

## **Appendix 4**

Narborough Social, Health & Wellbeing Impact Report (Iceni)



AUGUST 2023

# Socio-Economic and Health Impacts of Narborough level crossing

In relation to the Hinckley NRFI

Iceni Projects Limited on behalf of  
Blaby District Council

August 2023

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ICENI PROJECTS LIMITED  
ON BEHALF OF BLABY  
DISTRICT COUNCIL

**Socio-Economic and Health Impacts of  
Narborough level crossing**  
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# 1. INTRODUCTION

1.1 Icen Projects ('Iceni') have been commissioned by Blaby District Council ('Blaby DC'), to conduct an assessment into the potential socio-economic and health impacts of the additional downtime of the level crossing at Narborough Station as a result of the submitted Development Consent Order (DCO) for the Hinckley National Rail Freight Interchange ('HNRFI').

1.2 The proposed development for the HNRFI is detailed by Tritax Symmetry (Hinckley) Limited (April 2023) publication 'Environmental Statement (ES) – Chapter 3'. In summary, and of relevance to this study, the development of the main HNRFI Site will include:

- new rail infrastructure including points from the existing Leicester to Hinckley railway providing access to a series of parallel sidings at the HNRFI, in which trains would be unloaded, marshalled and loaded.
- an intermodal freight terminal or 'rail port' capable of accommodating up to 16 trains up to 775m in length per day, with hard-surfaced areas for container storage and HGV parking and cranes for the loading and unloading of shipping containers from trains and lorries.
- up to 850,000 square metres (gross internal area or GIA) of warehousing and ancillary buildings with a total footprint of up to 650,000 square metres and up to 200,000 square metres of mezzanine floorspace, including the potential for some buildings to be directly rail connected if required by occupiers. These buildings might incorporate ancillary data centres to support the requirements of HNRFI occupiers and operators. They will also incorporate roof-mounted photovoltaic arrays with a generation capacity of up to 42.4 megawatts (MW), providing a direct electricity supply to the building or exporting power to battery storage in the energy centre.

1.3 As detailed in Chapter 8 of the ES 'Transport and Traffic', the proposal is for the HNRFI site to accept up to 16 rail freight services per day, comprising 16 inbound and 16 outbound trains per day. In doing so, increasing the downtime of level crossings as the rail freight travels across the country to be offloaded at the Proposed Development.

1.4 The Narborough level crossing is located approximately 10km to the east-north-east of the Proposed Development Site. As a result of the Proposed Development, the barrier at the crossing that separates the road connection between the villages of Narborough and Littlethorpe is expected to be down for additional time than at present.

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- 1.5 The ES states that the impact will be an additional one train in peak morning hours (7 am – 10am) and two trains in the afternoon (4 pm and 7 pm). Each train would cause a maximum barrier downtime of 2 minutes and 30 seconds.
  - 1.6 This assessment also considers additional information provided by Arup 'Hinckley National Rail Freight Interchange – Narborough Level Crossing Downtime' (published in July 2023). This is an independent assessment of crossing downtime which may result in delays beyond that identified in the ES.
  - 1.7 As part of the proposals, no improvements are planned for the Narborough Level Crossing, approaching roads or footways.
  - 1.8 This assessment aims to understand the likely socio-economic and health impacts of the additional downtime of the barrier at Narborough level crossing on the immediate locality and communities.

### **Context of the Assessment**

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- 1.9 The applicant of the Proposed Development ('Tritax Symmetry') submitted the EIA Scoping Report request to the Secretary of State in November 2020. Within the Scoping Report, the impact of Narborough Crossing was not scoped into any of the technical chapters.
- 1.10 The Scoping Opinion, published in December 2020 by the Planning Inspectorate, responded to the proposed methodology to assess the environmental impacts. Within the report, the Inspectorate raised that the Transport and Traffic Chapter had not considered the impacts of freight trains on the Narborough level crossing (Ref. 7.23 and 7.44).
- 1.11 The need to include an analysis of the impact of the crossing was also raised by the statutory consultees of Sharnford Parish Council, Stoney Station Parish Council, Blaby District Council and Leicestershire County Council. Table 1.1 below provides a summary of the consultee responses concerning the lack of assessment of the impacts on Narborough level crossing and the response provided by each technical chapter.

**Table 1.1 EIA Scoping Opinion, 2020, References to Narborough Crossing**

<b>Consultee</b>	<b>Consultee Comment</b>
Planning Inspectorate	In response to a comment in the previous 2018 Scoping Opinion, the Scoping Report stresses that rail freight movements have been factored into the Trip Generation, and this will be explicit in the TA and ES (para 7.23). Paragraph 7.44 confirms that rail freight has been forecast and that resultant Heavy Goods Vehicle (HGV) trips have been included within the strategic modelling process. However, the description of baseline conditions within the report does not mention rail freight, and the methodology refers to highway links and thresholds

Consultee	Consultee Comment
	relating solely to changes in road vehicle flows. The ES should consider the impacts of the Proposed Development on the capacity and operation of the rail network, and the potential impacts of an increase in rail freight movements on environmental matters, for example, accidents and safety, and any potential indirect effects on passenger rail transport operations and the growth, where significant effects are likely. The Inspectorate highlights Solihull Metropolitan Borough Council's proposal for mitigation in the form of a contribution towards wider industry initiatives (such as an east-west rail link at Nuneaton) for consideration. The impact of freight trains on the Narborough level crossing is also highlighted (see consultation response from Sharnford Parish Council).
Sharnford Parish Council	Trains will be up to 775 metres in length. The ES needs to consider the disruption at the Narborough level crossing, and the effect on rail disruption when the bridge on the A5 between M69 and Dodwell's Island is hit. The bridge has been hit by high-sided HGVs 25 times in 2020.
Stoney Stanton Parish Council	Section 3.14 mentions the 2 per-hour passenger trains but does not reference the proposals for the need for this to increase for better links with other local policy and plans. It also does not mention the road crossings at Narborough that would be detrimentally affected by this proposal or how this has been taken into account.
Leicestershire County Council	The assessment of the impact of the rail freight element of the proposals should not be limited to resultant HGV trips (para 7.44). For the avoidance of doubt the assessment should also include assessments of the impacts on rail capacity and of any increased duration and/or frequency of level crossing closures. These assessments should take account of Midlands Engine Rail proposals and other relevant priority rail projects been promoted by Midlands Connect and are critical to understanding the feasibility and capacity of the proposal to perform as a rail freight interchange in this location.
Blaby DC	A full Health Impact Assessment is required that also considers other areas of impact, for example, that of increased Narborough level crossing barrier down time.

Source: Scoping Opinion, 2023

- 1.12 The Hinckley NRFI Consultation Report indicates that consultees are concerned that the applicant has not completed sufficient analysis of the impact on downtime at Narborough level crossing.
- 1.13 The applicant stated within the Consultation Report that the downtime is 'far less than a stopping passenger train coming from Leicester, which is 4 – 5 minutes' and therefore stated that is 'within Network Rails acceptable barrier down time at a level crossing'<sup>1</sup>. This is derived from work undertaken by Network Rail through an analysis of Narborough Station and the barrier downtime.

<sup>1</sup> Reference is from paragraph 11.2.52 within the Consultation Report (part 1 of 17).

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- 1.14 Specifically, the ES notes that based on the pre-pandemic timetable, in the morning peak hours 7 – 10 am, there is one possible time an additional intermodal freight train could run. In the afternoon, between 4 – 7 pm, two trains could run. Each train would cause a maximum barrier downtime of 2.5 minutes. Therefore, with development implemented, in each hour the total barrier down time would be approximately 20 minutes, with 40 minutes open.
- 1.15 Notwithstanding the applicant’s response to concerns raised, Blaby has commissioned this work in order to review the downtime in more detail and to understand any socio-economic and health impacts of additional barrier downtime on the villages of Narborough and Littlethorpe. Without such analysis, the appropriate mitigation measures to take account of the impacts from increased barrier downtime at the Narborough level crossing cannot be identified.

### **Methodology**

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- 1.16 The methodology for the assessment draws on the Design Manual for Roads and Bridges (DMRB) LA 112 Population and Human Health<sup>2</sup> (Highways England, 2020), which provides information relating to the definition of study areas, development of a baseline, assessing the sensitivity of communities and describing the socio-economic and health outcomes.

### **Assessment**

- 1.17 Receptors scoped into this assessment are listed below and are based on best practice and proportionality to the objective of this assessment:
- Impact on additional downtime of Narborough level crossing affecting the accessibility of social infrastructure for residents. Social infrastructure is defined as: early years facilities, primary schools, secondary schools, GP facilities, hospitals, retail facilities, employment, open space, play space and sports facilities.
  - Impact on additional downtime of Narborough level crossing affecting the health and well-being of residents – recognising that separate technical work may be required to understand this in full.
- 1.18 DMRB LA 112 requires that once the health profiles of communities have been established, the sensitivity of a community /population to change is identified. For this assessment the following, sensitive population groups have been determined:
- Residents of Narborough Village

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<sup>2</sup> Highways England (2020) LA 112 Population and Human Health Revision 1



- Residents of Littlethorpe Village
- Residents of the Surrounding Village (including Enderby, Cosby, and Whetstone)

1.19 The magnitude of potential impacts has been identified as high, medium, and low based on professional judgement as below.

**Table 1.2 Magnitude impacts**

High	Where there would be a substantial change in the access to social infrastructure or health and wellbeing of residents.
Medium	Where there would be a partial change in the access to social infrastructure or health and wellbeing of residents.
Low	Where there would be a limited but noticeable change in the access to social infrastructure or health and wellbeing of residents.
Negligible	Where there would be no change in the access to social infrastructure or health and wellbeing of residents.

1.20 From completing the baseline analysis key priority groups of the sensitive population will be drawn out of the analysis. For this assessment, a priority group refers to a specific subset of the population such as

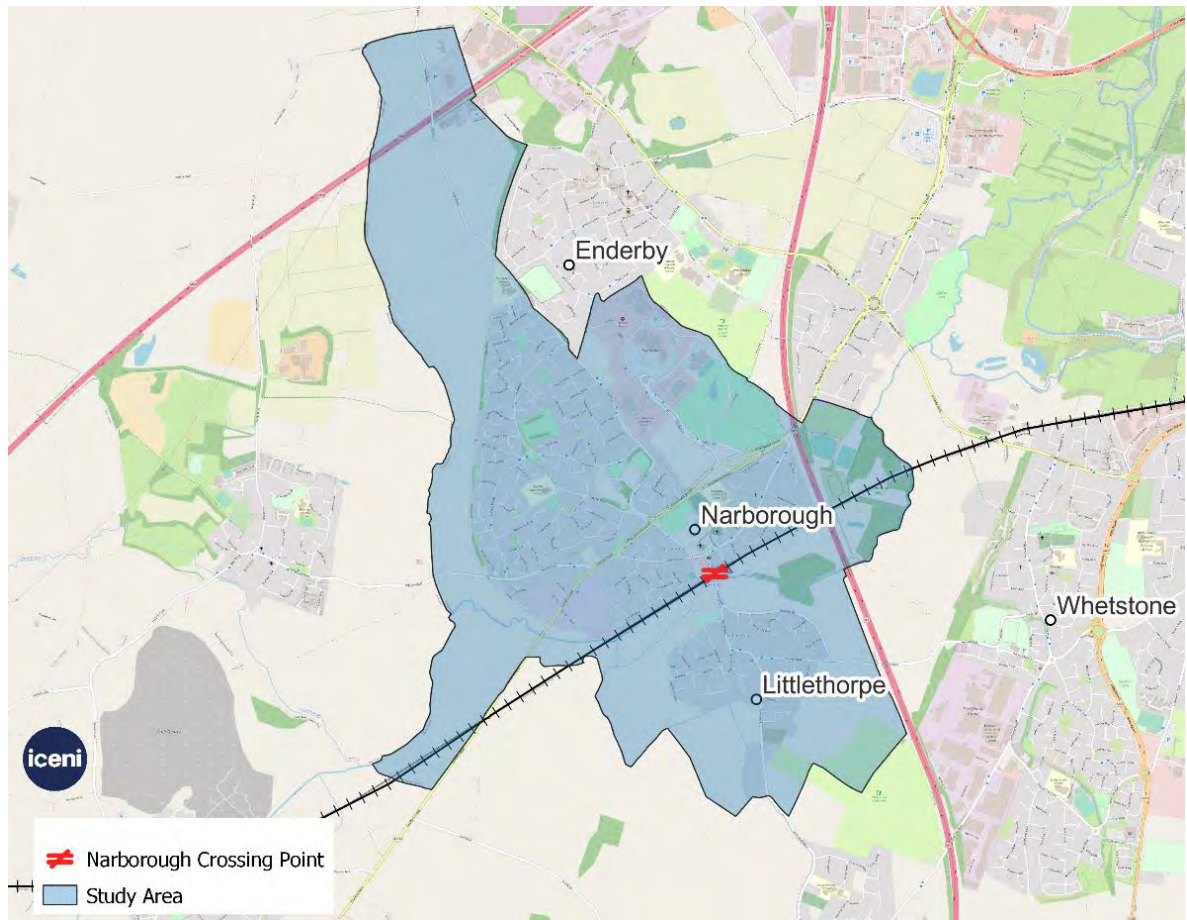
- Children and younger people
- Older people
- Pedestrians and cyclists (or people without access to private transport)
- People with disabilities and/or long-term health conditions
- Parents with young children /pushchairs

1.21 The above may be impacted disproportionately by the additional downtime of Narborough Crossing than the overall sensitive population groups.

**Study Area**

1.22 A study area is established based on the guidance of the DMRB LA 112 Population and Human Health Guidance. The immediate study area of focus for this assessment is Blaby 007 Middle Super Output Area. This MSOA includes the villages of Narborough and Littlethorpe which are anticipated to have the most likely socio-economic and health effects as a result of the additional downtime.

Figure 1.1 Study Area Map



### Limitations and Assumptions

- 1.23 In the social infrastructure baseline, distances have been provided from a Narborough level crossing. This has been reported as walking distances (in km). Where possible a consistent central point to a central point of the social infrastructure has been used, but distance may vary.
- 1.24 Unless otherwise stated, this assessment has been informed by information submitted by the applicant to the planning inspectorate.
- 1.25 Ascertaining the level of effects is primarily based on professional judgement, taking into account the fact that there are inherent uncertainties in identifying and predicting human behaviours i.e how and where people may access services and spend their time.

### Report Structure

- 1.26 To understand the socio-economic and health effects of the increased barrier downtime the following steps will be taken:

- 
- **Section 2: Baseline Context**
  - **Section 3: Assessment of Effects**
  - **Section 4: Recommended Mitigation**
  - **Section 4: Conclusions**

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## 2. BASELINE CONTEXT

### Narborough Crossing Baseline Context

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- 2.1 The level crossing is at Narborough Station and is located on Station Road. The crossing is located to the south of the village of Narborough and to the north of the village of Littlethorpe.
- 2.2 When the barriers are down, the level crossing itself can be accessed by pedestrians by stairs on either side of the footbridge. There is no ramp or wheelchair access over the crossing.

Figure 2.1 Narborough level crossing



Source: Icen Analysis, taken from Google Images (July 2023)

- 2.3 The immediate surroundings of Narborough level crossing are two car parks, with the Station Road car park located to the south and the Railway Car park located to the north. There are also several retail units to the north of the crossing including a Coop Food Shop, an Estate Agent, a Deli Store, the Narborough Arms Pub, a Clothing Alterations, and a Card Store.

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2.4 The barrier downtime data is based on data provided by BWB and Network Rail<sup>3</sup>. Currently, the barrier downtime at Narborough Crossing varies throughout the day with the following downtime recorded:

- AM Peak Hours (08:00 to 09:00): 22 minutes and 59 seconds.
- PM Peak Hours (17:00 to 18:00): 17 minutes and 50 seconds.
- Interpeak: 8 to 10 minutes per hour.

### **Narborough Village Context**

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2.5 Narborough village is located to the north of the crossing and based on the 2021 census data has an estimated population of 8,687 residents.

2.6 The village of Narborough is predominately residential and is well served in terms of social infrastructure. Within the village, there are two pre-schools, two primary schools, a secondary school, a GP surgery, and leisure facilities including playgrounds, parks and sports facilities including a David Lloyd. There is also a range of amenities including shops, pubs, and hairdressers. There are also industrial areas located nearby (Oaks Industrial Estate and Regent Street Industrial Estate) as well as a Business Park (Carlton Park), contributing to local employment opportunities.

2.7 The village of Narborough is well-connected to the surrounding areas through various transportation routes. The B4114 road runs through the village. This road provides a link between Leicester and Hinckley, enabling the movement of local traffic and commuters.

2.8 Cycle routes from Leicester terminate in Narborough. Leicester city centre can be accessed either via off-road National Cycle Network (NCN) route 6 or via a local cycle route 3 along Narborough Road. To get from Leicester City to Narborough cyclists can utilise the A47 and go via Enderby to Narborough and or the B4114 to the south or go via local cycle routes to the northwest.

2.9 The village is bound by the M1 to the east and the railway line to the south. Whistles Way and Meadows borders the village to the west which is a walkway along a disused railway line. To the north of Narborough is the village of Enderby which is also well served with local amenities for residents.

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<sup>3</sup> Appendix 8.1 Transport Assessment (part 7 of 20) PRTM 2.2. Base Model review and Addenda

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## **Littlethorpe Village Context**

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- 2.10 Littlethorpe is located to the south of the crossing and is a predominately a residential village. There are a limited number of amenities such as a village hall, a scout hut, a pub, and a playground. To the south-eastern boundary edge of Littlethorpe is Whetstone Golf Course.
- 2.11 There are no bus stops in Littlethorpe. The proximity to Narborough provides residents with easier access to a wider range of transportation options. Narborough, with its railway station and better road and bus connectivity, serves as a more significant transportation hub for the area.
- 2.12 Littlethorpe is surrounded by countryside characterised by agricultural fields, small woodlands, and rural landscapes. Located approximately 2km to the south of Littlethorpe is the larger village of Cosby. Cosby has a primary school, a library, convenience stores as well as a variety of recreational grounds.

## **Demographic Baseline**

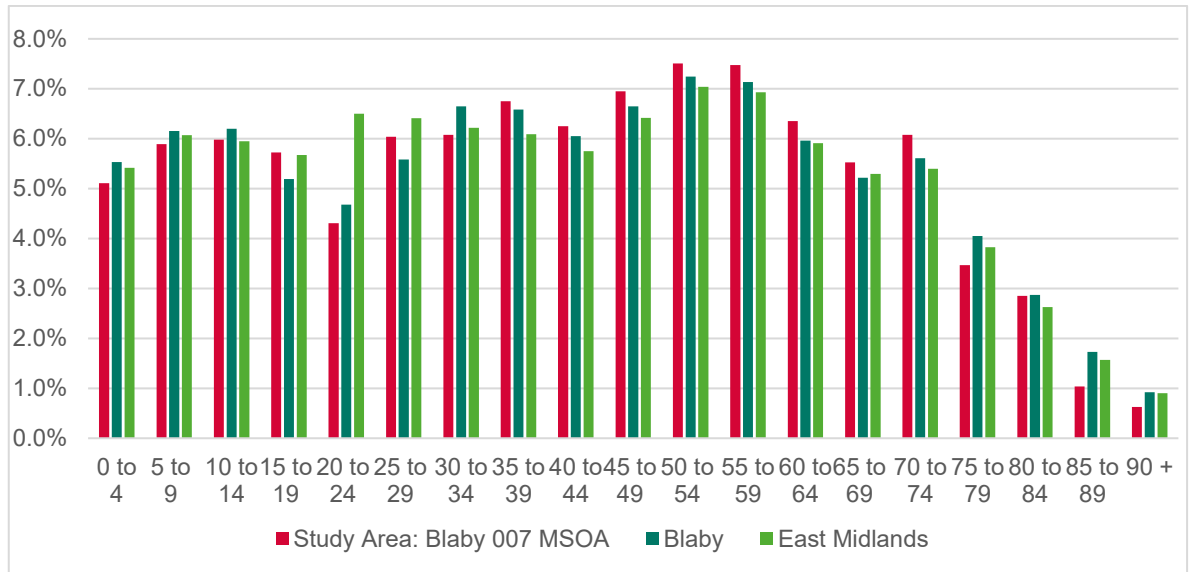
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- 2.13 Based on the ONS 2020 Mid-Year Population Estimates (published in 2021)<sup>4</sup>, it is estimated that there are 8,592 residents in the Study Area. This equates to 8.4% of the total residents of Blaby.
- 2.14 Figure 2.2 provides an overview of 5-year age bands of the proportional split of the population for the Study Area, Blaby DC, and East Midlands. The Study Area can be summarised as having a comparatively higher proportion of its residents aged between 35 and 74 at 52.9% when compared to the District (50.4%) and the region (48.8%).
- 2.15 Conversely, the Study Area has a marginally lower proportion of children (aged 0 to 20) and a significantly lower proportion of 20- to 24-year-olds in the Study Area (4.3%) compared to the region (6.5%). The Study Area also has a lower proportion of 75 to 90+ year olds at 8.0% compared to the District (9.6%) and the Region (8.9%).

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<sup>4</sup> ONS (2021) Middle Super Output Area Population Estimates

**Figure 2.2 5-Year Age Bands Breakdown of Study Area, District and Regional Population Breakdown**



Source: ONS, 2020 Mid-Year Population Estimates (2021)

### Social Infrastructure Baseline

- 2.16 As acknowledged within the National Planning Policy Framework (2021)<sup>5</sup>, access to social infrastructure including education, health care, community facilities, open space and play space and sports facilities can have a significant impact on the health and well-being of a population.
- 2.17 From the high-level review of social infrastructure within the villages of Littlethorpe and Narborough, it is evident that there is a limited provision in the village of Littlethorpe. Therefore, a social infrastructure audit has been undertaken to establish where the nearest social infrastructure provision is to both Narborough and Littlethorpe residents, to understand if the additional barrier downtime will affect the ability of residents to access local services such as education, health, or retail.

### Early Years Facilities

- 2.18 Leicestershire County Council Childcare Sufficiency Assessment 2018 – 2020<sup>6</sup> shows that in Narborough and Littlethorpe there is a combined total of 382 early years places with demand for 383 places, therefore there is effectively a childcare sufficiency model of 1.0, meaning that there is 1 child

<sup>5</sup> Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework

<sup>6</sup> Leicestershire County Council (2018) Early Learning and Childcare Service Childcare Sufficiency Assessment 2018-2020

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to every place available. This is in line with the County Council sufficiency score of 1.03 childcare places for 0- to 4-year-olds.

2.19 Typically, early years facilities do not operate catchment areas. When choosing to send a child to early years care, a parent or guardian may choose to send their child to a facility closest to their home. Therefore, the nearest three early-years facilities located in Narborough level crossing of:

- St George's Nursery (Narborough) located 500m to the north-east of the crossing.
- The Old Barn Day Nursery and Pre-School is located 1.2km to the north-west of the crossing.
- Busy Bees Carton Park located 1.2km to the north of the crossing.

2.20 The report states that sufficient childcare means that families can find childcare that meets their child's learning needs and enables parents to make a real choice about work and training. Therefore, while the residents of Narborough have access to childcare facilities there is no provision within Littlethorpe and sending their child to one of these facilities would access these facilities via Narborough Crossing.

### **Primary School**

2.21 Based on the guidance provided by the Leicestershire County Council<sup>7</sup>, it is advised that three primary schools should be applied to ensure the best opportunity of securing a place at a preferred school. Based on the County Council's 'Find a School Website'<sup>8</sup> it is evident that residents in Narborough and Littlethorpe (based on a central postcode of LE19 postcode), would apply for the following primary schools:

- Greystoke Primary School - located 450 to the north of the Narborough level crossing.
- Red Hill Field Primary School located 1km to the northwest of Narborough level crossing.

2.22 For the final primary school option residents of Narborough would be within the catchment area for

- The Pasture Primary School is located 2.1km to the north of Narborough level crossing.

2.23 Whereas residents of Littlethorpe would also be in the catchment for:

- Cosby Primary School is located 2.2km to the south of Narborough level crossing.

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<sup>7</sup> Leicestershire County Council (2023) Apply for a primary school place

<sup>8</sup> Leicestershire County Council (2023) Find a School



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2.24 Therefore, residents of Littlethorpe would have to access the two nearest primary schools by crossing Narborough.

### **Secondary Schools**

2.25 In terms of secondary schools, Leicestershire County Council<sup>9</sup> also advise applying for three schools. With distance being a criterion for the admission process, the three nearest secondary schools to residents of Narborough and Littlethorpe have been established as:

- Brockington College is located 2.4km to the north of Narborough level crossing.
- Countesthrope Academy is located 4.9km to the southeast of the Narborough level crossing.
- Thomas Estley Community College is located 6.3km to the southwest of Narborough level crossing.

2.26 As the catchment area for secondary school is typically wider, we would expect some pupils to travel to Brockington College via Station Road and therefore be impacted by the additional downtime of Narborough level crossing.

### **GP facilities**

2.27 To ensure that GP Practices do not take on too many patients, each GP practice is assigned a geographical area called a catchment area<sup>10</sup>. Based on NHS 'Find a GP' website<sup>11</sup>, it is understood there are four GP practices are within the catchment area for most residents of Narborough and Littlethorpe. These practices are:

- Limes Medical Centre is located 450m to the northeast of Narborough level crossing.
- Enderby Medical Centre is located 2.3km to the north of Narborough level crossing.
- Hazelmere Medical Centre is located 3.3km to the east of Narborough level crossing.
- Northfield Medical Centre is located 3.7km to the east of Narborough level crossing.

2.28 Therefore, there are no medical facilities within Littlethorpe, with residents having the closest facility just a short walk from the crossing.

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<sup>9</sup> Leicestershire County Council (2023) Apply for Secondary School Places

<sup>10</sup> NHS (2023) Registering with a GP Surgery outside of your local area

<sup>11</sup> NHS (2023) Find a GP

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## Hospital

- 2.29 Leicester has two main hospitals of Leicester Royal Infirmary and Leicester General Hospital.
- 2.30 To access the Royal Infirmary via the most direct route from Narborough it would be a 16-minute car journey via the B4114 and Narborough Road. For Littlethorpe residents, to access the hospital in the most direct route, the same route would be used, therefore, requiring residents to cross the Narborough Crossing.
- 2.31 To access Leicester General Hospital, via the most direct route, residents of Narborough would travel along the A563 road which is to the north of the village. For residents of Littlethorpe the most direct route is to end south out of Littlethorpe and therefore, not crossing Narborough Crossing.

## Retail Provision

- 2.32 As already acknowledged, the village of Narborough is well served in terms of a convenience retail offer. The village has a variety of convenience retailers including food stores of Co-op and Tesco Express as well as a pharmacy, cash points, post office and hardware stores. Conversely, Littlethorpe, does not have a local centre and has no convenience stores.
- 2.33 Therefore, residents of Littlethorpe would rely on the retail offer at Narborough to access everyday goods and services.

## Employment

- 2.34 Based on data from the Business Register and Employment Survey (BRES) (2021)<sup>12</sup>, it is understood that 85 employees work in Littlethorpe in comparison to 3,570 employees in Narborough. Within Littlethorpe, the sectors of employment are construction (35%), professional, scientific, and technical (29%), accommodation and food services (24%) and business administration (12%). In Narborough, there is a greater variety of sectors of employment, however, employment is mainly dominated by the financial services sector having 42% of jobs in Narborough. Other sectors include manufacturing (10%), public administrative (85) and health (7%).
- 2.35 There are several areas of employment in Narborough which are summarised below:

Employment Site	Distance from Narborough Crossing	Notable Employers
Blaby District Council	280m to the north of the crossing	Councils head office
Regent Street Industrial Estate	700m to the east of the crossing	Industrial estate consisting of furniture manufacturer, metal workers and engineers.

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<sup>12</sup> ONS (2021) Business Register and Employment Survey

Oaks Industrial Estate, Coventry Road	850m to the northwest of the crossing	Industrial estate consisting of medium to larger units which go across the B4114 road. Employers include courier services, manufactures, engineers and bathroom suppliers.
Carlton Park	1.7km to the north of the crossing	Purpose built business park with occupiers including Santander, Honeywell (manufacturing), Modus (construction company), Busy Bees Nursery School, David Lloyd gym

2.36 Of note is the B4114 road which cuts through Narborough which links Leicester and Hinckley, and therefore enables commuters to these larger centres of employment.

### Open Space, Play Space and Sports Facilities

2.37 Based on the Blaby Open Space Assessment (December 2015)<sup>13</sup>, it is understood that there are the following recreation area in Narborough and Littlethorpe:

Table 2.1 Open Space Audit of Narborough and Littlethorpe

Type of Open Space or Sports Facility	Location in Narborough	Location in Littlethorpe
<b>Natural Greenspace</b>	9.24ha at Narborough Bog Nature Reserve	1.09ha at Riverside Way, Littlethorpe
	6.39ha at Whistle Way	
<b>Recreational Ground</b>	Narborough Recreation Ground, Desford Road	Littlethorpe Recreation Ground (scored 3/5 for quality)
	Hardwick Road Play Area	
<b>Allotments</b>	1.53ha at Narborough Allotments	n/a
<b>Cricket Pitch and Football Pitch</b>	Narborough and Littlethorpe Cricket Club at Leicester Road Recreational Ground	n/a
	Greystoke Primary School and Red Hill Primary School provide 2 football pitches	
<b>Bowls</b>	Narborough and District Bowls Club at Coventry Road	n/a
<b>Tennis Court</b>	David Lloyd Club	n/a

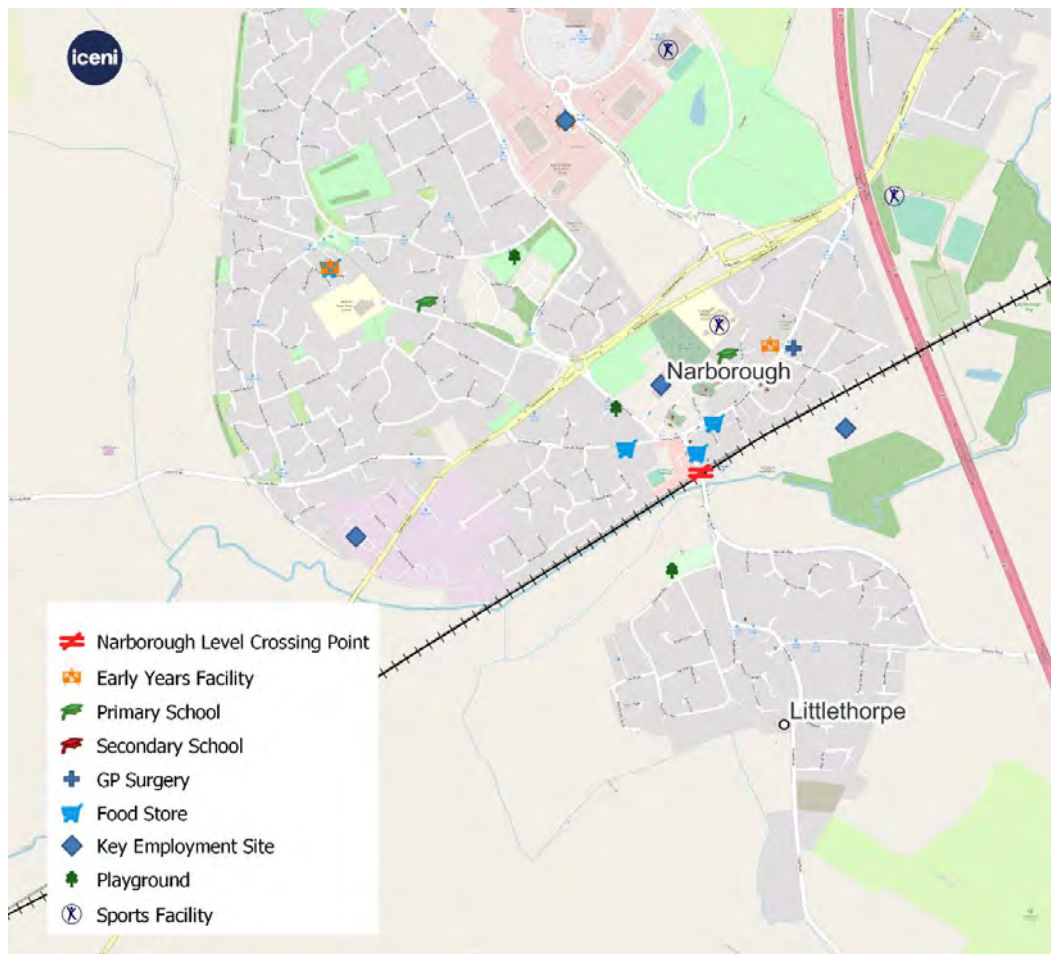
Source: Icen Analysis of Blaby Open Space Assessment, 2015

2.38 Both Littlethorpe and Narborough are well served by greenspace and have access to play areas. However, there is a deficiency of sports facilities in Littlethorpe whereas Narborough is served if a variety.

2.39 Figure 2.2 provides a high-level overview of the location of the social infrastructure in relation to Narborough Crossing.

<sup>13</sup> Blaby District Council (December 2015) Open Space Audit

Figure 2.2 Map of Social Infrastructure in Narborough and Littlethorpe



## Health Baseline

### Joint Strategic Health and Wellbeing Strategy

2.40 The Leicestershire's Joint Health and Wellbeing Strategy 2022-2032<sup>14</sup> is a plan to improve the health and wellbeing of children and adults in the county and to reduce health inequalities. It provides a useful reference point to understand the county's health priorities which the key points are summarised below:

- Health and wellbeing are generally good in Leicestershire compared with England overall, however, there are significant inequalities and challenges in certain communities.
- According to the Leicestershire County Council Community Insight Survey (2017-2021), 82.7% of respondents reported being in good/very good health, whilst 3.5% reported being in bad/very bad health.

<sup>14</sup> Leicestershire Health and Wellbeing Board (2022) Leicestershire Joint Health and Wellbeing Strategy 2022-2032

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- The overall vision is “‘Giving everyone in Leicestershire the opportunity to thrive and live happy, healthy lives’.
  - A life course approach has been used to identify high level strategic, multi-organisational priorities for the next 10 years and provide clear accountability to the Leicestershire health and wellbeing board which include:
    - Best Start for Life
    - Staying Healthy, Safe and Well
    - Living and Supported Well
    - Dying Well

### Health Profile

- 2.41 Every local area in England has a health score for each year produced by the ONS<sup>15</sup>. The score is made up of measures in different categories, called domains and subdomains. These measures include mental and physical health, local unemployment, road safety and behaviours like healthy eating. Blaby DC (the local planning authority where the Narborough level crossing is located), has an overall Health Index score of 116.6 where a score of 100 represents the average level of health in England from 2015 to 2021. Therefore, Blaby DC is ranked in the top 20% of local authorities in England for Health.
- 2.42 Based on 2021 Census Data<sup>16</sup>, it is understood that 49% of residents of Blaby have ‘very good health’ with 1% of residents stating, ‘very bad health’. ‘Good health’ of residents represents 34.5% of residents whereas ‘bad health’ is 3.2% of residents.
- 2.43 The Office for Health Improvement and Disparities provide data on factors that influence health and wellbeing<sup>17</sup>. Analysis has been completed to compare the health profile of the Study Area against Blaby and the National performance. This is summarised below, and a full health profile is set out in Appendix A1.
- In the Study Area, the average life expectancy is 80.2 years for men and 85.7 for women, which is in line with the Blaby district. In comparison to England, the average life expectancy in the Study Area is higher for both men and women.

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<sup>15</sup> ONS (2023) ONS website, methodology, Health Index methods and development: 2015:2021

<sup>16</sup> ONS (2021) Census 2021

<sup>17</sup> Office for Health Improvement and Disparities (2023) Local Health – Small Area Public Health Data

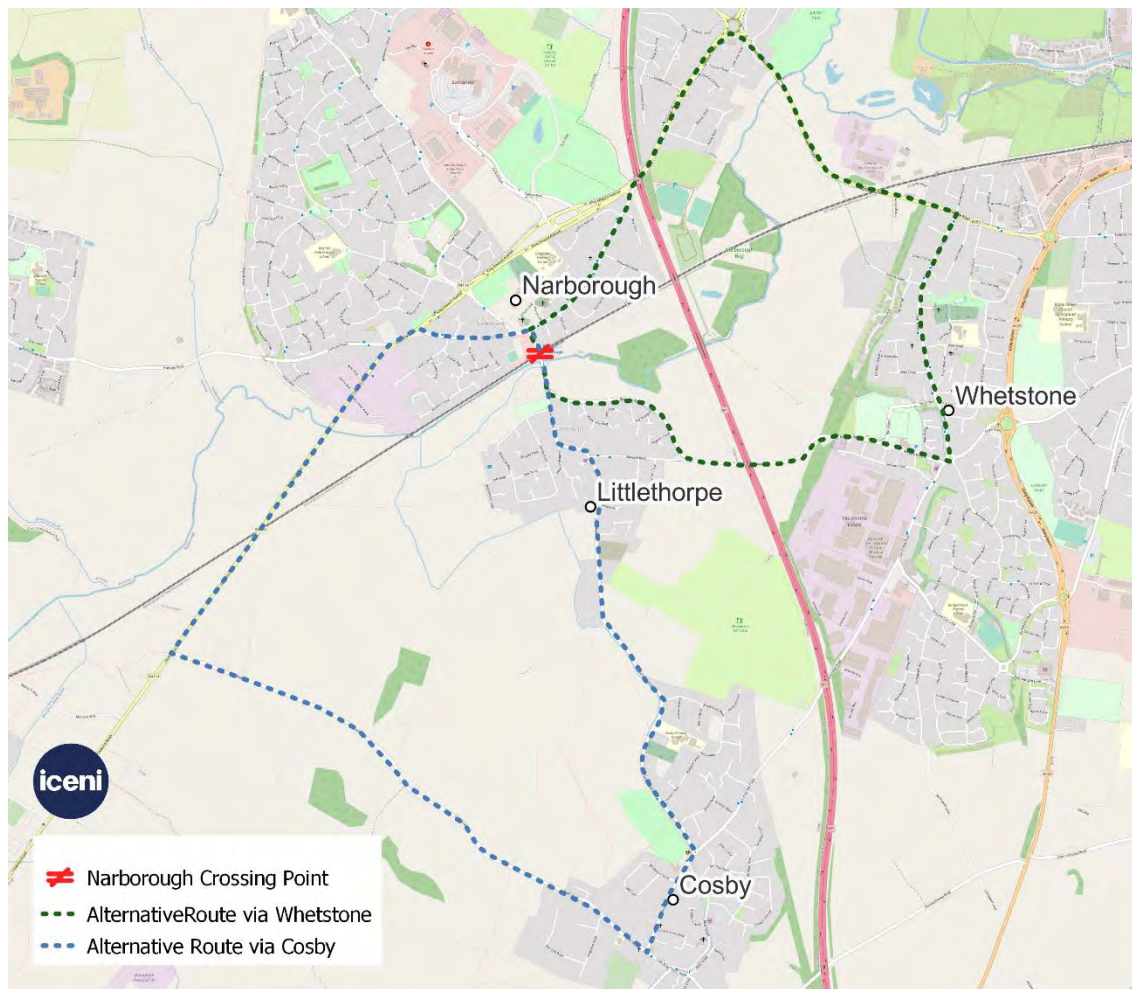
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- In the Study Area, 7.0% of reception students are obese, this increases to 12.5% of students by Year 6. There is a lower prevalence of obesity for children in the Study Area when compared to England where 9.9% of children at reception are obese increasing to 21.6% of student by Year 6.
  - Smoking prevalence for regularly smoking is 5% of residents aged 15 and over which is higher than the Blaby average of 4.5% but in line with England's average of 5.4%.
  - When standardised against England (100), the Study Area has a lower proportion of emergency hospital admission for all causes, across all ages at a value of 83.8. There is also a lower proportion of emergency hospital admission for heart disease, stroke and heart attacks in the Study Area compared to England.
  - For hospital admission for harm, injury and long-term conditions, the study area has higher rates of hospital admission for alcohol-attributable conditions (at a value of 115.3 when standardised against England at 100) and emergency hospital admission for hip fractures in persons over 65 years and over (at a value of 121.7 against England standardised value of 100).

### **Alternative Routes to the Narborough Level Crossing**

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- 2.44 There are two obvious alternative routes should people be deterred from using the Narborough Level Crossing.
- 2.45 The first is via the village of Whetstone located to the east of the crossing. From Littlethorpe this route would follow Warwick Road which goes under the M1 and head north up to Brook Street. Following this the route heads west back adjoining the B4114 road onto the Leicester Road back into Narborough. This route is approximately 6km and is estimated (via google maps) to take 10 minutes to drive or 1 hour 15 minutes to walk.
- 2.46 This route has pavement, however, some parts of the route such as Warwick Road are quite rural which could deter residents to walk this route not in daylight. Alternatively, the route would take 19 minutes to cycle where there are designated cycles and pedestrians' ways along the B roads.
- 2.47 A second alternative route would be to travel through the village of Cosby located to the south of Littlethorpe and use the Croft and Coventry Road to travel between Littlethorpe and Narborough without using the crossing point. This route is estimated to take 10 minutes to drive or 1 hour and 30 minutes to walk, with this route being 7.5km.
- 2.48 As shown in Figure 3.1, the alternative route via Cosby is mostly rural. There is limited to no pavement provided along Croft Road making it a less desirable route for pedestrians. An alternative could be to cycle this route and it is estimated to take 23 minutes to cycle.

Figure 3.1 Alternative Routes to avoid the Narborough Crossing



Source: Icen Analysis, 2023

### Baseline Summary

- 2.49 Narborough level crossing is located to the south of the village of Narborough and north of the village of Littlethorpe.
- 2.50 During peak times in the morning (AM) and evening (PM), the crossing remains down for approximately 20 minutes per hour, and this is reduced to about 10 minutes per hour during non-peak hours. When the barrier is down, there is a pedestrian footbridge to go over the track.
- 2.51 As shown in the summary map Figure 2.2, the village of Narborough to the north is well served in terms of social infrastructure whereas there are deficiencies in Littlethorpe. For residents of Littlethorpe they are within the catchment for schools and healthcare facilities that are located within Narborough, therefore, to access these services via the most direct route Narborough Crossing would be relied upon.



2.52 Based on publicly available health data, the Study Area of Narborough and Littlethorpe generally performs better than the UK average in terms of health outcomes. However, of relevance to this report is the higher-than-average emergency hospital admission, which because of the increased barrier downtime could affect how quickly patients receive emergency medical care.

2.53 No mitigation or alternative routes are proposed to mitigate this extra down time.

2.54 Based on the above information, the magnitude of the receptors is established as below. Because Littlethorpe residents rely on many services in Narborough they are more sensitive to change in access time.

**Table 2.2 Receptors and Sensitivity of Population Groups**

	Narborough Residents	Littlethorpe Residents	Surrounding Villages Residents
Access to early years facilities	Low	Medium	Low
Access to primary schools	Low	Medium	Low
Access to secondary schools	Low	Medium	Low
Access to GP facilities	Low	Medium	Low
Access to Hospitals	Low	Medium	Low
Access to Retail Facilities	Low	Medium	Low
Access to Employment	Low	Medium	Low
Access to Open Space, Play Space and Sport	Low	Medium	Low

Source: Icen Analysis

2.55 Furthermore, from completing the baseline analysis the following priority groups can be drawn out who could be disproportionately impacted by the increased level crossing barrier downtime arising from the Proposed Development.

Priority Group	Justification
Children and younger people	22.7% of residents are aged between 0 and 20 in the Study Area. Many of these residents will be attending a local pre-school, primary or secondary school. Ensuring they have sufficient time to cross the level crossing during additional downtime can help prevent disruptions to their education and daily routines.
Older people	19.6% of residents are aged over 65. Older individuals may have mobility challenges, which could make it difficult for them to cross the level crossing quickly and indirectly impact their mental health or well-being.
Pedestrians and cyclists (or people without access to private transport)	The alternative routes show that additional that not using Narborough Crossing is indirect and time-consuming. Enhancing safety and convenience for pedestrians and cyclists contributes to a sense of community well-being. People are more likely to engage in walking and cycling when they feel safe doing so.
People with disabilities and/or long-term health conditions	4.2% of residents of Blaby have 'bad to very bad' health. Disabilities and health conditions vary widely, and different individuals may require different amounts of time to cross Narborough Crossing safely.
Parents with young children /pushchairs	Parents with young children and pushchairs require more time to navigate the level crossing safely. With the increased downtime parents might feel



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Priority Group	Justification
	rushed and this could indirectly impact the mental health of parents and children. Secondly, providing parents with an adequate crossing encourages them to choose active transportation methods, like walking with their children in pushchairs, contributing to a healthier lifestyle and reduced traffic congestion.

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### 3. IMPACT ASSESSMENT

3.1 The assessment draws on the Design Manual for Roads and Bridges (DMRB) LA 112 Population and Human Health (Highways England, 2020) to understand the impact on additional downtime of Narborough level crossing affecting the accessibility of social infrastructure for residents and the health of residents.

#### Scenario Overview

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3.2 There are two scenarios considered for impact assessment being:

- **Scenario 1:** as set out in Transportation documents submitted as part of the ES Chapter 8 dated November 2022.
- **Scenario 2:** as assessed separately by Arup 'Hinckley National Rail Freight Interchange - Narborough Level Crossing Downtime' report published July 2023.

#### Scenario 1

3.3 The evidence presented in the Environmental Statement<sup>18</sup> indicates that the Proposed Development would result in the following periods of barrier downtime.

**Table 3.1 Narborough Level Crossing Barrier Downtimes**

Scenario	Year	Barrier Downtime (Minutes: Seconds)		
		AM Peak Hour	Interpeak Hour	PM Peak Hour
Current Baseline	2014	22: 59	09:00	17:50
Without Development	2026& 2036	22: 59	15:00	17:50
Without the Development of Infrastructure	2026& 2036	22: 59	15:00	17:50
With Development	2026& 2036	22: 59	17:00	20:21
With Development (Sensitivity Test)	2036	22: 59	17:00	20:21

Source: BWB Assessment of the impact on the downtime of Narborough Crossing

3.6 From the assessment, it is understood that the greatest difference between the current baseline and with development scenario is the additional 8 minutes expected during the interpeak hours and the additional 3 minutes and 31 seconds in the PM peak hours. The AM Peak remains unchanged.

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<sup>18</sup> The data as presented by BWB in ES Appendix 8.1 Transport Assessment (part 11 of 20).

## Scenario 2

- 3.7 Additional work into the downtime of Narborough Crossing was completed by Arup in July 2023. This independent assessment has shown that there is potential for the length of the downtime in each day to become greater than the nominal 20-minute value assigned (by Network Rail in 'Consultation Report – Appendix 9.1 – 9.10).
- 3.8 The high-level conclusions of the Arup (2023) assessment state that “as the new freight services are introduced there will be longer crossing downtimes throughout the day. This is going to impact on the community and the flows of road vehicles, pedestrians and others when travelling between Narborough and Littlethorpe.” (page 2)
- 3.9 The independent assessment estimates results are set out below.

**Table 3.2 Arup Assessment Crossing Downtown with Development**

Start	Finish	Difference in downtime per hour
06:00	08:59	No Change
09:00	09:59	+2.30 mins
10:00	12:59	+5.00 mins
13:00	13:59	No Change
14:00	15:59	+5.00 mins
16:00	17:59	+2.30 mins
18:00	18:59	No Change
19:00	20:59	+5.00 mins
21:00	21:59	+2.30 mins
22:00	22:59	+5.00 mins

Source: Arup, 2023

## Summary of the Scenarios

- 3.10 The timings reported by the two scenarios are summarised in Table 3.2 below.

**Table 3.3 Alternative Scenarios to the Additional Barrier Down Time**

Scenario	Barrier Downtime (Minutes: Seconds)		
	AM Peak Hour 8:00 – 8:59	Interpeak Hours	PM Peak Hour 17:00 – 17:59
Baseline @ 2026	22.59	15.00	17.50
With Development (Scenario 1)	22.59	17.00	20.21
<b>Additional downtime (Scenario 1)</b>	<b>00.00</b>	<b>+02.00</b>	<b>+02.31</b>
With Development (Scenario 2)	22.59	17.30-20.00	20.21
<b>Additional downtime (Scenario 2)</b>	<b>00.00</b>	<b>+02.30 - +5.00</b>	<b>+02.30</b>
Difference between S1 and S2	00.00	+00.30 - +3.00	-00.01

Source: Arup, 2023

- 3.12 Overall, the greatest additional time is added to the interpeak hours. The Arup assessment indicates an additional 30 seconds up to an additional 3 minutes compared to the ES position during interpeak

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hours. These hours include +5.00 mins between 14:00 and 15:59 (which would be normally school finishing / collection time).

- 3.13 For this assessment, assesses the worst-case scenario and therefore has assumed Scenario 2. This is because it will help to identify the potential effects that could occur because of the additional barrier downtime and therefore appropriate mitigation strategies can be produced if deemed suitable.

### **The impacts of additional downtime of Narborough level crossing affecting the accessibility of social infrastructure of residents**

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- 3.14 This section describes how accessibility by car, public transport, and active travel may change because of the additional downtime of the crossing during the operational phase of the Proposed Development.
- 3.15 Accessibility relates to the ease of reaching different destinations. Accessibility has a direct impact on where people live, work, how they access services and leisure activities and consequently on their health and wellbeing.
- 3.16 The baseline analysis has shown Littlethorpe is deficient in social infrastructure and for residents to access day-to-day services it would require them to travel to Narborough. The most direct route from Littlethorpe would be to go up from Station Road cross the railway line and access Narborough.
- 3.17 Based on the additional downtime it would be expected that the direct impact on residents would be:
- No change in AM peak hour 8.00-8.59 (maintain 23-minute downtime as baseline)
  - Increase of 2mins 30 seconds in PM peak hour 17:00-17.59 (increase downtime from 17 minutes 50 seconds to 20 minutes and 20 seconds)
  - Increase of between 2mins 30 seconds and 5 minutes in other hours (increase downtime from baseline 15 minutes to between 17 minutes 30 seconds and 20 minutes)
- 3.18 Each downtime lasts around 2 minutes 30 seconds.
- 3.19 The probability of experiencing increased delays to completing journeys increases when accessing services in the PM peak and non-peak hours. A return journey could be impacted up to an additional 5 minutes total (2 mins 30 seconds each way). This could rise of additional local congestion is generated. It is reasonable to expect that more than one return journey may be required by some residents on any individual day, compounding the effect of additional barrier downtime.

- 3.20 It is acknowledged that the maximum delay on any specific one-directional journey would be 2 minutes 30 seconds. This is unlikely to significantly impact on any single event - however there will be an ongoing daily inconvenience which will have a bearing on individuals experience and perceptions of accessibility. Any additional downtime adds to the existing probability of meeting the barrier which is already 38% in the AM peak, 30% in the PM peak and 25% during other hours.
- 3.21 The additional waiting time may have an impact, even if limited, on accessing a wide range of community and social infrastructure. This may then influence the health and well-being of residents. These potential effects are set out in Table 3.1

**Table 3.4 Potential effect of the increased delays of Narborough Crossing on Social Infrastructure**

<b>Social Infrastructure</b>	<b>The potential indirect effect of increased delay in accessing these services</b>
Early Years	<ul style="list-style-type: none"> <li>• The prolonged waiting time at the level crossing to access early years facilities can pose challenges for parents or guardians, potentially causing disruptions to daily routines.</li> <li>• Delays in drop-off and pick-up schedules.</li> <li>• Hindered access to important early childhood education and care services.</li> <li>• Perception of safety fears, reducing the likelihood to travel via active travel means.</li> </ul>
Primary School	<ul style="list-style-type: none"> <li>• Disrupt the punctuality of students, parents, and school staff, leading to potential lateness.</li> <li>• Potential for reduced instructional time.</li> <li>• Increased challenges in maintaining a consistent and efficient learning environment.</li> <li>• Perception of safety fears, reducing the likelihood to travel via active travel means. This could influence the number of obese children in the Study area currently estimated to be 7.0% of reception students.</li> </ul>
Secondary School	<ul style="list-style-type: none"> <li>• Students arriving late, potentially cause missed classes and ultimately reducing the overall learning time</li> <li>• Added stress for both students and school staff.</li> <li>• Perception of safety fears, reducing the likelihood to travel via active travel means. This could influence the number of obese children in the study area which is currently estimated to be 22% at Year 6 (secondary school starts in Year 7),</li> </ul>
GP Facility	<ul style="list-style-type: none"> <li>• Impact patients' healthcare access.</li> <li>• Potentially leading to delays in medical appointments</li> <li>• Increased frustration among individuals seeking timely medical care.</li> <li>• Increase cost to the NHS due to potential missed appointments.</li> <li>• Perception of safety fears, reducing the likelihood to travel via active travel means.</li> </ul>
Hospital	<ul style="list-style-type: none"> <li>• Potentially causing delays in emergency response.</li> <li>• Hindering timely medical interventions, and potentially jeopardizing patient outcomes.</li> </ul>

Social Infrastructure	The potential indirect effect of increased delay in accessing these services
Retail	<ul style="list-style-type: none"> <li>• Potential inconvenience to collecting day to goods.</li> <li>• Reduced shopping options.</li> <li>• Limited availability of essential goods and services in the local area</li> <li>• Perception of safety fears, reducing the likelihood to travel via active travel means.</li> </ul>
Employment	<ul style="list-style-type: none"> <li>• Potential delays in reaching the workplace.</li> <li>• Potential challenges in maintaining regular employment schedules.</li> <li>• Difficultly planning daily schedules</li> <li>• Potential negative impact on work productivity</li> <li>• Perception of safety fears, reducing the likelihood to travel via active travel means</li> </ul>
Open Space, Play Space and Sports Facilities	<ul style="list-style-type: none"> <li>• Potentially limiting opportunities for physical activity</li> <li>• Reduced community engagement through physical activity</li> <li>• Overall reduced well-being in the local area</li> <li>• Perception of safety fears, reducing the likelihood to travel via active travel means</li> </ul>

**Impact on additional downtime of Narborough level crossing affecting the accessibility of residents' health and well-being of residents.**

3.22 The World Health Organization defines health as a 'state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity'<sup>19</sup>. The range of personal, social, economic and environmental factors that influence health status are known as health determinants and include the physical environment, income levels, employment, education, social support and housing.

3.23 As this health is a far-ranging topic, the LA 112 guidance has been referenced for understanding the relevant environmental conditions relating to human health including<sup>20</sup>:

- The ambient air quality and Air Quality Management Areas (AQMA)
- Ambient noise and areas sensitive to noise (e.g. noise important areas (NIA), noise management areas (NMA))
- Sources of pollution (e.g. light, odour, contamination etc)

<sup>19</sup> World Health Organisation (1984) Constitution

<sup>20</sup> This study focuses is on the impact on air quality and noise. Landscape amenity and severance have been assessed within the previous section of social infrastructure.

- 
- Landscape amenity
  - Severance/accessibility and the ability of communities to access community land, assets, and employment.

3.24 The latter bullet point is relevant under the terms of this assessment, recognising that increased severance or weakened accessibility has a detrimental effect on health.

3.25 Other topics above require separate technical assessment.

#### **Air Quality Impact**

3.26 As the air quality chapter of the ES, did not include an assessment of the impact of Narborough Crossing it is difficult to understand in quantitative terms the impacts the increased idling time could have on air quality<sup>21</sup>. A separate technical assessment is required to understand the air impacts of any additional idling time.

#### **Noise Impact**

3.27 As with air quality, the technical chapter in the ES did not assess the impact the increased noise would have on residents because of increased downtime at Narborough Crossing.

3.28 A separate technical assessment is required to understand the noise impacts of any additional train time.

#### **Summary**

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3.29 Based on the additional downtime related to the proposed development it would be expected that the direct impact on residents would be:

- No change in AM peak hour 8.00-8.59 (maintain 23-minute downtime as baseline)
- Increase of 2mins 30 seconds in PM peak hour 17:00-17.59 (increase downtime from 17 minutes 50 seconds to 20 minutes and 20 seconds)
- Increase of between 2mins 30 seconds and 5 minutes in other hours (increase downtime from baseline 15 minutes to between 17mins 30 seconds and 20 minutes)

3.30 Each downtime lasts around 2 minutes 30 seconds.

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<sup>21</sup> Air Quality has been assessed in a subsequent report commissioned by the Council.

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- 3.31 The probability of experiencing increased delays to completing journeys increases when accessing services in the PM peak and non-peak hours. A return journey could be impacted up to an additional 5 minutes total (2 mins 30 seconds each way). This could rise of additional local congestion is generated. It is reasonable to expect that more than one return journey may be required by some residents on any individual day, compounding the effect of additional barrier downtime.
- 3.32 It is acknowledged that the maximum delay on any specific one directional journey would be 2 minutes 30 seconds. This is unlikely to significantly impact on any single journey or event - however there will be an ongoing daily inconvenience which will have a bearing on individuals experience and perceptions of accessibility.
- 3.33 Overall the magnitude of impacts is considered **negligible / low** as in most instances there would be *a no change or limited but noticeable change in the access to social infrastructure or health and wellbeing of residents*. However it should be acknowledged for those who require frequent return journeys from Littlethorpe to Narborough of say 3 times a day, the magnitude could be **medium** as the worst case would be up to 15 minutes additional delay to increased probability of additional barrier downtime.
- 3.34 The impacts are likely only to be noticed by Littlethorpe residents who are considered a '**medium**' sensitivity population group. Within this population group, there are priority subgroups that may be disproportionately affected, being:
- Children and younger people
  - Older people
  - Pedestrians and cyclists (or people without access to private transport)
  - People with disabilities and/or long-term health conditions
  - Parents with young children /pushchairs
- 3.35 Overall, this assessment finds that the impact of the additional barrier downtime at Narborough in the majority of instances will be negligible / low and are not considered to have an overall material impact on quality of life. However, there will be instances where the impacts will be noticeable and will in all probability impact on daily activities and some priority groups will experience delays and adverse impacts.



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## 4. RECOMMENDATIONS

- 4.1 The HRFI Proposed Development will increase the number of trains running through the Narborough level crossing throughout the day. In doing so there will be increased downtime of the barrier level crossing.
- 4.2 This report has identified that the impacts will be limited however they will be instances where the impacts will be noticeable and will impact on daily activities, some priority groups will experience delays and adverse impacts.
- 4.3 No mitigation will reduce the adverse effects of additional downtime. There are however related mitigation measures which could be implemented to reduce some of the impacts, particularly for priority groups. These are listed below.

### **Potential Mitigation**

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#### **DDA Compliant Travel Railway Bridge Crossing**

- Narborough level crossing bridge does not provide step-free access, therefore, making it inaccessible to people with disabilities. With the additional added delay time to cross from Narborough to Littlethorpe (or visa-versa), ramps or lift access would be beneficial to help improve the accessibility for disabled users and those that require step-free access.

#### **Improved Lighting and Safety Features**

- A potential indirect impact of the increased rail freight use is an increased perception of reduced safety.
- To make the Narborough level Crossing as appealing as possible to residents, design improvements to the footbridge and surrounding areas could be implemented. This could include improved lighting or the potential to include CCTV cameras to ensure that the footbridge crossing remains as welcoming as possible.

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## 5. CONCLUSION

5.1 The purpose of this report has been to assess the impact in socio-economic terms of the additional downtime of the level crossing at Narborough Station because of the submitted Development Consent Order (DCO) application for the Hinckley National Rail Freight Interchange.

5.2 The need to assess the socio-economic and health impacts of the additional downtime was raised by the Planning Inspectorate and several statutory consultees through the Scoping Opinion of the EIA in 2020. However, the applicant did not complete the analysis as the impact of the additional downtime was believed to be below the nominal '20 minutes in the hour' assigned value.

### Baseline Analysis Summary

5.3 Currently, during peak times in the morning and the evening, the crossing remains down for approximately 20 minutes per hour, and this is reduced to about 10 minutes per hour during non-peak hours. When the barrier is down, there is a pedestrian footbridge to cross the railway track.

5.4 The baseline analysis has shown that the village of Narborough to the north of the crossing is well served with social infrastructure facilities including two pre-schools, two primary schools, a secondary school, a GP surgery, and leisure facilities including playgrounds, parks and sports facilities. There is also a range of amenities including shops, pubs, and hairdressers. There are also industrial areas located nearby, contributing to local employment opportunities. Whereas the village of Littlethorpe to the south of the crossing, has a limited number of amenities including a village hall, a scout hut, a pub, and a playground.

5.5 Alternative routes to get to and from Narborough and Littlethorpe without using the Narborough level crossing have been assessed and these would be approximately 6k and 7.5km to complete. Adding, 10 minutes to drive time to access Narborough and Littlethorpe.

### Impact Assessment Summary

5.6 The HNRFI is proposed to accept 16 rail freight services per day, in doing so increasing the additional downtime. Based on the assessment completed by Arup it would be expected that the direct impact on residents would be:

- No change in AM peak hour 8.00-8.59 (maintain 23-minute downtime as baseline)
- Increase of 2 mins 30 seconds in PM peak hour 17:00-17.59 (increase downtime from 17 minutes 50 seconds to 20 minutes and 20 seconds)
- Increase of between 2mins 30 seconds and 5 minutes in other hours (increase downtime from baseline 15 minutes to between 17mins 30 seconds and 20 minutes)

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5.7 Overall, the magnitude of impact on accessing social infrastructure has been assessed to be 'negligible / low' as in most instances there would be either no change or limited but noticeable change in the access to social infrastructure or health and wellbeing of residents. However, if frequent return journeys from Littlethorpe to Narborough are undertaken (3 or more times a day), the magnitude could be 'medium' as the worst case would be up to 15 minutes additional delay if residents are continually met by a closed crossing.

5.8 The impacts are likely only to be noticed by Littlethorpe residents who are considered a '**medium**' sensitivity population group. Within this population group there are priority subgroups that may be disproportionately affected, being:

- Children and younger people
- Older people
- Pedestrians and cyclists (or people without access to private transport)
- People with disabilities and/or long-term health conditions
- Parents with young children /pushchairs

#### **Mitigation**

5.9 There is no mitigation measure capable of eliminating the socio-economic stemming from increased downtime of the crossing. However, potential mitigation strategies such as providing ramps or lifts to improve accessibility or improved lighting have been suggested to help mitigate the impact on the community.

#### **Conclusion**

5.10 This assessment concludes that the increased downtime of the barrier at Narborough Crossing is not considered to have an overall material impact on quality of life of residents. Nevertheless, there will be occasions when the effects will be noticeable and would likely to influence daily routines causing delays.

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# A1. HEALTH PROFILE FOR THE STUDY AREA

A1.1 Sourced for the Office for Health Improvement and Disparities, Local Health – Small Area Public Health Data










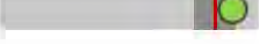





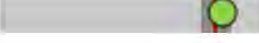

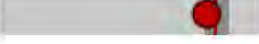

Indicator	Period	007 Narborough Districts England & UAs (2021/22-2022/23)			England			
		Count	Value	Value	Value	Worst	Range	Best
<b>Life Expectancy</b>								
Life expectancy at birth, (upper age band 90 and over) (Male)	2016 - 20	-	80.2	81.0	79.5	66.6		
Life expectancy at birth, (upper age band 90 and over) (Female)	2016 - 20	-	85.7	84.9	83.2	72.0		
<b>Mortality</b>								
Deaths from all causes, all ages, standardised mortality ratio	2016 - 20	310	87.1	89.3	100.0	251.0		36.0
Deaths from all causes, under 75 years, standardised mortality ratio	2016 - 20	125	89.8	80.1	100.0	309.2		26.1
Deaths from all cancer, all ages, standardised mortality ratio	2016 - 20	120	115.1	98.2	100.0	200.8		32.2
Deaths from all cancer, under 75 years, standardised mortality ratio (SMR)	2016 - 20	67	123.7	93.6	100.0	231.0		29.2
Deaths from circulatory disease, all ages, standardised mortality ratio	2016 - 20	72	84.9	85.2	100.0	244.7		32.1
Deaths from circulatory disease, under 75 years, standardised mortality ratio	2016 - 20	20	66.9	71.3	100.0	374.4		12.6
Deaths from coronary heart disease, all ages, standardised mortality ratio	2016 - 20	30	79.8	88.8	100.0	307.5		16.6
Deaths from stroke, all ages, standardised mortality ratio	2016 - 20	21	109.2	71.6	100.0	415.7		0.0
Deaths from respiratory diseases, all ages, standardised mortality ratio	2016 - 20	41	91.2	85.0	100.0	335.4		21.8
Deaths from causes considered preventable, under 75 years, standardised mortality ratio	2016 - 20	48	76.5	75.2	100.0	378.4		17.3

Indicator	Period	007 Narborough Districts England & UAs (2021/22-2022/23)				Worst/ Lowest	England	
		Count	Value	Value	Value		Range	Best/ Highest
<b>Population</b>								
Percentage of the total resident population who are 0 to 4 years of age (0-4 yrs)	2020	439	5.1%	5.5%	5.7%	0.7%		
Percentage of the total resident population who are 0 to 15 years of age	2020	1,589	18.3%	19.0%	19.2%	1.5%		
Percentage of the total resident population who are 5 to 15 years of age (5-15 yrs)	2020	1,130	13.2%	13.5%	13.5%	0.5%		
Percentage of the total resident population who are 16 to 24 years of age	2020	752	8.8%	8.7%	10.5%	4.0%		
Percentage of the total resident population who are 25 to 64 years of age	2020	4,588	53.4%	51.8%	51.8%	14.4%		
Percentage of the total resident population who are 50 to 64 years of age (50-64 yrs)	2020	1,833	21.3%	20.3%	19.2%	1.4%		
Percentage of the total resident population who are 65 and over	2020	1,683	19.6%	20.4%	18.5%	0.4%		
Percentage of the total resident population aged 85 and over	2020	143	1.7%	2.7%	2.5%	0.1%		
Population density, people per square kilometre	2020	8,592	1,501	781	434	6		
<b>Ethnicity &amp; Language</b>								
Percentage of population whose ethnic group is not 'white'	2011	343	4.1%	9.0%	14.6%	0.4%		
Percentage of population whose ethnicity is not 'White UK'	2011	478	5.7%	11.5%	20.2%	1.1%		
The percentage of people that cannot speak English well or at all, 2011	2011	12	0.1%	0.7%	1.7%	0.0%		
<b>Deprivation, Housing, and living environment</b>								
Index of Multiple Deprivation (IMD) Score	2019	-	6.2	10.6	21.7	2.2		
Income deprivation, English Indices of Deprivation	2019	439	5.1%	6.9%	12.9%	48.8%		
Child Poverty, Income deprivation affecting children index (IDACI)	2019	110	6.7%	8.8%	17.1%	64.7%		
Older people in poverty: Income deprivation affecting older people Index (IDAOPi)	2019	146	7.1%	8.9%	14.2%	76.0%		
Modelled estimates of the proportion of households in fuel poverty (%)	2020	261	6.9%	9.6%	13.2%	54.1%		
Households with overcrowding based on overall room occupancy levels	2011	87	2.5%	3.0%	8.7%	60.9%		
Older people living alone, % of people aged 65 and over who are living alone	2011	356	28.3%	28.1%	31.5%	87.2%		
Percentage of households in Poverty	2013/14	-	12.3%	-	21.1%	63.7%		
<b>Employment</b>								
Unemployment (Percentage of the working age population claiming out of work benefit)	2021/22	116	2.2%*	2.8%*	5.0%*	20.8%		
Long-Term Unemployment- rate per 1,000 working age population	2021/22	3	0.5*	0.3*	1.9*	15.1		

Indicator	Period	007 Narborough Districts England & UAs (2021/22-2022/23)				Worst/ Lowest	England	
		Count	Value	Value	Value		Range	Best/ Highest
<b>Behavioural risk factors</b>								
Smoking prevalence at age 15 - regular smokers (modelled estimates)	2014	5	5.0%*	4.5%*	5.4%*	17.9%		0.0%
Smoking prevalence at age 15 - regular or occasional smokers (modelled estimates)	2014	7	7.5%*	7.0%*	8.2%*	19.3%		0.0%
Reception: Prevalence of obesity (including severe obesity), 3-years data combined	2019/20 - 21/22	-	7.0%	7.8%	9.9%	22.7%		2.9%
Reception: Prevalence of overweight (including obesity), 3-years data combined	2019/20 - 21/22	-	17.5%	19.9%	22.6%	41.7%		7%
Year 6: Prevalence of obesity (including severe obesity), 3-years data combined	2019/20 - 21/22	-	12.5%	15.9%	21.6%	40.0%		
Year 6: Prevalence of overweight (including obesity), 3-years data combined	2019/20 - 21/22	-	26.8%	30.1%	35.8%	55.8%		
<b>Child and Maternal Health</b>								
Deliveries to teenage mothers	2016/17 - 20/21	-	*	0.5%	0.7%	-	<i>Insufficient number of values for a spine chart</i>	
General fertility rate: live births per 1,000 women aged 15-44 years, five year pooled	2016 - 20	428	54.2	60.7	59.2	2.1		
<b>Children and Young people: Health care use</b>								
Emergency hospital admissions in under 5 years old, crude rate	2016/17 - 20/21	115	84.5	90.0	140.7	352.2		24.8
Emergency hospital admissions for injuries in under 5 years old, crude rate	2016/17 - 20/21	15	62.9	72.7	119.3	363.7		0.0
Emergency hospital admissions for injuries in under 15 years old, crude rate	2016/17 - 20/21	50	65.4	65.2	92.0	251.2		18.7
Emergency hospital admissions for injuries in 15 to 24 years old, crude rate	2016/17 - 20/21	30	68.0	98.1	127.9	733.3		14.4



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Indicator	Period	007 Narborough Districts England & UAs (2021/22-2022/23)				England		
		Count	Value	Value	Value	Worst	Range	Best
<b>Emergency Hospital Admissions: Adults</b>								
Emergency hospital admissions for all causes, all ages, standardised admission ratio 	2016/17 - 20/21	-	83.8	90.8	100.0	215.6		31.5
Emergency hospital admissions for coronary heart disease, standardised admission ratio 	2016/17 - 20/21	-	109.7	82.5	100.0	396.1		23.0
Emergency hospital admissions for stroke, standardised admission ratio 	2016/17 - 20/21	-	107.4	95.9	100.0	260.9		28.4
Emergency hospital admissions for Myocardial Infarction (heart attack), standardised admission ratio 	2016/17 - 20/21	-	96.5	87.6	100.0	318.7		21.4
Emergency hospital admissions for Chronic Obstructive Pulmonary Disease (COPD), standardised admission ratio 	2016/17 - 20/21	-	64.6	80.8	100.0	554.5		9.3
<b>Hospital admissions, harm and injury and Long Term Conditions</b>								
Emergency hospital admissions for intentional self harm, standardised admission ratio 	2016/17 - 20/21	-	63.7	69.1	100.0	541.4		10.2
Emergency hospital admissions for hip fracture in persons 65 years and over, standardised admission ratio 	2016/17 - 20/21	-	121.7	119.6	100.0	527.4		29.3
Hospital admissions for alcohol attributable conditions, (Broad definition) 	2016/17 - 20/21	654	91.2	84.9	100.0	391.1		35.9
Hospital admissions for alcohol attributable conditions, (Narrow definition) 	2016/17 - 20/21	246	115.3	91.6	100.0	471.9		22.6
Percentage of people who reported having a limiting long term illness or disability	2011	1,050	12.4%	15.8%	17.6%	38.9%		3.6%