MWDA: Gillmoss Materials Recovery Facility

Transport Assessment

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Abbreviations

AADT	Average Annual Daily Traffic
DfT	Department for Transport
HGV	Heavy Goods Vehicle
HWRC	Household Waste Recycling Centre
IHT	Institute of Highways and Transportation
LCC	Liverpool City Council
LTP	Local Transport Plan
MRF	Materials Recovery Facility
MWDA	Merseyside Waste Disposal Authority
PIA	Personal Injury Accidents
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
RSS	Regional Spatial Strategy
TA	Transport Assessment
UDP	Unitary Development Plan
WTS	Waste Transfer Station

1 Introduction

1.1 Project Description

Mouchel have been commissioned by Merseyside Waste Disposal Authority (MWDA) to undertake a Transport Assessment (TA) for the proposed development of a Materials Recovery Facility (MRF) on land adjacent to Gillmoss Waste Transfer Station (WTS). This assessment will accompany the planning application for the proposed development.

The development site currently houses a Waste Transfer Station (WTS) in the north-east of the site, with permission to operate at 500,000 tpa, and as such the proposals represent, in effect, an expansion of the existing land-use. The WTS currently takes in kerbside collected household waste and residual waste from Household Waste Recycling Centres (HWRCs) and stores it prior to transfer to landfill.

The proposed MRF will take in kerbside collected household recyclables, sort the materials and deliver to dedicated recycling plants and third party processors. Recent trends, as well as current policy, suggest that in the medium/long term, kerbside recyclable collection will increase in line with a corresponding decrease in kerbside collection of household waste. This will result in a zero growth scenario for waste related trips to and from this site as deliveries shift from waste to recyclables.

The TA considers the impact of the development in access and transportation terms and follows the recommended procedures outlined in the 'Guidelines for Transport Assessment' published by the Department for Transport, 2007.

1.2 Purpose of the Report

This report presents the TA process and its findings. Any measures necessary to mitigate the impact of the proposed MRF development are also identified.

1.3 Report Structure

- Section One provides an introduction and description of the TA;
- Section Two contains the Policy Review and Consultation;
- Section Three details the existing situation;
- Section Four provides the policy considerations;
- Section Five describes the local and strategic highway network;
- Section Six details the level of impact the development is likely to have on the network;
- Section Seven considers the accident record surrounding the site; and
- Section Eight provides a summary and conclusions.

2 Policy Review and Consultation

2.1 Introduction

A review has been undertaken of the following transport, national, regional and local policy documents:

- Planning Policy Statement (PPS) 1 – Delivering Sustainable Development
- PPS 10 – Waste Management
- Planning Policy Guidance (PPG) 13 – Transport
- Regional Spatial Strategy (RSS) – North West
- Joint Municipal Waste Management Strategy for Merseyside (JMWMS)
- Liverpool Unitary Development Plan (UDP)
- Merseyside Local Transport Plan (LTP)

2.2 Policy Review

The development at Gillmoss will generate two distinct trip types: those associated with the transfer of recyclable materials, and those associated with staff.

2.2.1 National

Current national policy regarding land-use planning and transport is primarily concerned with integration, resulting in a reduction in the number and length of car journeys and the promotion of accessibility to more sustainable modes. Section Five of this report examines the opportunities for walking, cycling and use of public transport at the site and concludes that, considering the nature of the development (recyclate sorting), reasonable access to non-car modes is available. This complies well with the government's aims for sustainable development.

PPS1 – Delivering Sustainable Development states that development plan policies should take account of environmental issues such as "the management of waste in ways that protect the environment and human health, including producing less waste and using it as a resource wherever possible"[1].

PPS10 – Planning for Sustainable Waste Management sets out a number of key planning objectives that regional planning bodies and all planning authorities should to the extent of their responsibilities, prepare and deliver planning strategies. These include:

- Provide a framework in which communities take more responsibility for their own waste, and enable sufficient and timely provision of waste management facilities to meet the needs of their communities;
- Help secure the recovery or disposal of waste without endangering human health and without harming the environment, and enable waste to be disposed of in one of the nearest appropriate installations;

- Ensure the design and layout of new development supports sustainable waste management.

PPS10 states that regional planning bodies should prepare regional spatial strategies (RSS) which aim to provide sufficient opportunities to meet the identified needs of their area for waste management for all waste streams[2].

It is stated that "waste management should be considered alongside other spatial planning concerns, such as transport, housing, economic growth, natural resources and regeneration, recognising the positive contribution that waste management can make to the development of sustainable communities, and should be integrated effectively with other strategies including municipal waste management strategies"[3].

2.2.2 Regional

The RSS for the North West, published in September 2008, has a strong emphasis on accessibility and mirrors national policy regarding integrated land-use planning and transport to this end. The document contains a number of policies related to waste management; policies EM9-EM13 support improved waste management.

EM10 states that "plans, strategies, proposals and schemes should promote and require the provision of sustainable new waste management infrastructure, facilities and systems that contribute to the development of the North West by reducing harm to the environment (including reducing impacts on climate change), improving the efficiency of resources, stimulating investment and maximising economic opportunities"[4].

The policy states that "plans and strategies should reflect the principles set out in the Waste Strategy for England 2007 and PPS10"[5]. The policy further states that plans and strategies "should seek to achieve the following regional waste targets and to exceed them where practicable"[6]:

- Growth in municipal waste to be reduced to zero by 2014;
- 40% of household waste to be reused, recycled or composted by 2010; 45% by 2015; and 55% by 2020;
- Value to be recovered from 53% of municipal solid waste by 2010 (including recycling/composting); and 67% by 2015 and 75% by 2020;
- Zero future growth in commercial and industrial wastes;
- Recycle 35% of all commercial and industrial wastes by 2020; and
- Value to be recovered from at least 70% of commercial and industrial wastes by 2020 (including recycling/composting).

The recyclable material movements associated with the development are essential to the site's operation and therefore cannot be easily removed; the location of the development relative to the residential areas from which the recyclables are drawn can however, assist in attempts to reduce the length of these trips.

The Joint Municipal Waste Management Strategy (JMWMS) for Merseyside 2008 states that the 'proximity principle' suggests that waste and recyclables should generally be disposed of and or sorted as near to its place of production as possible. Gillmoss is ideally located to promote this policy being close to the residential generators (trips in) and also the motorway network (trips out).

In addition to satisfying the proximity principle, as outlined in PPS10, the Gillmoss development forms part of a wider strategy to support Merseyside's bid for regional self sufficiency. PPS10 states that most waste should be treated in the region in which it was produced with each region expected to provide facilities with sufficient capacity to manage the quantity of waste expected to need to be dealt with in that area for at least 10 years. The proposed Gillmoss MRF will have a capacity of up to 100,000 tonnes of recyclables per annum and will significantly contribute towards this policy.

Table 2.1 summarises the key policy considerations and comments on how the proposed development impacts on each.

Table 2.1 – Development Considerations

Consideration	Comments
Encouraging Sustainable Access	
Reducing the need to travel, especially by car	Complementary infrastructure, such as footpaths that link to the existing network and cycle lockers, will be provided to improve sustainable transport choices.
Improving sustainable transport choices	
The accessibility of location	The accessibility of the site by non-car modes is described in Section 5, which concludes that the site would offer reasonable opportunities for travel by alternative modes in accordance with the government's aims of sustainable development, whilst recognising the limitations of the type of development being considered.
The 'proximity principle'	Gillmoss is ideally located to promote this policy being close to the residential generators (trips in) and also the motorway network (trips out).
Managing the existing network	
Making best possible use of existing transport infrastructure	The site will be designed with due regard to existing footpaths and cycle ways, ensuring linkages between the site and existing and new infrastructure.
Mitigating residual impacts	
Through minor physical improvements to existing roads	In Section 6, the TA determines the impact of the development on the local network. Where necessary, it recommends minor improvements to existing roads and junctions.

The 'Joint Municipal Waste Management Strategy for Merseyside – June 2008' sets a target of 0% waste growth for 2020. It is expected that kerbside collection of household recyclables will increase in line with a reduction in kerbside collection of household waste. Whilst this trend cannot be easily quantified, strict government targets will ensure that positive actions and results will be seen in this area.

Policy EP 5 of the 'Liverpool UDP - Adopted version November 2002' notes that in determining applications for new or enlarged waste management facilities regard will be had to whether the proposed development would cause significant and unacceptable harm to road safety and highway capacity. The following are relevant extracts from this policy:

EP5

1. Planning permission for the reception, recycling, processing, treatment, sorting, incineration or transfer of waste and second hand materials, will only be granted if the proposal:

iii. has sufficient off-street space for all deliveries, collections and storage of materials, together with associated parking;

iv. includes satisfactory access arrangements, and the traffic generated can be accommodated on the local highway network without adversely affecting road safety or the amenity of local residents;

v. is not located on a prominent main road frontage;

Requirements 'iii' and 'v' are satisfied by the proposed development, as the facility will be around 200 metres from Stonebridge Lane and East Lancashire Road and it will share a large area of vacant land shown in Figure 3.1 and Figure 6.1. The purpose of this Transport Assessment is to address requirement 'iv'.

The 'Merseyside Local Transport Plan - 2006-2011 (LTP)' seeks to improve transport access to employment through the provision of improved public transport information to staff and visitors to:

- Increase awareness of public transport options; and
- Overcome low travel horizon issues to the socially excluded.

This may be a more appropriate alternative to a traditional travel plan.

An examination of the above policies concludes that the proposed development accords well with current transport policy at the national, regional and local level.

2.3 Local Authority Consultation

Pre application discussions have been held with Highways Officers at Liverpool City Council (LCC) to agree the scope of the assessment, which covers the following areas below.

These are the points for consideration:-

- The junction of A580 East Lancashire Road / Stonebridge Lane (north);
- Design of the site access junction must be to appropriate standards (existing left turn only restriction on vehicles exiting the site should also be maintained); and
- Stonebridge Business Park committed development should be taken into consideration. The proposals for Stonebridge Business Park include junction modifications on the A580, which have already been implemented.

3 Existing Use

3.1 Background

The application site falls within the existing Gillmoss site. The north east corner of the Gillmoss site is currently occupied by a WTS which received planning approval on 18th March 1988. There have been a number of subsequent planning applications for the site. The 1988 permission and the existing situation are described below.

3.2 1988 Planning Permission

Merseyside Waste Disposal Authority (MWDA) received planning permission (reference number – L267054/0711A) in March 1988 to develop a WTS comprising a main reception hall, administration offices, weighbridges, container parking area and associated transport maintenance facilities, drainage and lighting works, hard standing area and an access road from Stonebridge Lane.

3.3 Current Facility

The site north east corner of the Gillmoss site currently houses a WTS. Figure 3.1 shows the layout of the existing site. This is connected to the local network via an access road that forms a priority junction on Stonebridge Lane. All waste transfer vehicles arrive from and depart towards the south via the junction of Stonebridge Lane and East Lancashire Road.

All vehicles use the access road but are separated into staff/visitor cars and waste vehicle movements upon reaching the centre of the site where staff and visitors are provided with a large surface car park to the west of the WTS and delivery/collection vehicles are directed onto a gyratory around this car park and into the WTS area itself.

Figure 3.1 – Aerial Photo Showing Site Layout

3.4 Current Hours of Operation

Table 3.1 describes the current hours of operation of the Waste Transfer Station.

Table 3.1 – Waste Transfer Station Hours of Operation

Operation	Days	Hours
Normal Operation	Monday - Friday	08:00 - 17:30
Normal Operation	Saturday	08:00 - 12:30
Deliveries during and following Public Holidays	Saturday	12:30 - 17:30
	Sunday	08:00 - 17:30
Handling of waste from Household Waste Recycling Centres	Monday - Friday	17:30 - 20:00
	Saturday	12:30 - 20:00
	Sunday	08:00 - 20:00

4 Proposed Development

4.1 Introduction

The proposed development site comprises land adjacent to the Gillmoss Waste Transfer Station covering an area of approximately 2 hectares. The site is bounded by Long Down Road to the north, Stonebridge Lane to the west, and Hermes Road to the east. The north east corner of the site is currently occupied by an existing WTS. Stonebridge Business Park is currently being developed to the south of the site.

Gillmoss Lane Industrial Estate is 6 miles from Liverpool City Centre and is strategically located in terms of the local highway network close to the A580 East Lancashire Road as shown by a red star in Figure 4.1.

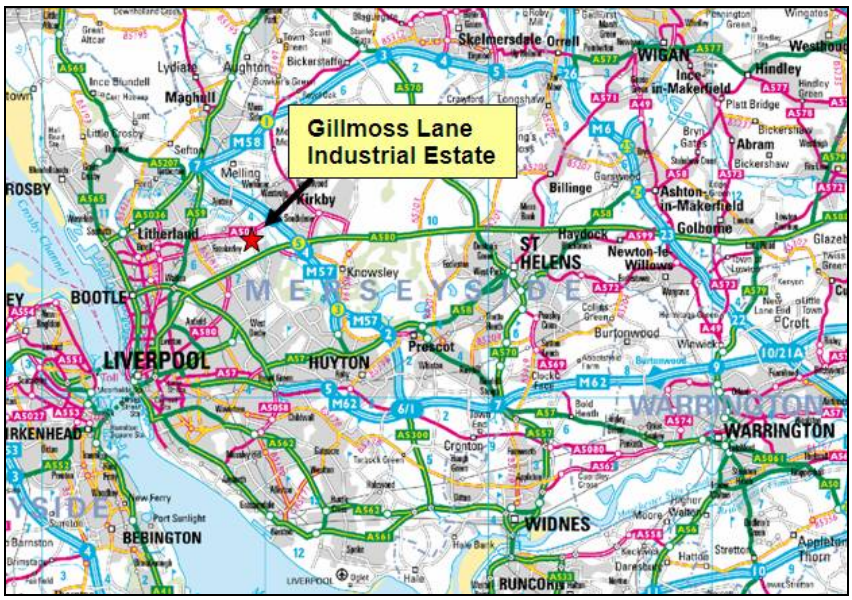

Figure 4.1 – Strategic Location of Site

4.2 Development Proposal

The proposed development is for a MRF with a capacity of up to 100,000 tonnes of recyclable material per annum. The MRF will process dry recyclable material that is collected from the kerbside. This will principally comprise paper, card, plastic bottles, steel and aluminium cans and glass bottles. The recyclable material will be brought to site in either conventional refuse collection vehicles or in bulk haulage vehicles.

The vehicles will weigh-in at the existing site weighbridge before unloading within the MRF building. The material will be dry and of low odour.

It is intended that the MRF will occupy vacant land in the south west corner of the site, to the south west of the existing WTS, which is to remain. All existing internal

infrastructure will be retained with the hard standing being extended to the new facility. Figure 4.2 presents the current layout and proposals.

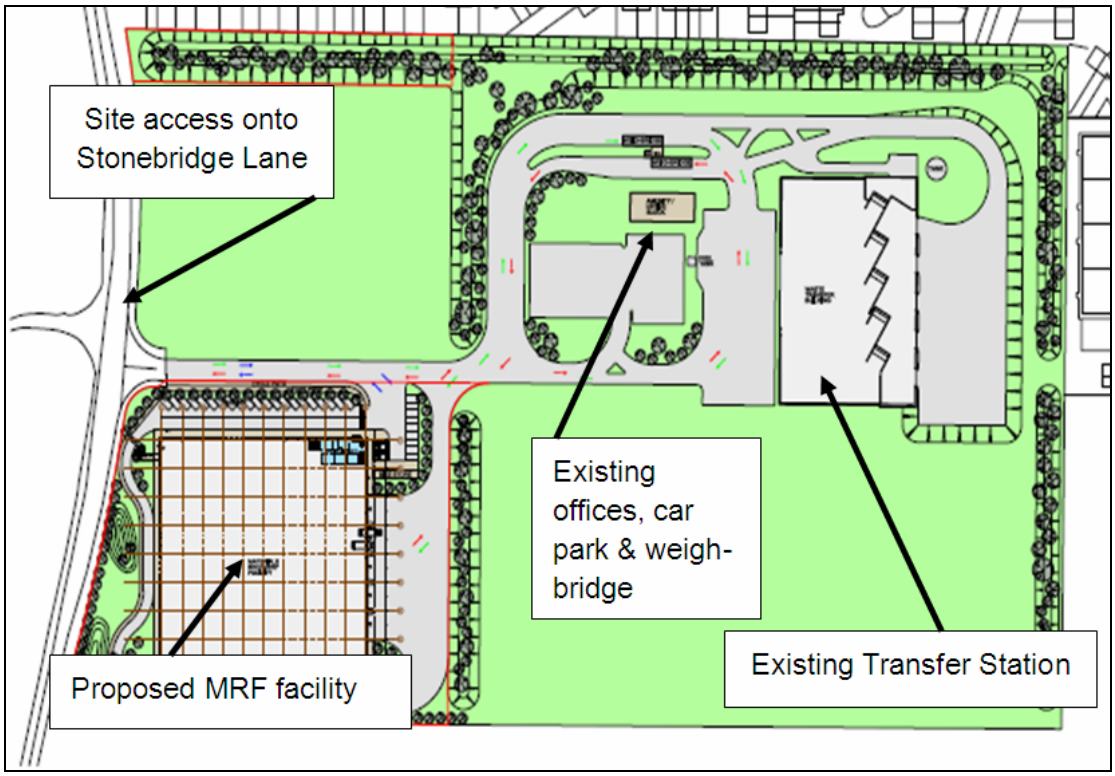

Figure 4.2 – Site Layout

4.3 Proposed Site Access

It is proposed that all traffic will access the development site from Stonebridge Lane, as shown in Figure A4 in Appendix A, via the existing priority junction. Stonebridge Lane is easily accessible from the A580 East Lancashire Road to the south and the A506 Longmoor Lane, via Copplehouse Lane, to the north. The A580 and A506 provide easy access to the site from the M57 (junctions 5 and 6, respectively).

The existing access is currently appropriately signed and marked and allows all vehicles access to and egress from the site in a forward gear. Any potential improvements at this location are discussed in later Sections.

4.4 Vehicle Routing

Following consultation with Liverpool City Council Highways officers, it has been agreed that any heavy commercial traffic egressing the proposed MRF (both during construction and operation) will be subject to the existing restrictions enforcing a left only turn towards the A 580 East Lancashire Road. Heavy vehicles travelling to the site will therefore approach from the East Lancashire Road, to avoid travelling through the residential area around Copplehouse Lane to the north. This is a condition of the Waste Management Licence for the WTS, with the exception of

vehicles collecting waste from these areas. No such restriction will apply to other vehicle movements such as commuters or visitors.

4.5 Parking

A new car park is proposed adjacent to the new facility. This will comprise 30 car parking spaces with 2 disabled spaces. Additional adequate on site parking for the WTS development currently exists and as such it is proposed that this level of parking for the MRF will accommodate all staff requirements.

Liverpool City Council's Unitary Development Plan's Supplementary Planning Guidance Note 8 parking standards for B2 Land Use Class (General Industrial) recommends a maximum car parking requirement for individual units over 2,000 m^2 of 1 space per 60 m^2 for staff and visitors.

The North West of England Plan Regional Spatial Strategy to 2021 states that plans and strategies should incorporate maximum parking standards that are in line with, or more restrictive than the North West Parking Standards, and define standards for additional land use categories and areas where more restrictive standards should be applied.

It is also stated in the Regional Spatial Strategy that car parking standards should not exceed the maximum regional standards defined in Policy RT6 and authorities are encouraged to establish additional categories relevant to their area[7].

The North West of England Plan Regional Spatial Strategy to 2021 recommends a maximum car parking requirement of 1 space per 45 m^2 for B2 General Industry units[8].

The proposed maximum parking provision for the development using Liverpool City Council's maximum parking standards would be 120 standard car parking spaces for the MRF which is 7,200 m^2 in size. Due to the nature of the site and the number of workers at the facility, it is considered that this level of parking provision would not be appropriate at this location.

5 Local Highway Network and Accessibility

5.1 Highway Network

The proposed development has the advantage of being close to a network of strategic highways, as previously shown in Figure 4.1 and described below.

5.1.1 Local Network

The road network within the vicinity of the site is subject to a 30 mph speed limit. Stonebridge Lane and Copplehouse Lane form the main route through the residential area of Gillmoss which lies between East Lancashire Road (A580) and Longmoor Lane/Valley Road (A506). This route provides access to a number of residential streets and estates as well as other commercial and industrial units. This includes the effluent treatment works located opposite the site on Stonebridge Lane.

The full length of Stonebridge Lane is covered by a Prohibition of Waiting Order indicated by double yellow lines. This ensures an efficient flow of traffic and protects visibility splays for emerging vehicles at junctions. On site observations show all parking restrictions are well respected. A new roundabout has been constructed on Stonebridge Lane providing access to Stonebridge Business Park, as shown in Figure 6.1.

5.1.2 Strategic Network

5.1.2.1 A506 Longmoor Lane/Valley Road

Longmoor Lane/Valley Road is an east-west radial route linking the A59 to the M57 passing to the north of the proposed development site. The A506 also provides links to Kirkby and the M58.

5.1.2.2 A580 East Lancashire Road

The East Lancashire Road is also an east-west radial route that passes to the south of the proposed development site. The A580 links Liverpool to Salford/Manchester intersecting several key routes along the way including the M57, M6 and M60 motorways.

5.1.2.3 M57

Both the A506 and A580 intersect the M57 to the east of the proposed development site. The M57 forms part of an orbital route to the east of Liverpool between the M58 towards Wigan and the M62 towards Warrington, the M6 and Manchester.

Importantly, access to the strategic road network is possible from the site within 1 mile.

5.2 Access by Non Car Modes

The following Section outlines the sustainable transport choices available to the proposed development and the layout features designed to encourage non-car travel.

The nature of the development is such that the majority of trips, i.e. those directly related to collection and delivery, cannot easily be influenced by current sustainable transport policies since they already involve the use of motorised vehicles. Therefore it is the staff trips where attention will be focussed as this is where the potential for a positive impact is greatest, as stated in Section 2.2.2.

5.2.1 Pedestrians

The highway network external to the site provides good pedestrian routes between the existing access and the surrounding residential areas. However, between the East Lancashire Road and Wadebridge Road, footways are only provided on the east side of Stonebridge Lane. The standard of pedestrian routes nearby is generally good. Wide footways and street lights are provided within proximity of the site as illustrated in Figure 5.1 and Figure 5.2.

Figure 5.1 – Stonebridge Lane Looking North (Taken 04/10/06 08:05 am)

Figure 5.2 – Stonebridge Lane Looking South (Taken 04/10/06 08:05 am)

The standard of footways throughout the Gillmoss Estate and along the East Lancashire Road is also of a good standard. However it has been noted that there is no tactile paving or dropped kerbs at the existing access junction.

Walking is the most sustainable travel mode and currently about 70% of journeys less than 1 mile (1600 m) are made on foot[9]. Department for Transport, "Walking and Cycling Action Plan (June 2004)" states that a quarter of all trips are less than 1 mile with 42% being less than 2 miles.

PPG13 paragraph 75 recognises walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 km, also forming an often forgotten part of all longer journeys by public transport and car.

"Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips particularly under 2 kilometres"[10].

Acceptable walking distances however, will vary considerably depending on various factors such as fitness and land topography. The Institute of Highways and Transportation (IHT) guidelines; 'Providing for Journeys on Foot' and 'Planning for Public Transport in Development', suggest acceptable walking distances for various attractions, as summarised in Table 5.1.

Table 5.1 – IHT Acceptable Walking Distances

Attraction	Desirable Walking Distance	Acceptable Walking Distance	Preferred Maximum Walking Distance
Work (Commuting)	500 m	1000 m	2000 m
Bus Stop	300 m	-	400 m

Figure A2 in Appendix A shows the walking distance catchment within 1.3 km of the proposed development site. This catchment area extends to cover parts of the Croxteth and Gillmoss residential estates.

5.2.2 *Cyclists*

The highway network surrounding the proposed development offers no restriction to cycling; wide carriageways and flat topography provide, in the absence of any dedicated facilities, a suitable platform upon which to encourage cycling.

Cycling is accepted as a convenient mode of transport appropriate for longer journeys than walking. PPG13[11] states that cycling also has potential to substitute for short car trips, particularly those under 5 km. Transport Statistics 2007 shows that nationally, for trips where cycling forms the main mode of transport, people are prepared to cycle an average of around 4.3 km for commuting.

PPG13 states that an acceptable cycling distance is considered to be up to 5 km:

"Cycling also has the potential to substitute for shorter car trips, particularly those less than 5 km and to form part of a longer journey by public transport".

Figure A3 in Appendix A shows the 5 km cycling distance from the site. This shows that large areas of residential development, additional to those within the walking catchment, would also lie within easy cycling distance of the site.

Liverpool City Council's Unitary Development Plan states that[12] the application of cycle parking standards to development is designed to promote the contribution which cycling can make in helping meet the City's transport needs in the next decade.

The guidance note also states that where the provision of cycle parking facilities are intended for the use by the staff of that particular development, stands should be located within the curtilage of the development to ensure effective security and provision. The note also states that the cycle stands should be provided in the style of the "Sheffield" rack which provides for two cycles and enables the whole cycle to be immobilised as both frame and two wheels can be locked to them.

Liverpool City Council's minimum cycle parking requirement is 1 stand per 500m² for staff and visitors for B2 Land Use Class (General Industrial). The development will also provide facilities to encourage cycle use within the site. Covered, secure cycle parking is to be provided close to the main office building access, in locations overlooked by workers. Within the development, shower and changing facilities will also be provided and lockers are proposed for the storage of clothing and other items.

5.3 Public Transport Services

5.3.1 Bus and Rail

The site is accessible by bus with a number of bus stops located within a 5 minute walk of the site. Regular bus services operate along the A580 East Lancashire Road, as included in Table 5.2. The locations of the bus stops in relation to the application site are illustrated in Figure A4 in Appendix A.

The Institute of Highways and Transportation (IHT) and the Department for Transport (DfT) guidelines both state that bus stops should be located within a maximum of 400 m from new developments, the equivalent of a 5 minute walk.

Table 5.2 – Travel by Bus - Service Summary – October 2008

Service Number	Route	Frequency Monday - Friday	Frequency Saturday	Frequency Sunday
19	Kirkby Civic Centre – Liverpool return service	Every 20mins - 7:15am till 6:45pm then every 10mins till 9pm, then every 30mins till 0:07am	Every 20mins – 7:30am till 6:45pm then every 10mins till 8:30pm then every 30mins till 0:07am	Every 30mins – 10am till 6:30pm then hourly till 11:40pm
19A	Kirkby Civic Centre – Liverpool return service	Every 20mins – 6:30am till 6:30pm	Every 20mins – 8:00am till 6:30pm	Every 30mins – 10:30am till 6pm
119	Kirkby – Liverpool*	Every 30mins between 4:40am till 5:40am	Every 30mins between 5:11am till 6:41am	No service
	Liverpool – Kirkby*	1 bus at 6:11am	Every 30mins between 6:11am till 7:41am	No service
121	Broadway – Aintree Station return service	Every 30mins – 7:00am till 9:00pm	Every 30mins – 8:00am till 8:30pm	Every 30mins
244	Kirkby – Liverpool*	No service	No service	Every 30mins between 6:37am till 9:07am
	Liverpool – Kirkby*	No service	No service	Every 30mins between 7:48am till 10:18am
Total number of buses per hour in each direction not including services 119 and 244*		8 between 6:30am till 9pm then 2 till 0:07am	8 between 7:30am till 8:30pm then 2 till 0:07am	4 between 10:00am till 1pm then 6 till 6:30pm, then 3 till 8:30pm, then 1 till 11:40pm

** Services 119 and 244 have not been included in the above totals due to their limited hours of operation.*

Table 5.2 demonstrates that the proposed development is well served by bus services for the majority of shifts. There is a high frequency of services between Liverpool and Kirkby stopping on the A580 East Lancashire Road a short distance from the site and a good frequency of service between Broadway and Aintree stopping on Stonebridge Lane close to the proposed site access.

There are two important findings relating to bus services serving the proposed development:

- The development is within easy walking distance of a number of bus stops.
- A number of the services identified operate throughout several of the shift change periods for the proposed development. This ensures that the bus can act as a viable alternative for the majority of shifts.

The development will provide facilities to encourage passenger transport use within the site premises. Up to date timetable and bus routing information will be displayed prominently in both the main office and operational buildings and will therefore be visible to all employees.

5.3.2 Merseytram

The Merseytram, Line 1 proposals will link Liverpool City Centre to Kirkby Town Centre. At this stage Merseytravel's Passenger Transport Authority decided not to apply to the Court of Appeal for a hearing into the Judicial Review of Merseytram Line One. The Authority agreed, however, that the scheme should remain within the Merseyside Local Transport Plan for 2006-2011.

The proximity of the proposed Stonebridge Lane tram stop to the application site represents a significant opportunity to replace single occupancy car trips to and from the development by employees.

Should the Merseytram scheme be progressed at some point in the future it is a significant opportunity to increase modal split between sustainable and non-sustainable modes of transport.

6 Highway Impact

6.1 Introduction

In order to assess the impact of proposed development traffic on the local road network, the information provided for the operational facility is analysed below. Current guidance issued by the DfT indicates that Transport Assessments should only be necessary where a new development is likely to have significant transport implications[13]. In March 2007, the Department for Transport published new Guidance on Transport Assessment which recommended the following relevant thresholds:

- Any development generating 30 or more two-way vehicle movements in any hour;
- Any development generating 100 or more two-way vehicle movements per day; and
- Any development generating significant freight or HGV movements per day, or significant abnormal loads per year.

The following Sections describe the level of traffic likely to be generated by the proposed development.

6.2 Staff Traffic

The proposed development is estimated to employ a total of 78 staff with the following shift patterns:

Table 6.1 – Staff Shift Patterns

Role	Shift Pattern	Staff Numbers
Admin Staff (Monday – Friday)	09:00 - 17:00	5
Maintenance and Operation Staff (7 days per week)	06:00 - 14:00	7
Maintenance and Operation Staff (7 days per week)	14:00 - 22:00	7
Maintenance and Operation Staff (7 days per week)	22:00 - 06:00	7
Picking Staff (7 days per week)	07:00 - 19:00	26
Picking Staff (7 days per week)	19:00 - 07:00	26

Although five staff will be required to work an office shift where their commute coincides with the network peak periods, the majority of staff (52) will work one of two shifts that start and finish outside the highway network peak periods. This

demonstrates quite clearly that impact on the highway network from staff vehicles will be minimal.

6.3 Trip Generation

Typical average weekday (Monday - Friday) movements to and from the existing WTS were provided by MWDA, these are shown in Table 6.2.

Table 6.2 – Movements to and from the Existing Waste Transfer Station

Time	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00
Two way Movements	11	28	26	31	27	33	26	12	8	0

The MRF is expected to handle up to 100,000 tonnes per annum of recyclable materials. The vehicle movements into and from the proposed facility have been based upon the expected throughput of material, with the 100,000 tonnes distributed as follows:

Table 6.3 – Percentage Throughput of Recyclable Material

Material	Percentage of throughput (%)
Paper	56.0
Glass	22.2
Cardboard	3.0
Steel	2.9
Aluminium	0.9
Plastic	1.9
Residual	13.1

Using industry standard tonnages for materials having been bulked and assuming an equal distribution of recyclable materials throughout the year, there are anticipated to be 110 vehicles accessing the site each day; 80 delivering and 30 collecting.

It has been assumed that these vehicles will be distributed in the same percentages as the existing movements for the WTS, which is based on the existing profile for waste vehicle movements. This gives a movement profile for the MRF as shown in Table 6.3. Monday – Friday will be when the greatest HGV movements will occur.

Table 6.4 – Movements to and from the Proposed Materials Recovery Facility

Time	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00
In	4	11	11	12	13	14	10	4	1	0
Out	2	5	3	5	1	3	4	3	5	0
Total	6	15	14	17	14	17	14	7	6	0

In line with the requirements of the Waste Strategy 2007 and the RSS, (see Section 2.2.2), there is a requirement for waste disposal authorities to increase the amounts of waste that is recycled. As new recycling initiatives are launched by the local authorities of Merseyside, it is anticipated that the amount of residual waste that will need to be disposed of will decrease as residents move from placing waste in the residual bin to the recyclate bin.

Therefore, in line with Waste Strategy 2007, it is anticipated that the throughput of waste through the WTS will fall by approximately 28%.

It is therefore an appropriate assumption that the existing WTS vehicle trips will decrease by a similar ratio. When the increase in trips due to the MRF is applied to the revised WTS movements, there are approximately 53 extra HGV movements per day, over a 10 hour period (08.00-18.00).

The time and number of HGV movements has been calculated based upon the amount of each type of recyclable material that will be processed at the new facility. These are presented for each hour and direction in Table 6.4 and represent total movements, i.e. vehicles arriving full and leaving empty and vice versa. A total of 6 HGV movements are predicted for the AM peak hour of 08:00-09:00, whilst no movements are predicted for the PM peak hour of 17:00-18:00. It is likely that within each hour the predicted flows will be evenly distributed.

6.3.1 All Operational Traffic

Table 6.5 provides a summary of the peak hour movements for all vehicles, staff and transfer vehicles. It is clear that the development has a very minimal impact on the local network in the peak hours.

Table 6.5 – All Proposed Development Traffic

Traffic Type	AM Peak (08:00 – 0900)		PM Peak (17:00 – 18:00)	
Direction	**In**	**Out**	**In**	**Out**
Process Staff	0	0	0	0
Office Staff	5	0	0	5
MRF	4	2	0	0
Totals	9	2	0	5
	11		**5**	

6.4 Trip Distribution

Each vehicle trip type will display distinct patterns in terms of how it is distributed onto the highway network. These various routes are described below and the distribution is summarised in Figure 6.1 and Figure 6.2.

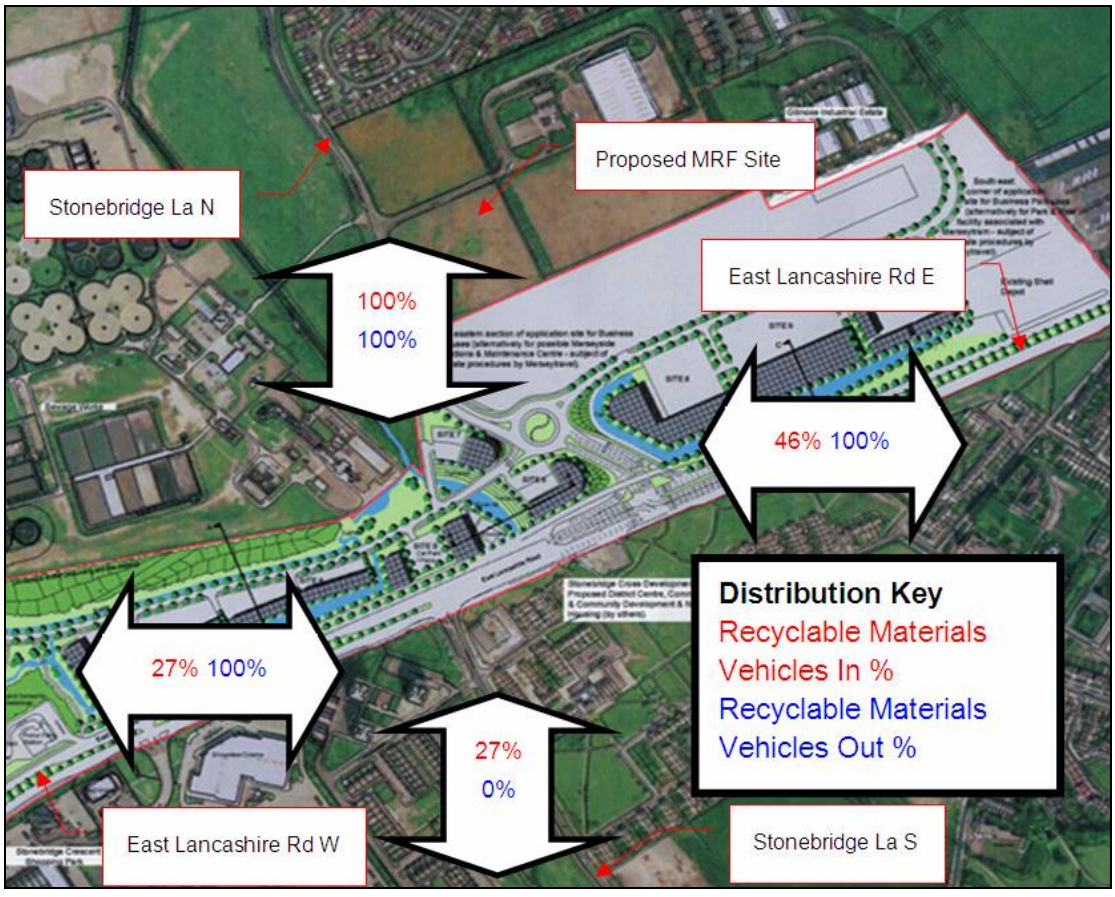

Figure 6.1 – MRF Development HGV Distribution Plan

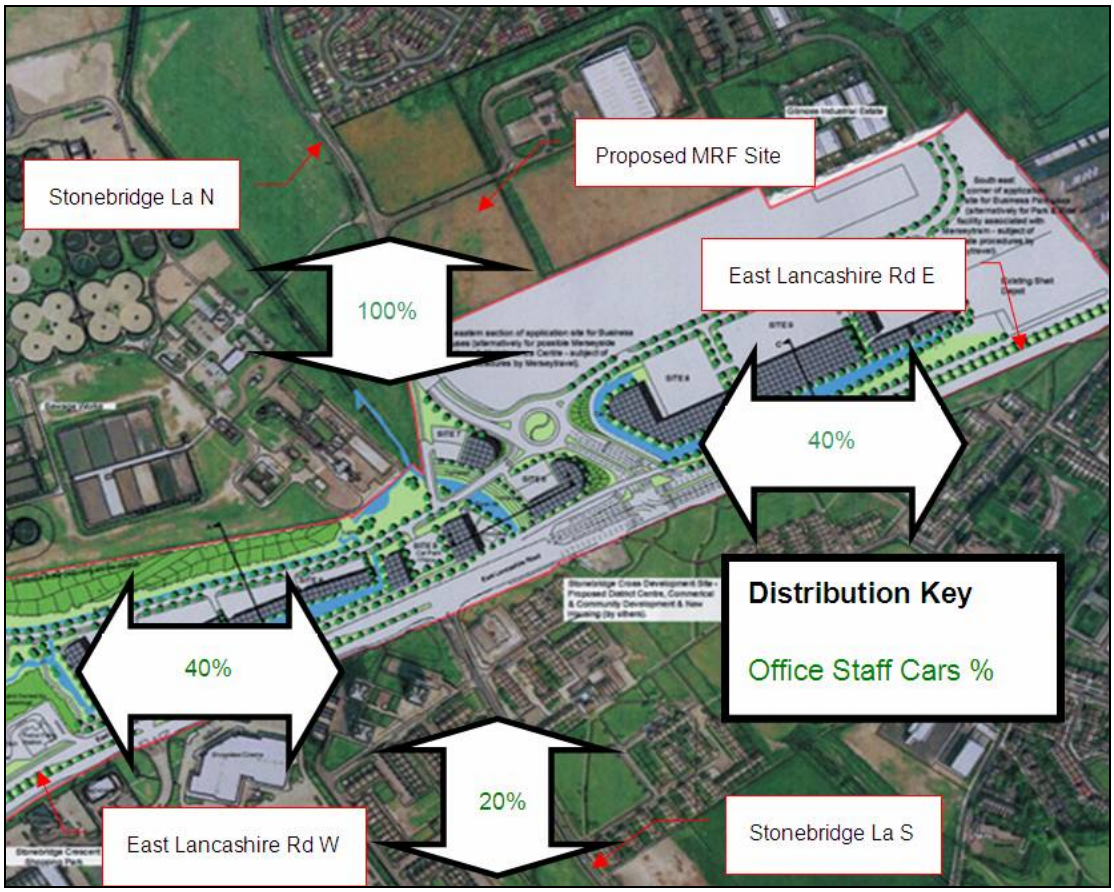

Figure 6.2 - MRF Development Office Staff Cars Distribution Plan

6.4.1 *Mixed Recyclables Delivery Vehicles*

All vehicles delivering kerbside collection mixed recyclables to the MRF site will approach from the A580 East Lancashire Road to avoid the residential areas around Copplehouse Lane to the north of the access. The direction from which these vehicles will originate will be determined by which local authority area within Merseyside the recyclables have been collected from.

Information has been provided on waste delivery vehicle movements to the existing WTS on the site for the last three months of 2007. The proportion of all vehicle deliveries that each local authority contributed was applied to the predicted HGV trip generation for the proposed facility. These proportioned trips were then assigned to the local highway network based upon the distribution described above.

6.4.2 *Sorted Recyclables Removal Vehicles*

All vehicles removing sorted recyclables from the site will travel south to the East Lancashire Road and from there the distribution will depend upon the destination of the cargo. In order to gauge worst case impact levels, two scenarios have been devised whereby 100% of the outgoing sorted recyclables trips are directed either east or west at the junction with East Lancashire Road.

6.4.3 Empty Recyclables Collection Vehicles

It is assumed that all delivery and collection vehicles must make the opposite, related, reverse trip un-laden, i.e. delivery vehicles arrive full and return to their origin empty or vice-versa. These trips have been assigned onto the network following the same distribution as the opposite, fully loaded, trips.

6.4.4 Office Staff

Office staff have been assigned to the network on worst case scenario; all staff (5 No.) are assumed to travel by car. These trips have been distributed evenly upon arrival at the East Lancashire Road. Any impact presented by cars turning right out of the site towards Longmoor Lane are at such a low volume that they will have dispersed into the background traffic before reaching this junction and will result in no material change in network conditions.

6.5 Traffic Analysis

The MRF generated traffic was assigned to the local highway network for the network peak hours of 08:00-09:00 and 17:00-18:00, based upon the distribution described above. The recyclables in, recyclables out and office staff vehicle movements were combined for these peak hours so they could be assessed against the background traffic. As the shift start/ends are outside this period no shift related trips have been included in this analysis.

Forecast flows associated with the proposed Stonebridge Business Park, immediately south of the site, for the park's opening year of 2012 have been used in this assessment.

The predicted MRF flows were divided by the forecast flows in consultant JMP's Transport Assessment supporting the Stonebridge Business Park planning application to calculate the percentage increase in link flow when the MRF is operational.

The results presented in Figure 6.3 show that the greatest increase in the AM peak was 2.33 % on the East Lancashire Road eastbound right-turn movement. In the PM peak the greatest increase was 0.54 % on the Stonebridge Lane left-turn movement. Neither of these increases is significant enough to warrant a detailed junction assessment and as such the MRF development traffic has not been assessed further.

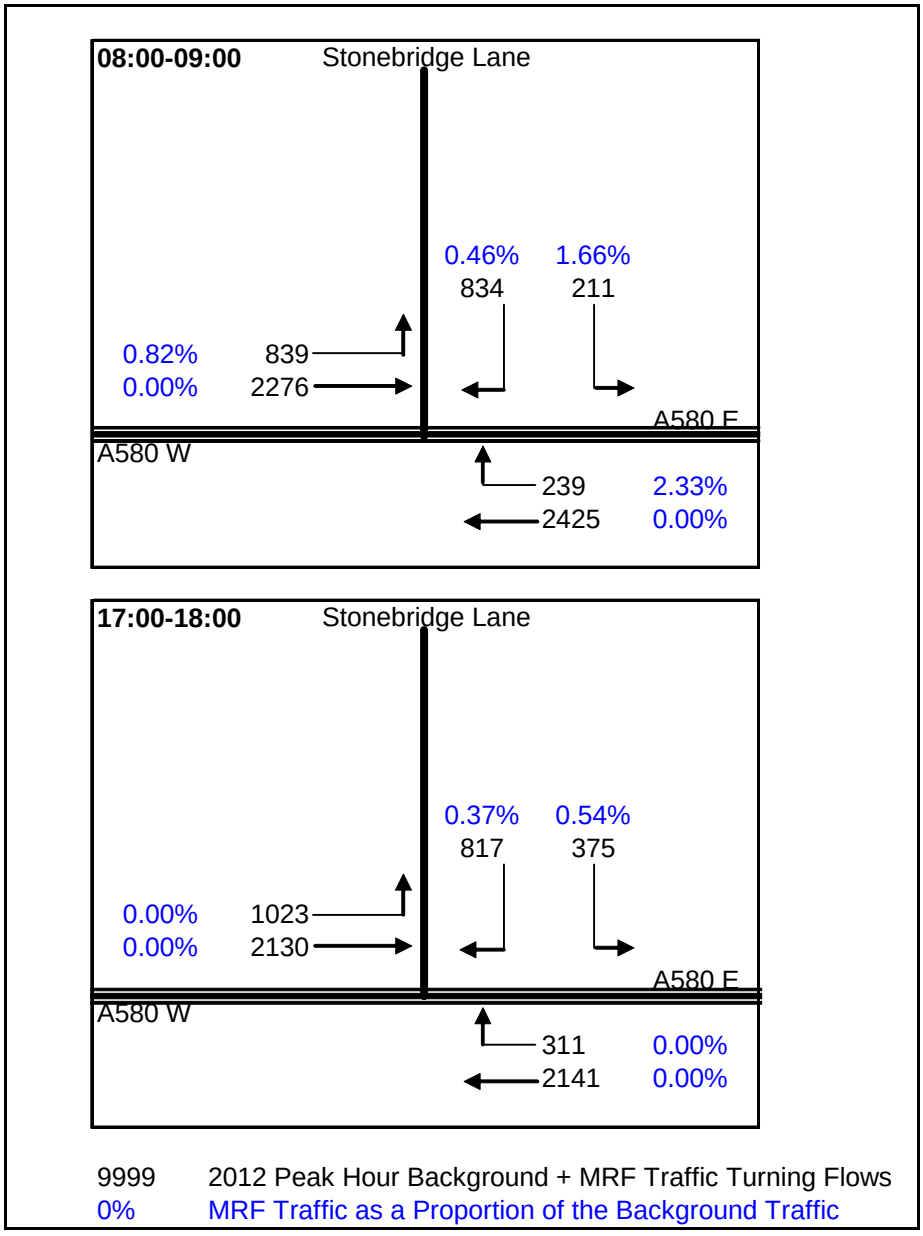

Figure 6.3 – 2012 Peak Hour Traffic Turning Flows and MRF Flow Proportion

As the proposal represents an expansion of the existing land use and travel patterns are not predicted to materially change in terms of vehicle type or routing, the existing access provides adequate visibility.

There are no safety or capacity implications as a result of the proposed MRF, therefore the proposed site access is considered adequate for the proposed development.

7 Accident Analysis

7.1 Accident Data

This section summarises a review of the personal injury accidents located within the vicinity of the site for the period October 2003 to September 2008. The analysis covers an approximate area from the signalised junction on the A580 that forms the junction of the A580 East Lancashire Road and Back Gillmoss Lane to the priority junction of Stonebridge Lane and Wadebridge Road.

The area under analysis looked at the routes used by haulage vehicles as well as routes used by workers accessing the site. The data has been provided by Liverpool 2020. The purpose of the analysis is to determine whether the proposed development site will have any significant impact upon the accident rates close to the site.

A total of 42 reported personal injury accidents were recorded over a five year period (1st October 2003 to 31st September 2008). Of these collisions 1 (2 %) resulted in fatalities, 3 (7 %) resulted in serious injury and 38 (91 %) resulted in slight injuries. These collisions are displayed within Table 7.1 below.

Table 7.1 – PIA records in the neighbourhood of the proposal site (Oct 2003-Sep 2008)

Severity	2003 Oct-Dec	2004	2005	2006	2007	2008 Jan-Sep	Total
Fatal	0	0	0	0	0	1	1
Serious	0	2	0	1	0	0	3
Slight	5	12	8	3	6	4	38
Total	**5**	**14**	**8**	**4**	**6**	**5**	**42**

(Source: 2020 Liverpool)

The data show that of all the recorded accidents 5 (12 %) occurred between the hours of 07:30 and 09:30, 6 (16 %) occurred between 16:30 and 18:30 and 7 (18 %) occurred between 12:00 and 14:00. The data also show that 38 (90 %) of all recorded accidents took place between Monday and Friday with 5 (13 %) occurring between the hours of 07:30 and 09:30, 5 (13 %) occurring between 16:30 and 18:30 and 4 (11 %) occurred between 12:00 and 14:00.

7.1.1 All Local Road Accidents

The analysis shows that most recorded accidents that have occurred within the study area on the local road network occurred on East Lancashire Road (A580). All of the accidents recorded on this busy road were slight in severity.

The analysis of the accident data does show that this section of road has a high accident rate of 43.39. The accident rate was calculated using AADT flows for this

area, and the rationale used defines any accident rate greater than 35 as high, a rate between 25 and 35 is considered as moderate and a rate less than 25 is considered low. Stonebridge Lane has an accident rate of 25.47 which is defined as a moderate accident rate.

7.1.2 Accidents within the Vicinity of the Site

The data show that between October 2003 and September 2008 there was only one accident that occurred within a 100 m radius of the site entrance. The accident was judged to be a slight accident and was caused by a vehicle shunting another vehicle from behind which in turn was pushed into the rear of a third vehicle. One of the factors in the accident was likely to be that the road surface was wet or damp. Again there were no significant accident clusters near or adjacent to the site entrance and therefore no mitigation measures are required.

7.1.3 HGV Collisions

There have been six reported accidents within the study area involving goods vehicles weighing greater than 3.5 tonnes. Three of these collisions involved goods vehicles over 7.5 tonnes with the remaining vehicles being under 7.5 tonnes; all of the accidents were recorded as slight accidents. One of the collisions involved the vehicle colliding with a pedestrian on the pavement whilst the driver of the vehicle was performing a u-turn, two listed failure to give way at junctions as the factor, three involved a rear end shunt and the remaining collisions were detailed as a vehicle which had crossed the centre line and collided with the front of another vehicle.

One of the accidents that involved goods vehicles was located on Stonebridge Lane north of the junction with Wadebridge Road. Two of the accidents occurred at the signalised junction of A580 (East Lancashire Road)/Stonebridge Lane and three of the accidents occurred on the A580 (East Lancashire Road) near to the signalised junction of the A580 (East Lancashire Road)/Back Gillmoss Lane.

7.2 Accident Summary

The accident analysis shows that between 2003 and 2008 there have been 42 accidents that have occurred on the roads surrounding the site and of those, one has been fatal, the motorist killed was riding a motorbike and lost control whilst overtaking another vehicle. The analysis also shows that Stonebridge Lane has a moderate accident rate and that the A580 (East Lancashire Road) between its junction with Stonebridge Lane and Back Gillmoss Lane has a high accident rate of 43.39.

However, despite an accident rate of 43.39 the A580 (East Lancashire Road) is a very heavily used road and the accidents that have occurred along the section in five years were all slight, with the majority of accidents being clustered at the A580 (East Lancashire Road)/Stonebridge Lane and A580 (East Lancashire Road)/Back Gillmoss Lane junctions and typically being shunts between vehicles, with the majority of accidents occurring when the road surface was wet or damp.

This appears to show that there does not seem to be a significant accident problem along this section of road.

The data show that there are two areas of accident clusters at the junctions of the A580 (East Lancashire Road)/Back Gillmoss Lane and A580 (East Lancashire Road)/Stonebridge Lane.

The negligible nature of the traffic impact generated by this proposed development, as highlighted in Section 3, allows us to conclude that the increase in traffic should not cause any significant safety implications. Therefore no mitigation measures are required.

8 Summary and Conclusions

This report refers to proposals for developing a 100,000tpa Materials Recovery Facility (MRF) at Gillmoss, Liverpool, on land to the south west of the existing Waste Transfer Station (WTS). The existing WTS has operated at this location since 1988 and has permission to operate at a throughput of 500,000tpa which is below the current rate of throughput which is approximately 220,000tpa. MWDA consider it highly unlikely that they will utilise their full capacity allowance for the WTS in the future.

The application under consideration will result in an increase in trips which is not significant as the balance of household waste treatment shifts in line with ever tightening environmental targets.

This reduction will be characterised by a shift from kerbside collection of household waste bound for landfill, via the WTS, to kerbside collection of household recyclables bound for the Materials Recovery Facility.

The proposed development is situated within a well established industrial area that has co-existed with the surrounding community for a significant amount of time.

The assessment of the transport impact of the proposed development recognises that the trips generated by the development are relatively low and that distribution patterns will not alter from those currently associated with the existing WTS. Consequently, the assessment demonstrates that the additional trips occurring as a result of the proposed MRF will not result in any significant change to local highway conditions.

The majority of vehicle movements (staff and recyclable materials delivery/collection) avoid the network peak periods and the development generates a maximum of 17 two way goods vehicle movements in an hour and 33 two way car movements in an hour (not the same period). For most of the day, the development will generate very low numbers of movements and will not impact significantly on local conditions.

The development site will utilise the single access currently used by the existing WTS. The access onto Stonebridge Lane is an adequately marked and signed ‘Give way’ priority junction and vehicles turning right into the site, from the East Lancashire Road, have the facility of a protected right-turn lane.

Although traffic movement to and from the site is possible for cars in all directions, HGV movements will be restricted, as per current arrangements, to the East Lancashire Road only, thereby minimising the impact on local roads.

An examination of the local road accident history has revealed no issues that would raise concern in connection with the proposal. In addition, accident rates on local roads are below national average in many respects. Accordingly, it can be

concluded that the development will not adversely impact on road accident rates or severity on local roads.

In terms of public transport, the assessment has examined the location and quality of local service provision and it has been shown that the development location offers convenient access to a number of bus services operating for the majority of the shifts.

Access to and from the development for pedestrians and cyclists is good. Local streets provide good quality footways and paths and with adequate street lighting, favourable topography and wide carriageways encourage walking and cycling as a viable means of travel for employees living locally.

In summary, the transport impact of the Gillmoss Materials Recovery Facility is low. Access to public transport is good, local walking and cycling provision is good and the site is well located in relation to the strategic road network.

Whilst the majority of trips to the site (those directly related to the delivery and collection of mixed and sorted household recyclables) cannot be directly influenced by green transport planning principles, the developer is committed to influencing those that can. The implementation of measures such as cycle parking, showers, lockers and bus service and time table information within the development will serve this end. These measures will further reduce the impact of the development on the surrounding community.

In conclusion, this assessment has demonstrated that the site is accessible by all modes of transport and that the overall transport impact of the proposals would be minimal.

9 Appendix A - Drawings

10 References

[1] PPS (Planning Policy Statement) 1 – Delivering Sustainable Development – Page 8 – Chapter 20

[2] PPS (Planning Policy Statement) 10 – Planning for Sustainable Waste Management – Page 6, Chapter 4

[3] PPS (Planning Policy Statement) 10 – Planning for Sustainable Waste Management – Page 6, Chapter 4

[4] The North West of England Plan Regional Spatial Strategy to 2021 – Page 104, Chapter 9.21

[5] The North West of England Plan Regional Spatial Strategy to 2021 – Page 104, Chapter 9.21

[6] The North West of England Plan Regional Spatial Strategy to 2021 – Page 104, Chapter 9.21

[7] The North West of England Plan Regional Spatial Strategy to 2021 – Page 178, Appendix RT

[8] The North West of England Plan Regional Spatial Strategy to 2021 – Table 8.1

[9] National Travel Survey – 2002 (revised July 2004) – Page 17

[10] PPG (Planning Policy Guidance) 13 Transport – March 2001, paragraph 75

[11] PPG (Planning Policy Guidance) 13 Transport – March 2001, paragraph 78

[12] Liverpool Unitary Development Plan – Supplementary Planning Guidance Note 8

[13] Guidance on Transport Assessment – March 2007 – Department for Transport – Chapter 1.1