



# ARCUS

## RETFORD CIRCULAR ECONOMY PROJECT

### TECHNICAL APPENDIX 3.1 SOCIAL, HEALTH AND WELLBEING IMPACTS TECHNICAL NOTE

FEBRUARY 2023



## 1 INTRODUCTION

This technical note summarises the anticipated social, health and wellbeing impacts of the Proposed Development. It has been agreed with Nottinghamshire County Council (NCC) that the anticipated socio-economic effects are not considered to be significant in an EIA context and therefore do not require specific assessment. Nonetheless, the Proposed Development has some potential, if not appropriately managed, to affect job creation, local supply chains, local accommodation and visitors to the Idle Valley Nature Reserve and associated visitor centre, which are the subject of this technical note.

It has been produced primarily in response to consultation comments received from the Nottinghamshire Wildlife Trust (NWT) prior to submission of the planning application for the Proposed Development.

The World Health Organization (WHO) defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (illness).” WHO defines wellness as “the optimal state of health of individuals and groups,” and wellness is expressed as “a positive approach to living.”

Health is influenced by a range of factors, termed the ‘wider determinants of health’. Determinants of health span the bio-physical, social, behavioural, economic and institutional factors.

## 2 LEGISLATION

The legislative basis of EIA requirements across England, Wales, Scotland, Northern Ireland and the Republic of Ireland derives from the EU EIA Directive 2011/92/EU, as amended by 2014/52/EU. This is variously transposed into a range of national EIA legislation. Given the diversity of national legislation, the common origin of the EU Directive wording remains informative and adequately summarises the current requirements.

The NCC Joint Health and Well Being Strategy 2022-2026 sets out an overarching vision of “*Working together to enable everyone in Nottinghamshire to live healthier and happier lives, to prosper in their communities and remain independent in later life*”.

The Bassetlaw Local Plan 2020-2037: Publication Version: August 2021 also sets out policies to:

- *'Promote and support the development and growth of social capital across the District.*
- *Create high quality employment opportunities.*
- *Develop a strong culture of enterprise and innovation.*
- *Provide the physical conditions for a modern economic structure, including infrastructure to support the use of new technologies.'*

## 3 RECEPTORS

Within the local area there are a number of receptors whose health, wellbeing and livelihoods could potentially be affected by the Proposed Development over the approximate 25 years of its life cycle. These include:

- Local residents;
- Users of the local footpaths and bridleways;
- Visitors to the Idle Valley Nature Reserve and the visitor centre; and

The following sections of this statement examine the impacts of the Proposed Development on these receptors and provides a judgement as to whether they would be affected adversely or beneficially by the Proposed Development.

## 4 TRAFFIC AND TRANSPORT

### 4.1 General

The Proposed Development would be accessed via a priority junction from the A368, which includes a ghost island right turning lane within the main road. The same access from the A368 is also shared with the Idle Valley Nature Reserve visitor centre and the existing Bellmoor Industrial Estate.

Visitors to the visitor centre share approximately 125 metres of access road before turning off to the east to the visitor centre access road, and the Bellmoor Industrial Estate is a further 225 metres along the access road. The estate road carries traffic associated with a number of existing industrial / business uses, including offices associated with Bellmoor Industrial Estate. These include similar vehicles to those associated with the Proposed Development.

To ascertain the potential effects of the Proposed Development on traffic volumes along the access road, both a traffic count survey and capacity assessment have been undertaken, with the results of both presented in full in the Transport Statement (ES **Volume 2, Appendix 14.1**). During the operational phase, the Proposed Development is expected to generate a maximum of 68 one-way vehicle trips per day. This equates to a total two-way traffic flow of 136 vehicles comprising 96 HGV movements and 40 staff movements. Construction traffic associated with the Proposed Development is anticipated to generate approximately 20 two-way HGVs on average per day during the peak month of a relatively short main construction period (6-12 months).

The operating hours for extraction and HGV exports would be limited to the following:

- 07:00 to 19:00 Monday to Friday; and
- 07:00 to 13:00 Saturday, with no HGV movements on Sundays or Bank Holidays.

The operating hours for the Main Processing Site would be 24 hours per day in order to allow for sufficient amounts of PFA to be processed to meet the maximum operational tonnage of 300,000 tonnes per annum. However, importantly, there would be no exports outside of the operating hours for extraction and HGV exports.

The assessment found that increases in traffic arising from the Proposed Development would be low accounting for a small 2% increase in traffic on the surrounding road network.

To avoid any potential issues arising from construction traffic e.g., bottlenecking or congestion on the shared access road access it is anticipated that traffic movements would be controlled using a range of best practice measures to be implemented through a Construction Traffic Management Plan (CTMP) secured by a suitable planning condition.

Also, the following avoidance measures would be considered in relation to the traffic forecasts and impacts during operation:

- Operational Traffic Management Plan (OTMP), to mitigate the impact of the operational phase and associated traffic.
- Staff Travel Plan to reduce the number of employees travelling to the Site by single occupancy car.

With these measures in place and also the low volume of traffic generated by the Proposed Development, it is considered that impacts for other businesses within the Bellmoor industrial Estate and staff and visitors to the Idle Valley Nature Reserve would not be adversely affected.

## 4.2 Parking provision

Vehicle parking would be provided with 18 parking spaces within the curtilage of the Site for use by staff and visitors. It is considered that this level of parking is appropriate for the proposed type of land use where the shift patterns are of an overlapping nature. In addition, adequate parking for HGV loading and unloading is provided. There would therefore be no need for vehicles to park outside the curtilage of the Proposed Development or queue on the shared access road.

An assessment of 2024 baseline traffic flows shows changes that would not be noticeable to other drivers and would not create or add to any existing levels of congestion or road safety. For users of the NWT visitor centre, there would be no delay in entering the site and given the existing use of the access road for HGV movements and the existing level of HGV movements on the local road network, there would be minimal change in the perceived road use and amenity.

## 5 LOCAL EMPLOYMENT AND THE ECONOMY

Temporary jobs would be created during the construction phase; however, this is expected to be relatively limited as part of the required infrastructure already exists due to the legacy of quarrying and industrial activity at the Site. This includes an existing highway access and areas of hardstanding at the Bellmoor Industrial Estate.

Due to the specialist nature of the Proposed Development, it would not be appropriate to calculate the anticipated numbers of jobs arising based on employment densities<sup>1</sup>. In any event, the use of such guidance would lead to an over-estimate of the number of jobs expected to be created. The Applicant estimates that the Proposed Development would create up to 20-30 new full-time jobs during the operational phase, working a mix of 'shift' and 'day' roles and as such would travel to and from the Site at a variety of times during the day.

Once operational, the Proposed Development would be expected to create additional indirect roles in the local community. This can be calculated using the approach set out in the Homes and Communities Agency Additionality Guide<sup>2</sup> as set out in **Table 1**.

**Table 1 - Indirect Employment Effects Employees (FTE)**

<b>A</b>	Direct full-time roles	20
<b>B=Ax25%</b>	Estimated leakage (medium 25%)	5
<b>C= A-B</b>	Gross local direct effects	15
<b>D=C*50%</b>	Displacement (50%)	7.5
<b>E=C-D</b>	Net local direct effects	7.5
<b>F=Ex(1.1)</b>	Multiplier (Medium 1.1)	8.25
<b>G=E+F</b>	Total net local effects	15.75

Based on the 20 minimum operational roles, the estimated effect of the Proposed Development on indirect employment is 15-16 FTE roles.

It is considered that construction workers may use the facilities at the visitor centre, such as the café, adding economic benefit here. Operational workers will have an on-site canteen

<sup>1</sup> Homes and Communities Agency (2015) *Employment Density Guide 3<sup>rd</sup> Edition* [withdrawn]

<sup>2</sup> Homes and Communities Agency (2014) *Additionality Guide 4<sup>th</sup> Edition*. Available online: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/378177/additionality\\_guide\\_2014\\_full.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/additionality_guide_2014_full.pdf)

provided due to the 24-hour shift pattern but may still choose to use the visitor centre café during opening hours.

Benefits to hospitality businesses in the wider area are likely during the construction and operational phases of the Proposed Development, as construction workers/employees are likely to spend a proportion of their salaries in local shops, hospitality venues (including public houses) and on local accommodation if required.

Where possible local contractors would be encouraged to tender for construction, operation and maintenance work to ensure maximum benefit to local communities. The Applicant is already talking to several local contractors and plant suppliers, in regard to contracts that amount to many millions of pounds (£).

## **6 HEALTH AND WELLBEING IMPACTS**

The ES provides a detailed assessment of the potential health and wellbeing impacts of the Proposed Development in the relevant technical chapters, namely:

- Ground Conditions and Contamination (including human health);
- Noise;
- Air Quality;
- Climate Change and Sustainability; and
- Landscape and Visual.

Reference should be made to the specific ES chapters for a detailed assessment of these topics and to the NCC Rapid Health Impact Assessment Matrix provided in Volume 3,2.

Given the scale of employment associated with the Proposed Development and the measures in place to employ staff from the local area during the lifecycle of the Proposed Development, any impacts or demographic changes that would impact on housing and educational resources in the area would be expected to be negligible.

### **6.1 Ground Conditions and Contamination**

The Proposed Development would provide betterment from a contamination perspective, through removal of the PFA and protection of identified receptors. The Site would be licensed under an environmental permit, and therefore restoration would be undertaken in accordance with an Environment Agency construction quality assurance (CQA) plan and would also meet the requirements of the Outline Construction Environmental Management Plan (OCEMP), a Water Construction Environmental Management Plan (WCEMP) and Soil Management Plan (SMP). As such, no significant effects on human health have been identified resulting from ground conditions and contamination during the construction, operation or restoration phases of the Proposed Development.

### **6.2 Noise**

Changes in noise levels as a result of the Proposed Development have the potential to adversely affect the amenity value of the Idle Valley Nature Reserve for visitors using the footpaths in the area and the Wildlife Trust visitor centre. However, as demonstrated in Volume 1, Chapter 12: Noise and Vibration, although there would be potential increases in noise generated these would be heard against the background of noise currently generated from the Bellmoor Industrial Estate. As part of the noise assessment, background (ambient) noise levels were taken for noise sensitive receptors (NSR) within the Idle Valley Nature Reserve, at properties close to the Proposed Development on the A638, Sutton Road and Lound Low Road (refer to Volume 1, Chapter 12: Noise and Vibration, Table 12.13 and Figure 12.2). At these locations noise levels were predicted for noise generated by construction traffic and from the extraction and restoration activities. Based on a total of 50 vehicles per day during peak construction phases, the increase in traffic noise at NSRs in the vicinity of the A638 would be less than 1dB(A) which would be negligible.

For the operational phases, the noise assessment concluded that the main noise impacts would be short-term temporary construction and restoration activities resulting from the removal of existing embankments to provide fill for the voids left after the PFA extraction. To mitigate this a range of measures are proposed which include:

- Fitting all vehicles and mechanical plant with effective exhaust silencers;
- Shutting down or throttling down machines during intervening periods between use;
- Placing ancillary plant in areas to cause minimum noise disturbance, and providing acoustic enclosures where necessary;
- Limiting use of noisy plant to core daytime periods where practicable;
- Retaining as much of the existing sandstone embankment throughout the works as possible, to provide some level of screening for the NSRs;
- Restoration works being undertaken within line of sight of any NSR to be completed as efficiently and as quickly as possible; and
- Acoustic blankets attached to Heras fencing to provide local mitigation at the Site boundary where line-of-sight to affected NSRs is identified.
- Establishing channels of communication between the contractor/developer, NCC, and residents.

The anticipated increase in noise has therefore, been predicted to be sufficiently low that any effect on local residents an recreational amenity for users of the local Public Rights of Way (PRoW) networks and visitors to the Idle Valley Nature Reserve and visitor centre would be minor.

### 6.3 Air Quality

An air quality assessment has been undertaken in support of the Proposed Development to assess the effects of the Proposed Development on human health resulting from dust and ambient pollution during both the construction and operational phases. In summary, there would be a negligible effect on health, including the health of those visiting the nature reserve, as a result of the Proposed Development, as pollution concentration changes are anticipated to be negligible, owing to the extensive mitigation deployed including the fully enclosed processing in the Main Processing Site and the range of measures comprised in the Dust Management Plan.

### 6.4 Climate Change and Sustainability

The Proposed Development presents a unique opportunity to recycle and use waste PFA by-products derived from the historic burning of coal in power stations. This use of PFA provides for a substantial reduction in net greenhouse gas emissions when compared to traditional Portland Cement, contributing to the national 'net zero' climate change target.

The biodiversity-led restoration of the Site, implemented progressively post extraction, would provide an opportunity to restore the landscape, taking full consideration of the need to conserve existing farming activities and provide valuable habitats.

### 6.5 Landscape and Visual

A landscape and visual impact assessment has been undertaken that has found the effect on the Idle Valley Nature Reserve Riverside Discovery Walk and the Woodland Walk to be negligible throughout the whole project lifecycle. This is primarily due to the existing perimeter woodland and tree planting screening views towards the Site from these areas within the Nature Reserve. It should be noted too that the quality of existing views from these receptors is heavily influenced by the floodlights, pylons, sewage works, and industrial buildings within the Bellmoor Industrial Estate already present within the

landscape. For footpath users on other PRowS within or close to the Site e.g., NT Sutton Fp1, NT Sutton FP2, NT Sutton Boat 7, some temporary visual impacts would be experienced as reported in Volume 1, Chapter 7, Landscape and Visual Appraisal. Although described as adverse, it should be noted that for some, the dynamic changes taking place on the Site might be perceived as being of interest and provide incentive for more frequent use. Post restoration, users of these PRowS would experience visual benefits with views into a restored and biodiversity enhanced Site.

## **7 CONCLUSIONS**

This technical note, reviewing the social, health and wellbeing impacts of the Proposed Development, has found that no significant adverse effects are expected for local residents; users of the local footpaths and bridleways and visitors to the Idle Valley Nature Reserve and visitor centre. A positive effect would be expected on the local economy and whilst there is some potential for additional vehicle movements and site operations to have a negative short term and temporary effect on local noise levels, the effect overall would be minor. Taking effects on all topics discussed in this technical note in combination, the effect on recreational users of the wildlife reserve would be expected to be negligible taking into account the existing ongoing effect from the Bellmoor Industrial Estate and nearby sewage treatment works.