

The Hurlstone Partnership

PROPOSED PHASE 3 BLOW MOULDING PLANT EXTENSION AT
TOMLINSON'S DAIRIES, FIVE CROSSES INDUSTRIAL ESTATE, MINERA,
WREXHAM

Transport Statement

July 2016

JPH/150401/Final

The Hurlstone Partnership

PROPOSED PHASE 3 BLOW MOULDING PLANT EXTENSION AT TOMLINSON'S DAIRIES, FIVE CROSSES INDUSTRIAL ESTATE, MINERA, WREXHAM

Document Status – Final

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Date: July 2016

Transportation Planning, Highway Design and Environmental Assessment

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CONTENTS

1	INTRODUCTION	1
2	EXISTING SITUATION	2
3	EXISTING TRAFFIC FLOWS	5
	Phase 1 Development Traffic	7
	Phase 2 Development Traffic	10
4	PROPOSED DEVELOPMENT	10
5	DEVELOPMENT TRAFFIC.....	10
6	SUMMARY	12

FIGURES

H0070-20-A3-PL-01 Location Plan BMB Extension Phase 3 (Haston Reynolds)
H0070-20-A1-PL-05 Site Layout Plan BMB Extension (Haston Reynolds) – Reduced Scale

APPENDICES

A Traffic and Speed Survey Results

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1 INTRODUCTION

- 1.1 Tomlinson's Dairies Limited (TDL) principally operates from the Five Crosses Industrial Estate in Minera, Wrexham, to the northeast of the A525 and northwest of Coedpoeth.
- 1.2 TDL is currently the largest processor of liquid milk in Wales, with a throughput of approximately 95 million litres of milk per annum.
- 1.3 TDL has recently been selected by J Sainsbury to process 100 million litres of milk and cream for sale in their stores in Wales and parts of England from July 2017. This will generate a further 60 full time jobs at the Five Crosses site, together with many more jobs in the wider rural economy.
- 1.4 Whilst the existing Five Crosses Dairy has sufficient capacity to process the additional milk, delivery is constrained principally due to insufficient cold storage capacity, insufficient storage for the increased number of poly bottles that will be blow moulded on site and inadequate staff car parking.
- 1.5 In order to help facilitate the required increase in output and the associated increase in employment, TDL needs to increase the size of its cold storage facilities through the extension of the existing main dairy building, provide additional poly bottle production and storage facilities through the extension of the existing blow moulding building and to re-organise and extend on-site car parking.
- 1.6 Given that the dairy has to continue operating throughout the development process, the development will be arranged into three Phases, with each Phase being the subject of a separate planning application. The development comprised within each Phase will broadly be as follows:

Phase 1

- Extension of the main dairy building to provide approximately 36% of the required additional cold storage capacity and additional first floor office accommodation; and
- Extension of the hardstanding to the east of the main dairy to facilitate the circulation and manoeuvring of goods vehicles and the interim provision of additional car parking.

Phase 2

- Extension of the main dairy building to provide the remaining 64% of the required additional capacity;
- Re-positioning of the main surface water attenuation pool;
- Removal of the majority of the earth mound to the east of the main dairy building;

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- Repositioning of the main parking area for goods vehicles;
- Formation of a new staff car park with car-only access off Gwern y gaseg Road; and
- Establishment of extensive structural landscaping for the dairy site as a whole.

Phase 3

- Extension of the existing blow moulding building to facilitate increased production and to provide storage for the additional poly bottles;
- Establishment of additional structural landscaping.

1.7 Whilst forming an integral part of a holistic proposal, this planning application and the associated submission deal specifically with the Phase 3 development. The application for Phase 1 has been submitted and that for Phase 2 will be submitted at the same time as that for Phase 3.

1.8 Permission for the developments is being sought by way of separate planning applications in order to allow the construction programme to be met, which will allow TDL to satisfy the contract and continue production whilst the wider site is reorganised.

1.9 The planning applications are being made by Philip and John Tomlinson who are Directors of TDL and freehold owners of the site.

1.10 The Hurlstone Partnership Limited was instructed to consider the transport related impact of the proposed Phased development, taking into account the identified variations in staff numbers and operational vehicle movements.

1.11 The remainder of this report details the findings of the study for the Phase 3 scheme.

2 EXISTING SITUATION

2.1 The development site is located to the northeast of Five Crosses Industrial Estate. Five Crosses Industrial Estate is located on the northeast side of the A525 Ruthin Road and is served by two accesses specifically designed to accommodate industrial development traffic, including HGVs.

2.2 TDL is accessed via the southern junction, which incorporates merge and diverge tapers when joining and leaving the A525 respectively and also provides excellent visibility from and towards turning vehicles. Analysis of collision records on the Crashmap website confirm there have been one recorded injury accident at the access to Five Crosses Industrial Estate, which is used by TDL, during the period 2005 to 2014; that being the full extent of data available on Crashmap. The single recorded accident occurred in 2005, which pre-dates TDL's occupation of the site within the industrial estate.

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- 2.3 In the event there is a feature of the local highway network that results in compromised highway safety, it is common to find a number of recorded incidents at a specific location, which share similar characteristics. The lack of recorded accidents within the most recent 5 year period available, which is the preferred period for safety reviews (although 3 years is also commonly assessed), indicates that the existing junction is acceptable in terms of its geometric layout.
- 2.4 When leaving the A525, the route to TDL then follows the internal industrial estate roads through to the site access, which is located in the northeast corner of Five Crosses Industrial Estate, through which all dairy vehicles pass.
- 2.5 The site is served by a single point of access which connects to the existing industrial estate road. The industrial estate is effectively a cul-de-sac which connects to the A525 via a simple priority T junction.
- 2.6 Pedestrian footways extend from the A525 junction into the industrial estate on both sides of the access road for a distance of approximately 90m. Beyond this point the footway on the south side ends whilst that on the north side continues around a 90 degree bend for a further 30m. Beyond this point there is sporadic footway provision on both sides which is interrupted by access to the various industrial units within the estate. Observations on site revealed that people walk along the carriageway or verge areas where there are no footways.
- 2.7 Whilst this may not be desirable, due to the layout of the industrial estate, which incorporates relatively short straight sections and speed humps, vehicle speeds are low, which naturally reduces the potential for conflict. The existing industrial estate road is lit during the hours of darkness to improve safety and the access road has recently been resurfaced.
- 2.8 The distance between the A525 junction and the end of the existing industrial estate road before reaching the TDL site is approximately 290m. The TDL site is served by an extension to the industrial estate road of approximately 125m. The access extension has a nominal width of 7.3m with a 2m footway on the west side. Cyclists share the access width with traffic travelling to/from the dairy only, as the route is a cul-de-sac serving only the TDL site.
- 2.9 A total of 106 parking spaces are provided within the TDL site.
- 2.10 Footways extend along both sides of the A525 to the north and south of the access to Five Crosses Industrial Estate, which provide connectivity to the bus stops on Ruthin Road.
- 2.11 There is an existing bus stop with a shelter located approximately 165m to the north of the access to Five Crosses Industrial Estate on the east side of the carriageway. This stop is known as "Minera - Village Bakery", as it is outside the Village Bakery premises. A bus stop without a shelter is provided on the opposite side of the A525. Another bus stop

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with a shelter is provided approximately 170m to the south of the Five Crosses Industrial Estate access, beyond Talwrn Road. This stop is known as “Coedpoeth – Five Crosses”, as it is adjacent to the Five Crosses public house and junction. Again, the shelter is on the east side of the route with an unsheltered stop opposite.

- 2.12 By considering the foregoing it is apparent that the existing bus stops are located approximately 460m from the far end of the existing industrial estate.
- 2.13 The closest railway station is at Wrexham, approximately 7km distant. Access to the rail services within Wrexham would be possible via the existing bus services.
- 2.14 There are no specific cycle facilities in the immediate vicinity, although cyclists are active in the area and share the existing carriageways with motorised traffic.
- 2.15 Approximately 550m to the southeast of the Five Crosses Industrial Estate access there is a petrol filling station with an associated convenience food store, which supplies a range of items for sale including sandwiches, confectionery, drinks etc. There is also a fish and chip shop just before reaching the food store. Pedestrian crossing facilities are provided to assist movement across the A525 between the east (site) side and the food store, which may be accessed via the existing lit footways adjacent to the carriageway.
- 2.16 The main shopping area in High Street, Coedpoeth, which provides a range of shops and services, is located approximately 1km to the southeast of the Five Crosses Industrial Estate/A525 junction.
- 2.17 However, a kitchen area is provided for clerical staff and a canteen with vending machines, microwave cooker, fridge etc. for operational staff. These facilities allow staff members to prepare/reheat and eat food on site away from their normal workstation, which avoids the need to travel off-site to buy lunch etc.
- 2.18 The Five Crosses junction mentioned above includes the connection between Gwernygaseg Road, from which it is proposed to access the new staff car park, and the A525 Ruthin Road. Visibility along the A525 Ruthin Road for drivers joining from Gwernygaseg Road is good in both directions from an X distance (set-back) of 2.4m. Beyond 2.4m, the visibility to the right (north) is restricted by the Five Crosses Public House. However, as the junction is controlled by a regulatory STOP line and associated signage, it is not necessary to provide for longer X distances, as these enable drivers to look left and right without stopping. As a result, the restriction imposed by the Five Crosses Public House effectively enforces the regulation to stop at the line.
- 2.19 A review of information on the Crashmap website confirmed there had been no reported personal injury accidents along Gwernygaseg Road or at its northern and southern junctions in the five year period 2010 – 2014 inclusive. Similarly, there had been no recorded accidents at the junction of the access to Five Crosses industrial estate over the same period.

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- 2.20 Although the development does not physically exist, planning applications have been submitted for the Phase 1 and Phase 2 developments, which would result in a variation to the existing traffic activity if approved and implemented.
- 2.21 As described in the Introduction, the proposed development in Phase 1 is to provide an extension of the main dairy building to provide approximately 36% of the required additional cold storage capacity and additional first floor office accommodation; and an extension of the hardstanding to the east of the main dairy to facilitate the circulation and manoeuvring of goods vehicles and the interim provision of additional car parking.
- 2.22 The extension to the cold store (including offices and trolley returns area) represents a gross internal floor area of 1,496m². The proposed extension to the hardstanding covers an area 2,937m² which equates to a net increase in hardstanding area of 2,233m², given the loss of some of the existing hardstanding to the cold store extension itself. The resulting hardstanding will provide capacity for approximately 50 temporary car parking spaces in addition to the required manoeuvring/circulatory areas.
- 2.23 Following the completion of Phase 1, it is anticipated that an additional 53 staff would be employed within the processing area of the business, of which 38 would be on site on any given day. Due to the increased activity, it is also anticipated that additional visitors would be attracted to TDL.
- 2.24 Under the Phase 1 development, there would be no change to the existing access arrangement to the A525 Ruthin Road via the internal route through the Five Crosses Industrial Estate.
- 2.25 The working hours would also remain as existing, with similar shift patterns being used.
- 2.26 In terms of transport matters, the Phase 2 application provides a new access to a staff car park from Gwernygaseg Road. Other than the redistribution of staff traffic to Gwernygaseg Road, there would be no change when compared with Phase 1 of the overall scheme.

3 EXISTING TRAFFIC FLOWS

- 3.1 Analysis of the existing traffic movements to and from TDL has been undertaken to establish the current baseline, taking into account the shift times of staff, import / export of product to / from the site and visitor movements.
- 3.2 In terms of staff movements, there are typically 115 employed within or from the site each day, including processing, blow moulding, mechanics, administrators and drivers. In addition, there are typically around 15 visitors to the site per day, when taking into account sales representatives, inspectors, engineers etc.

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- 3.3 The various staff members travel to / from the site at different times of the day, resulting in a peak of 115 staff / visitors being on-site at any one time between 08:00 – 10:00. Movements occur between midnight and 10pm, although there are periods within that 22 hour time-frame when no movements take place.
- 3.4 By analysing the cumulative vehicle movements, it has been established that over the 22 hour working day there is a total of 232 movements associated with staff and visitors (116 in / 116 out). The peak period of activity is between 08:00 – 09:00, when 46 staff / visitor movements occur (45 arrivals / 1 departure). The second highest period of activity is between 16:00 – 17:00 when 40 vehicle movements occur (40 departures). Taking into account the arrival and departure profile, a peak parking demand of 100 vehicles is established between 08:00 – 10:00, which falls just below the 106 spaces within the site.
- 3.5 In terms of HGV activity, taking into account the deliveries of raw milk, Nampak poly bottles and other general supplies, a total of 27 HGV loads are delivered per day, resulting in 54 HGV movements. In addition, there is one delivery of plastic granules to the on-site blow moulding plant, resulting in 2 HGV movements on one day per week. In terms of deliveries of processed milk / products, this results in 54 HGV loads / 108 HGV movements per day, giving a combined HGV flow of 82 loads / 164 movements on the busiest day of the week.
- 3.6 HGV movements start between 01:00 – 02:00 (6 total movements) and continue to 21:00. However, as with the staff / visitor movements, there are some hours during the period when no HGV deliveries occur.
- 3.7 Analysis of the schedule of HGV activity reveals the busiest hour is between 12:00 – 13:00, when a total of 17 HGV movements occur (13 arriving / 4 leaving). Between 08:00 – 09:00 a total of 13 HGV movements occur (4 arrivals / 9 departures). This may be compared with the period between 16:00 – 17:00 when 9 HGV movements occur (7 arrivals / 2 departures).
- 3.8 In terms of traffic flows on the A525, the Department for Transport Database includes two count sites in the vicinity, which provide data from between 2000 and 2015 inclusive. At the count site to the north at Bwlchgwyn, the Annual Average Daily Traffic (AADT) flow was identified to be 1,873 vehicles including 104 HGVs over 24 hours during 2015. This may be compared with the peak AADT flow of 2210 including 165 HGVs in 2006 and the peak HGV flow of 169 within a total AADT flow of 2179 in 2007.
- 3.9 At the count site to the southeast of Coedpoeth, the 2015 AADT flow was 12,729 vehicles including 445 HGVs. The peak AADT at this location was also recorded in 2006 with a total of 12,886 vehicles including 409 HGVs. The peak AADT HGV flow of 494 HGVs was recorded in 2003 within a total flow of 11,774 vehicles.
- 3.10 In order to establish whether adequate visibility could be provided at the proposed new access to Gwernygaseg Road, speed surveys were undertaken on Gwernygaseg Road. Initially, 2 No. Automatic Traffic Counters were installed. However, these were stolen during the 7 day survey period and no data was recovered from them.

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- 3.11 It was therefore necessary to undertake manual speed surveys on site. These were carried out on Friday 17th and Monday 20th July 2015. The speed survey results are provided in Appendix A for information and confirm the higher of the northbound design speeds (85th percentile wet weather) was 44.5 mph and the corresponding southbound design speed was 46.5 mph.
- 3.12 Traffic flows on Gwernygaseg Road were also recorded between 00:00 and 19:00 on Friday 17th July. The results are also provided in Appendix A for information and confirm the total flows over the period were 525 vehicles northbound and 535 vehicles southbound (1060 total) of which 15 were HGVs and 2 were buses, representing a total of 17 large vehicles and 1.6% of the total flow.
- 3.13 Analysis of the survey results revealed that the baseline peak hour flows occurred between 07:45 – 08:45 and 08:30 – 09:30 in the morning, when a total of 114 vehicle movements were recorded during each 1 hour period. The comparable PM peak hour flow occurred from 16:45 – 17:45 when a total of 111 vehicles were recorded.
- 3.14 It is apparent from the low traffic volumes that Gwernygaseg Road is currently a lightly trafficked route.

Phase 1 Development Traffic

- 3.15 Analysis of the proposed traffic movements to and from TDL was been undertaken to establish the variations when compared with the existing baseline, taking into account the shift times of staff, import / export of product to / from the site and visitor movements.
- 3.16 In terms of staff movements, there would be 153 people employed within or from the site, per day including processing, blow moulding, mechanics, administrators and drivers, representing an increase of 38 people, as stated above. In addition, it is predicted that there would be an additional 6 visitors per day, resulting in a total of 21.
- 3.17 When taking into account the various staff members' travel times, it is predicted that a peak site occupancy of 154 people would occur at any one time staff / visitors being on-site at any one time between 08:00 – 09:00, representing an increase of 39 people when compared to the baseline. As with the existing situation, movements occur between midnight and 10pm, although there are periods within that 22 hour time-frame when no movements take place.
- 3.18 By analysing the cumulative vehicle movements, it has been established that over the 22 hour working day there is predicted to be a total of 314 movements associated with staff and visitors (157 in / 157 out), which equates to an increase of 82 movements per day (41 in / 41 out). In terms of the peak number of vehicles on site, this has been calculated to be 143 between 12:00 – 13:00. This increased demand of 43 spaces will be met by the 50 additional temporary spaces provided within the hardstanding extension proposed as part of the Phase 1 development scheme, in addition to the 106 provided within the existing site.

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- 3.19 The peak period of activity is between 08:00 – 09:00, when 61 staff / visitor movements occur (60 arrivals / 1 departure). This represents an increase of 15 movements during the peak hour, which equates to an average of 1 vehicle every 4 minutes on the local highway network.
- 3.20 The second highest period of activity is between 16:00 – 17:00 when 60 vehicle movements occur (60 departures), representing an increase of 20 vehicles (one every 3 minutes on average) when compared with the existing baseline scenario. This period represents the highest hourly increase associated with the proposed development in any given hour of the working day when compared with the existing baseline.
- 3.21 In terms of HGV activity, taking into account the deliveries of raw milk, Nampak poly bottles and other general supplies, a total of 50 HGV loads would be delivered per day, resulting in 100 HGV movements. In addition, there would continue to be one delivery of plastic granules to the on-site blow moulding plant, resulting in 2 HGV movements on one day per week. This represents an increase of 23 HGV loads / 46 movements per day when compared with the current imports to the site.
- 3.22 In terms of deliveries of processed milk / products, this is predicted to result in 74 HGV loads / 148 HGV movements per day, which represents an increase of 20 loads / 40 HGV movements per day when compared with the current exports from the site.
- 3.23 When adding the imports and exports from the site a combined HGV flow of 125 loads / 250 movements on the busiest day of the week; an increase of 43 loads / 86 HGV movements per day.
- 3.24 As with the existing situation, HGV movements start between 01:00 – 02:00 (6 total movements) and continue to 21:00. However, as with the staff / visitor movements, there are some hours during the period when no HGV deliveries occur.
- 3.25 Analysis of the proposed schedule of HGV activity reveals the busiest hour would remain between 12:00 – 13:00, when a total of 27 HGV movements is predicted to occur (17 arriving / 10 leaving). This represents an increase of 10 HGV movements (4 arriving / 6 departing) when compared with existing activities, which represents an average of 1 HGV every 6 minutes. However, the greatest increase in HGV activity is predicted to occur between 11:00 – 12:00 when 11 additional movements (5 arrivals / 6 departures) would result in a total of 20 HGV movements. This increase represents an average of 1 additional HGV movement approximately every 5.5 minutes between 11:00 – 12:00.
- 3.26 Between 08:00 – 09:00 a total of 22 HGV movements are predicted to occur (9 arrivals / 13 departures), which represents an increase of 9 HGV movements (5 arrivals / 4 departures) compared with the existing activity. This may be compared with the period between 16:00 – 17:00 when 19 HGV movements occur (11 arrivals / 8 departures), representing an increase of (4 arrivals / 6 departures) over the existing baseline.

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- 3.27 The increase in staff and visitor movements combined with the increase in HGV movements represent an additional 168 movements per full working day during the week. By considering the observed traffic counts on the A525, the northern survey site revealed that 2015 AADT flows are 337 vehicle movements per day below the historic peak in 2006. This indicates that the A525 to the north has historically accommodated a higher overall traffic volume than would occur if all of the additional development traffic headed to/from the north.
- 3.28 In terms of the southern count site, the 2015 traffic flow was found to be 137 vehicle movements below the historic peak in 2006. Whilst this is less than the cumulative increase that would occur should all of the additional traffic travel to/from the south, in reality there will be some directional split between the northern and southern routes, due to the locations of the supplying farms and customers.
- 3.29 It should also be recognised that the majority of the additional activity will occur off-peak. During the AM peak hour an additional 24 movements are predicted as a result of the development (15 light vehicles / 9 HGVs representing 20 arrivals and 4 departures). During the PM peak hour the predicted increase is 30 movements (20 light vehicles / 10 HGVs representing 4 arrivals / 26 departures).
- 3.30 It is therefore apparent that the highest one-directional increase in the peak periods associated with the proposed development would add less than a single vehicle movement every 2 minutes to the outbound flow between 16:00 – 17:00. This is less than the cycle time of most signal-controlled junctions and is considered to fall within the range of normal day to day variations on the A525, as are the total combined increases during the individual hours and over the working day.
- 3.31 The hourly variations are apparent by the range associated with TDL's own activities, which are established to fall between 0 and 59 movements per hour throughout the working day, which represents almost double the level of increase in any given hour associated with the proposed development.
- 3.32 Similarly, when compared with the 2015 AADT flow of 12,729 vehicles on the A525 to the south of Coedpoeth, the daily increase of 168 movements equates to just 1.3%, which falls well within the range of hour to hour and day to day variation on such a route. Whilst representing a greater proportion of the base flow on the A525 to the north, being 8.9% of the 2015 AADT figure of 1873 vehicles, the actual number of movements is still considered to fall within what would be expected as part of a typical day to day variation on an A class route.
- 3.33 Having considered the foregoing, it is concluded that the impact of the proposed Phase 1 development on the local highway network would be acceptable.

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Phase 2 Development Traffic

- 3.34 This Phase would result in 119 staff vehicles (238 movements per day along Gwernygaseg Road over a full working day, with a peak flow in any hour of 52 staff movements. There would be a corresponding reduction in staff traffic movements through the existing access via Five Crosses Industrial Estate, which would continue to be used by all HGV traffic travelling to from the site.
- 3.35 The capacity of Gwernygaseg Road was assessed and found to be readily capable of accommodating the redistributed staff movements, as set out in the Transport Statement for the Phase 2 development proposal.

4 PROPOSED DEVELOPMENT

- 4.1 The proposed development will provide an extension of the existing blow moulding building to facilitate increased production and to provide storage for the additional poly bottles to achieve a more efficient production process for the increased milk output within the site. The extension will have a footprint of approximately 1,045m² and will have a gross internal floorspace of approximately 2,028m² arranged over two floors. The proposed development also incorporates additional landscaping planting to the north east of the extension to the existing building. There would be no changes in terms of the access arrangement when compared with the Phase 2 proposal.
- 4.2 The location of the proposed development is illustrated on Haston Reynolds drawing number H0070-20-A3-PL-01, whilst the proposed layout for Phase 3 is illustrated on Haston Reynolds drawing no. H0070-20-A1-PL-05, which are provided in the Figures section towards the back of this report.
- 4.3 In terms of the transport impact on the wider highway network, there are two changes when compared with the Phase 2 application. The first change is that there would be an addition of 7 staff members and their associated traffic movements via the new staff access to Gwernygaseg Road, for which permission is sought under Phase 2 of the overall development plan.
- 4.4 The second change is a reduction in HGV activity to/from TDL through Five Crosses Industrial Estate and along the A535 Ruthin Road.

5 DEVELOPMENT TRAFFIC

- 5.1 Based on the current travel patterns of staff at TDL it is predicted that the addition 7 members of staff would result in an additional 5 vehicles visiting the site per day when compared with the Phase 2 scheme, resulting in 124 vehicles / 248 movements along Gwernygaseg Road associated with TDL.

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- 5.2 When taking into account the shift times, it is established that there would be between 0 and 54 vehicle movements per hour between midnight and 22:00, with the busiest hours at 05:00 – 06:00 (46 arrivals), 08:00 – 09:00 (53 arrivals) and 16:00 – 17:00 (52 departures). This range of hourly flow falls within the range of hour to hour variation observed on Gwernygaseg Road during the traffic surveys, which fell between 0 and 114 vehicles.
- 5.3 Based on the staff timings, it is therefore apparent that Phase 3 would result in a peak hourly trip attraction of 53 staff movements in any hour (08:00 – 09:00). However, the peak TDL trip attraction during Phase 2 was found to be 52 movements, albeit later in the day between 16:00 – 17:00. As can be seen from paragraph 5.2 above, there would be no change in TDL traffic during this period when compared with the Phase 2 scheme.
- 5.4 Based on the analysis of staff movements associated with TDL under the Phase 3 development scheme, it is predicted that the staff parking demand would be 122 vehicles between 08:00 – 10:00, which represents an increase of 5 vehicles when compared with the Phase 2 total of 117 vehicles. However, when allowing for the turnover of staff at shift change times, a provision of 143 spaces was proposed at Phase 2, which avoids drivers potentially waiting for spaces to be vacated and being late for work.
- 5.5 When adding the periods of higher activity at TDL to the observed flows on Gwernygaseg Road, it is apparent that the cumulative peak hour occurs between 08:00 – 09:00 with a total combined traffic flow of 164 movements on Gwernygaseg Road, which is an increase of 5 vehicles (3.1%) when compared with the Phase 2 scheme where the peak of 48 movements was established during the same hour, resulting in a total of 159 movements.
- 5.6 This cumulative flow is well within the capacity of Gwernygaseg Road as is demonstrated by the fact it represents just 55% of the capacity of a single track road with passing places, which have found to be capable of accommodating 300 vehicles per hour without resulting in unacceptable delay by research undertaken by the Transport and Roads Research Laboratory (TRRL).
- 5.7 In terms of HGV traffic, the proposed extension to the existing blow moulding plant would result in an increase of plastic granule deliveries from one per week between 09:00 – 18:00 hours to one per weekday between 09:00 – 18:00 hours. However, as when assessing Phases 1 and 2 it had been assumed that the delivery of granules occurred on the day considered, in practical terms there would be no variation in terms of daily HGV movements.
- 5.8 There would also be an increase of 1 HGV per general supplies per day, resulting in an additional arrival likely to be between 12:00 – 13:00 with an additional departure between 13:00 and 14:00 following offloading.
- 5.9 Notwithstanding this increase of 2 HGV movements, it would be offset by a reduction of 10 deliveries of Nampak Polybottles per day, which results in 20 fewer HGV movements through Five Crosses Industrial Estate. This is because with the increased on-site

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production within the blow moulding plant, combined with the increased storage capacity, there would be no need to import Nanpak Polybottles following completion of Phase 3.

- 5.10 As a result, there would be an overall reduction of 9 HGV loads / 18 HGV movements per day when compared with the Phase 1 and Phase 2 development scenarios along the Industrial Estate road and the A525 Ruthin Road.
- 5.11 Having considered the foregoing it is concluded that in terms of highway impact, the Phase 3 proposal would result in a slight but insignificant increase in traffic on Gwernygaseg Road, combined with a slight but insignificant reduction in HGV traffic through Five Crosses Industrial Estate when compared with the earlier Phase 2 development proposal. Given the apparent capacity of Gwernygaseg Road, along which the slight increase in traffic is proposed, and its good safety record, it is concluded that in terms of highway impact, the proposed Phase 3 development would be acceptable.

6 SUMMARY

- 6.1 Tomlinson's Dairies Limited (TDL) is currently the largest processor of liquid milk in Wales, processing approximately 95 million litres of milk per annum, and principally operates from the Five Crosses Industrial Estate in Minera, Wrexham, to the northeast of the A525 and northwest of Coedpoeth.
- 6.2 TDL has recently been selected by J Sainsbury to process 100 million litres of milk and cream for sale in their stores in Wales and parts of England from July 2017. This will generate a further 60 full time jobs at the Five Crosses site, together with many more jobs in the wider rural economy.
- 6.3 Whilst the existing Five Crosses Dairy has sufficient capacity to process the additional milk, delivery is constrained principally due to insufficient cold storage capacity, which the Phase 1 and 2 developments would collectively address.
- 6.4 Through a three phase development programme, TDL seeks to: increase the size of its cold storage facilities through the extension of the existing main dairy building; provide additional poly bottle production and storage facilities through the extension of the existing blow moulding building; and to re-organise and extend on-site car parking in order to provide an efficient dairy to meet the increased production levels.
- 6.5 The application has been split into three separate phases as the dairy must continue operating throughout the development process, which must commence soon in order to enable full production to be achieved by July 2017. Each Phase is subject to a separate planning application in order to enable the construction timetable to be met, which will allow TDL to meet its contractual obligations and continue production whilst the wider site is reorganised.

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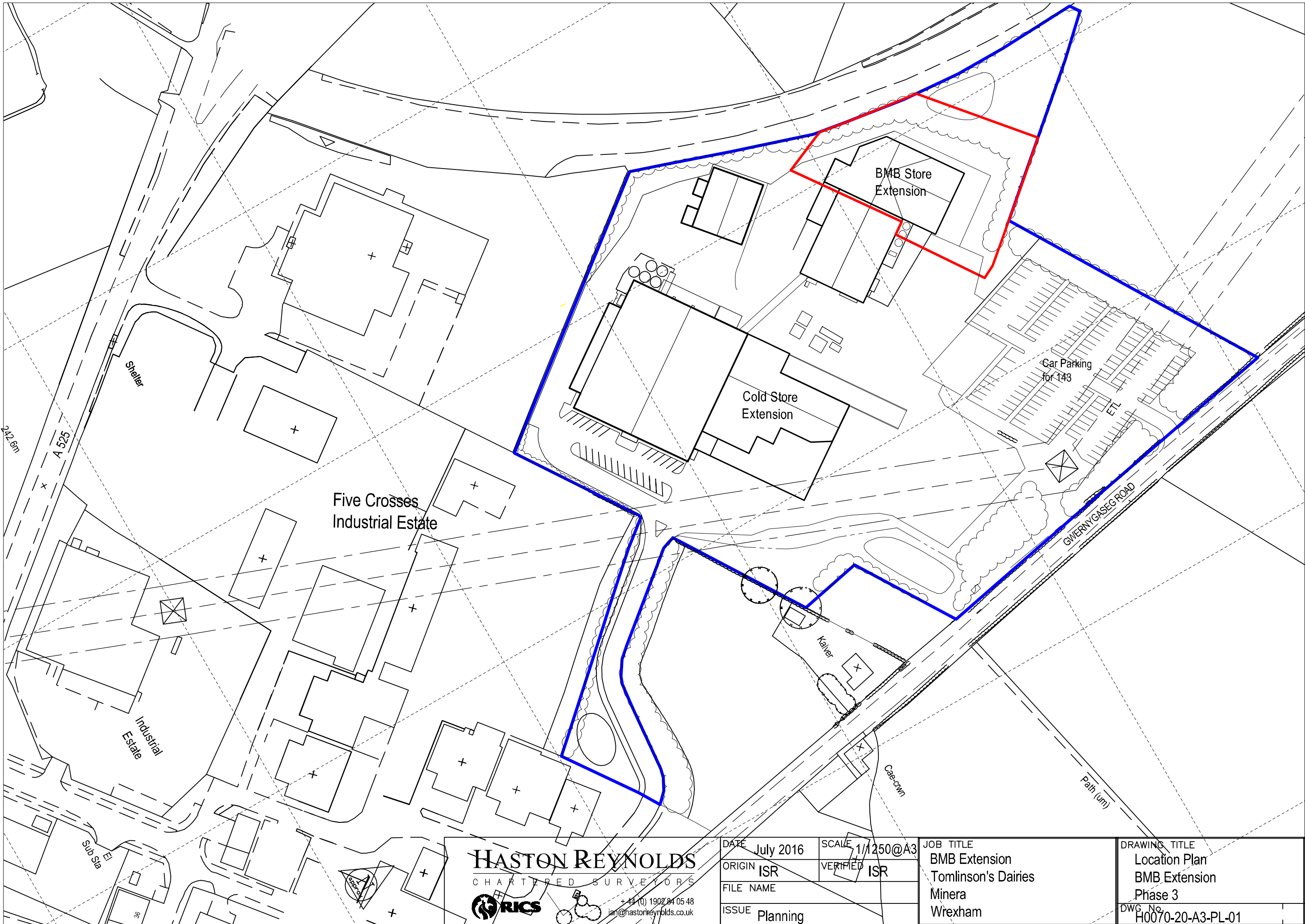
- 6.6 Whilst forming an integral part of a holistic proposal, this planning application and the associated submission deal specifically with the Phase 3 development. An application has already been submitted for the Phase 1 and Phase 2 proposals, which would deliver the required cold storage extension and an extended staff car park with its own access to Gwernygaseg Road.
- 6.7 The planning applications are being made by Philip and John Tomlinson who are Directors of TDL and the freehold owners of the site.
- 6.8 The Hurlstone Partnership Limited was instructed to consider the transport related impact of the proposed phased development, taking into account the identified variations in staff numbers and operational vehicle movements.
- 6.9 The study undertaken for the Phase 1 and 2 developments confirmed their impact would be acceptable in terms of transport matters. The Phase 1 development would retain the existing access arrangement to the A525 Ruthin Road to the north of Coedpoeth, via the internal cul-de-sac route to TDL through Five Crosses Industrial Estate.
- 6.10 In terms of transport impact, when compared with the Phase 1 development, the only change resulting from the Phase 2 proposal would be the creation of the new access to Gwernygaseg Road and the associated re-distribution of staff movement to Gwernygaseg Road from the existing route through Five Crosses Industrial Estate.
- 6.11 Beyond this change there would be no difference in terms of HGV activity, the overall number of staff / visitor movements of their respective timings.
- 6.12 The Phase 3 development would extend the existing blow moulding plant by 1,045 m² footprint (2,028 m² gross internal area over two floors) but would retain the same access arrangement as Phase 2, whereby HGV and visitor traffic accesses the site via Five Crosses Industrial Estate, whilst the majority of staff traffic enters and leaves via a new access from Gwernygaseg Road.
- 6.13 When compared with the Phase 2 scheme, the impact of Phase 3 is limited to a slight increase of 5 staff vehicles resulting in 10 additional movements per day on Gwernygaseg Road and a reduction of 9 HGV deliveries / 18 HGV movements per day on the Five Crosses Industrial Estate access.
- 6.14 It was also found that with the cumulative traffic volumes associated with baseline observed flows and the additional staff movements, at the peak hour period the combined flow of 164 vehicles was well within the capacity of Gwernygaseg Road and represented approximately half the flow that could be accommodated on a single track road with passing places without unacceptable delay (300 vehicles per hour).

The Hurlstone Partnership

- 6.15 A review of recent collision data confirms the junction has a good safety record, with no recorded injury accidents within the most recent 5 year period available on the Crashmap website.
- 6.16 A review of the existing staff and vehicle movements has been undertaken and compared with the proposed scenario with the Phase 1 and 2 and 3 developments in place.
- 6.17 When taking into account additional staff, visitor and delivery trips, it was established that the proposed peak parking demand within the staff car park would be 122 vehicles from 124 total staff vehicles, which result in 248 movements per day on Gwernygaseg Road.
- 6.18 The peak hourly traffic movements on Gwernygaseg Road associated with the proposed Phase 3 development was found to be 53 movements. This falls within the range of hour to hour traffic movements observed on Gwernygaseg Road, which was found to be 114 vehicles.
- 6.19 Having considered the foregoing, it is concluded that the impact of the proposed Phase 3 development on the local highway network would be acceptable.

The Hurlstone Partnership

FIGURES



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CHARTERED SURVEYORS

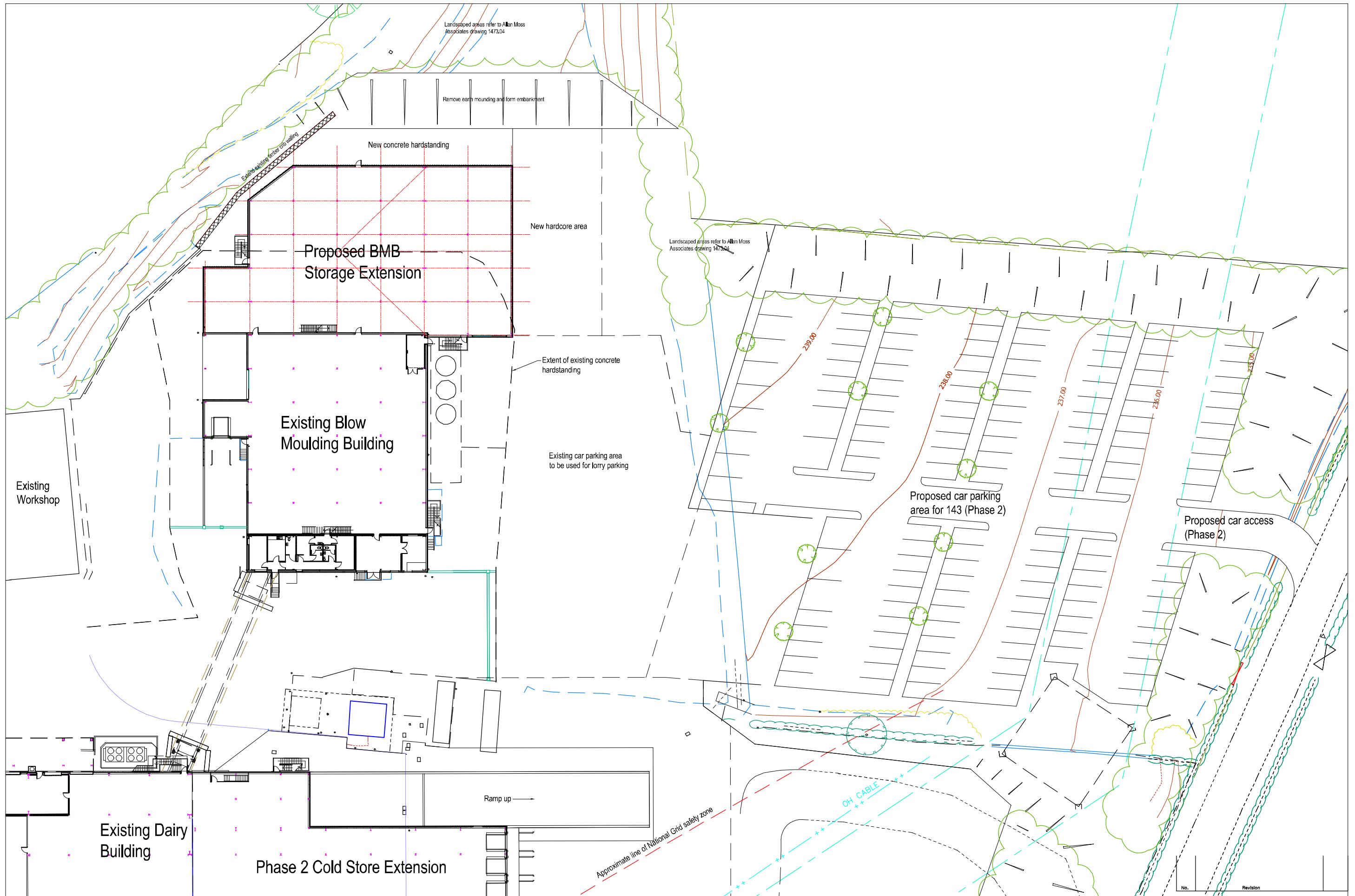


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DATE	July 2016	SCALE	1/1250@A3
ORIGIN	ISR	VERIFIED	ISR
FILE NAME			
ISSUE	Planning		

JOB TITLE	BMB Extension Tomlinson's Dairies Minera Wrexham
-----------	---

DRAWING TITLE	Location Plan BMB Extension Phase 3
DWG No.	H0070-20-A3-PL-01



HASTON REYNOLDS
CHARTERED SURVEYORS



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DATE	July 2016	SCALE	1 : 250@A1
ORIGIN	CdsII	VERIFIED	ISR
FILE NAME	H0070-20BMBExtensionPL1c		
ISSUE	Planning	A1 Drawing	

JOB TITLE	BMB Storage Extension Five Crosses Industrial Estate Minera, Wrexham
CLIENT	Tomlinson's Dairies Ltd

DRAWING TITLE	Site Layout Plan BMB Extension
DRAWING No.	H0070-20-A1-PL-05
REV.	

The Hurlstone Partnership

APPENDIX A

Traffic and Speed Survey Summaries

SITE PLAN



MANUAL CLASSIFIED COUNTS



JOB REF: 19179

JOB NAME: WREXHAM

SITE: 1

DATE: 17/07/2015

LOCATION: GWERNYGASEG ROAD

DAY: FRIDAY

TIME	MOVEMENT 1 (NORTH BOUND)								MOVEMENT 2 (SOUTH BOUND)							
	CAR	LGV	OGV1	OGV2	BUS	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	BUS	MCL	PCL	TOT
00:00	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2
00:15	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
H/TOT	2	0	0	0	0	0	0	2	6	0	0	0	0	0	0	6
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0
05:30	2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0
05:45	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
H/TOT	10	3	0	0	0	0	0	13	0	0	0	0	0	0	0	0
06:00	2	0	0	0	0	0	0	2	3	1	1	0	0	0	0	5
06:15	8	0	0	0	0	0	0	8	2	2	0	0	0	0	0	4
06:30	6	1	0	0	0	0	0	7	1	0	0	0	0	0	0	1
06:45	10	1	0	0	0	0	0	11	5	0	0	0	0	1	0	6
H/TOT	26	2	0	0	0	0	0	28	11	3	1	0	0	1	0	16
07:00	12	5	0	0	0	0	0	17	3	0	0	0	0	0	0	3
07:15	10	3	0	0	0	0	0	13	5	1	0	0	0	0	0	6
07:30	14	2	0	0	0	0	0	16	2	1	0	0	0	0	0	3
07:45	21	3	0	0	1	0	0	25	5	1	0	0	0	0	0	6
H/TOT	57	13	0	0	1	0	0	71	15	3	0	0	0	0	0	18
08:00	12	0	0	0	0	0	0	12	8	1	1	0	0	0	1	11
08:15	13	0	1	0	0	0	0	14	8	3	1	0	0	0	0	12
08:30	15	7	0	0	0	0	0	22	10	1	1	0	0	0	0	12
08:45	13	0	0	0	0	0	0	13	12	3	0	0	0	0	0	15
H/TOT	53	7	1	0	0	0	0	61	38	8	3	0	0	0	1	50
09:00	13	2	0	0	0	0	0	15	7	3	0	0	0	0	0	10
09:15	11	1	1	0	0	1	0	14	11	2	0	0	0	0	0	13
09:30	5	0	0	0	0	0	0	5	5	2	0	0	0	0	0	7
09:45	4	0	0	0	0	0	0	4	7	0	0	0	0	0	0	7
H/TOT	33	3	1	0	0	1	0	38	30	7	0	0	0	0	0	37
10:00	6	0	0	0	0	0	0	6	8	0	0	0	0	0	3	11
10:15	7	1	0	0	0	0	0	8	6	2	0	0	0	0	0	8
10:30	10	0	1	0	0	0	0	11	7	0	0	0	0	0	0	7
10:45	4	1	0	0	0	0	0	5	2	0	0	0	0	0	1	3
H/TOT	27	2	1	0	0	0	0	30	23	2	0	0	0	0	4	29
11:00	3	0	0	0	0	0	0	3	3	0	1	0	0	0	0	4
11:15	6	2	1	0	0	0	0	9	7	0	1	0	0	0	0	8

MANUAL CLASSIFIED COUNTS



JOB REF: 19179

JOB NAME: WREXHAM

SITE: 1

DATE: 17/07/2015

LOCATION: GWERNYGASEG ROAD

DAY: FRIDAY

TIME	MOVEMENT 1 (NORTH BOUND)								MOVEMENT 2 (SOUTH BOUND)							
	CAR	LGV	OGV1	OGV2	BUS	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	BUS	MCL	PCL	TOT
11:30	6	1	0	0	0	0	0	7	8	1	0	0	0	0	0	9
11:45	4	1	0	0	0	0	0	5	8	2	0	0	0	0	0	10
H/TOT	19	4	1	0	0	0	0	24	26	3	2	0	0	0	0	31
12:00	8	0	0	0	0	0	0	8	4	2	1	0	0	0	0	7
12:15	6	1	0	0	0	0	0	7	10	2	0	0	0	0	0	12
12:30	8	4	0	0	0	0	0	12	7	1	0	0	0	0	0	8
12:45	7	2	0	0	0	0	0	9	9	1	0	0	0	1	0	11
H/TOT	29	7	0	0	0	0	0	36	30	6	1	0	0	1	0	38
13:00	7	1	0	0	0	0	0	8	9	1	0	0	0	0	0	10
13:15	11	0	0	0	0	0	0	11	11	1	0	0	0	0	0	12
13:30	5	0	1	0	0	0	0	6	12	3	0	0	0	0	0	15
13:45	7	2	0	0	0	0	0	9	8	0	0	0	0	0	1	9
H/TOT	30	3	1	0	0	0	0	34	40	5	0	0	0	0	1	46
14:00	7	1	0	0	0	0	0	8	5	2	0	0	0	0	0	7
14:15	3	3	0	0	0	0	0	6	8	0	0	0	0	0	0	8
14:30	6	0	0	0	0	0	0	6	6	3	0	0	0	0	0	9
14:45	12	2	0	0	0	0	0	14	12	1	0	0	0	0	0	13
H/TOT	28	6	0	0	0	0	0	34	31	6	0	0	0	0	0	37
15:00	10	0	0	0	0	0	0	10	7	2	0	0	0	0	0	9
15:15	13	2	0	0	0	0	0	15	9	0	0	0	0	0	0	9
15:30	12	2	0	0	0	0	0	14	13	2	0	0	0	0	0	15
15:45	6	3	0	0	0	0	0	9	12	5	0	0	0	0	0	17
H/TOT	41	7	0	0	0	0	0	48	41	9	0	0	0	0	0	50
16:00	7	1	1	0	0	0	0	9	10	3	1	0	1	0	0	15
16:15	5	1	0	0	0	0	0	6	13	0	0	0	0	0	1	14
16:30	8	2	0	0	0	0	0	10	13	2	0	0	0	0	0	15
16:45	8	1	1	0	0	0	0	10	16	0	0	0	0	0	0	16
H/TOT	28	5	2	0	0	0	0	35	52	5	1	0	1	0	1	60
17:00	15	1	0	0	0	0	0	16	9	7	0	0	0	0	0	16
17:15	2	1	0	0	0	0	0	3	16	3	0	0	0	0	0	19
17:30	13	1	0	0	0	0	0	14	17	0	0	0	0	0	0	17
17:45	9	1	0	0	0	0	0	10	10	1	0	0	0	0	0	11
H/TOT	39	4	0	0	0	0	0	43	52	11	0	0	0	0	0	63
18:00	7	0	0	0	0	0	0	7	12	1	0	0	0	0	0	13
18:15	5	1	0	0	0	0	0	6	12	0	0	0	0	0	0	12
18:30	6	0	0	0	0	0	0	6	9	1	0	0	0	0	0	10
18:45	5	1	0	0	0	0	0	6	16	1	0	0	0	0	0	17
H/TOT	23	2	0	0	0	0	0	25	49	3	0	0	0	0	0	52
P/TOT	448	68	7	0	1	1	0	525	446	71	8	0	1	2	7	535

SPEED SURVEY



SPEED SURVEY



JOB REF: 19179

JOB NAME: WREXHAM

SITE: 1 DATE: 17/ 07/ 2015

SPEED LIMIT: 60 mph

LOCATION: GWERNYGASEG RD DAY: FRIDAY

WEATHER: DRY

Note: All speeds were recorded in Free Flow conditions

Direction : NORTHBOUND

Speed (mph)	Time Period	
	16:20 to 19:20	
25	0	0
26	0	0
27	0	0
28	1	28
29	0	0
30	0	0
31	2	62
32	2	64
33	1	33
34	2	68
35	2	70
36	6	216
37	4	148
38	8	304
39	6	234
40	5	200
41	15	615
42	8	336
43	11	473
44	4	176
45	5	225
46	1	46
47	6	282
48	2	96
49	2	98
50	2	100
51	1	51
52	1	52
53	2	106
54	1	54
55	0	0
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0
63	0	0
64	0	0
65	0	0

Sample 100 41.4
85th %ile (mph)- DRY 47.0 85
85th %ile (mph)- WET 44.5

Direction : SOUTHBOUND

Speed (mph)	Time Period	
	16:20 to 19:20	
25	0	0
26	0	0
27	0	0
28	1	28
29	1	29
30	2	60
31	0	0
32	1	32
33	2	66
34	3	102
35	3	105
36	11	396
37	5	185
38	9	342
39	11	429
40	12	480
41	8	328
42	12	504
43	9	387
44	7	308
45	5	225
46	6	276
47	6	282
48	5	240
49	6	294
50	0	0
51	4	204
52	4	208
53	0	0
54	1	54
55	2	110
56	1	56
57	0	0
58	0	0
59	1	59
60	0	0
61	1	61
62	1	62
63	0	0
64	0	0
65	0	0

Sample 140 42.2
85th %ile (mph)- DRY 49.0 119
85th %ile (mph)- WET 46.5

SPEED SURVEY



JOB REF: 19179

JOB NAME WREXHAM

SITE 1

DATE 17/ 07/ 2015

LOCATION: GWERNYGASEG RD

DAY: FRIDAY

SITE	DIRECTION	TIME	SAMPLE	SPEED LIMIT	LOWEST SPEED	HIGHEST SPEED	AVERAGE SPEED	85th % DRY SPEED	85th % WET SPEED
Site 1	NORTHBOUND	16:20 to 19:20	100	60	28	54	41.4	47.0	44.5
Site 1	SOUTHBOUND	16:20 to 19:20	140	60	28	62	42.2	49.0	46.5

SPEED SURVEY



JOB REF: 19179

JOB NAME: WREXHAM

SITE: 1

DATE: 20/ 07/ 2015

SPEED LIMIT: 60 mph

LOCATION: GWERNYGASEG RD

DAY: MONDAY

WEATHER: DRY

Note: All speeds were recorded in Free Flow conditions

Direction : NORTHBOUND

Speed (mph)	Time Period
	07:15 to 11:15
25	0
26	0
27	0
28	0
29	1
30	2
31	2
32	3
33	4
34	8
35	5
36	6
37	13
38	14
39	9
40	10
41	8
42	11
43	12
44	12
45	5
46	6
47	3
48	3
49	4
50	3
51	2
52	4
53	1
54	0
55	0
56	1
57	0
58	0
59	0
60	0

Sample 152
85th %ile (mph)- DRY 46.0
85th %ile (mph)- WET 43.5

Direction : SOUTHBOUND

Speed (mph)	Time Period
	07:15 to 11:15
25	0
26	1
27	1
28	0
29	1
30	0
31	3
32	2
33	2
34	4
35	5
36	6
37	4
38	2
39	8
40	9
41	9
42	7
43	8
44	5
45	5
46	3
47	5
48	2
49	2
50	2
51	2
52	1
53	0
54	0
55	0
56	0
57	0
58	1
59	0
60	0

Sample 100
85th %ile (mph)- DRY 47.0
85th %ile (mph)- WET 44.5

SPEED SURVEY



JOB REF: 19179

JOB NAME WREXHAM

SITE 1

DATE 20/ 07/ 2015

LOCATION: GWERNYGASEG RD

DAY: MONDAY

SITE	DIRECTION	TIME	SAMPLE	SPEED LIMIT	LOWEST SPEED	HIGHEST SPEED	AVERAGE SPEED	85th % DRY SPEED	85th % WET SPEED
Site 1	NORTHBOUND	07:15 to 11:15	152	60	29	56	40.7	46.0	43.5
Site 1	SOUTHBOUND	07:15 to 11:15	100	60	26	58	40.6	47.0	44.5