

Brymbo Heritage Trust

TRANSPORT STATEMENT

Stori Brymbo



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DECEMBER 2023

PUBLIC

Brymbo Heritage Trust

TRANSPORT STATEMENT

Stori Brymbo

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TRANSPORT STATEMENT

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1 INTRODUCTION

1.1 PURPOSE OF REPORT

WSP have been commissioned to produce a Transport Statement to support a planning application for the Stori Brymbo project to be located on the site of the former Steelworks, Brymbo.

1.2 REPORT STRUCTURE

The remainder of the report is structured as follows:

Section 2 describes site location in the context of the local highway network, outlining the site's accessibility and public transport provision in the area.

Section 3 describes the development proposals, provision for all modes of transport and parking arrangements.

Section 4 sets out the local and national policy relevant to the development.

Section 5 identifies the projected highway impacts of the proposals, providing evidence of calculated trip rates and summarises the document's findings relating to the likely impact of the development proposals.

Section 6 describes the parking demand for the sites based on trip generation within Section 5.

Section 7 analyses accident data for the surrounding area.

1.3 OVERVIEW OF DEVELOPMENT

The Brymbo Heritage Centre aims to tell an interwoven story of nature, industry and people; from fossils to coal, from iron to steel, and from closure to regeneration.

The Brymbo Heritage Area contains a 314 million year old fossil forest as well as the remains of Brymbo's 1790s Ironworks and later Brymbo Steelworks. Stori Brymbo aims to conserve and reuse Brymbo's historic buildings to develop a visitor attraction, heritage skills learning centre, small business space and events venue.

1.4 SCOPING

WSP contacted the Local Highway Officer in 2019, Peter Douthwaite, to introduce the scheme. During discussion, Peter provided advice regarding the transport components of the planning applications, which WSP has followed in this Transport Statement.

2 EXISTING CONDITIONS

2.1 SITE LOCATION AND LOCAL HIGHWAY NETWORK

Figure 2-1 shows the location of the site with respect to the local highway network. The site is located to the south of Brymbo in an area of land formerly operating as Brymbo 1790's Ironworks and later Brymbo Steelworks. The site is currently largely inactive.

The site is bound by Phoenix Drive and New High Street to the east, the Blast Road to the north and a footway to the south. Phoenix Drive and Blast Road are single carriageway roads subject to a speed limit of 30mph. Phoenix Drive is a newly constructed road built to serve the adjacent mixed-use development proposed by the current site owners, Brymbo Developments Ltd. as part of the Brymbo Park Masterplan.

Figure 2-1 - Site location within the local context



2.2 PEDESTRIAN ACCESS

The Chartered Institute of Highways and Transportation (CIHT) 'Guidelines for providing journeys on foot' (2000) suggests acceptable walking distance for a variety of locations. It states a desirable walking distance of 500m, acceptable walking distance of 1,000m and preferred maximum of 2,000m to a sight-seeing location. These acceptable walking distances are the greatest for this purpose.

The following table summarises suggested acceptable walking distances for various purposes:

Table 2-1 – Suggested acceptable walking distances

Walking Distance	Town Centres (m)	Commuting/ School/ Sight Seeing (m)	Elsewhere (m)
------------------	------------------	-------------------------------------	---------------

Desirable	200	500	400
Acceptable	400	1000	800
Preferred maximum	800	2000	1200

Figure 2-2 below shows the pedestrian isochrone for the site. As the figure shows, the site is within walking distance of Brymbo residential areas to the north and south of the proposed heritage centre. The site is also within walking distance of a local enterprise centre; a multiuse building offering a variety of work spaces, facilities and events which currently attract visitors. Other amenities within the vicinity of the site consist of a mixture of residential properties, small businesses, food & drink establishments and a sports centre.

Pedestrian access to the site is appropriate with good quality footways along both sides of New High Street and informal crossing across the site access. The closest informal crossing points New High Street are approximately 100m south of the site at the 3-arm roundabout, or approximately 200m north at the junction with Mount Hill. There are currently no formal crossing points across New High Street however the existing traffic demand on this road is low enough that pedestrians are able to cross relatively safely unassisted.

Figure 2-2 - Walking isochrone



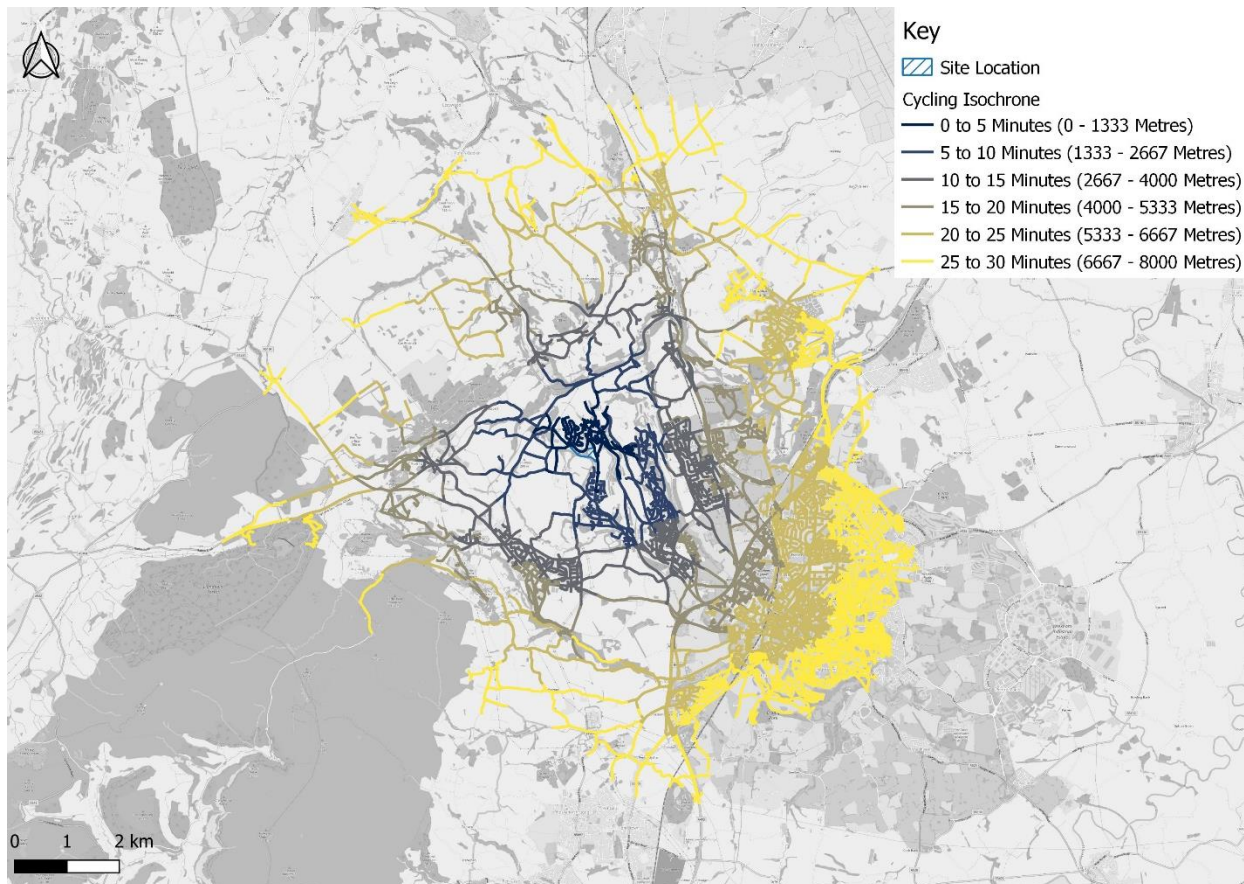
2.3 CYCLE ACCESS

A distance of three miles is referred to in the Department for Transport (DfT) 'Cycle Infrastructure Design' (2008) guidance as being appropriate for many utility cycle journeys. The distance of three miles referred to in the DfT guidance is broadly equal to 5km.

Figure 2-3 shows the cycling isochrone from the site. A 5km trip equates to approximately a 20-minute trip depending on cycle speed. As can be seen on the diagram below, a 20-minute journey can reach many residential locations and the nearby train station.

There is no on road or off-road cycle infrastructure within the immediate vicinity of the site.

Figure 2-3 - Cycling Isochrone



2.4 PUBLIC TRANSPORT – BUS

Figure 2-4 shows the bus stop provision in the town of Brymbo. The existing bus stops on Phoenix Drive serve the current residential development however it is understood that further bus stop locations will be provided along New High Street upon the build out of the adjacent proposed residential led development, the proposed new school and associated commercial development.

The existing frequency of bus services throughout Brymbo is fair with hourly services in both the weekdays and on the weekends between Brymbo and Wrexham. The frequency of local bus services is set out in Table 2-2.

Figure 2-4 - Bus stop locations within proximity to the site



Table 2-2 – Frequency of local bus services

No.	Route	Operator	Buses per hour					Hours of operation			Journey times (Approx.)
			AM Peak	Inter Peak	PM Peak	Sat	Sun	Mon - Fri	Sat	Sun	
12	Wrexham - Library	Arriva Wales	2	2	2	2	2	05:30 - 22:55	05:30 - 22:55	09:50 - 17:50	24 mins
12	Library - Wrexham	Arriva Wales	2	2	2	2	2	05:31 - 23:20	05:31 - 23:20	10:14 - 18:14	24 mins
14	Wrexham - Library	Arriva Wales	1	1	1	1	<1	06:20 - 18:20	06:20 - 18:20	-	24 mins
14	Library - Wrexham	Arriva Wales	1	1	1	1	<1	06:48 - 18:48	06:48 - 18:48	-	24 mins

2.5 PUBLIC TRANSPORT – RAIL

As can be seen from the figure below there is a local railway station within proximity to the site and a major railway station in Wrexham (Wrexham General).

Table 2-3 shows the direct rail services from local rail stations. From Wrexham, a number of other destinations can be reached including southern destinations within Wales such as Cardiff and, Holyhead, and within the North West and West Midlands of England, such as Chester, Shrewsbury, Birmingham and Liverpool.

Figure 2-5 - Rail Stations in proximity to the site



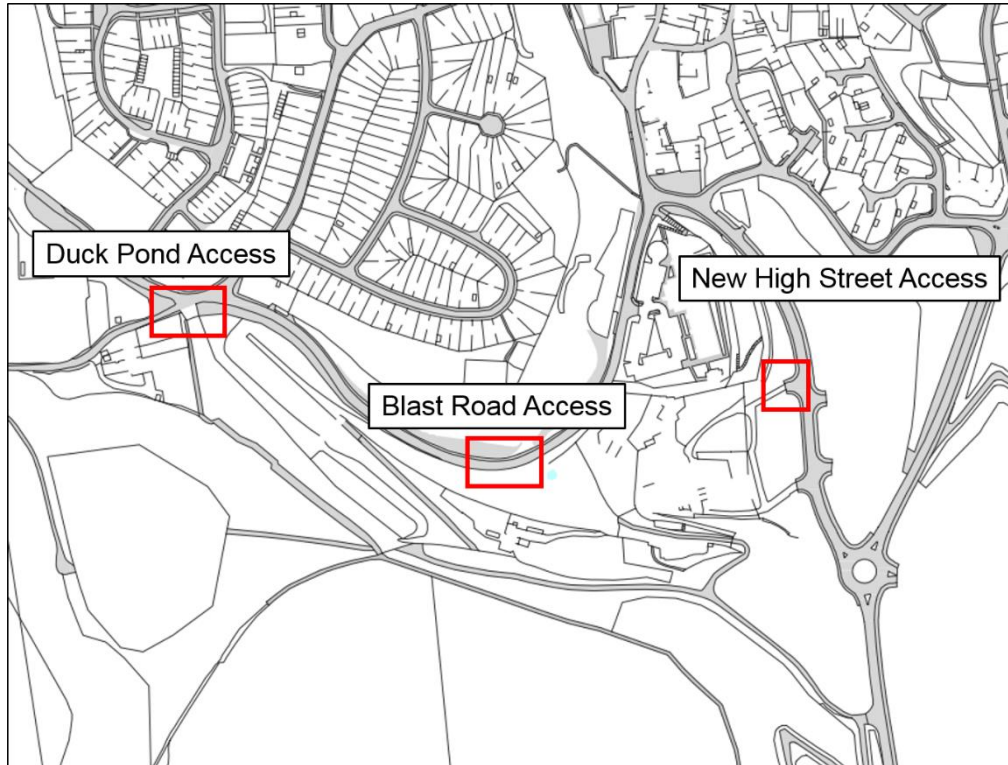
Table 2-3 – Frequency of local rail services

Route	Mon-Sat				Sunday			
	Trains per day	Trains per Hour (tph)	First Train Arriving	Last Train Departing	Trains per day	Trains per Hour (tph)	First Train Arriving	Last Train Departing
Gwersyllt to Wrexham Central	15	1	08:18	23:43	10	Generally 1 every 2 hours	10:49	23:16
Gwersyllt to Bidston	15	1 most hours	06:26	22:04	10	Irregular	08:47	21:12
Wrexham General to Wrexham Central	13	1	08:24	21:39 (Mon-Fri) 21:30 (Sat)	8	Less than 1 per operating hour	10:54	20:55
Wrexham General to Bidston	15	1 per hour	06:22	22:01	10	1 per operating hour	08:44	21:09
Wrexham General to Cardiff Central	19	1	05:48	21:37 (Mon-Fri) 20:39 (Sat)	8	Less than 1 per operating hour	09:35	19:54
Wrexham General to Holyhead	18	1	06:20	23:04 (Mon-Fri) 22:19 (Sat)	12	1 most hour	08:44	23:37

2.6 VEHICULAR ACCESS

The main site access is via New High Street however there are two further private access points off Blast Road. The locations of these three access points can be seen in Figure 2-6.

Figure 2-6 – Existing site access locations



New High Street is a single carriageway with a carriageway width of 7.3m. There is good visibility from the New High Street access.

The visibility for the access point at the Duck Pond access has been assessed. Appendix A shows the visibility splays in consideration of the 30mph road speed. The MfS principles and as such stopping sight distances are considered appropriate at this location. MfS visibility is achievable to the nearside kerb line to the east and west of the junction. A visibility splay for a potential future access off Blast Road is also provided in this Appendix.

2.7 EXISTING CAR PARKING PROVISION

2.7.1 ON-SITE

There is currently no formal parking available on the site.

2.7.2 ON-STREET

There is currently on-street parking in the many nearby residential areas. Neither New High Street nor Phoenix Drive currently have any road markings that would restrict on-street parking and the road width of 7.3m would support the capability for on-street parking.

2.7.3 PUBLIC CAR PARK

The Brymbo Enterprise Centre is located approximately 300m away via road and provides an estimated 70 car parking spaces, plus provision for disabled parking, for services within the centre. Whilst this is not public parking, the facility does offer free parking during normal opening hours of the centre.

2.8 LOCAL FACILITIES

Brymbo is a small town with local facilities including the Brymbo Enterprise Centre, the Brymbo Sports and Social Complex, various eating and drinking establishments, a local convenience shop and a chemist. There are also employment opportunities within many small businesses.

3 PROPOSED DEVELOPMENT

3.1 SITE PROPOSALS

The proposed development is expected to comprise the following:

- The Stori Brymbo Heritage Centre with ancillary land uses
- Approximately 290sqm of business unit space

As briefly discussed in Section 1.3, the redevelopment of the site will provide a Heritage Centre for the remains of Brymbo's 1790's Ironworks and later Brymbo Steelworks. The site is also of significance due to the uncovered fossil forest within the site boundary. This will become part of the visitor attraction.

Within the limits of the site there are two locations proposed as small business units. 142 sqm of space is proposed within the Heritage Centre itself. Up to a further 183 sqm of small business unit space is proposed in due course within four train carriages converted for business use to the northwest of the site. The latter is not part of the suite of planning applications to which this Transport Statement relates. Access and parking arrangements for this future provision will be set out as part of such a future application.

There are two points of access to Stori Brymbo that will serve different spaces, end uses of these spaces have not been identified.

- New High Street Access - Access for visitors and staff of the small business units
- Duck Pond Access – Access for Stori Brymbo staff and volunteers

The proposed site layout can be seen in Figure 3-1 below.

Figure 3-2 - Brymbo Masterplan



3.2 STAFF NUMBERS

The Stori Brymbo Business Plan sets out the number of permanent front of house staff that it is expected will be employed, including the café staff and management. The Business Plan states that there will be 26 permanent front of house staff in a stabilised year, equating at maximum to 20 staff on any one day.

Part of the Stori Brymbo Business Plan is to make use of space within the centre for small businesses. The site development plan proposes a maximum of 142 sqm in the Machine Shop (entrance). The small business staff would be additional to the Stori Brymbo staff. The proposed trip demand generated by the small business units has been determined from TRICS data.

The small businesses within the Machine Shop are assumed to be office based. This method is robust as office-based land uses have high rates of employees per floorspace. Assuming a start time between 7-10am, the headcount generated by a 142m² office floorspace is 8 employees.

The table below sets out the expected employee numbers associated with the site.

Table 3-1 – Number of staff

Staff Type	Number of Staff
Stori Brymbo Staff (and volunteers)	20
Small Business Unit Staff (Machine Shop)	8
TOTAL	28

3.3 VISITOR NUMBERS

The Brymbo Heritage Centre Business Plan sets out forecast ticket sales in a fully operational year. This information was based on evidence from similar sites, and the location and profile of the available market.

The number and type of forecast tickets annually are set out in the table below.

Table 3-2 – Forecast number of tickets by type

Ticket Type	No.	Percentage
Adults	14250	38%
Concessions	8250	22%
Child	3750	10%
Family	7500	20%
Groups (non-schools)	1875	5%
School visits	1875	5%

When making assumptions about the number of visitors, it is important to understand that the number of tickets does not equal the number of trips.

In order to provide a robust assessment, it has been assumed that all visitor trips will be by car or coach. However, in practice, and in accordance with the Trust's keen desire to maximise sustainability, a proportion of these would be expected to be generated by people coming by public transport, cycling or, for very local residents, walking. The following sets out visitor trip generation assumptions:

- *School visits* will travel to the site via coach (or local schools will walk) therefore this ticket type will be disregarded in the car trip generation methodology
- Children visiting the site will be accompanied by an adult, therefore a *Child* ticket will not equate to a car borne trip.
- Whilst the ticket type *Groups (no-schools)* may include tourist trips that would arrive by coach, it is also possible that these trips may arrive from multiple cars or minibuses therefore this ticket type will be counted towards visitor trip generation.

The table below sets out the worst case (i.e. 100% car borne) assumed number of car-based visitors to the site annually.

Table 3-3 – Forecast number of visitors annually

Ticket Type	Number
Adults	14250
Concessions	8250
Family	7500
Groups (non-schools)	1875
Total	37,500

3.4 VOLUNTEER NUMBERS

It is also the ambition of Stori Brymbo to accept volunteers throughout the year. The Trust estimates that, on average, there will be around 10 volunteers daily.

3.5 MEANS OF ACCESS

Pedestrian Accessibility

Stori Brymbo lies between the northern and southern residential areas of Brymbo, as set out in Section 2 the site is very accessible to the local residents of Brymbo. The site is also within 300m of a bus stop for visitors arriving from greater distances via public transport.

Pedestrians can access the site via New High Street, which has a well-lit footway. Footways are provided in all surrounding areas and create direct, safe routes in between the local residential centres and bus stop locations.

Cycle Accessibility

Cyclists can access the site in the same way as pedestrians. The site will provide outdoor sheltered cycle storage provision.

As is shown in Figure 2-3 in Section 2, the nearest train station is within a 15-20-minute cycle ride of Stori Brymbo, encouraging sustainable travel via multi-modal trips for visitors originating in more distant locations.

Public Transport Accessibility

The site is located close to bus stops and many bus services currently run by the site. It is expected that the frequency of bus services will increase as the adjacent development is built out, however the existing bus service provision serves the proposed opening times of Stori Brymbo well.

In addition, the site is within cycling distance of the local railway station that provides hourly services to both Wrexham and Bidston.

Whilst there are no direct bus services between Gwersyllt Railway Station and Stori Brymbo, there are direct services available from Wrexham Bus station, a short walk from both Wrexham Central and Wrexham General Stations.

3.6 PARKING PROVISION

There are two main types of vehicular trips to the Heritage Centre; those via car and those via coach. It is expected that individual or small groups of visitors, staff and volunteers will travel to the site via car. It is also anticipated that large groups of visitors, largely from schools, will travel to the site via coach.

The table below sets out the parking standards from Wrexham County Borough Council's Local Planning Guidance. Parking provision has been calculated based on these standards and the floorspace of the development.

Table 3-4 – Parking Calculations D1 Non-residential institutions

Type of Space	Standard	Floorspace	No. Spaces
Car Parking Spaces	2 car spaces plus 1 car space per 25m ²	Approximately 5,000 sqm	202 (max)
Cycle Spaces	1 cycle space per 250m ² gross floor space		20 (min)
Mobility Spaces	10% of all car spaces must be provided to mobility standard		20 (min)
Electric Vehicle Charging Point / Motorcycle Spaces	There are no current standards relating to the provision of Electric Vehicle charging or motorcycle spaces within the WCBC guidance		

Table 3-5 – Parking Calculations B1 Business and light industry

Type of Space	Standard	Floorspace	No. Spaces
Car Parking Spaces	1 car space per 30m ² gross floor space	Approximately 290sqm	10 (max)
Cycle Spaces	1 cycle space per 300m ² gross floor space		1 (min)
Mobility Spaces	10% of all car spaces must be provided to mobility standard		1(min)
Electric Vehicle Charging Point / Motorcycle Spaces	There are no current standards relating to the provision of Electric Vehicle charging or motorcycle spaces within the WCBC guidance		

The number of parking spaces that are potentially available to Stori Brymbo visitors, staff and volunteers has been assessed with reference to the available space and visual design ambitions of Stori Brymbo. In addition to these spaces, the following nearby locations would provide additional parking during periods of occasional high demand in some cases subject to agreement with site owners/occupiers.

- Brymbo Enterprise Centre
- Adjacent proposed primary school
- Adjacent proposed food store
- Adjacent proposed medical centre
- Adjacent eating, drinking and leisure establishments; and
- Elsewhere in the village centre.

Figure 3-3 below shows potential car parking provision serving the site.

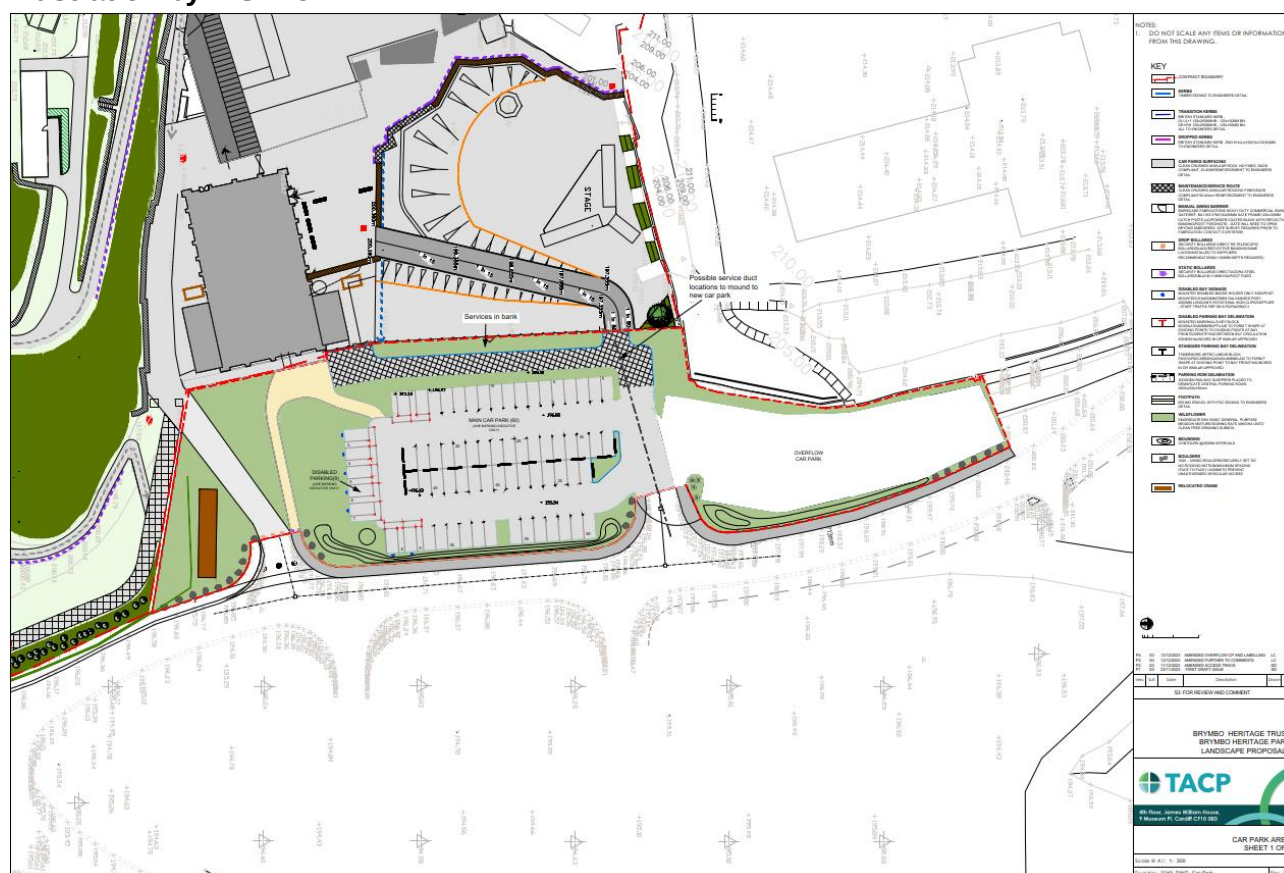
Figure 3-3 – Potential parking provision locations



On site, the Duck Pond car park is proposed to provide up to 10 spaces which will be primarily used for staff and volunteers of the heritage centre. This parking provision will be the subject of a separate planning application being made by Brymbo Heritage Trust.

The planned main parking provision available for the use of Stori Brymbo visitors and front of house staff and volunteers is a public car park that will be under the control of Brymbo Heritage Trust and included within revised lease terms with Brymbo Developments Ltd (BDL). The proposed layout of this car park is shown in Fig. 3.4. This indicates 60 general car spaces and 9 disabled car parking spaces. Based on the above assessment, this provision is forecast to accommodate demand for car park use for 85% of a typical year's needs, after taking account of the 10 spaces being provided elsewhere on the site in the Duck Pond area. On the busiest 15% peak days, the forecast additional 18 spaces of car parking requirement can be met at the Enterprise Centre or by occasional use of an overflow area (not part of the current planning application) also shown in Figure 3.4.

Figure 3-4 – Proposed shared parking provision located adjacent to the site – layout illustration by WSP for BHT



Coaches are expected to drop off and pick up visitors outside of Stori Brymbo on New High Street and layover remote from the site. It is anticipated that there will be a maximum of two coaches per day. Minibuses (for example used by informal adult learning groups) would also drop off and pick up in the same location as coaches and lay over at the Duck Pond staff and volunteer parking area.

Due to the nature of the land use, it is unlikely that Stori Brymbo will generate enough traffic to warrant the maximum parking provision set out in the local parking guidance. The actual parking demand has been calculated and is described in Section 6, based on trip generation which is discussed in Section 5.

3.7 BRYMBO-PARK

As the main parking site for Stori Brymbo will be provided by the adjacent development, it is important to understand the proposed parking provision for the uses of the Brymbo Park development.

The Brymbo Park masterplan comprises multiple parcels of land. The parking for Stori Brymbo lies within the eastern parcel of the proposed development site. The proposed land uses for the eastern parcel are set out below:

- 450 dwellings;
- Express style food store – 930sqm
- Local retail – 465sqm

- Public House/ Restaurant – 372sqm
- Health Centre/ other non-residential use – up to 465sqm
- Primary School – 420 pupils

The nature of the development, areas and numbers in the bullet list above may be subject to revision as detailed planning applications are made for individual plot of land within the masterplan framework.

The Brymbo Park transport assessment supports a shared approach to parking provision as it encourages sustainable travel throughout the proposed development. The eastern parcel contains the 'small district centre' where higher numbers of non-motorised users are anticipated.

Below summarises the proposed parking provision for the non-residential uses, as is set out within the Transport Assessment.

- Food Store car parking – primarily used by customers but could be used for other land uses;
- Retail units – there would be on street parking bays fronting the smaller retail units, primarily for this use only;
- Health Centre – some operational car parking would be provided;
- Public House/ Restaurant – a car park would be provided;
- Primary School – a car park will be provided for staff only; and
- Heritage Centre – a car park would be provided at the Heritage Centre

To facilitate school drop-offs and pick-ups, a shared use approach is proposed where users would utilise all parking locations stated above.

Whilst the exact parking provision for each land use is not stated within the Transport Assessment for Brymbo Park, it can be seen that all proposed land uses have associated parking provision.

The Heritage Centre car park is expected to share its use with pick ups and drop offs at the local primary school. The AM drop off time is outside of the opening hours for Stori Brymbo, resulting in zero impact on the ability for visitors to park. During the PM pick up time for the primary school, the Heritage Centre car park and all other proposed parking locations is expected to have the combined capacity to accommodate the low number of car-borne trips to the primary school.

3.8 SERVICING

Loading on New High Street is permitted at any time so the collection of bins would not be affected. Refuse vehicles can access New High Street directly, no reversing manoeuvres are required. If travelling southbound on New High Street, there is provision to make a U-turn at the roundabout at the southern end of New High Street where it joins Heritage Way and Phoenix Drive.

4 TRANSPORT POLICY

4.1 NATIONAL POLICY

The Planning Policy Wales (PPW) document Edition 11 was published in 2021. The document ensures consistency to planning decisions in Wales.

The document places an importance on achieving well-being through placemaking, stating *“sustainable places are the goal of the land use planning system in Wales”*.

The PPW suggests developments follow the key planning principles:

- Growing our economy in a sustainable manner
- Making best use of resources
- Facilitating accessible and healthy environments
- Creating and sustaining communities
- Maximising environmental protection and limiting environmental impact.

As discussed in Chapter 2, the proposed development has access to public transport facilities in the form of regular bus services and multiple train stations, promoting sustainable access to the site.

In addition, the development supports the planning principle to create and sustain communities by redeveloping a locally significant site and generating a sustainable economic improvement to the area.

PPW10 sets out the commitment to reducing the reliance on private car and supporting a modal shift to sustainable travel modes. To facilitate this, developments should be:

“designed in a way which integrates them with existing land uses and neighbourhoods”.

The Stori Brymbo scheme has been worked up in conjunction with the Brymbo Park Masterplan which ensures its integration within the wider area and all the proposed land uses.

In Section 4, PPW10 sets out the importance of Transport Assessments and their role in setting out the level of impacts of a proposed development. As set out in Chapter 5, the proposed development will generate a low number of vehicle trips both during and outside of AM and PM peak periods. As such, the development will not have a significant impact on the local highway network.

The proposal therefore complies with the transport requirements of the PPW.

4.2 LOCAL POLICY

The development of a Wrexham Local Development Plan (WLDP) is underway and is currently in consultation stages. The WLDP sets to replace Wrexham’s Unitary Development Plan (UDP), 1996-2011.

The site is earmarked within the UDP as land for reclamation. The area south of Brymbo makes up the Brymbo Masterplan, with various parcels of land committed for residential development.

Brymbo’s Sustainable Urban Mobility Plan (2016) ‘Wrexham Connected’ sets a clear vision for the future of transport in Wrexham. It follows on from the Sustainable Urban Mobility Plan (SUMP) created in 2014.

The document sets out the following key objectives:

- Safer Places - Wrexham Connected will work with partners to create places and environments where people from all walks of life can live, work and play safely together- both on and off the transport network and at the final destination.
- Sustainable Places – Wrexham Connected will embrace a ‘sustainable’, transport-first approach to new development through the planning process. It will facilitate and manage the County Borough’s growth agenda in the most sustainable and efficient way possible, strengthening its economy and improving access to jobs, education, services and tourism.
- Healthy Places - Wrexham Connected will reduce the impacts of air and noise pollution, greenhouse gas emissions and energy consumption. It will contribute to raising health standards through the promotion of active travel, particularly along the ‘last mile’. By connecting communities, we will make it easier for people to access open spaces and the countryside.
- Affordable Places- Wrexham Connected will stimulate inward investment and regeneration that leads to job-creation across a wide skill-base, using the planning process to ensure that affordable housing and employment needs are met.
- Well Connected Places - Wrexham Connected will enhance connectivity to, from and within Wrexham. Transport solutions will improve the attractiveness and quality of the environment both on key transport corridors and in the town centre.

4.3 BRYMBO PARK MASTERPLAN

Stori Brymbo is located at the north-western edge of the wider Brymbo Steelworks site, which is owned by Brymbo Developments Ltd (BDL), who have their own masterplan for the wider area, but firmly place the Stori Brymbo proposals at the heart of and as key asset of the new neighbourhood. The heritage area represents less than 10% of the entire former Brymbo Steelworks site.

Prior to the financial crash of 2008/2009 BDL (through Taylor Wimpey and Bloor Homes) had already completed the development of 469 houses at the southern end of the Steelworks site. In June 2015, the construction of a new spine road, which links Brymbo with nearby Tanyfron, was completed. The road was fully funded by BDL as a condition to enable plans for further housing and retail development on the Steelworks site. The road, the southern part of which was aptly named Heritage Way, will help in the regeneration of the former steelworks and the development of Stori Brymbo as a visitor destination and community/enterprise hub.

The current masterplan (see Figure 4-1) includes plans for 450 more residential dwellings, as well as a new 420-place primary school and community facilities, including a food store (up to 930 sqm), retail (up to 465 sqm), eating/drinking establishments (up to 372 sqm) and leisure opportunities such as cycling and walking trails as well as adventure play and parkland. Subject to demand from a service provider, there is also provision for a medical centre (up to 465 sqm). The scheme also includes plans for new footways, bus stops as well as cycle and car parking.

Figure 4-1 - Brymbo Masterplan



5 HIGHWAY IMPACT

5.1 INTRODUCTION

The proposed development is located in a relatively rural location that is accessible to local residents, however less accessible via public transport means for trips of greater distance. Due to the less accessible nature of the area, a high proportion of the trips are expected to be made via car, as is common with tourist attractions.

5.2 TRIP GENERATION

Trip generation for the site is described in terms of visitor, staff and volunteer trips. The methodology for trip generation is set out below.

5.2.1 VISITOR TRIPS BY CAR

Table 3-3 in Section 3 provides a forecast number of visitors to the site annually, however not every visitor results in an individual car trip. The following outlines the methodology used to consider car occupancy.

The Department for Transport Statistics (DfTS) calculates standard car occupancy rates for various trip types, based upon the National Travel Survey.

The trip type of this development falls under the trip purpose of 'Leisure'. An average car occupancy rate of 1.7 has been used for this development. Table 5-1 sets out the new number of total trips once the car occupancy rate has been applied. To ensure a robust assessment it is assumed all visitors travel by car.

Table 5-1 – Total number of car borne trips annually

Forecast Car Based Visitors	Forecast Car Based Visitors Car Occupancy rate applied
37500	22060

Using the seasonal profile provided within the Business Plan, it is possible to predict the distribution of these trips over a typical year. The table below sets out the profile, number of monthly trips and average number of trips per day based on the predicted number of days open within the Business Plan.

Table 5-2 – Annual profile of trips

Month	Percentage	Number	No. Days Open	Average Car Trips per Day
January	5%	1103	26	43
February	7%	1545	24	65
March	6%	1324	27	49
April	10%	2206	25	89
May	9%	1986	27	74
June	10%	2206	26	89
July	12%	2648	27	98
August	13%	2868	27	107
September	9%	1986	26	77
October	8%	1765	27	66
November	6%	1324	26	49
December	5%	1103	25	43

As can be seen from the monthly distribution of trips, the trip generation at the site will vary depending on the season. To consider the seasonal changes, the Stori Brymbo Business Plan has set out different opening hours for the winter and summer seasons. As well as the effects of seasonality, another factor commonly influencing parking demand at visitor attractions is the day of the week. It was therefore considered appropriate to calculate the arrival/departures for four specific profiles:

- Winter Weekday;
- Winter Weekend;
- Summer Weekday; and
- Summer Weekend.

The opening hours set out in the Business Plan are as follows:

- Winter (10:00 - 16:00) – there will be a period of reduced opening days per week in the months of November to February, excluding event type days
- Summer (10:00 – 17:00)

It is considered that the 'Summer Weekend' profile will also represent the high visitor demand on days such as Bank Holidays and therefore show a worst-case scenario.

ARRIVAL/DEPARTURE PROFILE CALCULATIONS

Trip Arrival and Trip Departure figures were obtained from a data source known as TRICS. TRICS collects traffic survey data from a wide range of sites in order to provide a way to calculate average trip generation or parking demand for specific sites by location, land use, peak period and other factors.

To understand the average parking arrival and departures for a site similar to the Brymbo Heritage, data from 29 sites classified as 'Tourist Attractions' were obtained across the past 10 years. Data older than 10 years was discarded as this may not represent current car ownership rates, economic climate and traffic generation.

The 29 sites provided a range of weekday, weekend and seasonal surveys. The TRICS datasource provided car park arrival and departure rates for each of the 29 sites. Using this information, it was possible to calculate an average hourly arrival and departure rate for each profile. These have been summarised in the tables below.

Table 5-3 - Arrival/Departure demand profiles

Time	Winter Weekday		Winter Weekend		Summer Weekday		Summer Weekend	
	Arrival	Departure	Arrival	Departure	Arrival	Departure	Arrival	Departure
10:00-11:00	19%	7%	15%	7%	22%	9%	18%	4%
11:00-12:00	20%	11%	19%	10%	17%	10%	20%	9%
12:00-13:00	19%	22%	21%	16%	13%	12%	17%	15%
13:00-14:00	18%	16%	17%	18%	12%	13%	17%	18%
14:00-15:00	15%	21%	18%	24%	16%	20%	14%	17%
15:00-16:00	9%	23%	11%	26%	12%	22%	9%	19%
16:00-17:00					7%	15%	6%	18%

The Stori Brymbo Business Plan states the experience “on average would take about 2-3 hours”. For robustness, this methodology assumes a duration of 3 hours for each visit.

To also ensure robust analysis, the table below shows daily trips for the busiest day of the busiest month.

Table 5-4 – Daily arrival/departure profile for the busiest day in August

Time	Summer Weekend	
	Arrival	Departure
10:00-11:00	19	0
11:00-12:00	21	0
12:00-13:00	18	16
13:00-14:00	18	19
14:00-15:00	15	18
15:00-16:00	10	20
16:00-17:00	6	38

5.2.2 STAFF TRIPS BY CAR

As we do not know whether the employees will be local residents, it is robust to assume all employees will drive to the site.

Of the Stori Brymbo staff listed within the Business Plan, six were staff that shared the same role. Therefore, it is assumed that only 20 staff will be working on any one day. The place of work for Front of House (FoH) staff would be in the Machine Shop, so these staff would expect to look to park in the main shared car park. Back of House (BoH) staff will have a more varied pattern of activity across the site and would be directed to the Duck Pond parking site. Of the 20 staff on duty any one day, 10 are expected to be FoH and 10 BoH. In addition, 5 FoH and 5 BoH volunteers are expected daily.

As the Machine Shop small business units will operate independently from Stori Brymbo, it is assumed that all business units will be fully utilised at all times for a robust assessment.

The table below sets out the car borne staff trips.

Table 5-5 – Total number of staff car borne trips to the site

Staff Type	No. of Staff Car Borne Trips
Stori Brymbo (staff and volunteers)	30
Small Business Units (Machine Shop)	8
Total	38

5.3 NETWORK IMPACT

For consistency, this Transport Statement has taken the local peak hours from the Transport Assessment (TA) of the adjacent development. The TA states an AM peak hour of 08:00-09:00 and PM peak hour of 17:00-18:00 is assumed throughout the traffic assessments.

The assessment of traffic on the network during peak hours is based on the month with highest average daily trips, August, and the Summer Season opening hours, 10:00-17:00.

The Heritage Centre does not open until after the AM peak and closes before the PM peak so is expected to have minimal impact on the local road network.

The below table sets out the forecast traffic generation for visitor and staff trips at peak times.

Trip Type	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Visitor Trips	0	0
Staff and Volunteer Trips (Stori Brymbo)	30	30
Staff Trips (Machine Shop)	8	8
TOTAL	38	38

5.4 SUMMARY

Overall, the site is expected to generate 38 additional trips on the network in the AM peak and 38 additional trips in the PM peak, during the peak summer season. This number will be comprised entirely of staff and volunteers with all visitors arriving after or leaving before the recognised peak periods on the network. These figures are considered to be robust for the following reasons:

- As staff rotas and shift patterns are currently unknown, the assumption of 30 staff and volunteers leaving during the PM peak is very robust. It is likely that this number may be lower.

- The opening hours used in this assessment are for the summer season. During the 6 months of the winter season, the heritage centre will close at 16:00 and place 0 heritage centre staff trips on the network during the PM peak.
- It is robust to assume all staff and all visitors will travel to the site by car. It is likely that a percentage of trips will be via other modes.

It is not anticipated this volume of trip generation will have a significant impact on the local highway network and accordingly no further network analysis has been undertaken.

6 PARKING DEMAND

The trip generation has been set out in Section 5 of this Transport Statement. To calculate the expected parking demand for the site, the Daily Arrival and Departure profiles were used to understand the maximum number of spaces required at any one hour through the year.

To represent the worst-case scenario, as in the Highway Impact assessment, a weekend in August has been used to calculate the maximum parking demand.

6.1 VISITOR PARKING DEMAND

The arrival and departure profile shown in Table 5-3 was used to calculate the number of parking spaces used each hour. As previously stated, an average duration of 3 hours is estimated for every car trip. The table below shows that the maximum number of spaces used in any one hour is 50.

Table 6-1 – Maximum Parking Demand profile for a weekend day in August

Time	No. Spaces in use
10:00-11:00	12
11:00-12:00	33
12:00-13:00	50
13:00-14:00	49
14:00-15:00	43
15:00-16:00	33
16:00-17:00	25
MAXIMUM	50

6.2 STAFF PARKING DEMAND

As stated above, it is estimated that the combined staff, volunteer and Machine Shop small business unit's trips during a high peak season during the AM and PM peak hours is 38. Assuming that all of these staff and volunteers will drive to the site, the maximum number of trips required for staff is 38.

However, part of this car parking demand is proposed to be accommodated at the Duck Pond car park (10 car parking spaces).

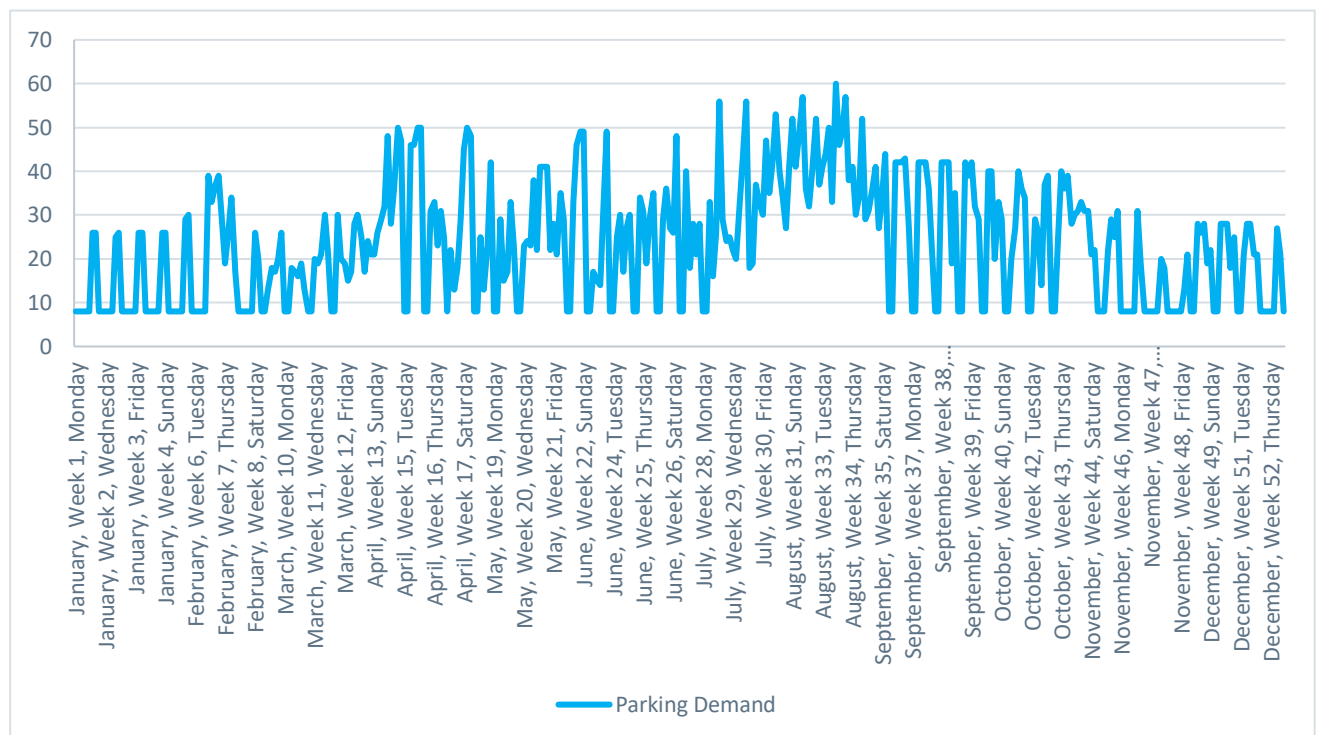
6.3 VISITOR PARKING DEMAND SEASONALITY

The Stori Brymbo project will open all year round. However, during winter months it will only be opened to visitors during weekends and school holidays. Figure 6-1 shows the seasonal parking demand profile for a typical year, with a clear peak during the summer months.

The visitor parking demand for a peak day will be 50, excluding eight employees. Throughout the year, the visitor parking seasonality will vary between circa 30 spaces on winter weekends, and 40-60 spaces on peak summer weekends.

It can be clearly seen that the peaks throughout a typical year occur during weekends, where most visitors will be travelling to Stori Brymbo project.

Figure 6-1 - Visitor Parking Demand for a typical year



6.4 OVERFLOW CAR PARK

Appendix B includes a letter of support provided by the Brymbo Enterprise Centre indicating their willingness to enter into a Heads of Terms with Brymbo Heritage Trust for using their facilities as overflow car park during weekends.

Furthermore, the staff/visitors car park of the planned primary school in the immediate vicinity of the site has the potential to act as an additional overflow car park for weekends and school holidays, when the school would not be in use. This will help to further reduce the amount of parking needed on site. A letter is being provided by the School to this effect and will be made available on receipt.

In addition, further land that could be used for peak demand overflow provision is shown on the layout at figure 3.4. This is not included in the current planning application.

6.5 SUMMARY OF PARKING DEMAND

On a high demand day within a peak summer season, it is expected that a maximum number of 88 spaces is required for visitors, staff and volunteers. The maximum parking provision estimated at the site is 88 spaces. The analysis of demand shows that there is considered to be sufficient car parking potentially available to cater for maximum anticipated visitor, staff, and volunteer parking numbers.

7 ACCIDENT ANALYSIS

Crashmap provides Department for Transport accident data including information about crash circumstances, casualties, drivers and vehicles. Figure 7-1 below shows accident data for the most recent 5-year period, 2017-2021. As Phoenix Drive was recently constructed, the number of incidents occurring on this link is expected to be minimal. Notwithstanding, there are 7 accidents recorded in proximity to the site within the latest 5-year period, these are summarised in Table 7-1.

Of these accidents, all were classified as 'Slight' in severity. There are two accidents close to the proposed site, located on Blast Road at the northern boundary.

Table 7-1 – Number of accidents in the most recent 5-year period by severity

Accident Severity	Count
Slight	7
Serious	0
Fatal	0

Figure 7-1 - Local Crashmap accident data



8 SUMMARY AND CONCLUSION

8.1 ACCESSIBILITY

- **Walking** - Excellent walking provision to all surrounding areas with good footways and safe crossing points. Whether local residents or travelling using the bus service, all staff and visitors will be able to access the site safely.
- **Cycling** - No on road or off-road cycle provision however this is not necessarily required due to the rural location of the site. Staff and visitors are able to cycle from nearby residential areas or the local train station within the preferred cycle time.
- **Public Transport** - Many bus stops within walking distance of the site. Regular services from local railway stations. Public transport serves the site within the site opening hours for both staff and visitors.

8.2 PARKING ACCESS & ARRANGEMENTS

The initial parking provision set out in Section 5 shows the entire site can accommodate the maximum car parking demand of 88 spaces. The key parking locations are as follows:

- Site off New High Street – 60 spaces
- Site off Duck Pond access – 10 spaces
- Overflow Car Parking Arrangements – 18 spaces

The proposed parking provision complies with local policy and are adequate to meet forecast parking demand. The indicative estimate meets Stori Brymbo visitor, staff and volunteer parking demand.

The development will also provide appropriate cycle and mobility parking.

8.3 HIGHWAY IMPACT

In the Peak summer season, the number of trips expected to be generated by the site during the peak hours is 38 (comprising staff and volunteer trips only). This equates to approximately 2 trips every minute. In the Winter Season, this will reduce to only 8 additional trips to the network during the PM peak hour.

The impact of this traffic to the network is unlikely to be significant, therefore further network analysis has not been undertaken.

8.4 CONCLUSION

This report sets out that the proposed development will be accessible by all appropriate modes of transport and that the impact on the local highway network is not considered to be severe. It is therefore concluded that there are no highway reasons for planning approval for the scheme not to be granted.

Appendix A

VISIBILITY SPLAY



Appendix B

LETTER FROM THE ENTERPRISE CENTRE





06/07/2023

Dear Gary,

We are pleased to be able to indicate our in-principle support for over-flow heritage/events visitor car parking capacity to be provided at the Enterprise Centre during high tourist season weekends and bank holidays.

The outline terms for this provision can be further developed, but are likely to include:

- the joint agreement of an annual programme of days where capacity could be reserved;
- details of the maximum number (and location) of spaces to be made available for over-flow purposes;
- details of sessional signage and stewarding as necessary to be funded at BHT's cost; and
- an agreement for both parties to regularly review the arrangement.

If you have any queries regarding the outlined terms, please don't hesitate to get in touch.

Yours Sincerely

F Sammut

Fiona Sammut
Centre Manager



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