# PEDDIMORE

## Environmental Statement:
## Volume 3 - Non-technical Summary

January 2019

# Contents




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**Client**
IM Properties PLC

**Our reference**
IMPZ3001

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Turley

# 1. Introduction

1.1 This Environmental Statement (ES) is part of a suite of documents that supports the hybrid planning application (the 'Application') by IM Properties PLC (the 'Applicant') in partnership with Birmingham City Council (BCC) for a high-quality employment park of up to 247,716m$^2$ to include facilities for research and development, light industry and storage distribution, known as Peddimore (the 'Proposed Scheme').

1.2 This ES is one of the supporting documents submitted in support of the Application and has the status of a material consideration during the determination of the Application by BCC, who are the determining authority. The ES is the output of the EIA process undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (SI2017/571) (the EIA Regulations, 2017). Under Regulation 26, the decision maker must integrate into the decision (as to whether the planning permission should be granted); their reasoned conclusions on the significant effects of the Proposed Scheme taking into account the information in the ES.

1.3 The ES is provided in three parts:

- **Volume 1: – Main Text and Figures**, provides the results of the EIA which is divided into 'Chapters' and supported by a series of figures and technical appendices (see Volume 2 below);
- **Volume 2: – Technical Appendices**, encompasses a range of technical reports which have informed the technical assessments presented in Volume 1: – Main Text and Figures; and
- **Volume 3: – Non-Technical Summary**, provides a summary of the ES in non-technical way to aid communication and understanding of the Proposed Scheme and the EIA process undertaken.

1.4 In line with Schedule 4, Paragraph 9 of the EIA Regulations, 2017, the ES should include a non-technical summary of the information presented within **Volume 1: – Main Text and Figures**.

1.5 As defined in Planning Practice Guidance[1], the non-technical summary should be written in '*plain English'*, so as to ensure that the findings reported in **Volume 1: – Main Text and Figures** (and where applicable **Volume 2: – Technical Appendices**) can be easily understood by non-experts (i.e. the general public).

1.6 Therefore, the information that is presented within this Volume is written in a non-technical language (as far as reasonably possible) and presents the main findings of the assessments undertaken. As such, this Volume should be read in conjunction with **Volumes 1** and **2** of the ES.

1.7 This Volume has been structured as follow:

[1] PPG, Paragraph 035, Reference ID: 4-035-20170728

- The EIA Process that has been undertaken;
- The Proposed Scheme, explaining the proposals for which planning consent is sought;
- Environmental Effects of the Proposed Scheme;
- Cumulative Effects, in terms of multiple effects across different topics and in-combination with other projects proposed; and
- What Happens Next, which summarises the determination process of the application.

1.8 Given that the information presented within this Volume is a summary and non-technical in nature, within each Section of this Volume a reference is provided to the main text and technical appendices of the ES where a greater level of information is available (within the grey sections at the top of each section). Therefore, should the reader wish to read the technical documents or understand the conclusions presented in more detail, they are able to do so.

# 2. EIA Process

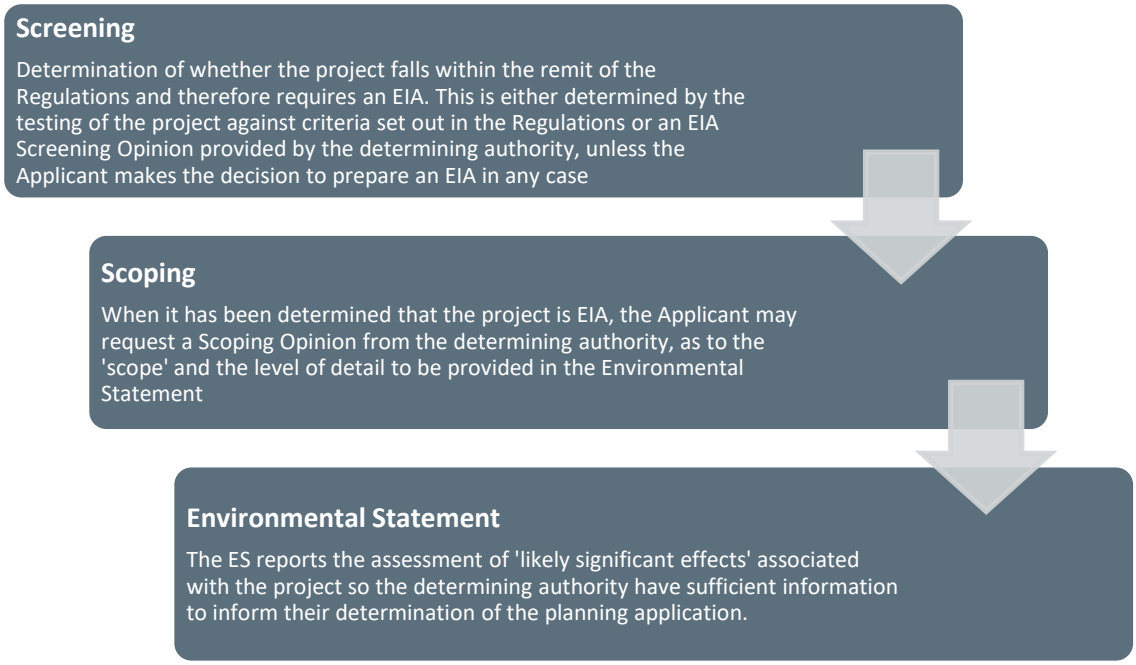
Volume 1: – Main Text and Figures, Chapter 1 – Introduction

Volume 1: – Main Text and Figures, Chapter 2 – Approach to EIA

2.1 The aim of Environmental Impact Assessment (EIA) is '*to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision-making process*.'

2.2 EIA is a tool to support those responsible for approving projects and as the name suggests, is concerned with the assessment of environmental impacts.

2.3 EIA comprises a series of steps, which are summarised in **Extract 1**. It should be noted that the first step (Screening) can be skipped and the second stage (Scoping) is voluntary.




**Extract 1 – Summary of EIA process**

2.4 With respect to this Application, given the characteristics of the Proposed Scheme and the Site, the Applicant decided to undertake an EIA without Screening and therefore proceeded directly with a request for an EIA Scoping Opinion. This request was supported by an EIA Scoping Report, prior to the preparation of the ES.

# 3. The Site and Proposed Scheme

Volume 1: – Main Text and Figures, Chapter 3 – Description of the Site and Study Area
Volume 1: – Main Text and Figures, Chapter 4 – Description of the Proposed Scheme
Volume 1: – Main Text and Figures, Chapter 5 – Consideration of Alternatives

## Site Characteristics

3.1 The key characteristics of the Site (i.e. the current state on the environment) upon which the EIA assesses the impacts of the Proposed Scheme, are summarised in **Table 3.1**.

**Table 3.1: Summary of the key Site characteristics**

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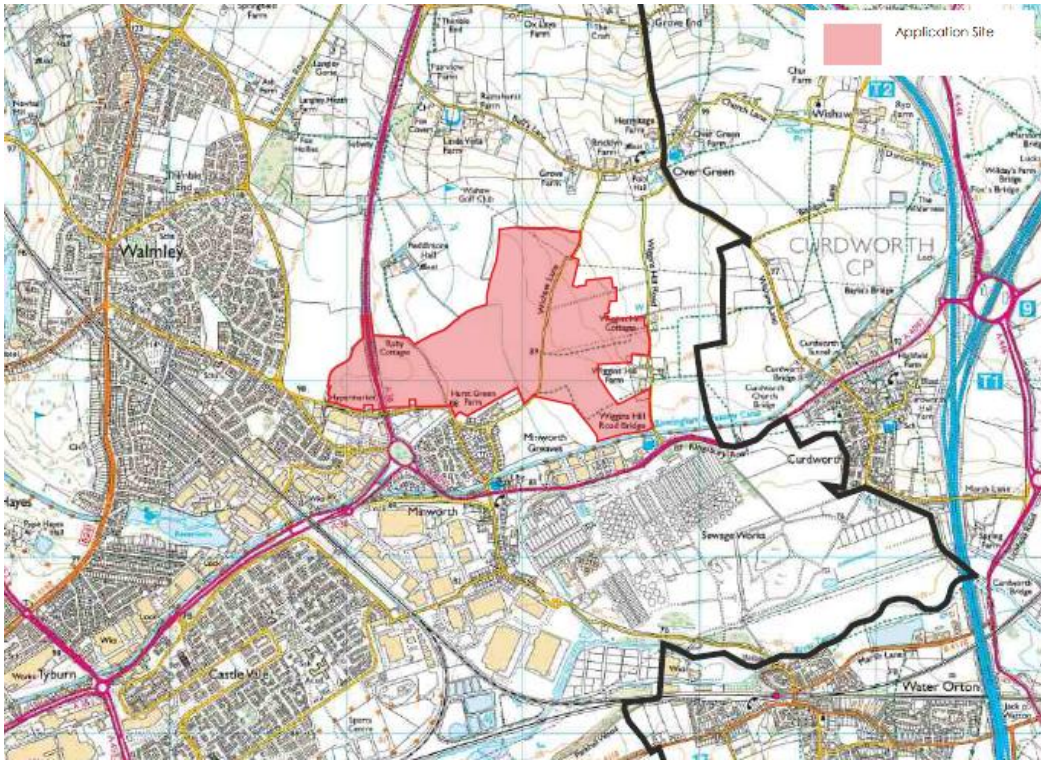
|---|---|
| Location | The Site is located to the north-west of Minworth, Sutton Coldfield, approximately 9km north of Birmingham (city centre) (**Extract 2**). To the north of the Site is agricultural land, Peddimore Hall and Wishaw Golf Club; the east by Wiggins Hill Road; the south by Birmingham to Fazeley Canal, Walmley Ash Lane and Hurst Green Farm; and the west by the A38 and agricultural land. |




**Extract 2 – Site Location Plan**

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| Landform | The landform is characterised by higher ground to the east and west, circa 94mAOD and 92mAOD respectively, falling inward to the centre of the Site (circa 84-88mAOD). |



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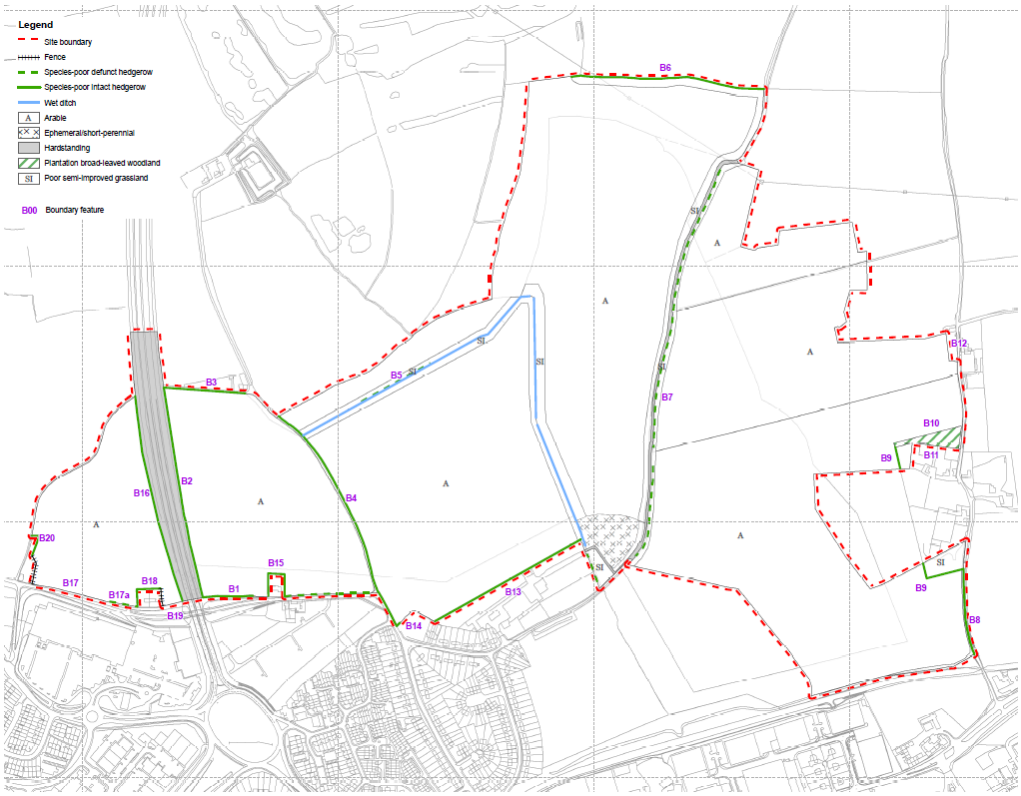
| Existing use | The Site comprises approximately 110ha of arable land (**Extract 3**), broken up into a number of large irregular fields. Peddimore Brook, Peddimore Lane and Wishaw Lane run north-south through the Site. The only built forms present within the Site are overhead high voltage electricity cables and associated pylon(s). |




**Extract 3 – On-site Habitat**

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| Environmental designations | The Site falls wholly/partly within and/or is located adjacent to the following environmental designations:<br>• Birmingham and Fazeley Canal Site of Local Importance for Nature Conservation (SLINC)/potential Local Wildlife Site (pLWS);<br>• A38 Corridor Potential Site of Importance (PSI);<br>• Peddimore Brook Valley PSI;<br>• Peddimore Hall (Grade II Listed Building) and the moated site Scheduled Monument;<br>• Peddimore Hall Grade II listed building;<br>• Six Grade II listed buildings on Wiggins Hill Lane (five) and Walmley Ash Lane (one);<br>• Birmingham and Fazeley Canal and Wiggins Hill Bridge (locally listed);<br>• Birmingham Air Quality Management Area (AQMA);<br>• *Arden* National Character Area (NCA:97);<br>• *Arden Parklands* regional character area; |



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| | • *Peddimore Hall Lowland Basin* local character area (LCA14); and<br>• *Wiggins Hill Lowland Farmland* local character area (LCA19). |
| Environmental characteristics | The Site or the immediately surrounding landscape includes the following environmental characteristics:<br>• Habitat of ecological importance, comprising hedgerow, plantation woodland, running water, wet ditches and scattered trees (**Extract 3**);<br>• Habitat understood to support/potentially support protected/important species;<br>• Environment Agency (EA) Flood Zone 1 (low probability) and Flood Zone 3 (high probability);<br>• Lighting environment comprising of an E2 Environmental Zone (low district brightness) on the edge of an E3 Environmental Zone (medium district brightness);<br>• Secondary A aquifer (superficial deposit); and<br>• Grade 2 (Very good), 3a (Good) and 3b (Moderate) agricultural land (23%, 55% and 19% respectively). |
| Evolution of the Site | In the absence of the Proposed Scheme the baseline of the Site and surrounding is anticipated to remain the same, except the following;<br>• Traffic flows are anticipated to increase;<br>• There is likely to be a decrease in concentrations of air quality pollutants ($NO_2$, $PM_{10}$ and $PM_{2.5}$);<br>• On-site habitats and continued support of similar flora/fauna;<br>• There is continued arable cultivation, which may result in increased potential damage to underlying archaeological remains; and<br>• There will an increase in Birmingham population and employment rates. |

## Proposed Scheme Characteristics

3.2 The Proposed Scheme, is set out below with key information provided within **Table 3.2**.

*'Hybrid planning application comprising: Outline application with all matters reserved for an employment park comprising B1b, B1c, B2 and/or B8 uses, including ancillary offices (B1a), gatehouses and security facilities, service yards and HGV parking, plant, vehicular and cycle parking, landscaping, pedestrian and cycle infrastructure, green and blue infrastructure, ancillary business and community facilities (D1/D2/B1a/A3/sui generis) including a multi-purpose hub building and associated development. Full planning application for a new roundabout access from the A38, construction access and compound area, internal spine road, site gatehouse, primary substation and tower, engineering operations including foul pumping station, acoustic fencing, earthwork (including creation of development plot plateaus), pedestrian and cycle infrastructure and structural landscaping including drainage infrastructure and development platform within Peddimore Brook corridor for ancillary business and community facilities'.*

3.3 A number of the physical characteristics of the Proposed Scheme (i.e. layouts, building heights, etc.) are not yet defined and therefore the Application is seeking outline consent for these elements and therefore further application(s) will be required for approval of the details of these elements. The first aspects of the Proposed Scheme to come forward, i.e. the detailed infrastructure, have been developed in detail and submitted for full approval. **Table 3.2** summarises the physical characteristics of the Proposed Scheme.

**Table 3.2: Key characteristics of the Proposed Scheme**

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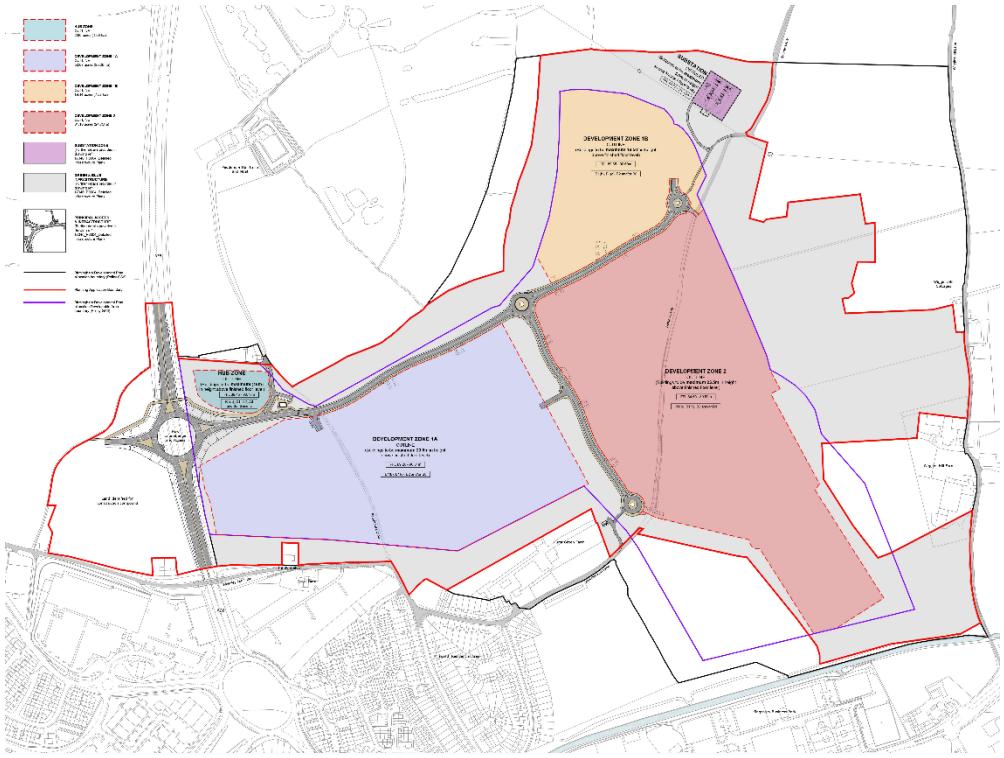
| Key characteristics | The key characteristics of the Proposed Scheme are as follows:<br>• **Employment Park**, delivered across three '*Development Zones*' which can be developed for business uses (primarily facilities for research and development, light industry and storage distribution), inclusive of supporting offices, parking, service yards and ancillary infrastructure.<br>• A new **business/community 'hub'** for business offices and may include a community centre, education/training centre or/and interpretive centre/exhibition space;<br>• **A38 Interchange** to provide access to the Site, and internal spine road to serve each Development Zone; and<br>• Multi-functional landscaping outside of the Development Zones, incorporating new pedestrian/cycle network and realignment of Peddimore Brook (collectively termed **Green and Blue Infrastructure**). |



**Extract 4 – Outline elements of the Proposed Scheme**

| | |
|---|---|
| Access and circulation | • A new roundabout will be created on the A38, just north of Minworth Island Roundabout. This will include a footpath overbridge connecting land to the east and west of the A38;<br>• Internal spine road will extend from the new roundabout to each Development Zone, inclusive of a segregated pedestrian/cycle path;<br>• Additional accesses will be provided off Wishaw Lane, albeit restrictions on access will be in place (i.e. limited to public transport/emergency vehicular use); and<br>• Footpath/cycle network provided within the **Green and Blue Infrastructure** surrounding the Development Zones, connecting to the wider footpath/cycle network. |
| Built form | • The maximum gross internal area (GIA) of all buildings, across all Development Zones and inclusive of the substation and gatehouse, will not exceed 247,716sqm;<br>• Maximum building heights will range from 5.0mAOD up to 23.5mAOD;<br>• Finished floor levels will range from 84.5mAOD up to 91.15mAOD; and<br>• External façades will use cladding/materials that are non-reflective and of a mainly neutral palette. |


**Extract 5 – Detailed elements of the Proposed Scheme**

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| Operational Strategies | The completed project includes the following key principles/strategies:<br>• A tiered surface water drainage system, compliant with relevant |



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| | guidelines/planning policy, will be implemented across the Site and include above and below ground drainage features, from all areas. Ultimately the managed/treated water will be released into the diverted Peddimore Brook at a controlled rate;<br>• A comprehensive landscape strategy will manage transition between countryside and the Proposed Scheme, enhance amenity value and respective existing characters and maximise biodiversity through careful planting and habitat selection in line with a Biodiversity Strategy. Diversity in planting will also aim to provide appropriate screening of the Proposed Scheme and create a sense of place limiting detriment to surrounding areas;<br>• Through a Biodiversity Strategy the Proposed Scheme aims to great a mosaic of high ecologically valuable habitat. This is delivered via enhanced green corridors, enhancement of blue infrastructure (i.e. Peddimore Brook and new features), habitat diversity within landscaped areas and unlit corridors/areas for bats;<br>• Acoustic fencing will be installed along the northern Site boundary and to the north of the 'Hub Zone';<br>• Lighting within the Site, required for safe operation, access and movement (including non-motorised users), will be implemented in line with relevant design guidance(s). Sensitive ecological zones will remain unlit and lighting near to it will be designed appropriately.<br>• The Proposed Scheme include an energy strategy formulated around low/zero carbon emission and passive design techniques in order to achieve; 35% reduction in carbon emissions over current building regulations; 25% reduction in regulated electricity use; thermally efficient building envelopes; air tightness above building regulations; and on-site low carbon/renewable technologies;<br>• The Proposed Scheme will generated approximately 5,470 jobs and has adopted an employment strategy to help the local community through adoption of key measures to support the local community, including young people/students;<br>• Operational activities will be 24 hours a day and 365 days a year, which will help operational traffic to avoid peak periods. |
| Construction Practices | The construction of the Proposed Scheme will include the following key practices:<br>• Stopping up of Wishaw Lane and Peddimore Lane and temporary diversion of PRoW 2086, which will be managed to ensure access is maintained at all times until implementation of permanent diversions;<br>• The new A38 roundabout will be implemented as early as possible to be used as primary construction access. Prior to its completion access will be from two locations on Wamley Ash |

| | |
|---|---|
| | Lane, either side of the A38;<br>• Hedges associated with Hurst Green Farm and around The Bungalow are to be retained;<br>• Extensive earthworks will take place, including excavation to create level plateaus. As such, all excavated, imported or exported materials will be managed appropriately. On-site retention and reuse will be maximised;<br>• Construction is anticipated to generate 205 jobs per annum, 40% will be placement/internship, 30% apprenticeships and 30% full time employees;<br>• Construction will run from Q2 2019 and be completed by 2027;<br>• Construction working hours will be 07:00 – 19:00 Monday - Friday, 08:00 – 13:00 Saturday, with no activity on Sundays or Bank Holidays; and<br>• A number of measures have been developed to control environmental effects during construction. These will be secured through a Construction Environmental Management Plan (CEMP). |

**Reasonable Alternatives**

3.4 Alternatives considered included:

- Development design (i.e. layout, size and scale);
- Location; and
- Technology.

3.5 Within the **Volume 1: – Main Text and Figures**, the above were appraised and only development design was considered relevant to the Proposed Scheme, the justification for which is summarised below.

3.6 The Site is currently allocated within the BCC Development Plan for a high quality employment site. In addition, it was deemed the best opportunity of a number of locations considered and given a shortfall of suitable brownfield sites. To this end, the allocation of the Site resulted in the Application being brought forward. As such, it considered unnecessary to repeat previously completed assessments.

3.7 The Proposed Scheme is for a number of employment uses; however, these aspects are submitted in outline. Therefore, no assessment of technology can be undertaken at this stage.

3.8 **Table 3.3** provides a summary of the assessment of alternatives focused on the various elements under development design.

**Table 3.3: Summary of assessment of alternatives**

| Alternative | Summary of assessment |
|---|---|
| Layout/Arrangement | Within the BCC Development Plan, a Growth Area boundary is defined within Policy GA6; however, a Developable Area (which is less than that growth area) is also defined. The layout/arrangement of the Proposed Scheme has limited all built form to within the Developable Area to align with the policy.<br>The Development Zones (Zones 1A, 1B and 2), have been determined in order to maximise the available area for built form. However, the distribution and its arrangement has been defined by the necessity of the primary access to and through the Site, as well as the necessity to divert the Peddimore Brook and enhance its landscape, biodiversity, and community value. In addition, Development Zone 2, in the southwest of the Site, has been set back from the designated Developable Area under Policy GA6, implemented to reduce the potential for disturbance to users of the Birmingham and Fazeley Canal, specifically visual and noise disturbance.<br>The implementation of Green and Blue Infrastructure helps to create of buffer between the Development Zones and neighbouring properties/local community which limits likelihood and severity of effects in relation to nuisance and disturbance to neighbouring properties/local community.<br>Landscape strategy maximises proposed planting and variety of planting (to replace lost features), maximises biodiversity net gain, limits effects on the setting of heritage assets and creates a facility of value for workforce and local community. |
| Size/Quantum of Land Use | The quantum has been informed by an appraisal of '*layout options*' for facilities required for each land use, based on previous knowledge of similar projects. The quantum assessed provides suitable space with Development Zones to support further screening and ability to further set back built form. |
| Scale (height) | The maximum height has been informed by the consideration of the Visual Envelope and the inter-visibility between the Site and visually sensitive receptors, including heritage assets. Specified heights are considered suitable to retain the effectiveness of the screening provided by the landscaping, whilst maintaining the viability of the Proposed Scheme. |

# 4. Effects of the Proposed Scheme

Volume 1: – Main Text and Figures, Chapter 2 – Approach to EIA;

Volume 1: – Main Text and Figures, Chapter 6 to Chapter 18

4.1 The EIA Regulations, 2017 specify that EIA must '*identify, describe and assess the direct and indirect significant effects'* of the Proposed Scheme on a number of *'factors'*. These factors, generally broken down into specific sensitive receptors, have been considered/assessed within a number of technical topics and appraised at each stage of the EIA.

4.2 The Proposed Scheme has adopted best practice guidance, in that the design development process was undertaken in conjunction with the EIA process. As such, the design has been influenced by an understanding of the environmental constraints within the Site and surrounding area and has been altered so as to avoid direct and indirect effects as far as reasonably possible. Such design changes are termed '*primary mitigation*'.

4.3 Determination of 'significant effects' was first considered at EIA Scoping, where an EIA Scoping Report (EIASR), informed by a series of baseline studies, was prepared and submitted to BCC.

**BOX 1.**

The EIASR scoped out the following technical topics:

- Waste;

- Microclimate; and

- Risk of Major Accident and/or Disasters

4.4 The EIASR undertook a preliminary assessment in order to identified technical topics and/or specific effects which were 'insignificant'. This process was used to '*scope*' the necessity for continued assessment (i.e. required consideration and reporting within the ES). The Scoping Opinion from BCC confirmed/agreed with the approach set out within the EIASR. Both the EIASCR and BCC Scoping Opinion are appended to the ES for completeness.

4.5 The technical topics considered to be '*insignificant*' (**Box 1**), as agreed with BCC were not taken forward to the next stage. As such, the ES only reported the assessment of *likely significant effects* for the following technical topics:

- Traffic and Access;
- Air Quality;
- Noise and Vibration;
- Biodiversity;
- Landscape and Visual;
- Built Heritage;
- Archaeology;
- Lighting;
- Flooding and Hydrology;
- Ground Conditions;

- Soil and Agricultural Land
- Climate Change; and
- Socio-Economics and Human Health.

4.6 The assessment of likely significant effects does vary between technical topics, but all are informed by industry guidance. The adopted methodology for each technical topic was confirmed through the EIA Scoping process. The methodologies adopted are clearly outlined for each technical topic.

4.7 The assessments of likely significant effects, is determined by considering the '*sensitivity*' of the receptors/receiving environment and the anticipated '*magnitude of change*', i.e. the scale of change from the current baseline situation based on an understanding of the Proposed Scheme. This is completed for both the construction and operation phases of the Proposed Scheme. Professional judgement is then used to determine the 'level of effect', which range from negligible (i.e. no effect) up to major and can be beneficial or adverse.

4.8 During the assessment of likely significant effects, the EIA (in line with requirements of the EIA Regulations) has considered *measures to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects*, commonly termed as 'mitigation'.

4.9 There are three forms of mitigation that can be considered within EIA when assessing likely significant effects (**Box 2**). Each type of mitigation is considered at various stages of the assessment.

**BOX 2.**

**Primary Mitigation** – modifications to the location or design of the Proposed Scheme;

**Secondary Mitigation** – further actions required in order to achieve an anticipated outcome: and

**Tertiary Mitigation** – actions that would occur with or without input from the EIA feeding into the design process.

4.10 Finally, each assessment determines if the level of effect reported is 'significant' or not. This determination is based on professional judgement and the information presented within each assessment.

4.11 A summary of the assessment of *likely significant effects* reported within **Volume 1 – Main Text and Figures**, taking each topic in turn, is provided below.

## Traffic and Transport

### What is the current situation?

- The Site includes part of the A38 (**Extract 6a**), a strategic route between Birmingham/Sutton Coldfield and the wider road network; and
- Peddimore Lane, Wishaw Lane and Public Right of Way (PRoW) 2086 all cross the Site.

### Who/what may see a change and what will the change look/feel like?

- Users of the local road network may notice an increase in delays and congestion due to temporary closures/diversions and/or increase in vehicles using the road network; and
- Non-motorised users of the local road and PRoW (mainly pedestrians) may experience changes to their journey times, temporary/permanent changes to routes, or change in the amenity value of their routes.

### How were effects considered during the design of the Proposed Scheme?

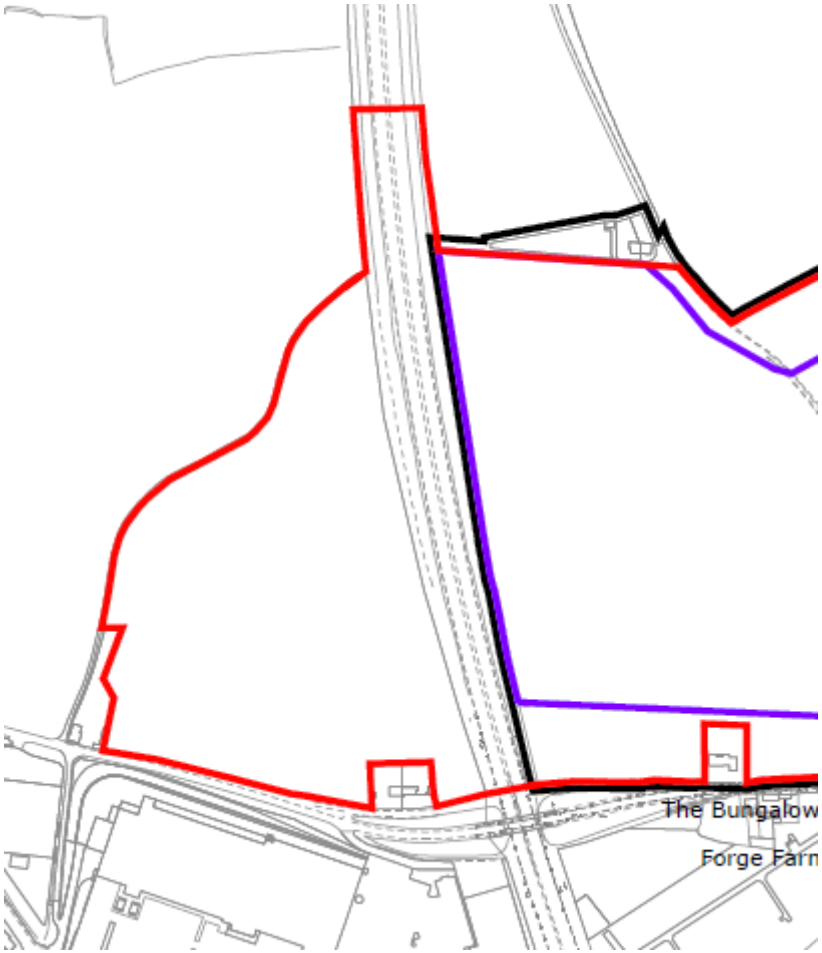
- The timings and longevity of any temporary/permanent closures/diversions to the local road/PRoW network will be appropriately managed to reduce disruption and clearly agreed and advertised in advance of these taking place;
- During construction, limitations/controls will be in place to manage the movements of construction staff, materials, plant etc. in a safe manor to help reduce disruption to local road/PRoW network;
- The new A38 interchange (**Extract 6b**) was designed to accommodate existing and future traffic volumes and reduce congestion. The timing of the work on the A38 will be agreed with BCC and then advertised well in advance of works commencing;
- A new network of pedestrian/cycle paths are to be created within the Site, all of which will connect to the wider network, including to the west of the A38; and
- The public transport network will be extended into the Site, to encourage a reduced reliance on personal vehicle use for those travelling to and from Site. This will be supported by a Public Transport Strategy prepared in in conjunction with BCC and Transport for West Midlands.

### What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

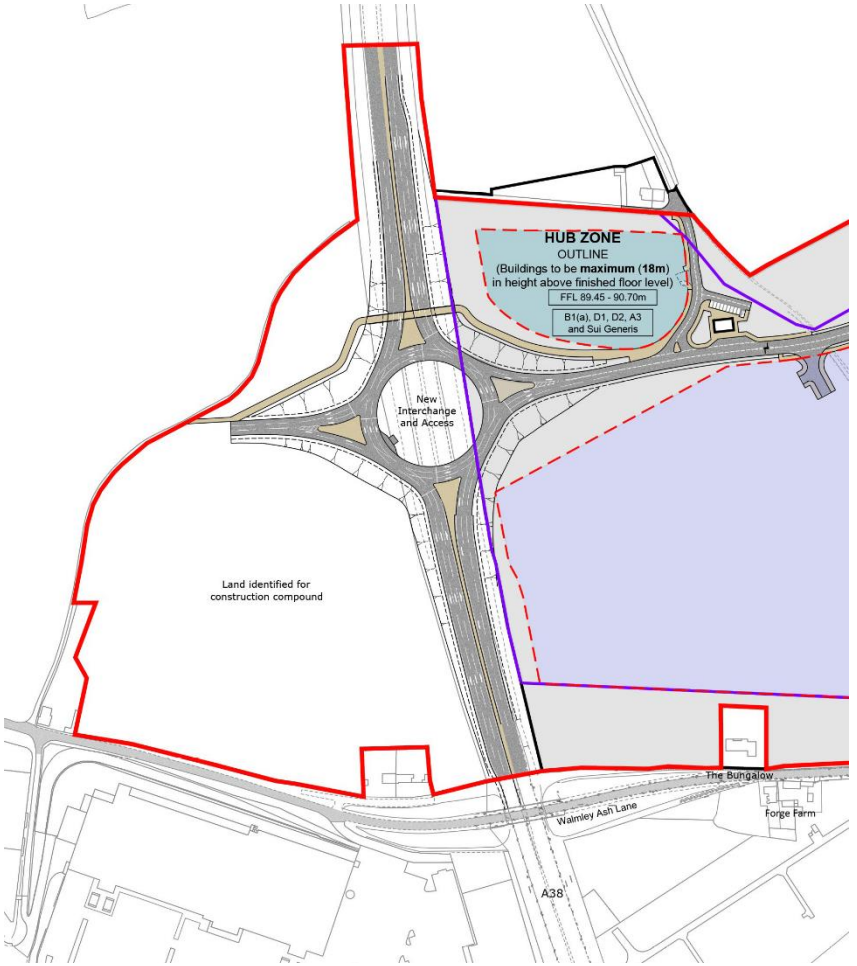
- A number of off-site improvements to local road, pedestrian and cycle network (including crossings/junctions) are suggested to improve movement of vehicles, pedestrians and cyclists in the immediate area.

### Is/Are the change(s) significant?

- All likely effects are not considered to be significant.




**Extract 6a – Exising A38**




**Extract 6b – Proposed A38 Interchange**



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## Air Quality

What is the current situation?

- The local air quality is largely influenced by the emissions from vehicle and traffic using the local road network. The Site is located within the Birmingham City wide air quality management areas, which are enacted to help control specific air pollutants, especially those associated with vehicles.

Who/what may see a change and what will the change look/feel like?

- The volume of traffic generated as a result of the Proposed Scheme will result in a change to the local air quality (specifically levels of $NO_2$) experienced by the local community, inclusive of limited number of local residential properties and community facilities (i.e. schools), located near to the local road network (**Extract 7**).

How were effects considered during the design of the Proposed Scheme?

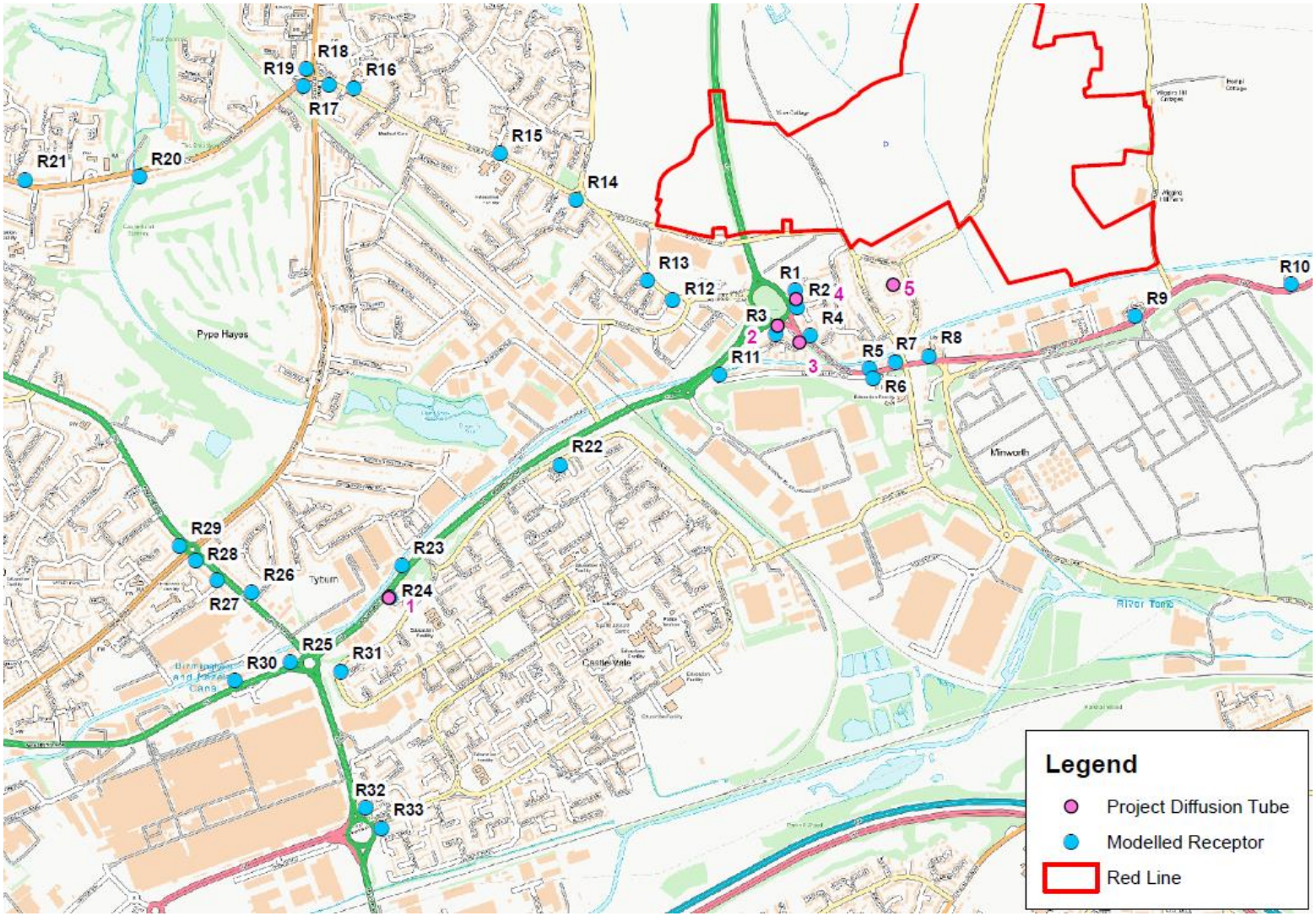
- During construction, dust and particulate matter suppression/control measures will be implemented;
- The Proposed Scheme has incorporated a pedestrian and cycle network which connects to the wider network surrounding the Site, including a bridge over the A38.
- The Proposed Scheme will connect to the local bus network, again allowing individuals to use this form of travel rather than individual vehicles;

What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- Contributions towards the setting up of a Green Travel District;
- A number of off-site improvements to local road, pedestrian and cycle network (including crossings/junctions) are suggested to further movement of vehicles, pedestrians and cyclists in the immediate area; and
- The Site will be supported by a Travel Plan which will outline suitable sustainable forms of travel, including car sharing schemes and bike hire stands.

Is/Are the change(s) significant?

- All likely effects are not considered to be significant.




**Extract 7 – Sensitive receptors assessed with respect to air quality**



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## Noise and Vibration

### What is the current situation?

- The noise environment at the Site and surrounding area is governed by road traffic associated with the local road network, including the A38; and
- The agricultural nature of the Site means there is limited noise generating activities currently located within the Site.

### Who/what may see a change and what will the change look/feel like?

- Residential properties (including canal moorings and Cuttle Bridge Inn) located near to the Site may experience an increase in noise levels and vibration as a result of temporary on-site construction activities, but only those located close to site boundary. In addition, permanent changes to noise levels could occur as a result of on-site operational activities (i.e. loading/unloading of vehicles); and
- A number of residential properties located near to the local road network may experience an increase in noise levels as a result of a temporary and permanent increase in traffic.

### How were effects considered during the design of the Proposed Scheme?

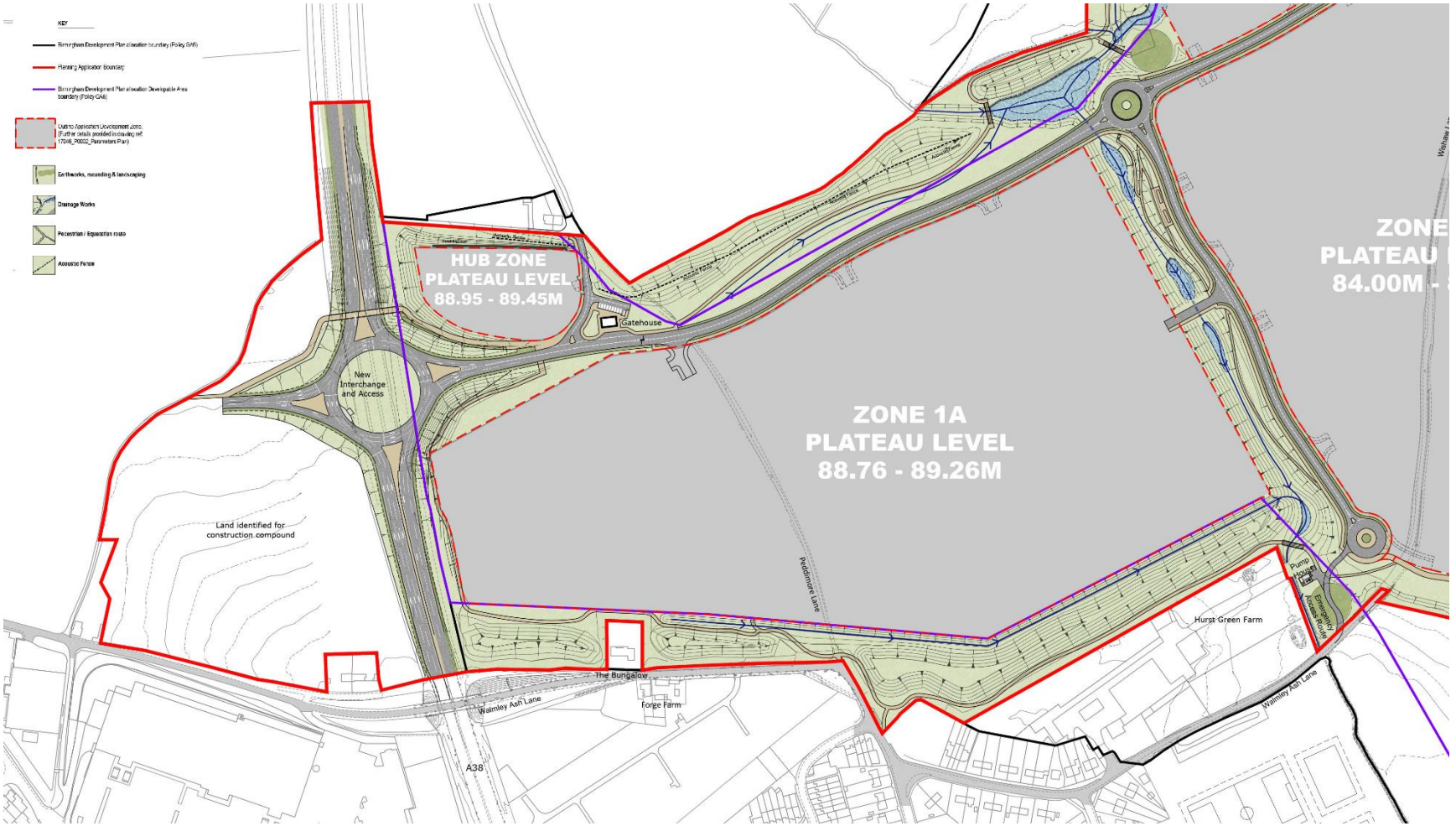
- All construction traffic will be subject to controls/limitations in terms of their movement, timings and routing to avoid disturbing local residential receptors;
- The generation of construction noise associated with on-site construction activities, will be subject to a number of best practice noise control measures, which the Applicant will be required to uphold and adhere to during construction;
- The landscaping around the Site, which incorporates mounding (**Extract 8**), are design to reduce noise levels experience by those nearby; and
- Acoustics fences have been included near to the northern boundary to further reduce noise levels experienced by those residential properties to the north.

### What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- A number of specific noisy activities during construction would benefit from additional management measures to further control noise, including minimising noisy works near to the Site boundary; adherence to agreed working hours; appropriate control of construction traffic/parking; considerate site layout which locates noise sources away from receptors; prioritisation of electrically driven equipment; switching off of vehicle engines where not in use; maintenance of plant/equipment; and use of silenced equipment where possible;
- The final layout and design (especially facades) of buildings, service yards and ancillary features within each Development Zones (which will be subject to a further application) should be appropriately designed to avoid disturbance to nearby residential properties and/or consider further noise reducing measures; and
- Noise limits for fixed plant within the Development Zones will be met that would avoid future disturbance associated with fixed plant in the future.

### Is/Are the change(s) significant?

- Noise and vibration from construction work (in close proximity to the site boundary) is considered to be significant, albeit temporary;
- Noise generated by operational traffic is considered to be significant in the short-term for a number of residential properties close to the A38, just south of the proposed access. In the long-term this effect is not considered to be significant as the anticipated changes in noise levels is considered to be less in the long-term; and
- All other likely effects are not considered to be significant.




**Extract 8 – Mounding within Green and Blue Infrastructure, around Development Zone 1A**



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## Biodiversity

### What is the current situation?

- There are two non-statutory nature conservation sites within the Site, the A38 Corridor Potential Site of Importance (PSI)I and Peddimore Brook Valley PSI;
- The Site is largely arable land, but does include some other habitats, including hedgerow, woodland and scattered trees and running water, which have greater ecological value; and
- The Site is considered to support some protected species, including bats, terrestrial mammals (badger and hedgehogs) and breeding and wintering birds.

### Who/what may see a change and what will the change look/feel like?

- Two non-statutory nature conservation sites (A38 Corridor and Peddimore Brook Valley PSI) will be lost at the outset;
- There are a number of ecologically valuable habitats within the Site that will be lost as result of the Proposed Scheme, as well as habitat that supports declining farmland bird species and the proposed operations within the Site could result in disturbance to breeding and wintering birds; and
- The project will deliver biodiversity net gain.

### How were effects considered during the design of the Proposed Scheme?

- During construction a number of measures have been set out to minimise effects to retained ecological habitat/features, including pre-commencement surveys, ecological method statements, timing/supervision of construction activities, location of material store, no works areas and appropriate application of temporary lighting. Where a protected species license is considered necessary, this will be obtained via Natural England;
- Landscaping within the Site, within the Green and Blue Infrastructure Landscaping, has been designed in accordance with a number of ecological principles. These principles will deliver diverse habitat creation/enhancement and biodiversity net gain (**Extract 9**). The creation will offset the habitat loss within the Site. In addition the landscape will be appropriately managed with biodiversity and protected species in mind, with careful management practice that will not result in the killing, injury or disturbance protected species and on-going monitoring of habitat conditions;
- An appropriate surface water management system and strategy has been designed to control water runoff and provide permanent water within the realigned Peddimore Brook, so as to support ecological diversity; and
- The lighting strategy is designed to avoided disturbance to sensitive ecological receptors/habitats.

### What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- A 20mph speed limit is to be in place along the primary access road within the Site, to reduce potential mortality to terrestrial mammals; and
- Nest boxes for breeding birds will be distributed around the Site in undisturbed locations.

### Is/Are the change(s) significant?

- Loss/disturbance of habitat during construction is considered to be adverse, however, the resulting habitat creation within the Proposed Scheme is beneficial in the long-term. Only disturbance to breeding and wintering birds from on-site activities had a long-term adverse effect. The loss of habitats during construciton were considered to be significant and adverse. The creation of new habitats as part of the Proposed Scheme were considered to be significant and beneficial.


**Extract 9 – Proposed habitats within Green and Blue Infrastrcuture**



Turley

## Landscape and Visual

### What is the current situation?

- The Site is considered to be irregular in shape, located within a topographical '*basin*' and comprising of approximately 7 arable fields, dissected by a number of roads, a single PRoW (2086) and Peddimore Brook;
- The Site contains a limited number of trees and hedgerows, albeit a small woodland is present near to Wiggins Hill Cottages; and
- The Site is located within the Arden Parklands regional landscape character areas; Peddimore Hall Lowland Basin; and Wiggins Hill Lowland Farmland local landscape character areas.

### Who/what may see a change and what will the change look/feel like?

- The Site will be changed from its existing arable, gently rolling landscape, inclusive of a number of landscape features to a level plateau with built form and therefore its 'character' will change;
- Views of the Site, from residential properties, the local road network and surrounding landscape will change with the Proposed Scheme in place; and
- Peddimore Brook will be realigned and there will be the creation of new pedestrian/cycle routes. Therefore the experience of the Site by the local community will change.

### How were effects considered during the design of the Proposed Scheme?

- The Proposed Scheme has looked to retain, protect and enhance existing boundary planting where possible;
- The Green and Blue Infrastructure landscaping has been designed to incorporate natural slopes with planting to help screen the Proposed Scheme from the wider landscape, residential properties and local community, as best as possible (**Extract 10**);
- Planting proposals will make use of low and high screening and include a percentage of evergreen and faster growing species, all designed to help provide adequate screening of the Proposed Scheme (as best as possible); and
- A 20 Year Landscape Management Plan has been prepared which outlines how all landscape elements are to be appropriately managed to maintain the mitigating effects of the landscaping within the Site (i.e. visual screening etc.).

### What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- All landscaping to be implemented within the Development Zones (subject to further application/s) will need to be carefully designed to coincide with the wider Site and key characteristics of the local landscape character; and
- The design of built form within the Development Zones, including façade finishes and colouring (subject to further application/s) will further reduce visual effects.

### Is/Are the change(s) significant?

- Changes to the land use and topography of the Site, to the local landscape character, a number of views from residential properties and PRoW (and canal) where considered to be adverse and significant;
- The creation of new access routes and public open space were determined to be significant and beneficial; and
- All other effects were not considered significant.


**Extract 10 – Landscaping within Green and Blue Infrastructure, around Development Zone 1A**



Turley

## Built Heritage

### What is the current situation?

- There are a number of built heritage assets present close to the Site (up to 2km), including: Moated site at Peddimore Hall (Scheduled Monument); Peddimore Hall, The Old Barn, Old Barn Cottage, Wiggins Hill Farmhouse, Dovecote and Stable at Wiggins Hill Farm and Forge Farmhouse (Grade II Listed Buildings); and Farm buildings adjacent to Peddimore Hall (locally listed building).

### Who/what may see a change and what will the change look/feel like?

- Built heritage assets (designated and non-designated) may be subject to a change to their historic setting due to temporary works and activities on site, as well as the long term operational activities on-site.

### How were effects considered during the design of the Proposed Scheme?

- All construction works will occur within the Site and therefore there will be no physical/direct interaction with the built heritage assets. The use of hoarding/fencing around the Site will also provide an element of visual screening during construction.
- The construction of landscape mounding, as part of the Green and Blue Infrastructure will help to provide an element of screening, lessening the impact to the setting of built heritage assets;
- Hedgerow planting, especially parallel to Wiggins Hill Road will help to reinstate historic field pattern character, which contributes to the setting of some assets; and
- The design principles proposed for built form, which includes guiding principles for facade colouring and architectural features to reduce massing, will help to reduce the visual dominance of the built form.

### What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- The exact design of the built form within the Development Zones (subject to further application/s) will provide further details on how the design principles have been applied.

### Is/Are the change(s) significant?

- Effects on the Scheduled Monument and Grade II Listed Buildings designated heritage assets were found to be adverse and significant.
- Likely effects on non-designated heritage assets was not considered significant.

## Archaeology

What is the current situation?

- Evidence from previous archaeological investigation works and other sources suggest that the Site could include archaeological features from a number of periods in history, including palaeoenvironmental, prehistoric and medieval. It is know that a medieval earth bank is present along the northern boundary of the Site and a Royal Observer Corps (ROC) nuclear monitoring post is located within the Site; and
- The Site also includes two features that contribute to the historic landscape character of the Site; Wishaw Lane and a number of historic field boundaries.

Who/what may see a change and what will the change look/feel like?

- Changes to the existing ground levels during construction or any construction works that extend below ground, can result in the loss or damage of unknown archaeological assets present within the Site, which may include prehistoric and medieval archaeological remains and historic evidence associated with former stream channels; and
- Development of the Site will remove surface features that contribute to historic landscape character.

How were effects considered during the design of the Proposed Scheme?

- The medieval earthwork bank (lynchet) and ROC nuclear monitoring post, north of Wiggins Hill Farm have been incorporated into the Green and Blue Infrastructure and will be preserved.

What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- The best course of action for archaeological remains is a programme of further archaeological excavation and recording of any assets found on the relatively small proportion of the Site left to be investigated, as agreed by BCC.

Is/Are the change(s) significant?

- All effects are considered not to be significant.

## Lighting

### What is the current situation?

- The Site does not currently include any lighting installations, the closest installations are located at Minworth Island Roundabout and the surrounding urban environment. As such the lighting environment of the Site is classified as a low district brightness area on the edge of a medium district brightness area.

### Who/what may see a change and what will the change look/feel like?

- Residents in close proximity to the Site may be subject to lighting intrusion and glare in the short-term; and
- Residents (including those further away from the Site) may be subject to a change in visual amenity as a result of the new lighting, although this is limited to the short-term, whilst planting matures.

### How were effects considered during the design of the Proposed Scheme?

- All the lighting associated with the A38 Interchange and the internal spine road have been designed to specified national standards (i.e. British Standards). This ensures there are no effects associated with lighting associated with the A38 and internal spine road;
- The mounding included within the Green and Blue Infrastructure area will go some way to limit views either completely or in part for a number of residential properties; and
- The strategy for planting within the landscape areas specifies the use of varied height species at the outset. This will also help to reduce views of lighting for residential properties, both initially and in the long term.

### What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- Lighting associated within the Development Zones will be subject to further application/s and detailed lighting design in accordance with national standards and within the 'environmental zones' identified.

### Is/Are the change(s) significant?

- All effects are not considered to be significant.

## Flooding and Hydrology

### What is the current situation?

- Peddimore Brook is the only surface water features within the Site, which ultimately flows to the River Tame (approximately 1.23km downstream); and
- The majority of the Site falls within a low probability flood zone (less than a 0.1% annual probability), with a small amount falling partially within a high probability flood zone (a 1% or greater annual probability).

### Who/what may see a change and what will the change look/feel like?

- There will be an improvement in the protection from flooding. The realigned Peddimore Brook will be more natural in character and will be controlled through sustainable urban drainage.

### How were effects considered during the design of the Proposed Scheme?

- Throughout construction an approved temporary drainage strategy will be adhered and implemented in sequence to make sure there are no changes to water management;
- A permanent drainage strategy, which includes attenuation systems (above and below ground), has been prepared in line with national and local guidance, controlling surface water runoff and the rate of discharge off-site;
- The realignment of Peddimore Brook will be managed appropriately, using temporary coffer dams to create safe working areas, but accompanying by pumping to allowing continued flow, thus not changing the flow regime; and
- The new alignment and design of Peddimore Brook was chosen to align with the natural valley line. It will promote a more natural watercourse and has been designed to cope with a high risk fluvial flood event but maintain a continual flow for biodiversity benefits.

### What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- A method statement for the diversion of Peddimore Brook will be submitted to BCC for approval prior to any works; and
- A site wide flood management plan will be prepared and implemented during construction.

### Is/Are the change(s) significant?

- Construction related effects are not significant due to the measures committed to.
- The permanent changes to Peddimore Brook is significant and beneficial, both in terms of protection from flooding in the catchment and how the flow regime can be controlled.

## Ground Conditions

### What is the current situation?

- The Site is agricultural and has been for some time (circa. late 1800s). As such, the geology of the Site is largely top soil that cover a number of deposits and bedrock that are common for the region;
- Groundwater within the Site does vary, with the highest levels recorded at 0.6m below ground level;
- Evidence from ground investigations works has not identified significant accumulation or migration of ground gas or soil, leachate, groundwater or surface water contamination; and
- A number of 'landfill' sites around the Site were identified, but none overlap with the Site.

### Who/what may see a change and what will the change look/feel like?

- Construction workers, when undertaking works may be exposed to contaminants associated with historic land uses.

### How were effects considered during the design of the Proposed Scheme?

- A large number of control mechanisms are required under legislation and guidance so that construction activities do not put construction workers at harm. Throughout construction these measures/mechanisms will be adhered to.

### What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- In the event that unexpected contaminants are identified, this will be the subject of standard protocol adopted on construction sites, including notification to BCC and remediation.

### Is/Are the change(s) significant?

- The effects are not considered significant.

## Soil and Agriculture

What is the current situation?

- The 110ha Site is largely arable fields and includes 85.7ha of best and most versatile agricultural land (**Extract 11**). This forms part of Wiggin Hill Farm holding, which is a tenanted farm holding, extending to approximately 320ha.

Who/what may see a change and what will the change look/feel like?

- Much of the agricultural land will be lost due to the construction of the Proposed Scheme;
- The structure and characteristics of the soil and its value as a resource will be altered/lost as a result of earthworks and new structures within the Site; and
- The Site will no longer be part of the workable farm land within Wiggins Hill Farm holding.

How were effects considered during the design of the Proposed Scheme?

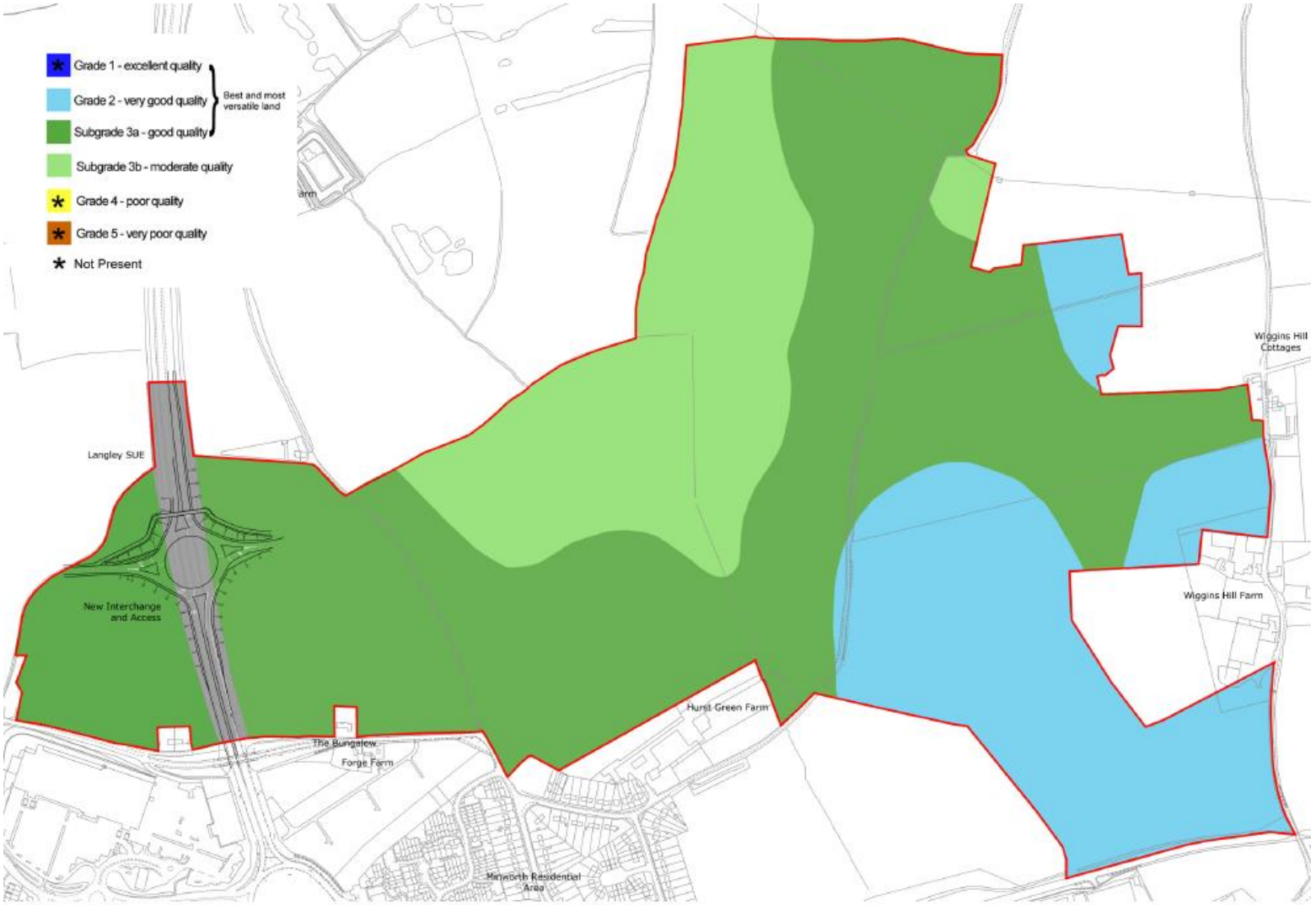
- Earthworks and soil reuse will be undertaken in line with a Soil Resource Management Plan, aimed to ensure soil is handled, stored or replaced according to good practice. The focus will be on the reuse of soils for their most suitable purposes.

What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- It is not possible to mitigate the direct loss of agricultural land in the same location and to the same extent.

Is/Are the change(s) significant?

- Both the loss of best and most versatile agricultural land and the effects on farm holdings are significant and adverse.
- The loss of soil or change to its properties during construction is not considered to be significant, following mitigation.




**Extract 11 – Agricultural land classification at the Site**



Turley

## Climate Change (including adaption)

What is the current situation?

- The Site contributes to a wider local, regional and national greenhouse gas budget.

Who/what may see a change and what will the change look/feel like?

- Both the construction of the Proposed Scheme and its operation will contribute toward the release of greenhouse gas;
- In addition, the built form within the Proposed Scheme has the potential to overheat in times of increased high temperatures, which could occur more frequently in the future. This will be experienced by the workers and users of the buildings; and
- The Proposed Scheme itself, as a whole and individually is susceptible to changes as a result of a changing climate, this could influence the working environment both during construction and operation, as well as the design specifics of the Proposed Scheme (e.g. planting proposed).

How were effects considered during the design of the Proposed Scheme?

- Targets have been set for carbon emissions, electricity usage, and air tightness values;
- Renewable energy technologies will be used to generate electricity and heat;
- All on-site operations (i.e. within the workplace) during construction and operations will adhere to health and safety standards/requirements as set out in national legislation and guidance; and
- All building design and elements proposed as part of the Proposed Scheme have considered measures to ensure climate resilience.

What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- When specifics of the building requirements are understood, a lifecycle assessment of construction materials is to be undertaken to target a 10% reduction in associated emissions; and
- The final design of the buildings within the Development Zones (subject to further application/s), will be subject to thermal modelling to determine any further requirements for control to heating/cooling with buildings.

Is/Are the change(s) significant?

- All effects are not considered to be significant.

## Socio-Economics and Human Health

What is the current situation?

- The unemployment rate in Birmingham is higher than the regional and national average and the economic activity rates is lower.
- Industrial and logistics-based jobs make up 11.8% of employment in Birmingham; and
- Access to greenspace amongst nearby households varies; in Walmley access to open space was considered to be relatively good, while access for households in Minworth were considered to be poor.

Who/what may see a change and what will the change look/feel like?

- New jobs will be generated during the construction of the Proposed Scheme and when operational, contributing to the generation of economic productivity;
- There will be increased work and training opportunities which will indirectly have health benefits; and
- Access to open space, nature and cycle paths/walkways, which again will bring about health benefits.

How were effects considered during the design of the Proposed Scheme?

- All construction works and future on site operations will adhere to Health and Safety standards; and
- The Proposed Scheme has included a large area of multi-functional landscaping, providing key amenity areas, pedestrian/cycle network connecting to the wider network, designed to support all occupiers and users.

What further measures would be implemented to mitigate any impacts or enhance the Proposed Scheme?

- No additional measures have been identified.

Is/Are the change(s) significant?

- Effects in relation to the creation of employment opportunities (during construction), economics productivity (during construction and operational) and access to open space are all beneficial but are not considered significant;
- The improvements to health associated increased work and training opportunities during the construciton and operational phase are considered to be beneficial and significant; and
- Effects in relation to the creation of employment opportunities during operation is considered to benefical and significant.

# 5. Cumulative Effects

Volume 1: – Main Text and Figures, Chapter 19 – Cumulative Effects Assessment

5.1 It is a requirement of the EIA Regulations, 2017, for the EIA to assess the cumulative effects arising from the Proposed Scheme. There is no standard methodology for the assessment of cumulative effects but it is common for cumulative effects to be broken down into two types of effect, *Effect Interactions* and *In-combination Effects*, which are defined in **Box 3**. Both of these cumulative effects have been assessed.

5.2 The assessment of effect interactions identified that interactions were limited to two receptor groups: *Population and Human Health* during both construction and operational phase, and *Cultural Heritage* during construction only

5.3 Whilst effect interactions were identified to *Cultural Heritage* (in relation to below and above ground heritage assets), where relevant, this was already considered in **Volume 1: - Main Text and Figures, Chapter 11: Built Heritage** where both below ground and above ground aspects of Peddimore Hall are comprehensively assessed in-combination.

**BOX 3.**

**Effect Interactions:** the interaction of environmental effects of the Proposed Scheme affecting the same receptor, either within the Site or in the local area.

**In-combination Effects:** the combination of environmental effects of the Proposed Scheme with approved project(s), affecting the same receptor

5.4 The effect interactions reported for *Population and Human Health* were principally in relation to the local community, in particular those in close proximity to the Site who are likely to experience a number of effect interactions. These are in relation to adverse effects associated with traffic congestion and construction noise/vibration and beneficial effects associated with employment generation and improved heath (from increased work and training opportunities). During operation, the effect interactions are similar (traffic congestion and noise) but with the addition of changing pollutant concentrations, views and nuisance from lighting. These are likely to interact with beneficial effects associated with reducing flood risk, employment opportunities, generation of economic productivity, improved heath (from increased work and training opportunities) and access to open space, nature and accessibility to cycle paths and walkways.

5.5 Approved projects for consideration of in-combination effects was determined by a three step approached, summarised below.

- **Step 1**: Review of planning applications submitted to BCC in the last 5 years for projects under construction, permitted but not yet implemented, submitted but not determined or applications refused that are being appealed;
- **Step 2**: Those identified were then appraised against three criterion:

- Concurrent construction or operational phase with the Proposed Scheme;
- Relevant scale, determined as the thresholds under Schedule 2 of the EIA Regulations; and
- Relevant geographical boundary and common receptors.

- **Step 3:** Identification of common receptors and presence of an effect on the same receptors (from both schemes) for a similar duration.

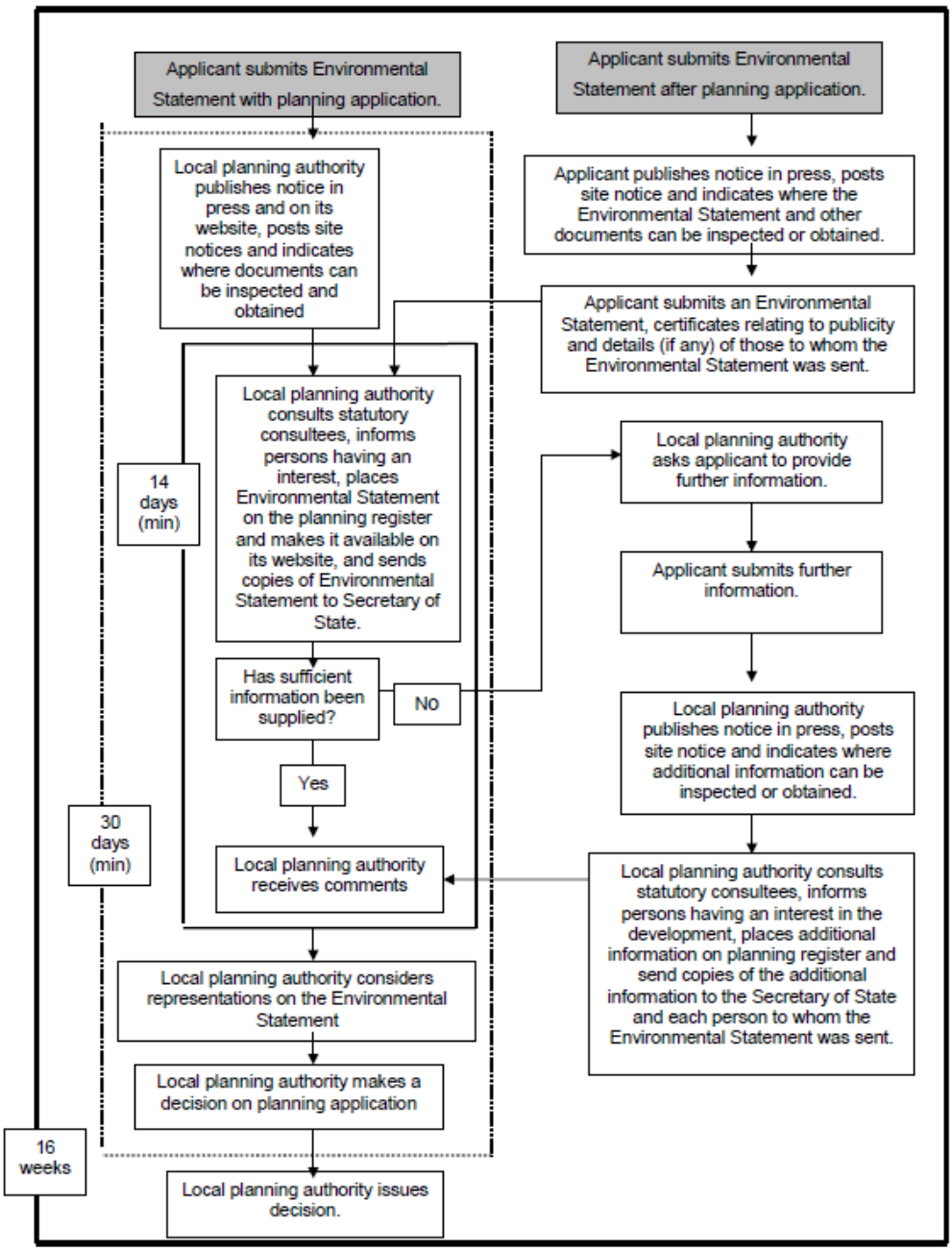
5.6 It is also worth noting that the Sustainable Transport Strategy which supports the planning application has separately considered the in-combination of traffic from the Proposed Scheme and the Langley Sustainable Urban Expansion project as part of a programme of scenario testing undertaken. This has informed potential mitigation to ensure that the existing highway network could accommodate Langley SUE in-combination with the strategic growth applied to Saturn Traffic Model.

5.7 In general, the assessment of in-combination effects identified that there are limited common receptors, or where a common receptor was identified, the in-combination effect had either already assessed within the Technical Chapters (in the case of traffic related effects) or the effects were considered no greater than that assessed for the Proposed Scheme in isolation. The only in-combination effects identified which were considered significant were with respect to changes in flood risk and the generation of direct and induced employment, both of which are beneficial.

# 6. What Happens Next

6.1 As outlined within the **Introduction**, the Environmental Statement comprising of all three volumes, has been submitted to BCC in support of the Application and is a material consideration during the determination of the Application by BCC.

6.2 The process for the submission and determination of the Application, including anticipated timeframes, is outlined in **Extract 12**.




**Extract 12 – Summary of submission and determination process**

6.3 The Application will be submitted in both digital and hard copy, with a number of hard copies of the ES provided to BCC for distribution to established locations, where members of the public can view the documents. All documentation will also be published on the BCC website for viewing and downloading.

6.4 Copies of the ES can be requested from the Application and Turley for a fee of £500 (hard-copy) or £5 (digital file); contact details are provided in **Box 4**.

6.5 As indicated in **Extract 12**, the process for determination of the Application (once validated) is 16 weeks. BCC can request an extension to this period, if agreed in writing with Applicant.

6.6 During the determination of the Application, members of the public have an opportunity to comment on the application via BCC, either in writing or via the BCC planning portal website (**Box 4**).

**BOX 4.**

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