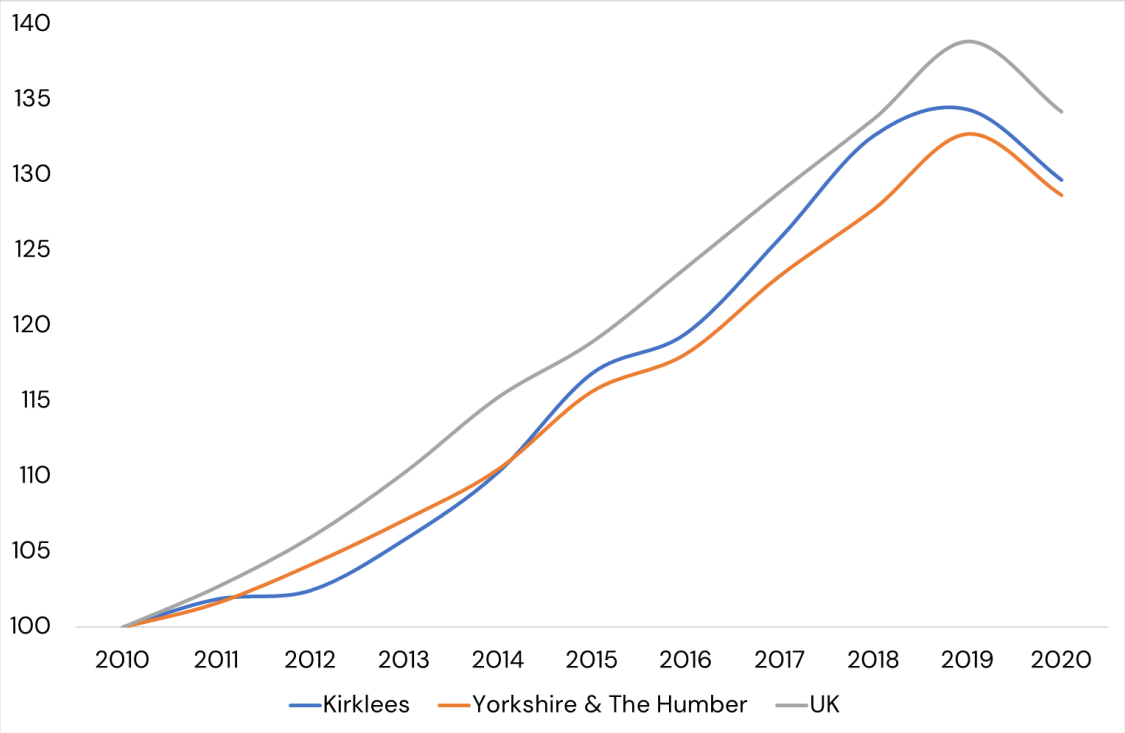
| | Micro (0 to 9) | Small (10 to 49) | Medium-Sized (50 to 249) | Large (250+) |
|---|---|---|---|---|
| Kirklees | 84.3% | 12.8% | 2.6% | 0.3% |
| West Yorkshire | 82.9% | 13.5% | 3.1% | 0.5% |
| Yorkshire & The Humber | 83.0% | 13.6% | 2.9% | 0.4% |
| Great Britain | 84.8% | 12.3% | 2.5% | 0.4% |

**Source**: ONS, UK Business Count

## Economic Output

6.3.18 Figure 6.7 shows the GVA for Kirklees, Yorkshire & The Humber, and The United Kingdom between 2010 and 2020. In this time, GVA for Kirklees increased by 29.7% (approximate increase of £7.4bn). This was just above the rate for Yorkshire & The Humber, which saw GVA rise by 28.7%, but below the rate for the UK, which saw GVA rise by 34.2%. As of 2020, the GVA in the construction sector in Kirklees was £472 million. Between 2010 and 2020, this increased by 51.3%. This is an absolute increase of £160 million.

**Figure 6.7: Gross Value Added at Current Basic Prices, 2010-2020**




**Source**: Office for National Statistics

6.3.19 Using data produced by ONS, it is possible to calculate GVA per worker. In 2020 the GVA per worker in Kirklees was approximately £47,070. This figure is just below the regional GVA per worker for Yorkshire and The Humber of £51,850, however both of these figures are substantially below the GVA per worker across England of £75,175.

**Unemployment**

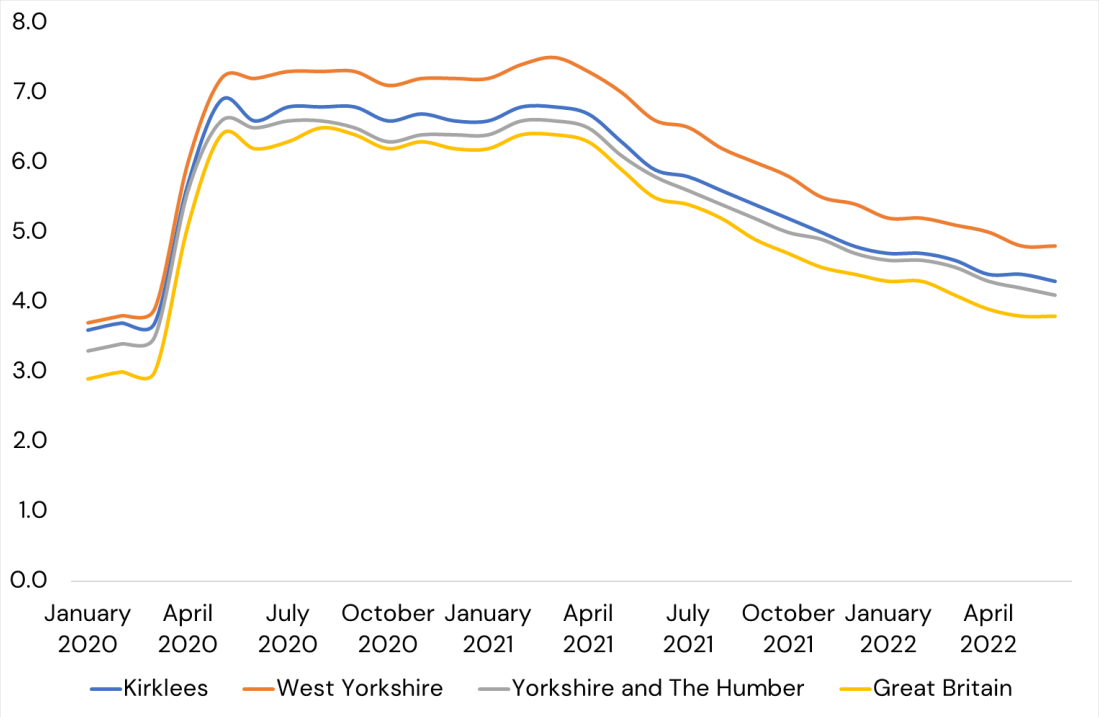
6.3.20 The claimant count gives the number of people claiming Jobseeker's Allowance plus those who claim Universal Credit and are required to seek work and be available for work. Figure 6.8 shows the claimant count as a proportion of those aged 16-64 in Kirklees, West Yorkshire, Yorkshire and The Humber and Great Britain for every month from January 2020 to June 2022. A sharp rise is evident in the claimant count in all areas between March and April 2020, which is a direct result of the impact of Covid-19. This is down in part to more people claiming unemployment-related benefits and also because of changes made to the system by government which means more people are eligible to claim benefits. Further details on this are provided below.

6.3.21 ONS state that enhancements to Universal Credit as part of the UK Government's response to the coronavirus mean that an increasing number of people became eligible for unemployment-related benefit support despite still being in work. Consequently, changes in the claimant count will not be wholly accurate because of changes in the number of people who are not in work. It is not possible to identify to what extent people who are employed or unemployed have affected the numbers.

6.3.22 In January 2020, the claimant count rate in Kirklees was 3.6%. At the height of the pandemic it reached 6.9% but has since decreased to 4.3% in June 2022. This rate is below the rate for the West Yorkshire area (4.8%) but remains above the figures for both Yorkshire and The Humber (4.1%) and Great Britain (3.8%).

6.3.23 Changes to the benefits system which came into force at the beginning of October 2021 may mean the claimant count starts to drop at a slightly faster rate, however it is still reasonable to assume that the legacy effects of the pandemic mean it will be higher than it was pre-March 2020. Figure 6.7 shows the data in more detail.

**Figure 6.8: Claimant count as % of residents aged 16-64, January 2020 – April 22**

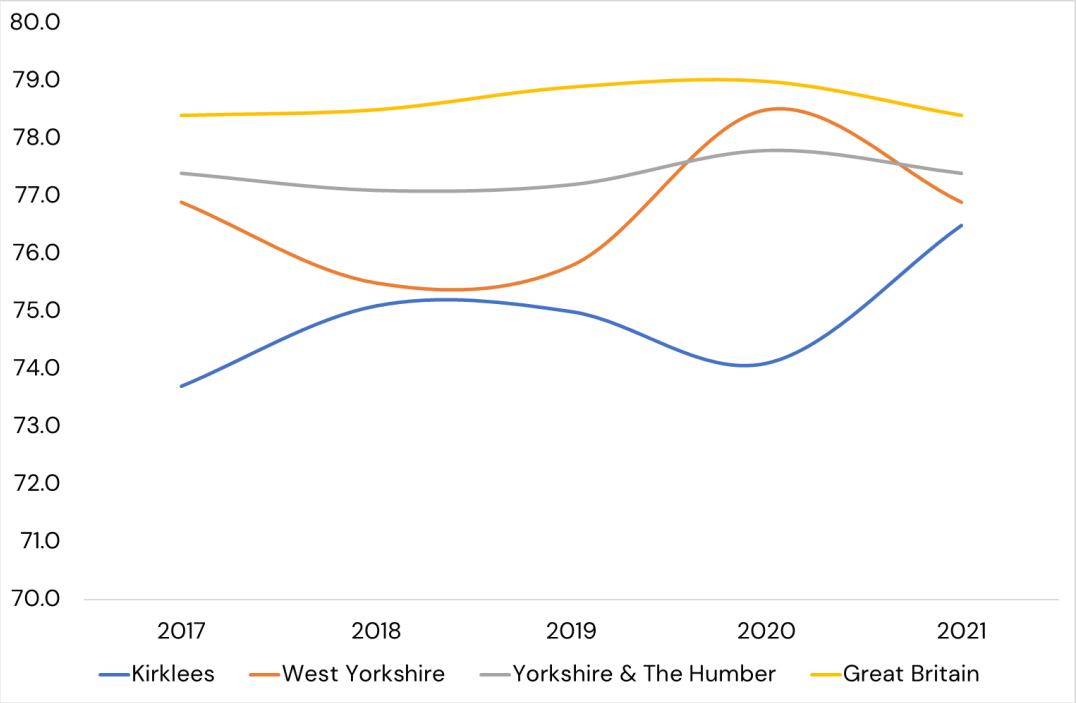



**Source:** Nomis

## Economic Activity

6.3.24 Economic activity rates (the proportion of the working age population in, or seeking work) have fluctuated over the past four years, for Kirklees the rate is currently around 76.5%. This figure is below the rates for West Yorkshire (76.9%), Yorkshire & The Humber (77.4%) and Great Britain (78.4%). Figure 6.9 shows the data in more detail.

**Figure 6.9: Activity rate (16-64), 2017-2021**




**Source:** ONS, Annual Population Survey

**Crime**

6.3.25 Based on data from LG inform[3], the number of total recorded offences per 1,000 population in Q1 2022 was 102 in Kirklees. This represents an increase of 14.4% from the 2021 Q1 figure. This rate was lower than the average rate across Yorkshire and The Humber (108) which increased by 13.7%.

6.3.26 The rate of victim-based crimes reported in Q1 2022 was 81 in Kirklees, which again was below the average for Yorkshire and The Humber of 87. However, when looking at rates of violence against the person, the most common type of offence, Kirklees saw a rate above the average for Yorkshire and The Humber. In Kirklees the rate was 46 per 1,000, whilst for Yorkshire and The Humber this figure is rounded to 44 per 1,000.

6.3.27 It is noted that, as indicated under 'Deprivation', one of the LSOAs in which the Site is located is in the top 10% most deprived for crime in England. This indicates that overall, crime is an issue of note in Huddersfield Town Centre.

**Health Overview**

6.3.28 Overall, many of the health indicators in Kirklees are significantly worse when compared to averages for England. Life expectancy for males in Kirklees is 78.5, this compares to 78.7 in Yorkshire and the Humber and is significantly worse than the England average of 79.6[4]. Life expectancy for females in Kirklees is 82.5, compared to 82.4 in Yorkshire and the Humber and 83.2 in England. Life expectancy in Kirklees also varies within the local authority. Life expectancy is 9.1 years lower for men and 6.9 years lower for women in the most deprived areas of Kirklees than the least deprived areas.

6.3.29 The under 75 mortality rate in Kirklees was 364.9. This was above the rate in the North West at 363.2 and is significantly worse than the rate in England at 330.5. This was similar for the under 75 mortality rate from cardiovascular diseases in Kirklees where the rate was 83 per 100,000. This compares to 82 in Yorkshire and the Humber and 71.7 in England.

6.3.30 In Kirklees 21.1% of children in year 6 were classified as obese, this is better than the rate in the Yorkshire and the Humber of 21%, but above the rate in England of 20.2%. At a ward level, data from Public Health England[5] shows that in Newsome ward (within which the Proposed Development sits), 24.5% of year 6 children were classed as obese between 2017/18 and 2019/20. This was the fourth highest rate of all the wards within Kirklees.

6.3.31 Data from the Office for National Statistics looks at annual personal well-being estimates[6]. The data presents results from a survey where respondents rank how

[3] Available at: Total recorded offences (excluding fraud) (offences per 1,000 population) in Kirklees | LG Inform (local.gov.uk)

[4] *Public Health Profile: Kirklees, 2019. Public Health England, March 2020. Accessed 3 August 2022. Available at: https://fingertips.phe.org.uk/static-reports/health-profiles/2019/E08000034.html?area-name=Kirklees*

[5] *Obesity Profile: Kirklees 2017/18-2019/20. Accessed 3 August 2022. Available at:* https://fingertips.phe.org.uk/profile/national-child-measurement-programme/data#page/3/gid/1938133288/pat/401/par/E08000034/ati/8/iid/93107/age/201/sex/4/cat/-1/ctp/-1/yrr/3/cid/4/tbm/1/page-options/car-do-0

[6] Office for National Statistics: Annual Personal well-being estimates. *Accessed 3 August 2022. Available here:* https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/datasets/headlineestimatesofpersonalwellbeing.

satisfied they were with life on a scale from 0 to 10, where 0 was not satisfied at all and 10 was completely satisfied. In Kirklees, the average rate for life satisfaction in 2020/21 was 7.20 (see figure 6.5). This was below the average rate of 7.32 in Yorkshire and the Humber and the rate of 7.38 in the whole of England.

6.3.32 The same survey asks respondents how anxious they felt yesterday, where a rank of 0 is not anxious at all and a rank of 10 is completely anxious. The average rank for anxiety in Kirklees for 2020/21 was 3.51. This is above the average rank seen in Yorkshire and the Humber of 3.36 and the average seen in England of 3.31.

**Huddersfield Town Centre investment and change**

6.3.33 A research briefing from the House of Commons Library on Town Centre Regeneration[7] looks at the trends and challenges being faced by high streets and what can be done to support town centres. Before the Covid-19 pandemic, high streets were already facing challenges through changes in the retail industry, consumers shopping habits and spending power and the change in use of office space. These impacts were only accelerated by the Covid-19 pandemic. The Government has given focus to supporting high streets following the pandemic through it's levelling up agenda and published policy on how they will build back better on the high streets.

6.3.34 The report looks at a paper produced by the Centre for Local Economic Strategies on building resilient town centres[8]. The challenges faced across town centres and how these can be overcome to build resilient centres is considered. The report identifies that one focus of town centres to become more resilient is to redefine or broaden their functions. It is outlined that some town centres need to take a more balanced approach away from focusing on just retail and encourage more leisure use on the high street alongside retail and focus on community needs. The Proposed Development will deliver a mix of culture and leisure facilities alongside retail and food and drink to create a diverse mix of amenities.

6.3.35 Research from What Works Centre for Economic Growth[9] looks at how investment and interventions can be effective in promoting economic growth on high streets and in town centres. Improving high streets and town centres was already a priority before the Covid-19 pandemic, however, the challenges from the pandemic such as a shift towards online shopping and an increase in the number of people working from home has exacerbated the problems that towns centres were already facing.

6.3.36 One of the points found in the research is the need for an increase in demand to meet supply-side intervention to ensure that there is a sustained improvement in the high street or town centre. As outlined above, between 2011 and 2020 there has been an increase in the population in Kirklees (4.3%) and a significant increase in the population of Huddersfield Town Centre (45.5%) which could be considered a latent demand for the Proposed Development, not least the large increase in population of working age (16 to 64 years). The working age population would be expected to have disposable income which could be spent at the Proposed Development once it is operational.

[7] *Town Centre Regeneration*: House of Commons Library, December 2021.

[8] Developing Resilient Town Centres: Centre for Local Economic Strategies & DCLG, 2016.

[9] *Evidence Briefing: local growth, high street and town centres:* What Works Centre for Local Economic Growth, March 2021.

6.3.37 Further research by the High Street Taskforce[10] also identifies the fall in footfall in town centres with high street footfall falling by 5% since 2015. Footfall declined significantly during the peak of the Covid-19 pandemic lockdowns with major cities being impacted the most: on average footfall fell by 75.9% between March and June 2020. However, this decline in footfall does not mean all high streets are failing, but provides a signal that the function of high streets is changing. There has been an increase in the number of town centres that are considered 'multifunctional', with retail declining as the dominant occupier. Multifunctional towns have suffered lower declines in footfall than 'comparison retail' towns. It is also expected that multifunctional towns recover faster from the effects of the Covid-19 pandemic. Kirklees Cultural Heart is considered to be a fundamental element of Huddersfield Town Centre being considered as a multifunctional town, as opposed to a retail town.

6.3.38 Although in general there has been a fall in footfall on high streets, especially in bigger cities, district and neighbourhood centres haven't been as badly affected. Between March and June 2020, footfall in district centres only fell by 34.5%, this compares to the 75.9% drop seen in major cities. With essential retail and open space being crucial during the Covid-19 lockdowns, district and neighbourhood centres have been rediscovered. Therefore, schemes such as Kirklees Cultural Heart would benefit from more support through national, regional and local policy to ensure they are attracting local people through providing a diverse range of services and ensuring high footfall.

## 6.4 Assessment of Likely Significant Effects

**Demolition and Construction**

**Scenario 1: Business As Usual**

Employment

6.4.1 The Outline Business case for the Proposed Development estimates the build cost at £14.9 million for the business as usually scenario[11]. Using professional experience, we have estimated the build time at 18-months.

6.4.2 To estimate construction employment supported during the building phase, the total construction cost has been divided by the average turnover per construction employee in Yorkshire and the Humber of £142,614[12]. Over the estimated 18-month build programme, 69 construction jobs could be supported on-site per annum.

6.4.3 It is widely recognised that construction has knock-on effects for other sectors, which leads to increased demand for building materials and equipment at the construction phase, as well as furniture, carpets etc. following completion. This generates and sustains employment in other sectors. This is known as the 'multiplier effect' and analysis published by the Homes & Communities Agency (HCA – now Homes England) indicates that the employment multiplier for construction activities in the UK is 2.7 – i.e. for every construction job created, a further 1.7 jobs are supported in the wider economy. This

[10] Review of High Street Footfall July 2019 – June 2020: High Streets Task Force, September 2020.

[11] The Business as usual scenario aligns with option 1 do nothing in the outline business case.

[12] Calculated using data for the Yorkshire and the Humber construction sector from the 2021 edition of Business Population Estimates produced by the Office for National Statistics.

suggests that as well as the 69 on-site jobs, development could support a total of 118 additional jobs during the build phase.

6.4.4 In total, an estimated 188 jobs temporary jobs could be supported during the 18-month build phase.

6.4.5 The sensitivity of the receptor in Kirklees is **high** given that employment declined between 2015 and 2020. The area also has high levels of deprivation surrounding the site. The magnitude of the effect is considered to be **medium** (188 jobs accounts for 2.1% of construction employment in Kirklees as of 2020). Therefore, the significance of the effect is considered to be **major beneficial** which is significant in EIA terms.

Economic Output

6.4.6 Another way of looking at the economic impact of the construction phase is to calculate the contribution a development makes to wealth creation, as measured by the increase in the value of goods and services generated within an area. This can be done by looking at the increase in GVA[13], a common proxy for economic output. Using ONS data, it is possible to calculate GVA per employee by sector at a regional level[14]. Applying these estimates to the employment estimates outlined above, the construction of the Proposed Development could generate around £10 million of GVA per annum or £15million of GVA over the 18-month build timeframe in current prices.

6.4.7 The sensitivity of the receptor in Kirklees is **medium** given the GVA in the construction sector in Kirklees increased by 51.3% between 2010 and 2020. The magnitude of the effect is considered to be **medium** as the GVA generated per annum during the construction phase would lead to a 2.1% uplift in the GVA generated by the construction sector in 2020. As such, the significance of the temporary effect is assessed as being **major beneficial** in Kirklees which is significant in EIA terms.

Amenity Impacts

6.4.8 It is noted that the assessments relating to Air Quality (ES Chapter 9) and Noise (standalone assessment report) used to inform the consideration of potential impacts on nearby residents and users of the Town Centre during the period of construction have been undertaken based the proposals associated with the PWF. As such, the discussion and associated impacts from a socio-economic and health perspective relating to amenity impacts during the construction phase are presented under Scenario 2: Preferred Way Forward and are accepted as representative of the worst case position for both Scenarios 1 and 2 assessed within this chapter.

**Scenario 2: Preferred Way Forward**

Employment

6.4.9 As outlined in the Outline Business Case the construction cost for the Preferred Way Forward is estimated at £146.4 million[15] over a 3-year build timeframe.

[13] Gross value added is the measure of the value of goods and services produced in an area, industry or sector of an economy.

[14] GVA per employee estimates calculated using data from the 2020 Business Register and Employment Survey, as well as regional GVA estimates for 2019 – both published by ONS.

[15] This includes the total construction cost and allowance for contingency and risk costs.

6.4.10 To estimate construction employment supported during the building phase, the total construction cost has been divided by the average turnover per construction employee in Yorkshire and the Humber of £142,614[16]. Over the estimated 3-year build programme, 342 construction jobs could be supported on-site per annum.

6.4.11 Applying the same multiplier as used above in the business as usual scenario, as well as the 342 on-site jobs, the development could support a total of 582 additional jobs during the build phase.

6.4.12 In total, an estimated 924 temporary jobs could be supported by the 3-year build phase.

6.4.13 The sensitivity of the receptor in Kirklees is **high** given that employment declined between 2015 and 2020. The area also has high levels of deprivation surrounding the site. The magnitude of the effect is considered to be **high** (924 direct construction jobs per annum in Kirklees accounts for 10.3% of construction employment in 2020). Therefore, the significance of the temporary effect on employment during construction is **major beneficial** in Kirklees which significant in EIA terms.

Economic Output

6.4.14 Another way of looking at the economic impact of the construction phase is to calculate the contribution a development makes to wealth creation, as measured by the increase in the value of goods and services generated within an area. This can be done by looking at the increase in GVA[17], a common proxy for economic output. Using ONS data, it is possible to calculate GVA per employee by sector at a regional level[18]. Applying these estimates to the employment estimates outlined above, the construction of the Proposed Development could generate around £49.3 million of GVA per annum or £148million of GVA over the 3-year build timeframe in current prices.

6.4.15 The sensitivity of the receptor in Kirklees is **medium** given the GVA in the construction sector in Kirklees increased by 51.3% between 2010 and 2020. The magnitude of the effect is considered to be **high** as the GVA generated per annum during the construction phase would lead to a 10.5% uplift in the GVA generated by the construction sector in 2020. As such, the significance of the temporary effect is assessed as being **major beneficial** in Kirklees which is significant in EIA terms.

Amenity Impacts

6.4.16 There is potential for negative impacts on local amenities, including closest residents and users of the immediate surrounding area, as a result of pollution and nuisance caused by construction works. This includes the potential for dust, noise and vibration generated as a result of construction traffic movements and construction activities on site.

6.4.17 For the purposes of the consideration of potential impacts on local amenities during the construction period in the context of the Socio-Economic and Health assessment, a

[16] Calculated using data for the Yorkshire and the Humber construction sector from the 2021 edition of Business Population Estimates produced by the Office for National Statistics.

[17] Gross value added is the measure of the value of goods and services produced in an area, industry or sector of an economy.

[18] GVA per employee estimates calculated using data from the 2020 Business Register and Employment Survey, as well as regional GVA estimates for 2019 – both published by ONS.

conservative approach is taken. It is assumed that there is potential for receptors to have a **high** sensitivity in respect of their vulnerability to change, and that the magnitude of effect is also **high**, albeit for a short, temporary period within the construction phase.

6.4.18 To address potential negative effects, a Construction Environment Management Plan (CEMP) will be prepared and secured by Condition, which will uphold construction works to a wide range of best practice measures throughout the construction phase, and serve to minimise any potential temporary construction effect to **minor to moderate adverse** in Huddersfield Town Centre which is **not significant** in EIA terms

**Operation**

**Scenario 1: Business As Usual**

Employment

6.4.19 Based on calculations provided by IPW…, once operational, the business as usual scenario will support an estimated 61 gross full-time equivalent (FTE) jobs.

6.4.20 The sensitivity of the receptor in Kirklees is **medium** given that employment in Kirklees declined slightly between 2015 and 2020 and unemployment is almost in line with regional and national trends. The magnitude of the effect is **negligible** given that the 61 gross FTE jobs from the scheme once it is operational account for 0.04% of total employment in Kirklees. As such, the significance of the permanent employment on Kirklees is considered to be **negligible** which is **not significant** in EIA terms.

6.4.21 The sensitivity of the receptor in Huddersfield Town Centre is **medium** given that employment in Huddersfield Town Centre declined between 2015 and 2020 and unemployment is almost in line with regional and national trends. The magnitude of the effect is **low** given that the 61 gross FTE jobs from the scheme once it is operational account for 0.3% of total employment in Huddersfield Town Centre. As such, the significance of the permanent employment on Huddersfield Town Centre is considered to be **minor beneficial** which is **not significant** in EIA terms.

Economic Output

6.4.22 In the Outline Business Case produced for the scheme used GVA per employee of £34,000. Applying this to the 50 net additional FTEs outlined above gives the net GVA per annum from the Proposed Development at £1.7million.

6.4.23 The sensitivity of the receptor in Kirklees is **medium** given that between 2010 and 2020, the GVA in Kirklees for all industries increased by 29.7% which was between the growth seen at a regional and national level. The magnitude of the effect is **negligible** given that the annual GVA generated by the scheme once operational accounts for 0.02% of total GVA in Kirklees. As such, the permanent effect if GVA once the scheme is operational is considered to be **negligible** in Kirklees which is **not significant** in EIA terms.

6.4.24 Data relating to the change in GVA at the LSOA spatial scale is not available. Therefore, to enable consistency and worst case assumptions to be applied, the sensitivity of the receptor in Huddersfield Town Centre is assumed to align with that identified for Kirklees, i.e. **medium**. The magnitude of the effect is **low** given that the annual GVA generated by the scheme once operational accounts for 0.2% of total GVA in Huddersfield Town Centre. As such, the permanent effect if GVA once the scheme is operational is

considered to be **minor beneficial** in Huddersfield Town Centre which is **not significant** in EIA terms.

Health and Wellbeing

6.4.25 The HIA presented in **Appendix 6.1** of this ES Chapter, provides a detailed review of potential health and wellbeing impacts of the Proposed Development. Considerations were made in respect of a wide range of relevant determinants, considering social, economic and physical factors which all have potential to influence health and wellbeing of local residents and/or of the Proposed Development.

6.4.26 In association with Scenario 1: BAU, it is noted that there would be investment of £30m to maintain the existing facilities in their current condition, and also include some limited works to the listed Library building which also houses the current Gallery and Queensgate market. It is expected that health and wellbeing effects associated with Scenario 1: BAU would include:

- 61 gross FTE jobs once operational (including existing and generated employment).
- £30m economic investment which will have direct and indirect benefits for the District's economy.
- Maintenance of existing buildings on site and some works to the Library building, albeit limited in scope.
- Continuation of range of amenities and activities offered to date.

6.4.27 The sensitivity of the receptors, local residents and/or users of the Proposed Development, is **medium** given that claimant count is above regional and national averages, economic activity rate is below regional and national averages albeit fast rate of growth seen in last 12 months compared to other spatial scales, deprivation is particularly high in the Town Centre, crime is noted as being a key issue in the area, fewer people are physically active in Kirklees than at the regional / national level and mental health is slightly worse than regional/national averages, and there are noted differences in life expectancy of males and females between the least and most deprived areas of the town. The magnitude of the effect is considered to be **low** as the area is maintained for use as community facilities and amenity, and there is some investment made under Scenario 1: BAU, but the potential for change would be limited. As such, the significance of the permanent effect is assessed as being **minor beneficial** in Kirklees and Huddersfield Town Centre which is **not significant** in EIA terms.

**Scenario 2: Preferred Way Forward**

Employment

6.4.28 The Proposed Development will create permanent employment opportunities once it is built, many of which are likely to prove attractive to residents of Kirklees and the wider area.

6.4.29 Based on information provided by IPW… it is estimated that the Proposed Development will support 459 gross full-time equivalent (FTE) jobs.

6.4.30 The sensitivity of the receptor in Kirklees is **medium** given that employment in Kirklees declined slightly between 2015 and 2020 and unemployment is almost in line with regional and national trends. The magnitude of the effect is **low** given that the 459 gross FTE jobs from the scheme once it is operational account for 0.2% of total employment in Kirklees. As such, the significance of the permanent employment on Kirklees is considered to be **minor beneficial** which is **not significant** in EIA terms.

6.4.31 The sensitivity of the receptor in Huddersfield Town Centre is **medium** given that employment in Huddersfield Town Centre declined between 2015 and 2020 and unemployment is almost in line with regional and national trends. The magnitude of the effect is **medium** given that the 459 gross FTE jobs from the scheme once it is operational account for 1.8% of total employment in Huddersfield Town Centre. As such, the significance of the permanent employment on Kirklees is considered to be **moderate beneficial** which is **significant** in EIA terms.

Economic Output

6.4.32 Based on calculations provided by IPW… on the GVA (a proxy for economic output) associated with the Proposed Development. On an annual basis the net GVA contribution is calculated to be £10.2 million.

6.4.33 The sensitivity of the receptor in Kirklees is **medium** given that between 2010 and 2020, the GVA in Kirklees for all industries increased by 29.7% which was between the growth seen at a regional and national level. The magnitude of the effect is **low** given that the annual GVA generated by the scheme once operational accounts for 0.1% of total GVA in Kirklees. As such, the permanent effect of GVA once the scheme is operational is considered to be **minor beneficial** in Kirklees which is **not significant** in EIA terms.

6.4.34 Data relating to the temporal change in GVA at the LSOA spatial scale is not available. Therefore, to enable consistency and worst case assumptions to be applied, the sensitivity of the receptor in Huddersfield Town Centre is assumed to align with that identified for Kirklees, i.e. **medium**. The magnitude of the effect is **medium** given that the annual GVA generated by the scheme once operational accounts for 1.2% of total GVA in Huddersfield Town Centre[19]. As such, the permanent effect of GVA once the scheme is operational is considered to be **moderate beneficial** in Huddersfield Town Centre which is **significant** in EIA terms.

Health and Wellbeing

6.4.35 The HIA presented in **Appendix 6.1** of this ES Chapter, provides a detailed review of potential health and wellbeing impacts of the Proposed Development. Considerations were made in respect of a wide range of relevant determinants, considering social, economic and physical factors which all have potential to influence health and wellbeing of local residents and/or of the Proposed Development.

6.4.36 **Appendix 6.1** HIA notes that the Proposed Development will have a beneficial impact on health and wellbeing overall once completed and operational. Key benefits include, but are not limited to:

[19] Note: GVA for Huddersfield Town Centre has been calculated by multiplying the total employment in Huddersfield Town Centre (26,000) by the GVA per job given in the Outline Business Case (£34,000) giving GVA in Huddersfield Town Centre of £884 million.

- Generation of 459 gross FTE jobs, which will contribute to improving the proportion of people who are of working age, economically active and in employment.

- Economic investment which will have direct and indirect benefits for the District's economy.

- Creation of refurbished and new, safe, exciting and inspiring community spaces, both external to and within the buildings proposed, through well considered and informed design.

- Enable accessibility for all individuals in all parts of the Proposed Development, both internally within buildings proposed and externally in public realm areas.

- Offer a wider range of amenities and activities to suit people of varying age groups and for varying budgets, which have the potential to benefit physical and mental health, directly and indirectly.

- Generation of additional social value in the form of a wellbeing value and an amenity value, which overall has been estimated by the Outline Business Case to be worth £10.5 million per annum. In addition, the estimated 1 million visitors to the Proposed Development are estimated to generate £15.3 million in spend per annum.

6.4.37 The sensitivity of the receptors, local residents and/or users of the Proposed Development, is **medium** given that claimant count is above regional and national averages, economic activity rate is below regional and national averages albeit fast rate of growth seen in last 12 months compared to other spatial scales, deprivation is particularly high in the Town Centre, crime is noted as being a key issue in the area, fewer people are physically active in Kirklees than at the regional / national level and mental health is slightly worse than regional/national averages, and there are noted differences in life expectancy of males and females between the least and most deprived areas of the town. The magnitude of the effect is considered to be **high** as there will be significant amount of investment under Scenario 2: PWF, which will result in complete refurbishment and new, additional provision for a wide range of leisure and community uses. As such, the significance of the permanent effect is assessed as being **major beneficial** which is **significant** in EIA terms: this applies to both Kirklees District and Huddersfield Town Centre spatial scales.

## 6.5 Mitigation, Enhancement and Residual Effects

6.5.1 There are no mitigation or enhancement measures specific to socio-economic and health.

6.5.2 Residual effects remain unchanged from those impacts identified in Section 6.4 Assessment of Likely Significant Effects of this ES chapter.

## 6.6 Cumulative Effects

6.6.1 There are no cumulative schemes identified that need to be assessed from a socio-economic and health perspective.

## 6.7 Summary

**Introduction**

6.7.1 This chapter considered the potential socio-economic effects of the Proposed Development during both the construction and operational phases.

**Baseline Conditions**

6.7.2 Population has increased at a considerably faster growth rate in the last 10 years in Huddersfield Town Centre in comparison to Kirklees as a whole, West Yorkshire Combined Authority and Great Britain. Those people within working age (16-64 years) have seen the greatest growth (potentially attributable in part to the increase in the number of students studying and staying in Huddersfield), with a smaller proportion of growth shown for those aged 0-15 years, whilst there was a reduction in those aged 65 years and over. Population projections indicate that there is expected to be similar growth rates at all spatial scales in the over 65 years age group, whereas there is predicted to be a decline in proportion of the population between 0-15 years and 16-64 years.

6.7.3 The part of the District in which the Proposed Development is located is in at least the top 30% most deprived LSOAs in the country, with part of the Site and some of the immediate surrounding areas noted as being within the top 10% most deprived LSOAs in the country.

6.7.4 Employment in Kirklees declined slightly between 2015 and 2020 and unemployment is almost in line with regional and national trends. The claimant count in Kirklees is above regional and national averages, economic activity rate is below regional and national averages albeit a fast rate of growth was seen in the last 12 months compared to other spatial scales.

6.7.5 There are 17,930 businesses recorded as of 2021 in Kirklees with a rise of 29.4% seen since 2011. Of these businesses, 25% (4,500) are the retail, accommodation and food services and the arts, entertainment and recreation sectors which are the sectors most likely to be supported by the Proposed Development. This and all other sectors had grown in the period 2011 to 2021.

6.7.6 Fewer people are physically active in Kirklees than at the regional and national level and mental health is slightly worse in Kirklees than regional and national averages. There are noted differences in life expectancy of males and females between the least and most deprived areas of the town.

**Likely Significant Effects**

6.7.7 Effects are identified for both the 'Do Nothing' scenario, in which minimal investment is made, as well as the 'Preferred Way Forward' scenario, in which the maximum potential investment is assumed. The potential range of effects generated by the Proposed Development is presented.

6.7.8 In respect of the construction phase, the assessment indicates that the Proposed Development will have the following temporary economic effects:

- Generate between 188 and 924 temporary jobs per annum over the build period.

- Generate between £10million and £49.3million of gross value added per annum is estimated to be contributed to the local economy during the build programme.

6.7.9 In EIA terms, these impacts are considered to have a significant beneficial temporary effect at the District scale for both the 'Do Nothing' and the 'Preferred Way Forward' scenario.

6.7.10 Once operational, the effects are identified at both the Huddersfield Town Centre spatial scale as well as the Kirklees District scale to determine spatial differentiation in respect of the expected effects. In respect of the operational phase, the assessment indicates that the Proposed Development will have the following permanent economic effects:

- Generate between 61 and 459 gross FTE jobs.
- Generate between £1.7million and £10.2million gross value added per annum contributed to the local economy.

6.7.11 In EIA terms, these impacts are considered to have a permanent beneficial effect at both the Huddersfield Town Centre and Kirklees District scale, but it is only the 'Preferred Way Forward' scenario that generates the significant beneficial effects.

6.7.12 In terms of health and wellbeing, during the construction phase there is potential for a temporary adverse effect as a result of pollution and nuisance on local residents and users of the Town Centre. However, this will be minimized by best practice construction measures to be implemented by a Construction Environment Management Plan, secured by Condition. The effect is not expected to be significant in EIA terms.

6.7.13 Once operational, the Proposed Development is expected to have a significant beneficial impact at both the Huddersfield Town Centre and Kirklees District spatial scale on both physical and mental health and wellbeing. Key benefits relate to additional employment improving the proportion of people who are working age, economically active and in employment, creation of refurbished and new, safe, exciting and inspiring community spaces, accessibility for all individuals, and the offer of a wide range of amenities and activities to suit people of varying age groups and budgets.

**Mitigation and Enhancement**

6.7.14 There are no mitigation or enhancement measures specific to socio-economic and health.

**Conclusion**

6.7.15 A review of relevant literature has been undertaken focused on the issues faced by town centres in the UK and options for effective management to reinstate use, vibrancy and ultimately economic growth of town centres in the context of historic economic downturn and, most recently, Covid-19 pandemic. Overall, research has indicated that a broad mix of uses within a town centre generates greatest potential for economic revival and growth. The proposal to reinvigorate and increase the provision of leisure and cultural amenity in Huddersfield Town Centre through this Proposed Development, with the overall aim of contributing to the regeneration and economic growth of Huddersfield Town Centre, is in line with research findings. Specific to the Socio-Economic and Health assessment of the Proposed Development, it is considered that beneficial socio-economic effects will be generated and will contribute to much needed regeneration in the Town Centre.

6.7.16 **Table 6.13** presents a summary of the effects, mitigation and residual effects in relation to Socio-Economics and Health.

**Table 6.13: Summary of Effects**

| Development Phase | Description of Effect | Nature of Effect | Receptor | Sensitivity of Effect | Magnitude of Effect | Significance | Mitigation | Residual Effect |
|---|---|---|---|---|---|---|---|---|
| ***Demolition and Construction*** | | | | | | | | |
| *Scenario 1: Business As Usual (BAU)* | | | | | | | | |
| Employment | Generation of jobs during the build phase | Temporary | Kirklees District | High | Medium | Major Beneficial | None required | Major Beneficial |
| Economic Output | Generation of GVA by construction employment | Temporary | Kirklees District | Medium | Medium | Major Beneficial | None required | Major Beneficial |
| Amenity | Potential for nuisance as a result of construction activities | Temporary | Huddersfield Town Centre | High | High | Major Adverse | Construction Environment Management Plan (CEMP) | Minor to Moderate Adverse |
| *Scenario 2: Preferred Way Forward* | | | | | | | | |
| Employment | Generation of jobs during the build phase | Temporary | Kirklees District | High | High | Major Beneficial | None required | Major Beneficial |
| Economic Output | Generation of GVA by construction employment | Temporary | Kirklees District | Medium | High | Major Beneficial | None required | Major Beneficial |
| Amenity | Potential for nuisance as a result of construction activities | Temporary | Huddersfield Town Centre | High | High | Major Adverse | Construction Environment Management Plan (CEMP) | Minor to Moderate Adverse |

| Development Phase | Description of Effect | Nature of Effect | Receptor | Sensitivity of Effect | Magnitude of Effect | Significance | Mitigation | Residual Effect |
|---|---|---|---|---|---|---|---|---|
| ***Operation*** | | | | | | | | |
| *Scenario 1: Business As Usual (BAU)* | | | | | | | | |
| Employment | Generation of jobs once complete and fully occupied | Permanent | Kirklees District | Medium | Negligible | Negligible beneficial | None required | Negligible beneficial |
| | | | Huddersfield Town Centre | Medium | Low | Minor Beneficial | None required | Minor Beneficial |
| Economic Output | Generation of GVA by operational employment | Permanent | Kirklees District | Medium | Negligible | Negligible beneficial | None required | Negligible beneficial |
| | | | Huddersfield Town Centre | Medium | Low | Minor Beneficial | None required | Minor Beneficial |
| Health and Wellbeing | Potential effects on health and wellbeing of population in respect of a range of related determinants | Permanent | Kirklees District | Medium | Low | Minor Beneficial | None required | Minor Beneficial |
| | | | Huddersfield Town Centre | Medium | Low | Minor Beneficial | None required | Minor Beneficial |
| *Scenario 2: Preferred Way Forward* | | | | | | | | |
| Employment | Generation of jobs once complete and fully occupied | Permanent | Kirklees District | Medium | Low | Minor Beneficial | None required | Minor Beneficial |
| | | | Huddersfield Town Centre | Medium | Medium | Moderate Beneficial | None required | Moderate Beneficial |
| Economic Output | Generation of GVA by operational employment | Permanent | Kirklees District | Medium | Low | Minor Beneficial | None required | Minor Beneficial |
| | | | Huddersfield Town Centre | Medium | Medium | Moderate Beneficial | None required | Moderate Beneficial |
| Health and Wellbeing | Potential effects on health and wellbeing of population in | Permanent | Kirklees District | Medium | High | Major Beneficial | None required | Major Beneficial |
| | | | Huddersfield Town Centre | Medium | High | Major Beneficial | None required | Major Beneficial |

| Development Phase | Description of Effect | Nature of Effect | Receptor | Sensitivity of Effect | Magnitude of Effect | Significance | Mitigation | Residual Effect |
|---|---|---|---|---|---|---|---|---|
| | respect of a range of related determinants | | | | | | | |

# 7 Cultural Heritage

## 7.1 Introduction

7.1.1 This chapter considers the likely significant effects of the Proposed Development on cultural heritage receptors. It includes a consideration of buildings / structures that form the built historic environment and below-ground archaeology.

7.1.2 This chapter has been prepared by Simon Britt, IHBC MRTPI, Associate Built Heritage Consultant and Laura Garcia MCIfA, Director of Heritage at Pegasus Group. Both have extensive experience in the preparation of ES Chapters.

## 7.2 Assessment Approach

7.2.1 This chapter is supported by the following reports:

- **Appendix 7.1.**- Desk Based Archaeology and Built Heritage Setting Assessment (Pegasus Group – September 2022)
- **Appendix 7.2**: Heritage Statement – (FCB Studios - Various Dates through 2022) made up of:
    - Volumes 1 – Introduction
    - Volume 2 - Huddersfield History
    - Volume 3 – Development Setting
    - Volume 4 (V2) – Library and Art Gallery Assessment of Significance
    - Volume 5 (V5) – Queensgate Market Hall Assessment of Significance
    - Volume 6 (V5) Heritage Impact Assessment

Methodology

7.2.2 This Chapter has been undertaken in accordance with national legislation and guidance and national and local planning policy. The full text of each of the policies referred to below can be found in the Pegasus Desk-based Archaeology and Built Heritage Assessment and Setting Assessment – Appendix 7.1. The list of legislation, policies and guidance is set out below:

- Planning (Listed Buildings and Conservation Areas) Act 1990 – Section 66(1);
- National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government (MHCLG), 2021) – Chapter 16;
- Kirklees Local Plan Strategy and Policies (adopted 27th February 2019) – policies LP25, LP35, LP17;
- National Planning Practice Guidance (Ministry of Housing, Communities and Local Government (MHCLG), 2019);

- Historic England, 2015. Managing Significance in Decision-Taking in the Historic Environment: Historic Environment Good Practice Advice in Planning: 2;

- Historic England, 2017, Historic Environment Good Practice Advice in Planning Note 3 (Second Edition): The Setting of Heritage Assets.;

- Historic England 2019. Statement of Heritage Significance: Analysing Significance in Heritage Assets Historic England Advice Note 12; and

- Historic England's Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment (published by English Heritage in 2008)

Value of receptors (the significance of a Heritage Asset)

7.2.3 Heritage Assets are defined in the NPPF as:

**"A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. It includes designated heritage assets and assets identified by the local planning authority (including Local Listing)."**

7.2.4 The value of Heritage Assets is defined as the 'Significance of Heritage Assets' and is defined in the NPPF as:

**"The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting. For World Heritage Sites, the cultural value described within each site's Statement of Outstanding Universal Value forms part of its significance."**

7.2.5 Historic England's Managing Significance in Decision-Taking in the Historic Environment: Historic Environment Good Practice Advice in Planning: 2 (hereafter GPA 2); Historic England 2019. Statement of Heritage Significance: Analysing Significance in Heritage Assets Historic England Advice Note 12 and the National Planning Guidance which advocate describing the significance of Heritage Assets in the terms of four interests. These interests are described as follows:

- **Archaeological interest:** "As defined in the Glossary to the National Planning Policy Framework, there will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point."

- **Architectural and artistic interest**: "These are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skills, like sculpture."

- **Historic interest:** "An interest in past lives and events (including pre-historic). Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation's history but can also provide meaning for communities derived from their collective experience of a place

and can symbolise wider values such as faith and cultural identity."

7.2.6 In accordance with the levels of significance articulated in the NPPF, three levels of significance are identified:

- **Designated heritage assets of the highest significance**, as identified in paragraph 200 of the NPPF comprising Grade I and II* Listed buildings, Grade I and II* Registered Parks and Gardens, Scheduled Monuments, Protected Wreck Sites, World Heritage Sites and Registered Battlefields (and also including some Conservation Areas) and non-designated heritage assets of archaeological interest which are demonstrably of equivalent significance to Scheduled Monuments, as identified in footnote 68 of the NPPF;

- **Designated heritage assets of less than the highest significance**, as identified in paragraph 200 of the NPPF, comprising Grade II Listed buildings and Grade II Registered Parks and Gardens (and also some Conservation Areas); and

- **Non-designated heritage assets**. Non-designated heritage assets are defined within the Government's Planning Practice Guidance as "buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of significance meriting consideration in planning decisions, but which do not meet the criteria for designated heritage assets".

7.2.7 Additionally, it is of course possible that sites, buildings, or areas have no heritage significance, values are thereby articulated from having a negligible value to high value.

7.2.8 The value (significance) of receptors and descriptions are presented in Table 7-1.

**Table 7-1: Receptor Value (importance) and Sensitivity.**

| Value | Description |
|---|---|
| High | Standing structures included within World Heritage Sites.<br><br>Scheduled Monuments.<br><br>Grade I and Grade II* Listed Buildings.<br><br>Grade I and Grade II*Registered Parks and Gardens.<br><br>Registered Battlefields.<br><br>Non-Designated Heritage Assets of archaeological interest which are demonstrably of equivalent significance to scheduled monuments. |
| Medium | Grade II Listed Buildings.<br><br>Grade II Registered Parks and Gardens.<br><br>Conservation areas.<br><br>Non-Designated Heritage Assets, Sites, and features noted as nationally or regionally important in the Historic Environment Record. |

| Value | Description |
|---|---|
| Low | Locally listed buildings.<br><br>Non-Designated Heritage Assets, Sites, and features noted as locally important in the Historic Environment Record. |
| Negligible | Buildings of no architectural or historical note; buildings of an intrusive character and badly preserved / damaged or very common archaeological features buildings of little or no value at local or other scale. |

7.2.9 The setting of a Heritage Asset can also contribute to its significance, as defined in the NPPF:

**"Significance derives not only from a heritage asset's physical presence, but also from its setting."**

7.2.10 Setting is defined as:

**"The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral."**

7.2.11 Therefore, setting can contribute to, affect an appreciation of significance or be neutral with regards to heritage values.

7.2.12 How setting might contribute to these interests has been assessed with reference to Historic Environment Good Practice Advice in Planning Note 3 (Second Edition): The Setting of Heritage Assets (GPA 3). This advocates the clear articulation of 'what matters and why'.

7.2.13 In GPA 3 a stepped approach is recommended, of which:

- Step 1 is to identify which heritage assets and their settings are affected.
- Step 2 is to assess "whether, how and to what degree settings make a contribution to the significance of the heritage asset(s) or allow significance to be appreciate"'. The guidance includes a (non-exhaustive) check-list of elements of the physical surroundings of an asset that might be considered when undertaking the assessment including, among other things: topography, other heritage assets, green space, functional relationships and degree of change over time. It also lists points associated with the experience of the asset which might be considered, including views, intentional intervisibility, tranquillity, sense of enclosure, land use, accessibility and rarity.
- Step 3 is to assess the effect of the proposed development on the significance of the asset(s).
- Step 4 is to explore ways to "maximise enhancement and avoid or minimise harm".

- Step 5 is to "make and document the decision and monitor outcomes".

7.2.14 Descriptions of significance will naturally anticipate the ways in which impacts will be considered. Hence descriptions of the significance of Listed Buildings will be discussed with reference to the building, its setting and any features of special architectural or historic interest which it possesses.

Magnitude of Impact

7.2.15 The magnitude of impact is defined by the extent of change to a receptor (heritage asset) or its setting. The magnitude of impact is described in Table 7-2.

**Table 7-2: Magnitude of Impact.**

| Magnitude of Impact | Description |
|---|---|
| Major | Change such that the significance of the receptor (heritage asset) is **totally altered or destroyed**. Comprehensive change to setting affecting significance, resulting in **substantial changes** in our ability to understand and appreciate the resource and its historical setting. |
| Moderate | Change such that the significance of the receptor (heritage asset) is affected. Changes such that the setting is **noticeable different**, affecting significance resulting in **moderate changes** to significance and in our ability to understand and appreciate the resource. |
| Minor | Change such that the significance of the receptor (heritage asset) is **slightly affected**. Changes to the setting that have a **slight impact** on significance resulting in changes in our ability to understand and appreciate the resource. |
| Negligible | Changes to the receptor (heritage asset) that **hardly affect** significance. Changes to the setting of an asset that have **little effect** on significance and no real change in our ability to understand and appreciate the resource. |
| No Change | The development results in **no change** or such a **negligible level of change** that it **does not affect** the significance of the receptor (heritage asset). Changes to the setting do not affect the significance of the asset or our appreciation of it. |

Nature of Effect

7.2.16 In addition to determining the magnitude of the impact the assessment process also includes a qualitative description regarding the nature of the effect. These terms add additional information about how the effect would affect a receptor (Heritage Assets) and are set out in Table 7.3.

**Table 7-3: Assessment Descriptors**

| Term | Nature of Effect Descriptors |
|---|---|
| Adverse | An effect which has the potential to decrease a Heritage Asset value or status relative to baseline conditions. |
| Beneficial | An effect which has the potential to increase a Heritage Asset value or status relative to baseline conditions. |
| Short-term | Effects that persist only for a short time, e.g., during the construction (or decommissioning) phase only; includes reversible effects. |
| Medium-term | Effects that may persist until additional mitigation measures have been implemented and become effective. |
| Long-term | Effects that persist for a much longer time, e.g., for the duration of the operational phase (essentially until the development ceases or is removed/ reinstated); includes effects which are permanent (irreversible) or which may decline over longer timescales. |
| Temporary | A reversible effect where recovery is possible. |
| Frequent | Refers to a recurring effect that occurs repeatedly; in some cases a lower level of impact may occur with sufficient frequency to reduce the ability of a Heritage Asset to recover effectively. |

Determination of Residual Effect

7.2.17 The determination of the magnitude of effect has been assessed with regard to the extent to which embedded mitigation and enhancement measures will reduce or reverse negative effects or enhance positive effects, to determine the residual effect.

7.2.18 The assessment of the predicted effects of the Proposed Development on the Heritage Assets (receptors) is undertaken by assessing the magnitude of the impact of the proposal against the Receptor Sensitivity (i.e., the significance of the Heritage Asset). These effects can be adverse or beneficial. The methodology matrix for assessment is presented in Table 7.4.

7.2.19 .It is considered in the professional judgement of Pegasus Group that a Very Large effect would be considered significant in EIA terms. Effects of Large or, Moderate a may be considered significant or not significant. The distinction is made by applying professional judgement to this matrix-led process allowing a true reflection of the effect to be considered, rather than a level of effect which has been artificially inflated due to the constraints of the EIA process.

**Table 7-4: Significance of Effect Matrix**

| Receptor Sensitivity (Heritage Asset Value) | Magnitude of impact | | | | |
|---|---|---|---|---|---|
| | **No change** | **Negligible** | **Minor** | **Moderate** | **Major** |
| **High** | Neutral | Slight | Slight or Moderate | Moderate or Large | Large or Very large |
| **Medium** | Neutral | Neutral or Slight | Slight | Moderate | Moderate or large |
| **Low** | Neutral | Neutral or slight | Neutral or slight | Slight | Slight or moderate |
| **Negligible** | Neutral | Neutral | Neutral or Slight | Neutral or Slight | Slight |

Limitations of the Assessment

7.2.20 The conclusions presented within this chapter are based upon the baseline conditions which are set out in full in Appendix 7.1 - Desk-based Assessment. A summary is presented below. These baseline conditions have been established in large part from the data held and supplied by the West Yorkshire Archaeology Advisory Service (WYAAS) Historic Environment Record (HER). In establishing the baseline conditions, for the purposes of this chapter, both the accuracy and currency of this data has necessarily been assumed.

7.2.21 It is acknowledged that the Piazza Shopping Centre within the application site has recently been included on the West Yorkshire Historic Environment Record (MWY20125) whilst a Certificate of Immunity for Listing. At the time of preparing this report Historic England have recommended (and the Secretary of State for DCMS is minded to agree) that a Certificate of Immunity be issued on the basis that Piazza complex lacks the architectural quality, visual flair and consistent use of high-quality materials to sufficiently raise the interest in a national context; it does not demonstrate innovative construction techniques, unlike the adjacent listed Queensgate Market; alterations to the front elevation of the curved parade of shops, roofing over of the Shambles, together with more subtle incremental changes to the original palette of materials and introduction of modern sail canopies, have combined to erode the consistency of the original design. sufficiently raise the interest in a national context and whilst it has some interest as a representative example of a pedestrianised shopping centre based upon post-war enclosed malls of the United States, but it is not at the forefront of this building type in England in terms of date or influence.

7.2.22 Kirklees Council as the Local Planning Authority have not confirmed it to be a Non-Designated Heritage Asset in any correspondence, nor has any designated heritage asset status been assigned to it. As such only Designated Heritage Assets are identified in and around the application site.

7.2.23 In relation to settings assessment, inspection of heritage assets within the Application Site environs that were identified as potentially susceptible to non-physical impact was undertaken from publicly accessible locations. No privately held land or properties were accessed, other than those in Kirklees Council's control.

Scoping and Consultation Responses

7.2.24 A response to the scoping opinion was provided by the Conservation and Design Team at Kirklees Council. In summary the Officers were satisfied with the methodology of the proposed assessment. They made the following suggestions:

- ***"Along with national planning policies, the assessment should take into account Local Plan policies, particularly LP17, LP24 and LP35, as well as relevant SPD's including the Castle Hill setting study. Although the site is some distance from Castle Hill this needs to be assessed.***

- ***Listed buildings within the setting should include those within the university campus on Queensgate. These are identified on Figure 1 in the appendices and are directly in context with the site, in particular the proposed venue and car park.***

- ***The impact of the proposed car park and venue on the setting of surrounding listed buildings, including the recently revealed view from Queensgate to the town hall. We understand that the design detailing, scale and materials still need to be worked up and these are important factors to carry out a meaningful assessment of impact. However, the indicative scale of the building shows that this will be a substantial structure. The same applies for the proposed library building and the existing library extension.***

- ***The impact on the building performance, weathering details and structure of the Queensgate Market where alterations are proposed, including the removal of existing external elevations."***

7.2.25 Throughout the development of the proposal's consultation has been undertaken with the Local Planning Authority Conservation Officer, Historic England, the Twentieth Century Society and Huddersfield Civic Society, as follows:

Local Planning Authority Conservation Officer

- 10th June 2022 – Project introduction to Sue Brooks;

- 21st July 2022 – Project update (virtual / e-mail).

Historic England.

- 5th November 2021: Site visit with Planning Consultant

- 21st December 2021: First consultation with FCBS Heritage team and presentation issued;

- 25th January 2022: Formal response from Historic England received;

- 26th April 2022: Heritage Statement issued (Vol 1-5);

- 29th April 2022: Second consultation and site visit;
- 13th May 2022: Consultation feedback;
- 20th June 2022: Consultation 03a - Listed buildings and other core matters;
- 8th July 2022 - Consultation 03b - Landscape and new buildings update;
- 15th July 2022: Consultation feedback; and
- Consultation 04 - 2nd September: Latest Proposals

Twentieth Century Society

- 4th March 2022: Heritage Statement issued (Vol 1-5);
- 27th March 2022: First consultation and presentation issued;
- 27th April 2022: Second consultation;
- 29th April 2022: Site visit;
- 11th May 2022: Committee feedback received;
- 20th June 2022: Consultation 03 - Update on progress and current activity; and
- Consultation 04 - 31st August: Latest Proposals.

Huddersfield Civic Society

- 15th February 2022: Design Consultation 1 - Project Introduction;
- 26th May 2022: Design Consultation 2 - RIBA Work Stage 2 Presentation;
- 28th July 2022: Design Consultation 3 - RIBA Work Stage 3 Presentation; and
- 5th September Design Consultation 4 - Final Presentation prior to planning.

7.2.26 Comments received and actions and outcomes in the design of the proposals are summarised in Table 7-5.

**Table 7-5: Table summarising consultation responses and amendments made in response.**

| Consultee | Summary of Comments |
|---|---|
| Historic England | On the Masterplan.<br>• The Cultural Heart masterplan offers an opportunity to improve the quality of the environment in the area, including enhancing the setting of several listed buildings and the setting of the conservation area.<br>• Welcomed the proposal for a new gallery forming the east edge of the site |

| | |
|---|---|
| | to potentially improve the setting of the Conservation Area and the GII* Lawrence Batley Theatre.<br><br>• Of Queen Street and the new Gallery – "Definition of the street is welcome and frames views of the Church of St Paul to the south. "the proposed gallery would still represent a sizeable building directly opposite the Grade II listed buildings on the east of Queen Street and - We would echo your desire that the gallery should have a degree of active frontage onto Queen Street to reactivate this historic street.<br><br>• The level of change proposed to both buildings and the wider area is extensive. There is the potential for considerable enhancement, both of the fabric and the experience of the listed buildings. There is also potential for harm.<br><br><u>On the Venue</u><br><br>• Visuals for the venue show that it will be a substantial building, taller than the previous multi-storey car park and with a large mass which is to be expected from a building of this type.<br><br><u>On the Art Gallery and Library</u><br><br>• Supportive of the positive reuse of the building. Supportive in principle of the proposed works to the Library including the extension<br><br><u>Queensgate Market</u><br><br>• Welcome investment in the GII listed market hall.<br><br>• The physical impact of the proposal for Queensgate Market is extensive. There would be a considerable loss of existing fabric, both structural and functional such as the market stalls and shop units. Taken individually, the interventions might be beneficial or cause minor harm to the significance of the listed building; however, cumulatively, the impact of the scheme would be at the higher end of "less than substantial" in the terminology of the National Planning Policy Framework.<br><br>• The Kirklees Cultural Heart scheme offers the potential for substantial public benefits, including benefits to the listed building through increased investment and greater public access. Nevertheless, those aspects of the proposals which would be harmful to designated heritage assets require a strong justification and mitigation to minimise this harm to the greatest possible extent.<br><br>• The proposed uses are exciting and present a great opportunity for better public interaction with one of Huddersfield's most distinctive and important buildings.<br><br>• Welcome the proposed public access to the private first floor level.<br><br>• The architectural concept is very interesting and has the potential to create some striking spaces and enhance the visibility and appreciation of the listed building. The proposals will result in a significant alteration in the |

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| | external appearance and internal experience of the market hall. - We understand the rationale of a transformative project for the building and the concept of increasing transparency to encourage greater use of the building. We do have some concerns about unintended consequences this could have for the experience of light and sound within the market hall."<br><br>• Invited exploration of proposals with greater solidity to north and west aspects.<br><br>• Of the scale of change including the removal of the building's interior – "The proposals currently show the removal of a significant amount of historic fabric, including internally with the removal of the "panopticon" manager's officer, market stalls and plinths. The cumulative impact of all these changes on the significance of the listed building should be assessed and justified in the context of securing the public benefits of the wider scheme."<br><br>• Opportunities for enhancing this view of the market should also be pursued, for example removing the street trees which currently obscure many of the ceramic panels on the Queensgate elevation. |
| Huddersfield Civic Society | <u>On the Masterplan.</u><br><br>• The scale and scope of the vision for the masterplan is ambitious.<br><br>• Pedestrian circulation through the site will be important to ensure forgotten spaces can be brought back to life.<br><br>• Queen Street requires a positive edge to improve activation and setting<br><br>• Event space could open onto the outdoor space / opportunity of a combined indoor/outdoor events area<br><br>• Structures facing on to Queen Street should be articulated (but not pastiche) to respect of the late Georgian character of the street"<br><br><u>On the Art Gallery and Library</u><br><br>• Rear extension should incorporate ground floor retail space offering design/craft objects to compliment the gallery.<br><br>• The thermal enhancement of the building fabric must consider the retention of heritage features<br><br><u>Queensgate Market</u><br><br>• Demolition of retail units and arcade adjoining the market hall off Princess Alexandra Walk is supported (in order to provide better access into the re-purposed building and highlight its architectural qualities)". |

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| Twentieth Century Society | <u>On the Art Gallery and Library</u><br>• Supportive of the positive reuse of the building. Supportive in principle of the proposed works to the Library including the extension.<br>• Recognises the potential for an extension to the north aspect.<br>• Retention of the laylight and maintain the form and visual integrity of the Main Lending Library space.<br>• Welcomes the retention and original fitted furniture to the maximum extent possible.<br>• Welcomes the retention and conservation of the study rooms / carrels, entrance lobby, chief librarians office and committee room.<br>• We encourage as minimal an intervention as possible to the existing north wall which would connect with the proposed rear extension. We would like to see as much historic fabric and features retained as possible, which includes the central door in the north wall.<br><u>Queensgate Market</u><br>• Welcome the conservation and repair of the sculptures 'Commerce' and 'Articulation in Movement'.<br>• Questioned the 'peeling back' approach proposed to the elevations to reveal the 'mushroom' columns on the exterior. - The committee recommends that the existing boundaries of the main market space are retained and 'mushroom' columns are concealed on all but the east elevation facing the road."<br>• Of the market managers office (Panopticon) "recommend that the scheme for reuse retains and incorporates it." |

| **Proposed area of change** | **Amendments / Design approach in recognition of consultee feedback.** |
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| Art Gallery and Library | • Conservation and repair of key rooms, Committee Room, Chief Librarians Office, Archive Office.<br>• continued use of the main entrance and the peeling back of later layers to achieve restored, simplified appearance where the original high-quality finishes are evident.<br>• Retention of the laylight<br>• Retention and re-use of original shelving within the main lending library space<br>• Retention of the carrels<br>• Retention of original doors and linings to the northern wall between the existing building and the proposed extension<br>• Thermal enhancements that take a restorative approach and avoid visual disruption to the original building aesthetic. |

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| | • Of the Market Stalls – The committee accepted that it would not be possible to retain all the stalls and adapt the building for reuse. However, committee members ask that good examples of stalls, such as those near the edges with terrazzo risers, are retained to illustrate the space's historic use. |
| Venue | • The form of the Venue has been articulated to respond to the setting. The Queensgate Market terrace has been reflected in the east elevation of the Venue where the façade steps back at the same level offering relief to the east façade to both buildings. |
| Queensgate Market | • Retention of 'Commerce' largely in its existing location<br>• Use of terrazzo covering as part of replacement floor design<br>• Sensitive designs for renewal of glazed elements that must be replaced in order that a sustainable future use can be achieved |

### 7.3 Baseline Conditions

Site Description and Context

7.3.1 The planning application site covers an area of approximately c3.9ha and consists of the former (now demolished) multi-storey car park, the Queensgate Market (Grade II listed), the library and art gallery (Grade II listed) and the Piazza shopping centre.

7.3.2 In addition to the buildings there are an extensive network of service tunnels, predominantly below the Piazza, servicing the surrounding area and most notably the Piazza shopping centre and the market.

7.3.3 The site is located north and west of the A62 – Queensgate, within Huddersfield Town Centre. The A62 Queensgate frontage is largely characterised by the former site of the now demolished 4 storey multistorey car park and the eastern elevation of the Queensgate Market Hall and its artwork panels. The Market Hall is adjoined by the Piazza shopping centre, which wraps around the remainder of the site's eastern boundary and encloses around the Huddersfield Library and Art Gallery, which is located on (but within) the eastern edge of the site.

7.3.4 The site includes areas of open space, separating existing buildings. The open space is generally characterised with hard landscaping and limited street furniture and landscaping in terms of treatment within the public realm.

7.3.5 The site is overlooked by Huddersfield Town Hall and Concert Hall along the western boundary and further shopping areas which positively look out, into the site. The University of Huddersfield campus is located beyond the A62 to the south east, whilst the Lawrence Batley Theatre stands off Queen Street to the east.

Baseline Survey Information

7.3.6 Study area – A 250m study area from the application site boundary was used to identify any heritage assets (receptors). A 250m radius was considered suitable due to the urban environment in which the site is located within and the limited ability for any assets to be affected by the proposals beyond this area. A professional judgement was made on site whether any asset beyond this radius warranted assessment.

7.3.7 Data sources: The following key sources were consulted as part of the assessment process:

- The National Heritage List for England (NHLE) for information relating to designated heritage assets;
- The West Yorkshire Archaeology Advisory Service (WYASS) Historic Environment Record (HER) for information relating to recorded built heritage assets;
- Historic maps held by the West Yorkshire Archive Service, those available online from The Genealogist and Promap websites;
- Previous published and grey literature reports relating to the development and town planning of the Application Site and environs; and
- Historical photographs held by the West Yorkshire Archaeology Advisory Service, and

historic satellite imagery available on Google Earth.

7.3.8 Data processing and analysis: A proportionate level of data, sufficient to inform the assessment of significance, and potential impact, has been acquired from the sources listed in section 7.3.6 above.

7.3.9 All data has been reconciled and analysed in accordance with the relevant industry guidance and best practice, and consistent with the objectives of Environmental Impact Assessment (EIA).

7.3.10 All digital spatial data has been interrogated using industry-standard Geographical Information System (GIS) software.

7.3.11 Historic Environment Record (HER) data: The results of a full commercial data search were received from WYAAS HER in August 2022.

7.3.12 All of the HER data supplied was reconciled and analysed within the context of the project aims and objectives.

7.3.13 The HER data returned contained numerous records of varying reliability and relevance. Only those recorded sites and events that are of relevance to the determination of potential, significance and impact in respect of cultural heritage are discussed further within this chapter.

7.3.14 Application Site inspection: A walkover survey of the Application Site was undertaken several times in July and August 2021 and most recently on the 18th August 2022 in order to;

- assess the Application Site within its wider townscape context,
- assess the receptors (heritage assets) within the Application Site with consideration of direct and indirect (via setting) impacts to them.
- assess the receptors (heritage assets) within the study area with consideration of direct and indirect (via setting) impacts to them.

7.3.15 The Historic Environment: A discussion of the historic environment and history of the application site and surrounds can be found in Appendix 7.1 and Appendix 7.2.

Receptors (Heritage Assets)

7.3.16 The Application Site is not within a Conservation Area, or World Heritage Site and is not a Scheduled Monument but does contain two identified Receptors (Designated Heritage Assets), these are:

- Grade II Listed Building – Queensgate Market.
- Grade II Listed Building – Huddersfield Library and Art Gallery.

7.3.17 Potential Receptors within 250m of the boundary of Application Site include

- 155 Listed Buildings
- 1 Conservation Area

7.3.18 The heritage assets which could be susceptible to direct and indirect effects as a result of the Proposed Development and assessed are shown in Table 7-6.

**Table 7-6: Receptors (Heritage Assets) susceptible to direct or indirect effects of the Proposed Development.**

| Receptor (Heritage Asset) | Receptor Type | Grade | Receptor Value |
|---|---|---|---|
| Huddersfield Library and Art Gallery | Listed Building | II | Medium |
| Queensgate Market | Listed Building | II | Medium |
| Huddersfield Town Hall | Listed Building | II | Medium |
| 2 and 4 Queen Street | Listed Building | II | Medium |
| 12 and 14 Queen Street | Listed Building | II | Medium |
| Arts Centre Including Dwarf Wall Enclosing Queens Square, Queen Street | Listed Building | II* | High |
| Crown Court, Queen Street. | Listed Building | II | Medium |
| 22 Queen Street | Listed Building | II | Medium |
| 24 Queen Street | Listed Building | II | Medium |
| 26 Queen Street | Listed Building | II | Medium |
| 28 Queen Street | Listed Building | II | Medium |
| 30 Queen Street | Listed Building | II | Medium |
| 32 Queen Street | Listed Building | II | Medium |
| St Paul's Hall | Listed Building | II | Medium |
| Ramsden Building at the University of Huddersfield | Listed Building | II | Medium |
| Milton Congregational Church | Listed Building | II | Medium |
| Milton Congregational Chapel Sunday School | Listed Building | II | Medium |
| Bath House (Amenity Block) at Thomas Broadbent and Sons Ltd | Listed Building | II | Medium |
| Juvenile Court, Princess Street | Listed Building | II | Medium |
| 03, New Street, Huddersfield (Formerly listed as Butchery Department of Co-operative Stores PRINCESS STREET (South Side)) | Listed Building | II | Medium |
| Commercial Hotel, 64, New Street | Listed Building | II | Medium |
| 71 New Street | Listed Building | II | Medium |
| 14 Victoria Lane | Listed Building | II | |
| 16 & 16a Victoria Lane | Listed Building | II | |
| 13 King Street | Listed Building | II | Medium |
| 15 15A and 17, King Street | Listed Building | II | Medium |
| Burns Tavern, King Street | Listed Building | II | Medium |
| 41 Kingsgate (formerly the Globe Public House) | Listed Building | II | Medium |
| Parish Church of St Peter | Listed Building | II* | High |
| Castle Hill | Listed Building | II | High |
| Victoria Tower | Listed Building | II | Medium |
| Huddersfield Town Centre Conservation Area | Listed Building | II | |

7.3.19 With regard to the remaining Receptors (heritage assets) in the vicinity of the application site, assessment has concluded that the site does not form any part of setting that positively contributes to overall heritage significance due the nature of the receptor and a lack of visual connections, spatial relationships or historic connections. Accordingly, the proposed development is not anticipated to result in a change that would have an effect

upon the overall heritage significance of these receptors. Therefore, these remaining receptors (heritage assets) have therefore been excluded from further assessment within this chapter and are listed in **Appendix 7.1.** Only those receptors listed above have been considered to have the potential to experience effects and therefore are included in this ES Chapter.

7.3.20 With regards to below-ground archaeology, the WYHER did not identify any below-ground archaeological assets within the footprint of the proposed site.

7.3.21 The first activity within the site began in the early 19th century and by 1887, the entire site boundary was occupied by a mix of residential, civic, commercial, religious and industrial buildings of varying scales. In the early 20th century, the site was chosen as the location of a new library and art gallery which necessitated the demolition of the Ramsden Street Congregational Church. Following the construction of this, the rest of the site was chose as the site of a large-scale redevelopment of Huddersfield. All of the remaining buildings on the site were demolished, and the historic street pattern was erased. This new development was undertaken in a number of phases and resulted in the construction of a number of new offices, shops, a market hall and public gardens. This redevelopment of the area also required the construction of a number of service tunnels and below-ground rooms to service the shops and buildings above. The new development required the relevelling of the area and resulted in significant below-ground disturbance. The change in level caused by the new development can be seen in the public garden area to the east and north of the library and art gallery which is at a much lower height than the library and illustrates the level changes across the site.

7.3.22 A programme of archaeological watching brief was undertaken during the excavation of test pits for ground investigation purposes within the site. These were undertaken in the one area of the proposed site with some potential for archaeology – the area around the current Art Gallery and Library which was the former site of the Ramsden Street Congregational Church. Although no burial ground is noted on historic mapping associated with this church, the West Yorkshire Archaeological Advisory Service (WYAAS) advised that it could not be stated with certainty that prominent non-conformist chapels, such as this, would not have provision for burials within proximity to the building, though it is noted that archive images of the Church from the 1930s (see Appendix 7.1 for a fuller discussion) prior to its demolition do not provide any indication that there would be space around this building for the deposition of human remains outside of the church footprint. The Church was demolished in 1936 and the Art Gallery and Library were constructed over the footprint of the Church. The area surrounding the Church was not developed, however it is highly likely this area was heavily disturbed, and any human remains removed at the time. However, to avoid the potential of disturbing human remains with future development WYAAS requested that during ground investigations in this area, an archaeologist be present to monitor these works.

7.3.23 The results of this work did not reveal any trace of human remains or, indeed any trace of archaeological deposits. It is considered that in the first instance, the potential for archaeological remains is low. The proposed site lies to the south of the medieval core of the city, within the agricultural hinterland of the settlement. It is also considered that the development of the site in the 19th century, followed by the wholesale demolition, reordering and rebuilding of structures within the footprint will have removed any potential archaeological deposits which may have remained within the site. The likelihood of survival of elements of significance from the 19th century buildings within the site is low and analysis of the Goad Fire Insurance plans of 1887 provides a detailed description of the buildings. They did not contain basements and thus the likelihood of

the uncovering of anything of significance which would allow an understanding of the buildings which could not be gained from the already available documentary sources is low.

## 7.4 Assessment of Likely Significant Effects

Construction (Archaeology)

7.4.1 Construction impacts are likely to arise from a variety of actions across the site. This includes the demolition of existing structures, the remediation and any required ground-levelling, piling and the formation of foundations for the new structures, the construction and ground disturbance required for the formation of the new car-park below the arena.

7.4.2 It is not considered that the construction phase of this scheme will result in any impacts to below-ground archaeology. The WYHER has not identified any records of archaeological activity within the proposed site boundary and the archaeological watching brief on an area of the site with some archaeological potential for human burials near to the location of the former Ramsden Street Congregational Church, did not identify any archaeological deposits. Analysis of historic mapping has shown that there has been significant disturbance within the proposed site boundary with the demolition of all of the buildings shown in detail on the 1887 Goad Fire Insurance Plan of the area, and the total redevelopment with large-scale civic buildings, modern multi-storey car-park and, importantly, the creation of a network of tunnels beneath the ground surface. The construction of these buildings required the demolition and clearance of the site and then the formation of foundations for the buildings and he construction of the tunnels below the site, all of which will have removed traces of the previous buildings within this site.

7.4.3 Therefore, the impact from the construction upon below-ground archaeology is **no change**. The effect is therefore **Neutral**.

Operation (Archaeology)

7.4.4 The operation of scheme from day one will not result in any impacts to archaeological deposits. The impact will be **no change**. The effect will be **Neutral**.

Construction (Bult Heritage)

7.4.5 Construction impacts are likely to arise from a variety of actions across the site. This includes site clearance and the demolition of existing structures or parts of them; movement and presence of associated construction vehicle and plant; presence of construction compounds; site offices and welfare facilities; presence of mobile or truck/track mounted cranes for construction of proposed buildings; earthworks and construction associated with the formation of development platform, foundations, road infrastructure and drainage; and highways and junction improvements, including tie-ins with the existing road network.

7.4.6 The construction phase of the proposed development will result in some indirect impact from structures, such as those referred to above, being temporarily erected within the setting of receptors, including the Listed Buildings and the Conservation Area. In general, such structures will be placed and designed for their practical function and purpose and not considering the heritage significance of the receptors and their settings. Motion of vehicles, cranes, deliveries, and noise of construction will change their setting and affect

the ability of the receptors to be seen and how they are experienced for a temporary period. The impact is temporary and would be removed on completion of the project or relevant phase and as such be reversible.

7.4.7 The construction phase of the proposed development will also result in some direct impact resulting from the removal of parts of the receptors, including the Listed Buildings of the Art Gallery and Museum and the Queensgate Market. Direct impact is likely to arise from the use of scaffolding and propping and enclosing of spaces whilst works of demolition and removal of fabric are undertaken. The impact would be temporary and a necessary element of construction and be removed on completion of the project or relevant phase and as such be reversible.

7.4.8 The construction phase of the proposed development will result in in both **direct and indirect moderate impact** to the significance of the Grade II Listed Buildings and the Conservation Area, which are receptors of **Medium Value**. A temporary **Moderate Adverse Effect** is therefore reported.

7.4.9 The construction phase of the proposed development will result in an i**ndirect minimal impact** of the significance of the Grade II* Listed Building (Parish Church of St Peter; Arts Centre Including Dwarf Wall Enclosing Queens Square, Queen Street), receptors of **High Value**. A temporary **Slight Adverse Effect** is therefore reported.

7.4.10 The construction phase of the proposed development will result in **no indirect change** on the significance of the Scheduled Monument at Castle Hill and Grade II Listed Victoria Tower, which are receptors of **High and Medium Value** respectively. A **Neutral Effect** is therefore reported.

Operation (Built Heritage)

7.4.11 **Receptor - Huddersfield Library and Art Gallery:** The setting and surrounds of the Library and Art Gallery have changed and evolved with the majority of the immediate and wider setting of the Library and Art Gallery making no contribution to its heritage significance. The Murrayfield redevelopment of the 1960s and 70s and its aspirational public realm is disconnected from the library building and the designs were not fully integrated with the library and its setting, thereby the application site makes a neutral contribution to the significance of the Library and Art Gallery.

External works to the building and proposed extension.

7.4.12 Works to the existing elevations will constitute careful repairs and renovations, where necessary, and replacement of existing signage/displays generally, but will be extensive in scope due to the poor condition of some of the fabric.

7.4.13 The existing roof design has been recognised as a substantial constraint to the sustainable re-use of the building, due to its failure which has resulted in the closure of the gallery and the upper floors. As such, the proposal seek the complete renewal of the roof deck which will result in the loss of the original form as well as the removal of more recent lantern windows, roof coverings and the gallery ventilation system housed within the ceiling void. The new roof deck is to be laid over the existing primary steel structure and remain set below the existing parapet. The design for the new roof includes lanterns over the top floor spaces set out to ensure the provision of north light which will offer suitable illuminance and direction of daylight as required for collections display. The south aspect of the pitched lanterns will offer mounting positions for Photovoltaics.

7.4.14 To the east, the existing frontage will remain largely unchanged, but, the removal of the vehicle access area in front of it will connect the building more positively to its surrounds, and the removal of trees in front of it give full prominence to the elevation. Mirroring the lower ground garden to the west, which currently serves the children's library, a new external area will be created to provide external access from the education spaces. This will separate the main proposed park level from the existing façade at the lower ground floor, in the same way as on Victoria Lane. To facilitate this access, three new doors are proposed on this elevation, created by extending existing window openings.

7.4.15 At the junction of the existing building and new extension, at park level, a new doorway will be created in an existing opening, which will be significantly increased in height, to serve as the new principal entrance. This entrance acts as a signifier for the building, facing both the proposed new park and the proposed gallery building entrance opposite, forming a strong connection between the two cultural facilities.

7.4.16 To the south, the existing entrance and steps will be retained but with doors and access provisions installed to offer improved accessibility, alongside the reinstatement of bronze window guards from the original design and construction to the main door and adjacent windows. Also, to the front (south) elevation the proposal is to install a steel frame ramp that links the primary entrance to the street to achieve step free access. The ramp will require the removal of a section of railings at the west edge and opening up of the west wall to the side of the main entrance landing will afford sufficient space for a ramp. A new step will need to be added at the top of the existing flight of steps to ensure the entrance is flush

7.4.17 To the west, as with the eastern and southern elevations, the existing façade is largely retained and repaired as required. The existing sunken gardens will be retained and reutilised as a useable outdoor area, an important feature of the original design by Ashburner.

7.4.18 The composition of the proposed extension to the north has been conceived as a simple volume which complements the existing 1930's library and gallery building. The extension is located in area that was originally intended or considered to be accepted for an extension by the original architect, Ashburner, in the 1930s. The extension is of a similar height to that of the existing building and its footprint sits within the existing eastern building line.

7.4.19 Its intention is not to challenge or dominate the existing building, and given its relatively modest new footprint, this would not be appropriate, but rather it seeks to allow a better flow of spaces internally, provide a focal point in the park, improve the connection between the building and its setting to the north and east externally.

7.4.20 The extension and new build elements are primarily proposed to be clad in stone, having a strong contextual response to the existing building but on the western façade of the extension, the proposed stone cladding will wrap around the north-west corner, and the material will change to metal cladding at the western junction with the existing building.

7.4.21 The removal of historic original fabric to enable the extension to be built will result in some harm to the heritage significance of the building, this harm might be considered to be less than substantial harm at the lower end of the scale. But it is recognised that the north elevation which will primarily be affected is the least significant elevation, was originally identified to be extended from and is only visible in its entirely today following the demolition of buildings in the 1960s that once surrounded the library. The proposed extension is thereby located in the most preferable location that will have a minimal

impact on the architectural interest of the building as a whole.

7.4.22 The massing, form and appearance of the extension respects the existing mass, form and appearance of the original building but does not seek to mimic the original style or be a 1930s pastiche. The design of the proposed extension will not materially harm the significance or values of the Listed Building.

7.4.23 Works to the existing building are also detailed in the parallel Listed Building Consent application, which includes works not subject to Planning Permission (i.e., internal alterations).

7.4.24 Overall, the proposed development will result in a **direct minor impact** to the significance of the Grade II Listed Library and Art Gallery, a receptor of **Medium Value**, during the operation phase. A **Slight Adverse Effect** is therefore reported.

Development within its setting.

7.4.25 The setting and surrounds of the Library and Art Gallery have evolved and changed since it was first built with most of the application site not contributing positively to its heritage significance.

7.4.26 The proposed demolition of the shops attached to Queensgate Market, including those along Peel Street, and the creation of a new public space – 'The Square' will create a new larger space to view, experience and appreciate the building, and especially its principal most significant front elevation and statues. The creation of the proposed Square will also strengthen the visual connection with the Grade II Listed Town Hall and relationship between these civic buildings in a positive way.

7.4.27 The proposed works to the Queensgate Market and the 'peeling back' of fabric to reveal the most significant architectural elements of this building, and the proposed new curtain glazing will also enable the Library and Art Gallery to be experienced from within the market hall space which again will enable the building to be experienced in a new positive way.

7.4.28 The proposed new library, galley and venue are all at sufficient distance from the building and will not detrimentally impact on any significant view of the building from within or beyond the application site. But the introduction of these buildings and uses into its wider surrounds will strengthen the purpose and function of the building at the heart of a cultural hub which will contribute to the long-term conservation and sustainability of the building.

7.4.29 The proposed 'Gardens' to replace the existing Piazza gardens will have a neutral impact on the significance of the building whilst the proposed new 'Green' will visually connect the building with King Street and the Conservation Areas and create new pedestrian links to the wider town centre and ensure that the building has a greater prominence in the town centre.

7.4.30 Overall, the proposed development will result in an **indirect moderate impact** to the significance of the Grade II Listed Library and Art Gallery, a receptor of **Medium Value,** during the operation phase, via a change in setting. A **Moderate Beneficial Effect** is therefore reported.

7.4.31 **Receptor-Queensgate Market:** The immediate and wider surrounds of Queensgate Market is largely a product of the comprehensive Murrayfield redevelopment undertaken

between 1969 and 1974, of which the Market Hall was formed as part of the second phase. The setting has remained broadly unchanged since, other than for alterations to the Piazza complex with shop front extensions, canopies and changes to elements of the public realm, but it still comprises a pedestrianised retail precinct punctuated by open hard landscaping with green space to its north and west.

7.4.32 To the southeast is the town's ring road form which it is separated by a grass verge with trees, opposite on the east side of the ring road is St Paul's Church (Hall), the Ramsden Building and the Milton Congregational Chapel, whilst directly to the south once stood the multistorey carpark (now demolished) which it was connected to. To its west is Peel Street, bus stops and the Victorian Town Hall.

7.4.33 The extended setting of the building comprises Huddersfield town centre itself, including the Town Centre Conservation Area and the university to the southeast.

Removal, alteration, addition, and extension to create new library and food hall.

7.4.34 The existing purpose-built Grade II indoor market hall is proposed for refurbishment and change of use to an indoor food hall (use class E(b)) and new public library (use class F1(d)), which will also house the West Yorkshire Archive Service (WYAS). Although separate and distinct uses, the food hall and library will both sit below the existing hyperbolic paraboloid concrete roof shells and the building will read as one, with a glazed internal wall separating them.

7.4.35 Parts of the existing Listed Building will be demolished; retained fabric will be upgraded and a substantial new extension will be built to accommodate the new public library, when the existing 1930s library and gallery building is converted into a museum. Works to the existing building are detailed in the parallel Listed Building Consent application, which includes works not subject to Planning Permission, i.e., internal alterations.

7.4.36 Proposed Library: The proposed new library is accommodated over four floors at the east end of the Grade II listed Market Hall. Its size, form and extent are dictated by the constraints of the site (location of the tunnels, existing service routes and roads) and the character, scale and heritage significance of the retained parts of the existing building, which presents very differently on each elevation. The length of the ceramic frieze on the east elevation dictates the northern extent of the building, with all of the new accommodation sitting behind its line.

7.4.37 The dominance of the 21 concrete shells informs the height of the new extension and the scale of the junction between the two.

7.4.38 The lower ground, upper ground and southern half of the first floor sit within the volume and footprint of the existing Market Hall and Piazza Centre.

7.4.39 The northern part of the first and second floors rise above the volume of the existing buildings behind the retained stone and ceramic façade and, following the demolition of the northwest section of the Piazza centre, present a three- storey elevation to the new square with the second-floor events space standing higher than the existing market hall acting as lantern marking the presence of the new library, an important new civic building in Huddersfield. This 'lantern' addresses the proposed new gallery building across the recovered east-west route of Ramsden Street, which was cut off by the creation of the Piazza centre in the 1960s.

7.4.40 The new library façade will be of glass reinforced concrete (GRC) cast elements over

curtain glazing set out to respond to each floor plate and as such offering a horizontal emphasis to the massing. The GRC elements will be formed to create a sculptural panels with a varying rhythm between the upper element and the intentionally simpler mid element. The curtain glazing will be a combination of transparent window and solid panel.

7.4.41 The layout of the new library is designed to be clear, intuitive and accessible. Its principal access will be off the new public square with a secondary access from Queensgate, and service vehicle access from the existing tunnels, also via Queensgate.

7.4.42 The library's east elevation to Queensgate is the existing stone-faced wall and part of the Grade II listed market hall elevation underneath the market hall's art ceramics and cantilevering concrete roof shells. The new entrance will be cut into the existing wall here to suit the structural grid of the building and flanked by new windows.

7.4.43 The first floor of the library will be largely one space, with a seamless junction between new and existing floors. To the south, below the concrete shells of the existing market hall roof, the West Yorkshire Archive Service (WYAS) will have its front-of-house space, and to the north, in the extension, the local studies and reference library will be located. To ensure that the volume of the market hall still reads as one from either side of it, the dividing wall between the food hall and library will be fully glazed, with the exception of a strip at ground level, approximately 1.5m high, shielding bookcases that will be located there. First floor meeting rooms and the WYAS front-of-house spaces will have glazed frontage partitions but will require ceilings for the provision of lighting etc., which will not touch the concrete mushrooms above, to allow the space to visually flow over them.

7.4.44 The existing terrace on the east elevation, looking across Queensgate to St Paul's and the University, will be extended north and will wrap around to the south to directly connect into an escape stair.

7.4.45 The second floor of the library provides a large events space with views to the north, west and south and an external terrace on three sides.

7.4.46 Food Hall: The food hall is accommodated entirely within the volume of the existing market hall. A new façade, of replacement glazing, along the line of the existing columns to the north and west pull the building envelope back from where it is currently to reveal the cantilever of the roof shells. To the east it the food hall is bounded by the new library and along the south the existing building form is retained.

7.4.47 Externally, the new north and west facing elevations will have high performing timber framed curtain walling, with a rhythm to the glazing bars which will relate to the structural grid of the existing building and all four elevations of the food hall will become frontages:

- North to the public square – a newly created elevation, this will have a glazed façade from ground level to the underside of the existing roof shells along the column line, allowing for a new appreciation of the revealed structure.

- East to the library – a new (internal) glazed façade from ground level to the underside of the existing roof shells along the column line.

- South to the Princess Street and the venue – the existing façade retained with works to the stone wall and clerestory glazing as described in the heritage section and new door openings.

- West to Peel Street – a new façade with some ancillary accommodation to the south and a continuation of the north façade glazing wrapping around the corner.

7.4.48 The food hall will have a strong connection to the new public square, being fully glazed along its north elevation, and there will be reciprocal benefit by outdoor seating being provided for customers to eat outside, and by its own permeability. It is also intended to be able to act as an introduction to the venue, with patrons using the food hall to either eat and drink either side of an event or use the food hall as a route through to Princess Street and the venue entrance on Alfred Street.

7.4.49 The proposed development is for substantial alteration to the Listed Building with the removal of large areas of its original design and fabric, however these are areas of low significance or special interest, and the proposals will allow for the areas of high significance and special interest to be better revealed, appreciated, and enjoyed by users and within the wider townscape. The proposed library is higher in part than the roof of the existing building, but it is sufficiently removed and a distance from the highly significant and distinctive concrete hyperbolic paraboloid roof to ensure that it does not detract from it in views. Nonetheless, the removal of extensive areas of original fabric, albeit fabric that has been altered, will result in loss of some understanding of the original design intention of the original market and its intended relationship within the wider Murrayfield redevelopment of the 1960s and early 1970s.

7.4.50 Overall, the proposed development will result in a **direct moderate impact** to the significance of the Grade II Listed Queensgate Market, a receptor of **Medium Value**, during the operation phase. A **Moderate Adverse Effect** is therefore reported.

Development within its setting.

7.4.51 The majority of its setting has no historic functional association with the market hall, especially now that the attached car park has been demolished and it is established in preceding paragraphs that the Murrayfield development of the Piazza, be it the earlier or later phases are architecturally distinct from the market hall and provide no element of architectural cohesion with it and thereby the application site is considered to make a neutral contribution to its setting.

7.4.52 The main elements of the proposed development that have potential to affect the building from a change to it setting comprise the 'Square', the new 'Library' and the 'Venue and Car Park'.

7.4.53 The proposed public Square will be created from the removal of the retail units and arcades that form part of the original Queensgate Market building. This proposed space, together with the proposed works to the north elevation of the market hall will provide a new space and opportunity for the building to be experienced and appreciated and enable the most significant elements of the building, especially its concrete hyperbolic paraboloid roof to be visible within the wider townscape. This will be a beneficial change to its setting.

7.4.54 The proposed library will replace retail units and the entrance arcade of the building and will be seen alongside the 'peeled back' market hall and its roof structure from the new Square. The use of curtain wall glazing systems will ensure that the new library does not detract from or mimic it architecturally, ensuring that the Listed market hall (proposed food hall) maintains a strong visual presence on the new Square. The proposed library will have a neutral impact on the Listed Building from the change within its setting.

7.4.55 The proposed Venue and Car Park is on the site of the former multi-storey car park, a site that is now an unsightly gap site following its demolition. The building is designed as a single volume with set-backs for landscaped terraces at first floor level on the east and south. Developing the vertical elevational emphasis used across the cultural heart proposals the venue uses the theatrical theme of a rippled curtain to present a looser more informal flowing approach to its vertical expression. In common with the other new-build cultural heart buildings the venue is topped by a continuous frieze where the vertical emphasis tightens to provide a continuous crown and a clean crisp profile against the sky. Where the slope of the site reveals the car park façade on the south and east it continues the building's form into the ground.

7.4.56 In reference to the local stone that is used on most of Huddersfield's town centre buildings the venue will be clad in buff glazed terracotta tiles. These will pick up the soft tones from the stone seen in the nearby listed buildings – the Town Hall, former Juvenile Court and former Milton Congregational Church being just the three closest – and by being glazed add a new level of brightness appropriate to the building's use as a place of entertainment. The buff glazed terracotta also references the use of glazed tiled facades to many historic places of entertainment, locally and nationally. For example, the remaining façade of the Grand Picture Theatre on Manchester Road, the Picture House on Ramsden Steet that was demolished in 1967 to make way for the piazza centre and further afield the Odeon in Harrogate (and many other 1930s Odeons).

7.4.57 The proposed Venue and Car Park does not attempt to mimic the architecture or materials of the Listed Market Hall but is to be a modern building that sits in harmony with its surrounds through the use of materials and its colour palette. The building will obscure much of the Princess Street elevation of the market hall, but this was the long-established relationship between the market hall and the former multi-storey car park and thereby this elevation cannot be considered to be of high significance.

7.4.58 The proposed Venue and Car Park will be mostly experienced with the market hall in views from Queensgate and this is recognised in the proposed design. The elevation to Queensgate is stepped back to allow for views of the concrete hyperbolic paraboloid roof in views northwards along Queensgate, and to ensure that the concrete 'mushrooms' of the roof retain space around them to ensure that the sharp corners and shape of them remains discernible.

7.4.59 The masterplan as a whole will also bring better connectivity to the building, especially through the reconnection of pedestrian entrances and links between it and the university. This will serve to better sustain its long term future and use.

7.4.60 Overall, the proposed development will result in an **indirect moderate impact** to the significance of the Grade II Listed Queensgate Market, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Moderate Beneficial Effect** is therefore reported.

7.4.61 **Receptor- Huddersfield Town Hall:** The setting and surrounds of the Town Hall have changed and evolved several times since it was built, and historic Ordnance Survey maps shows that the east side of Peel Street was largely an undeveloped street with large areas of open space and with an additional street extending from with which aligned with the east elevation door of the Town Hall until at least 1907. The removal of elements of the west side of Queensgate Market and the introduction of a tree lined street and landscaped area will enable the east elevation of the Town Hall to be better appreciated and experienced from both the street and from within Queensgate Market through the proposed curtain glazing.

7.4.62 The removal of the least significant elements of Queensgate Market will create new views of the Town Hall from the new public square and the front entrance of the Library and Art Gallery (the proposed Museum). This will create a 'civic like square' square befitting to the civic status of the Town Hall and again allow for the Town Hall to be experienced in a new way within the town.

7.4.63 The proposed Venue on the site of the former multi-storey car park will once again close off views of the Town Hall from the southeast that had been created following the demolition, although it is anticipated that elements of the upper portion and roof of the Town Hall will still be visible. However, there is no evidence that the Town Hall was designed to be viewed and experienced from the distant south and historic maps shows that since the Town Hall was built in the 19th century the land to the southeast has always been developed and it is thereby unlikely that the east and south elevation of the Town Hall was exposed to views as it currently is following the clearance of the multi-storey car park from this part of the site.

7.4.64 Overall, the proposed development will result in an indirect **minor impact** to the significance of the Grade II Listed Town Hall, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

7.4.65 **Receptor - 2 and 4 Queen Street:** The setting and surrounds of the Listed Buildings have evolved and changed since they were first built, and the existing blank elevation of the Piazza Centre is considered to have a negative effect on the Listed Buildings from being within their setting. The proposed development is for the demolition of the Piazza Centre and for it be replaced with a landscaped area called 'The Terraces' which will address the change in land levels across the site with terracing, ramps and steps between the proposed 'Green' and Queen Street. The effect of the demolition will open the Listed Buildings to new views both to and from them across The Green and The Terraces, and from and to King Street and Victoria Lane. This will result in some loss of understanding of the original street layout and how the buildings would have been originally experienced as historic maps suggest that Queen Street was developed along both sides in this part, but this will be reinstated further to the south with the proposed new Gallery building.

7.4.66 Overall, the proposed development would result in some minor harm which could only be considered to be less than substantial and at the lowermost end of the scale arising from the loss of built form that define the historic character of Queen Street, but not the loss of historic fabric, this harm would be less than substantial at the lower end of the scale. However, there are benefits that would be delivered from the demolition of the imposing blank wall of the Piazza Centre and allow the Listed Buildings to be experienced in a new way within the town.

7.4.67 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.68 **Receptor- 12 and 14 Queen Street:** The setting and surrounds of the Listed Buildings have evolved and changed since they were first built, and the existing blank elevation of the Piazza Centre is considered to have a negative effect on the Listed Buildings from being within their setting. The proposed development is for the demolition of the Piazza Centre and for it be replaced with a landscaped area called 'The Terraces' which will address the change in land levels across the site with terracing, ramps and steps between the proposed 'Green' and Queen Street. The effect of the demolition will open the Listed Buildings to new views both to and from them across The Green and The Terraces, and from and to King Street and Victoria Lane. This will result in some loss of

understanding of the original street layout and how the buildings would have been originally experienced as historic maps suggest that Queen Street was developed along both sides in this part, but this will be reinstated further to the south with the proposed new Gallery building.

7.4.69 Overall, the proposed development would result in some minor harm which could only be considered to be less than substantial and at the lowermost end of the scale arising from the loss of built form that define the historic character of Queen Street, but not the loss of historic fabric, this harm would be less than substantial at the lower end of the scale. However, there are benefits that would be delivered from the demolition of the imposing blank wall of the Piazza Centre and allow the Listed Buildings to be experienced in a new way within the town.

7.4.70 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.71 **Receptor - Arts Centre Including Dwarf Wall Enclosing Queens Square, Queen Street (Lawrence Batley Theatre):** The setting and surrounds of the Listed Building, wall and Queens Square have evolved and changed since they were first built and the existing blank elevation the of Piazza Centre is considered to have a negative effect on the Listed Building from being within its setting. The proposed development is for the demolition of the Piazza Centre and for it be replaced with a landscaped area called 'The Terraces' which will address the change in land levels across the site with terracing, ramps and steps between the proposed 'Green' and Queen Street. The effect of the demolition will open the Listed Buildings to new views both to and from them across The Green and The Terraces, and from and to King Street and Victoria Lane. Steps between Queen Street and The Green are aligned on the building and thereby introduce a planned formality to the proposals in views to and from the Listed Building and in how it is experience on approach or leaving it. However, the demolition will result in some loss of understanding, but not historic fabric, of the original street layout and how the buildings would have been originally experienced as historic maps suggest that Queen Street was developed along both sides in this part, but this will be reinstated further to the south with the proposed new Gallery building.

7.4.72 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II* Listed Building, a receptor of **High Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

7.4.73 **Receptors – 22-32 Queen Street:** The setting and surrounds of the Listed Building, has evolved and changed since it was first built, and the existing blank elevation of the Piazza Centre is considered to have a negative effect on the Listed Building from being within its setting. The proposed development is for the demolition the Piazza Centre and its replacement along the southern part of Queen Street with the proposed gallery building that will be located at the back of the pavement; new steps up to the proposed Library; and with an area of public realm in front of them at Queen Street. The gallery will predominantly be built from stone and rainscreen cladding with the ground floor to Queen Street having an active frontage which include window and doors.

7.4.74 Its position will be closer to the road than the existing Piazza Centre and will result in the loss of some street trees, but the Ordnance Survey map of 1893 confirms that historically buildings were positioned at the back of the pavement along the street and there is no evidence to suggest that was tree lined or that trees contribute to the significance of the buildings on Queen Street.

7.4.75 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Buildings, receptors of **Medium Value**, during the operation phase, via a change in setting. **A Neutral Effect** is therefore reported.

7.4.76 **Receptor – St Paul's Hall:** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the building of the ring road which and the Queensgate Market which severed several connections to and from the building to the town centre to the west and north.

7.4.77 The demolition of the Piazza Centre and the removal of the tall chimney flues will remove these tall vertical detracting features from views of the building and its spire from Cross Church Street and Queen Street and will be a benefit that enhances its wider setting.

7.4.78 The introduction of new wide steps between Queen Street will better connect the building with the town centre and the proposed development and the proposed public realm at the base of the steps on Queen Street will provide a new space for the building to be appreciated and experienced as from here the tower and spire will be the focus of views and will be a benefit.

7.4.79 The demolition of the part of Queensgate Market will be to areas of the building that are hidden behind the ceramic panels in views from the Listed Building. The replacement building that will form the proposed new Library is likely to be visible in views from the immediate surroundings of the building, but it has been designed to ensure that the ceramic art panels remain the focus of views in the direction of the application site with the upwards Library extension being stepped and set back from the ring road elevation. Any view of the proposed new Library will thereby be seen within the context of a built urban environment but will not detract or be detrimental to the existing visual relationship between the building and Queensgate Market.

7.4.80 The proposed Library will change views from the west towards St Paul's Hall, especially from Ramsden Street, but the view of the tower and spire is currently seen in conjunction with the Piazza Centre and the modern university building. The proposed library is likely to result in some loss of view of the tower and spire form vantage points along Ramsden Street, but new views will be opened up from the creation of the new steps and the former church will be better connected physically from Ramsden Street.

7.4.81 The proposed Venue will be visible in oblique views from the immediate surrounds of the building and in views with it from the ring road, but at greater distance and alongside the existing Queensgate Market building. The site was a former multi-storey car park (demolished) and thereby a building of a scale and mass commensurate with Queensgate Market did occupy the site, but it was a building that lacked any architectural interest. The proposed Venue is a building that is of architectural interest and is designed to respect the existing scale of Queensgate Market in views from the ring road thus ensuring that it will not detract from the Market building in views from the immediate surrounds of St Paul's Hall. The Venue is designed with a step-back in the elevation to the ring road with a rooftop private/public space. This rooftop space will enable users to appreciate and experience St Paul's Hall, especially the tower and spire in a new way from the creation of this new high vantage point.

7.4.82 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

7.4.83 **Receptor - Ramsden Building at the University of Huddersfield:** The setting and

surrounds of the Listed Building have evolved and changed since it was built, especially with the building of the ring road; the Queensgate Market; and the multi-storey car park (now demolished), all are buildings and structures which severed several connections to and from the building to the town centre to the west and north.

7.4.84 The proposed Venue will be on the site of the former multi-storey car park which currently is an unsightly gap site in the town centre and within the setting of the Listed Building and currently has a negative impact from being within its setting. The Venue will be connected to the ring road with new steps that will better connect Listed Building for pedestrians to the town centre via Princess Street, this will be a benefit. The Venue is also designed with a step-back in the elevation to the ring road with a rooftop private/public space. This rooftop space will enable users to appreciate and experience the Listed Building in a new way from the creation of this new high vantage point.

7.4.85 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

7.4.86 **Receptor- Milton Congregational Church and Milton Congregational Chapel Sunday School:** The setting and surrounds of the Listed Buildings have evolved and changed since they were built, especially with the building of the ring road; the Queensgate Market; and the multi-storey car park (now demolished), all are buildings and structures which severed several connections to and from the building to the town centre to the west and north.

7.4.87 The proposed Venue will be on the site of the former multi-storey car park which currently is an unsightly gap site in the town centre and within the setting of the Listed Building and currently has a negative impact from being within their setting. The Venue will be connected to the ring road with new steps that will better connect Listed Buildings for pedestrians to the town centre via Princess Street, this will be a benefit. The Venue is also designed with a step-back in the elevation to the ring road with a rooftop private/public space. This rooftop space will enable users to appreciate and experience the Listed Buildings in a new way from the creation of this new high vantage point.

7.4.88 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

7.4.89 **Receptor - Bath House (Amenity Block) at Thomas Broadbent and Sons Ltd:** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the building of the ring road; the Queensgate Market; and the multi-storey car park (now demolished), all are buildings and structures which severed several connections to and from the building to the town centre to the west and north.

7.4.90 The proposed Venue will be on the site of the former multi-storey car park which currently is an unsightly gap site in the town centre and within the setting of the Listed Building and currently has a negative impact from being within its setting. The Venue will be connected to the ring road with new steps that will better connect Listed Building for pedestrians to the town centre via Princess Street, this will be a benefit. The Venue is also designed with a step-back in the elevation to the ring road with a rooftop private/public space. This rooftop space will enable users to appreciate and experience the Listed Building in a new way from the creation of this new high vantage point.

7.4.91 Overall, the proposed development will result in an **indirect negligible impact** to the

significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

7.4.92 **Receptor - Juvenile Court, Princess Street:** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Queensgate Market and the multi-storey car park (now demolished).

7.4.93 The proposed Venue will be on the site of the former multi-storey car park which currently is an unsightly gap site in the town centre and within the setting of the Listed Building. Whilst the proposed Venue will result in the loss of views of the side elevation of the building from across the application site from the east, there is no evidence that the building was designed to be viewed and experienced in views from this direction historic maps shows that when the building was built in the early 19th century the land to the southeast and east was fields and tenter fields and thereby unlikely it was designed to take advantage of views from there.

7.4.94 The proposed changes to the Queensgate Market building at the Peel Street and Princess Street corner will provide an improved public realm that will enable the building to be better appreciated and experiences from this vantage point.

7.4.95 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

7.4.96 **Receptor- 03, New Street, Huddersfield (Formerly listed as Butchery Department of Co-operative Stores PRINCESS STREET (South Side)):** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Queensgate Market and the multi-storey car park (now demolished).

7.4.97 The proposed changes to the Queensgate Market building at the Peel Street and Princess Street corner will provide an improved public realm that will enable the building to be better appreciated and experiences from this vantage point. Whilst the proposed Venue will enhance an unsightly gap site within its setting.

7.4.98 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

7.4.99 **Receptor - Commercial Hotel, 64, New Street**: The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Queensgate Market and Piazza Centre and the Ramsden Building opposite.

7.4.100 The proposed demolition of part of Queensgate Market to create a civic-like Square will be seen from and with Listed Building but at a distance in views westward along Ramsden Street and is considered to have no impact on the Listed Building via a change to its setting.

7.4.101 The proposed new Library will terminate views with the Listed Building along Ramsden Street, but this view is currently terminated with the modern University Building, the canopies at the Piazza Centre and the tower and spire of St Paul's Hall. Whilst the proposed Library will change this view St Paul's tower and spire will remain visible but there is no identified historic function relationship between this Listed Building and the former church.

7.4.102 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.103 **Receptor- 71 New Street**: The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Queensgate Market and Piazza Centre and the Ramsden Building opposite.

The proposed demolition of part of Queensgate Market to create a civic-like Square will be seen from and with Listed Building but at a distance in views westward along Ramsden Street and is considered to have no impact on the Listed Building via a change to its setting.

7.4.104 The proposed new Library will terminate views with the Listed Building along Ramsden Street, but this view is currently terminated with the modern University Building, the canopies at the Piazza Centre and the tower and spire of St Paul's Hall. Whilst the proposed Library will change this view St Paul's tower and spire will remain visible but there is no identified historic function relationship between this Listed Building and the former church.

7.4.105 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.106 **Receptor- 14 Victoria Lane:** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Piazza Centre. The demolition of Piazza Centre will open new views both from the Listed Building and to it across the proposed Green. This will allow the buildings to be appreciated and experienced in a new way in the town centre. The Piazza Centre does contribute to the urban grain by establishing the street boundary and the immediate setting of the building, but there is no evidence that the street width or development along the street contributes to the significance of the Listed Building, especially when consideration is given to historic maps. The Ordnance Survey map of 1851 shows that the site of Piazza Centre was an open market area, with only Shambles buildings, this was prior to the Victoria Market which was demolished to make way for the Piazza Centre. Since the buildings were built Victoria Lane and the area around it has had both a loose and tight urban grain but the Lane itself other than for providing a vantage and access point for the building does not contribute to its significance.

7.4.107 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.108 **Receptor - 13 King Street:** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Piazza Centre. The demolition of Piazza Centre will open new views both from the Listed Building and to it across the proposed Green. This will allow the buildings to be appreciated and experienced in a new way in the town centre. The Piazza Centre does contribute to the urban grain by establishing the street boundary and the setting of the building, but there is no evidence that the street width or development along the street contributes to the significance of the Listed Building, especially when consideration is given to historic maps. The Ordnance Survey map of 1851 shows that the site of Piazza Centre was an open market area, with only Shambles buildings, this was prior to the Victoria Market which was demolished to make way for the Piazza Centre. Since the buildings were built

King Street and area of the application site has had both a loose and tight urban grain but the site itself does not contribute to its significance.

7.4.109 Overall, the proposed development will result in an **indirect negligible impact t**o the significance of the Grade II Listed Building, a receptor **of Medium Value,** during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.1 **Receptor- 15, 15A King Street:** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Piazza Centre. The demolition of Piazza Centre will open new views both from the Listed Building and to it across the proposed Green. This will allow the buildings to be appreciated and experienced in a new way in the town centre. The Piazza Centre does contribute to the urban grain by establishing the street boundary and the setting of the building, but there is no evidence that the street width or development along the street contributes to the significance of the Listed Building, especially when consideration is given to historic maps. The Ordnance Survey map of 1851 shows that the site of Piazza Centre was an open market area, with only Shambles buildings, this was prior to the Victoria Market which was demolished to make way for the Piazza Centre. Since the buildings were built King Street and area of the application site has had both a loose and tight urban grain but the site itself does not contribute to its significance.

7.4.2 Overall, the proposed development will result in an **indirect negligible impact t**o the significance of the Grade II Listed Building, a receptor **of Medium Value,** during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.3 **Receptor- Burns Tavern, Kind Street:** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Kingsgate Shopping Centre and the Piazza Centre. The demolition of Piazza Centre will open new but generally oblique views, both from the Listed Building and to it across the proposed Green. This will allow the buildings to be appreciated and experienced in a new way in the town centre. The Piazza Centre does contribute to the urban grain by establishing the street boundary and the setting of the building, but there is no evidence that the street width or development along the street contributes to the significance of the Listed Building, especially when consideration is given to historic maps. The Ordnance Survey map of 1851 shows that the site of Piazza Centre was an open market area, with only Shambles buildings, this was prior to the Victoria Market which was demolished to make way for the Piazza Centre. Since the buildings were built King Street and area of the application site has had both a loose and tight urban grain but the site itself does not contribute to its significance.

7.4.4 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.5 **Receptor - 41 Kingsgate (formerly the Globe Public House):** The setting and surrounds of the Listed Building have evolved and changed since it was built, especially with the construction of the Kingsgate Shopping Centre and the Piazza Centre. The demolition of Piazza Centre will open new but generally oblique views, both from the Listed Building and to it across the proposed Green. This will allow the buildings to be appreciated and experienced in a new way in the town centre. The Piazza Centre does contribute to the urban grain by establishing the street boundary and the setting of the building, but there is no evidence that the street width or development along the street contributes to the significance of the Listed Building, especially when consideration is given to historic maps. The Ordnance Survey map of 1851 shows that the site of Piazza Centre was an

open market area, with only Shambles buildings, this was prior to the Victoria Market which was demolished to make way for the Piazza Centre. Since the buildings were built King Street and area of the application site has had both a loose and tight urban grain but the site itself does not contribute to its significance.

7.4.6 Overall, the proposed development will result in an **indirect negligible impact** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.7 **Receptor - The Church of St Peter:** The church is seen in views alongside the application site from Victoria Lane and Queen Street. The proposed development will change these views, but they will result in no loss of a view of the building.

7.4.8 Views of the application site are only obtained from the south side of the church and generally are of the chimney flues at the Piazza Centre, but these have a greater effect on the view of St Paul's Hall (Church) rather on the view from St Peters

7.4.9 Overall, the proposed development will result in **no change** to the significance of the Grade II* Listed Building, a receptor of **High Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.10 **Receptor- Victoria Tower:** The setting and surrounds of Victoria Tower have changed since it was first built and the application site is only seen at distance from the tower and within the context of the existing urban built environment of the town centre.

7.4.11 The proposed development will be seen in the context of the town centre and neither the proposed design nor materials will be overtly prominent within its surrounding context within the long-distance view.

7.4.12 Overall, the proposed development will result in **no change** to the significance of the Grade II Listed Building, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported.

7.4.13 **Receptor – Castle Hill:** The setting and surrounds of Castle Hill have changed since it was first built and the application site is only seen at distance from the hill and within the context of the existing urban built environment of the town centre.

7.4.14 The proposed development will be seen in the context of the town centre and neither the proposed design nor materials will be overtly prominent within its surrounding context within the long-distance view.

7.4.15 Overall, the proposed development will result in **no change** to the significance of the Scheduled Monument, a receptor of **High Value**, during the operation phase, via a change in setting. A **Neutral Effect** is therefore reported

7.4.16 **Receptor – Huddersfield Town Centre Conservation Area:** The application site affects part of the setting of the Conservation Area only. Whilst the application site includes two Listed Buildings of heritage significance the remainder of the site comprises the late 1960s and early 1970s Murrayfield retail redevelopment which replaced several predominantly 19th and early 20th-centruy buildings and resulted in the loss of earlier streets. The Conservation Area boundary was drawn around the application site evidently on the basis that other than for the Listed Buildings it lacked sufficient architectural or historic interest to warrant preservation of enhancement.

7.4.17 The demolition of the multi-storey car park has left an unsightly gap site in the town and the setting of the Conservation Area to its detriment, but the proposed demolition of buildings within the site will not result in the loss of any buildings that contribute to the character and appearance of the Conservation from their location within its setting.

7.4.18 However, the existing Piazza buildings along Victoria Lane, King Street and Queen Street all help to define the historic street pattern and layout of the town and streets within the Conservation Area. Their removal and replacement with an open public space/park – labelled as The Green and The Terraces will bring a permanent loss or weakening of the street pattern from the loss of built street frontages in these parts, but not a loss of understanding of understanding of the architectural or historic interest of the Conservation Area as a whole. Overall, this might be considered a harmful impact, at Less than Substantial and at the lower end of the scale in NPPF terms.

7.4.19 The proposed demolition to create these open spaces will also introduce new opportunities to experience and appreciate the buildings in the Conservation Area by opening up new views. Views of the Listed Buildings along Queen Street from Victoria Lane and vice versa, and of Victoria Lane and Queen Street from King Street will be a positive impact of the proposals, creating better visual connections within and across the Conservation Area. But there will also be new vantage points and greater prominence of buildings both within and outside of the Conservation Area, that make a detrimental or neutral contribution to it character and appearance, for example the Packhorse Centre on King Street will become a focal building in views from the proposed Green.

7.4.20 The proposals will increase pedestrian permeability between the application site and the surrounding Conservation Area resulting in better integration of the site with the Conservation Area. Whilst a full reinstatement of historic streets is not proposed north-south routes will be retained in the vein of the former Shambles Street and Bull and Mouth Lane; new connections and steps to Queen Street respect the former connection of the lost Victoria Lane; and the new steps and approach from the University and Queen Street reinstates the lost connection at the east end of Ramsden Street. This greater degree of permeability will result in a much greater integration of the site with the Conservation Area and within the Conservation Area itself, to its benefit.

7.4.21 The proposed removal of areas of less significance from the Queensgate Market building to create a new public square and landscaping along Peel Street will bring a new civic space to the town centre, and enhance the immediate setting of the Grade II Listed Town Hall which is within the Conservation Area, and allow for the building and this part of the Conservation Area to be experienced in a new way. This will be an enhancement of the Conservation Areas in this part.

7.4.22 The proposed venue building replaces the former multi-storey car park which has been demolished leaving and unsightly gap site in the town and within the setting of the Conservation Area, especially its two southern 'legs' which include the Town Hall and St Paul's Hall (church). The venue will be seen from these parts of the Conservation Area and in views towards it, especially the ring road to the south. The scale of the proposed building is similar to the former multi-storey car park which was long established building within the setting of the Conservation Area and thereby the impact of the proposals might be considered to be neutral. The proposed venue will reduce the ability to see the east elevation of the Town Hall, which is a building that positively contributes to the character and appearance of the Conservation Area from Queensgate, but it is recognised that this view results from the recent demolition of the car park only. It is also recognised

7.4.23 The proposed design and appearance of the venue is of much higher quality than the former car park, and it will be erected on a site that is now unsightly thereby it is considered that proposal will have a beneficial impact and enhance the setting of the Conservation Area, especially its southern elements.

7.4.24 Whilst some very limited harm would arise to the Conservation Area from the loss of some built form that defines the street layout, the streets themselves are not being lost from the Conservation Area and their alignment and layout will still be discernible. The greater integration of the application space with the Conservation Area in both views across, from and to it; the greater pedestrian permeability; the creation of new public spaces to appreciate the Conservation Area from new vantage points; and the redevelopment of an unsightly site are benefits and enhancement of the setting which will have a positive impact. Overall, the proposals are considered to be an enhancement to the Conservation Area from the change within its setting.

7.4.25 Overall, the proposed development will result in an **indirect minor impact** to the significance of the Conservation Area, a receptor of **Medium Value**, during the operation phase, via a change in setting. A **Slight Beneficial Effect** is therefore reported.

## 7.5 Mitigation and Residual Effects

Mitigation by Design

7.5.1 The proposed design has recognised the heritage significance of the heritage assets (receptors) and their settings and thereby the most harmful effects have already been mitigated through this iterative process.

Additional mitigation

7.5.2 Additional mitigation in the form of building recording of the two Listed Buildings prior to the commencement of works is proposed.

Residual Effects

7.5.3 The residual effects described on in this ES chapter range from moderate adverse, to slight adverse, to neutral to slight beneficial. **No significant effect** in EIA terms is reported.

7.5.4 Whilst the terminology of the EIA does not necessarily relate or easily transfer to consideration of harm in the context of the NPPF it is considered that a neutral effect is no harm, and thereby preserves the heritage asset. A slight beneficial effect is also no harm and might be an enhancement and public benefit. A slight adverse impact is considered to be harmful, but less than substantial and at the lower end of the scale, whilst a moderate adverse effect is considered to be harmful, but less than substantial harm at the upper end of the scale.

## 7.6 Cumulative Effects

7.6.1 No cumulative effects arising from the proposed development are identified.

## 7.7 Summary

7.7.1 This chapter has considered the potential effects on built heritage assets and

archaeology arising from the proposed development.

7.7.2 None of the identified effects are considered to be **significant effects** in EIA terms.

7.7.3 In the terminology of the NPPF it is considered that the effect of the proposals differ across the application site and to heritage assets – though no individual impact would result in a level of harm which is considered to be substantial harm.

7.7.4 There will be a direct impact on the Listed Buildings, which would be Less than Substantial harm at the lower and upper end of the scale.

7.7.5 The effects arising from development within the setting of the heritage assets would range from less than substantial harm at the lower end of the scale in some areas, to a neutral or beneficial effect.

7.7.6 Table 7-7 provides a summary of effects, mitigation (where applicable) and residual effects with regard to the assets discussed in this ES Chapter.

**Table 7-7: Summary of effects, mitigation, and residual effects with regards to the receptors (assets) discussed in this ES chapter.**

| ARCHAEOLOGY | | | | | |
|---|---|---|---|---|---|
| **Receptor (Heritage Asset** | **Nature of Effect** | **Receptor Value** | **Magnitude of Impact** | **Mitigation Measures** | **Residual Effect (Significant Effect / Not Significant in EIA Terms)** |
| **Construction** | | | | | |
| Archaeological deposits within the site footprint | None – it is considered there is negligible potential for archaeological deposits to survive within the site footprint | n/a | No change | None proposed | Neutral (Not Significant) |
| **Operation** | | | | | |
| Archaeological deposits within the site footprint | None – it is considered there is negligible potential for archaeological deposits to survive within the site footprint | n/a | No change | None proposed | Neutral (Not Significant) |

| BUILT HERITAGE | | | | | |
|---|---|---|---|---|---|
| **Receptor (Heritage Asset** | **Nature of Effect** | **Receptor Value** | **Magnitude of Impact** | **Mitigation Measures** | **Residual Effect (Significant Effect / Not Significant in EIA Terms)** |
| **Construction** | | | | | |
| All Grade II Listed Buildings and Town Centre Conservation Area. | Temporary Change in Setting and to building. | Medium | Direct and Indirect Moderate | None proposed. | Moderate Adverse Effect (Not Significant) |
| Arts Centre Including Dwarf Wall Enclosing Queens Square, Queen Street; and Parish Church of St Peter | Temporary Change in Setting. | High | Indirect negligible | None proposed. | Slight Adverse Effect (Not Significant) |
| Castle Hill | Temporary Change in Setting. | High | Indirect no change | None proposed. | Neutral (Not Significant) |
| Victoria Tower | Temporary Change in Setting. | Medium | Indirect no change | None proposed. | Neutral (Not Significant) |
| **Operation** | | | | | |
| Huddersfield Library and Art Gallery | Permanent change to building. | Medium | Direct Minor | Embedded within design.<br>Building Recording prior to commencement of | Slight Adverse Effect (Not Significant) |

| | | | | | |
|---|---|---|---|---|---|
| | | | | work. | |
| | Permanent Change in Setting. | Medium | Indirect Moderate | Embedded within design. | Moderate Beneficial Effect (Not Significant) |
| Queensgate Market | Permanent change to building. | Medium | Direct Moderate | Embedded within design.<br>Building Recording prior to commencement of work. | Moderate Adverse Effect (Not Significant) |
| | Permanent Change in Setting. | Medium | Indirect Moderate | Embedded within design. | Moderate Beneficial Effect (Not Significant) |
| Huddersfield Town Hall | Permanent Change in Setting. | Medium | Indirect Minor | Embedded within design. | Slight Beneficial (Not Significant) |
| 2 and 4 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 6 and 10 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 12 and 14 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 16 And 18, Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |

| | | | | | |
|---|---|---|---|---|---|
| Arts Centre Including Dwarf Wall Enclosing Queens Square, Queen Street | Permanent Change in Setting. | High | Indirect Negligible | Embedded within design. | Slight Beneficial (Not Significant) |
| Crown Court, Queen Street. | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 20 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 22 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 24 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 26 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 28 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 30 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 32 Queen Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| St Paul's Hall | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Slight Beneficial (Not Significant) |
| Ramsden Building at the University of Huddersfield | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Slight Beneficial (Not Significant) |

| | | | | | |
|---|---|---|---|---|---|
| Milton Congregational Church | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Slight Beneficial (Not Significant) |
| Milton Congregational Chapel Sunday School | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Slight Beneficial (Not Significant) |
| Bath House (Amenity Block) at Thomas Broadbent and Sons Ltd | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Slight Beneficial (Not Significant) |
| Juvenile Court, Princess Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Slight Beneficial (Not Significant) |
| 03, New Street, Huddersfield (Formerly listed as Butchery Department of Co-operative Stores PRINCESS STREET (South Side)) | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Slight Beneficial (Not Significant) |
| Commercial Hotel, 64, New Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 71 New Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 14 Victoria Lane | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 16 & 16a Victoria Lane | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 13 King Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |

| | | | | | |
|---|---|---|---|---|---|
| 15 15A and 17, King Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| Burns Tavern, King Street | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| 41 Kingsgate (formerly the Globe Public House) | Permanent Change in Setting. | Medium | Indirect Negligible | Embedded within design. | Neutral (Not Significant) |
| Parish Church of St Peter | Permanent Change in Setting. | High | No Change | Embedded within design. | Neutral (Not Significant) |
| Castle Hill | Permanent Change in Setting. | High | No Change | Embedded within design. | Neutral (Not Significant) |
| Victoria Tower | Permanent Change in Setting. | Medium | No Change | Embedded within design. | Neutral (Not Significant) |
| Huddersfield Town Centre Conservation Area | Permanent Change in Setting. | Medium | Indirect Minor | Embedded within design. | Slight Beneficial (Not Significant) |

# 8 Traffic and Transport

## 8.1 Introduction

8.1.1 The traffic and transport chapter assesses the impact of the proposed development on the local transport network. It considers the potential effects of the transport impacts in an environmental context.

8.1.2 Arup have prepared this Traffic and Transport chapter of the ES, led by Susie Bathe, a Senior Transport Planner and Chartered Engineer (MCIHT) with 20 years' experience preparing Transport Assessments, Travel Plans and ES Chapters for a wide range of mixed use developments including for Heart of the City II in Sheffield, Staveley Works Area and York Central.

8.1.3 This chapter is supported by the following appendices, Volume 2:

- Appendix 8.1: Transport Assessment
- Appendix 8.2: Travel Plan

8.1.4 A full Transport Assessment (TA) has been prepared for the proposed Development. This includes a detailed description of the baseline conditions, calculation of the trips likely to be generated by the proposed Development, the traffic modelling undertaken and the impact assessment for all aspects of traffic and transportation. The TA is the principal document in which the traffic and transport impacts of the proposed Development have been assessed.

8.1.5 This chapter of the ES provides a summary of the key traffic and transport impacts on existing receptors and assesses their significance. The main detail of the baseline, methodology and assessment are not repeated in this chapter unless they are of specific relevance to the impact assessment. This detail is contained within the TA (Appendix 8.1 within Volume 2 (Technical Appendices) of the ES) with detail of proposed management and mitigation measures within the Framework Travel Plan (Appendix 8.2 within Volume 2 (Technical Appendices) of the ES) which should be read alongside this chapter.

## 8.2 Planning Policy Context

8.2.1 The key policy documents referred to for the assessment of the proposed Development in transport terms are set out in the Transport Assessment (Appendix 8.1 within Volume 2 (Technical Appendices) of the ES) and in Chapter 5: Planning Policy Context. The documents guiding the assessment process include:

**National Planning Policy**

8.2.2 National planning policy of relevance to traffic and transport is set out in the NPPF (described in further detail in Chapter 5: Planning Policy Context):

8.2.3 Of particular importance, Section 9, Paragraph 113 of the NPPF sets out that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment and a Travel Plan. A Transport Assessment and Framework Travel Plan are submitted with this application and provided at Appendix 8.1 and 8.2 within Volume 2 (Technical Appendices) of the ES.

**Local Planning Policy**

8.2.4 Local planning policy of relevance to traffic and transport is set out in the West Yorkshire Local Transport Plan 2011-2026 (LTP3), and Kirklees Council Local Plan, Strategies and Policies, adopted in 2019.

8.2.5 The LTP3 and Local Plan set out development policy and transport strategies. The proposed Development will contribute to the LTP3 and Local Plan objectives given its town centre location and accessibility by all modes of transport. In addition, a high quality, attractive and safe environment will be provided for all transport modes as part of the Development; this will encourage trips to the development to be undertaken by sustainable means (including on foot, by cycle or by public transport).

## 8.3 Assessment Approach

**Consultation**

8.3.1 The scope of the assessment has been discussed and agreed with the LPA Highways Development Management and is based on the EIA Scoping Report, LPA responses, more detailed TA Scoping Report dated 28th April 2022 and additional Transport Technical Note, dated 14th July 2022. Subsequent and ongoing discussions with the LPA have been undertaken to agree the scope of assessment.

8.3.2 Throughout the design period, a number of meetings have been held with the LPA during which various transport topics have been discussed. The following meetings/telecons have been held to discuss the design principles and transport assessment in more detail:

- 16th March 2022 – KC Highways presentation of car park access options and seek feedback
- 28th April 2022 - KC Transport Strategy meeting to discuss sustainable transport policy and principles for the scheme
- 24th June 2022 – KC Highways meeting to present developing transport and access principles and seek feedback.
- 1st July 2022 – KC Highway Development Management meeting to discuss highway access options
- 25th July 2022 – KC Highway Development Management meeting to discuss the TA Scoping Report and agree methodology
- 2nd August 2022 – KC Highways meeting to present initial traffic modelling findings and access strategy for other modes and for officers to provide feedback

8.3.3 Specific comments were made by the LPA and the responses are set out in Table 8.1 below.

**Table 8.1: Consultation Summary**

| Consultee and Date | Issue Raised | Summary of Response |
|---|---|---|
| LPA – 16/03/2022 | Need to assess all car park access options to compare highway operation. Network model of ring road is required to cover Chapel Hill to Shorehead Roundabout | TRANSYT Model developed for access option testing |
| LPA – 21/07/2022 | TA Scoping Report response provided. Agreement to testing car park access options. Trip generation methodology generally accepted with minor clarifications required. Principles of TRANSYT modelling accepted. | Meeting of 25/07/2022 discussed outstanding queries |
| LPA – 22/07/2022 | TA Technical Note response provided. Further detail of TRANSYT modelling methodology and trip distribution accepted. Peak hour assessments accepted with an additional early evening event peak assessment requested. | Assessment to include additional assessment period |
| LPA – 2/08/2022 | Initial modelling findings presented. Requested that further base model validation is undertaken and liaison with UTC is undertaken to agree the modelling | Queue length and journey time validation undertaken, and all model files provided to UTC |

**Guidance**

8.3.4 There are no specific standards or legislation that relate to the traffic and transport assessment. DfT Guidance: Guidance on Transport Assessment, 2007 has been withdrawn but not replaced, however, the principles of this guidance are generally still considered valid and have been used as a basis for assessment.

**Sources of Information**

8.3.5 Traffic survey data was collected in June 2022 to enable development of the Base traffic model. A network TRANSYT model has been developed to assess the impacts of the scheme, as agreed with the LPA. Kirklees Council Highways have provided traffic data and junction signal details to enable development of the model.

8.3.6 The industry standard TRICS database (managed by TRICS Consortium) has been used to establish trip generation figures for the development.

8.3.7 IPW have provided expert advice in relation to types of events, visitor numbers and trip generation figures for the venue.

**Impact Assessment**

8.3.8 The approach to assessment has been undertaken based on ongoing discussions with the LPA.

Construction

8.3.9 Given the stage in the programme, quantitative data on construction traffic is not available. Construction vehicle numbers are based on development details, including phases, building sizes, types and materials etc. At this stage, the scheme proposals and phases are not confirmed, therefore the construction programme and vehicle numbers cannot be accurately defined.

8.3.10 As such, commentary on the likely scale of construction impacts is presented, based on professional judgement.

Operation

8.3.11 The assessment considers accessibility of the Site by sustainable modes, including by foot, cycle and public transport.

8.3.12 Highway assessment has been undertaken using a TRANSYT model for the following assessment years:

- 2022 Base Year
- 2027 Do Minimum Future year (forecast year with no development, but including traffic growth and committed development)
- 2027 Do Something (forecast year to full build out of the site, including Do Minimum traffic and the development)

8.3.13 The TA and this ES chapter, considers the forecasts trip generation and mode share for the proposed Development uses during the weekday AM and PM peak hours, as well as early Evening and Saturday peak hours. Traffic generation associated with all uses at the site including the Museum, Art Gallery, Library, Venue, Outdoor Event Space and Food Hall has been included.

8.3.14 In addition to the highway assessment, the TA also provides detail in relation to parking proposals, servicing requirements and considers additional transport demand for the venue by taxi and coach.

8.3.15 To avoid excessive repetition, the stages of the assessments are described in further detail within Section 8.5 of this chapter, alongside the findings.

**Assessment Criteria**

8.3.16 This will be assessed based on the magnitude of change due to the development proposals and the sensitivity of the receptors / receiving environment. The assessment of potential and residual effects resulting from the development will use the following 7-level scale of significance:

- Major Beneficial – the proposed development would have a very significant positive impact on the transport network

- Moderate Beneficial - the proposed development would have a noticeable positive impact on the transport network
- Minor Beneficial - the proposed development would have a small positive impact on the transport network
- Negligible - no discernible impact is expected as a result of the proposed development
- Minor Adverse - the proposed development would have a small negative impact on the transport network
- Moderate Adverse - the proposed development would have a noticeable negative impact on the transport network, and
- Major Adverse - where the proposed development would have a very significant negative impact on the transport network.

8.3.17 Professional judgement has been used to determine the significance of the effects on the local transport network.

8.3.18 A qualitative assessment of the significance of effects has been provided within the ES. For the purpose of this EIA, moderate and major effects will be deemed 'significant'. Where possible, mitigation measures will be identified to reduce the residual effects to 'not significant'.

**Limitations to the Assessment**

8.3.19 There are limitations in the approach taken in the TA. The assessment work is based on surveyed traffic flow data, plus estimations of trip generation and trip distribution which may differ in reality from that considered in the assessment. This is a standard approach and is not expected to affect the robustness of the assessment completed.

## 8.4 Baseline Conditions

**Study Area**

8.4.1 Assessment of the highway network has been undertaken for the TRANSYT network comprising the following junctions:

- A62 Queensgate / Outcote Bank traffic signal control junction
- A62 Queensgate / Albion Street priority junction
- A62 Queensgate / Manchester Road / A616 Chapel Hill traffic signal control junction
- A62 Queensgate / Alfred Street traffic signal control junction
- A62 Queensgate / Queen Street South priority junction
- A62 Queensgate / Queen Street priority junction
- A62 Queensgate / Zetland Street / University Road traffic signal control junction

- Shorehead Roundabout (A62 Queensgate / A62 Southgate / A629 Wakefield Road) signalised

8.4.2 A review of the Transport network in the vicinity of the site has been undertaken and is described below with more detail provided in the TA.

8.4.3 The KCH scheme site is located within the core of the town centre and located within the ring road (A62 Castlegate / Queensgate / Southgate). The site is bounded by A62 Queensgate to the south and south east, Queen Street to the east, King Street to the north and Victoria Lane, Peel Street and Alfred Street to the west, as shown in Figure 8.1. King Street and Victoria Lane are pedestrianised routes used by service vehicles at certain times.

8.4.4 The site is in a very accessible location with excellent connections to car and non-car infrastructure.

8.4.5 The A62 Castlegate, Queensgate and Southgate form the ring road around the town centre. Within the town centre, routes provide local access to car parks, businesses, shops and the main bus and rail stations. Some traffic movements are restricted within the town centre to promote public transport and active travel.

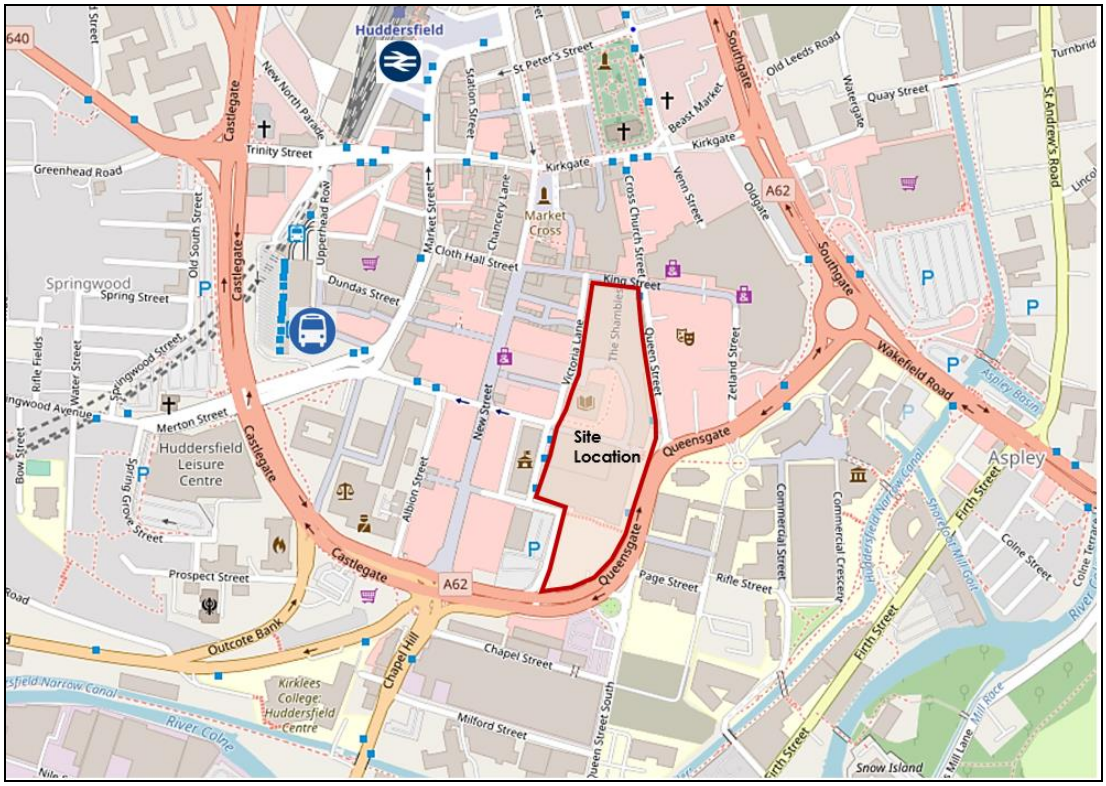
8.4.6 From the ring road, several radial routes (A616 Chapel Hill, Manchester Rd, A640 Trinity Street, A629 New N Road, A641 Bradford Road, A62 Leeds Road and A629 Wakefield Road) provide strategic connections to the motorway network and the surrounding area.

8.4.7 The highway network can be congested at peak times, particularly the ring road and junctions within vicinity of the site – A62 Queensgate / Southgate / A629 Wakefield Road (Shorehead roundabout) and A62 Queensgate / A62 Castlegate / A616 Chapel Hill junctions.

8.4.8 The site is within 500m walk of Huddersfield rail station which provides access to a range of local, regional and national rail services, including frequent services to Leeds, Manchester, Hull, Sheffield, Newcastle, Liverpool and Bradford.

8.4.9 The nearest bus stops are located along Peel Street and Queens Street which front the western and eastern boundaries of KCH scheme, providing access to approx. 30-40 bus services per hour during the day. The site is also within 350m walk of the bus station which provides access to significant number of local and regional bus services as well as regional and national coach services.

**Figure 8.1: Site Location and Local Transport Network**




8.4.10 The existing multi storey car park located at the south of the site was recently demolished. Previous accesses to the car park from Alfred Street and subway access under Queensgate have therefore been closed. The only current vehicular access is service vehicle access to and from Queen Street which provides access to a basement network of tunnels underneath much of the site.

8.4.11 Historical accident data for the period from 2017 to 2021 has been reviewed for the highway network within the study area. Over the five year period, 22 personal injury accidents were recorded, three of which resulted in serious injuries and 18 resulted in slight injuries. The findings of the highway safety review have not identified any highway safety issues in the vicinity of the site that raised concerns. There are some clusters of accidents at junctions, as would be expected, but in general the number of accidents over a five year period is considered low.

## 8.5 Assessment of Likely Significant Effects

8.5.1 This section of the report summarises the predicted impacts associated with the proposed Development on the transport network. It also summarises key proposals which have been developed during the design process and mitigation measures that have been adopted to avoid and reduce adverse effects as far as possible.

**Construction**

8.5.2 Given the duration of the construction period, to be phased over a number of years, the traffic generated during the construction phase of the proposed Development is likely to be significantly less than the development traffic generation of the operational Site (discussed below), particularly during peak periods. Transport assessments are usually undertaken for the commuter peak hours when traffic flows are generally highest.

Construction hours tend to be longer days, so site staff generally arrive earlier and leave later so avoid the commuter peak periods. Deliveries would be scheduled outside peak hours.

8.5.3 Based on experience of city and town centre schemes, it is also considered that the number of vehicle movements generated by the construction process, relative to existing traffic volumes on the local highway network in the peak hours, will be such that it will not give rise to a significant impact on the highway network. The volume of construction traffic will be low when spread across the construction period and across the working day.

8.5.4 Given the town centre location, however, the sensitivity of the junctions on the surrounding network to the additional construction traffic is high. Construction of the full scheme is anticipated to continue up to 2025. It is therefore considered that the magnitude of construction traffic impact on the highway network would **result in direct temporary effects of Moderate Adverse significance on the surrounding network.**

8.5.5 In addition, construction vehicles could carry site mud or dust onto the adjacent highway network, **resulting in direct, temporary effects of Minor Adverse significance**.

**Operation**

8.5.6 Through the process of consultation during the design development, potential transport impacts have been avoided or reduced where possible within the emerging design. This process, and the aspects of design that have considered traffic and transportation impacts, is set out in detail in the TA (Appendix 8.1 within Volume 2 (Technical Appendices) of the ES).

8.5.7 A new car park provides car parking to accommodate the majority of forecast trips to the development. The new car park access junction will accommodate predicted vehicle trips to minimise the impact on the local highway network, particularly to maintain operation of the ring road.

8.5.8 Scheme proposals have been developed to provide safe access proposals for service vehicles, taxis and coaches, to minimise potential disruption to operation of the local highway network.

8.5.9 In order to reduce the highway impact of the scheme, measures to maximise access by modes other than the car have also been identified. These include:

- Pedestrian and cycle infrastructure along A62 Queensgate and crossing provision included as part of the car park access proposals and linking with wider planned improvement schemes along A62 Queensgate and Queen Street
- High quality, attractive and safe pedestrian routes through the site, connecting with existing town centre routes. Level access to buildings is provided and steps, ramps with resting spaces and lifts accommodate level changes across the site
- Cycle parking is provided throughout the site, including staff cycle parking, showers, changing facilities and lockers within each building and a range of short and long stay secure covered cycle parking for visitors including a cycle hub. Cycle parking is provided at a number of locations, connecting with existing cycle infrastructure and routes surrounding the site

- Development of at Travel Plan for the site to encourage access for sustainable modes of travel and discourage access by car

8.5.10 A trip generation exercise has been undertaken using the trip rates (predicted number of trips per development quantum parameter) agreed with the LPA. This estimates the number of additional trips that are likely to arise as a result of the proposed Development. Applying the agreed trip rates to the proposed Development quantum forecasts the following:

- A total of 153 and 192 additional two-way vehicular trips generated in the weekday AM and PM peak hours respectively. 353 additional two-way vehicular trips are generated in the early Evening peak and 291 trips generated in the Saturday peak hour. These have been distributed across the highway network using the agreed distribution

- Approximately 2 and 48 additional two-way pedestrian trips and approximately 2 and 3 two-way cycle trips will be generated during each of the AM and PM peak hours respectively. 101 additional two-way pedestrian and 19 cycle trips will be generated in the early Evening peak and 164 pedestrian and 6 cycle trips generated in the Saturday peak hour. As identified above, the proposed Development incorporates measures to accommodate additional pedestrian and cycle trips

- Approximately 7 and 21 two-way bus trips and approximately 11 and 17 rail trips will be generated during each of the AM and PM peak hours respectively. 87 additional two-way bus and 176 rail trips will be generated in the early Evening peak and 41 bus and 41 rail trips generated in the Saturday peak hour.

Sustainable Modes Assessment

8.5.11 The impact of the proposed Development on pedestrians and cyclists is considered as part of the TA and Travel Plan. In summary, there will be an increase in pedestrian and cycle trips to/from and through the Site. These will be new trips generated by the proposed Development as well as additional trips from surrounding areas using the new infrastructure. The proposed Development incorporates a range of measures for pedestrians and cyclists, including high quality, attractive and safe routes through the Site and connections to the wider area. New infrastructure will be provided along A62 Queensgate, including crossing provision. Cycle parking will also be provided across the Site. **As a result, the impact will be direct, permanent and long-term with Minor Beneficial effect.**

8.5.12 The impact of the proposed Development on access by public transport is considered as part of the TA and Travel Plan. In summary, there will be an increase in public transport trips, including by bus and rail. The site benefits from excellent local connections to existing bus stops on Peel Street and the bus and rail stations are within 5-10 minute walk. It is considered that the forecast new trips can be accommodated on existing bus and rail services. A wayfinding / signing strategy will be implemented to improve information to pedestrians / cyclists accessing bus and rail services. **As a result, the impact is considered to be of Negligible significance.**

Highway Assessment

8.5.13 The impact of the proposed Development on highway operation is considered in detail as

part of the TA. Future year assessments of the highway network for the future year 2027 have been considered, including traffic growth and committed development highway schemes as identified by Kirklees Council Highways. An assessment of highway operation has been undertaken for the Do Minimum (DM) scenario without KCH scheme development traffic, and the Do Something (DS) scenario including the KCH scheme development traffic.

8.5.14 Assessment was undertaken for four peak hours, comprising:

- The AM and PM network peak hours with peak traffic generation associated with Conference / Business events at the Venue
- The early Evening peak hour with peak traffic arrivals for Entertainment events at the Venue
- The Saturday peak hour with high traffic generation associated with Exhibition / Consumer shows coinciding with the network peak hour

8.5.15 The local highway network has been assessed using industry standard modelling software to establish a baseline performance for each junction and to assess the potential impact of the proposed Development at each location. Highway assessment was undertaken using the TRANSYT traffic modelling programme to consider the operation of the modelled network of the A62 Queensgate comprising the new car park access as well as eight existing junctions, as identified at Section 8.4 above. Data was extracted from the models, comprising the Degree of Saturation (DoS) and Mean Max Queues (MMQ) for each approach link to a junction. The results of this assessment area as follows:

- A62 Queensgate / Car Park access – the assessment shows that the junction will operate within or approaching practical capacity in the 2027 future year with Development with DoS approximately 60%-70% in all scenarios except the Evening DS scenario where the DoS is 90%. In all DS scenarios the max queues are 6-8pcus.
- A62 Queensgate / Outcote Bank traffic signal control junction – the assessment shows that the junction is predicted to operate within capacity in both the DM and DS with max DoS approximately 55%-75% and max queues of 5-7pcus for all scenarios.
- A62 Queensgate / Albion Street priority junction – the assessment shows that the junction is predicted to operate within capacity in both the DM and DS scenarios with max DoS approx. 60% and max queues of 2pcus for all scenarios.
- A62 Queensgate / Manchester Road / A616 Chapel Hill traffic signal control junction - the assessment shows that the junction is predicted to operate approaching capacity in the DM and DS scenarios with DoS approximately 80%-90% and queues of 7-12pcus. Minor amendments to traffic signal controls were modelled in the DS scenario, resulting in only slight increases in DoS and queues.
- A62 Queensgate / Alfred Street traffic signal control junction - the assessment shows that the junction is predicted to operate within capacity in both the DM and DS scenarios with max DoS approximately 45%-75% and max queues of 6-7pcus for all scenarios.

- A62 Queensgate / Queen Street South priority junction - the assessment shows that the junction is predicted to operate well within capacity in both the DM and DS scenarios with max DoS less than 20% and negligible queues forecast.

- A62 Queensgate / Queen Street priority junction - the assessment shows that the junction is predicted to operate within capacity in both the DM and DS scenarios with max DoS approximately 50%-60% and max queues of 5-7pcus for all scenarios.

- A62 Queensgate / Zetland Street / University Road traffic signal control junction - the assessment shows that the junction is predicted to operate within capacity in both the DM and DS scenarios with max DoS approximately 50%-60% and max queues of 6-7pcus for all scenarios.

- Shorehead Roundabout (A62 Queensgate / A62 Southgate / A629 Wakefield Road) signalised – the assessment shows that the junction is predicted to operate within capacity in both the DM and DS scenarios with max DoS approximately 60%-80% and max queues of 6-7pcus for all scenarios.

8.5.16 The assessment results show that seven junctions will operate within practical capacity in the 2027 future year scenarios with minor increases in flows and capacity, therefore no mitigation measures are required for these junctions.

8.5.17 For two junctions (A62 Queensgate / Manchester Road / A616 Chapel Hill and the new site access with A62 Queensgate) the Do Something models show at least one link operating at practical capacity (90%) in some scenarios however the increase in DoS and queues is minor and the proposed Development will add a relatively small amount of traffic to an already busy network.

8.5.18 At the locations predicted to operate at capacity, highway improvements have been considered to mitigate the impact of the proposed Development. However, given the town centre location, there is no additional road space to provide lanes for more capacity. The traffic signal operations have been reviewed and refined where possible.

8.5.19 It is noted that the scenarios assessed comprise the peak movements associated with events at the Venue. These peak events will not occur on a frequent basis. For example:

- Weekday AM and PM - Peak forecast Conference / Business events (200+ visitors) are predicted approx. monthly and average attendance of approx. 90 visitors forecast for 57 events per year (ie approx. weekly)

- Evening – Peak forecast Entertainment events (max 2,200 visitors) are predicted approx. three times a year, with seated events (1,288 visitors) approx. weekly and average attendance of 700 visitors forecast across 128 events per year (ie approx. 2-3 per week)

- Saturday - Peak forecast Exhibition / Consumer Shows (1,250 visitors) are predicted on six weekend days per year. Larger scale Outdoor Events are forecast on weekends approx. monthly (up to 3,000 visitors) and will not coincide with the peak venue events

8.5.20 An Events Management Plan will be developed for the site to coordinate events at the Venue and Outdoor Event Space. This will include car park signing strategy to provide information to drivers regarding available parking. For occasional peak events, further

management of the highway operation may be required with additional signing and traffic management implemented as required.

8.5.21 The proposed Development will generate a number of vehicle trips in the peak hour periods assessed. Detailed assessment indicates the increase in traffic flows compared to the existing and anticipated background growth in traffic (Do Something vs Do Minimum scenarios) is generally minor. The impacts of these changes on the local junctions and wider highway network have been considered in detail as part of the modelling assessment set out in detail in the TA. The TA indicates that the highway network in the study area would generally accommodate the predicted increase in traffic associated with the proposed Development although some junctions are close to or at practical capacity.

8.5.22 In the already congested town centre network, the operational impacts of the completed development on the **highway network as a whole are considered to be direct, permanent and long-term with a Minor Adverse significance effect**.

Road Safety

8.5.23 Personal injury accident data has been reviewed in order to assess highway safety. The overall number of accidents is considered to be low. There are no patterns or clusters of incidents that would raise concern in the context of either the existing highway network or the proposed Development. The existing road safety situation does not require specific mitigation to facilitate the proposed Development, although new highway infrastructure will be subject to a Road Safety Audit process.

8.5.24 Although the proposed Development is likely to increase traffic flows within the TA study area, it is considered that this will not result in material impacts on road safety and, as such, **the impact of the development on road safety is considered to be Negligible**.

## 8.6 Mitigation, Enhancement and Residual Effects

8.6.1 This section of the report considers further mitigation measures, to be implemented in addition to the measures identified through the design development and assessment identified above. A summary of the residual environmental effects is then provided.

**Construction**

8.6.2 A Construction Environmental Management Plan (CEMP) will be agreed and implemented by the contractors and will include measures to manage impacts of construction traffic, including determining access routes and controlling the delivery and staff shift times if required. The CEMP will identify and enforce measures to ensure the local road network is protected (e.g. wheel-washing facilities, covered HGVs).

8.6.3 No further mitigation measures, beyond production and agreement of the CEMP are identified during the construction of the proposed Development.

8.6.4 As a result, the effects of construction traffic would be direct, temporary, short-term residual effects on the highway network of minor adverse significance. The effects of mud and dirt from construction vehicles will also be of short-term minor significance.

**Operation**

8.6.5 No further mitigation measures, beyond development of the scheme design and implementation of the Travel Plan are identified in relation to sustainable modes of transport. The Travel Plan will be reviewed and updated as the proposed Development is implemented and becomes operational, with additional measure identified if necessary. As such, the proposed Development is considered to result in direct, long-term permanent impacts of minor beneficial significance in the local area.

8.6.6 Based on the findings of the TA, the implementation of the Travel Plan and highway mitigation works will generally mitigate the Development's impact. The modelling undertaken as part of the TA shows that some local junctions are predicted to operate at capacity. At these locations, highway improvements have been considered. However, in the town centre location, physical space to provide additional capacity is not available. Minor revisions to signal timings have been made to improve operation where possible. At some junctions, congestion and queuing are forecast. As such, the residual effects are likely to be retained as minor adverse significance.

8.6.7 As identified above, peak events at the venue and outdoor event space will be managed through an Events Management Plan (EMP) including additional signing and traffic management as required.

8.6.8 No further specific mitigation is identified to mitigate for the proposed Development in terms of road safety. The overall impact of the Development on road safety is considered to be negligible.

**Summary of Effects**

8.6.9 Table 8.2 provides a summary of effects, including mitigation measures and residual effects

**Table 8.2: Summary of Effects**

| Potential Impact | Environmental Effect without mitigation | Mitigation | Effect after mitigation (residual effect) | Nature of Effect |
|---|---|---|---|---|
| **Construction Phase** | | | | |
| Impact on local highway – routes and volume of construction traffic | Moderate adverse | CEMP | Minor adverse | Direct, short term, temporary |
| Impact on local highway – mud/dust from construction traffic | Minor adverse | CEMP | Minor adverse | Direct, short term, temporary |
| **Operational Phase** | | | | |

| Potential Impact | Environmental Effect without mitigation | Mitigation | Effect after mitigation (residual effect) | Nature of Effect |
|---|---|---|---|---|
| Accessibility for pedestrians and cyclists | Minor beneficial | Scheme design / Travel Plan | Minor beneficial | Direct, long term, permanent |
| Accessibility for public transport users | Minor beneficial | Scheme design / Travel Plan | Minor beneficial | Direct, long term, permanent |
| Impact on local highway – development vehicle trips | Minor adverse | Signal timings / EMP / Signing | Minor adverse | Direct, long term, permanent |
| Impact on local highway – personal injury accidents | Negligible | N/A | Negligible | Direct, long term, permanent |

## 8.7 Cumulative Effects

8.7.1 The TA methodology requires highway assessment to include future forecast years comprising the addition of committed developments as well as general background traffic growth. Therefore, the cumulative effect of development traffic on the highway network has been assessed.

## 8.8 Summary

8.8.1 This traffic and transport chapter assesses the impact of the proposed development on the local transport network. It considers the potential effects of the transport impacts in an environmental context.

8.8.2 A full Transport Assessment has been prepared for the proposed Development. It provides a detailed assessment of the proposed development. In addition, the submitted Travel Plan considers measures to access the site by sustainable travel modes. These reports are provided as Technical Appendices and this chapter of the ES provides a summary of the key findings and assesses their significance.

8.8.3 Consultation has been undertaken with the LPA to agree the assessment methodology.

8.8.4 Impact assessment has been undertaken for the Construction and Operation phases of the scheme. There are no specific standards or legislation that relate to traffic and transport assessment and a qualitative assessment has been undertaken. Generally, professional judgement has been used to determine the significance of the effects on the local transport network.

**Construction**

8.8.5 Given the stage in the programme, details of construction and quantitative data on construction traffic is not available, therefore commentary on the likely scale of construction impacts is presented.

8.8.6 Given the duration of the construction period, to be phased over a number of years, the traffic generated during the construction phase of the proposed Development is likely to be significantly less than the development traffic generation of the operational Site particularly during peak periods.

8.8.7 Is also considered that the number of vehicle movements generated by the construction process, relative to existing traffic volumes on the local highway network in the peak hours, will be such that it will not give rise to a significant impact on the highway network. The volume of construction traffic will be low when spread across the construction period and across the working day. Construction staff will generally avoid peak hours and deliveries will be scheduled outside of the peak hours.

8.8.8 Given the town centre location, however, the sensitivity of the junctions on the surrounding network to the additional construction traffic is high. Construction of the full scheme is anticipated to continue up to the end of 2025. In addition, construction vehicles could carry site mud or dust onto the adjacent highway network.

8.8.9 A Construction Environmental Management Plan (CEMP) will be agreed and implemented by the contractors and will include measures to manage impacts of construction traffic, including determining access routes and controlling the delivery and staff shift times if required. The CEMP will identify and enforce measures to ensure the local road network is protected (e.g. wheel-washing facilities, covered HGVs).

8.8.10 As a result, the effects of construction traffic would be direct, temporary, short-term residual effects on the highway network of Minor Adverse significance. The effects of mud and dirt from construction vehicles will also be of short-term Minor Adverse significance.

**Operation**

8.8.11 Through the process of consultation during the design development, potential transport impacts have been avoided or reduced where possible within the emerging design. Scheme proposals have been developed to provide safe access for cars, service vehicles and other traffic and limiting the impact on the local highway network. Measures to support access by sustainable modes of travel are included to potentially reduce the highway impact of the scheme.

8.8.12 A trip generation exercise for the development forecasts the volume of trips by different modes of transport.

8.8.13 The sustainable modes assessment considers the forecast walking, cycling and public transport trips. The new development will generate additional trips by these modes. However, no further mitigation measures, beyond development of the scheme design and implementation of the Travel Plan are identified in relation to sustainable modes of transport.

8.8.14 The proposed Development incorporates a range of measures for pedestrians and cyclists, including high quality, attractive and safe routes through the Site and

connections to the wider area. New infrastructure will be provided along A62 Queensgate, including crossing provision. Cycle parking will also be provided across the Site. As a result, the impact will be direct, permanent and long-term with Minor Beneficial effect.

8.8.15 The site benefits from excellent local connections to existing bus stops on Peel Street and the bus and rail stations are within 5-10 minute walk. A wayfinding / signing strategy will be implemented to improve information to pedestrians / cyclists accessing bus and rail services. As a result, the impact is considered to be of Negligible significance.

8.8.16 The highway assessment considers operation in the 2027 future year for peak hour scenarios comprising the weekday AM and PM peak hours, early Evening peak hour and Saturday peak hour. Traffic generation associated with all uses at the site has been calculated, with the peak periods generally forecast for peak events at the Venue. A TRANSYT model has been built for the local highway network on the A62 Queensgate between Outcote Bank and Shorehead Roundabout.

8.8.17 The results of the assessment show that seven junctions will operate within practical capacity in the 2027 future year scenarios with minor increases in flows and capacity, therefore no mitigation measures are required for these junctions. Although at two junctions the Do Something models are operating at practical capacity, the increase in DoS and queues is minor and the proposed Development will add a relatively small amount of traffic to an already busy network.

8.8.18 At the locations predicted to operate at capacity, highway improvements have been considered to mitigate the impact of the proposed Development. However, given the town centre location, there is no additional road space to provide lanes for more capacity. The traffic signal operations have been reviewed and refined where possible.

8.8.19 As such, the residual effects are likely to be retained as direct, permanent and long-term with Minor Adverse significance.

8.8.20 Peak events at the venue and outdoor event space will be managed through an Events Management Plan (EMP) including signing and traffic management as required.

8.8.21 Personal injury accident data has been reviewed in order to assess highway safety. Although the proposed Development is likely to increase traffic flows within the study area, it is considered that this will not result in material impacts on road safety. No further specific mitigation is identified to mitigate for the proposed Development in terms of road safety. The overall impact of the Development on road safety is considered to be Negligible.

# 9 Air Quality

## 9.1 Introduction

9.1.1 Ove Arup & Partners Limited (Arup) has been commissioned by Kirklees Council to undertake an air quality assessment for the proposed "Kirklees Cultural Heart" (KCH) development located within Huddersfield Town Centre.

9.1.2 This air quality ES Chapter includes: a summary of relevant air quality policy and legislation; a description of the existing air quality conditions near the proposed development Site (hereafter referred to as the 'Site'); the methods used to assess likely significant effects; and assessment of the potential impact; and where necessary recommended mitigation.

**Site Location**

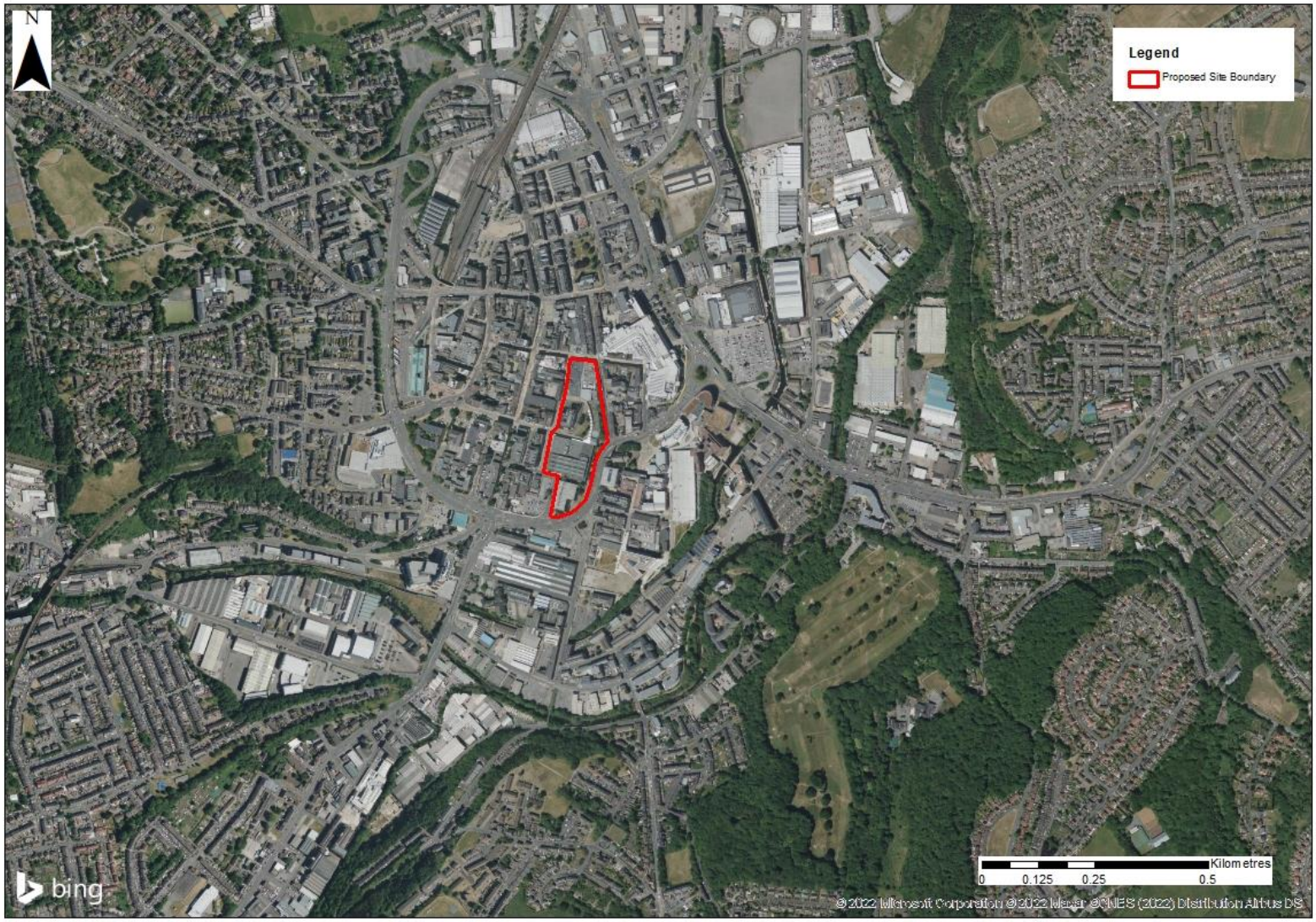
9.1.3 The Site is located north and west of the A62 – Queensgate, within Huddersfield Town Centre. The A62 Queensgate frontage is largely characterised by the former Site of the now demolished four storey car park and the eastern elevation of the Queensgate Market Hall and its artwork panels. The Market Hall is adjoined by the Piazza shopping centre, which wraps around the remainder of the Site's eastern boundary and encloses around the Huddersfield Library and Art Gallery, which is located on (but within) the eastern edge of the Site.

9.1.4 The location of the Site is shown in Figure 9.1.

9.1.5 The proposed development of the Site comprises:

- Demolition of the existing Piazza shopping centre, part removal of Queensgate Market, and demolition/ retention of service tunnels; with redevelopment of the site to form new public realm space (including public park and gardens, play areas, public square/outdoor event space);
- Refurbishment and change of use of existing Queensgate Market Hall into a new food hall;
- Refurbishment and extension of existing library and art gallery building to form a new museum;
- Change of use of part existing market hall building and extension to form a new public library;
- Construction of new indoor event venue incorporating multi-storey car park below;
- Erection of new public gallery building; and
- Associated infrastructure on land and buildings at Queensgate Market, Huddersfield Library and Art Gallery, and Piazza (and The Shambles) Shopping Centre, Huddersfield.

**Figure 9.1: Proposed Site Boundary**



## 9.2 Legislation and Policy Context

### Legislative Context

Air Quality Standards

9.2.1 The Air Quality Standards Regulations 2010 (amended in 2016) defines the policy framework for 12 air pollutants known to have harmful effects on human health or the natural environment. The Secretary of State for the Environment has the duty of ensuring compliance with the air quality limit values (pollutant concentrations not to be exceeded by a certain date). Some pollutants have standards expressed as annual average concentrations due to the chronic way in which they affect health or the natural environment, i.e. effects occur after a prolonged period of exposure to elevated concentrations. Other pollutants have standards expressed as 24-hour, 1-hour or 15-minute average concentrations due to the acute way in which they affect health or the natural environment, i.e. after a relatively short period of exposure. Some pollutants have standards expressed in terms of both long and short-term concentrations. Air quality limit values and objectives are quality standards for clean air. Therefore, in this assessment, the term 'air quality standard' has been used to refer to the national limit values.

9.2.2 Table 9.1 sets out the national air quality standards for $NO_2$, $PM_{10}$ and $PM_{2.5}$. Other pollutants have been screened out of this air quality assessment, since they are not likely to cause exceedances of their respective standards.

**Table 9.1: Air quality standards**

| Pollutant | Averaging Period | Air Quality Standard |
|---|---|---|
| Nitrogen Dioxide ($NO_2$) | Annual mean | 40µg/m$^3$ |
| | 1-hour mean | 200µg/m$^3$* |
| Fine Particulate Matter ($PM_{10}$) | Annual mean | 40µg/m$^3$ |
| | 24-hour mean | 50µg/m$^3$** |
| Very Fine Particulate Matter ($PM_{2.5}$) | Annual mean | 20µg/m$^3$ |
| Notes:<br>*not to be exceeded more than 18 times a year (99.8$^{th}$ percentile)<br>**not to be exceeded more than 35 times a year (90.4$^{th}$ percentile) | | |

Environment Act 2021

9.2.3 The Environment Bill become an Act (law) in November 2021[1] and is an update to the Environment Act 1995[2]. It amends the Clean Air Act 1993[3], to give local authorities more power to reduce local pollution, particularly that from domestic burning, and the Environmental Protection Act 1990[4], to reduce smoke from residential chimneys by extending the system of statutory nuisance to private dwellings.

9.2.4 The following remains applicable from the Environment Act 1995[2]: the duty on the Secretary of State for the Environment to develop, implement and maintain an Air Quality Strategy with the aim of reducing atmospheric emissions and improving air quality. The Air Quality Strategy for England, Scotland, Wales and Northern Ireland[5] provides the framework for ensuring compliance with the air quality limit values based on a combination of international, national and local measures to reduce emissions and improve air quality. This includes the statutory duty, also under Part IV of the Environment Act 1995, for local authorities to undergo a process of local air quality management and declare an Air Quality Management Area (AQMA) where necessary. Where an AQMA is declared, the local authority needs to produce an Air Quality Action Plan (AQAP) which outlines the strategy for improving air quality in these areas.

9.2.5 The Environment Act 2021[1] will implement key parts of the Department for Environment, Food and Rural Affairs' (Defra's) Clean Air Strategy[6] and include targets for tackling air pollution in the UK, such as:

- The Secretary of State is to set "*long-term*" legally binding targets on air quality. These targets must be of at least 15 years in duration, and be proposed by late 2022;
- Every five years, the Secretary of State is to review the Air Quality Strategy and publish a report on its findings;
- The government is to set an ambient air $PM_{2.5}$ target by October 2022, the specific figure and deadline for compliance of this is as yet undetermined;
- A new body is to be established (The Office for Environmental Protection) to *"contribute to environmental protection, and the improvement of the natural environment"*; and
- The Secretary of State may make vehicle manufacturers recall vehicles and engines if they are found to not comply with the "*relevant environmental standards*".

9.2.6 In addition, the Act a makes it quicker and easier for local authorities to enforce penalties for smoke emissions from homes in a Smoke Control Area (SCA) and removes the limits on fines that can be issued for the sale and delivery of unapproved solid fuels to a building in

[1] Environment Act 2021, Chapter 30.

[2] Environment Act 1995, Chapter 25.

[3] Clean Air Act 1993, Chapter 11.

[4] Environmental Protection Act 1990, Chapter 43.

[5] Department for Environment, Food and Rural Affairs in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment Northern Ireland (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Volume 1.

[6] Department for Environment, Food and Rural Affairs (2019) Clean Air Strategy.

an SCA. Retailers of solid fuel will also be required to tell customers that that it is illegal to buy unapproved fuel for use in an SCA.

Dust Nuisance

9.2.7 Dust is the generic term used in the British Standard document BS 6069 (Part Two) to describe particulate matter in the size range 1–75μm in diameter. Dust nuisance is the result of the perception of the soiling of surfaces by excessive rates of dust deposition. Under provisions in the Environmental Protection Act 1990[7], dust nuisance is defined as a statutory nuisance.

9.2.8 There are currently no standards or guidelines for dust nuisance in the UK, nor are formal dust deposition standards specified. This reflects the uncertainties in dust monitoring technology and the highly subjective relationship between deposition events, surface soiling and the perception of such events as a nuisance. In law, complaints about excessive dust deposition would have to be investigated by the local authority and any complaint upheld for a statutory nuisance to occur. However, dust deposition is generally managed by suitable on-site practices and mitigation rather than by the determination of statutory nuisance and/or prosecution or enforcement notice(s).

**National Policy and Guidance**

9.2.9 The land-use planning process is a key means of improving air quality, particularly in the long-term, through the strategic location and design of new developments. Any air quality consideration that relates to land-use and its development can be a material planning consideration in the determination of planning applications, dependent upon the details of each development.

National Planning Policy Framework

9.2.10 The National Planning Policy Framework (NPPF)[8] was updated in July 2021 with the purpose of planning to achieve sustainable development.

9.2.11 Paragraph 186 of the NPPF on air quality states that:

> *"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."*

[7] Environmental Protection Act 1990, Part 3 Statutory Nuisances and Clean Air.

[8] Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework.

9.2.12 In addition, paragraph 105 states that:

> *"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."*

9.2.13 Paragraph 174 discusses how planning policies and decisions should contribute to and enhance the natural and local environment. In relation to air quality, NPPF notes that this can be achieved by:

> *"…e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans…"*

Planning Practice Guidance

9.2.14 National Planning Practice Guidance (PPG) has been developed in order to support the NPPF. The guidance[9] on air quality provides a concise outline as to how air quality should be considered in order to comply with the NPPF and states when air quality is considered relevant to a planning application. This includes factors such as changes in traffic volumes, vehicle speeds, congestion or traffic composition, the introduction of new point sources of air pollution, exposure of people to existing sources of air pollutants, and the potential to give rise to air quality impacts at nearby sensitive receptors.

Clean Air Strategy

9.2.15 Defra's Clean Air Strategy[6] was published in January 2019 and sets targets for improving air quality across the country. It includes actions for reducing emissions from various sources, such as transport, domestic activities, farming and industry. There is also a long-term target for reducing population exposure to $PM_{2.5}$ concentrations to meet the World Health Organisation (WHO) target of 10µg/m$^3$ as an annual mean. In particular, the Clean Air Strategy states:

> *"New legislation will create a stronger and a more coherent framework for action to tackle air pollution. This will be underpinned by new England-wide powers to control major sources of air pollution, in line with the risk they pose to public health and the environment, plus new local powers to take action in areas with an air pollution problem. These will support the creation of Clean Air Zones to lower emissions from all sources of air pollution, backed up with clear enforcement mechanism."*

[9] Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2019) Planning Practice Guidance.

9.2.16 It is important to note that in September 2021, the WHO published updated air quality guideline (AQG) levels[10]; these include interim targets and ultimately, lower annual mean levels than previous. These include an annual mean reduction of $NO_2$ from the previous level of 40µg/m$^3$ to 10µg/m$^3$, $PM_{2.5}$ from 10µg/m$^3$ to 5µg/m$^3$ and $PM_{10}$ from the previous level of 20µg/m$^3$ to 15µg/m$^3$. However, the new WHO guidelines are currently not legally binding in the UK, and the Clean Air Strategy will continue with the aim of meeting the previous WHO levels until an amendment or new legislation supersedes this document.

Local Air Quality Management Policy and Technical Guidance

9.2.17 The policy guidance note, LAQM.PG(22)[11] provides additional guidance on the links between transport and air quality and the links between air quality and the land use planning system. It summarises the main ways in which the land-use planning system can help deliver compliance with the air quality objectives. This is relevant to any external organisations who may wish to engage with the local authority to assist in the delivery of their statutory duties on managing air quality.

9.2.18 The technical guidance, LAQM.TG(22)[12] is designed to support local authorities in carrying out their duties to review and assess air quality in their area. It provides detailed guidance on how to assess the impact of measures using existing air quality tools. Where relevant, this guidance has been taken into account in this assessment.

**Local Planning Policy and Guidance**

West Yorkshire Low Emissions Strategy 2016 to 2021

9.2.19 The West Yorkshire Low Emissions Strategy (WYLES)[13] was published in August 2016 and demonstrates a commitment of all West Yorkshire local authorities and other key stakeholders to improve local and regional air quality.

9.2.20 The WYLES is centred around three key aims:

- Accelerate improvements in air quality, above that which would occur without intervention, to achieve air quality limit values set out in law in all parts of West Yorkshire by 2020 at the latest;
- Working within the wider economic, social and environmental context for West Yorkshire to create a Low Emissions Future that will maximise opportunities to improve air quality, minimise risks of worsening air quality and create healthier places to live, work and visit; and
- Immediate focus on tackling transport emissions, targeting interventions that will deliver the most significant air quality improvements in the area of greatest concern.

[10] WHO Global Air Quality Guidelines (2021). Available at: https://apps.who.int/iris/bitstream/handle/10665/345334/9789240034433-eng.pdf?sequence=1&isAllowed=y

[11] Defra (2016) Local Air Quality Management Policy Guidance PG(22)

[12] Defra (2016) Local Air Quality Management Technical Guidance TG(22)

[13] West Yorkshire Low Emission Strategy (2016)

Kirklees Local Plan

9.2.21 The Kirklees Local Plan[14] was published in February 2019 and is the statutory development plan for Kirklees.

9.2.22 The plan sets out a framework for Kirklees' development between 2013 and 2031 integrating all economic, environmental, transport and social frameworks.

9.2.23 Policy LP47 relates to monitoring air quality and including air quality mitigation in development proposals:

*"The council will, with its partners, create an environment which supports healthy, active and safe communities and reduces inequality.*
*Healthy, active and safe lifestyles will be enabled by:*

- *Ensuring that the current air quality in the district is monitored and maintained and, where required, appropriate mitigation measures included as part of new development proposals"*

9.2.24 Policy LP51 relates to the protection and improvement of local air quality:

1. *"Development will be expected to demonstrate that it is not likely to result, directly or indirectly, in an increase in air pollution which would have an unacceptable impact on the natural and built environment or to people.*
2. *Proposals that have the potential to increase local air pollution either individually or cumulatively must be accompanied by evidence to show that the impact of the development has been assessed in accordance with the relevant guidance. Development which has the potential to cause levels of local air pollution to increase must incorporate sustainable mitigation measures that reduce the level of this impact. If sustainable measures cannot be introduced the development will not be permitted.*
3. *Where the development introduced new receptors into Air Quality Management Areas or Areas of Concern or near other areas of relatively poor air quality, for example near roads or junctions the development must incorporate sustainable mitigation measures that protect the new receptors from unacceptable levels of air pollution. Where sustainable mitigation measures cannot be introduced which prevent receptors from being exposed to unsafe levels of air pollution, development will not be permitted."*

9.2.25 Policy LP52 related to the protection and improvement of environmental quality:

*"Proposals which have the potential to increase pollution from noise, vibration, light, dust, odour, shadow flicker, chemicals and other forms of pollution or to increase pollution to soil or where environmentally sensitive development would be subject to significant levels of pollution, must be accompanied by evidence to show that the impacts have been evaluated and measures have been incorporated to prevent or reduce the pollution, so as to ensure it does not reduce the quality of life and well-being of people to an unacceptable level or have unacceptable impacts on the environment.*

*Such developments which cannot incorporate suitable and sustainable mitigation measures which reduce pollution levels to an acceptable level to protect the*

[14] Kirklees Council (2019) Kirklees Local Plan Strategy and Policies

*quality of life and well-being of people or protect the environment will not be permitted.*

*Where possible, all new development should improve the existing environment."*

Kirklees Council Air Quality Action Plan

9.2.26 The Kirklees Council Air Quality Action Plan[15] provides a summary of the current air quality in the borough and sets out the actions to improve it between 2019 and 2024. The Air Quality Action Plan outlines the Council's plan to effectively use local levers to tackle air quality issues. The Air Quality Action Plan is organised around 11 broad topics of alternatives to private vehicle use; environmental permits; freight and delivery management; policy guidance and development control; promoting low emission plants; promoting low emission transport; promoting travel alternative; public information; transport planning and infrastructure; traffic management; and vehicle fleet efficiency.

Kirklees Council Local Air Quality Strategy

9.2.27 The Kirklees Local Air Quality Strategy[16] outlines the approach Kirklees takes for achieving and maintaining good air quality and sets out broad aims and objectives to improve areas of poor air quality. The Air Quality Strategy is subject to annual review and should be read in conjunction with the Kirklees Council Air Quality Action Plan[15].

**Other Relevant Policy and Guidance**

Institute of Air Quality Management Dust Guidance

9.2.28 The Institute of Air Quality Management (IAQM) guidance[17] provides guidance to development consultants and environmental health officers on how to assess air quality impacts from construction. The IAQM guidance provides a method for classifying the significance of effect from construction activities based on the 'dust magnitude' (high, medium or low) and proximity of the Site to the closest receptors. The guidance recommends that once the significance of effect from construction is identified, the appropriate mitigation measures are implemented. Experience has shown that once the appropriate mitigation measures are applied, in most cases the resulting dust impacts can be reduced to negligible levels.

EPUK/IAQM Land-use Planning and Development Control

9.2.29 The 2017 Land-Use Planning & Development Control guidance document[18] produced by Environmental Protection UK (EPUK) and the IAQM provides a framework for professionals operating within the planning system to provide a means of reaching sound decisions, with regard to the air quality implications of development proposals. The document provides guidance on when air quality assessments are required by providing screening criteria regarding the size of a development, changes to traffic flows/composition energy facilities or combustion processes associated with the development.

[15] Kirklees Council (2019) Air Quality Action Plan for Kirklees Council

[16] Kirklees Council (2007) Kirklees Local Air Quality Strategy

[17] IAQM (2016) Guidance on the Assessment of Dust from Demolition and Construction (Version 1.1)

[18] EPUK/IAQM (2017) Land-Use Planning & Development Control: Planning for Air Quality

## 9.3 Assessment Approach

**Methodology**

9.3.1 The overall approach to the assessment of air quality comprises:

- A review of the existing air quality conditions at, and in the vicinity of the Site;
- An assessment of the potential changes in air quality arising from the construction and operation of the Site;
- An exposure assessment for the future occupants of the Site; and
- Formulation of mitigation measures, where appropriate, to ensure any adverse effects on air quality are minimised.

9.3.2 The main pollutants of concern in this study are nitrogen dioxide $NO_2$ and fine particulate matter $PM_{10}$ and $PM_{2.5}$ these pollutants are most likely to be close to or exceeding their relevant air quality objectives (based on local monitoring and assessment).

Methodology of Baseline Assessment

9.3.3 Existing or baseline ambient air quality refers to the concentrations of relevant substances that are already present in the environment. These are present from various sources, such as industrial processes, commercial and domestic activities, traffic and natural sources.

9.3.4 A desk-based review of the following data sources has been undertaken to determine baseline air quality conditions around the Site:

- The Environment Agency (EA) website[19];
- Defra UK Air Information Resource (AIR)[20]; and
- Defra Local Air Quality Management Technical Guidance TG(22)[12]

Methodology of Construction Assessment

**Construction Dust Assessment**

9.3.5 The construction phase effects of the Site have been assessed using the qualitative approach described in the latest guidance by the Institute of Air Quality Management (IAQM)[21]. The guidance applies to the assessment of dust from construction/demolition activities.

9.3.6 An 'impact' is described as a change in pollutant concentrations or dust deposition, while an 'effect' is described as the consequence of an impact. The main impacts that may arise during construction of the Site are:

- Dust deposition, resulting in the soiling of surfaces;

[19] Environment Agency website. Available at: https://environment.data.gov.uk/public-register/view/search-industrial-installations

[20] Department for Environment, Food and Rural Affairs, UK Air Information Resource (AIR), Newham AQMA (No. 2). Available from: https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=350

[21] Holman et al (2014). IAQM Guidance on the assessment of dust from demolition and construction, v1.1. Institute of Air Quality Management, London.

- Visible dust plumes;
- Elevated $PM_{10}$ concentrations as a result of dust generating activities on-site; and
- An increase in $NO_2$ and $PM_{10}$ concentrations due to exhaust emissions from Non-Road Mobile Machinery (NRMM) and vehicles accessing the site.

9.3.7 The IAQM guidance considers the potential for dust emissions from dust-generating activities, such as demolition of existing structures, earthworks, construction of new buildings and trackout. Earthworks refer to the processes of soil stripping, ground levelling, excavation and land capping, while trackout is the transport of dust and dirt from the site onto the public road network where it may be deposited and then re-suspended by vehicles using the network. This arises when vehicles leave the site with dusty materials, which may then spill onto the road, or when they travel over muddy ground on-site and then transfer dust and dirt onto the public road network.

9.3.8 For each of these dust-generating activities, the guidance considers three separate effects:

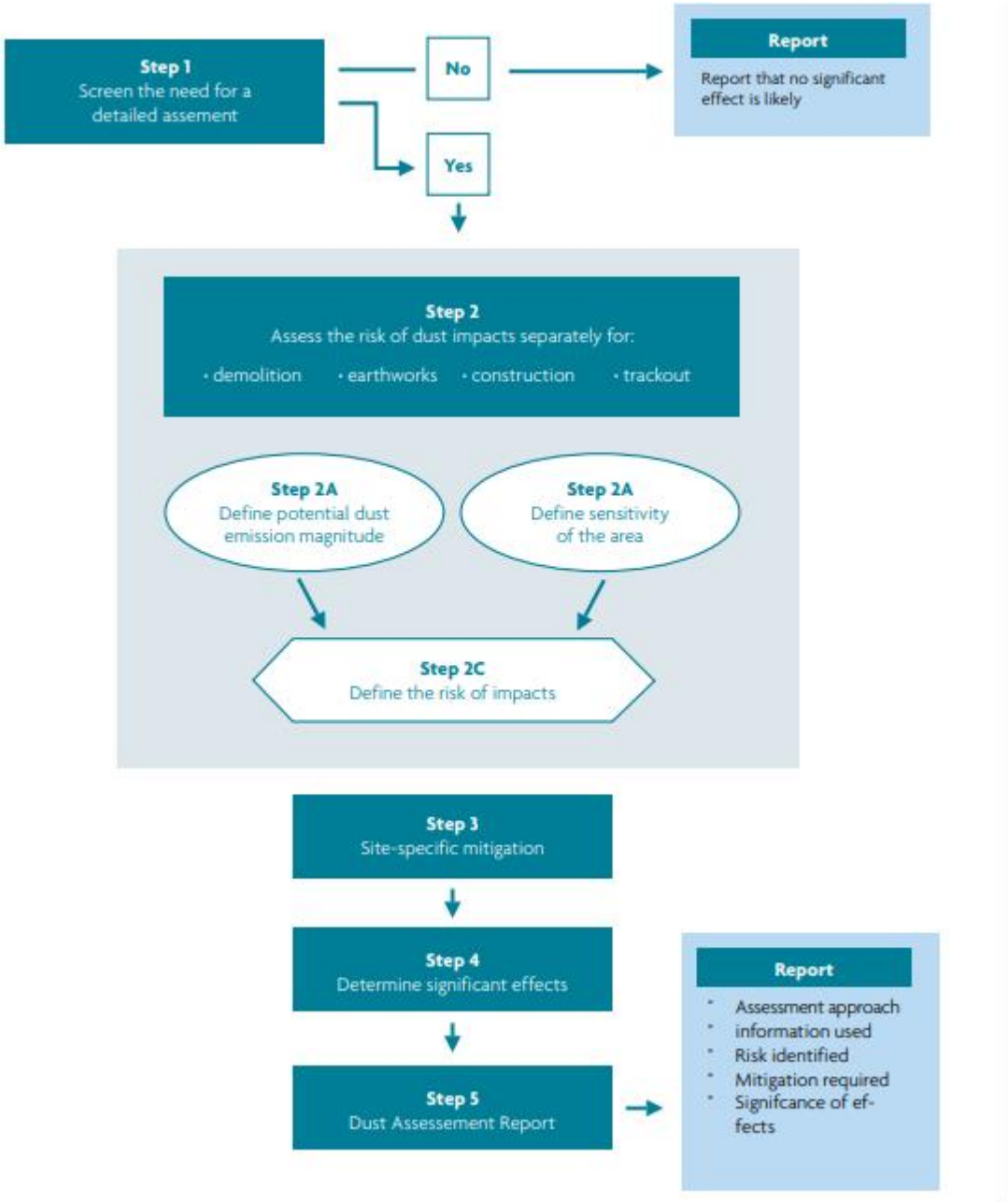
- Annoyance due to dust soiling;
- Harm to receptors; and
- The risk of health effects due to a significant increase in $PM_{10}$ exposure.

9.3.9 The receptors can be human or ecological and are selected based on their sensitivity to dust soiling and $PM_{10}$ exposure. Sensitive receptors are defined as those properties/schools/hospitals that are likely to experience a change in pollutant concentrations and/or dust nuisance due to the construction of the Site

9.3.10 The methodology takes into account the scale at which the above effects are likely to be generated (classed as small, medium or large), the levels of background $PM_{10}$ concentrations and the distance to the closest receptor, in order to determine the sensitivity of the area. This is then taken into consideration when deriving the overall risk for the site. Suitable mitigation measures are also proposed to reduce the risk of the potential impacts on local air quality as a result of the construction works.

9.3.11 There are five steps in the assessment process described in the IAQM guidance, this is summarised in Figure 9.2 with further description provided in Appendix 9.1.

**Figure 9.2: IAQM Dust Assessment Methodology**



**Construction Traffic Assessment**

9.3.12 Construction air quality impacts from the Site may arise as a result of construction traffic along the local road network associated with the building of the Site. Construction traffic was screened against the EPUK/IAQM guidance Stage 2 criteria set out in Table 9.3.

Methodology of Operational Phase Assessment

**Operational Traffic Assessment**

9.3.13 The IAQM and Environment Protection UK (EPUK) guidance[22] includes two stages for assessing the need for an air quality assessment. Stage 1 includes the criteria shown in Table 9.2 which relate to the size and use of the site, provision of car parking and the inclusion of energy plant or other combustion processes. Stage 2 includes more specific criteria in relation to the anticipated traffic flows generated by the Site and nature of the local area (Table 9.3).

9.3.14 If these thresholds are not triggered, then a detailed air quality assessment can be scoped out. Should screening of the traffic data indicate that any of the criteria are met, then potential impacts at sensitive receptor locations can be assessed by calculating the predicted change in pollutant concentrations ($NO_2$, $PM_{10}$ and $PM_{2.5}$) as a result of the Site.

9.3.15 Should the thresholds in Table 9.3 be triggered and a detailed air quality assessment undertaken, then the assessment of impacts and significance of effects at sensitive receptors can be determined following the EPUK/IAQM guidance. This is best practice for undertaking air quality assessments.

**Table 9.2: EPUK/IAQM guidance Stage 1 criteria**

| If any of the following apply | Coupled with any of the following |
|---|---|
| ≥10 residential units or ≥0.5ha site area<br>≥1,000m$^2$ for other uses or ≥1ha site area | >10 car parking spaces<br>centralised energy facility or other combustion process |

**Table 9.3: EPUK/IAQM guidance Stage 2 criteria**

| Change | In or adjacent to AQMA | Elsewhere |
|---|---|---|
| Change in Light Duty Vehicle (LDV) flows | ≥100 Annual Average Daily Traffic (AADT) | ≥500 AADT |
| Change in Heavy Duty Vehicle (HDV) flows | ≥25 AADT | ≥100 AADT |
| Change in road alignment | ≥5m | n/a |

9.3.16 Operational air quality impacts from the Site could arise because of traffic changes on the local road network. Operational traffic data were also provided by Arup transport

[22] Moorcroft and Barrowcliffe. et al. (2017) Land-use Planning & Development Control: Planning for Air Quality. v1.2. Institute of Air Quality Management, London.

consultant for roads surrounding the Site and taking into account the likely workforce and operational needs.

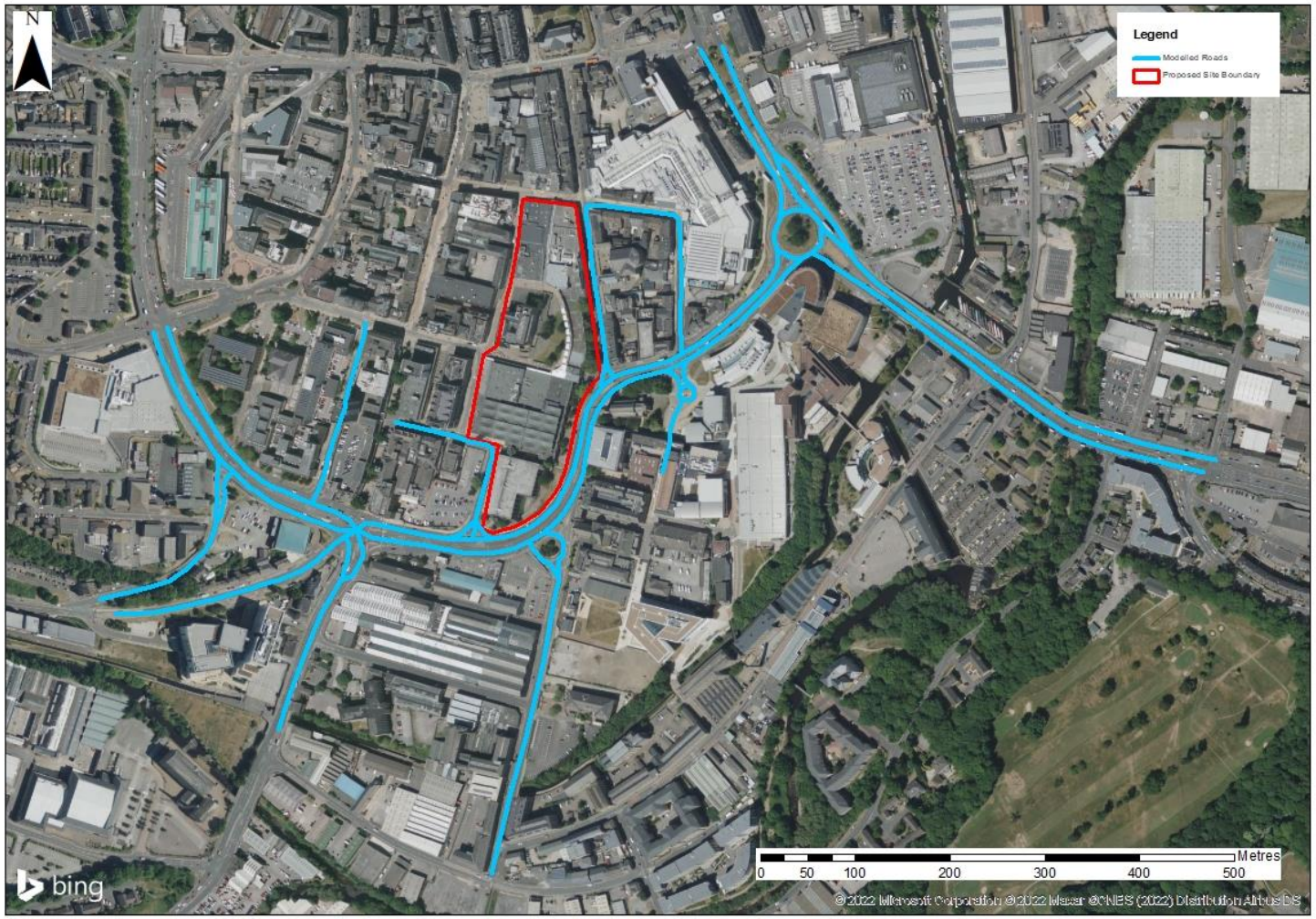
9.3.17 The operational traffic data were screened using the EPUK/IAQM land-use guidance document[22] and the criteria outlined above in Table 9.3.

9.3.18 The traffic data shows increases of greater than 100 LDV AADT on the A62 as a result of the Site. Due to exceedance of the EPUK/IAQM screening criteria a detailed assessment of operational traffic has been carried out. Additional roads where the screening criteria were not exceeded were included in the assessment to allow an assessment of onsite receptors, to facilitate model verification and to provide a wider assessment of local emissions to air.

9.3.19 The modelled road network is shown in Figure 9.3 and details of the modelled roads and the traffic data used are provided in Appendix 9.2.

9.3.20 Committed development traffic is included in the future year traffic data and so this air quality assessment is inherently cumulative, considering the effects of other developments alongside those of the Site.

**Figure 9.3: Modelled Road Network**



**Car Park Emissions**

9.3.21 A multi-storey car park will be constructed at the Site, underneath the Venue. It will have a total of 350 car parking spaces (at the time of writing). Two street level ventilation systems are proposed to extract exhaust fumes from the underground car park. One ventilator will be located on Alfred Street on the eastern boundary of the site, and the other on the A62 on the southern boundary of the site (Figure 9.4). As these locations will be in close proximity to both sensitive receptors and pedestrians using the pavement next to these ventilation outlets, an air quality assessment has been carried out to assess the impacts these outlets will have on air quality.

9.3.22 Information on car park movements were provided by Arup transport consultants. Emissions were calculated in accordance with the Cambridge Environmental Research Consultants (CERC) note on modelling car parks[23]. Emission factors for vehicles were taken from Defra's EFT[26], while cold start emissions were taken from the NAEI database[24]. The percentage of primary $NO_2$ emissions was also taken from the NAEI. A speed of 5kph was assumed in all car parks.

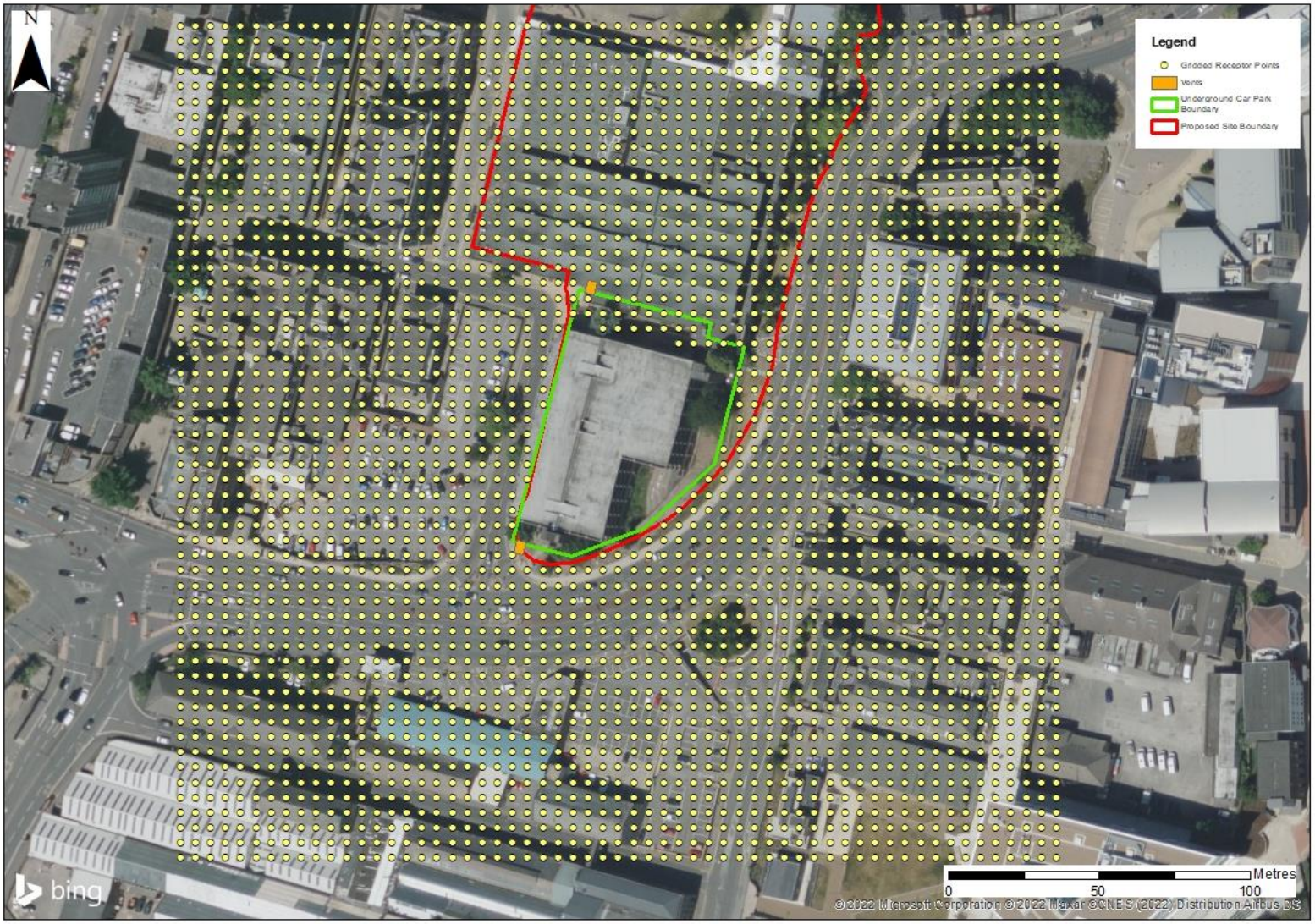
9.3.23 A conservative assessment of car park emissions has been carried out to assume for a worst-case scenario. The modelled emissions from the car park consider all cold starts to be from diesel vehicles and does not account for electric vehicle provisioning or usage. It has also been assumed that the car park emissions will be split equally between the two vents at the standard day-to-day flow rate of 5.81 $m^3/s$. The ventilators will operate at higher flow rates under emergency conditions.

9.3.24 A high-resolution grid covering a 200 x 200m area with points at 5m intervals and a height of 1.5m have been modelled to determine the impacts of emissions from the car park vents on pedestrians and street users along Alfred Street or the A62. The location of these receptors, the car park and street level vents can be seen in Figure 9.4.

[23] CERC. Modelling car parks, 2004. (Online) Available at: http://www.cerc.co.uk/user-area/assets/data/helpdesknotes/CERC_note_54_Modelling_car_parks.pdf

[24] NAEI (2019) (Online) Available at: http://naei.beis.gov.uk/data/

**Figure 9.4: Gridded receptors modelled for car park ventilator impacts**



**On-site Emissions Assessment**

9.3.25 There are five life-saving (backup) generators proposed on-site. Two on the lower ground floor for the food hall and library, and three on the roof for the venue, museum and gallery. The generators on the lower ground flood will emit into the service tunnels and any emissions expelled through the car park ventilators at street level.

9.3.26 The five life-saving generators will be tested for a maximum of 30 minutes each month and to 3 hours annually. Due to the short term and emergency use only use these generators are a low risk in terms of exceeding the EPUK/LAQM criteria of 18 exceedances of 200 $\mu g/m^3$ per year due to the short nature of testing and their positions on Site. Therefore, an assessment on the impact of the generators on sensitive receptors has been screened out of further assessment.

**Damage Costs**

9.3.27 The West Yorkshire Low Emission Strategy[13] requires major development proposals to calculate damage costs to determine the monetary value of predicted emission from a development over a five-year period. The calculated damage cost indicates the scale of mitigation required to offset the impacts on air quality. Following consultation with the Kirklees Council EHO, damage cost calculations will be provided for the operation of the Site.

9.3.28 Damage costs are calculated in line with the latest Defra guidance[25]. The overall approach to calculate damage comprises:

- Identifying and quantifying the change in emissions;
- Identifying the appropriate damage costs to use and convert to the relevant base year;
- Uplift the damage costs by 2% year on year;
- Calculate costs for each year and discount across the assessed period to calculate total present value;

9.3.29 As the main source of air pollution in and around the site is due to road traffic costs for 'Road Transport' have been used to estimate the damage costs of the increase in road traffic as a result of the future operation of the Site for NOx, $PM_{10}$, and $PM_{2.5}$.

[25] Department for Environment Food and Rural Affairs (2021) Air quality appraisal: damage cost guidance

Assessment Scenarios

9.3.30 The assessment scenarios are summarised as follows:

- Baseline scenario for 2019 (using 2019 traffic volumes);
- Do Minimum (DM) scenario, which is the future opening year (2027) without the operation of the Site; and
- Do Something (DS) scenario, which is the same as the DM scenario but includes operational traffic generated by operation of the Site.

9.3.31 Emissions rates have been calculated using the Defra Emissions Factor Toolkit (EFT v11)[26]. Impacts on air quality during operation have been modelled using 2027 vehicle emission factors.

Sensitive Receptors

9.3.32 Dispersion modelling has been undertaken to calculate predicted concentrations at sensitive receptor locations. Sensitive receptors are defined as those residential properties/schools/hospitals that are likely to experience a change in pollutant concentrations and/or dust nuisance due to the construction or operation of the Site.

9.3.33 A desk-top study was undertaken to identify the existing sensitive receptors in the vicinity of the Site to assess the impact of changes to road traffic. Representative sensitive human receptors have been selected at locations along the roads predicted to experience the greatest change in pollutant concentrations due to the operation of the Site.

9.3.34 Receptors have been modelled at a height of 1.5m.

9.3.35 The closest sensitive receptor to the site is receptor U2 (University of Huddersfield Queensgate Campus), located directly opposite the Site boundary on the A62 Queensgate.

9.3.36 Details of the receptors used are presented in Table 9.4, with the receptor locations shown in Figure 9.5, which shoes the proposed receptors, as well as monitoring locations used in the model verification.

**Table 9.4: Modelled Sensitive Receptors**

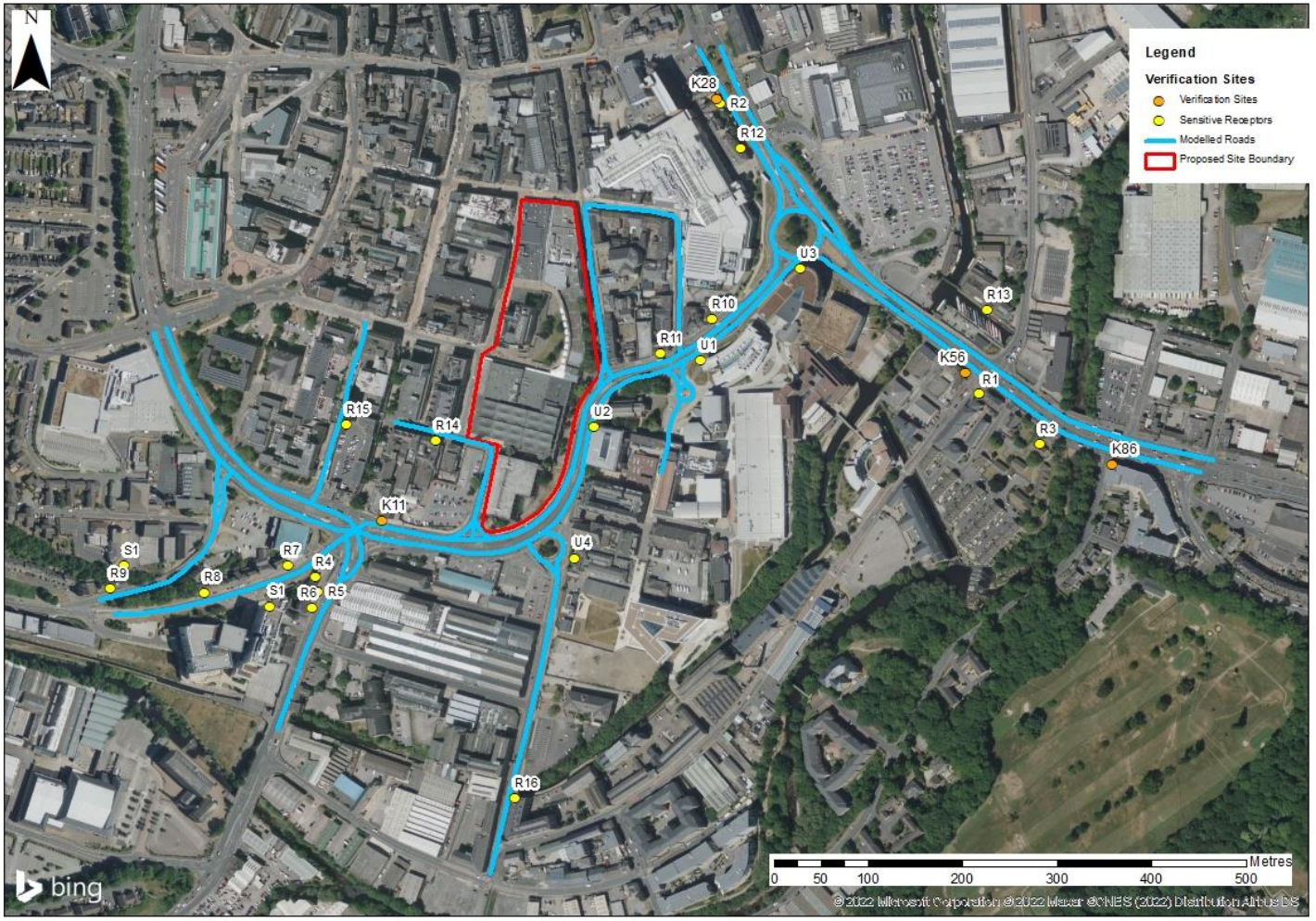
| ID | Type | Name | X | Y | Z |
|---|---|---|---|---|---|
| C1 | College | Kirklees College | 414271 | 416173 | 1.5 |
| R1 | Residential | Residential Property on Firth Street | 415023 | 416398 | 1.5 |
| R2 | Residential | Residential Property on Southgate | 414749 | 416706 | 1.5 |
| U1 | University | University of Huddersfield Queensgate College | 414728 | 416433 | 1.5 |

[26] Defra (2021) Emissions Factors Toolkit (EFT) v11; https://laqm.defra.gov.uk/air-quality/air-quality-assessment/emissions-factors-toolkit/ [Accessed August 2022]

| | | | | | |
|---|---|---|---|---|---|
| U2 | University | University of Huddersfield Queensgate Campus- Science Building | 414616 | 416363 | 1.5 |
| U3 | University | University of Huddersfield Queensgate Campus- Oastler Building | 414833 | 416530 | 1.5 |
| R3 | Residential | Residential Property on Colne Street | 415087 | 416345 | 1.5 |
| U4 | University | University of Huddersfiel Queensgate Camputs - Queen Street Building | 414595 | 416224 | 1.5 |
| S1 | School | Guru Nanak Punjabi School | 414117 | 416216 | 1.5 |
| R4 | Residential | Residential Property on Manchester Road | 414320 | 416204 | 1.5 |
| R5 | Residential | Residential Property on Chapel Hill | 414323 | 416188 | 1.5 |
| R6 | Residential | Residential Property on Chapel Hill | 414317 | 416171 | 1.5 |
| R7 | Residential | Residential Property on Manchester Road | 414291 | 416216 | 1.5 |
| R8 | Residential | Residential Property on Manchester Road | 414202 | 416188 | 1.5 |
| R9 | Residential | Residential Property on Manchester Road | 414103 | 416192 | 1.5 |
| R10 | Residential | Residential Property on Queensgate | 414740 | 416477 | 1.5 |
| R11 | Residential | Residential Property on Queensgate | 414686 | 416440 | 1.5 |
| R12 | Residential | Residential Property on Southgate | 414770 | 416658 | 1.5 |
| R13 | Residential | Residential Property on Southgate | 415032 | 416487 | 1.5 |
| R14 | Residential | Residential Property on Princess Street | 414448 | 416349 | 1.5 |
| R15 | Residential | Residential Property on Albion Street | 414353 | 416365 | 1.5 |
| R16 | Residential | Residential Property on Queen Street South | 414532 | 415970 | 1.5 |
| K11 | Verification Site | Chapel Hill Huddersfield | 414389 | 416262 | 2 |
| K28 | Verification Site | Ring Road Huddersfield | 414745 | 416710 | 2 |
| K56 | Verification Site | Wakefield Road Huddersfield | 415009 | 416420 | 2 |

| | | | | | |
|---|---|---|---|---|---|
| K86 | Verification Site | Kings Mill Lane | 415164 | 416323 | 2 |

**Figure 9.5: Sensitive receptor locations**



Dispersion Model Setup

9.3.37 This section details the inputs and set-up for the operational traffic dispersion modelling. The ADMS Roads dispersion model (version 5.0.0.1) has been used for the assessment of road traffic.

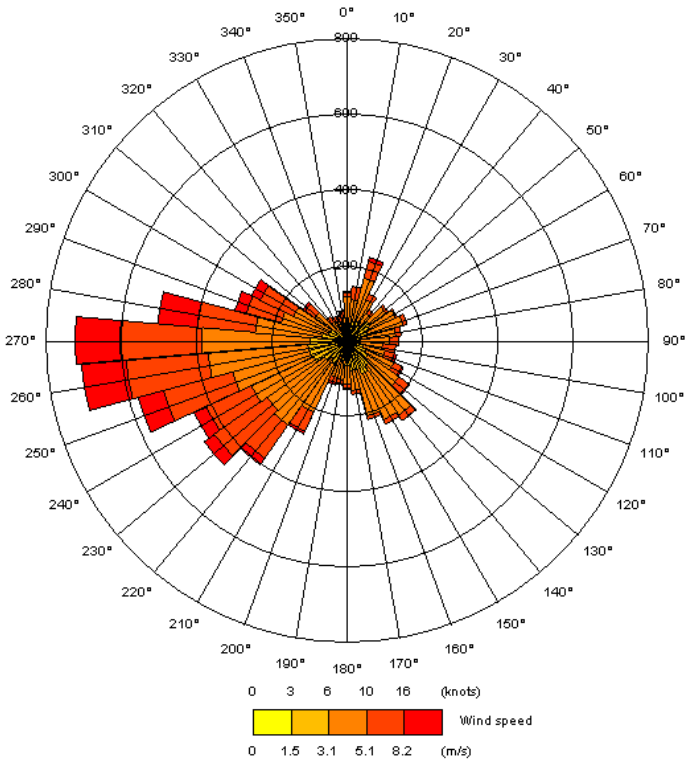
Meteorological Data

9.3.38 The meteorological data used in this assessment were measured at Leeds Bradford Airport meteorological station. The data was collected over the period 1st January 2019 to 31st December 2019 (inclusive). Leeds Bradford is located approximately 25km northeast of the Site. This site was chosen as it is the closest meteorological site to the Site which also provides data in an ADMS model ready format.

9.3.39 Most dispersion models of roads do not use meteorological data if modelling calm wind conditions, as dispersion of air pollutants is more difficult to calculate in these circumstances. ADMS-Roads treats calm wind conditions by setting the minimum wind speed to 0.75m/s. Defra's LAQM.TG16 guidance[12] recommends that the meteorological data file is tested in a dispersion model and the relevant output log file checked to confirm the number of missing hours and calm hours that cannot be used by the dispersion model. This is important when considering predictions of high percentiles and the number of exceedances. The guidance recommends that meteorological data should only be used if the percentage of

9.3.40 Hourly sequential observation data was used. The dataset includes usable hours is greater than 75% and preferably 90%. Hourly sequential observation data was used. The dataset includes 8,591 lines of usable hourly data, out of a total of 8,760 lines of data. This corresponds to over 98% of the year and hence is above the 90% threshold, so meets the requirements of the Defra guidance and is adequate for the dispersion modelling. Figure 9.6 shows the wind rose for Leeds Bradford Airport 2019. It can be seen that the predominant wind direction is Westerly.

**Figure 9.6: Leeds Bradford Airport wind rose for 2019**




Other Input Parameters

9.3.41 The extent of mechanical turbulence (and hence, mixing) in the atmosphere is affected by the surface/ground over which the air is passing. Typical surface roughness values range from 0.0001m (for water or sandy deserts) to 1.5 (for cities, forests and industrial areas). In this assessment, the general land use in the local study area can be described as "Large urban areas" with a corresponding surface roughness of 1.5m. The surface roughness value used for the meteorological station site was "Parkland, open suburbia" with a corresponding surface roughness of 0.5m. Which is considered representative of the site.

9.3.42 The minimum Monin-Obukhov length is a model parameter which describes the extent to which the urban heat island effect limits stable atmospheric conditions. A Monin-Obukhov length of 30m has been used in this dispersion modelling study. It is suggested in ADMS-Roads that this length is suitable for "Cities and large towns". The same Monin-Obukhov length was used for the meteorological station site. Which is considered representative of the site.

NOx to $NO_2$ Conversion

9.3.43 The dispersion model predicts NOx concentrations which comprise nitric oxide (NO) and nitrogen dioxide ($NO_2$). NOx is emitted from combustion processes, primarily as NO with a small percentage of $NO_2$. The emitted NO reacts with oxidants in the air (mainly ozone) to form $NO_2$. NO2 is associated with effects on human health. The air quality standards for the protection of human health are based on $NO_2$ rather than total NOx or NO.

9.3.44 LAQM.TG(22)[12] details an approach for calculating the roadside conversion of NOx to $NO_2$. This approach takes into account the difference between ambient NOx concentrations with and without the Site, the concentration of ozone and the different proportions of

primary $NO_2$ emissions in different years. This approach is available as a spreadsheet calculator, with the most up-to-date version being version 8.1, released in August 2020[27].

Model Verification

9.3.45 Model verification refers to the comparison of modelled and measured pollutant concentrations at the same locations to determine the performance of the model. Should the majority of model results for $NO_2$ be within ±25% of the measured values and there is no systematic over or under-prediction of concentrations, then the LAQM.TG(22)[12] guidance advises that no adjustment is necessary. If this is not the case, modelled concentrations are adjusted based on the observed relationship between modelled and measured $NO_2$ concentrations to provide a better agreement.

9.3.46 The outcome of the model verification is reported in Section 9.5.

[27] Defra NOx to NO2 calculator (version 8.1), 2020. Available at: https://laqm.defra.gov.uk/airquality/air-quality-assessment/nox-to-no2-calculator/ [Accessed August 2022].

**Assessment Criteria**

9.3.47 The 2017 EPUK/IAQM guidance note 'Land-Use Planning & Development Control'[18] provides an approach to determining the air quality impacts resulting from a proposed development and the overall significance of local air quality effects arising from a proposed development.

9.3.48 Impact descriptors are determined based on the magnitude of incremental change as a proportion of the relevant assessment level, in this instance the air quality standards. The change is then examined in relation to the predicted total pollutant concentrations in the assessment year and its relationship with the relevant air quality standard (Table 9.5).

**Table 9.5: Impact descriptors from EPUK/IAQM guidance**

| Predicted concentration relative to air quality standard | % Change in concentrations relative to air quality standard | | | |
|---|---|---|---|---|
| | **1%** | **2-5%** | **6-10%** | **> 10%** |
| < 75% | Negligible | Negligible | Slight | Moderate |
| 76-94% | Negligible | Slight | Moderate | Moderate |
| 95-102% | Slight | Moderate | Moderate | Substantial |
| 103-109% | Moderate | Moderate | Substantial | Substantial |
| > 110% | Moderate | Substantial | Substantial | Substantial |
| Changes of less than 0.5% are described as negligible. | | | | |

9.3.49 The impact descriptors at each of the assessed receptors can be used as a starting point to make a judgement on the overall significance of effect of the operation of the Site, however other influences are also accounted for, such as:

- The existing future air quality in the absence of the Site;
- The extent of current and future population exposure to the impacts; and
- The influence and validity of any assumptions adopted when undertaking the prediction of impacts.

9.3.50 In circumstances where the operation of the Site can be judged in isolation, the guidance suggests that a 'moderate' or 'substantial' impact is likely to give rise to a significant effect and a 'negligible' or 'slight' is not likely to result in a significance effect.

**Scoping and consultation responses**

9.3.51 Contact has been made with the Environmental Officer at Kirklees Council regarding the scope of works for the air quality assessment during a meeting held on 1st September 2022.

Subsequent correspondence via email gave agreement on the method proposed, receptors to be included in the model and verification points to be selected.

**Limitations and Assumptions**

Assumptions

9.3.52 The operational assessment is based on the traffic data available at the time of writing. It has been assumed by Arup transport consultants that the 2022 traffic flows provided are representative of 2019 traffic flows and can be used as a proxy baseline in this assessment.

Limitations

9.3.53 The assessment of baseline conditions has been undertaken for the latest representative calendar year of data available (2019). Due to the Covid-19 pandemic, 2020 would not be representative of the baseline conditions of the air quality around the Site.

## 9.4 Baseline Conditions

**Sources of Air Pollution**

Industrial Processes

9.4.1 Industrial air pollution sources are regulated through a system of operating permits or authorisations, requiring stringent emission limits to be met, and ensuring that any releases to the environment are minimised or rendered harmless. Regulated (or prescribed) industrial processes are classified as Part A or Part B processes and are regulated through the Pollution Prevention and Control (PPC) system[28,29]. The larger, more polluting processes are regulated by the EA and the smaller, less polluting ones by the local authorities. Local authorities focus on regulation for emissions to air, whereas the EA regulates emissions to air, water and land.

9.4.2 There are no Part A processes listed on the EA website[30] within 2km of the Site which have relevant releases to air. The contribution of all industrial processes to local air quality are assumed to be included in the background concentrations presented in Section 9.4.

Road Traffic

9.4.3 In recent decades, atmospheric emissions from transport on a national basis have grown to match or exceed other sources in respect of many pollutants, particularly in urban areas. The local air quality of the Site is mainly influenced by vehicle emissions associated with the A62 Queensgate which borders the Site to the south and east.

[28] Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control).

[29] The Environmental Permitting (England and Wales) (Amendment) Regulations 2013, SI 2013/390.

[30] Environment Agency. Environmental Permitting Regulations – Installations. Available at: https://environment.data.gov.uk/public-register/view/search-industrial-installations [Accessed August 2022]

**Local Air Quality**

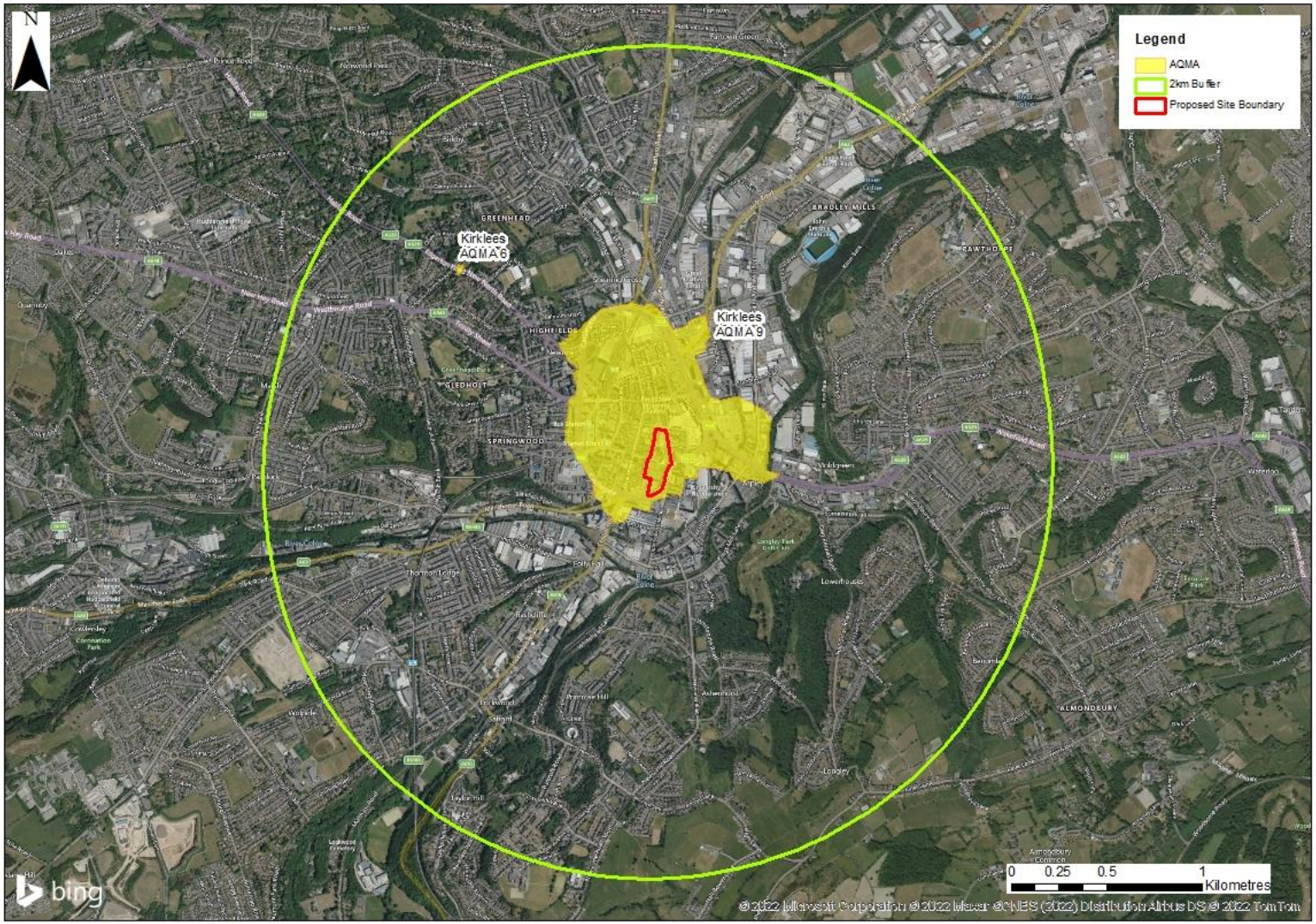
Air Quality Management Areas

9.4.4 The Environment Act 2021[1] requires local authorities to review and assess air quality with respect to the air quality standards for the pollutants specified in the National Air Quality Strategy. Local authorities are required to carry out an assessment and produce and Annual Status Report (ASR) of their air quality data every year. Where objectives are not predicted to be met, local authorities must declare the area as an Air Quality Management Area (AQMA).

9.4.5 A review of the Defra[31] AQMA website showed there are ten AQMAs in the Kirklees Council (KC) local authority area. The Site is situated within Kirklees AQMA 9, designated by KC in 2017 due to exceedances of the annual mean $NO_2$. The Site is additionally approximately 1.25km south-east of Kirklees AQMA 6, designated by KC in 2017 due to exceedances of the $NO_2$ annual mean. The extent of the AQMAs and the location of the Site is shown in Figure 9.7.

[31] Defra (2021) https://uk-air.defra.gov.uk/aqma/ [Accessed August 2022]

**Figure 9.7: Air Quality Management Areas**



Local Monitoring

9.4.6 The Site is located within Kirklees local authority. KC undertakes air quality monitoring using both automatic monitors and passive diffusion tubes.

Automatic Monitoring

9.4.7 KC do not operate any automatic monitors within 2km of the Site.

Diffusion Tube Monitoring

9.4.8 KC operate 23 diffusion tubes within 2km of the Site. Details of these monitoring sites are given below in Table 9.6 and the results from 2016 to 2020 are given in Table 9.7. These results are taken from the 2021 air quality annual status report ASR[32] produced by KC. The locations of these monitoring sites are shown in Figure 9.8. Exceedance of the $NO_2$ annual mean objective were recorded at 13 of the 23 monitoring sites between 2016 and 2020. All sites that recorded exceedances are roadside sites, with the exception of site K7, which recorded an exceedance in 2019 and is an Urban Centre site.

9.4.9 The closest background monitoring location to the Site (K14) is located approximately 825m west of the site boundary. The K14 site is located at Oastler Avenue and measured an annual mean $NO_2$ concentration of 17.7 $\mu g/m^3$ in 2019. The closest diffusion tube to the Site is located approximately 110m west of the site boundary at Chapel Hill (K11). This site is a roadside site and recorded and $NO_2$ concentration of 35.0 $\mu g/m^3$ in 2019, which is considered the most recent representative year of data.

[32] Kirklees Council (2021) Air Quality Annual Status Report

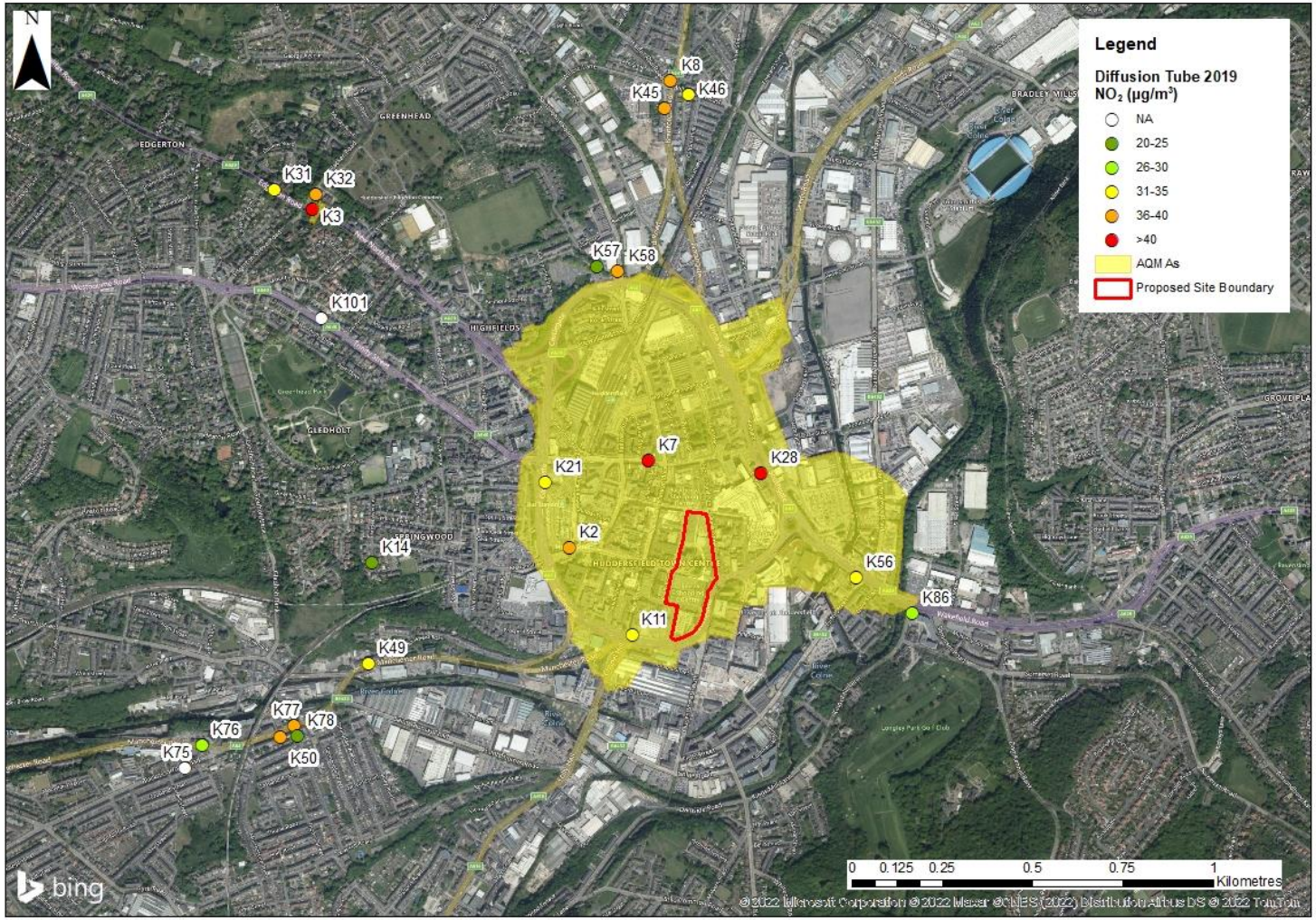
**Table 9.6: Kirklees Metropolitan Council operated diffusion tubes within 2km of the Site**

| Monitoring Site ID | Site name | Site Type | Grid reference | |
|---|---|---|---|---|
| | | | X | Y |
| K2 | Bus Station - Huddersfield | Other | 414214 | 416504 |
| K3 | Edgerton Road | Roadside | 413504 | 417439 |
| K7 | Westgate Huddersfield | Urban Centre | 414434 | 416744 |
| K8 | Bradford Road Fartown 1 | Roadside | 414496 | 417795 |
| K11 | Chapel Hill Huddersfield | Roadside | 414389 | 416262 |
| K14 | Oastler Avenue | Urban Background | 413669 | 416463 |
| K21 | Castlegate Huddersfield | Roadside | 414149 | 416686 |
| K28 | Ring Road Huddersfield | Roadside | 414745 | 416710 |
| K31 | Blacker Road 1 | Roadside | 413400 | 417495 |
| K32 | Blacker Road 2 | Roadside | 413513 | 417481 |
| K45 | Bradford Road Fartown 2 | Roadside | 414480 | 417720 |
| K46 | Willow Lane East Fartown | Roadside | 414546 | 417759 |
| K49 | Manchester Road Thornton Lodge 2 | Roadside | 413659 | 416182 |
| K50 | Manchester Road Thornton Lodge 1 | Roadside | 413414 | 415981 |
| K56 | Wakefield Road Huddersfield | Roadside | 415009 | 416420 |
| K57 | Cambridge Road 1 | Roadside | 414291 | 417281 |
| K58 | Cambridge Road 2 | Roadside | 414350 | 417270 |
| K75 | Blackmoorfoot Road - Thornton Lodge | Roadside | 413153 | 415894 |
| K76 | Manchester Road - Thornton Lodge 3 | Roadside | 413198 | 415957 |
| K77 | Manchester Road - Thornton Lodge 4 | Roadside | 413455 | 416013 |
| K78 | Thornton Lodge Road - Thornton Lodge | Roadside | 413464 | 415983 |
| K86 | Kings Mill Lane | Roadside | 415164 | 416323 |
| K101 | Trinity Street, Huddersfield | Roadside | 413531 | 417137 |

**Table 9.7: Kirklees Metropolitan Council diffusion tube results**

| Monitoring Site ID | $NO_2$ annual mean concentration (µg/m³) | | | | |
|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| K2 | **41.6** | **42.3** | 39.3 | 38.5 | 34.2 |
| K3 | **41.4** | **61.7** | **51.9** | **42.7** | 36.3 |
| K7 | 38.8 | 35.4 | 38.6 | **40.8** | 28.9 |
| K8 | 33.3 | 35.5 | 36.1 | 36.0 | 30.5 |
| K11 | 37.8 | 36.5 | 39.6 | 35.0 | 31.8 |
| K14 | 21.0 | 21.1 | 16.2 | 17.7 | 13.9 |
| K21 | **45.0** | **40.1** | **42.5** | 34.7 | 33.4 |
| K28 | **53.1** | **55.9** | **43.2** | **46.4** | 37.6 |
| K31 | **41.8** | 32.1 | 33.8 | 30.5 | 17.1 |
| K32 | **45.4** | **44.2** | **45.9** | 35.5 | 31.7 |
| K45 | 36.7 | 35.7 | 36.3 | 36.4 | 26.3 |
| K46 | 39.5 | 37.1 | 37.0 | 34.8 | 29.2 |
| K49 | 37.2 | 38.0 | 38.1 | 33.1 | 33.1 |
| K50 | **42.1** | 39.2 | **45.3** | 38.2 | 38.0 |
| K56 | **40.0** | 39.6 | 39.5 | 34.9 | 30.3 |
| K57 | **46.9** | 27.2 | 29.7 | 22.2 | 18.5 |
| K58 | 30.4 | **41.7** | **44.9** | 39.7 | 34.9 |
| K75 | - | 32.3 | 37.8 | - | 25.5 |
| K76 | - | **46.6** | 35.0 | 28.5 | 25.4 |
| K77 | - | 24.2 | **46.9** | 38.9 | 33.2 |
| K78 | - | - | 28.0 | 24.1 | 21.2 |
| K86 | - | - | 32.6 | 29.1 | 22.8 |
| K101 | - | - | - | - | 26.3 |
| Air Quality Objective | 40 | | | | |

**Figure 9.8: Locations of monitoring sites within 1km of the Site boundary**



9.4.10 There is a general downward trend in $NO_2$ concentrations observed at all the monitoring sites with no exceedances of the air quality objective in 2020. The reduction in 2020 will however be influenced by the COVID-19 national lockdown so should be considered outliers. For this reason, 2019 is considered the most recent year of representative data.

Background concentrations

9.4.11 Background concentrations refer to the existing levels of pollution in the atmosphere, produced by a variety of stationary and non-stationary sources, such as roads and industrial processes. The Defra website[31] includes estimated background pollutant concentrations for $NO_x$, $NO_2$ and $PM_{10}$ for each 1 km by 1 km OS grid square.

9.4.12 The background concentrations for the baseline year of 2019 and the future opening year of 2027 have been obtained for the grid square in which the Site is located (414500, 416500) are presented in Table 9.8. It can be observed that the annual mean background concentrations for 2019 and 2027 are below the national annual mean air quality objectives for $NO_2$, $PM_{10}$, and $PM_{2.5}$.

**Table 9.8: Defra's estimated 2019 background concentrations of NOx, $NO_2$, $PM_{10}$ and $PM_{2.5}$**

| Year | OS Grid Square | | Annual mean concentration (µg/m³) | | | |
|---|---|---|---|---|---|---|
| | X | Y | $NO_x$ | $NO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| 2019 | 414500 | 416500 | 31.8 | 21.6 | 12.3 | 8.6 |
| 2027 | | | 24.2 | 17.0 | 11.5 | 7.7 |
| Air Quality Annual Mean Objective (µg/m³) | | | - | 40 | 40 | 20 |

9.4.13 The projections in the 2019 background maps are based on assumptions which were current before the Covid-19 outbreak in the UK. In consequence, these maps do not reflect short- or longer-term impacts on emissions in 2020 and beyond resulting from behavioural change during the national or local lockdowns.

9.4.14 A comparison against monitoring background concentrations has also been undertaken for one urban background site within the study area (K14). The comparison has been undertaken for the latest year of representative available monitoring data (2020). Table 9.9 presents the comparison of the monitored $NO_2$ in 2020 against Defra background for the same year. No nearby background monitoring sites recorded $PM_{10}$ and $PM_{2.5}$ concentrations, so these have been excluded from the comparison. It can be observed that the monitored 2020 background concentrations show a good correlation, within 1% of the Defra background concentrations and are therefore acceptable for further use in the assessment.

**Table 9.9: Comparison between Defra and monitored urban background site K14 concentrations in 2020**

| Pollutant | Estimated Defra background concentration (µg/m³) | Measured $NO_2$ concentration (µg/m³) | Difference (µg/m³) | Difference |
|---|---|---|---|---|
| $NO_2$ | 13.8 | 13.9 | 0.1 | 1% |

Summary

9.4.15 The highest recorded concentration in 2019 was 46.4 µg/m$^3$ at monitor K28 on the Huddersfield Ring Road. This monitoring site is within Kirklees AQMA 9 and is at a roadside location to a heavily trafficked road in Huddersfield city centre. This site recorded an $NO_2$ concentration that exceeds the annual mean objective every year from 2016 to 2019. There were further exceedances at monitoring locations K3 and K7 which are also within AQMA 6 and AQMA 9, respectively. Any additional traffic generation therefore has the potential to increase air pollution in these areas.

9.4.16 The monitoring location closest to the site is monitor K11, which recorded an $NO_2$ concentration of 35.0 µg/m$^3$ in 2019. This monitoring location has shown a general downward trend in $NO_2$ concentrations since 2016 and has not exceeded the annual mean air quality objective between 2016 and 2020. No local monitoring site nearby to the Site recorded $PM_{10}$ and $PM_{2.5}$ concentrations, however these are likely to be similar to the Defra background concentrations recorded in 2019 (12.3 µg/m$^3$ and 8.6 µg/m$^3$ for $PM_{10}$ and $PM_{2.5}$, respectively), with elevated concentrations near to roads as seen from the $NO_2$ monitoring results.

9.4.17 Defra predicted background concentrations are below the air quality standards at and in the vicinity of the Site.

## 9.5 Assessment of Likely Significant Effects

**Construction Dust Assessment**

9.5.1 This section provides the results of the assessment of construction related activities on air quality. The Site will require demolition, construction and earthworks, with associated trackout.

Sensitive Receptors

9.5.2 Sensitive receptors are defined as those residential properties/schools/hospitals that are likely to experience a change in pollutant concentrations and /or dust nuisance due to the construction and operation of a proposed development.

9.5.3 There are between 10 to 100 sensitive receptors within 20m of the Site boundary. This includes nearby restaurants and shops and the University of Huddersfield Queensgate Campus and Kirklees College, which are considered "high sensitivity receptors" in accordance with IAQM guidance[17].

9.5.4 There are no sensitive ecological sites sensitive within 50m of the site; therefore, this element of the assessment has not been considered further. Figure 9.9 displays the construction dust buffers around the site.

Dust Emission Magnitude

9.5.5 Following the methodology outlined in Section 9.3, each dust generating activity has been assigned a dust emission magnitude as shown in Table 9.10.

**Table 9.10: Dust emission magnitude for construction activities**

| Activity | Dust emission magnitude | Reasoning |
|---|---|---|
| Demolition | Large | Demolition of the existing buildings assumed to be greater than 50,000m$^3$;<br>Potentially dusty material of existing building to be demolished (e.g, concrete, brick/block). |
| Earthworks | Large | Total site area >10,000m$^2$;<br>Assumed >10 heavy earth moving vehicles active at any one time |
| Construction | Large | Assumed total building volume greater than 100,000m$^3$;<br>All activities assumed to be undertaken with dust suppression through direct water or water mist systems.;<br>No on-site concrete batching; and<br>Dusty nature of construction material (e.g. concrete, brick/block). |
| Trackout | Small | Surface material with low potential for dust release;<br>Unpaved road length <50m |

Sensitivity of Area

9.5.6 There are 10-100 high sensitivity receptors (educational institutions) within 20m of the Site boundary. As such, the areas sensitivity to dust soiling has been classified as **high** in accordance with the IAQM guidance[17].

9.5.7 The Site is located in OS grid squares (414500, 416500) where the average Defra $PM_{10}$ background concentration is 12.3 µg/m$^3$, which falls below the 24 µg/m$^3$ threshold outlined in the IAQM guidance[17]. The sensitivity of the area to human health has been assigned as **low** as there are 10-00 receptors within 20m of the Site boundary.

Risk of Impacts

9.5.8 Due to the lack of detailed construction information at the time of writing, a conservative approach has been undertaken with high level assumptions presented in Table 9.11. Taking into consideration the dust emission magnitude and the sensitivity of the area, the risk of dust impacts due to the site has been determined, as outlined in Table 9.11. This shows that

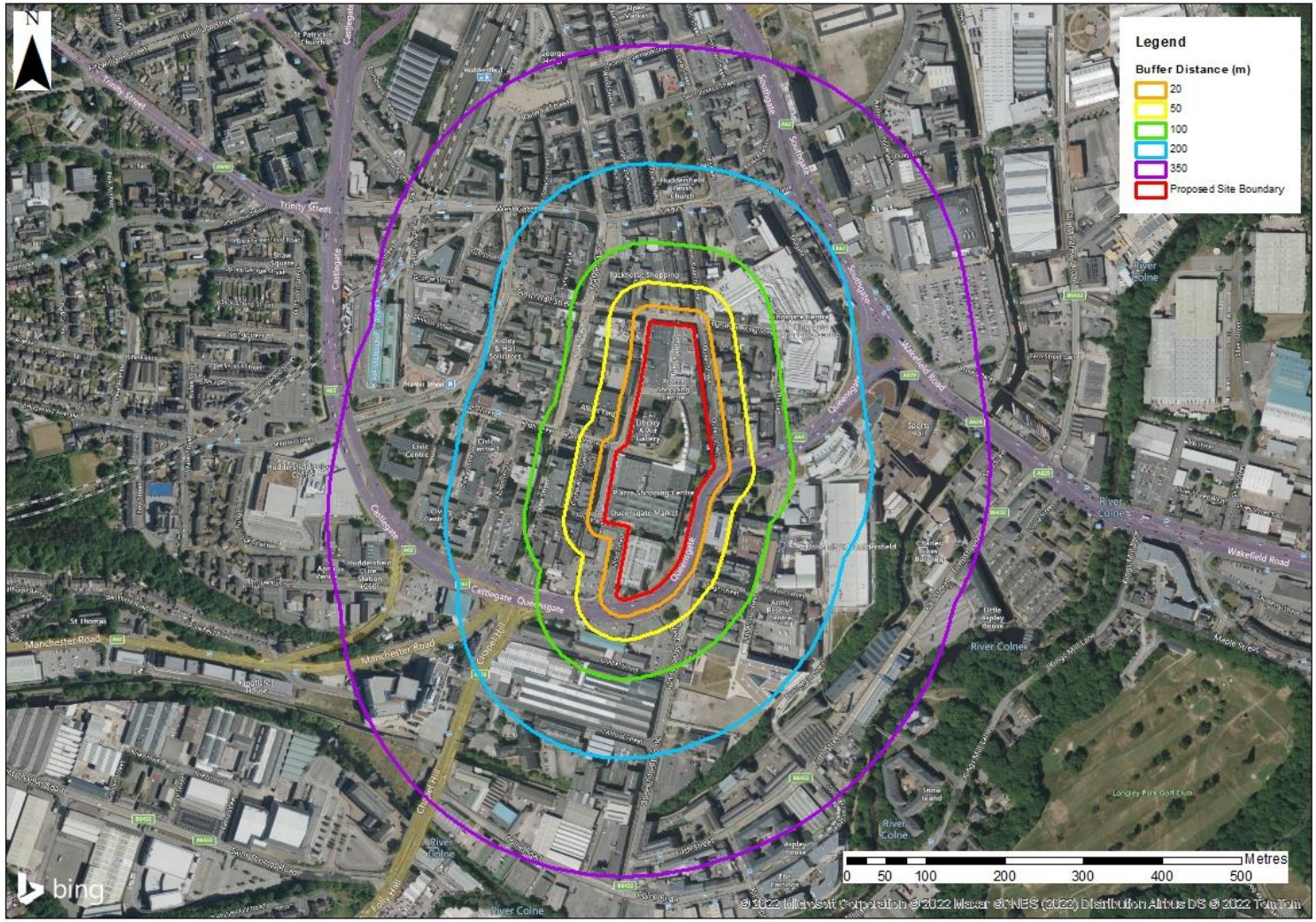
the site has been classified as **high risk** to dust soiling and **low risk** to human health at worst prior to the implementation of mitigation measures.

9.5.9 The dust emitted by the activities discussed can be greatly reduced or eliminated by applying the site-specific mitigation measures for **high risk** sites according to the IAQM guidance (Section 9.6).

**Table 9.11: Summary dust risk table prior to mitigation**

| Activity | Dust soiling | Human health |
|---|---|---|
| Demolition | High risk | Low risk |
| Earthworks | High risk | Low risk |
| Construction | High risk | Low risk |
| Trackout | Low risk | Low risk |

**Figure 9.9: Construction dust buffers**



**Construction Traffic Assessment**

9.5.10 The construction traffic volumes associated with the proposed development were not available at the time of assessment. They will be determined during the detailed design phase. It is recommended that a condition is added to assess the changes in traffic associated with the construction phase against the EPUK/IAQM screening criteria (Table 9.2 and Table 9.3) to determine whether a detailed assessment using dispersion modelling needs to be carried out in future. The work should be carried out and provided to the council prior to any commencement of works on site. However, whilst construction traffic vehicle movements are not known at this stage, the construction traffic management plan (CTPM) will include the commitment to limit HGV vehicle movements to less than 25 movements per day. This will ensure the change in traffic flow remains below the EPUK/IAQM screening criteria and would be considered insignificant. Following detailed design, should that volume increase above 25 movements a detailed assessment will be carried out to determine possible impacts.

**Operational Traffic Assessment**

9.5.11 This section provides the results of the assessment of effects from the operation of the Site on air quality.

Model Verification

9.5.12 Model verification used KC diffusion tube $NO_2$ monitoring data from the monitors on the modelled road network: K11, K56 and K86. The monitoring sites are all defined as Roadside. Monitoring site K28 was reviewed and the model was found to underpredict $NO_x$ at this location as the traffic network does not extend far enough north of the neighbouring junction to be considered representative of actual traffic flows. Therefore, K28 has been removed from the verification process.

9.5.13 Monitoring results from 2019 for these locations were obtained from the 2019 ASR[32] and were compared with modelled concentrations at the same locations. The model verification was undertaken following the methodology described in LAQM.TG(22)[12]. The model underpredicted concentrations at the verification sites.

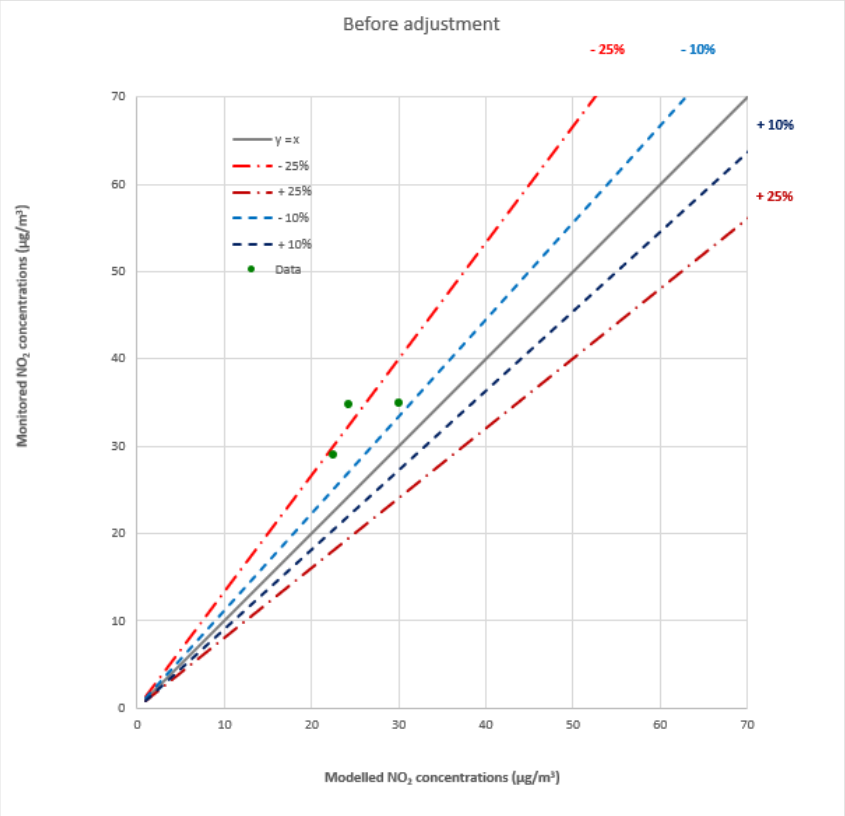
9.5.14 A comparison of monitored and modelled annual mean $NO_2$ concentrations for 2019 before and after adjustment are shown in Table 9.12. The percentage difference between the monitored and modelled results before adjustment is between -14.0% and -30.5%. However, as the model verification shows underprediction at all sites, an adjustment factor of 2.216 has been applied to all modelled $NO_x$ concentrations (which increases the resulting $NO_2$ concentrations). Following model adjustment, the percentage difference between monitored and modelled results is between -22.5% and 13.2%.

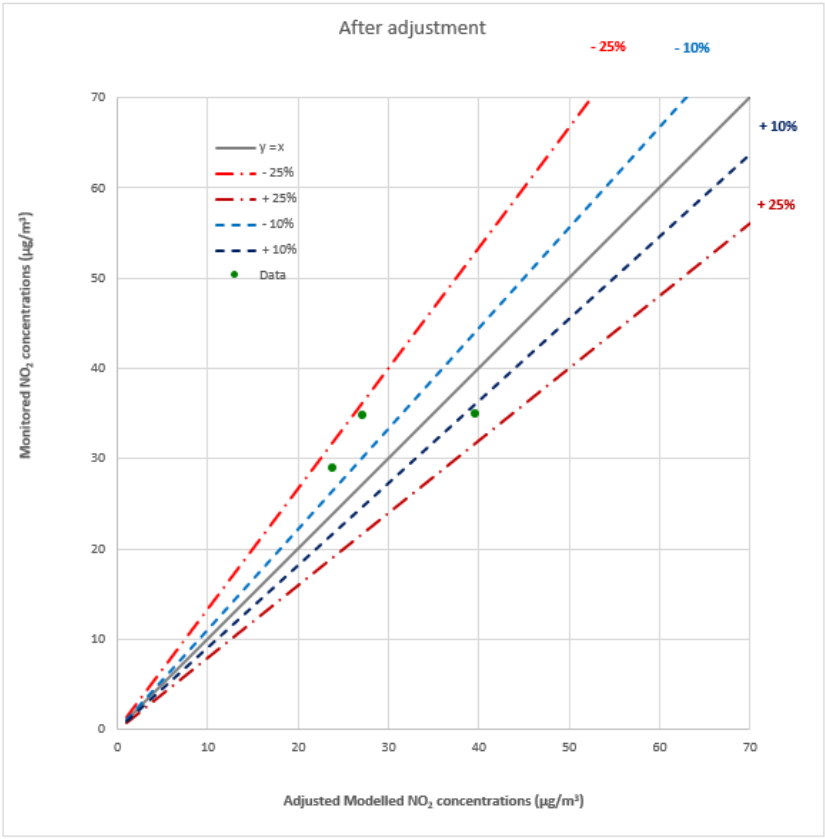
9.5.15 Graphs showing the model verification before and after adjustment are shown below in Figure 9.9.

**Table 9.12: Comparison of modelled and monitored annual mean $NO_2$ concentrations**

| Site ID | Site Type | Background $NO_2$ concentrations ($\mu g/m^3$) | Monitored $NO_2$ concentrations ($\mu g/m^3$) | Modelled $NO_2$ concentrations ($\mu g/m^3$) | % Difference (modelled-monitored)/ monitored |
|---|---|---|---|---|---|
| **Before Adjustment** | | | | | |
| K11 | Roadside | 21.6 | 35.0 | 30.1 | -14.0 |
| K56 | | 18.6 | 34.9 | 22.5 | -35.5 |
| K86 | | 18.6 | 29.1 | 20.9 | -28 |
| **After Adjustment** | | | | | |
| K11 | Roadside | 21.6 | 35.0 | 39.6 | 13.2 |
| K56 | | 18.6 | 34.9 | 27.0 | -22.5 |
| K86 | | 18.6 | 29.1 | 23.7 | -18.4 |

**Figure 9.10: Monitored and modelled annual mean $NO_2$ concentrations**



Model Results

**$NO_2$**

9.5.16 The predicted annual mean concentrations of $NO_2$ for the DM and DS scenarios at each receptor are presented in Appendix 9.3. The magnitude of impact with the scheme has been assessed using the EPUK significance criteria[18] and results are also provided in Appendix C. Predicted concentrations are below the annual mean air quality objective (40µg/m$^3$) at all of the sensitive receptor locations for each modelled scenario. The highest concentration was predicted at receptor U3 (University of Huddersfield) and was 24.2 µg/m$^3$ and 24.3 µg/m$^3$ in the DM and DS scenarios, respectively.

9.5.17 The greatest change in $NO_2$ concentrations between the DM and DS scenarios was predicted at receptors U2 and U3. Both receptors predicted an increase in $NO_2$ of 0.2 µg/m$^3$ as a result of the operation of the Site.

9.5.18 The magnitude of change to annual mean $NO_2$ concentrations at all existing and future receptor locations is predicted to be negligible.

**$PM_{10}$**

9.5.19 The predicted annual mean concentrations of $PM_{10}$ for the DM and DS scenarios at each receptor are presented in Appendix 9.3. The magnitude of impact with the scheme has been assessed using the EPUK significance criteria[18] and results are also provided in Appendix 9.3. Predicted concentrations are below the annual mean air quality objective (40µg/m$^3$) at all of the sensitive receptor locations for each modelled scenario. The highest concentration was predicted at receptor U3 (University of Huddersfield) and was 14.2 µg/m$^3$ and 14.3 µg/m$^3$ in the DM and DS scenarios, respectively.

9.5.20 The greatest change in $PM_{10}$ concentrations between the DM and DS scenarios was predicted at receptor U2, which predicted an increase of $PM_{10}$ of 0.1 µg/m$^3$ as a result of the operation of the Site.

9.5.21 The magnitude of change to annual mean $PM_{10}$ concentrations at all existing and future receptor locations is predicted to be negligible.

**$PM_{2.5}$**

9.5.22 The predicted annual mean concentrations of $PM_{2.5}$ for the DM and DS scenarios at each receptor are presented in Appendix 9.3. The magnitude of impact with the scheme has been assessed using the EPUK significance criteria[18] and results are also provided in Appendix 9.3. Predicted concentrations are below the annual mean air quality objective (20µg/m$^3$) at all of the sensitive receptor locations for each modelled scenario. The highest

concentration was predicted at receptor U3 (University of Huddersfield) and was 9.2 µg/m$^3$ and 9.3 µg/m$^3$ in the DM and DS scenarios, respectively.

9.5.23 The greatest change in $PM_{2.5}$ concentrations between the DM and DS scenarios was predicted at receptor U2, which predicted an increase of $PM_{2.5}$ of <0.1 µg/m$^3$ as a result of the operation of the Site.

9.5.24 The magnitude of change to annual mean $PM_{2.5}$ concentrations at all existing and future receptor locations is predicted to be negligible.

Car Park Emissions Assessment

9.5.25 The short-term NOx and $PM_{10}$ emissions were modelled to determine the impact of the street-level vents on pedestrians and amenity users in the streets surrounding the Site and the car park vents.

9.5.26 The magnitude of change to short-term $NO_2$ at all but three receptors within the modelled grid are predicted to be negligible with an imperceptible change to short-term air quality. There are modelled points which are directly next to the vents which are anticipated to experience a small change in short-term air quality due to increases in $NO_2$ emissions, resulting in a slight adverse impact. There are no exceedances of the short-term air quality objectives for $NO_2$ (200 µg/m$^3$ and 50 µg/m$^3$, respectively).

9.5.27 The point experiencing the highest change in short-term $NO_2$ concentrations is positioned 0.8m from the southern vent and also borders the junction between Alfred Street and the A62. This point is predicted to have a maximum hourly increase of $NO_2$ of 27.8 µg/m$^3$ as a result of the operation of the Site. There are additionally two more receptors which are within 2m of the northern vent which anticipate slight adverse short-term impacts on air quality, anticipating a maximum hourly average change of $NO_2$ of 22.4 and 23.7 µg/m$^3$.

9.5.28 The magnitude of change to short-term $PM_{10}$ at all receptors within the modelled grid are predicted to be negligible with an imperceptible change to short-term air quality. There are no exceedances of the short-term air quality objectives for $PM_{10}$ (50 µg/m$^3$)

9.5.29 The point experiencing the highest change in short-term $PM_{10}$ concentrations is positioned directly next to the southern vent, on the corner of Alfred Street and the A62. This point is predicted to have an increase of $PM_{10}$ of 1.0 µg/m$^3$ as a result of the operation of the Site.

9.5.30 These results are conservative and represent a worst-case scenario of only diesel vehicles using the car park and producing cold start emissions. Therefore, with a more diverse fleet mix including petrol and electric vehicles, it is unlikely that there will be adverse impacts on air quality in the streets surrounding the car park ventilators due to increased $NO_2$ or $PM_{10}$ emissions. There will be an imperceptible change in air quality to street amenity users.

**Damage Costs**

9.5.31 Table 9.13 provides the annual total and 5 year total damage costs as a result of the operation of the Site in 2027 for each of the assessed pollutants. Over 5 years the development traffic from the Site is expected to result in a total damage cost of £667,251 as a result of impacts on local air quality from the road traffic associated with the operation of the Site. This is based on no increase in electric vehicle use over the national average.

Embedded mitigation in the Site will aim to reduce this cost through encouraging sustainable forms of transport and reducing emissions from road transport.

9.5.32 The site contains embedded mitigation which will help reduce emissions in future such as the provision of electric vehicle charging points for 70 spaces within the car park, with the remaining spaces having passive provisioning for future electric car changing points. The Site will also be fully electric and will be looking to promote a decentralised energy supply system based on energy from renewable sources. A Travel Plan has also been produced to deliver sustainable transport objectives for the site, which will reduce personal car use and therefore emissions from vehicles on the local road network. The Travel Plan includes aims such as facilitating improved public transport and improving pedestrian and cycle networks to encourage the use of sustainable modes of transport.

9.5.33 Based on the average cost of installing electric vehicle charging points being around £6,000 excluding duct work, the cost for 70 spaces would be around £420,000. To calculate the saving in emissions an assumption of 20% of trips has been used to equal the number of spaces. This removes around 0.8t NOx, 0.15t PM10 and 0.08t of PM2.5 (20% of the original totals).

9.5.34 The cost of implementing the travel plan will add to the overall costs of mitigation and would ultimately expect to result in the development spending more than the five-year damage cost value. It is therefore considered that reasonable and proportionate measures have been taken following best practice as set out within the WYLES[13]. The measures in the travel plan and electric vehicle charging provision should be agreed through planning conditions to secure their delivery.

**Table 9.13: Damage costs from increased road traffic due to operation of the Site in 2027**

| **Pollutant** | Air quality damage cost per tonne | Development costs |
|---|---|---|
| $NO_x$ | £11,061 | £46,646 |
| $PM_{10}$ | £63,152 | £45,957 |
| $PM_{2.5}$ | £99,452 | £40,848 |
| | **Annual total** | **£133,450** |
| | **5 year total** | **£667,251** |

## 9.6 Mitigation, Enhancement and Residual Effects

**Construction Dust Mitigation**

9.6.1 The dust-emitting activities assessed in section 9.5 can be greatly reduced or eliminated by applying the site-specific mitigation measures for **high risk** sites according to the IAQM

guidance[17]. The IAQM guidance notes that with the implementation of effective site-specific mitigation measures, the environmental effect will not be significant in most cases.

9.6.2 The following measures from the guidance are relevant and should be included in the Construction Management Plan for the site.

Mitigation for all sites

**Communications**

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site;
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager; and
- Display the head or regional office contact information.

**Dust Management**

- Develop and implement a Dust Management Plan (DMP), which will include measures to control other emissions, approved by the local authority. In London, additional measures may be required to ensure compliance with the Mayor of London's guidance. The DMP may include monitoring of dust deposition, dust flux, real-time PM10 continuous monitoring and/or visual inspections.

**Site Management**

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken;
- Make the complaints log available to the local authority when asked; and
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site and the action taken to resolve the situation in the log book; and
- Hold regular liaison meetings with other high risk construction sites within 500 m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.

**Monitoring**

- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of site boundary, with cleaning to be provided if necessary;
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results and make an inspection log available to the local authority, when asked;
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions; and

- If required, agree dust deposition, dust flux, or real-time PM10 continuous monitoring locations with the local authority.

**Site Maintenance**

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible;
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site;
- Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period;
- Avoid site runoff of water or mud;
- Keep site fencing, barriers and scaffolding clean using wet methods;
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below; and
- Cover, seed or fence stockpiles to prevent wind whipping.

**Operating Vehicle/Machinery and Sustainable Travel**

- Ensure all vehicles switch off engines when stationary – no idling vehicles;
- Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable;
- Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate);
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials; and
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

**Operations**

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques, such as water sprays or local extraction;
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate;
- Use enclosed chutes and conveyors and covered skips;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use the fine water sprays on such equipment wherever appropriate; and

- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods; and
- Avoid bonfires and burning of waste materials.

Measures Specific to Demolition

- Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust);
- Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground;
- Avoid explosive blasting, using appropriate manual or mechanical alternatives; and
- Bag and remove any biological debris or damp down such material before demolition.

Measures Specific to Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and
- Only remove the cover in small areas during work and not all at once.

Measures Specific to Construction

- Avoid scabbing (roughening of concrete surfaces) if possible;
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and
- For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.

Specific to Trackout

- Use water-assisted dust sweepers on access and local roads, to remove, as necessary, any material tracked out of the site;
- Avoid dry sweeping of large areas;
- Ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport;

- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;
- Record all inspections of haul routes and any subsequent action in a site log book;
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned;
- Implement a wheel washing system; and
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and
- Access gates to be located at least 10 m from receptors where possible.

**Operational Mitigation**

9.6.3 As the overall effect of the Site on local air quality is predicted to be not significant, no mitigation is required.

9.6.4 It is recommended that any testing on the two generators in the lower-ground level are carried out outside of daytime hours to limit emission exposure to pedestrians passing by the street-level ventilators. Standard health and safety procedures should be in place to minimise exposure to those testing the equipment.

9.6.5 It is recommended the street design close to the car park vents considers how to reduce pedestrian exposure, such that members of the public are kept 4m away from the vent and queues for events are not directly adjacent to the vent locations.

9.6.6 The embedded mitigation as detailed in section 9.5 has demonstrated that reasonable and proportionate measures have been taken following best practice as set out within the WYLES[13]. The measures in the travel plan and electric vehicle charging provision should be agreed through planning conditions to secure their delivery.

## 9.7 Summary

9.7.1 This assessment presents the air quality assessment for the proposed Kirklees Cultural Heart Development in Huddersfield.

9.7.2 A review of current legislation, planning policy and a baseline assessment describing the current air quality conditions in the vicinity of the Site were also carried out. The Site does not contradict policy or legislation relating to air quality.

9.7.3 Current monitoring undertaken by Kirklees Council (KC) shows that there are a number of roadside locations where the $NO_2$ annual mean objective (40µg/m$^3$) was exceeded in 2019. The Site is located in Kirklees AQMA 9 declared due to exceedances of the $NO_2$ annual mean objective (40µg/m$^3$).

9.7.4 No detailed information on construction traffic was available at the time of writing. However, impacts from construction traffic will be assessed following the latest IAQM guidance, once available and whilst construction traffic vehicle movements are not known at this stage, the construction traffic management plan (CTPM) will include the commitment to limit HGV vehicle movements to less than 25 movements per day. This will ensure the change in traffic flow remains below the EPUK/IAQM screening criteria and would be considered insignificant. Following detailed design, should that volume increase

above 25 movements a detailed assessment will be carried out to determine possible impacts.

9.7.5 The relevant air quality objectives for $NO_2$, $PM_{10}$ and $PM_{2.5}$ are predicted to be met at all existing and proposed human receptors. The impact of operational traffic as a result of the Site is predicted to be negligible at all human receptors.

9.7.6 The impact of the underground multi-storey car park is also predicted to have at most, in a worst-case scenario, a small impact on only those standing directly adjacent to the vents in terms of NO2, with imperceptible impacts on receptors 4m or further from the vents. The multi-storey car park is predicted to have imperceptible changes in term of PM10 on all receptors around the site.

9.7.7 Following the guidance within the West Yorkshire Low Emission Strategy, a damage cost of the operation of the Site has been calculated in terms of air quality. The five-year damage cost of the Site in terms of societal air quality impacts is estimated to be £667,251. This cost will be offset with the inclusion of embedded mitigation measures within the plans for the Site, including electric vehicle charging provisions, and encouraging the use of public transport and other sustainable modes of transport.