A Planning Application by

BURBURY INVESTMENTS LIMITED

In respect of

Proposed Development at Ellesmere Wharf, Shropshire

Transport Assessment

August 2014

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1 INTRODUCTION

1.1 Transport Planning Associates (TPA) has been commissioned by Burbury Investments Ltd to provide highways and transportation advice in respect of a planning application for a proposed mixed use leisure and residential development on land adjacent to Ellesmere Wharf, Ellesmere.

1.2 The proposed site has been identified in the Shropshire Site Allocations and Management of Development (SAMDev) Draft Plan 2014, Policy S8, for residential (ELL003a) and leisure (ELL003b) land uses. ELL003a site is allocated for development of 250 houses and site ELL003b is allocated for development of approximately 18 hectares (ha) of leisure and tourism use.

1.3 This Transport Assessment (TA) has been prepared in support of the planning application, and will present an overview of both existing and proposed transport conditions, as well as the likely impact of the proposed development on the surrounding highway network. Consideration will also be given to optimising travel by non-car modes and potential Travel Plan measures.

Report Structure

1.4 The scope of the TA has been discussed with highway officers at Shropshire Council (SC).

1.5 The remainder of this report will be structured as follows:

- Chapter 2 – National and Local Planning Guidance
- Chapter 3 – Existing Site Conditions
- Chapter 4 – Proposed Development
- Chapter 5 – Trip Generation & Assessment Scenarios
- Chapter 6 – Development Impact Assessment
- Chapter 7 –Summary & Conclusions

1.6 This TA concludes that the proposed redevelopment can be accommodated without detriment to the operational safety or capacity of the local highway network. The site is located in a highly accessible location which will create opportunities to travel to the site by alternative travel choices to the private car. It is identified as a site for residential and leisure development within Shropshire Council's SAMDev draft document. It is therefore concluded that there are no valid highway or transportation reasons which should prevent the proposed redevelopment of the site.

2 NATIONAL & LOCAL PLANNING GUIDANCE

2.1 The relevant transportation policies are set out in the following national and local documents:

(i) National Planning Policy Framework (NPPF) (2012);

(ii) Shropshire Local Development Framework – Adopted Core Strategy (2011); and

(iii) Shropshire Council Site Allocations and Management of Development (SAMDev) Plan, Pre Submission Draft (Final Plan) (2014).

2.2 Ellesmere is identified in the Shropshire Core Strategy as a Key Centre within Policy CS1 and Policy CS3. The Core Strategy aims to enhance the traditional role of these type of settlements as accessible, sustainable centres for their rural catchment and to encourage service provision, economic development and regeneration. The Policies support local business development, whilst recognising Ellesmere's high quality landscape and environmental context, particularly the environmental assets of the Mere and the Shropshire Union Canal.

2.3 The SAMDev plan seeks to make provision for 312 new homes to help the local aspiration for growth during the plan period. The 250 houses at the site significantly helps with this, with the remaining homes achieved on brownfield sites within the established development boundary. The Council's aspiration for the leisure and tourism uses on the site is to help attract more visitors and tourists to the town to boost the local economy.

2.4 As stated, the site allocation is identified in Schedule S8.1a and S8.1c of the draft SAMDev Plan. The allocated site ELL003a is a single site to the south of the town and is allocated for residential use and the allocated site ELL003b to the south of this, is allocated for leisure and tourism use.

2.5 The draft SAMDev Plan supports the Council's commitment to sustainability and has been subject to extensive consultation over several years. The allocated sites within draft SAMDev Plan represent Shropshire Council's preferred approach for the use of land and policies to guide future development in Shropshire up to 2026.

2.6 The main thrust of up-to-date transportation policies contained within these documents is to reduce car dependency by making walking and cycling trips easier, and by encouraging public transport trips between housing and jobs, shops and services. Essentially, policy guidance states that developments should make the best, most effective and efficient use of land and that there should be a presumption in favour of sustainable development.

The Suitability of the Development Proposals

2.7 The proposal is located on the edge of the built-up area of Ellesmere, with residential areas, education, employment, leisure, retail and social opportunities located in close proximity to the site. The site is allocated within the SAMDev Plan for residential and leisure uses.

2.8 Ellesmere is well served by local and regional bus services, with bus stops located throughout the town and close to the site. This presents the opportunity for sustainable transport modes to be taken up and to meet social, economic and environmental objectives by improving accessibility and managing the need to travel. It is therefore considered that vehicular traffic arising from the development will be minimised because the site is sustainably located. Safe and suitable access to the site can also be achieved. As such, the development proposal is considered to be generally consistent with the policies of local and national government.

3 EXISTING SITE CONDITIONS

3.1 The site comprises approximately 70 acres of land adjacent to the Llangollen branch of the Shropshire Union Canal, along the southern edge of the existing settlement area at Ellesmere. The site is located off Canal Way to the south of a Tesco store and a new development with planning consent for up to 385 dwellings, including a 1,250sqm medical centre on land to the south of Canal Way (referred to as Pochins land). This development is partly completed. This site is located to the west and north of the Shropshire Union Canal and to the south east of the A495 Oswestry Road and Lakelands School. The site location and surrounding area is shown in **Figure 3.1**.

3.2 In the vicinity of the site there are a variety of land uses, with recently built residential and retail development immediately adjacent to the proposed development site. Blackwater Meadow boatyard and marina is located to the east of the site along the Shropshire Union Canal. There is no direct vehicular connection to the boatyard and marina as it is located on the opposite side of the canal from the site, although a footbridge connection is situated at the north eastern boundary of the site. Recent marina redevelopment and leisure mooring facilities are provided along the wharf of the canal, along New Wharf Road to the north east of the site. A sewage treatment works is also located adjacent to the site and Lakelands School.

Existing Highway Network

3.3 There is currently no existing vehicular access to the Burbury Investments land other than access for agricultural vehicles via Canal Way and other gated field access points to the north and west of the site.

3.4 **Figure 3.2** shows the existing highway network and local facilities in vicinity of the site.

3.5 Canal Way is a 30mph single carriageway road, which has recently been extended to serve the Tesco foodstore and the Pochins land to the south of Canal Way. One access point to the development site is proposed via a further extension of Canal Way to this new development, with it being been secured as part of a land owner agreement.

3.6 Canal Way joins the A495 Scotland Street at a signal controlled junction; to the east, the A495 leads into the centre of Ellesmere, becoming Victoria Street at the roundabout junction with Scotland Street immediately to the east of the junction with Canal Way. The A495 then continues towards Whitchurch to the northeast where the road carries a national speed limit restriction.

3.7 To the west, the A495 continues to the southwest away from Ellesmere towards Whittington and Oswestry. In the vicinity of the western site boundary and to the west of the Ellesmere Business Park roundabout, the speed limit changes from 30mph to 60mph national speed limit heading away from Ellesmere. This is approximately where the new roundabout access to serve subsequent phases of the site development is proposed.

3.8 New Wharf Road forms a priority controlled junction with Canal Way adjacent to the new Tesco Store. New Wharf Road is a cul-de-sac providing access to an area of shared space alongside marina development and leisure mooring facilities. Restricted vehicle access and access for pedestrians and cyclists is provided between New Wharf Road and Wharf Road.

3.9 Currently there is no through road access from either New Wharf Road or Canal Way, both roads ending as cul-de-sacs. All traffic currently using Canal Way and New Wharf Road achieve access from the A495 Scotland Street signal controlled junction.

3.10 Assessment of the existing highway network capacity is presented later in this report.

Accident Analysis

3.11 SC has provided accident data within the vicinity of the development site, for the five year period 01st April 2008 to 13th April 2013. The accident information is contained at **Appendix A**. An additional inquiry was made for accident information for the period May 2013 – May 2014 and an email correspondence with the council is attached in **Appendix A**. It is confirmed that no accidents occurred during this latter period.

3.12 The accident data confirms that there has been a total of six incidents in the vicinity of the site, resulting in four slight Personal Injury Accidents (PIAs), and two serious PIAs. A plan showing the locations of the PIAs is contained in **Appendix A**.

3.13 No PIA's occurred on the length of the A495 from the priority junction with Ellesmere Road in the west through to its junction with Beech Drive in the East. No PIA's have been reported on Canal Way.

3.14 The six PIAs are reported to have occurred between the priority junction of the A495 and Beech Drive and the junction of Victoria Street with Trimpley Street (B5068). A summary of the results of the data is shown in **Table 3.1**.

Table 3.1 – Summary of Personal Injury Accident Data

REF	LOCATION	SEVERITY	DATE	LIKELY CAUSE
08FA88294	A495 Oswestry Road junction with Beech Drive	Serious	30/04/2008	Pedestrian (12 years old) on crossing failed to judge the speed of the bus approaching and resulted in a collision.
09F901873	A495 Oswestry Road, near to the entrance with Lakeland School	Slight	06/04/2009	A car collided with a stationary single decker bus
09F903226	A495 Oswestry Road, Outside house number 110	Serious	14/06/2009	A shunt type collision occurred when a car braked without signalling and a motorcyclist went into the rear of the vehicle. The motorcyclist then rolled under the car travelling in the opposite direction.
11F101360	A495,Victoria Street junction with Trimpley Street	Slight	01/04/2011	A motorcyclist was travelling up Victoria Street, from Scotland Street and failed to brake in time when seeing a queue of traffic.
11F103123	Oswestry Road, junction with Canal Way	Slight	22/07/2011	A shunt type collision occurred at the traffic lights when a car slowed too suddenly causing other vehicles not to slow in time to stop.

3.15 **Table 3.1** shows that there were a total of four slight PIAs and two serious PIA within the search area in the vicinity of the site. One of the incidents involved a vulnerable road user on the pedestrian crossing near to Beech Drive, and two involved motorcyclists. Two of the incidents are considered to be shunt type collisions occurring at two different locations, one outside house number 110 and the other at the junction with Canal Way.

Summary of Highway Safety

3.16 It appears that the majority of the accidents, recorded in the vicinity of the site over a five year period, occurred as a result of driver error or temporary misjudgement. It is considered that six PIA's over a five year period illustrates that there is not an existing safety problem on the surrounding highway network in the vicinity of the site.

Public Transport Accessibility

3.17 Ellesmere is well served by local and regional bus services, with bus stops located throughout the town. A summary of local bus services is shown in **Table 3.2** below, while local stops and routes are shown in **Figure 3.3**.

Table 3.2 Local Bus Service Frequencies

Route	Operator	Route	Frequency		
			Mon-Fri	Sat	Sun
208 /209	R.J.'s of Wem	Ellesmere Town Service	Every 30 minutes	No Service	No Service
449	Tanat Valley Coaches	Oswestry-Welshampton	Every 60 minutes	Every 60 minutes	No Service
501	Bryn Melyn Ltd	Ellesmere-Shrewsbury	Every 60 minutes	Every 60 minutes	No Service
53	Arriva Midlands Ltd	Ellesmere-Oswestry	Every 60 minutes	Every 60 minutes	2 Services
63	Bryn Melyn Ltd	Ruabon-St Martin's	2 Services	No Service	No Service
X53	Arriva Midlands Ltd	Ellesmere-Oswestry	2 Services	2 Services	No Service
A23	Shropshire County Council	ShropshireLink Zone 7 Area 23	2 Services	No Service	No Service

Source: www.travelinemidlands.co.uk

3.18 The nearest bus stops to the site are located on the A495 outside the Lakelands Secondary School, approximately 600 metres north of the centre of the site. The bus stops provide access to Bus Service 449 - Oswestry to Welshampton (east of Ellesmere) at an hourly daily frequency; the first service that passes the site is at approximately 0920 and the last service is at approximately 1735.

3.19 The nearest railway stations are located in Gobowen and Shrewsbury. Gobowen railway station is accessible via bus service 53 from Ellesmere town centre and takes around 26 minutes. Rail services are available to Holyhead, Birmingham and Cardiff. Shrewsbury is accessible via bus service 501 from Ellesmere town centre and takes around 48 minutes. Rail services are available to Birmingham, Aberystwyth, Milford Haven, Manchester, Swansea, Cardiff and Holyhead.

3.20 The above information shows that the existing bus network is focussed to serve the needs of the town, with services accessing major local centres and providing linkage for those who choose not to travel by private car. There are also bus connections to railway stations which provide public transport to further destinations. In summary, for many trips comparable sustainable alternatives to the private car are available by train or bus exist. Hence, there is opportunity to promote sustainable travel choices at the development.

Pedestrian and Cycle Access

3.21 A number of local footpaths, cycle ways and promoted routes can be found in the vicinity of the site, as well as the towpath alongside the Shropshire Union Canal. The pedestrian and cycle facilities in the vicinity of the site are illustrated in **Figure 3.4**.

3.22 Access to the site for pedestrians is currently available via Canal Way and New Wharf Road, as well as a footpath, which runs from Berwyn View behind Lakelands School across to the canal to the south of the site. Canal Way and New Wharf Road connect to the towpaths and public open space areas associated with the development adjacent to the site, as well as to the centre of Ellesmere.

3.23 Cycle provision is reasonable, with on-road cycle routes connecting Ellesmere to the surrounding areas via less busy roads. Adjacent to the site, a section of cycle route utilises the towpath from New Wharf Road towards Birch Road. The Regional Cycle Network (Route 31) is accessible via Ellesmere town centre along the B5068 to the northwest and Swan Hill to the northeast. The Wem and Ellesmere Cycle Route is available from the town centre to the south of the town via Birch Road.

Proximity to Local Services and Amenities

3.24 The site is located to the south west of the centre of Ellesmere, with the Ellesmere Business Park located approximately 50 metres from the site, a Tesco store is also located 250 metres from the site with town centre beyond. The location of the site is close to the centre of Ellesmere and as such there is a good mix of services, facilities, amenities and public transport opportunities which are likely to be required on a daily basis by residents already located within walking and cycling distance. The local facilities in the vicinity of the site are illustrated in **Figure 3.2**.

3.25 A number of existing and proposed residential areas are located within a walking and cycling distance of the proposed leisure uses, as broadly illustrated on **Figure 3.2**.

3.26 Local residents and users of the marina and holiday accommodation would have the opportunity and choice to walk and cycle to the town centre which is located approximately one kilometre north east of the site, rather than travel by car. The most direct route is via Canal Way, New Wharf Road and Wharf Road. The town centre offers a range of services and facilities including; employment, shops, restaurants, public houses, banks, pharmacy, newsagents and two convenience stores.

3.27 Lakelands Secondary School and Sports College is located approximately 300 metres north of the site and is accessed from the A495 to the west of the signal controlled junction with Scotland Street. In addition, a footpath connection to the school is available to the north of the site via Berwyn View.

3.28 The Tesco superstore is located at the junction of Canal Way and New Wharf Road, and a medical centre is also proposed as part of the consented residential development (Pochins), which will be located approximately 450 metres from the entrance of the site.

3.29 Measures will be introduced to encourage walking and cycling trips to the town centre and key employment destinations, given their close proximity. Measures will also be introduced to encourage local residents from outside of the development to travel sustainably to the leisure uses on the site.

3.30 The nearest employment locations to the site are within Ellesmere itself and Ellesmere Business Park. Larger employment centres also include Oswestry (approximately 10 kilometres from the site), Wrexham (approximately 20 kilometres from the site), and Shrewsbury (approximately 27 kilometres from the site).

Existing Highway Network Operation

3.31 In order to understand the operation of the existing highway network, traffic surveys were undertaken at the following locations, which have been agreed with highways officers at SC:

- Junction One – Canal Way/A495 signal controlled junction;
- Junction Two – A495/Ellesmere Business Park roundabout; and
- Junction Three – Victoria Street/Scotland Street roundabout.

3.32 Surveys at Junctions One and Two were undertaken on Thursday 8th November 2012 with surveys also undertaken at Junction One on Saturday 10th and Sunday 11th November 2012 alongside an ATC survey over the period 8th-14th November 2012. Additional surveys were carried out at Junction Three on Tuesday 19th and Saturday 16th March 2013. The full survey data outputs are contained in **Appendix B**.

3.33 Analysis of the surveyed flows shows network peaks over all weekday surveys of 08:00-09:00 in the morning and 16:00-17:00 in the evening; Saturday and Sunday assessments both show a peak hour 12:00-13:00. These traffic flows are presented in **Figures 3.5** to **3.7**. In order to understand the existing network operation, assessment of the three surveyed junctions during the peak flows has been undertaken and is presented below.

3.34 The surveyed traffic flows for 2012 are not considered to be materially different to 2014 base flows for the purpose of this assessment and there have been no changes to the local highway network. This is agreed with SC. The adjacent Ponchins development has been considered as a committed development scheme as part of the traffic assessments. This is described later in paragraph 6.21.

Junction One – Canal Way/A495 Signal Controlled Junction

3.35 This junction will provide access between the site and the A495 Scotland Street. It comprises a three-arm signal controlled junction. The signal controller information, staging, phases and the intergreen times has been obtained from SC and considered within the analysis.

3.36 The assessment of the junction operation has been undertaken using LinSig v3, the results of which are summarised in **Table 3.3** below, and presented in full in **Appendix C**.

Table 3.3 Canal Way/A495 Signal Controlled Junction – Surveyed Traffic Flows

	AM Peak		PM Peak		Saturday Peak	
	Degree of Saturation (DoS)	Mean Max Queue (MMQ)	DoS	MMQ	DoS	MMQ
A495 *ahead, right*	55.7	7	63.2	8	48.5	5
A495 Scotland St *ahead, left*	57.7	9	61.9	9	48.2	6
Canal Way *left, right*	23.8	1	61.9	6	46.5	5
PRC	56.1%		42.5%		85.6%	
Cycle Time	90s		90s		90s	

3.37 The existing junction operates well within the limits of capacity, as shown above with a maximum DoS of 62 percent occurring in the PM peak period, and a MMQ value of nine passenger car units (PCUs).

Junction Two – A495/Ellesmere Business Park Roundabout

3.38 This junction serves the Ellesmere Business Park to the west of Ellesmere and comprises a three-arm roundabout. Assessment of the junction operation has been undertaken using ARCADY 7, the results of which are summarised in **Table 3.4** below, and presented in full in **Appendix D**.

Table 3.4 A495/Ellesmere Business Park Roundabout – Surveyed Traffic Flows

	AM Peak		PM Peak		Saturday Peak	
	RFC*	MMQ	RFC	MMQ	RFC	MMQ
Business Park	0.01	0	0.01	0	0.08	0
A495 (E)	0.23	0	0.20	0	0.22	0
A495 (W)	0.19	0	0.16	0	0.15	0

** RFC: Ratio of flow to capacity*

3.39 As seen in the table above, the existing junction operates with a significant level of reserve capacity, with a maximum ratio of flow to capacity (RFC) of 0.23 occurring on the A495 (E) approach during the AM peak, and MMQ values of less than 1.

Junction Three – Victoria Street/Scotland Street Roundabout

3.40 Located to the east of the Canal Way/A495 junction, this three arm roundabout junction connects to the central areas of Ellesmere, as well as onwards towards Whitchurch. Assessment of the junction operation has been undertaken using ARCADY 7, the results of which are summarised in **Table 3.5** below, and presented in full in **Appendix E**.

Table 3.5 Victoria Street/Scotland Street Roundabout – Surveyed Traffic Flows

	AM Peak		PM Peak		Saturday Peak	
	RFC*	MMQ	RFC	MMQ	RFC	MMQ
Victoria St	0.58	1	0.47	1	0.58	1
Scotland St	0.16	0	0.11	0	0.20	0
A495 Scotland St	0.46	1	0.44	1	0.40	1

** RFC: Ratio of flow to capacity*

3.41 The junction operates within capacity in all surveyed peaks, with the maximum RFC of 0.58 occurring in both the AM and Saturday peaks on the Victoria Street approach. Queuing levels on all arms are minimal.

Summary

3.42 Overall, the existing site is well located within Ellesmere, with good walking and cycling links to the rest of the town, as well as onwards by road to local centres and larger towns in the vicinity. Public transport links are good, with routes providing local and wider connections across the region. The existing highway network operates well within capacity, with all junctions operating at around 50 percent of their available capacity.

4 PROPOSED DEVELOPMENT

4.1 The site is identified as site ELL003a and ELL003b for residential and leisure development respectively, under Policy S8 of the SAMDev Draft Plan 2014.

4.2 The proposed development follows the principles set in the SAMDev plan and comprises a mixture of land uses, with access achieved via Canal Way in the initial stages and also ultimately via the A495 Oswestry Road. A spine road through the site will link the two junctions. The overall site masterplan is contained in **Appendix F**, and the development comprises the following as shown in **Table 4.1**.

Table 4.1 Proposed Development Schedule

South of Spine Road & Adjacent to Canal
188 berth Marina
43 log cabins
120 bed Hotel
4,400m^2 GFA leisure centre
70 berth touring caravan site
750m^2 GFA pub/restaurant
500m^2 GFA play centre
North of Spine Road
250 residential dwellings

Access Strategy

4.3 Access to the development at full build out is proposed to be via two main access points; the first a roundabout junction with the extension of Canal Way through the Pochins land, and the second a three arm roundabout junction with the A495 to the west of the Ellesmere Business Park. These roundabouts are to be linked by a new road which will provide access to each of the discrete sections of the development.

4.4 The new link road and roundabout to the west of Ellesmere will provide a secondary point of access for the site as an alternative to the Canal Way / A495 junction. The link road will be constructed to a local distributor standard, 6.7 metres wide with a two metre wide footway on one side of the road and a three metre wide footway/cycleway on the other.

4.5 Details of the individual access junctions to the development areas and the internal spine road are indicatively shown on the Masterplan at **Appendix F**. The proposed access junctions at Canal Way and the A495 are shown on **Figure 4.1** and **Figure 4.2** respectively. Both junctions include pedestrian footways and uncontrolled crossing points as appropriate.

4.6 The new roundabout on the A495 also includes a two metre footway constructed within the highway verge on the south side of the carriageway, up to the roundabout with the Ellesmere Business Park. It is proposed to provide a dropped kerb facility with tactile paving on the western side of the roundabout to access the footway on the northern side of the A495, which continues into Ellesmere to the east of the roundabout.

4.7 As illustrated on the masterplan, there are a number of pedestrian and cycle links which have been incorporated into the proposed layout, allowing access to all parts of the development by a variety of modes. This includes along both the distributor road (with a three metre footway / cycleway on the northern side and two metre wide footway on the southern side) and the canal towpath, with multiple connections between the two at the following locations:

- adjacent to the hotel;
- at and around the marina; and
- between the log cabins and the touring caravan site.

4.8 It is proposed to incorporate a number of pedestrian links within the residential element of the site, to access the link road and the leisure uses on the southern side of the site and to Berwyn View. The route via Berwyn View will provide a direct and convenient access to Lakelands Secondary School. This access will utilise the existing lane to the Sewage Treatment Works adjacent to the site.

4.9 A further pedestrian and cyclist connection is proposed from the residential development to the new residential development to the east of the site, which is currently being constructed on the Ponchins site. This will provide a direct route for pedestrians and cyclists to travel between Canal Way and the site. Pedestrian and cycle access will also be gained via the two access points to the site at Canal Way and the A495. Land will also be set-aside for a footbridge across the canal in the vicinity of the proposed hotel.

Public Transport Strategy

4.10 Further to discussions with the Council and the current operator, it is considered that the existing town bus service (208/209) could be diverted into the development and this is agreed in principle. The stakeholders have also agreed to work with the developer as the scheme progresses to provide public transport connections to the site.

4.11 The service currently operates on a Tuesday and Thursday only and at this stage, the preferred strategy based on discussions with the stakeholders, is to extend the operation of this service, so it passes through the site on Friday, Saturday, Sunday and Monday (i.e. four days a week) between 09:00 and 22:00, to provide opportunities for residents and visitors to access the site and the new facilities by a regular bus service and for them to access other facilities external to the site.

4.12 It is envisaged that in the early stages of development and before the link road is completed, that the service will operate along Canal Way to a midpoint on the road, turn and return out the same way. Ultimately, the service will go all the way through the site and re-joining the A495 and returning to the town centre.

Parking Provision

Car Parking

4.13 It is understood from officers at SC that there are no adopted parking standards in place at this time due to the emerging core strategy and review of parking standards. As such it is understood that car parking provision is assessed on a case-by-case basis during this interim period. As a guide, officers have advised that the standards in the North Shropshire Local Plan (2000-2011) could be used as a proxy for parking provision for the proposed development, although these standards are based on PPG13 which has been withdrawn. However, on this basis, the following maximum provision should be allowed within the development:

- Residential – 2 spaces per dwelling;
- Hotel – 1 space per bedroom;
- Restaurant – 1 space per 10 sqm of seating area;
- Public House – 1 space per 2 sqm of bar area;
- Caravan / Chalet Park - 1 space per unit; and
- Other D2 leisure uses – 1 space per 22 sqm.

4.14 Whilst this is an outline planning application and the internal layout will be subject to future reserved matters application, the parking provision at the site is proposed as follows, broadly in accordance with the guidance above and where more detailed development schedule information is available.

- Residential – anticipated to be up to around 500 spaces (approximately 2 per dwelling);
- 188 berth marina – 200 car parking spaces plus cycle and motorcycle parking;
- Log cabins– 1 per cabin plus 13 visitor spaces
- Caravan site – 1 per pitch plus 7 visitor spaces
- Pub/Restaurant, Play Barn – 60 car parking spaces;
- Other Leisure Uses/Spa – 199 car parking spaces; and
- Hotel – 125 car parking spaces.

4.15 Parking provision for the residential element will be in the form of garages and / or driveways, and communal parking areas for any flats as appropriate. Within the leisure portion of the development, a number of discrete car parks are proposed, associated with different elements of development, as shown on the Masterplan contained in **Appendix F**.

4.16 With the exception of the marina parking, there is inter-accessibility on foot between the remaining car parks, allowing parking spaces to be used appropriately dependant on demand and site operations, and promoting multi-site, multi-modal trips across the development.

Cycle Parking

4.17 The Emerging Core Strategy (paragraph 4.86) advises that developments should include suitable provision for cycle parking, although as per the car parking guidance above, it is understood from officers at SC that there are no adopted cycle parking standards in place at this time due to the emerging core strategy and review of parking standards. As a guide, officers have advised that the standards in the North Shropshire Local Plan (2000-2011) could be used as a guide for parking provision for the proposed development. However, this only provides for retail, office and industrial land uses. Cycle parking provision will therefore be agreed with highway officers at the reserved matters stage.

Travel Plan Measures

4.18 Measures and initiatives to encourage sustainable travel to and from the site will be encompassed as part of a travel plan, the key objective of which will be to reduce the reliance on the private car. The measures that will be explored in the context of the various elements of the development are outlined in **Chapter 5**.

5 TRAVEL PLANNING FRAMEWORK

5.1 It is proposed that individual Travel Plans will be produced for each of the leisure and residential uses on the site, in accordance with the Department for Transport's Travel Plan Guidance. It is proposed that these are conditioned as part of the planning permission and agreed and implemented prior to occupation of each element once the developer and or / occupants are known.

5.2 The individual Travel Plans will identify preliminary targets for travel to the development by all modes of transport. They will also set out initiatives and measures to support these targets, which will be provided before the individual elements of the development are occupied; and suggests other measures that could subsequently be introduced to influence travel behaviour. The documents will also include proposals for improving access for residents, customers, visitors and employees using public transport and those walking and cycling.

5.3 The full travel plans will continually evolve over time, and the travel targets will be monitored and reviewed on a regular basis. The initiatives, measures and targets may all be subject to change during the monitoring and review process in agreement with SC.

Travel Plans for the Leisure Uses

5.4 The primary aim of the individual Travel Plans for the leisure uses, is to set out the basis for a continually evolving document, which will:

(i) set out the existing conditions and accessibility of the proposed site including the public transport opportunities in and around the site for staff and visitors. This could include analysis of the strengths and weaknesses, opportunities and constraints of the use of existing facilities;

(ii) set out the scope and objectives of the Full Travel Plan;

(iv) set out the proposed initiatives and measures designed to promote accessibility by non-car modes of travel, including the appointment of a Travel Plan Coordinator who will be responsible for management and delivery of the Travel Plan;

(v) set out the marketing strategy to be provided before the development is opened in order to influence the pre-trip mode choice of all users and therefore minimise single occupancy car journeys;

(vi) set out the preliminary forecast modal share targets, especially with regard to public transport, walking and cycling; and

(vii) set out requirements for monitoring and reviewing targets through dissemination of information including requirements for surveys of future staff and visitor travel behaviour.

5.5 A list of suggested initiatives and measures for the leisure elements of the development are set out in **Table 5.1** below. These measures and initiatives may be subject to change at a later date through the reserved matters applications or as individual operators come forward.

Table 5.1 – Potential Initiatives and Measures for the Leisure Uses

NO	MEASURES
	WALKING & CYCLING MEASURES
1	Provision of travel notice boards in prominent locations within the development for staff and visitors to the development. This will provide information on the health benefits of walking and cycling and provide information regarding local cycle routes and pedestrian access to the site
2	Provision of conveniently located, secure and sheltered cycle parking
3	The inclusion of walking and cycling maps on the noticeboards, within employee 'welcome information packs' and on occupying organisations websites, as appropriate
4	The provision of internal pedestrian and cycle links to connect the site to local routes as far as is practicable
5	The provision of shower and changing facilities within the development
6	Appropriate and suitable signage showing the key pedestrian and cycle routes and informal and formal seating areas will also be provided within the site;
	PUBLIC TRANSPORT MEASURES
7	The provision of up to date public transport information on the notice boards for staff and visitors and also within the employee 'welcome information pack'
8	Allowing flexible working hours in order to maximise the use of bus services
9	The inclusion of sustainable travel information on the relevant organisations websites, as appropriate
	REDUCING THE NEED TO TRAVEL
10	Produce a calendar of Travel Awareness Events
11	The inclusion of sustainable travel information on organisations websites
12	Provision of leaflet to employees containing information on the health benefits of walking and cycling and car sharing, as well as safe practical measures for use of these modes.
13	Hotel guests will also have information within their rooms, which will identify the opportunities for using sustainable modes of transport to likely destinations during their stay at the hotel
14	Organisations or large parties that will use the development will be encouraged to arrive by coach or minibus.
15	The provision of an emergency "Get You Home" service for staff who have travelled by sustainable modes
16	Local sourcing of materials, stock and supplies where possible to reduce delivery distances and the co-ordination of deliveries where possible by the individual occupiers.
	REDUCING CAR BORNE TRIPS
17	The promotion of car sharing within the 'welcome information packs', or the organisations websites (if available) and on the notice boards.

Residential Travel Plan

5.6 A Residential Travel Plan document is proposed to be agreed with the Council prior to occupation. This is in order to help influence local travel patterns and restrict private car travel, as new residents would modify their travel arrangements in accordance with the Travel Plan at the outset, and would not be intransigent about adjusting their existing travel arrangements.

5.7 The Travel Plan will also set out initiatives and measures to support the targets, which will generally be provided before the development is occupied; and suggests other measures that could subsequently be introduced to influence travel behaviour. It will confirm the appointment and role of a Travel Plan Coordinator who will be responsible for management and delivery of the Travel Plan.

5.8 A list of suggested initiatives and measures for the residential element of the development are set out in **Table 5.2** below. These measures and initiatives may be subject to change at a later date through the reserved matters applications or as developer's come forward.

Table 5.2 – Potential Initiatives and Measures for the Residential Use

NO	MEASURES
	WALKING & CYCLING MEASURES
1	Provision of conveniently located, secure and sheltered cycle parking
2	The inclusion of walking and cycling maps within a 'Welcome Information Pack' for residents delivered to each property on first occupation
3	The provision of internal pedestrian and cycle links to connect the site to local routes as far as is practicable
4	Cycle vouchers. Details are to be determined through implementation of the travel plan but could consist of vouchers that can be exchanged for cycle training sessions or discounts at a local cycle store.
5	Organisation of cycle events (two per year). This could include specialist bicycle mechanics that offer servicing and recommend repairs to residents cycles. E.g. Dr Bike, road shows, information stalls or cycle training.
	PUBLIC TRANSPORT MEASURES
6	The provision of up to date public transport information through the 'Welcome Information Pack'
7	The provision of travel notice boards within the development. This will provide information on and promote sustainable modes of transport. The notice boards will be located in prominent locations within the development.
8	Bus taster tickets. Details are to be determined through implementation of the travel plan but could consist of vouchers that can be exchanged for one book of bus tickets per household or one monthly pass per household.
	REDUCING THE NEED TO TRAVEL
9	Formation of a local residents group to explore and maximise all on-site measures and opportunities to reduce single occupancy car travel.
10	Produce a calendar of Travel Awareness Events
11	The provision of a 'Welcome Information Pack' for residents, which will contain details of how trips to local leisure and employment facilities can be achieved by other means to the private car. It will give information on bus routes and frequency, local cycle routes and the location of local schools and amenities.

12	The inclusion of sustainable travel information within the sales office during build-out and on the developer's or a local community website (if available)
	REDUCING CAR BORNE TRIPS
13	The promotion of car sharing within the 'welcome information packs', or the developers website (if available) and on the notice boards.

6 TRIP GENERATION & ASSESSMENT SCENARIOS

Development Trip Generation

6.1 In order to consider the impact of the proposed development on the local highway network, an assessment of likely trip rates for each of the proposed elements of the development has been carried out. Trip rates have been derived from the TRICS 2013 database based on the proportions of development outlined in the previous section of this report.

6.2 The weekday and weekend peak vehicle trip generation for each of the land uses is presented in terms of the relevant phasing in **Table 6.1** below, with the associated multi-modal TRICS outputs contained in **Appendix G**. In order to assess the marina vehicular trip profile for a typical weekday, information from a suitable marina site within the TRICS database dated July 1998 has been used, which is the only available weekday survey. For the purpose of this assessment, 200 berths at the marina have been assumed.

Table 6.1 Vehicle Trip Attraction by Land Use

Land Use	AM Peak (08:00-09:00)		PM Peak (16:00-17:00)		Saturday Peak (12:00-13:00)	
	Arr	Dep	Arr	Dep	Arr	Dep
200 berth Marina* [Trip Rate] Vehicles	[0.036] 7	[0.026] 5	[0.061] 12	[0.080] 16	[0.101] 20	0.085] 17
43 log cabins [Trip Rate] Vehicles	[0.016] 1	[0.038] 2	[0.079] 3	[0.058] 2	[0.130] 6	[0.075] 3
120 bed Hotel [Trip Rate] Vehicles	[0.151] 18	[0.2238] 29	[0.132] 16	[0.111] 13	[0.077] 9	[0.154] 18
4,400m2 GFA leisure centre [Trip Rate] vehicles	[0.588] 26	[0.521] 23	[1.168] 51	[0.92] 40	[1.133] 50	[0.933] 41
70 berth touring caravan site [Trip Rate] vehicles	[0.016] 1	[0.038] 3	[0.079] 6	[0.058] 4	[0.130] 9	[0.075] 5
750m2 GFA pub/restaurant [Trip Rate] vehicles	[0.00] 0	[0.00] 0	[1.904] 14	[1.237] 9	[3.691] 28	[1.772] 13
500m2 GFA play centre [Trip Rate] vehicles	[0.013] 0	[0.000] 0	[0.544] 3	[0.736 4	[1.835] 9	[2.118] 11
250 residential dwellings [Trip Rate] vehicles	[0.16] 40	[0.442] 111	[0.335] 84	[0.202] 51	[0.134] 34	[0.235] 59
Total Trips	**93**	**173**	**189**	**139**	**165**	**167**

Trip Discounts

6.3 While each of the separate land uses will generate its own volume of trips, it is reasonable to assume that a number of trips will be linked with other uses on the site. In particular, the leisure centre, play centre and pub/restaurant uses are likely to link with the residential dwellings, hotel, marina, caravans and log cabins, particularly during peak summer and holiday periods of the year, with lower trip levels outside of peak periods. This is agreed in principle with the highway authority.

6.4 Initially a discount of five percent in AM peak and 12 percent in PM peak for 'shopping' purposes was considered as appropriate by TPA for regular trips associated with the residential development due to the close proximity of the Tesco store. Trips further afield and for bulky goods are likely to be made on weekends or at off peak times.

6.5 The highway authority stated that Ellesmere town centre has a wide and varied number of shops, including independent shops and local market, which will principally serve the need of residents of the proposed development and not necessarily the Tesco store. As a result of discussions, the 'shopping' discount has been reduced by half to 2.5 percent in the AM peak hour and six percent in the PM peak hour.

6.6 The trips associated with pub / restaurant are most likely to be linked trips from the hotel or leisure centre. A discount of 75 percent has been considered and agreed with SC.

6.7 Furthermore, the proximity of the development to the Tesco superstore, as well as to the centre of Ellesmere and the associated local facilities makes trips to these facilities from the holiday accommodation more viable by non-car modes.

6.8 In respect of the above, 50 percent of all trips associated with the leisure centre will be linked to other uses, and therefore are not considered as primary related new trips to the development. A total of 20 percent of all vehicle trips associated with the leisure accommodation development (marina, hotel, log cabins, caravan site) will also be discounted due to the proximity of the Tesco superstore, pub / restaurant and Ellesmere town centre. This is agreed with the highway authority.

6.9 **Table 6.2** summarises the discounts applicable for various land uses.

Table 5.2 Trip Discounts

Land use	AM Peak	PM Peak	Saturday
Marina, Log Cabins, Caravans and Hotel	20%	20%	20%
Leisure Centre	50%	50%	50%
Pub/Restaurant	75%	75%	75%
Residential	2.5%	6%	6%

6.10 The resultant total vehicle trips over each phase of the development are presented in **Table 6.3**.

Table 6.3 Total Vehicle Trips

Land Use		AM Peak (08:00-09:00)		PM Peak (16:00-17:00)		Saturday Peak (12:00-13:00)	
		Arr	Dep	Arr	Dep	Arr	Dep
200 berth Marina	Trip Forecast	7	5	12	16	20	17
	Discount	*20%*	*20%*	*20%*	*20%*	*20%*	*20%*
	Discounted Trips	6	4	10	13	16	14
43 log cabins	Trip Forecast	1	2	3	2	6	3
	Discount	*20%*	*20%*	*20%*	*20%*	*20%*	*20%*
	Discounted Trips	1	1	3	2	4	3
120 bed Hotel	Trip Forecast	18	29	16	13	9	18
	Discount	*20%*	*20%*	*20%*	*20%*	*20%*	*20%*
	Discounted Trips	14	23	13	11	7	15
4,400m^2 GFA leisure centre	Trip Forecast	26	23	51	40	50	41
	Discount	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*
	Discounted Trips	*13*	*11*	*26*	*20*	*25*	*21*
70 berth touring caravan site	Trip Forecast	1	3	6	4	9	5
	Discount	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*
	Discounted Trips	*1*	*2*	*4*	*3*	*7*	*4*
750m^2 GFA pub/ restaurant	Trip Forecast	0	0	14	9	28	13
	Discount	*75.0%*	*75.0%*	*75.0%*	*75.0%*	*75.0%*	*75.0%*
	Discounted Trips	*0*	*0*	*4*	*2*	*7*	*3*
500m^2 GFA play centre	Trip Forecast	0	0	3	4	9	11
	Discount	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
	Discounted Trips	*0*	*0*	*3*	*4*	*9*	*11*
250 residential dwellings	Trip Forecast	40	111	84	51	34	59
	Discount	*2.5%*	*2.5%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*
	Discounted Trips	*39*	*108*	*79*	*47*	*31*	*55*
Total Trip Forecast		67	136	158	108	129	129
Discounted Trips		-14	-15	-43	-31	-50	-35
TOTAL		53	121	115	77	80	94

6.11 Reviewing the trip volumes presented in the table above, the proposed development is predicted to attract broadly similar levels of vehicle trips across all peaks. The breadth of development is also likely to stimulate trips by non-car modes both internal to the development and linked with the town and local facilities, thereby reducing the volume of vehicle trips further.

Development Trip Distribution

6.12 The development trip distribution methodology is based on the land use, location of the land use within the development site and the access points to the site. The site is accessed via two access junctions; Canal Way/A495 signal controlled junction and the A495/site access roundabout. The distribution described below is assumed to be the same for both arrivals and departures in all peak periods assessed. Each land use and corresponding distribution is described below and illustrated on **Figure 6.1**.

6.13 Marina Log Cabins and Hotel: The Marina, Log Cabins and Hotel can all be classified as tourist accommodation and the majority of trips are likely to be associated with regional or national geographic areas. As Ellesmere is not in the immediate vicinity of any major roads or motorways, trips are likely to be equally split between the roads to the east and west of the site. Hence, a 50/50 split between the two access points is considered for trip distribution.

6.14 Caravan Site: The trips attracted for the Caravan site will be leisure trips and are likely to be regional trips. It is assumed that the trips associated with Caravan site are equally split between the two site access junctions (50/50 split).

6.15 Leisure Centre: The main attraction for the leisure centre is likely to be from Ellesmere with some possibility of trips from villages along the A495 due to proximity of these areas to the next nearest leisure centre, located to the west of Whittington. Thus, it is assumed that 60 percent of trips attracted to the Leisure centre are from Canal Way/A495 junction and 40 percent of trips from A495/site access roundabout.

6.16 Pub/ restaurant: It is assumed that 80 percent of trips attracted to the restaurant are from Ellesmere and only 20 percent of the trips are accessed via the A495/site access roundabout. This is due to the fact that the residential area to the west of the site is in close proximity to other public houses. It is also considered that a number of trips are linked trips to the hotel, marina and log cabins. Also, a proportion of trips are internal trips from residential development within the site.

6.17 Play Centre: Due to limited amount of facilities within the vicinity of the site, trips attracted to the Play Centre are likely to be associated from Ellesmere and other regions. An even distribution of trips (50/50) is considered from the two site access junctions.

6.18 Residential: The proposed residential development trips have been assigned onto the local highway network based on the 2001 Census, travel to work data for wards in the immediate vicinity of the development site. The census data shows that 75 percent of people travelling to work from the scheme are likely to travel east from the development and 25 percent are likely to travel west (turning left) on A495/site access roundabout. However due to location of the residential area within the masterplan, of the 75 percent of trips travelling east, it is assumed that 70 percent of this traffic will use the roundabout access before travelling east through the Canal Way/A495 junction.

6.19 The distribution of these trips in each of the assessed peak hours is shown in **Figure 6.2 - 6.4** and summarised in **Table 6.4.**

Table 6.4 Trip Distribution for the proposed development

Landuse	Canal Way/A495 junction	A495 /site access Roundabout
Marina, Log Cabins and Hotel	50%	50%
Caravan Site	50%	50%
Leisure Centre	60%	40%
Pub/Restaurant	80%	20%
Play Centre	50%	50%
Residential	22.5% (30% of 75%)	77.5% (25+70% of (75%))

Committed Developments

6.20 In respect of committed developments in the vicinity of the site, two developments have been highlighted and are considered in terms of traffic impact. These developments are:

- Pochins site – 385 residential dwellings; and
- Medical centre – 1,250m^2 GFA.

6.21 The trip generation associated with the committed development has been assessed using TRICS, the output reports from which are contained in **Appendix H**. This traffic has been distributed based on existing flows at Canal Way / A495 junction. The traffic flows for the 2012 Base plus Committed Development are shown in **Figures 6.5 – 6.7**. It therefore assumes that there is no redistribution of committed development traffic flow following completion of the new link road and access junction on to the A495, which represents a robust assessment.

Assessment Scenarios

6.22 As discussed with the highway officer at SC, base traffic is assumed to remain constant in the design year and committed and proposed developments are to be the main growth areas in the town. Hence no growth factors have been applied to the surveyed traffic flows.

6.23 The addition of the committed development traffic discussed above, results in the total forecast base traffic flows, while the addition of the development results in the production of total forecast traffic flows. The following scenarios are analysed for junction capacity assessments.

- AM Peak Base + committed + development traffic flows (**Figure 6.8**)
- PM Peak Base + committed + development traffic flows (**Figure 6.9**)
- Weekend Peak Base + committed + development traffic flows (**Figure 6.10**).

7 TRAFFIC IMPACT ASSESSMENT

7.1 In order to consider the impact of the development on the local highway network, the scenarios detailed in the previous section of this report have been used to assess the existing and proposed junction operation. In order to best present the impact at each junction, assessments are presented for the total forecast base plus committed plus development scenario.

7.2 For the purpose of this calculation, all the traffic associated with the total development within the site is distributed at the two access junctions; Canal Way /A495 signal controlled junction and A495 / site access roundabout. A sensitivity assessment is presented at the end of the section to show the level of development that could potentially be served off the single point of access via Canal Way.

Junction One – Canal Way/A495 Signal Controlled Junction

7.3 This junction serves the new Ellesmere Wharf development, providing direct access to the development from the A495 Scotland Street, and comprises a three-arm signal controlled junction. Assessment of the junction operation has been undertaken using LinSig v3, the results of which are summarised in **Table 7.1** below, and presented in full in **Appendix I**.

Table 7.1 Canal Way/A495 Signal Controlled Junction –Total Forecast Traffic Flows

	AM Peak		PM Peak		Saturday Peak	
	DoS	MMQ	DoS	MMQ	DoS	MMQ
A495 *ahead, right*	70.5	9	82.9	11	52.6	6
A495 Scotland St *ahead, left*	69.9	11	81.2	14	54.3	7
Canal Way *left, right*	66.6	6	82.4	10	54.2	6
PRC	27.6%		8.5%		65.8%	
Cycle Time	90s		90s		90s	

7.4 Under the total forecast base traffic flows, which include the committed development traffic flows, the junction continues to operate within capacity, with the maximum DoS of 83 percent and maximum MMQ value of 14 PCUs on the A495 Scotland Street approach in the PM peak.

Junction Two – A495/Ellesmere Business Park Roundabout

7.5 This junction serves the Ellesmere Business Park to the west of Ellesmere, providing direct access to the development north of the A495, and comprises a three-arm roundabout. Assessment of the junction operation has been undertaken using ARCADY 7, the results of which are summarised in **Table 7.2** below and presented in full in **Appendix I**.

7.6 Assessment of the 2018 total forecast base traffic flows show that this junction continues to operate within capacity, with a maximum RFC of 0.28 occurring on the A495 (E) approach in the AM peak, and MMQ values less than 1 on all approaches in all scenarios.

Table 7.2 A495/Ellesmere Business Park Roundabout –Total Forecast Traffic Flows – Base + Committed + Development

	AM Peak		PM Peak		Saturday Peak	
	RFC	MMQ	RFC	MMQ	RFC	MMQ
Business Park	0.01	0	0.02	0	0.00	0
A495 (E)	0.28	0	0.24	0	0.17	0
A495 (W)	0.23	0	0.20	0	0.16	0

7.7 The junction is predicted to continue to operate within capacity under the full development, as shown on the table above, with a maximum RFC of 0.28 occurring on the A495 (E) approach in the AM peak.

Junction Three – Victoria Street/Scotland Street Roundabout

7.8 The Victoria Street /Scotland Street three arm roundabout is located to the east of the Canal Way/A495 junction and connects to the central areas of Ellesmere, as well as onwards towards Whitchurch. Assessment of the junction operation has been undertaken using ARCADY 7, the results of which are summarised in **Table 7.3**, and presented in full in **Appendix I**.

7.9 The junction currently operates within capacity under the total forecast base traffic flows, with the most sensitive peak being the PM peak, with a maximum RFC of 0.79 on Victoria Street.

Table 7.3 Victoria Street/Scotland Street Roundabout –Total Forecast Traffic Flows

	AM Peak		PM Peak		Saturday Peak	
	RFC	MMQ	RFC	MMQ	RFC	MMQ
Victoria St	0.72	3	0.79	4	0.75	3
Scotland St	0.20	0	0.20	0	0.27	0
A495 Scotland St	0.63	2	0.56	1	0.52	1

7.10 **Table 7.3** shows that with the total forecast development, the junction is operating within capacity in all peak periods assessed.

Junction Four – Proposed Link Road/A495 Roundabout

7.11 The results of the 2018 Total Forecast for the proposed link road roundabout with the A495 is summarised in **Table 7.4** with the full ARCADY7 reports presented in **Appendix I**.

Table 7.4 Proposed Link Road/Canal Way Roundabout –Total Forecast Traffic Flows

	AM Peak		PM Peak		Saturday Peak	
	RFC*	MMQ	RFC	MMQ	RFC	MMQ
A495 (E)	0.23	0	0.22	0	0.17	0
Distributor Road	0.06	0	0.04	0	0.04	0
A495 (W)	0.29	0	0.28	0	0.24	0

** RFC: Ratio of flow to capacity*

7.12 The proposed junction operates well within capacity, with the maximum RFC of 0.29 occurring on the A495 (W) arm on an AM peak. The weekday AM and PM peak periods demonstrate minimal queues at the proposed junction with the forecast traffic flows.

Sensitivity Test

7.13 It is anticipated that the site will be developed in phases and for the sensitivity test assessment, it is assumed that Phase One (comprising of the Marina, Log Cabins, Leisure centre, Hotel, Play Centre, Caravans and up to 50 residential houses), will be accessed only via Canal Way. The development traffic associated with these facilities is distributed based on distribution methodology in **Chapter 6**.

Junction One – Canal Way/A495 Signal Controlled Junction

7.14 Assessment of the junction operation has been undertaken using LinSig v3, the results of which are summarised in **Table 6.5** below, and presented in full in **Appendix J**.

Table 7.5 Canal Way/A495 Signal Controlled Junction –Total Forecast Traffic Flows

	AM Peak		PM Peak		Saturday Peak	
	DoS	MMQ	DoS	MMQ	DoS	MMQ
A495 *ahead, right*	65.4	8	85.4	12	55.2	7
A495 Scotland St *ahead, left*	67.1	10	80.2	13	51.8	7
Canal Way *left, right*	71.1	7	87.5	12	61.5	7
PRC	26.5%		2.9%		46.3%	
Cycle Time	90s		90s		90s	

7.15 Under the sensitivity test scenario, with Phase One (comprising of the Marina, Log Cabins, Leisure centre, Hotel, Play Centre, Caravans and up to 50 residential houses) being served by only one site access point, the junction continues to operate within capacity, with the maximum DoS of 87.1 percent for Canal Way in PM peak period and maximum MMQ value of 13 PCUs on the A495 Scotland Street approach in the PM peak.

Development Impact Assessment Summary

7.16 The impact assessment indicates that all the junctions will operate within capacity for the total development scenario, with two access points to the site; A495 / Canal Way junction and A495 / site access junction.

7.17 In the case of the sensitivity test for an initial phase of development off a single point of access, the A495 / Canal Way signal controlled junction would also operate efficiently with a maximum DoS of 83 percent during the busiest peak period, assuming all the leisure development and 50 houses are served via Canal Way.

8 SUMMARY & CONCLUSIONS

8.1 This Transport Assessment has been completed to support the proposed development on land adjacent to Ellesmere Wharf, Ellesmere, for a mixed residential dwellings and leisure use scheme.

8.2 The site is identified as site ELL003a and ELL003b for residential and leisure development respectively, under Policy S8 of the SAMDev Draft Plan 2014. The allocated sites within draft SAMDev Plan represent Shropshire Council's preferred approach for the use of land and policies to guide future development in Shropshire up to 2026.

8.3 The proposed layout of the development with infrastructure and public transport improvements will ensure a good level of accessibility of the site for local facilities and amenities for non-car modes of transport. The site is also within walking and cycling distance of many facilities and amenities in Ellesmere town centre.

8.4 Access to the development at full build out is proposed to be via two main access points; the first a roundabout junction with the extension of Canal Way through the Pochins land, and the second a three arm roundabout junction with the A495 to the west of the Ellesmere Business Park. The report confirms that the proposed site access arrangements are appropriate to accommodate the levels of vehicular traffic associated with the development.

8.5 This report also considers that the forecast traffic associated with the proposed development will not have a material impact on the operation or safety of the existing local highway network.

8.6 Measures proposed as part of the development, including a Travel Plan, will ensure the site, the local community and local facilities and amenities are accessible by non-car modes of transport.

8.7 The site has been demonstrated to generally comply with local and national planning guidance and satisfies the transportation requirements, which are set out as part of these policies.

8.8 It is finally concluded that there are no valid highway or transport reasons, which should prevent the proposed development of the land. The site is suitable for the proposed mixed use of residential dwellings and leisure uses.

FIGURES

A4
ORIGINAL
PLOT SIZE

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PROJECT:

PROPOSED DEVELOPMENT AT ELLESMERE WHARF

CLIENT:

Burbury Investments Ltd

TITLE:

Site Location Plan

NOTES:

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STATUS:

INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:50000	11.04.13	JAN	JC	MB

JOB NO:	DRAWING NO:	REVISION:
1109-54	Figure 3.1	-

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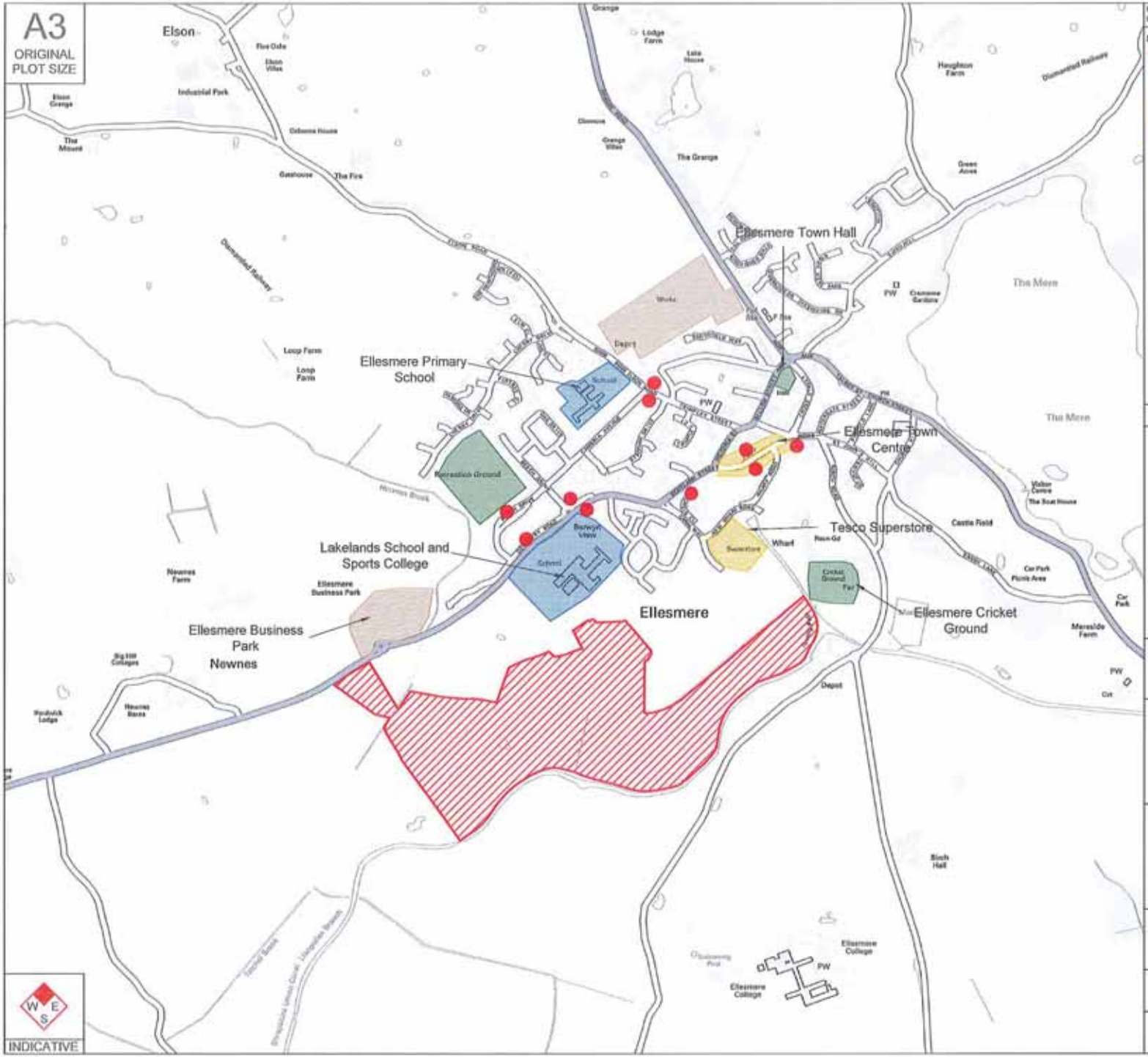

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NOTES:

- Approximate site boundary
- Bus stop
- School
- Shops
- Recreation
- Employment

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-	-	-	-	-	-

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CLIENT:
Burbury Investments Ltd

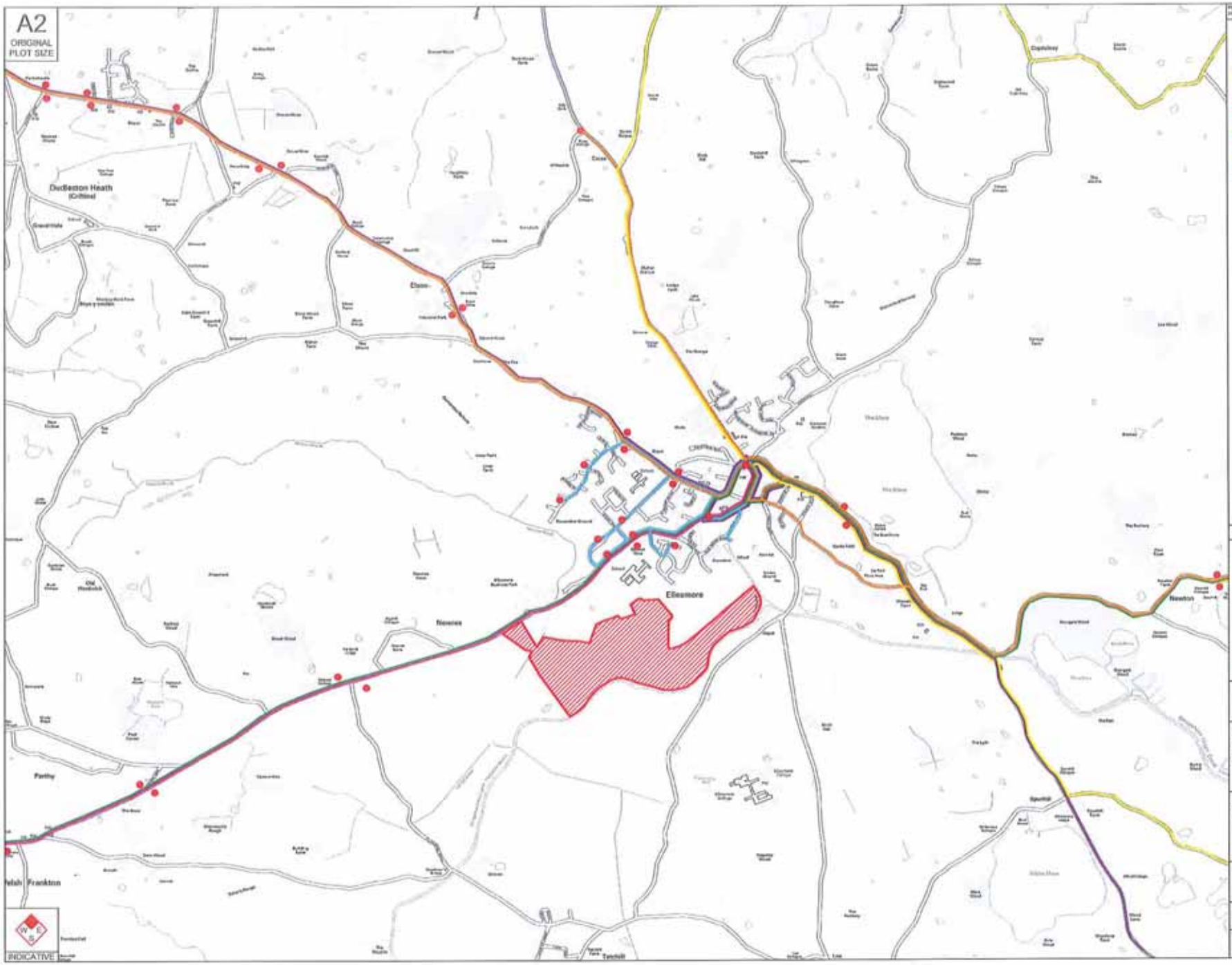
PROJECT:
PROPOSED DEVELOPMENT AT ELLESMERE WHARF

TITLE:
Local Facilites and Amenities Plan

STATUS:
INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:10000	30.04.13	JAN	JC	MB

JOB NO:	DRAWING NO:	REVISION:
1109-54	Figure 3.2	-



KEY

Bus Service Frequencies

Bus Service	Mon-Fri Day (mins)	Mon-Fri Eve (mins)	Saturday (mins)	Sunday (mins)
[illegible]	30	-	-	-
[illegible]	60	-	60	-
[illegible]	60	-	60	2 services
[illegible]	60	-	60	-
[illegible]	2 services	-	-	-
[illegible]	2 services	-	-	-

Site Boundary

Bus stop

Rev	Date	Description	Drawn by	Checked by	Approved by
-	-	-	-	-	-

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CLIENT:
Burbury Investments Ltd

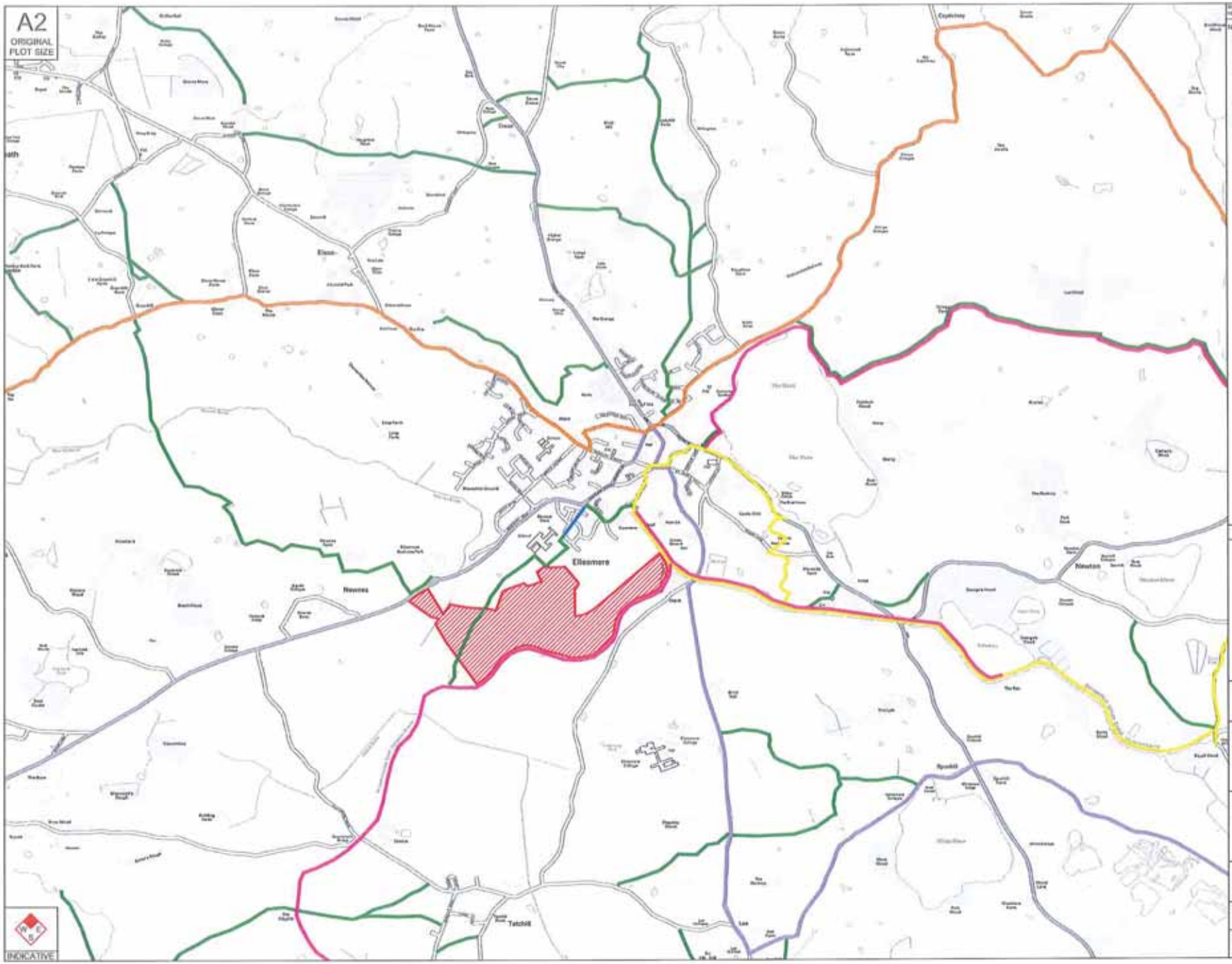
PROJECT:
PROPOSED DEVELOPMENT AT ELLESMERE WHARF

TITLE:
Public Transport Plan

STATUS:
INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:12500	11.04.13	JAN	JC	MB

JOB NO:	DRAWING NO:	REVISION:
1109-54	Figure 3.3	-



NOTES:

- Site Boundary
- Public Right of Way
- National Cycle Network - Route 51
- National Cycle Network - Local Route
- Restricted Byway
- Towpath
- Local circular route

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CLIENT:
Burbury Investments Ltd

PROJECT:
PROPOSED DEVELOPMENT AT ELLESMERE WHARF

TITLE:
Pedestrian and Cycle Plan

STATUS:
INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:12500	11.04.13	JAN	JC	MB

JOB NO:	DRAWING NO:	REVISION:
1109-54	Figure 3.4	-

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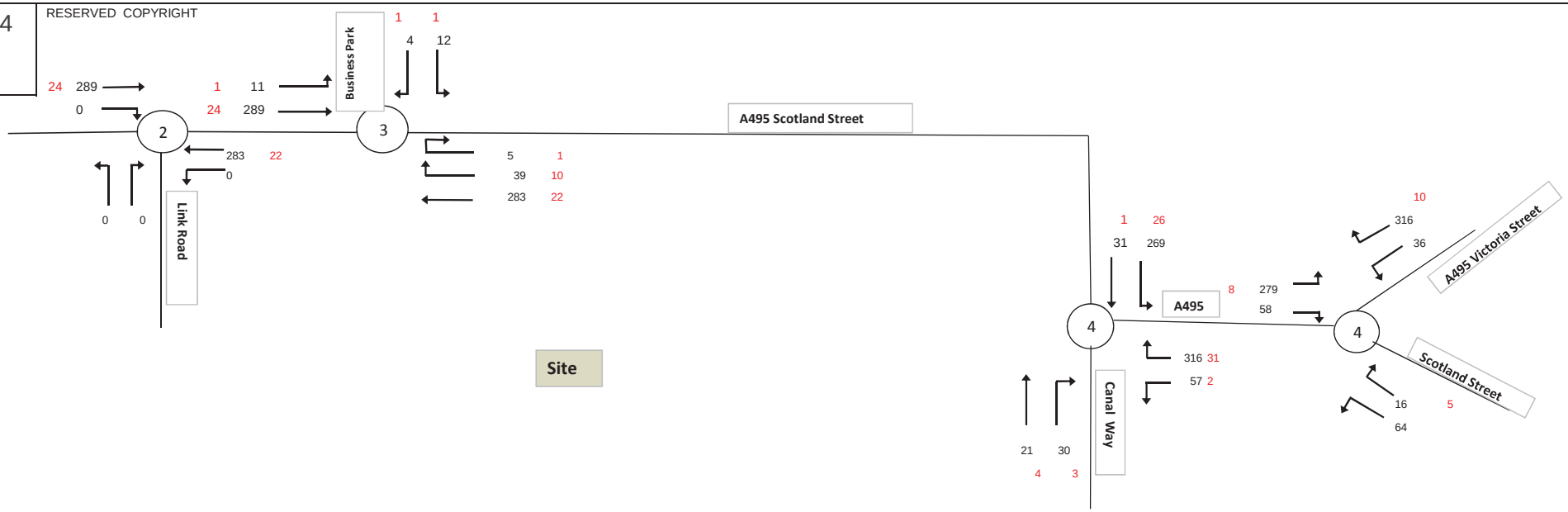

Key

X All vehicular movements
X HGV movements
→ Direction of movement

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2012 Base Traffic Flows AM	Date: **30.05.2014**	Status: **INFORMATION**	Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**
	Project No: **1109-54**	Figure No: **3.5**	Revision:

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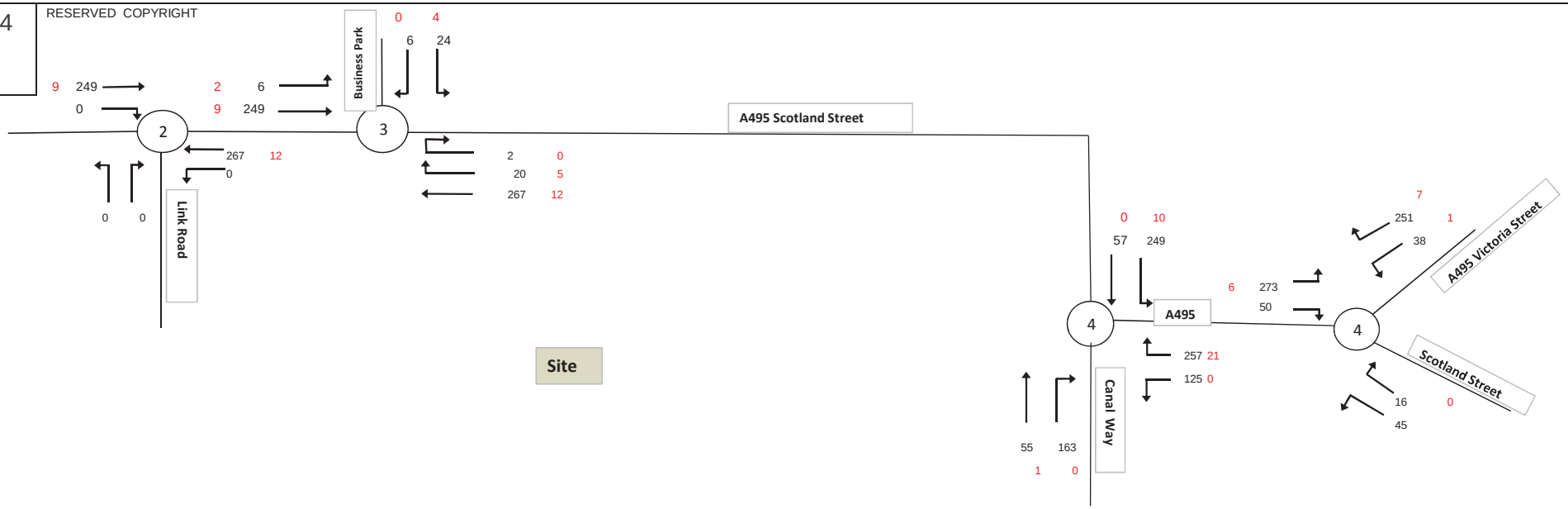

Key

X All vehicular movements
X HGV movements
Direction of movement

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2012 Base Traffic Flows PM	Date: **30.05.2014**	Status: **INFORMATION**	Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**
	Project No: **1109-54**	Figure No: **3.6**	Revision:

A4

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Key

X All vehicular movements
X HGV movements
Direction of movement

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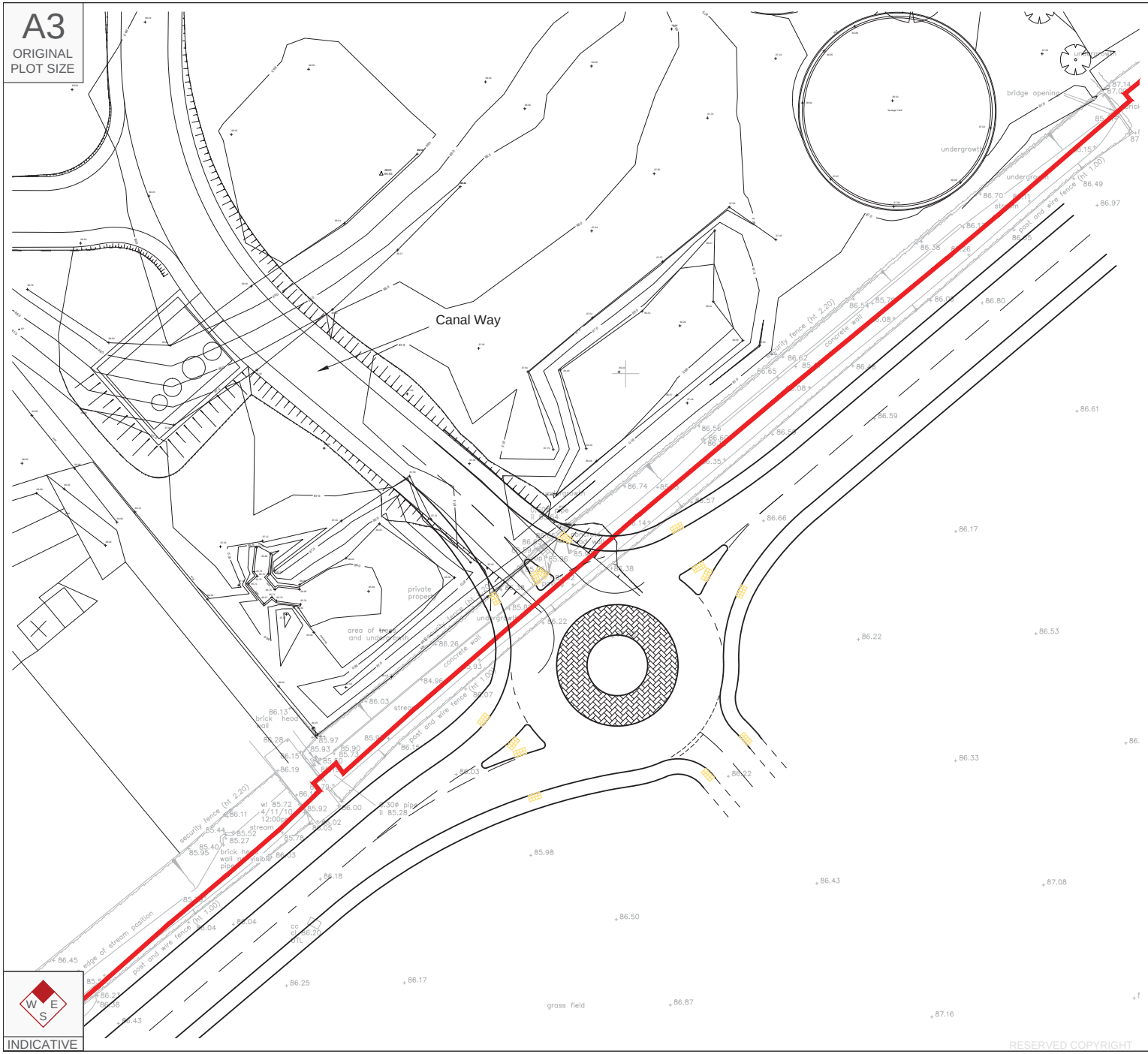
2012 Base Traffic Flows Saturday	Date: **30.05.2014**	Status: **INFORMATION**	Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**
	Project No: **1109-54**	Figure No: **3.7**	Revision:

A3
ORIGINAL
PLOT SIZE



INDICATIVE

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NOTES:

KEY

Site boundary

Rev	Date	Details	Drawn by	Checked by	Approved by
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CLIENT:
BURBURY INVESTMENTS LTD

PROJECT:
ELLESMERE WHARF DEVELOPMENT

TITLE:
Proposed Access Junction From Extension Of Canal Way

STATUS:
INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:500	22.08.14	PSW	JRC	MB

JOB NO:	DRAWING NO:	REVISION:
1109-54	Figure 4.1	

A2
ORIGINAL
PLOT SIZE

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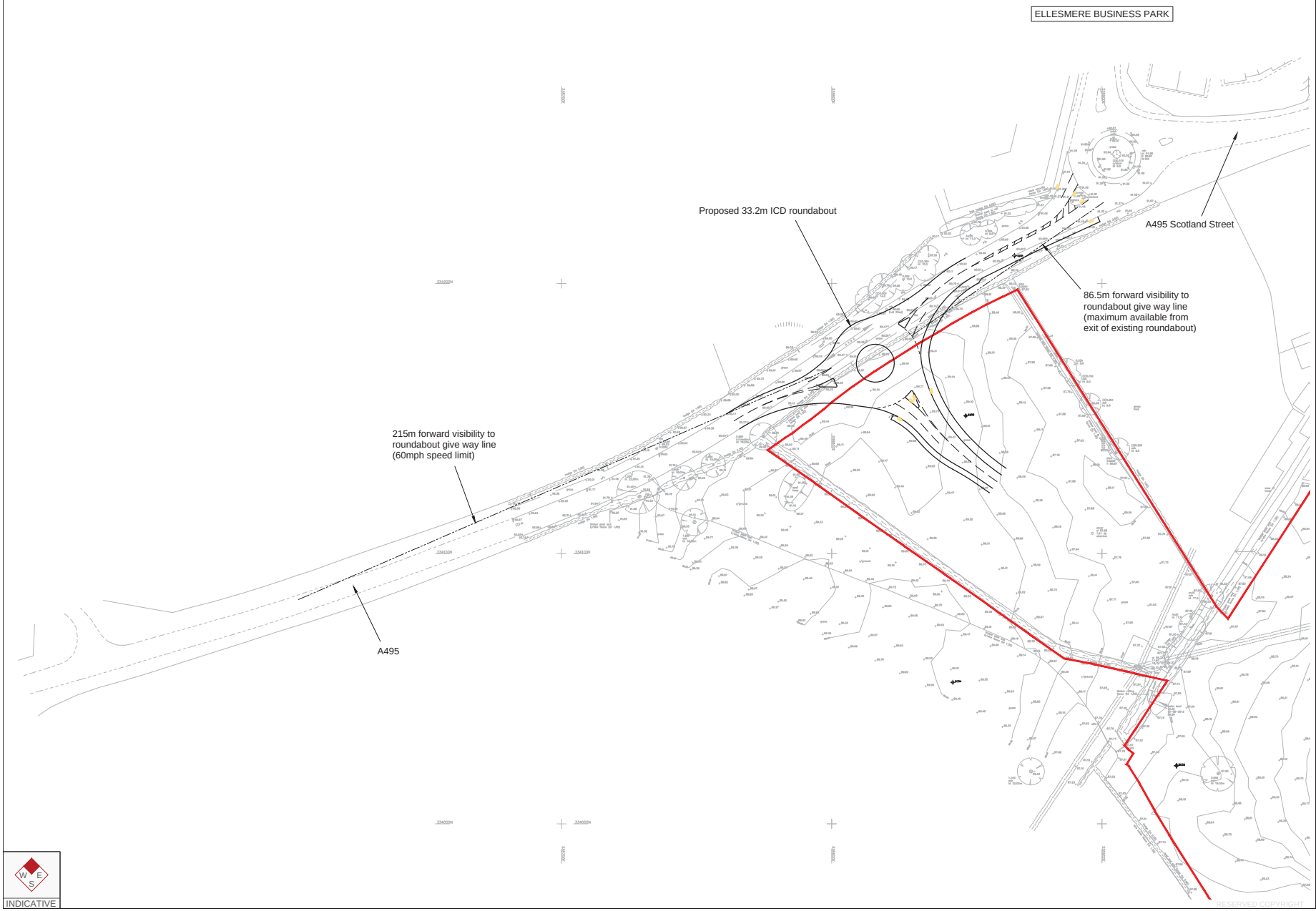
NOTES:



Rev	Date	Details	Drawn by	Checked by	Approved by
-	-	-	-	-	-

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CLIENT:
BURBURY INVESTMENTS LTD

PROJECT:
ELLESMERE WHARF DEVELOPMENT

TITLE:
Potential A495 Roundabout Junction Arrangement

STATUS:
PRELIMINARY

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:1000	22.08.14	PSW	JRC	MB

JOB NO:	DRAWING NO:	REVISION:
1109-54	Figure 4.2	

W E S

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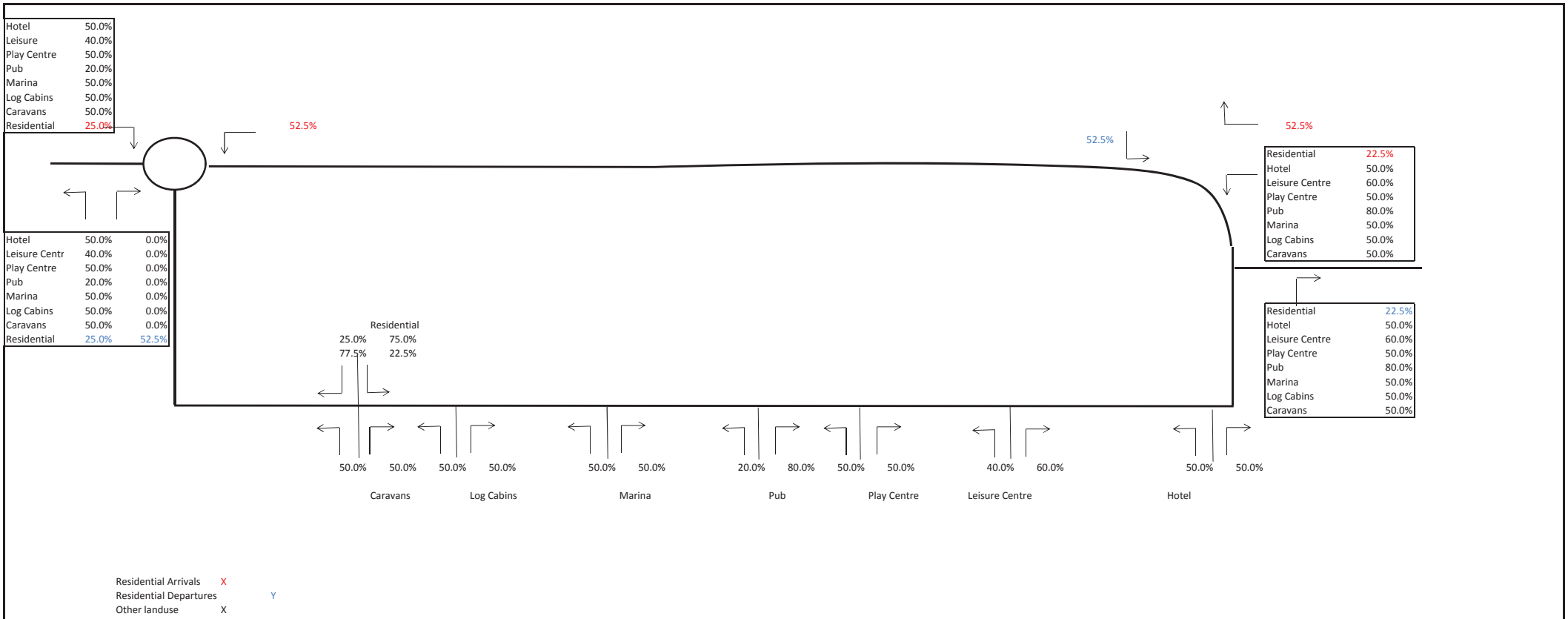

Residential Arrivals X
Residential Departures Y
Other landuse X

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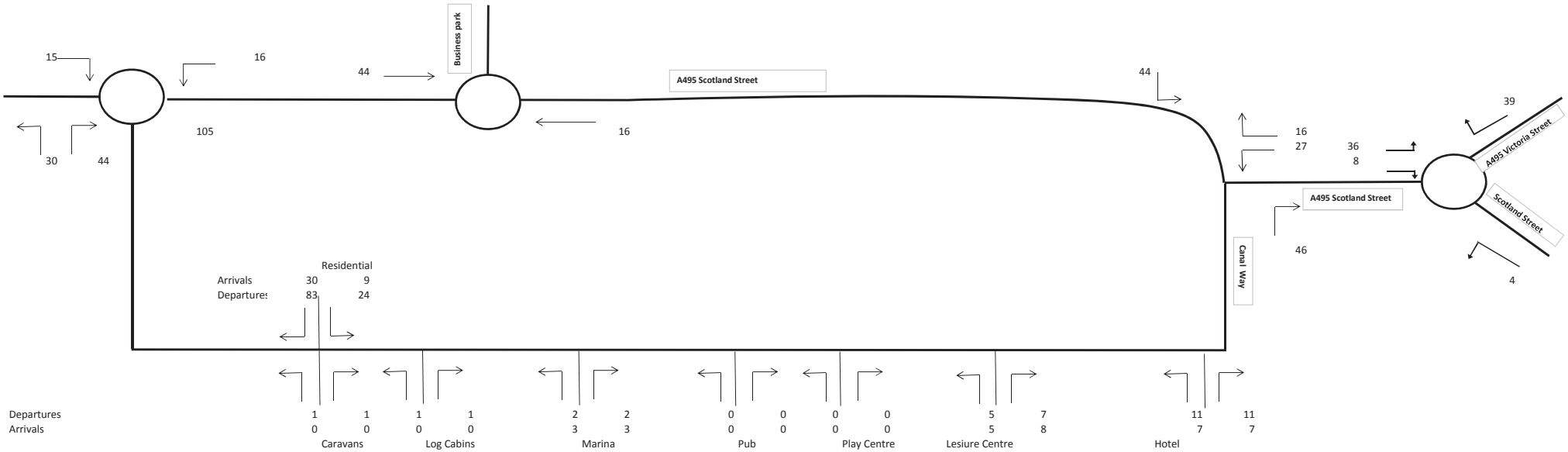
Percentage Distribution Development FLows

Ellesmere Wharf, Shropshire

Date:	Status:	Scale:
30.05.2014	INFORMATION	NTS

Prepared By:	Checked By:	Approved By:
NK	JC	JC
Project No:	Figure No:	Revision:
1109-54	6.1	



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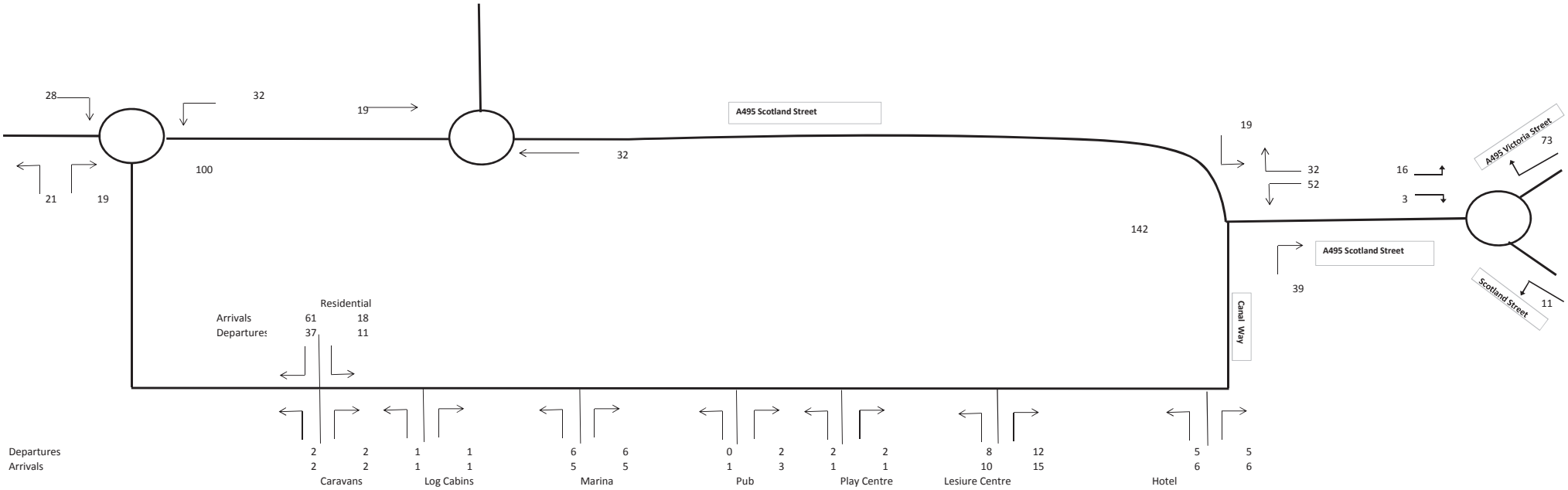
AM Development Flows	Date: **30.05.2014**	Status: **INFORMATION**	Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**
	Project No: **1109-54**	Figure No: **6.2**	Revision:



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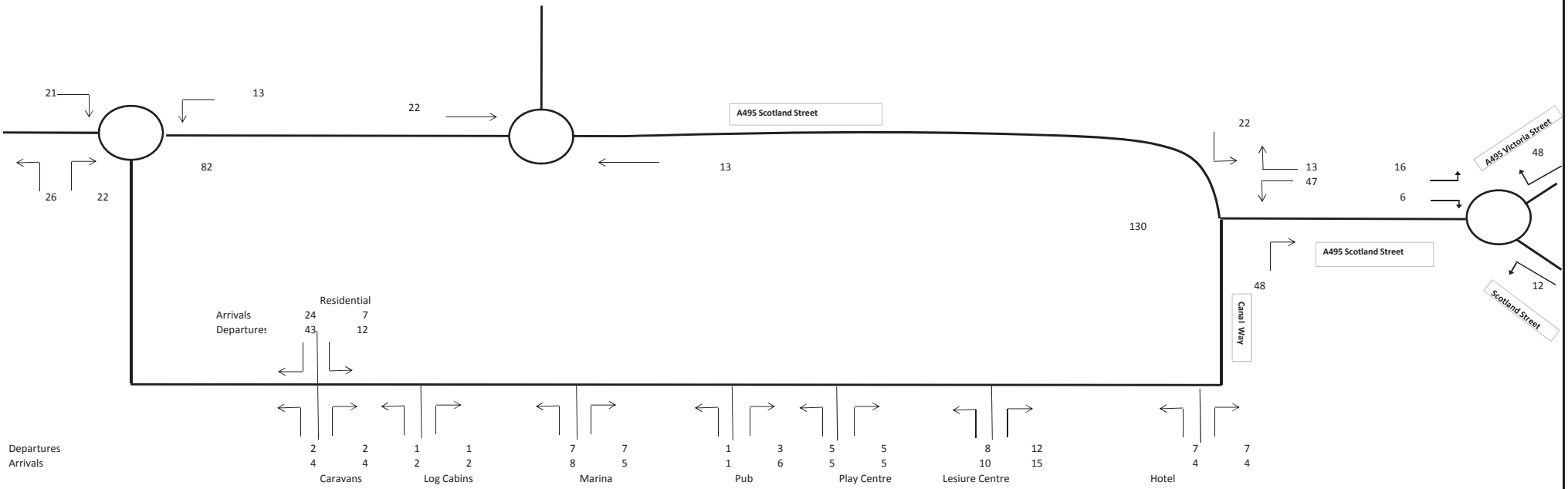
PM Development Flows

Ellesmere Wharf, Shropshire

Date:	Status:	Scale:
30.05.2014	INFORMATION	NTS

Prepared By:	Checked By:	Approved By:
NK	JC	JC
Project No:	Figure No:	Revision:
1109-54	6.3	



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Weekend Development Flows	Date: **30.05.2014**	Status: **INFORMATION**	Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**
	Project No: **1109-54**	Figure No: **6.4**	Revision:

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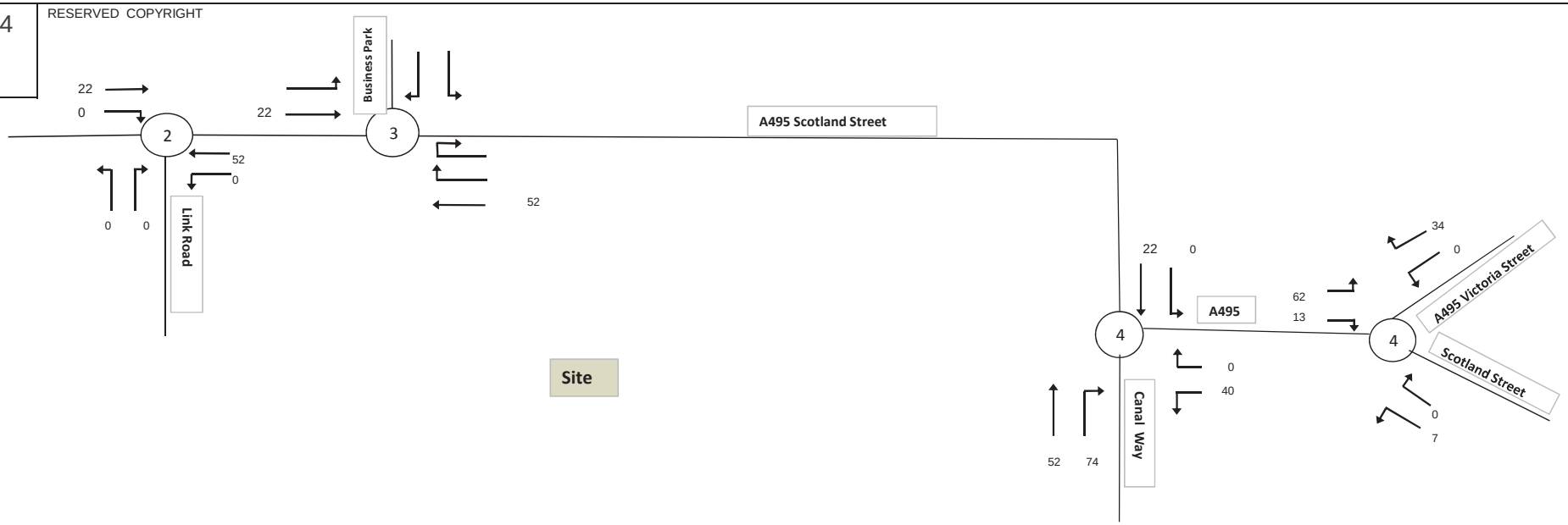

Key

X All vehicular movements

Direction of movement

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AM Peak Committed Development Flows	Date: **30.05.2014**	Status: **INFORMATION**	Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**
	Project No: **1109-54**	Figure No: **6.5**	Revision:

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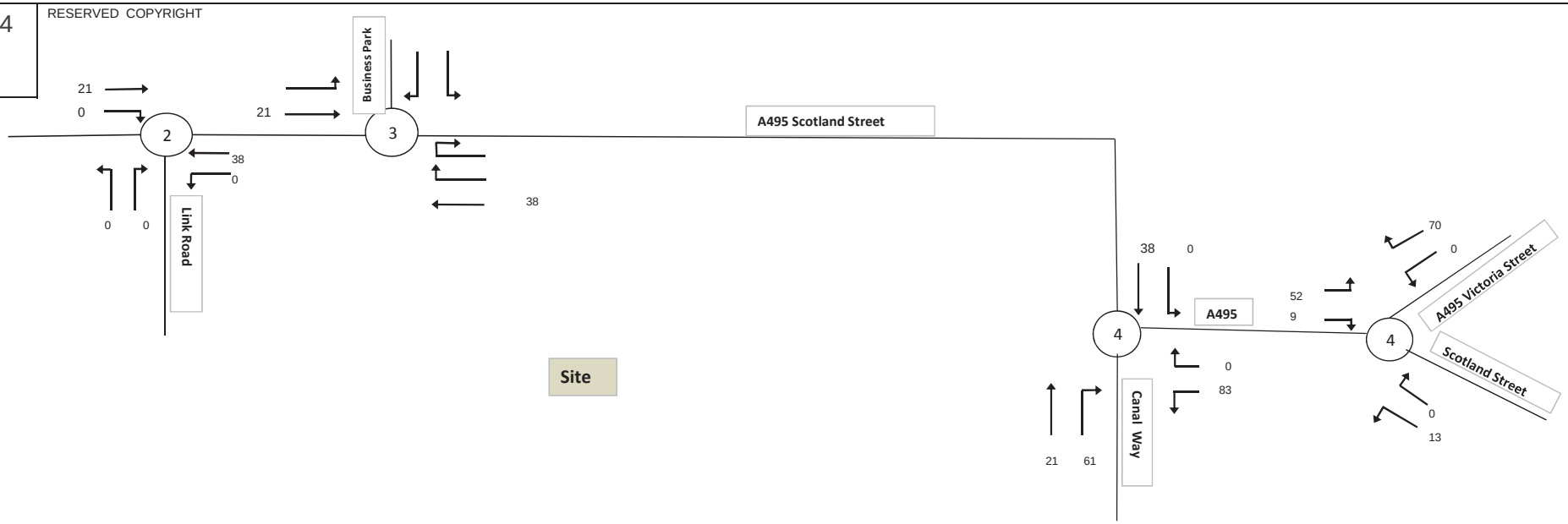

Key

X All vehicular movements

→ Direction of movement

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PM Peak Committed Development Flows	Date: **30.05.2014**	Status: **INFORMATION**	Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**
	Project No: **1109-54**	Figure No: **6.6**	Revision:

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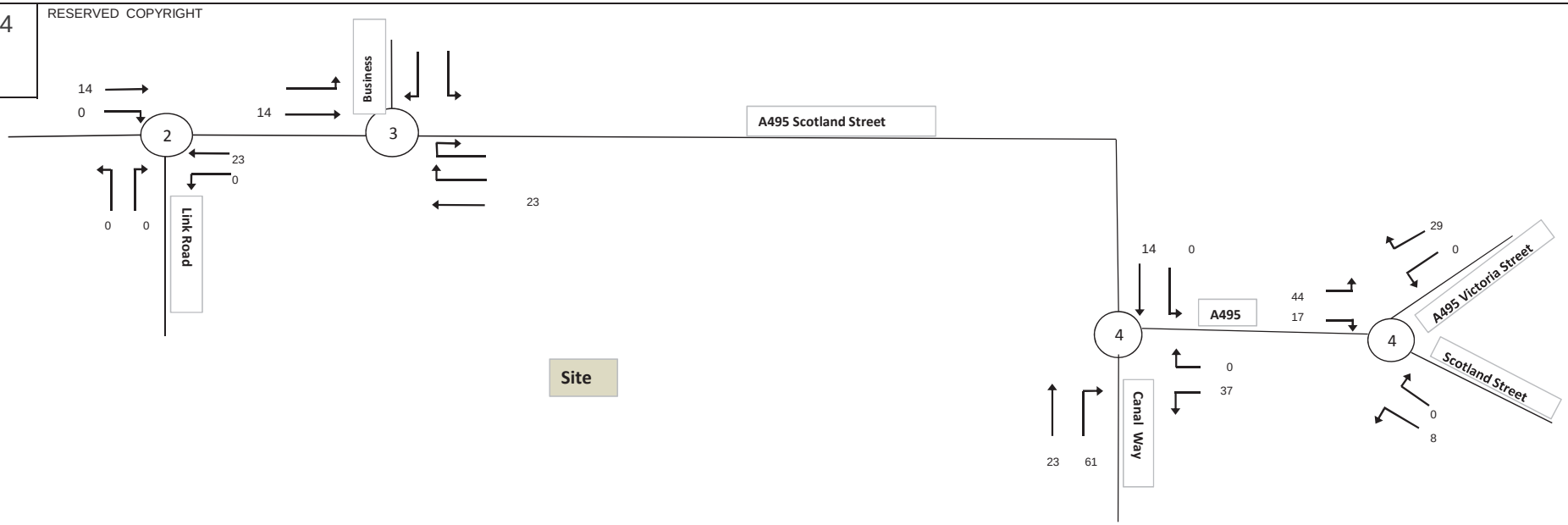

Key

X All vehicular movements

Direction of movement

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Weekend Peak Committed Development Flows

Ellesmere Wharf, Shropshire

Date:	Status:	Scale:
30.05.2014	INFORMATION	NTS

Prepared By:	Checked By:	Approved By:
NK	JC	JC

Project No:	Figure No:	Revision:
1109-54	6.7	

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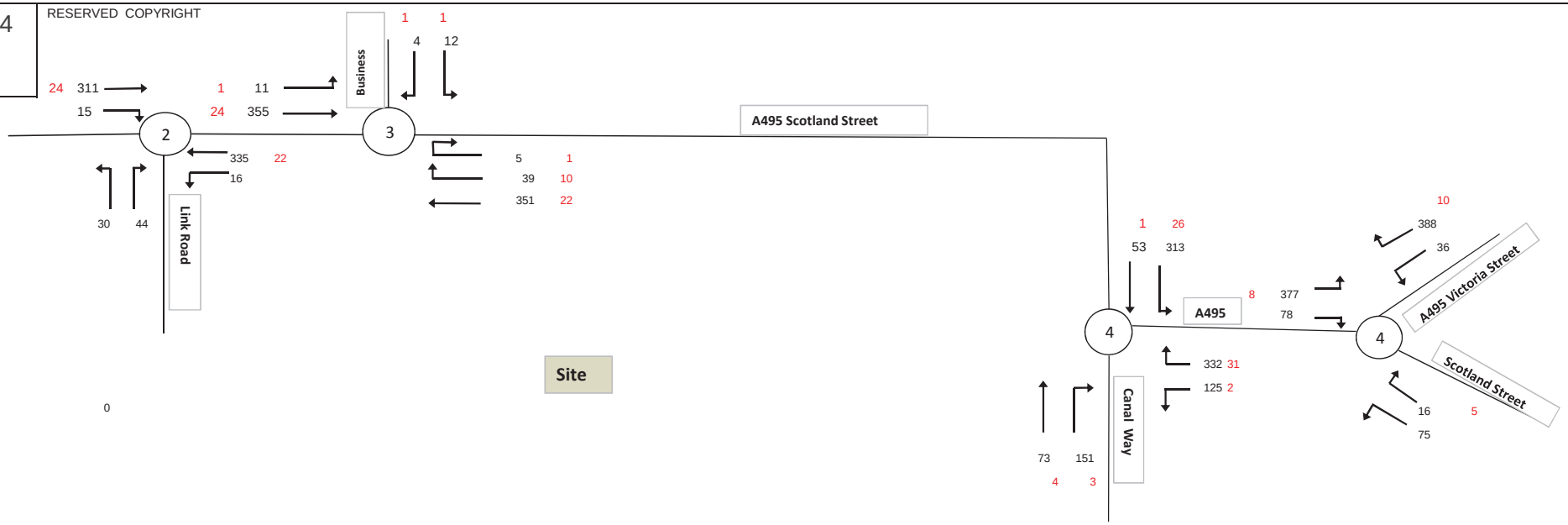

Key

X All vehicular movements
X HGV movements
→ Direction of movement

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Total Flows Base + Committed + Development - AM	Date: **30.05.2014**	Status: **INFORMATION**	Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**
	Project No: **1109-54**	Figure No: **6.8**	Revision:

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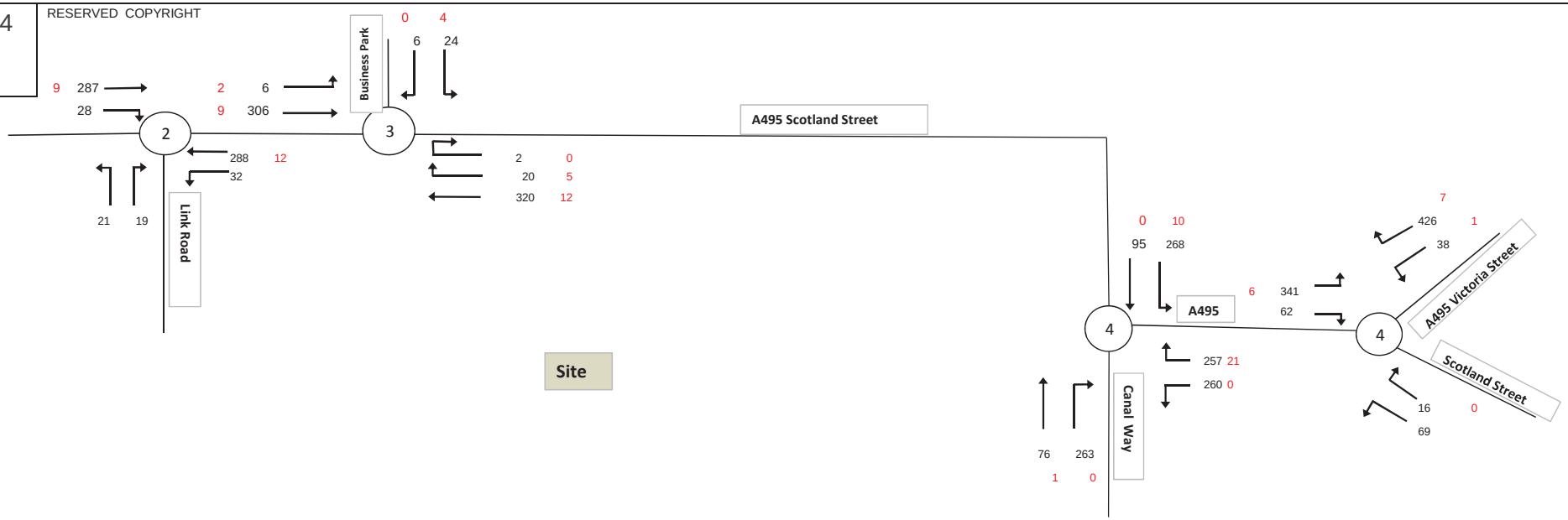

Key

X All vehicular movements
X HGV movements
Direction of movement

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Total Flows Base + Committed + Development - PM

Ellesmere Wharf, Shropshire

Date:	Status:	Scale:
30.05.2014	INFORMATION	NTS

Prepared By:	Checked By:	Approved By:
NK	JC	JC

Project No:	Figure No:	Revision:
1109-54	6.9	

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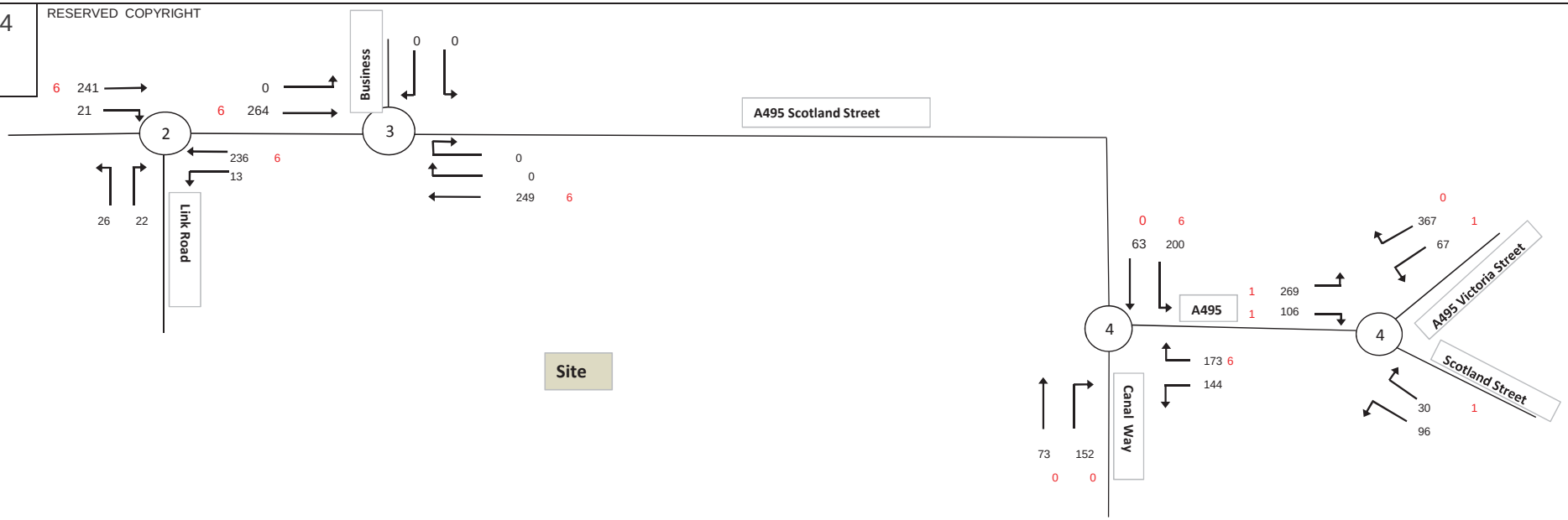

Key

X All vehicular movements
X HGV movements
→ Direction of movement

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Total Flows Base + Committed + Development - Saturday	Date: **30.05.2014**	Status: **INFORMATION**		Scale: **NTS**
Ellesmere Wharf, Shropshire	Prepared By: **NK**	Checked By: **JC**	Approved By: **JC**	
	Project No: **1109-54**	Figure No: **6.10**	Revision:	