NON-TECHNICAL SUMMARY

PAGE 1: COVER

Cardiff Park and Ride East, Llanrumney

Environmental Statement (ES)

Volume III – Non-Technical Summary (NTS)

Introduction

This Non-Technical Summary (NTS) presents a summary of the findings of an Environmental Statement (ES). It has prepared on behalf of Curtis Hall Limited, who are the Applicant. The ES accompanies a hybrid planning application submitted to Cardiff Council ('CC') for redevelopment of land known as 'Cardiff Park and Ride East, Lllanrumney' (the 'Site').

A hybrid planning permission application seeks outline planning permission for one part of a site and full planning permission for another part of the same site under a single application. The outline component includes information about the scale and nature of a proposed development but does not include detailed information such as the appearance of the development. It allows for the Local Planning Authority to make a decision on the general principles of how a site could be developed.

The planning application seeks hybrid permission for the demolition of existing structures and redevelopment of the site to provide a data centre and ancillary buildings, associated car parking and access roads, a bridge across the Rhymney River, site wide landscaping and associated works.

A full description of the Proposed Development is provided in Section 3: 'Proposed Development', below.

1. Site and Setting

Where is the Site?

The Site is located in Llanrumney, wholly within the administrative boundary of CC located immediately to the south-east of the Eastern Avenue dual-carriageway (A48), to the north of the city of Cardiff at National Grid Reference ST212809. The Site covers an area of approximately 23.4 hectares (ha). **Figure 1** shows the land within the planning application boundary. This is known as the red line boundary.

The Site is bound by Eastern Avenue (A48) and a section of ancient woodland to the west, dense woodland and the Rhymney Trail / informal cycle route to the north and the Rhymney River to the east. **Figure 2** shows an aerial view of the Site.

Figure 1 Planning Application Boundary (shown in red)

This drawing is to be read in conjunction with all relevant documents, specifications, Architectural & services drawings.

Notify the Architect immediately of any discrepancies between drawings.

All dimensions are in millimeters unless noted otherwise.

LOCATION PLAN LEGEND

Site Boundary

NOTES:

OS Map & Site survey information used has been provided by others.

0 20 40 60 80 100 125 150 200

1:2000 Meters

N

Rev	Date	By	Description	Chkd

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Project:
Cardiff East
Data Centre

Drawing Title:
Site Location Plan - Hybrid

Date: 19.09.2025	Scale: As indicated	Drawn By:	JB
Revision:	Media: A1	Checked By:	RC
Drawing Status:			

Figure 2 Aerial View of Site

What does the Site include?

The land within the planning application is made up of the existing hard surfacing covering the Site and is bound by open greenspace and vegetation surrounding the extent of the Site. The existing Site is 23.4ha in size, with a hard-surfaced park and ride area of 12.2 acres.

The Rhymney river bounds the eastern border of the Site but is not included within the red line boundary. Furthermore, several public footpaths including part of the Rhymney River trail falls within the site boundary bordering the river to the east.

The existing Park and Ride contains approximately 1,000 car parking spaces with a small office and amenity building to the southeast corner of the Site next to the entrance / exit road, which is also included within the proposed development site. A small number of bus shelters and shipping containers are also present within the Site. The Site is enclosed and compartmentalised by tall green metal fencing.

2. Site Background and Context

What are the environmental sensitivities?

Ecology and Arboriculture

There are no ecological designations either on-site or within a 250m radius of the Site boundary. The nearest statutory designated site is the Howardian Local Nature Reserve (LNR) located approximately 2km to the south of the Site.

Internationally valued potential receptors include the Severn Estuary Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar designated area, which is located within 6km of the Development.

The features of greatest ecological value as noted in **Chapter 5: Ecology** of the ES, are the section of the River Rhymney along the Site's eastern flank, designated as a Site of Interest for Nature Conservation (SINC) and the area of ancient woodland to the northwest.

The site has a variety of features, comprising broadleaf semi-natural woodland, dense scrub, poor semi-improved grassland, bracken, hardstanding, buildings and the river, and various scattered broadleaf trees and scattered scrub.

The dense woodland areas of the Site have potential to provide opportunities for species of nesting birds and bat roosting potential. Other potential species that may use the Site's ecological habitat features include: otters, badgers, dormice and hedgehog. In 2008 when the park and ride was initially constructed, extensive mitigation works were required at the time to protect the dormice

including construction of a specialised new habitat area including coppicing and transplanting over 200 mature hazel stools in an area adjacent to the car park.

Invasive species of Himalayan balsam and Japanese knotweed are also present on-site.

Transport and Access

The Site is located within direct access to several public footpaths, bridleways and notably the Rhymney River Trail. There are no public walkways along the A48 or Bryn Celyn Road junction along the access road to the park and ride. The River Rhymney Trail runs along the river connecting north to Pentwyn Road and south to Newport Road and acts as a pedestrian and cycleway for much of its length.

The Site is located approximately 1.6km northwest of the suburb of Llanrumney and bound by the A48 to the west. There are Public Rights of Way (PRoW) and open fields (including Llanrumney Fields) to the south and the river and residential properties at Ball Road to the east. These public access routes provide access to the north, east, south and west of the Site.

The footbridge over the A48 provides connectivity to Pentwyn Road and several local facilities. An additional footbridge to the south of the Site links the Circle Way East route where local facilities are also available to the public.

The Site has active shuttle bus stops on-site at present; the H59 and X59. Furthermore, there are bus stops located along Bryn Celyn and Pentwyn Road, accessible via the PRoW routes, served by the 58 and X59 to the city every 15-minutes and along Ball Road stops, serviced by the 50, 65 and 65A shuttles.

The nearest railway station is Heath High Level Station, approximately 4km west, accessed by the H59 bus service.

Air Quality

The Site is not located within an Air Quality Management Area (AQMA), although the A48 dual carriageway is located immediately to the west of the Site.

There are multiple high sensitivity receptors located within 200 metres of the A48 including Glan-Yr-Afron Primary School, Quarry Hill Care Home and several more highlighted in **Chapter 4: Air Quality.**

Additional ecological receptors in regard to air quality associated with the development include: the Site of Special Scientific Interest (SSSI) designated section of the Rhymney River, 1.8km from the

Site, and 100m from the nearest affected road, and Rumney Quarry SSSI, 1.5km from the Site and 270m from the nearest affected road.

Flood Risk

Flood Mapping[1] shows that the Site is located within Flood Zones 2 and 3 which is recognised as an area of medium probability of flooding (i.e., land assessed as having between or greater than 1 in 100 and 1 in 1,000 [>1%] annual probability) from fluvial sources.

The Site is also identified within a C2 Flood Zone which means an area of a floodplain without significant flood defence infrastructure. The Site is considered to be on Flood Alert.

Furthermore, the main constraint for the Site both physically and politically is the location within the River Rhymney Corridor which provides open space to ecological and human recreational uses.

Built Heritage and Townscape

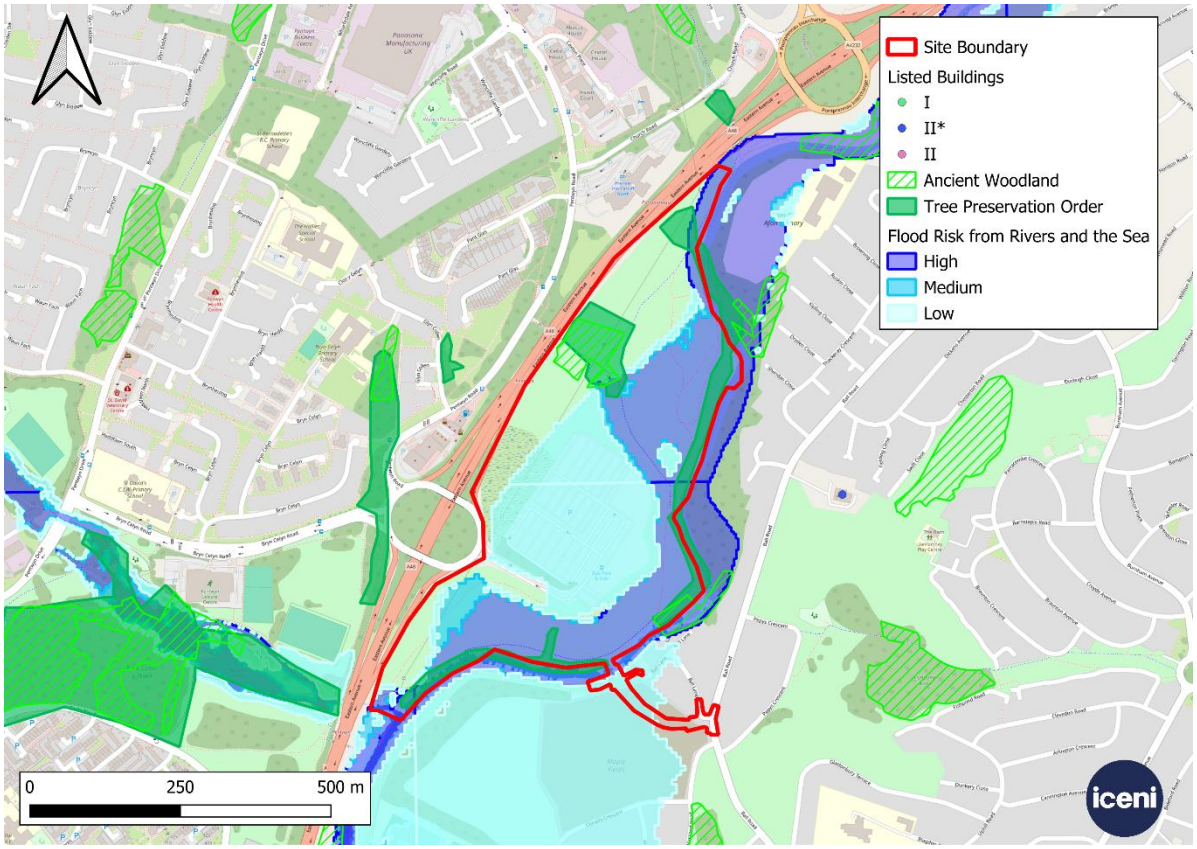
The Site is not located within a Conservation Area and there are no listed buildings within or in proximity to the Site. The nearest statutory designated heritage asset is the Grade II* Llanrumney Hall PH, located 650m to the east of the Site.

The Site is not located in an area considered to be of archaeological importance.

There is however a historic landfill site located to the east of the Site on the opposite side of the Rhymney River.

Figure 3 shows the environmental constraints within the context of the Site.

Figure 3 Environmental Constraints Map



Background to the EIA Process

The Need for EIA

An Environmental Statement records the findings of an Environmental Impact Assessment (EIA). An Environmental Statement allows the possible environmental impact of a proposed development to be taken into account.

The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (Wales) (the 'EIA Regulations') describe when an EIA is required by law. The EIA Regulations also describe what information must be included in an Environmental Statement. The Proposed Development falls within the EIA Regulation category of *'urban development project'* of which for development that includes more than 1 hectare of urban development which is not house development and the overall area of development exceeds 5 hectares.

In an EIA, a specialist will determine the significance of an environmental impact relating to their topic are (e.g. noise, air quality, built heritage). They will do this by assessing who or what is being affected – this is known as receptor sensitivity. They will also assess how big the change is from the existing conditions at the site – this is known as magnitude of impact. If needed, the specialist has then suggested mitigation measures, which will reduce, avoid or offset these environmental effects.

Residual effect are those effects that will remain after mitigation measures are put in place.

Approach to the ES

A Scoping Opinion from Cardiff Council was received in May 2022 for the previous application on the Site. The Proposed Development differs from the previous application on the Site, however similar environmental effects are considered likely. Therefore, a Scoping Opinion Request was not submitted to Cardiff Council for the forthcoming development proposals. This approach was agreed with Cardiff Council during pre-application meetings and is considered to be acceptable.

As the forthcoming proposals are for a data centre, it was considered that Climate Change should be added to the scope of the Environmental Statement. Therefore, the scope of this ES is as follows:

- Air Quality
- Ecology
- Landscape and Visual Impact
- Socio-Economics
- Transport
- Water Resources and Flood Risk
- Climate Change

Structure

The ES is made up of three volumes. These are shown in **Table 1.**

Table 1 Structure of the EIA Report

	Chapter	Responsibility
1	Introduction and EIA Methodology	Iceni Projects
2	Description of Site, Surroundings and Background	Iceni Projects
3	Proposed Development, Demolition Construction and Description of Alternatives	Iceni Projects
4	Air Quality	Tetra Tech
5	Ecology	WSP
6	Landscape and Visual Impact	BCA Design
7	Socio-Economics	Iceni Projects
8	Transport	SLR Consulting
9	Water Resources and Flood Risk	WSP

	Chapter	Responsibility
10	Climate Change	Iceni Projects
11	Residual Effects, Mitigation and Cumulative Effects	Iceni Projects (with input from the EIA team)
Vol II	Technical Appendices	Various
Vol III	Non-Technical Summary	Iceni Projects (with input from the EIA team)

2. The Proposed Development

The Applicant is seeking hybrid planning permission for for the demolition of existing structures and redevelopment of the site to provide a data centre and ancillary buildings and structures, associated car parking and access roads, a bridge across the Rhymney River, site wide landscaping and associated works.

Overview

The detailed part of the planning application seeks permission for a new through-road and roundabout, a new bridge linking the A48 Eastern Avenue with Pentwyn and Llanrumney, vehicular access between plots and an associated pedestrian underpass, landscaping elements to provide recreational uses for the Rhymney Trail for walking and cycling and engineering works to improve the Flood Risk level of the Site.

The outline part of the planning application seeks permission for data centre uses including associated buildings and structures, associated internal access roads, car parking areas, drainage features and landscaped areas, and an ancillary energy centre / grid supply point substation.

In summary, Proposed Development will comprise:

Detailed:

- New through-road and roundabout providing improved access through the Site.
- New bridge linking the A48 Eastern Avenue with Pentwyn and Llanrumney.
- Vehicular access between Plot 4 and Plot 5 / 6 and associated pedestrian underpass.
- Landscaping enhancements to provide recreational uses for the Rhymney Trail for walking and cycling.
- Engineering works to improve the Flood Risk level of the Site.

Outline:

- Data Centre (Use Class B8) uses (maximum 30,392.5sqm GIA; 150 MW capacity), including associated buildings and structures (including admin and storage areas, back-up generators, site substations).
- The buildings and structures proposed will range in height from up to 3m to up to 21m in height.
- Associated internal access roads, car parking areas, drainage features and landscaped areas.
- Ancillary energy centre (maximum 47 MW capacity) / Grid Supply Point (GSP) substation.

The Proposed Development provides the opportunity to provide a key piece of economic and digital infrastructure in Cardiff, as well as ensuring improvements to landscaping, public access and habitat protections across the site. The Proposed Development would deliver a number of economic, environment and social benefits, including a new bridge connecting the site with Pentwyn and Llanrumney, and providing local jobs through the construction and operation of the Site.

Figure 4 Land Use Parameter Plan

What landscape and wildlife improvements are proposed?

The Proposed Development will provide landscaped areas and enhanced public open spaces.

Existing woodland on the Site will be retained where possible, and new trees and other landscaping measures will be planted.

Public amenity / seating areas are proposed. The central amenity area would be located adjacent to the central roundabout and to an additional amenity area located further within the forested area and near to the existing pedestrian footbridge over the Rhymney river linking the Site to Llanrumney. Both seating areas would connect to the public rights of way, which have been retained, redirected and created in continuation from the Rhymney trail.

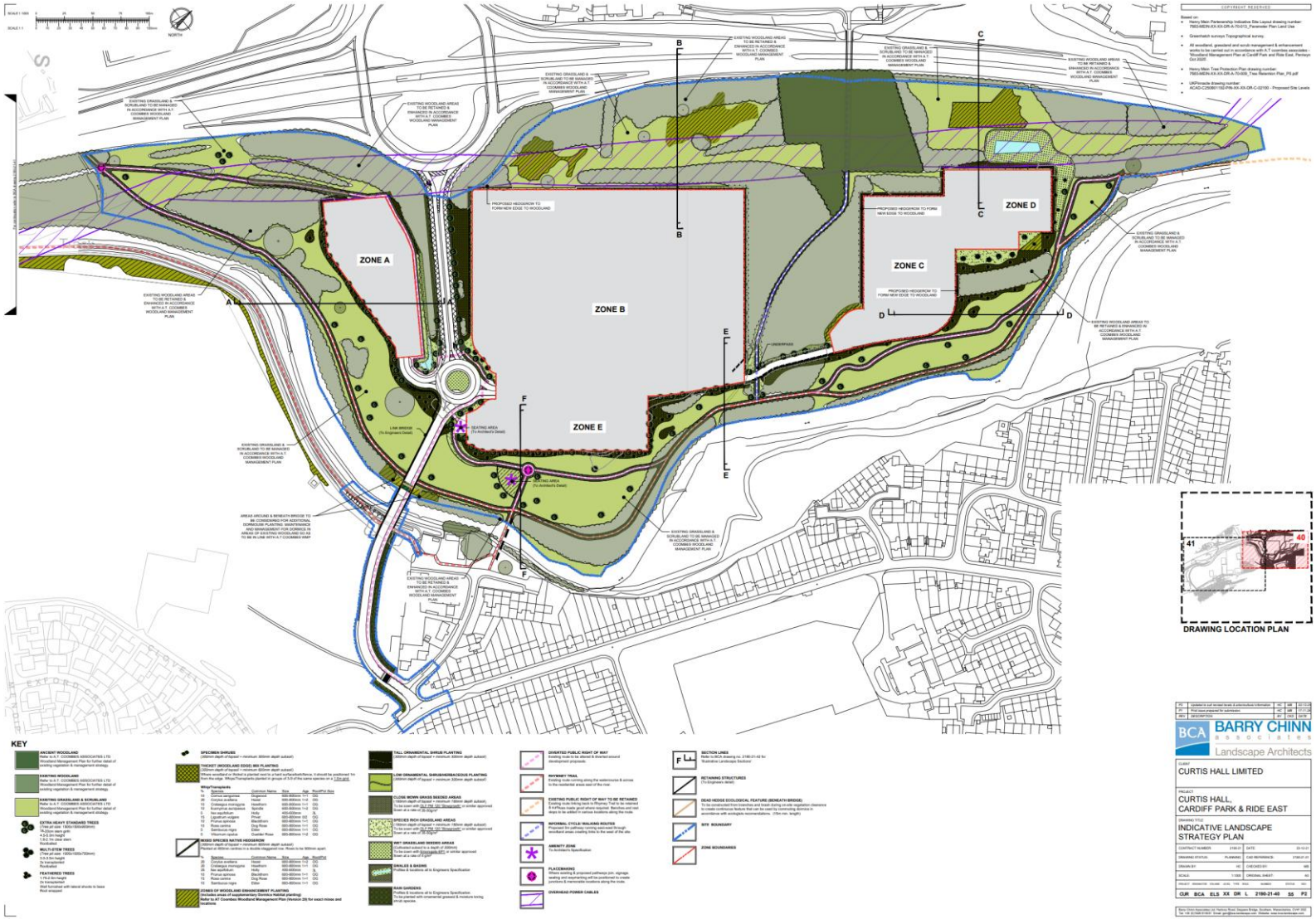
The footpaths and routes within the Site would be retained and be brought into active management thereby improving the recreational resource. The Rhymney Trail would be upgraded through the introduction of sensitive lighting to improve safety, but this will be designed to ensure light-sensitive bat species are not affected.

A number of interventions are proposed to enhance the screening of the site protect open space of amenity and nature conservation value against any impacts of development, including using native hedgerow, woodland edge and standard native trees to close the gap between existing vegetation while aiding to screen the development from Eastern Avenue. An enhanced landscape buffer would also be planted between the riverside and the development plots.

Retained areas of grassland are located along the River Rhymney Trail and ornamental species will be included around building envelopes and within prominent locations throughout the car park and adjacent to footpaths.

Figure 5 shows the landscape strategy masterplan.

Figure 5 Landscape Strategy Masterplan



What access and parking provision is made and how will the Proposed Development connect to the local utilities?

Access to and egress from the Site will be provided via the connecting bridge, which will provide access from the south. Access from the A48 will be provided via the first exit of the East Avenue North roundabout when travelling from the east, and the fourth exit when travelling from the west.

Cycle parking and car parking, including EV and Disabled spaces will be provided in line with CC's guidance.

Existing PRoWs on the Site will be retained, where possible, however it will be necessary to divert some PROWs across the Site to provide opportunities to enhance public access for recreational and amenity uses through more formalised routes including the provision of active travel routes across the Site.

How is waste to be managed?

It is envisaged that operational waste at the Site will be managed in accordance with best practice and in consultation with the Local Planning Authority.

How will flood risk and drainage be managed on the Site?

The planning application submission will be accompanied by a Flood Risk Assessment. In terms of how drainage and flood risk is assessed, please see **Chapter 9: Water Resources and Flood Risk.**

How will the Proposed Development address climate change and sustainability?

An Outline Energy Statement by HasLid Services and Sustainability Statement provided by Iceni Projects informs these two aspects of the development design. Key measures include:

- Delivery of gas-free buildings and Data Centre uses;
- Alignment with best practice and policy on data centre energy efficiency;
- Incorporating highly efficient systems to ensure power usage effectiveness targets are met for data centre uses;
- Embedding of circular economy principles;
- Achievement of climate resilient through the implementation of blue and green infrastructure to manage the risk of overheating, as well as manage surface water flooding;
- Employment of water efficient appliances within the Data Centre uses to reduce the water consumption as far as possible; and
- Encouragement of the incorporation of drought-resistant planting to minimise external water consumption.

Further details of these elements and can be found in the Sustainability Statement and Outline Energy Statement which accompany this ES and the planning application.

3. Demolition and Construction

How long will demolition and construction of the Proposed Development take?

Subject to planning permission being granted and the subsequent approval of matters specified in conditions, demolition and construction is expected to commence in 2026, with construction expected to be completed and the Proposed Development expected to be operational by 2028. This would represent an indicative build out period of approximately 1.5 years.

This may change depending on when planning permission is approved.

What environmental management and mitigation measures will be put in place?

A Construction Environmental Management Plan has been submitted with the planning application. The Construction Environmental Management Plan include controls for environmental protection during the demolition and construction works. A Construction Environmental Management Plan will also be submitted with the 'reserved matters' planning application. Measures to manage traffic during demolition and construction will be agreed with the Council before work begins. As well as this, vehicle movements will be spread over the course of the working day, with the prescribed hours of work to be agreed with Curtis Hall Limited. Construction workers will be encouraged to use public transport where possible.

How will material be managed and reused?

Where possible, materials to be recycled will be sorted on-site and stockpiled ready for collection.

4. What information was the environmental assessment based on?

The environmental assessment was based on the detailed drawings and parameter plans submitted with the planning application.

The detailed drawings provide a detailed description of the key components of the Proposed Development.

The parameter plans include information on the maximum proposed land use, buildings heights, areas of potential built development, structure of landscape and green infrastructure and access.

5. Alternatives

The Applicant has considered options other than redeveloping the Site.

The options considered by the Applicant are:

- Option 1: Alternative site location or alternative site boundaries;
- Option 2: Do nothing i.e. leave the Site as it is; and

- Option 3: Alternative designs and design evolution.

Option 1: Alternative site location or alternative site boundaries

No alternative sites were considered by the Applicant due to their 'subject to planning' ownership of the full Site area. Minor amendments have been made to the red line boundary since an EIA Scoping Opinion was submitted, as detailed in **Chapter 1: Introduction and EIA Methodology.**

Option 2: Do nothing i.e. leave the Site as it is

In line with best practice, this section broadly outlines the consequences of no development taking place at the Site and it remaining in its current state. **Chapters 4-10** and **Volume II** set out the baseline conditions of the Site together with the future baseline conditions which are likely to arise in the absence of the Proposed Development. These are not repeated here.

In the absence of the Proposed Development, it is reasonable to assume that the Site would largely remain in its present condition i.e., the existing Cardiff Park and Ride East facility and associated land.

The site was originally marketed as a strategic development opportunity by Cardiff City Council with a gross area stated as 56.45 acres. Developable area was estimated at 24.71 acres approximately. The particulars stated that the illustrated masterplan was indicative only and the successful developer would be adopting their own designs. A mix of uses was envisaged including drive through operations, a petrol filling station, supermarket, retail warehousing and warehousing / logistics accommodation. Curtis Hall Limited was identified as the preferred bidder for the site in 2020, with the terms of sale including a commitment from Curtis Hall Limited to deliver the new bridge and road link in lieu of a land receipt to the Council, as discussed at the Council Cabinet Meeting, 20 May 2021.

Inevitably, the adverse environmental effects related to demolition and construction would not occur, for example disruption relation to construction traffic with relation to diver delay, pedestrian amenity and construction noise. However, these effects have been found by the EIA process to be not significant.

In the absence of development, leaving the Site in its current state would avoid potential adverse significant environmental effects associated with the completed and operational Proposed Development, such as:

- Potentially moderate adverse visual effects in some locations;
- Moderate adverse climate change effects on the global climate from the production of GHG emissions if the National Grid is not decarbonised.

In the absence of the Proposed Development, the significant environmental benefits of the scheme would not be realised:

- Minor to moderate beneficial socio-economic effects (improvements to areas deprivation levels).

Option 3: Alternative Designs and Design Evolution

The Site benefits from planning permission granted 25th June 2024 for the following description of development:

"Demolition of existing structures and redevelopment of the site to provide commercial floorspace (Use Classes B1, B2, B8, A3) and/or ancillary Class A1), associated drive-thru and car parking; the re-provision of the park and ride; a bridge across the Rhymney River; site wide landscaping and associated works."

The above development is known as the 'extant development'.

The design of the extant development evolved over several iterations since April 2021 through consultation with various stakeholders and interested parties, including CC, Welsh Water and Natural Resources Wales. Environmental testing was undertaken to inform the design, such as energy and sustainability assessments, flood risk and drainage assessments and transport assessments.

This alternative design is not being taken forward, and instead the Proposed Development is being taken forward as there is an opportunity to provide critical national digital and economic infrastructure and related employment. As of September 2024, data centres are designated as Critical National Infrastructure (CNI) due to their significance in supporting essential services such as healthcare, finance and communication.

The primary goal of the forthcoming proposals was to fit the Data Centre layouts within the confines of the development plot areas as per the extant planning permission, therefore allowing the agreed mitigation measures, landscape and biodiversity enhancements, PROW's, access road and bridge construction to proceed in accordance with this permission.

A number of environmental opportunities and constraints on the Site have been considered. These have influenced the design of the Proposed Development and are summarised in the table below.

Table 4.1 Opportunities and Constraints

Opportunity / Constraint	Assessment
Opportunity to use brownfield land	The middle, brownfield portion of the Site was identified as the most suitable area for built development, due to its topography, existing access, and distance from the most sensitive ecological and visual receptors. The placement of built development within this portion of the Site has ensured retention of habitat and provision of recreational features within the outer extents of the Site.
Opportunity for the provision of recreational space	Due to the existing formal and informal footpaths and established habitat within the Site, the existing PRoWs on the Site are viewed as an opportunity to enhance public access for recreational and amenity uses through more formalised routes, including provision of active travel routes. This will encourage active and healthier lifestyles of the Site users and local community once operational, and contribute towards the provision of ecological value on the Site.
On-Site Habitat Provision	Retention, management and enhancement of the habitats is an integral aspect of the Proposed Development. Ecological provisions such as the enhancement of the Ancient Woodland on the Site and provision of dormouse habitat are proposed.
Existing Woodland	Significant opportunity for a thorough woodland management plan to be designed and implemented. This would result in an improvement for habitat and biodiversity.
Invasive Species	Removal of invasive species like Japanese Knotweed and Himalayan balsam improving site biodiversity.

Technical Assessments

Air Quality

Introduction

An air quality assessment has been undertaken in support of a planning application for the redevelopment of Cardiff East Park & Ride, Eastern Avenue, Old St Mellons, Cardiff, CF23 8HH. The air quality assessment has identified existing and future sensitive receptors near to the site, which are considered to be 'highly sensitive' to the effects of dust and vehicular emissions. Highly sensitive receptors include residential properties, hospitals, schools and care homes. The air quality assessment has defined the baseline (i.e. current) air quality conditions near the site and has modelled the future air quality effects of the Proposed Development based on an operational (opening) year of 2028. The model has assessed the impact of the increased road traffic emissions associated with the development on NO2 (Nitrogen Dioxide), PM10 (particulate matter that is less the 10 micrometres in diameter) and PM2.5 (particulate matter than is less the 2.5 micrometres in diameter) exposure at the nearby existing and future sensitive receptors.

Construction

Potential impacts of dust associated with the construction of the development at existing sensitive receptors have been assessed. Construction activities have the potential to suspend dust, which could result in annoyance of residents surrounding the site. The main emissions during construction are likely to be dust and particulate matter during earth moving (particularly during dry months), or from construction materials.

All dust impacts are considered to be direct, temporary, short-term and reversible in nature. The impacts are determined to be direct as they occur as a result of activities associated with the development, temporary as they will only potentially occur during the construction phase, short-term because these will only arise at particular times when certain activities and meteorological conditions for creating the level of magnitude predicted combine, and reversible as conditions will return to baseline once construction phase activities have finished. With the construction mitigation measures in place detailed below, dust soiling and PM10 emissions during construction are considered not significant.

Operation

Additional vehicle movements associated with the Proposed Development will generate additional exhaust emissions, such as nitrogen dioxide and fine particulate matter, on the local and regional road networks.

All impacts are considered to be direct, permanent, long-term and irreversible in nature. The impacts are determined to be direct as they occur as a result of vehicles travelling to and from the Proposed Development, permanent as they will occur throughout the operational phase, long-term because

these occur during the entire operational phase, and irreversible as conditions will not return to baseline conditions.

The effects of additional exhaust emissions from increased road traffic are predicted to have a negligible impact at all sensitive receptors and are therefore not significant. The effects of additional exhaust emissions from the operation of the energy centre are predicted to be not significant in terms of the protection of human health and for the protection of vegetation and ecosystems.

The cumulative effects of both long-term and short-term impacts from the operations of the energy centre and from the contributions of the traffic emissions, are not significant in terms of the protection of the human health and for the protection of vegetation and ecosystems.

Emergency Backup Generators Testing for 2 Hours Every Six Months for a Black START of the Site

It is noted that there are a few receptors located to the southwest of the site further away from the backup generators (the closest one being approximately 680 m to the nearest backup generator stack). Therefore, it is recommended that the scheduled test for 2 hours every six months for a black start of the site should be taking place when wind direction is northeast (north easterly winds).

Use of the Emergency Backup Generators for more than 30 Minutes

It is likely that the short-term impact of NO2 emissions from the backup emergency generators, when operated more than 30 minutes, would result in the exceedance of the short-term NO2 AQO for the protection of human health. Therefore, in case of the emergency use of the backup generators at the Data Centre, it is recommended that the operators take the additional precautions to limit exposure, such as informing the neighbouring residents to stay inside and keep windows closed.

Ecology

Introduction

The Site includes a mix of habitats such as broadleaved woodland, scrub, grassland, and a river corridor. These habitats support a range of species such as bats, dormice, badgers, otters, birds, amphibians and reptiles and otters. The Site is also likely to support a range of invertebrate species. Surveys and studies were carried out to understand which species and habitats are present and how important they are for nature. This information helps predict how the construction and operation of the Proposed Development could affect them.

Construction

During construction, some habitats like scrub, grassland, and a small part of woodland will be removed. Noise, dust, and temporary disturbance from machinery could affect animals using the Site. Sensitive species, such as bats and dormice, may lose part of their habitat, and birds may be disturbed during nesting. Aquatic habitats in the river could experience small amounts of sediment or pollution if not managed carefully.

Measures are in place to reduce harm, such as controlling dust and pollution, protecting trees and retained habitats, and timing works to avoid sensitive seasons. For some species, new habitats, such as planted areas and nest boxes, are being created to replace those lost. Overall, while there are temporary changes and some habitat loss during construction, the impact is managed carefully to protect wildlife.

Operation

Once the Proposed Development is in use, most retained habitats will remain intact, and new planting and management will provide additional and improved wildlife areas. Sensitive lighting and retained corridors will help bats and birds continue to move safely across the Site. The river corridor remains protected, and invasive plant species will continue to be managed.

Over time, these measures will support the recovery and enhancement of wildlife, with more trees, scrub, and hedgerows improving habitats. This means the Site will not only retain important species but also provide new opportunities for wildlife to thrive.

Summary

In summary, the Site supports a range of habitats and wildlife that are important locally. Construction will cause temporary disturbance and some habitat loss, but careful management and habitat creation reduce these impacts. Once operational, the Site will maintain and enhance habitats, benefiting bats, dormice, birds, reptiles, and other species. Overall, the Proposed Development is designed to protect and improve wildlife while allowing the works to proceed safely.

Landscape and Visual Impact

Introduction

A Landscape and Visual Impact Assessment (LVIA) has been carried out in accordance with best practice guidance, and through a thorough understanding of both the Application Site and the surrounding area.

The assessment methodology comprises a combination of desktop and field studies, which amongst other matters includes:

- A review of statutory plans and other data, such as relevant designations and planning policies for the area; an assessment of the landscape character of the Application Site and the surrounding area;
- A visual record and appraisal of the Application Site and its surroundings including the identification of views from publicly accessible areas;
- Analysis of the landscape and visual findings; and, recommendations for appropriate development.

This assessment has considered the baseline situation of the landscape character and visual amenity of the application site and the likely effect of the Proposed Development on these features. It has been founded on a thorough study of the assessment site and the established study area.

The north-western boundary of the application Site runs parallel to the A48 linking the M4 to Cardiff whilst the north-eastern boundary runs parallel to the River Rhymney. A set of high voltage cables and associated pylons two of which sit within the application Site also run along the north-western boundary. To the north-west of the application Site lays the residential area of Pentwyn, separated by the A48, to the south sits the residential area of Llanrumney whilst St Mellons sits further away to the east.

The topography of the application Site is reasonably level falling circa 6 meters from the north-western boundary with the A48 to the north-eastern boundary with the River Rhymney from a high point of 16.68 m (AOD) down to 10.11 m (AOD). Generally the application Site, A48 and River Rhymney are located down at the base of the river Rhymney valley.

There are a number of Public Rights of Way situated within or close to the application Site as well as several recreational cycle routes. The application Site is not located within a Conservation Area. There are no scheduled monuments or listed buildings within or in close proximity to the application Site. There are three blocks of existing woodland on-site that are covered by Tree Preservation Orders (TPO) and comprise of mainly Oak and Alder.

There are no ecological designations located on the application Site, however along the eastern boundary the River Rhymney corridor is designated as a Site of Importance for Nature Conservation (SINC). There would be no significant effects on the character or setting of this landscape arising from the Proposed Development

In Wales, LANDMAP is the formally adopted methodology for landscape assessment and is advocated by Planning Policy Wales. LANDMAP is comprised of five spatial datasets of information known as the Visual & Sensory, Landscape Habitats, Historic Landscape, Cultural Landscape and Geological Landscape.

The LANDMAP system has been referenced to describe the landscape character for the Site and the surrounding area.

With regards Visual and Sensory the application Site falls within area CRDFFVS051 Rhymney Valley floor and sides. Over time as the mitigation planting establishes it is expected that the effect upon the application site itself will reduce from minor/moderate adverse at completion to negligible neutral/minor adverse at year 15.

The residual effect upon CRDFFVS051 Rhymney Valley Floor upon which the application site is located can be expected to reduce upon the establishment of the mitigation planting therefore

assimilating with the character area and reducing the effect after 15 years from minor adverse at completion to negligible neutral.

The residual effect upon CRDFFLH010 River Rhymney and surrounds upon which the application site is located is likely to remain at negligible neutral.

The residual effect upon CRDFFCL015 Rhymney Valley Corridor upon which the application site is located is likely to remain at negligible neutral.

The visibility of the application site varies in relation to the surrounding topography and built environment. The majority of visual receptors with direct views of the development are predominantly located towards the east of the application site, within the region of Llanrumney whilst visual receptors with minimal or partial views tend to be towards the north. The completion stage effects upon these visual receptors range from moderate / major adverse to negligible neutral at completion, changing to moderate adverse to negligible neutral at year 15. The level of these effects would be reduced over time through the establishment of the proposed landscaping mitigation scheme.

Construction

During the construction phase of the Proposed Development associated plant and cranes will be brought into the area, clearance and land regrading will occur and site hoarding will be erected. The construction plant will be an incongruous feature and it is considered that the cranes used for the construction of the Proposed Development are likely to be visible within a number of the identified visual receptor's views and this is likely to create a temporary, direct effect that will be greater than during the operational phase, subject to the visibility.

Operation

The landscape strategy considers the careful retention and enhancement of the boundary planting to application site boundaries. The new built form has been considered in terms of materials and form to reduce its appearance in views from the wider landscape. Existing vegetation will be supplemented with new tree and shrub planting on the Proposed Development boundaries, alongside access roads and associated with parts of the new parking areas. The landscape proposals have been carefully designed to ensure the new planting responds to the local character and enhances the ecological value of the landscape framework. Following establishment this structure will provide a mature setting to the Proposed Development helping to assimilate it into the immediate surroundings.

There are no significant adverse landscape or visual effects anticipated.

Socio Economics

This socio-economic assessment has been prepared to identify any potential effects on the Local and Wider Impact Areas in terms of the local economy arising from the Proposed Development. Where an impact is identified, mitigation measures have been recommended to alleviate any adverse impacts or enhance or secure a beneficial impact.

The baseline assessment provides an overview of the demographic and socio-economic profile of the local population compared where possible to a wider impact area which includes the Local Authorities of The Vale of Glamorgan, Rhondda Cynon Taf, and Caerphilly, and Wales. The baseline also provides an audit of existing levels of social infrastructure provision in the Local and Wider Impact Areas.

Labour market

The Site is located within the 10% most deprived neighbourhoods in Wales in terms of overall deprivation. The Income, Employment, Health, Education, Community Safety and Physical Environment domains also score in the lowest ranks of deprivation (10% most deprived).

The Proposed Development would create additional employment opportunities in Cardiff. This supports an aim of the Cardiff Local Development Plan to create an environment that develops, attracts and retains skilled workers, businesses and entrepreneurs to Cardiff.

Construction

The construction phase is expected to result in beneficial effects, although not significant, in the short term through the generation of employment over the 18-month construction period. It is also likely to generate further indirect employment in the supply chain along with induced employment effects arising such as the employment supported by the wage spending of construction and supply chain workers in shops, services and other businesses throughout the economy.

Operation

In terms of the operational phase, the proposed development is assessed as having a beneficial effect with regards to digital infrastructure, supporting the development of local and UK wide digital industries, with well remunerated on-site roles.

Transport

Introduction

This Transport ES chapter has been produced by SLR Consulting Ltd and considers Proposed Development in terms of transport and accessibility.

A standalone Transport Assessment has been produced by SLR Consulting Ltd in support of the planning application and is included as **Appendix A8.1** of the ES.

The Site is currently accessed from the A48 Eastern Avenue / Park and Ride junction which serves the Cardiff East Park and Ride facility. It is proposed to access the Site from this junction and also from the new link road across the Rhymney River to provide a route through to Llanrumney outside of peak hours.

The site is located in a sustainable location, with bus stops located either side of the A48 and in close proximity to a number of formal and informal walking routes between the site and Llanrumney.

The Transport chapter considers the likely environmental effects, in traffic and transportation terms, during both the construction and operational phases of the Proposed Development and during the 24hr daily period and the weekday AM and PM peak periods.

Construction

The total daily HGV and LGV movements during the construction phases are anticipated to be low and would not have a noticeable effect on traffic conditions within the study area. Construction vehicles will be routed via the A48 and therefore construction activity will not have a noticeable effect on the pedestrian and cyclist environment. There are no long-term effects caused by construction traffic beyond the construction period.

Operation

The assessment demonstrates that during the operation of the Proposed Development, the impact will be **long term, negligible** in relation accidents and safety and driver delay, and **long term, minor adverse** in relation to severance, pedestrian delay, and pedestrian amenity.

There are no additional mitigation measures being proposed as part of the development proposals. The Proposed Development will be supported by a workplace Travel Plan with a commitment to provide sustainable travel incentives, such as financial contributions towards sustainable transport vouchers and holding various events to encourage cycling and walking as part of everyday commuting.

The residual impacts of the Proposed Development are therefore the same as that reported in the pre-mitigation scenario.

Water Resources and Flood Risk

Until the conclusion of the hydraulic modelling study currently being undertaken for the site the effects and potential impacts of the scheme cannot be fully assessed. It is noted however, that the Environmental Statement for the prior planning application was able to find that the effects were likely acceptable, a similar approach will be followed and concluded for this development, however the findings of the flood study cannot be pre-empted.

Climate Change

Introduction

Greenhouse gas (GHG) emissions within the UK have been reducing over recent years. This trend is expected to continue into the future as the UK continues towards its target of net zero carbon emissions by 2050.

Under the 2°C global warming scenario, it is anticipated that temperatures will increase. The Wales and the west of the UK may be subject to around 2°C warming during the summer, whilst winter temperatures could increase by 1.5°C. Under this scenario, changes to rainfall patterns may result in wetter winters, and drier summers.

Construction

GHG Emissions

In order to minimise the production of GHG emissions during the construction of the Proposed Development, a number of mitigation measures will be put in place. This will include the embedding of circular economy principles within the design of the Proposed Development, and the procuring of materials in consideration of sustainability credentials and embodied GHG emissions. In addition, lean design principles, and the preferential use of locally sourced, recycled and reused materials will be employed, where appropriate, within the construction of the Proposed Development. As a result of the embedding of these measures within the design of the Proposed Development, the Proposed Development will have a negligible (not significant) effect on the global climate with respect to GHG emissions during its construction.

Climate Change Resilience

During the construction of the Proposed Development, measures will be implemented to ensure risks to sensitive receptors, such as site staff, construction traffic and structures, will be mitigated. These measures will include, but are not limited to, day-to-day assessment of climatic conditions, and the undertaking of construction works in line with relevant legislation, regulations and best practice. Through the implementation of these measures, there will be a negligible (not significant) effect on sensitive receptors present on the Site during the construction of the Proposed Development as a result of the projected effects of climate change.

Operation

GHG Emissions

In order to minimise the production of GHG emissions during the operation of the Proposed Development, a number of mitigation measures have been embedded within the design. This includes, but is not limited to, the integration of active travel routes to promote the use of sustainable and active modes of transport, the delivery of electric vehicle (EV) charging facilities, the employment of highly efficient IT equipment to reduce the unregulated energy demand of the Proposed

Development as far as possible, and the employment of low carbon and renewable technologies to serve the heating and cooling demands of the Proposed Development. These measures will aid in reducing the GHG emissions associated with the energy consumed during the operation of the Proposed Development as well as those associated with transport. When assuming that there will be no further decarbonisation of the National Grid, with the GHG emissions generated per kWh of energy consumed assumed to remain as per the existing case in 2025, the residual effects of the Proposed Development during its operation in the context of the UK Carbon Budgets are considered to be Major Adverse (significant). When accounting for the anticipated continued decarbonisation of the National Grid, however, this effect is considered to be reduced to Minor Adverse (not significant).

Climate Change Resilience

During the operation of the Proposed Development, measures will be implemented to ensure risks to sensitive receptors, such as employees, visitors and structures, will be mitigated. These measures will include, but are not limited to, the incorporation of a site-wide surface water management strategy to mitigate the risk of flooding, the incorporation of native and drought-resilient species within the Landscaping Strategy to mitigate the potential effects of water scarcity, and the incorporation of measures within the design of the Proposed Development to mitigate the potential health risks associated with internal overheating. Through the embedding of these measures, as well as the additional measures that may be implemented as the detailed design continues, there will be a negligible (not significant) effect on sensitive receptors present on the Site during the operation of the Proposed Development as a result of the projected effects of climate change.

Residual Effects, Mitigation and Cumulative Effects

Cumulative Effects

The EIA Regulations require an Environmental Statement to describe the likely effects of a development on the environment when taken cumulatively with other environmental effects and any current or prospective (‘reasonably foreseeable’) development in the vicinity of the Site.

There are two types of cumulative effect, which are commonly known as ‘Type 1’ and ‘Type 2’ effects respectively. These are generally defined as follows:

- Type 1: The combined effect of individual effects, for example noise, airborne dust or traffic on a single receptor (defined as ‘effect interactions’); and

- Type 2: The combined effects of nearby development schemes which are either consented or under construction which may, on an individual basis, not be significant but, cumulatively, have a likely significant effect (defined as ‘cumulative effects’).

Cumulative Effects (Type 1)

Given the findings of the ES as presented on Table 3 (overleaf) it is not considered that any additional significant environmental effects are identified when considered in-combination with each other.

Cumulative Effects (Type 2)

The list of cumulative schemes agreed with the Council, to be included for assessment are shown in Figure 6. There would be no significant cumulative environmental effects during the construction phase of the Proposed Development.

There would be significant cumulative environmental effects during the operation phase of the proposed Development, as follows:

- Minor / Moderate adverse cumulative landscape and visual effects of the Proposed Development and 18/02594/MJR; and
- Major beneficial cumulative socio-economic effects in regard to residential expenditure.

Figure 6 Cumulative schemes considered

Summary of Mitigation and Residual Effects

In summary, environmental effects during the construction and operational phases of the Proposed Development include the following:

Construction

There would be no significant residual effects during the construction phase.

Operation

There would be significant residual effects during the operational phase, as follows:

- Minor to moderate beneficial socio-economic effects on deprivation levels;
- Moderate adverse visual effects at Ball Lane, Clovelly Crescent, Glastonbury Terrace and Ball Road; and
- Moderate adverse climate change effects on the global climate from the production of GHG emissions if the National Grid is not decarbonised.

Although it is likely that some adverse effects may be experienced during the construction phase of the Proposed Development, they will only be temporary in nature and mitigated as far as possible by best practice guidance. Once the Proposed Development is operational, the positive impacts associated with bringing this Proposed Development forward are considered to outweigh any negative effects.

Availability of ES Volumes

All volumes of the ES (including the NTS) are available to view online on the Cardiff Council website at the following link:

https://www.cardiffidoxcloud.wales/publicaccess/search.do?action=simple&searchType=Application

All volumes of the ES (including the NTS) can also be viewed at the Council's offices. If you need help in locating the ES, please do get in touch. The contact details are:

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