

Upton McGougan

**Windroos Nursery
Worthing Road
Littlehampton**

TRANSPORT ASSESSMENT

for

Stuart Lyons (Haulage) Ltd

July 2010

Project No. 022.1832/GB /92472



Upton McGougan Limited

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Revision History

Rev	Date	Purpose/ Status	Document Ref	Comments
-	16/07/10	First Issue	022.1832/GB /92472	
A	21/07/10	Second Issue	022.1832/GB /92472A	With client comments

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Approved by:

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1.0 INTRODUCTION

- 1.1 Upton McGougan Limited (UML) have been commissioned by Stuart Lyons (Haulage) Ltd to prepare a Transport Assessment in support of an outline planning application for the redevelopment of the Stuart Lyons Haulage site at the former Windroos Nursery, Worthing Road, Littlehampton.
- 1.2 The site is located north of Worthing Road, approximately 50m west of the Watersmead Roundabout, in Littlehampton. **Figure 1** shows the site location.

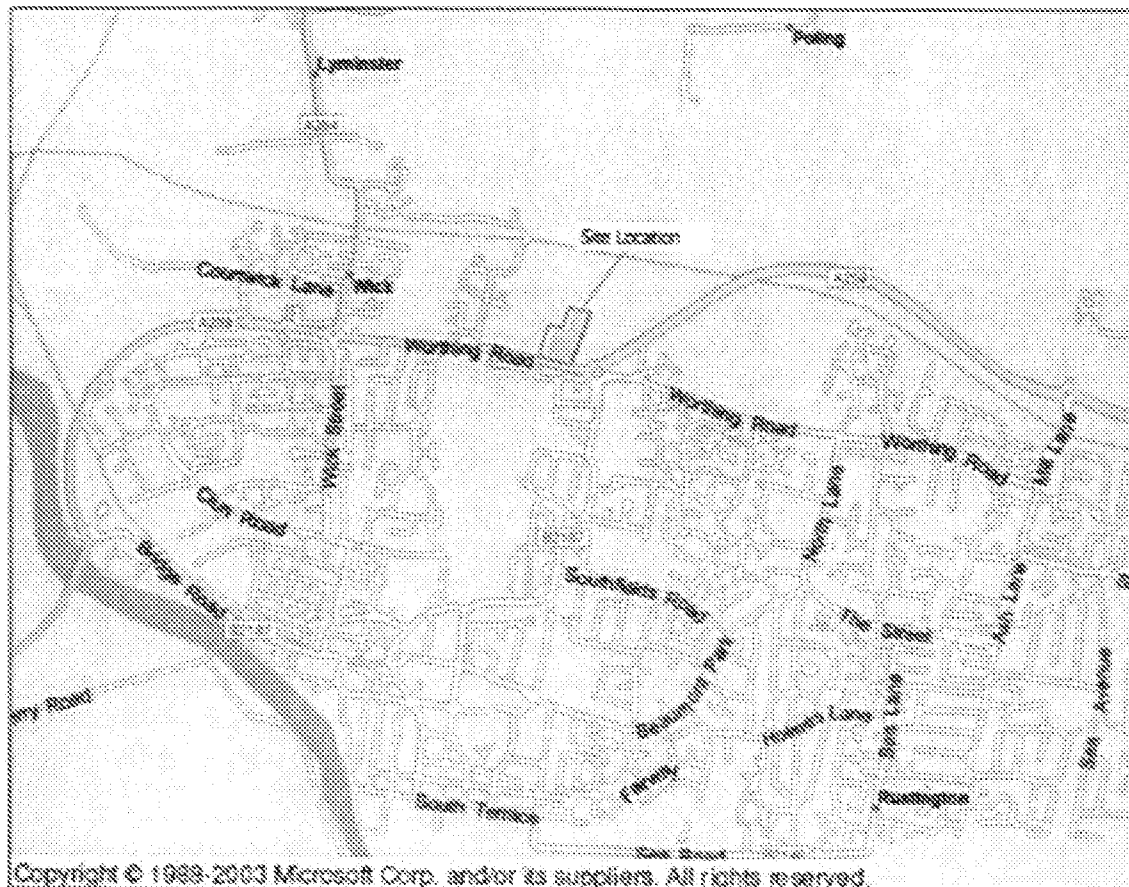


Figure 1: Site Location Plan

- 1.3 Stuart Lyons (Haulage) propose to relocate their haulage business to an alternative site and wish to gain outline planning permission for a residential development on the former Windroos Nursery site. The site is currently allocated for housing development within the Arun District Council (ADC) Local Plan.
- 1.4 It was originally envisaged by the local authority that this site would be redeveloped as part of the adjacent George Wimpey/Laing Homes site, however third party land issues came to light that meant this was not feasible.

- 1.5 An indicative site layout has been prepared which comprises 91 residential units, including a proportion of affordable housing. The layout includes a mixture between flats and houses, of varying sizes, however the details of the site layout accommodation and tenure will be subject to review as part of the full application.
- 1.6 This document has been prepared following extensive pre-application discussions with West Sussex County Council (WSCC). The following points set out the process to date:
- In June 2009 UML prepared an Access Feasibility Report (Document Reference 022.1832/PB/89982a, **Appendix A**). This document became the basis for the subsequent pre-application meeting.
 - A pre-application meeting between UML and WSCC took place on 31st July 2009 to discuss the access arrangements. The agreed minutes for the meeting are included as **Appendix B**.
 - Further to the meeting UML prepared a Right Turn Lane Access Design Check Report, dated September 2009 (Document Reference 022.1832/PB/90619a, **Appendix C**), which was submitted to WSCC.
 - An exchange of emails took place between UML and WSCC which resulted in amendments to the Right Turn Lane Access Design Check Report. The amended report, dated December 2009 (Document Reference 022.1832/RW/90619b, **Appendix D**) was submitted to WSCC for the purpose of the WSCC Design Check.
 - In January 2010 WSCC undertook design check, which is included in **Appendix E**.
 - Further to the Design Check, UML commissioned Crashnot Solutions to undertake a Stage 1 Road Safety Audit on the proposed access arrangement and a speed survey. The safety audit and speed survey prepared in February 2010 is included **Appendix F**.
 - In July 2010 UML prepared a Road Safety Audit Designers Response (Document Reference 022.1832/GB/92001A), which is included in **Appendix G** and a Right Turn Lane Access Design Check Response, (Document reference 022.1832/GB/92509) included in **Appendix H**.
- 1.7 This report considers the proposed development in the context of the following chapters: Relevant Planning Policy, Existing Environment, Proposed Development, and Junction Options.

2.0 RELEVANT PLANNING POLICY

- 2.1 In determining planning decisions, consideration is given to national, regional and local policies as well as national housing and transport policies. This section therefore considers the relevant planning policies to ensure the development supports the policies in place.

Planning Policy Guidance 13 Transport (March 2001)

- 2.2 Planning Policy Guidance 13 (PPG13) considers the various land uses and seeks to improve "linkages by public transport between housing, jobs, local services and local amenity". The objectives of the guidance are to integrate planning and transport at national, strategic and local levels to promote more sustainable transport choices and reduce the need to travel, especially by car. Allocating designated cycle ways/shared use footways shall be a consideration for this plan while as suggested above, the site is well located to the above facilities by public transport, walking and cycling.
- 2.3 PPG13 states that *"in shaping the pattern of development and influencing, the location, scale, density, design and mix of land uses planning can help to reduce the need to travel, reduce the length of journeys and make it safer and easier for people to access jobs, shopping, leisure facilities and services by public transport, walking and cycling"*. This policy is part of the government's overall approach to addressing the needs of motorists, other road and public transport users, and businesses by reducing congestion and pollution and achieving better access to development and facilities.

West Sussex Structure Plan

- 2.4 West Sussex Structure Plan promotes the reuse of brownfield sites and the location of development within existing built up areas and states *"Therefore, our priority is to locate development within existing towns and villages through the reuse of 'brownfield' sites (vacant, derelict or underused land and buildings) including infilling, redevelopment and the conversion of existing buildings. However, it will be imperative to maintain and, where possible, enhance the quality of the local environment and create high quality, safe and attractive places to live."*

Development Brief for Land at Toddington (October 2003)

- 2.5 The 'Development Brief for Land at Toddington', adopted in October 2003, was prepared to guide the development of the site identified as, north of the A259 Worthing Road and east of Toddington Lane. The southern part of the Development Brief site, which includes the Lyons Haulage Depot, is recognised as part of SITE 7 in ADC's adopted Local Plan and allocated for housing within that document. Any development on that portion of the larger site would therefore be expected to accommodate the design principles, as outlined in the Brief.
- 2.6 In respect of the Lyons Haulage Depot, Section 2.6 of the Brief recognises the established and lawful use of the site by a haulage contractor and its direct access from the A259 Worthing Road.

- 2.7 In reference specifically to transport matters, the Brief recognises the whole of the Development Brief site as being *"located within the built-up area and lies within easy walking and cycling distance of a range of educational, employment and other services"* (paragraph 4.26). Paragraph 4.35 also set out a number of key points which should be considered in a transport context for development of the site:
- Providing a new, safe and convenient vehicular access to Worthing Road to serve development traffic and that using the present Toddington Lane junction;
 - Ensuring that congestion on the road network adjacent to the site is not exacerbated;
 - Discouraging additional traffic from using Toddington Lane as a through route;
 - Provide safe and convenient crossing facilities on Worthing Road for pedestrians and cyclists;
 - Enhance pedestrian and cycle connections from the site to local destinations including schools and the town centre;
 - Considering options for the enhancement of accessibility to the site by buses;
 - Ensuring that the access arrangements and location of the development on the site do not preclude improvements to the A259 (in accordance with the approved Worthing Road Improvement Scheme) if these are brought forward by the County Council in future.
- 2.8 Whilst many of these elements have been catered for by the neighbouring development, these principles would be considered with the Lyons Haulage application.
- 2.9 In terms of implementation of the development, the Brief anticipates a phased approach and makes specific reference to access to the Stuart Lyons (Haulage) Ltd section of the site in paragraph 7.19, which states *"Land in the south eastern part of the Development Brief area, at Windroos Nursery, has existing access direct from Worthing Road which serves the business currently operating there. Any intensification of use of that access to serve new development would not be acceptable to the Highway Authority, but a limited amount of new housing may be able to be served in this way, for a temporary period, pending connection to the permanent access road to the west."*
- 2.10 This is logical in highway terms, as the Development Brief anticipated the whole of SITE 7 would be a single development site gaining access to the A259 Worthing Road via the improved, and relocated, Toddington Lane junction. The key driver in respect of the closure of the direct access at Windroos Nursery was to prevent rat running to and from Toddington Lane through the wider, joined-up site.
- 2.11 However the Development Brief assumed deliverability. It could not have foreseen the specific strategic third party land issues that have subsequently come to light. This has meant that the entire site could not have been brought forward in the way the Brief envisaged. In respect of the Lyons Haulage Depot site, because no linkage exists to the rest of the site and, more importantly, the through traffic on Toddington Lane, rat running is not possible. The key issue therefore relates to the intensification of the use of the existing access. **Section 5.0** of this report includes a comparative impact analysis, which has been agreed with the highway authority during the pre-application discussion, that considers how much new housing constitutes intensification of use of the access.
- 2.12 With regard to the issue that *"new housing may be able to be served in this way, for a temporary period"*, ultimately, it is still within the control of the Local Planning Authorities. The final bullet point, relating to transport, is about ensuring that the access

arrangements and location of the development on the site do not preclude improvements to the A259 (in accordance with the approved Worthing Road Improvement Scheme). An indicative layout has been produced in conjunction with Savills' Urban Design team, which, whilst focusing on the Lyons Haulage Depot site, also considers possible strategic connections to the wider site. To allow the Worthing Road Improvement Scheme to be progressed, the Highway Authority could exercise its powers under Highways Act 1980 to make a Compulsory Purchase Order for the acquisition the land required for improvements to the A259.

- 2.13 The current proposal for the redevelopment of the Lyons Haulage Depot site is therefore entirely consistent with the 'Development Brief for Land at Toddington'.

Arun District Local Plan

- 2.14 The development site lies within the built-up area of Littlehampton as defined in the ADLP.

How The Proposed Development Supports Relevant Planning Policy

- 2.15 The proposed development site is ideally located to ensure these policies can be fully met. The remainder of this document introduces the development proposals and demonstrates the ways in which the above policies shall be met. The following points set out how the proposed development complies with the policies discussed previously.
- The proposed development would provide residential units located such that future residents could access jobs, shopping, leisure facilities and services by sustainable means, thus reducing the need to travel by private car
 - A brownfield site is being redeveloped as part of the proposals
 - The site is allocated for residential development in the Development Brief for Land at Toddington
 - The proposals do not intensify existing usage of the site access
 - It is proposed to improve the existing access to facilitate the development, until such time as the highway authority link the development with the neighbouring site, should they choose to do so.
 - The improvements are located outside of the area safeguarding associated with the Worthing Road Improvement Scheme so do not adversely impact on this scheme

3.0 EXISTING ENVIRONMENT

- 3.1 The site is currently in use as a haulage depot, and five businesses operate out of the site at present. The primary occupant is Stuart Lyons (Haulage) employs 50 staff including office staff, mechanics and drivers. **Table 1** sets out the businesses operating on the site, and the number of Heavy Goods Vehicle (HGV) licenses associated with each. The site also contains two residential dwellings, both occupied by Stuart Lyons of Stuart Lyons (Haulage) Ltd.

Table 1: HGV licenses operating from the Stuart Lyons site

Business Name	Licenses held
Stuart Lyons (Haulage)	31 HGVs, 28 trailers
M.J. Tandy Haulage Ltd	2 HGVs, 2 trailers
Grip & Tip Services (waste disposal services)	2 HGVs
Ralph Removals	2 HGVs
Fowler Welch (a food distribution firm)	4 HGVs

- 3.2 The information above, combined with site-specific operational data and further conversation with the business owners for the site, has been used to compile daily trip rate information for the whole site. This is shown below in **Table 2**.
- 3.3 Two operational levels for existing development are identified in **Table 2**. The first scenario relates to the mean average weekday trips. The second scenario considers the potential maximum weekday trips. Both the mean average and potential maximum daily trips have been included as it reflects the daily variability in HGV trips generated by Stuart Lyons (Haulage) Ltd across the week. It also reflects the expanding nature of the business as demonstrated by recent trends in obtaining additional licenses.

Table 2: Existing Trips (Car/LGV Movements, HGV Movements)

Trip Generator		Mean Average		Potential Maximum	
		Arrivals	Departures	Arrivals	Departures
Stuart Lyons (Haulage) Ltd	48 Staff	43	48	48	48
	Large Deliveries Contract 1	25	23	30	30
	Market Deliveries Contract	3	3	4	4
	Large Deliveries Contract 2	18	18	27	27
	Smaller Individual Clients	30	30	30	30
	HGV Traffic sub-total	74	74	91	91
Other Businesses	HGV Traffic (2 deliveries/vehicle/day)	20	20	20	20
Services, Deliveries, etc.	Refrigeration Units - Fuel Delivery				
	MOT/Vehicle Inspectors	10	10	10	10
	Postal/Parts Deliveries	10	10	10	10
	Waste Services				
	Visitors/Clients				
Residential Units	Two Lyons' private dwellings	5	5	5	5
All	Car/LGV sub-total	63	63	63	63

Movements	HGV sub-total	104	104	121	121
	Total Vehicles	167	167	184	184
	Two-way Total	334		368	
	PCU Equivalent	542		610	

- 3.4 Based on this detailed breakdown of vehicle movements associated with the existing permitted land use, an average of 334 daily trips currently utilise the site access in total, including 208 HGV trips. On some days during the working week, this level rises to 368 daily trips including 242 HGV trips.

Site Access

- 3.5 The site is accessed via two existing junctions, divided by some informal landscaping. There are no formal junction road markings provided, either in the form of stop-lines or give way lines from the side road. As is the case for the rest of the section, the A259 is a single carriageway, in this location with centreline marking only. No marked right turning facility of any kind currently exists. A site visit carried out by UML determined that all turning movements are available and are executed to and from the highway at the existing junction. While there are no formal junction markings or signs provided site observations indicate vehicles tend to enter by the western access and leave by the eastern access. Dropped kerbs and tactile paving are in place across the accesses to facilitate pedestrian movements. The access arrangement is recognised in the Development Brief as being a lawful and operator licences continue to be granted to the businesses operating on the site.

Local Facilities

- 3.6 Figure 2 shows the facilities available within a 1.5km radius of the site. In respect of the retail offer, this includes two Somerfield supermarkets. Local educational requirements are served by two infant schools, two primary schools and a secondary school.

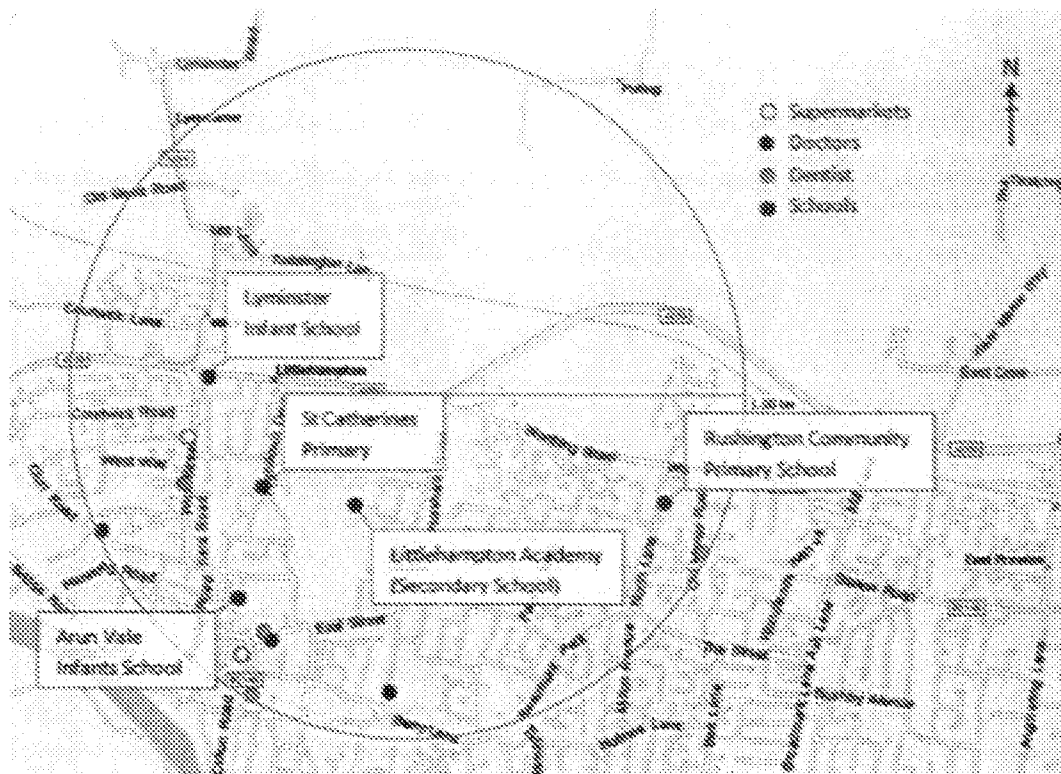


Figure 2: Local Facilities

- 3.7 Health facilities include three doctors' surgeries, the Arun Medical Group, Wick Surgery and The Park Surgery. The five dentists within the radius include two branches of Old Manor Surgery, Beach Road Dental Care, S Pittham and A G Seward BDS, LDS, RCS & Associates. Littlehampton Hospital is close to the town centre around 2 kilometres from the site.
- 3.8 In addition to this, the town centre also houses Littlehampton railway station and the leisure centre.

Pedestrian and Cycle Network

- 3.9 A shared footway cycleway is in place along the northern side of A259 Worthing Road between Watersmead Roundabout and just west of Toddington Lane. Pedestrian and cyclist permeability is aided by the presence of a toucan crossing in the vicinity of the Watersmead Roundabout, and two pelican crossings, one in the vicinity of Wick Roundabout and the other just to the west of Toddington Lane. These 3 controlled crossings operate on demand. A footway is in place along the south of A259 Worthing Road between Watersmead Roundabout and Wick Roundabout.

3.10 It was agreed as part of the adjacent George Wimpey/Laing Homes development that the following improvements would be implemented:

- Provision of a new Toucan crossing facility on A259 Worthing Road and pedestrian and cycle links between it and the main site and between it and Highdown Drive
- Provision of a 3m shared footway cycleway along the north side of A259 Worthing Road between the proposed Toucan crossing and the existing Toucan crossing at Watersmead Roundabout

3.11 An advisory cycle route is in place, linking Wick Roundabout and Watersmead Roundabout with the town centre, including Littlehampton railway station. The above improvements will ensure the proposed site is linked to the towns cycle network. The town centre and nearby services can be easily accessed from the site via footway links.

Bus Services

3.12 The closest bus stop to the site is to the south east, adjacent the cemetery, approximately 250m walk from the site. The Stagecoach 700 service operated from this stop serving destinations between Brighton and Southsea. A further 150m to the south is the Peregrine Road bus stop where Stagecoach route number 9 can be accessed, which links Southwick and Littlehampton. The bus services available from these stops are summarised in Table 3 below. The southbound bus stop at Littlehampton Cemetery features a bus shelter and seating.

3.13 In addition to this there is a service (service number: G) operated by Compass Travel which runs once a day between Wick and Angmering Sainsburys, calling at the stop at Peregrine Road and a school bus service (756) between Wick and Worthing Palatine School.

Table 3: Local Bus Services

Operator	Service No	Bus Stop	Route	First Bus	Last Bus	Frequency	Duration to furthest destination (mins)
Stagecoach South	700	Littlehampton Cemetery	Brighton - Worthing - Arundel - Chichester - Southsea	05:45	20:34	2 hourly	105
Stagecoach South	9	Peregrine Road	Southwick - Littlehampton	07:38	18:32	hourly	100 minutes

- 3.14 There is also a National Express stop in Littlehampton which links Littlehampton to, Bognor Regis, Chichester, Coulsdon, Felpham, Findon, Gatwick airport, Goring-by-Sea, Hooley, Horsham, Rustington, Stockwell, London (Victoria Coach Station), West Worthing and Worthing, however generally these services only call at Littlehampton once a day.

Rail Services

- 3.15 The closest railway station to the site is Littlehampton, which is 2km from the site. The station serves routes to London Victoria (via Worthing and Hove) to the east, and Bognor Regis to the west. The rail services available from Littlehampton are summarised in **Table 1**. Brighton and Southampton can also be accessed from Littlehampton by changing at Angmering station.
- 3.16 Littlehampton railway station is managed by Southern, and fully staffed between the following hours Monday-Friday 05:50-19:15, Saturday 06:30-19:55, and Sunday 08:10-19:45. Sheltered cycle storage is provided on the platform, and there are 40 spaces in the station car park. Self service ticket machines are available at this station. Disabled parking is available, as well as step free access to the entire station and disabled toilets.

Table 4: Rail Services Available from Littlehampton

Destination	First	Last	Number of Direct Services		Approximate Duration (mins)	Frequency (per hour)
			Arrive AM 08:00 – 09:00	Depart PM 17:00 – 18:00		
London Victoria via Worthing & Hove	05:02	23:39 (out bound)	3	5	105	4
Portsmouth & Southsea	05:35	23:39 (out bound)	3	4	55	2-3
Bognor Regis	06:04	23:39 (out bound)	3	2	17	2-3

- 3.17 Angmering railway station, located 3.4km from the site, serves routes to Brighton, Littlehampton, Worthing, London Victoria, Portsmouth Harbour and Southampton. Stagecoach number 9 links the site with Angmering railway station, thus improving the accessibility of Angmering railway station to site users.

- 3.18 Angmering railway station is managed by Southern, and fully staffed between the following hours Monday-Friday 06:25-19:35, Saturday 06:40-20:05, and Sunday 08:10-15:45. Sheltered cycle storage is provided on the platform as well as at the front of the station, and there are 75 spaces in the station car park. Self service ticket machines are available at this station, as well as the collect from machine facility. Disabled parking is available, as well as step free access to the entire station and disabled toilets.

Table 5: Rail Services Available from Angmering

Destination	First	Last	Number of Direct Services		Approximate Duration (mins)	Frequency (per hour)
			Arrive AM 08:00 – 09:00	Depart PM 17:00 – 18:00		
London Victoria via Worthing & Hove	05:33	23:47 (out bound)	5*	4*	95	4*
Portsmouth & Southsea	06:06	23:19 (out bound)	2*	2*	45	2*
Bognor Regis	05:50	23:15	3*	2*	20	2*

* Includes some indirect services

Highway Network

- 3.19 The A259 Worthing Road, which the site fronts onto, forms part of the Strategic Road Network and is classified as a County Distributor Road. Acting as a bypass for Littlehampton, the A259 Worthing Road lies to the north of the town centre. In the vicinity of the site the A259 Worthing Road comprises a single lane in each direction and is subjected to a 40mph limit. At this location the A259 Worthing Road serves a number of residential side roads, many of these accessed by right turn lanes. At this location the A259 Worthing Road is lit, and footways exist on both sides for the majority of its length.
- 3.20 To the east of the site the A259 Worthing Road forms a 5 arm roundabout with the A259 Rushington Bypass, B2187 Worthing Road, B2187 Horsham Road, and the access to Watersmead Business Park. Approximately 1km to the west of the site the A259 Worthing Road forms a 5 arm roundabout with the A284 Wick Street, (continuation of) A259 Worthing Road, Hawthorn Road, and A284 Lyminster Road.
- 3.21 The A27 Trunk Road lies some distance to the north of Littlehampton, linking the area with places such as Portsmouth, Chichester, Worthing and Brighton. North of Littlehampton the A27 is a dual carriageway, with a derestricted speed limit.
- 3.22 On the A259 Worthing Road between Wick Roundabout and Watersmead Roundabout there are a number of priority accesses. These are described in the following points:
- 3.23 It was agreed as part of the adjacent George Wimpey/Laing Homes development that the following highway improvements would be implemented:
- Provision of a new Toucan crossing facility on A259 Worthing Road and pedestrian and cycle links between it and the main site and between it and Highdown Drive;
 - A section of single-lane dualling of the A259 Worthing Road;

- Provision of a new access from A259 Worthing Road to allow left and right turns into the site and left turn only out of the site;
- Closure of the existing Toddington Lane junction with A259 Worthing Road, and provision of a link between Toddington Lane and the new access road;
- Provision of a new Toucan crossing facility across A259 Worthing Road and pedestrian/cycle links between the crossing and the main site area and between the crossing and Highdown Drive;
- Provision of a 3.0m wide shared foot/cycleway facility along the northern side of A259 Worthing Road between the proposed Toucan Crossing and the existing Toucan Crossing at Watersmead Roundabout;
- Provision of a 3.0m wide shared foot/cycleway facility along the northern side of A259 Worthing Road between the proposed Toucan Crossing and the existing Toucan Crossing at Watersmead Roundabout;
- Widening of the A259 Worthing Road approach to the Watersmead Roundabout and provision of spiral road markings at this roundabout; and
- Provision of a secondary access into the site from the northern end of Toddington Lane, approximately 100 metres south of the railway level crossing.

3.24 Toddington Lane is accessed off the northern side of A259 Worthing Road, approximately halfway between Wick roundabout and Watersmead Roundabout. This is perceived as a shortcut between A259 Worthing Road and A284 Lymminster Road and therefore is regularly used as a rat run at peaks. Toddington Lane serves a limited amount of residential development and is narrower and more rural than A259 Worthing Road. A Traffic Regulation Order (TRO) restricts access to Toddington Lane to vehicles below 7.5 tonnes only.

- Proceeding east along the A259 from the Worthing Road/Wick Street Roundabout, the first junction encountered is with Globe Place, a cul-de-sac. This is a normal priority junction with no specific carriageway markings for right turning vehicles from the main road. A series of priority junctions then follow, linked by an extended hatched ghost-island, which provides marked areas for right turning vehicles from the main road. These include: Gladonian Road (cul-de-sac), Lansdowne Road, Allotments Access and Highdown Drive.
- The next junction encountered is Toddington Lane, which was the subject of a planning permission granted at appeal in January 2007 (Appeal Ref: APP/C3810/A/06/2022588) for an application made by George Wimpey Southern Ltd and Laing Homes South West Thames Ltd (Application Ref: LU/61/06). The Transport Assessment proposed development related infrastructure in the form of improvements to the local road network (now implemented) to facilitate the development. These are summarised in Section 3.23.
- The next junction east, Cornfield Close (cul-de-sac), has been incorporated into the eastern end of the improved section of single lane dualling. This junction was specifically designed to permit full turning movements to and from Cornfield Close, but to force right-turners from Toddington Lane to u-turn at the Watersmead Roundabout, rather than attempt that manoeuvre at this location.
- The last junction with the A259 Worthing Road, prior to the Watersmead Roundabout, is the Windroos Nursery Access (Lyons Haulage Depot). This junction is actually in the form of two existing accesses divided by some informal landscaping. There are no formal junction road markings provided, either in the form of stop-lines or give way lines from the side road. As is the case for the rest of the section, the A259 is a single carriageway, in this location with centreline

marking only. No marked right turning facility of any kind currently exists. From a recent site visit, it is clear that all turning movements are available and are executed to and from the highway at the existing junction.

- 3.25 As discussed earlier there are currently 3 controlled crossing points on A259 Worthing Road which operate on demand.

PIA data

- 3.26 As part of neighbouring developments highway improvements were recently carried out on A259 Worthing Road. It was agreed with WSCC that these improvements have not been in place sufficiently long to carry out a robust analysis of accidents in the area. Only limited accident data would be available since the implementation of these works, and accidents attributed to highway design issues that were recorded prior to these highway improvements may have now been resolved. Any other accident issues, resulting from the improvements, should be identified and addressed in the maintenance period. However, a specific assessment was carried out in relation to accidents relating to the existing site access, and this is discussed in **Section 5.34**.

4.0 PROPOSED DEVELOPMENT

Internal Layout

- 4.1 An indicative site layout has been prepared which comprises 91 residential units, including a proportion of affordable housing. This layout is provided in **Appendix I**. The exact details of the site layout, accommodation and tenure will be subject to review as part of the full application. The layout includes a mixture between flats and houses, of varying sizes and the current schedule of accommodation is shown in
- 4.2 **Table 6.**

Table 6: Proposed Schedule of Accommodation

Dwelling Type	Number of dwellings proposed
1 Bed Flat	6
2 Bed Flat	13
2 Bed House	18
3 Bed House	45
4 Bed House	9

- 4.3 When considering the internal layout for the Lyons Haulage Depot site, the Savills' team were conscious of potential links to the adjacent George Wimpey/Laing Homes site, which is why the indicative layout for the Lyons Haulage Depot site mirrors the adjacent development layout at Faulkner Gardens and Olliver Acre. The Savills' layout also, subject to third party land issues being overcome, provides a loop to link these two roads, thereby delivering the whole Development Brief site in the way originally envisaged.
- 4.4 UML Drawing No. 022.1832.202 P7, available in **Appendix J** also shows the area safeguarded for future improvements to the A259 (in accordance with the County Council's approved Worthing Road Improvement Scheme). Ultimately the delivery of the Brief still lies within the control of the Local Planning Authorities. The Highway Authority could exercise of its powers under Highways Act 1980, in progressing the Worthing Road Improvement Scheme, to make a Compulsory Purchase Order for the acquisition of the land required for improvements to the A259.
- 4.5 As part of those proposals, the Highway Authority might decide that they wish to modify the Lyons Haulage Depot site access. Based on the indicative layout, this modification may only require the acquisition of two small strips of land in order to facilitate the connection to the wider Development Brief site. At that point it would leave the way open for the local planning authorities to consider and promote various access modifications, including total closure, maintaining a non-motorised vehicle link, or, possibly, a controlled bus gate to allow public transport vehicles to service the site and regain access to the A259 close to the Watersmead Roundabout.

4.6 A key feature of the Savills' design, however, is that it has been developed to ensure that it also works as a stand-alone layout. The Lyons Haulage Depot site design promotes place-making principles in giving the depot site a particular character, whilst being sympathetic to the adjacent development. For example, the smaller internal loop around public open space gives a 'village green' feel and also minimises the length of cul-de-sac within the site.

4.7 Access proposals are discussed in **Section 5.0**.

Visibility splay

4.8 Visibility splays for this access are required to be 4.5m x 120m according to DMRB. However, due to the location of the Watersmead Roundabout, it is not feasible to provide this visibility.

4.9 S4.10 of WSCC Local Design Guide Supplementary Guidance for Residential Development Proposals states that: *"If appropriate MIS or DMRB requirement cannot be achieved but existing visibility can be improved to the benefit of both existing and development traffic a judgement will be made (possibly supported by a Safety Audit) as to whether the development provides a net safety benefit."*

4.10 Therefore it has been agreed with WSCC in pre-application discussions that visibility splays of 4.5m x 120m (primary direction) and 4.5 x 99m (secondary direction to splitter island of roundabout) would be acceptable as this would offer an improvement.

4.11 Car and Cycle Parking

4.12 **Table 7** outlines the Arun District Council maximum car parking provision in relation to the schedule of accommodation associated with the indicative layout.

Table 7: Arun District Council Maximum Parking Standards

Type of Unit	Car Parking Standard	Proposed Number of Units	Maximum Parking Spaces
1 – 2 bed flat	1.2 spaces per dwelling	6	7.2
1 – 3 bed house	2.2 spaces per dwelling	76	167.2
4+ bed house	3.2 spaces per dwelling	9	28.8
Total Permitted Parking Provision			203

4.13 The existing indicative site layout proposes 197 parking spaces, and therefore meets the Arun District Council maximum parking standard. The Parking Standards states that parking for drivers with disabilities will also be required and that one disabled parking space must be provided for every 20 parking spaces on residential developments. In light of this, the development would need to ensure 10 of these parking spaces are provided as disabled spaces.

-
- 4.14 The Parking Standards sets out that the minimum cycle parking standard for residential developments is 1 cycle space per 8 car parking spaces, with a minimum provision of 2 cycle spaces. The details of the proposed cycle parking arrangements will be finalised at a later stage to ensure that the proposed method of complying with the standards is compatible with the final layout. However the indicative layout clearly shows opportunities for cycle storage to be provided in accordance with standards eg on plot, secure and covered.
- 4.15 UML have also prepared a Framework Travel Plan to support this planning application. This document will seek to reduce single occupant car trip and promote sustainable travel.

5.0 JUNCTION OPTIONS

Pre-application Discussions

- 5.1 UML approached WSCC for pre-application discussions regarding the proposed development of this site. UML and WSCC agreed that due to the proposed change of use there was merit in exploring improvements to the existing access arrangement. The lead officer had concerns about vehicles queuing to turn right into the site and requested that the access design incorporate a right turn lane. A preferred option, for the provision a right turn lane subsequently emerged, which is discussed in **Section 5.18**.
- 5.2 WSCC suggested that the residential trip rates for the George Wimpey/Laing Homes development were not used as they were based on more detailed information that is not yet available for the Lyons Haulage site, and therefore it was agreed trip rates would be obtained from TRICS. The specific search criteria were agreed as follows:
- Suburban and Edge of Town locations
 - South of England Regions (excluding London and Midlands)
 - Weekday surveys only
 - Sites between 20 and 550 units
- 5.3 WSCC also confirmed that visibility splays of 4.5m x 120m (primary direction) and 4.5 x 99m (secondary direction to splitter island of roundabout) would be acceptable as this would offer an improvement. WSCC advised the following course of action:
- A Design Check Report, to ensure compliance with the relevant standards
 - An Independent Road Safety Audit (carried out by a WSCC approved auditor) to identify any highway safety concerns
 - A Designer's Response to address the Safety Audit recommendations
- 5.4 Given that there is already a well-established junction at this location, however, the lead officer confirmed that WSCC Highways would have difficulty in objecting to an improved, design-checked and safety-audited access, but that their preference remained ultimately to provide a link through the neighbouring site, as set out in the Development Brief.
- 5.5 The decision to permit an access directly via Worthing Road to serve any potential development at Stuart Lyons (Haulage) Ltd site would ultimately be in the hands of the local planning authority, Arun District Council.

Discussions with WSCC Regarding Junction Options

- 5.6 An Access Feasibility Assessment, June 2009 (Doc. Ref. 022.1832/PB/89982a) was prepared by UML and submitted to WSCC to inform the pre-application discussions.
- 5.7 Three potential access arrangements were identified and presented in drawings reference 022.1832.200.P1 and 022.1832.201.P2, attached as appendices to that document.

Option 1

- 5.8 The first option proposed a left in/left out arrangement, located approximately 20m west of the existing site access, which would be closed as part of the redevelopment. The new access would provide 9m junction radii, with 4m wide entry/exit lanes split by a tapered pedestrian island, proceeding into a 5.5m carriageway into the site with 2m footways (linking to the existing footway/cycleway on Worthing Road) on each side of the proposed junction.
- 5.9 The primary benefit of Option 1 is the restriction of right turning manoeuvres, therefore limiting opportunities for conflict with eastbound traffic on Worthing Road. Such an arrangement would also remove any potential for westbound traffic to be restricted by vehicles waiting to turn right, thus maintaining a free flow of traffic on Worthing Road.
- 5.10 The limitation of such an arrangement is inevitably the inability of westbound vehicles to exit/enter the site, and the impact this would have on convenience for future residents. As a result of the restriction of right-turn manoeuvres, it would be necessary for vehicles exiting the site to use the roundabout approximately 100m east of the site in order to travel west, similar to the situation promoted from the revised Toddington Lane junction. It would also be necessary for westbound vehicles to turn beyond the site access and approach the site from the west; the nearest roundabout in this direction is approximately 900m west of the new site access.

Option 2

- 5.11 The second option proposed a one-way access arrangement, with a separated entry and exit. Both junctions would provide radii of 7.5m, with a carriageway width of 3.5m and 2m footways on the leading side of each lane.
- 5.12 Such an arrangement would necessitate vehicles to circulate the within the development before exiting, unless a convenient cut through were provided as part of the internal road layout.
- 5.13 Option 2 maintains two accesses on Worthing Road, whereas options 1 and 3 propose a single access point. Reducing the number of accesses onto Worthing Road is likely to be seen positively by the local highway authority and would represent an improvement in highway safety, both in terms of vehicle movements and for pedestrians/cyclists utilising the shared footway/cycleway recently installed along Worthing Road, as part of the adjacent development.

Option 3

- 5.14 The third option proposed a single priority junction with 9m radii, a 5.5m wide carriageway and 2m footways on each side of the access road. The access would be located approximately 20m west of the existing arrangement.
- 5.15 Option 3 represents the simplest access arrangement and, as stated previously, reduces the number of accesses onto Worthing Road. This is likely to be seen positively

by local highways officers, as the number of locations for potential conflict would subsequently reduce as a result of development of the site.

Pre-application Discussions

- 5.16 These options were discussed with the lead officer at the meeting held on 31st July 2009. In respect of the Left In/Left Out design (Option 1), concerns were raised that, whilst it may work having a left out due to the proximity of the Watersmead Roundabout to the east, the requirement for right turning traffic from the east to approach via the western roundabout was unrealistic. This would actually result in drivers attempting u-turns or making other inappropriate turning manoeuvres within side streets.
- 5.17 With regard to Options 2 and 3, the key concern related to what effect a badly positioned right turning vehicle from the east would have on 'stacking back' to the pedestrian crossing and the Watersmead Roundabout. UML were asked whether they had considered the potential to implement a right turn lane on the Worthing Road to alleviate 'stacking back' concerns.

Options 5 and 6

- 5.18 UML tabled two further drawing, which presented a right turn lane facility (Options 5 and 6). Option 5 involved the highway deflection to the south of Worthing Road to accommodate the additional width for the right turn lane, whilst Option 6 considered deflection to the north into the site.
- 5.19 The lead officer expressed a preference for Option 5 provided the widening was being delivered within highway land. Highway boundary information was subsequently obtained from WSCC, which confirmed this to be the case. Option 5 (deflection south) was then taken forward as the preferred solution for further justification. This is discussed in Section 6.

Additional WSCC Comments

- 5.20 The lead officer requested that the signalised pedestrian crossing to the east of the proposed access location be made clear within any future drawings.
- 5.21 It was accepted that the overall issue of access needed to be considered primarily from a safety perspective, rather than capacity perspective, as the impact of the additional units has already been considered within the assessment of the neighbouring site.
- 5.22 The lead officer advised that parking would need to be in keeping with WSCC parking policy (car parking maximum levels/cycle parking minimum levels), but that this could be dealt with at detailed design stage.

Preferred Junction Option Design Check and Safety Audit

- 5.23 A number of highway related documents have been submitted in parallel with this report, which take on board all previous design comments in connection with this proposal. These include:

- Lyons Haulage Site, Worthing Road, Littlehampton - Right Turn Lane Access Design Check Report, December 2009, Upton McGougan Ltd., (Document reference: 022.1832/PB/90619c);
- Road Safety Audit – Stage 1, Lyons Haulage Site, Worthing Road, Littlehampton, Junction Access Option 5, February 2010, Crashnot Solutions LLP;
- Lyons Haulage Site, Worthing Road, Littlehampton - Road Safety Audit Designer's Response, April 2010, Upton McGougan Ltd., (Document reference: 022.1832/PB/92001);and
- Speed Survey – A259 Worthing Road, Littlehampton (approaches to Lyons Haulage Access), 8 February 2010, Crashnot Solutions LLP (Document reference: 2010/20).

5.24 The Trip Rate Impact Assessment, August 2009 (Doc. Ref. 022.1832/PB/89871b) is, once again, included as an appendix to the Right Turn Lane Access Design Check Report. A key aspect of this document relates to the comparative assessment of the likely acceptable level of generation from the site, based on information relating to the current use, is reported in that document. That analysis confirms there is no intensification of use of the access.

Comparative Impact Assessment

5.25 As calculated previously in **Table 2**, an average of 334 daily trips currently utilise the site access in total, including 208 HGV trips. On some days during the working week, this level rises to 368 daily trips including 242 HGV trips. This is based on the existing usage of the site by five business and the two residential dwellings on site.

Proposed Trip Generation

5.26 Predicted trip rates associated with the neighbouring development were identified within the Transport Assessment based on industry standard data. As mentioned in previously in Section 5.2, the lead officer for WSOC Highways requested that the residential trip rates used for the adjacent development were not used, despite the fact these had been tested at appeal. This was because they resulted from detailed negotiations regarding tenure, accommodation type, parking provision, etc. which had not yet taken place for this site. The approach adopted for the Lyons Haulage Depot site, agreed during the pre-application discussions, was that specific search criteria for the TRICS 2009(b) assessment were used to include:

- Suburban and Edge of Town locations
- South of England Regions (excluding London and Midlands)
- Weekday surveys only
- Sites between 20 and 550 units

5.27 As a full detailed scheme is yet to be designed that identifies tenure types and dwelling sizes, a worst-case scenario (in trip rate terms) of private housing has been considered. It has been assumed for the purposes of providing a robust analysis that up to 120 dwellings could be provided on the site. **Table 8** shows the trip rate summary, which offers a robust basis for comparison from a local Planning Authority perspective. The TRICS 2009(b) outputs are attached in **Appendix K**.

Table 8: TRICS 2009(b) Summary

Privately Owned Housing	08:00-09:00 AM Peak		17:00-18:00 PM Peak		Daily Trips		Daily Total
	IN	OUT	IN	OUT	IN	OUT	TOTAL
Trip Rates (per dwelling)	0.141	0.417	0.324	0.211	2.497	2.599	5.096

5.28 It was previously calculated within Table 2 that the existing site use generates an average of 334 daily trips, with 208 (62%) of these being undertaken by HGVs to a peak of 368 trips on some days during the week, with 242 (66%) of these being undertaken by HGVs. In order to consider the effect of large heavy goods vehicle movements it is normal to convert them to a passenger car unit (PCU) equivalent. This conversion gives an equivalent value of 542 PCUs per average day, rising to 610 PCUs per peak day.

Table 9: Trip Comparison

	08:00-09:00 AM Peak		17:00-18:00 PM Peak		Daily Trips		Daily Total
	IN	OUT	IN	OUT	IN	OUT	TOTAL
Existing (Mean Average) Trips (PCUs)	/	/	/	/	271	271	542
Proposed Trips (106 Private Households)	15	44	34	22	265	275	540
Existing (Potential Maximum) Trips (PCUs)	/	/	/	/	305	305	610
Proposed Trips (120 Private Households)	17	50	39	25	265	312	612

5.29 In comparison, a wholly residential development on this site would generate a much smaller number of HGV trips. Based on the trip rates set out in Table 8, a trip rate analysis has been completed to identify the potential number of private houses that could be implemented on site that are comparable to the PCU flows generated by both the average and potential maximum trip scenario for the existing site. The results of this comparison are shown in Table 9.

5.30 This assessment suggests that the average number of daily trips generated by the existing site is equivalent to the number of daily trips that would be generated by a 106 household development. The peak level of daily trips generated by the existing site is equivalent to the level of trips generated by a 120 household development. However

realistically, a lower level of trips would be generated by the proposed development as a proportion of it would be provided as affordable housing, therefore this represents a worst case scenario. The indicative layout shows a proposal of 91 units which represents a less intensive use of the access compared to the existing levels.

Junction Modelling

- 5.31 The proposed junction design, established through pre-application discussions with WSCC Highways, is considered in greater detail in the accompanying Right Turn Lane Access Design Check Report.
- 5.32 Industry standard software has, once again, been used to test the performance of the proposed junction in capacity terms for both the AM and PM peak periods. This testing is based on the geometries established within the design, utilising 2015 traffic flows on the A259 (established within the application for the neighbouring site) and the traffic flows associated with a 120 private house development. This therefore represents a worst-case scenario in terms of possible impact.
- 5.33 The results are reported in full within Right Turn Lane Access Design Check Report. In summary, however, they show that the design copes well with the single vehicle, which occasionally queues to turn right, and is easily accommodated within the proposed layout. The proposed junction therefore operates well within capacity.

Safety

- 5.34 As explained above in **Section 3.26**, it was agreed with WSCC highways that a full accident data review should not be completed at this stage. UML have, however, obtained the most recent five years accident records (01/02/2005-31/01/2010) in order to consider any highway safety issues relating directly to the Lyon's Haulage Depot access. Analysis of this information shows that, even with the current layout and the proliferation of heavy goods vehicle movements emanating from the site, there have been no reported personal injury accidents during that period at this location.
- 5.35 As discussed previously a robust analysis of the accident data in the area cannot be carried out due to the recent highways improvements. UML have, however, obtained the most recent five years accident records (01/02/2005- 31/01/2010) in order to consider any highway safety issues relating directly to the Lyon's Haulage Depot access. Analysis of this information shows that, with the current access layout and the flow of heavy goods vehicle movements using the access, there have been no reported personal injury accidents during that period at this location.

6.0 CONCLUSION

- 6.1 Upton McGougan Ltd (UML) have been retained by Stuart Lyons (Haulage) Ltd to consider the transport and access issues relating to the redevelopment of the current Lyons Haulage Depot site, located at Windroos Nursery, Littlehampton. The site is currently allocated for housing development within the Arun District Council (ADC) Local Plan, and is located on the A259 Worthing Road, within the built-up area, on the northern edge of Littlehampton.
- 6.2 This document has been prepared to support the outline planning application for a residential development on the existing site. This report has been influenced by extensive pre-application discussions with WSCC and is supported by reports prepared and issued to WSCC, by UML, previously throughout the discussion period.
- 6.3 The 'Development Brief for Land at Toddington', adopted in October 2003, was prepared to guide the development of the site identified as, north of the A259 Worthing Road and east of Toddington Lane. The southern part of the Development Brief site, which includes the Lyons Haulage Depot, is recognised as part of SITE 7 in ADC's adopted Local Plan and allocated for housing within that document. In respect of the Lyons Haulage Depot, the Brief recognises the established and lawful use of the site by a haulage contractor and its direct access from the A259 Worthing Road.
- 6.4 In terms of implementation of the wider development, the Brief anticipates a phased approach and makes specific reference to access to the Stuart Lyons (Haulage) Ltd section of the site in paragraph 7.19, which states:
- "Land in the south eastern part of the Development Brief area, at Windroos Nursery, has existing access direct from Worthing Road which serves the business currently operating there. Any intensification of use of that access to serve new development would not be acceptable to the Highway Authority, but a limited amount of new housing may be able to be served in this way, for a temporary period, pending connection to the permanent access road to the west."*
- 6.5 This aspect of the Development Brief sought to prevent rat running to Toddington Lane. However, due to third party land issues, which have since arisen, the proposed site will not be connected to the adjacent site, therefore rat running will not be possible through the proposed site. The issue of what constitutes intensification of the use of the existing access was raised with the highway authority during the pre-application discussion, and agreement reached on how much new housing might be considered as intensification of use of the access.
- 6.6 The current proposal for the redevelopment of the Lyons Haulage Depot site is therefore entirely consistent with the 'Development Brief for Land at Toddington'.
- 6.7 During the pre-application discussions, WSCC's lead officer identified the type of access arrangement that was likely to satisfy the highway authority from a range of alternatives.

- 6.8 Site-specific operational data obtained for the current site use determined existing trip rates, an approach agreed with the lead officer. Trip rates for the proposed development, obtained from TRICS, determined that up to 120 dwellings could be provided without intensifying the access. However, in order to ensure a robust approach, the subsequent analysis assumed that the proposed usage would be entirely private housing. In reality, a proportion of the development would be affordable housing, which would lower the prevailing trip rate.
- 6.9 A junction capacity check was carried out in the Right Turn Lane Access Design Check Report, using industry standard software, showed that the proposed access design, using traffic flows for a development of up to 120 private dwellings, would operate well within capacity.
- 6.10 It was agreed with WSCC highways that a full accident data review could not be completed at this stage, due to the recent changes in highway layout resulting from off-site works associated with the adjacent development. However UML have obtained the five years reported personal injury accident records (01/02/2005-31/01/2010) in order to consider any highway safety issues relating directly to the Lyon's Haulage Depot access. This showed there were no accidents associated with the existing access.
- 6.11 The indicative layout, included with this application, has been designed as a functioning stand alone layout, yet it does not preclude the possible future connection of the site to the adjacent George Wimpey/Laing Homes site, should this move forward.
- 6.12 The indicative site layout includes parking, which complies with Arun District Council Maximum Standards, however the final accommodation mix has not yet been established. This issue will be discussed in detail as the design process progresses.
- 6.13 It has been demonstrated that the proposed development is in support of planning policy and will not increase in real terms the traffic on the network.
- 6.14 UML have also prepared a Framework Travel Plan to support this planning application. This document will seek to reduce single occupant car trip and promote sustainable travel.
- 6.15 We would conclude that the proposed development does not result in any significant traffic impact and therefore should be look upon favourable and accepted in traffic and transport terms.

Appendix A

Access Feasibility Report, Rev A

Upton McGougan

**Lyons Haulage Site Development
Worthing Road
Littlehampton**

Access Feasibility Report

for

Stuart Lyons (Haulage) Ltd

June 2009

Project No. 022.1832/PB/89982a



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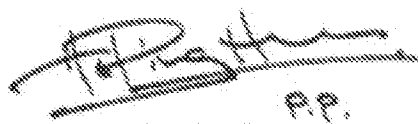
Revision History

Rev	Date	Purpose/Status	Document Ref.	Comments
-		Draft	022.1832/PB/89982	Issued to Client
A	24.06.2009	Final	022.1832/PB/89982a	Issued to WSCC

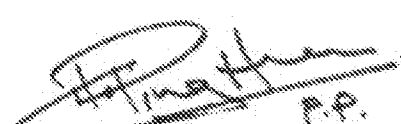
Prepared by:

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FIGURES

Figure 1 Site Location

APPENDICES

Appendix A	Drawing Reference 022.1832.200.P1
Appendix B	Drawing Reference 022.1832.201.P1

1.0 INTRODUCTION

Upton McGougan Ltd (UML) have been commissioned by Stuart Lyons of Stuart Lyons (Haulage) Ltd to produce an Access Feasibility Report (AFR) for a potential redevelopment of Lyons Haulage Depot site. Stuart Lyons (Haulage) Ltd are currently looking for new premises for expansion of the business and intend to redevelop their existing premises for residential development, with the site allocated for housing development within Arun District Council (ADC) Local Plan. The site is located on the A259 (Worthing Road) on the northern edge of Littlehampton, as demonstrated in Figure 1.

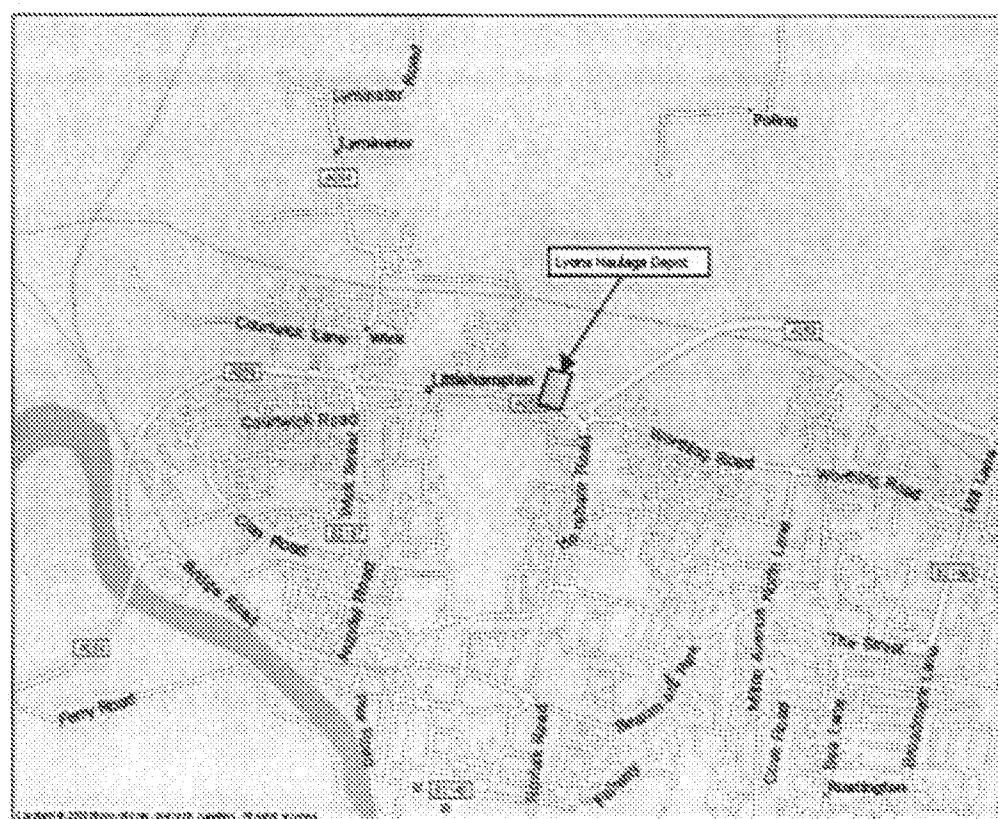


Figure 1 Site Location

This document has been prepared in advance of pre-application discussions with West Sussex County Council (WSCC) and will identify 3 potential access arrangements for the proposed site, identifying the benefits and limitations of each, to aid in deciding which approach should be brought forward as part of any future planning application.

This AFR is supported by a Trip Rate Impact Assessment (document reference: 022.1832/PB/89871), which reviews trip generation resulting from the existing use and the proposed residential development.

2.0 ACCESS OPTIONS

3 potential access arrangements have been identified, and are presented in drawings reference 022.1832.200.P1 and 022.1832.201.P2, attached as Appendices A and B. These options will be considered in turn in the following paragraphs.

Option 1

The first option (drawing 022.1832.200.P1, Appendix A) proposes a left in/left out arrangement, located approximately 20m west of the existing site access which would be closed as part of the redevelopment. The new access would provide 9m junction radii, with 4m wide entry/exit lanes split by a tapered pedestrian island, proceeding into a 5.5m carriageway into the site with 2m footways (linking to the existing footway/cycleway on Worthing Road) on each side.

The primary benefit of Option 1 is the restriction of right turning manoeuvres, therefore limiting opportunities for conflict with eastbound traffic on Worthing Road. Such an arrangement would also remove any potential for westbound traffic to be restricted by vehicles waiting to turn right, thus maintaining a free flow of traffic on Worthing Road.

Both existing and proposed layouts can achieve visibility in excess of 120m in the primary direction; however the proposed layout improves visibility for vehicles exiting the site, from approximately 4.5m x 70m in the secondary direction under existing conditions to 4.5m x 87m in the secondary direction as proposed.

The limitation of such an arrangement is inevitably the inability of westbound vehicles to exit/enter the site, and the impact this would have on convenience for future residents. As a result of the restriction of right-turn manoeuvres, it would be necessary for vehicles exiting the site to use the roundabout approximately 100m east of the site in order to travel west. It would also be necessary for westbound vehicles to turn beyond the site access and approach the site from the west; the nearest roundabout in this direction is approximately 900m west of the site access, and as a result it is possible that residents might use nearer side roads to turn, or even attempt U-turn manoeuvres on Worthing Road.

Option 2

The second option (drawing 022.1832.200.P1, Appendix A) proposes a one-way access arrangement, with a separated entry and exit. Both junctions would provide radii of 7.5m, with a carriageway width of 3.5m and 2m footways on the leading side of each lane.

Such an arrangement would necessitate vehicles to circulate the development before exiting, unless a convenient cut through were provided as part of the internal road layout. This would therefore need to be considered as part of any design should this option be brought forward as part of any future development.

Option 2 maintains 2 accesses on Worthing Road whereas options 1 and 3 propose a single access point. Any reduction in accesses on Worthing Road is likely to be seen positively by the local highway authority and would represent an improvement in terms of highway safety, in terms of vehicle movements and for pedestrians/cyclists utilising the shared footway/cycleway recently installed along Worthing Road as part of the adjacent Eden Park development scheme. On this basis options 2 and 3 may be favoured over option 1.

Option 3

The third option (drawing 022.1832.201.P1, Appendix B) proposes a single priority junction with 9m radii, a 5.5m wide carriageway and 2m footways on each side of the access road. The access would be located approximately 20m west of the existing arrangement.

Option 3 represents the simplest access arrangement and, as stated previously, reduces the number of accesses onto Worthing Road. This is likely to be seen positively by local highways officers, as the number of locations for potential conflict would subsequently reduce as a result of development of the site.

In addition, a single access providing dropped kerbs and tactile paving would represent an improvement for pedestrians and cyclist utilising the shared footway/cycleway. Under existing conditions pedestrians and cyclists must cross 2 access roads to reach the signalised pedestrian crossing adjacent to the roundabout, so removal of an access could be considered to half the potential for conflict at the site frontage. Footways would also be provided into the site, where none exist presently.

Option 3 maximises the available visibility from the site, achieving 4.5m x 120m in the primary direction and 4.5m x 90m in the secondary direction, representing a modest improvement over Options 1 and 2, and the existing arrangement.

Visibility Range

Drawing 022.1832.201.P1 demonstrates the range of visibility splays available at the site frontage, from the existing access location at the eastern extreme, and at the furthest point to west where splays of 4.5m x 120m could be achieved. Moving the access any further west would result in visibility splays encroaching on third party land, thus opening the opportunity for third party land ransom.

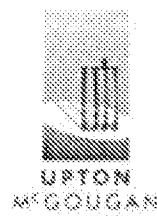
Achievable visibility splays in the secondary direction vary, from 'Y' distances of 73m (formalisation of the existing access) to 99m (the furthest achievable point to the west). This range is outside of the standard of 4.5m x 120m for 40mph roads set within Design Manual for Roads and Bridges (DMRB) however a reduction can be justified in this location, as vehicle speeds would be constrained by the roundabout to the east of the site. Secondary visibility splays have been measured to the central reservation at the roundabout, as this feature would restrict overtaking manoeuvres.

Appendix B

Pre-Application Meeting Minutes

MEETING MINUTES

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Meeting Date: Friday 31st July 2009
Location: WSCC Highways Offices, Chichester
Project: Lyons Haulage, Worthing Road, Littlehampton (022.1832)

Attending:	Tony Martin (TM)	West Sussex County Council (WSCC) Highways
	Paul Basham (PB)	Upton McGougan Ltd (UML)
	Mark Smith (MS)	UML

Distribution:
Issue:

Issues relating to Traffic & Transportation

Action

Main Issues to be Discussed:

1. Introduction to Site and Site History
2. Access Design Options
3. Trip Rate Impact Assessment Report
4. Any Other Comments
5. Moving Forward

1.0 Introduction to Site and Site History

- 1.1 PB and MS provided a summary of the Development Brief and the history associated with the neighbouring development. Aspects raised included:

- Windroos Nursery access
- Preference for a single vehicular access for the whole development onto Worthing Road (A259)
- Issue of ransom
- Infrastructure works on the Worthing Road associated with the George Wimpey development.

2.0 Access Design Options

- 2.1 The Left in/Left Out design option (Option 1 drawing 022.1832.200.P1) was discussed and following TM's site visit, he raised concerns that whilst it may work having a left out due to the proximity of the Watersmead Roundabout to the east, the long distance to the western roundabout would likely result in a number of vehicles undertaking u-turn manoeuvres or making inappropriate turning manoeuvres within side streets. TM also raised concern as to the impact that vehicles waiting to turn right would have on 'stacking back' to the pedestrian crossing and the Watersmead Roundabout.

MEETING MINUTES

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2.2 TM raised similar concerns regarding stacking back with the In/Out arrangement (Option 2 drawing 200.P1) and the single access (Option 3 drawing 201.P1).

2.3 TM then requested that consideration be given to the potential to implement a right turn lane on the Worthing Road to alleviate 'stacking back' concerns.

2.4 PB presented two right turn lane options (Option 5 and 6 drawing 202.P1 and 203.P1). Option 5 involved the highway deflection to the south of Worthing Road to accommodate the additional width for the right turn lane, whilst Option 6 considered deflection to the north into the site.

2.5 TM advised that as long as the right turn lane was designed in line with TD42/95 standards, that either Option 5 or Option 6 could be implemented, although a preference would be for Option 5 (deflection south) provided these works were on highways land and not under third party ownership. This appears to be the case due to the location of services within this grassed verge (inc signage and street lighting), although would need to be confirmed with WSCC.

Action – UML to liaise with Sam Mason at WSCC to identify exact extent of highways land to inform the potential to implement Option 5. A nominal charge would be required for this information

UML

2.6 TM confirmed that visibility splays of 4.5m x 120m (primary direction) and 4.5m x 99m (secondary direction to splitter island of roundabout) should be acceptable.

2.7 In order to progress the access arrangements, TM advised the following course of action:

1) Design Analysis Report

UML

This would incorporate details of each element to ensure design compliance with TD42/95 and any departures from standard. Aspects to analyse include visibility, junction radii, stacking space, carriageway and turning lane widths, footways and tapering. This would be submitted to WSCC for comment.

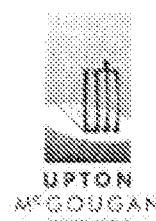
2) Independent Road Safety Audit

UML

Following approval of the Design Analysis Report, an independent road safety audit would need to be undertaken to identify any highway safety concerns with the proposals. An approved list of Auditors is available, and UML confirmed

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they have a copy of this list. A designer's response would be prepared and the two submitted to WSCC. Should the designer's response accept all of the Auditors recommendations, then WSCC would be satisfied. If any recommendations are not incorporated WSCC would need to complete an **Audit Check**.

- 2.8 Following completion of these checks to ensure that the access could be implemented safely, WSCC Highways would have difficulty in objecting to an access at this location. Whilst their preference would ultimately be to provide a link through the neighbouring site as per that identified within the Development Brief, WSCC Highways would not be able to object to the access if designed to adoptable standards, and no highway safety matters were raised through the Stage 1/2 RSA.
- 2.9 TM explained that the decision to permit an access directly via Worthing Road to serve any potential development at Stuart Lyons (Haulage) Ltd site would ultimately be in the hands of the local planning authority (Arun District Council). Once WSCC Highways had completed their checks from a highway design and safety perspective, TM advised that preparation of a Feasibility Report for Arun DC Planning Officer and Members would be a prudent approach.
- 2.10 This **Feasibility Report** would need to include:
- 1) Brief History of the Site, Development Brief and adjacent development
 - 2) Characteristics of Worthing Road
 - 3) Situation faced with regards to the ransom strip
 - 4) Assessment of housing demand within the locale
 - 5) Pre-application discussions with WSCC Highways
 - 6) Why previous access options had been discounted
 - 7) Design checks and Safety Audit findings
 - 8) An indicative internal layout
- 2.11 Through presenting the case for access in this manner to Arun DC, they would then be able to make a comprehensive decision on the principle of access direct from Worthing Road
- 3.0 **Trip Rate Impact Assessment**
- 3.1 TM believed that the trip rates associated with the existing land use seemed reasonable but requested some evidence of these figures would be required – e.g. vehicle operator licence records/delivery records.

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Action – UML to seek this evidence from Stuart Lyons

UML

- 3.2 TM queried the trip rates proposed within this assessment, and those within the original George Wimpey scheme, as seeming low. TM requested that UML review the TRICS database again, listing only suburban/edge of town sites up to 500 units within the South of England (exc London and Midlands) and identify clearly the selection criteria used to eliminate sites. Through undertaking a detailed assessment at this stage, this would give further confidence to Arun DC within the Feasibility Report.

Action – UML to discuss with client and undertake more detailed TRICS database interrogation in line with the above criteria, to agree with TM in advance of the Feasibility Report.

UML

- 3.3 At the Feasibility Stage, TM would be happy for survey information used within the George Wimpey scheme Transport Assessment to be utilised, and a TEMPRO growth factor applied for current period if not already identified within that assessment. TM advised liaison with Guy Parfit at WSCC Highways to confirm acceptable growth rate.

Action – UML to liaise with Guy Parfit to determine acceptable growth rates

UML

4.0 Any Other Comments

- 4.1 TM requested that the signal pedestrian crossing to the east of the proposed access location be made clear within any future drawings.
- 4.2 TM advised that the overall issue of access needs to be considered primarily from a safety perspective rather than capacity perspective as the impact of the additional units has already been considered within the assessment of the neighbouring site.
- 4.3 TM advised that parking would need to be in keeping with WSCC parking policy (car parking maximum levels/cycle parking minimum levels)
- 4.4 TM advised on WSCC Contributions Policy, in that contributions would be sought towards:

5.0 Moving Forward

- 5.1 Implementation of a right turn lane would be desired should any access be sought directly from Worthing Road. In order to WSCC to

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be in a position not to object to this arrangement, a **Design Check Report** would have to be submitted and approved by WSCC Highways Officers. Following the Design Check, an independent **Road Safety Audit** would need to be completed by a WSCC-approved auditor and a **Designer's Response** prepared. If these reports are prepared to the satisfaction of WSCC Highways, it would be difficult for them to object to implementation of an access direct from Worthing Road.

- 5.2 The overall agreement of access in principle would need to be agreed with Arun DC as the local planning authority. In order to achieve this, TM advised that the best way to achieve this agreement in principle would be through the production of a **Feasibility Report**, identifying project history, pre-application discussions and design checks with WSCC, housing necessity in the local area and an explanation as to why the preferred option in the Development Brief could not be implemented. This would inevitably result in significant input from Savills.

Appendix C

Right Turn Lane Access Design Check Report, Rev A