



## **Chapter Eight TRANSPORT AND ACCESS**

### **INTRODUCTION**

**8.1** The development of a site which has been vacant for many years on an industrial estate which has a good deal of spare capacity will naturally bring a shift in the transportation flows of the immediate area, especially when the operation requires a constant feedstock to be brought to site, as well as staff to operate it. This chapter of the Environmental Statement will therefore consider the potential impact of the changing traffic movements which will be required to facilitate the proposed Enviroparks operation.

#### **Transport policy and strategy**

**8.2** The Welsh Assembly Government aims to extend choice in transport and secure accessibility in a way which supports sustainable development by encouraging the establishment of an integrated transport system which is safe, efficient, clean and fair. In accordance with Planning Policy Wales<sup>(1)</sup>, this will be achieved through integration:

- within and between different types of transport;
- between transport measures and land use planning;
- between transport measures and policies to protect and improve the environment; and
- between transport measures and policies for education, health, social inclusion and wealth creation.

**8.3** Land use planning can help to achieve the Assembly Government's objectives for transport through:

- reducing the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling;
- locating development near other related uses to encourage multi-purpose trips and reduce the length of journeys;
- improving accessibility by walking, cycling and public transport;
- ensuring that transport is accessible to all, taking into account the needs of disabled and other less mobile people;
- promoting walking and cycling;
- supporting the provision of high quality public transport;
- supporting traffic management measures;
- promoting sustainable transport options for freight and commerce;
- supporting sustainable travel options in rural areas;
- supporting necessary infrastructure improvements; and
- ensuring that, as far as possible, transport infrastructure does not contribute to land take, urban sprawl or neighbourhood severance.



**8.4** Planning Policy Wales also notes that Local Authorities should utilise available powers to reduce the need to use trunk roads and other through routes for short, local journeys, and identify policies and proposals relating to the development of other transport infrastructure and related services. The strategic significance of freight access to industry and commerce should also be taken into consideration. Wherever possible, planning authorities are expected to promote the carriage of freight by rail, water or pipeline rather than by road, and should consider which routes are most suitable for use by road freight, encouraging the location or relocation of distribution and operating centres to sites which have good access to these routes.

**8.5** Despite not being located in the immediate vicinity of good public transport links, the proposed Enviroparks development on the Hirwaun Industrial Estate supports several of these objectives. Due to the nature of the waste materials being brought to site as feedstock, the most appropriate form of transport is along the road network, enabling a variety of collection containers (e.g. bins and skips) and vehicles (e.g. refuse collection vehicles and lorries) to transport material to the site. As such, it is imperative that the facility is located close to a good road network, and the chosen site on the Hirwaun industrial estate is situated approximately 1.7 km from the main A465, providing an east-west road network through south Wales, and direct access to the A470 for a north-south route. The on-going extension to the A465 promotes this road as a main route through south Wales, and as a dual carriageway it will be ideally suited to the transportation of freight, whilst enabling the continued use by other vehicles.

**8.6** Although waste is to be sourced from the local region, deliveries will not necessarily constitute 'short, local journeys' and the main trunk roads will be employed for these journeys wherever possible, keeping large and heavy goods vehicles off the smaller road network. However Enviroparks also aim to employ local people and promote sustainable travel options through the use of a transport plan, and thereby hope to reduce dependency on the main road networks for a proportion of staff. Staff travelling from the immediate vicinity may avoid the need to travel for any great distance on the trunk roads, however the main route into the Hirwaun industrial estate, and indeed that which will be used by all HGVs, will be from the roundabout of the A465 / A4059 / A4061.

**8.7** The following points should be considered by any development application. What are:

- the impacts of the proposed development on travel demand;
- the level and nature of public transport provision;
- accessibility by a range of different transport modes;
- the willingness of a developer to promote travel by public transport, walking or cycling, or to provide infrastructure or measures to manage traffic, etc
- the environmental impact of both transport infrastructure and the traffic generated; and
- the effects on the safety and convenience of other users of the transport network?



**8.8** These issues have been addressed through the production of a Transport Assessment, which appraises the travel demand and impact, and has provided the basis for the production of a Transport Plan. These documents, which inform this chapter, are presented in volume 2 of the ES (appendices).

**8.9** The South East Wales Transport Alliance (Sewta) draft Regional Transport Plan<sup>(2)</sup> (RTP) was released for consultation in July 2008, and will replace the Local Transport Plans once the final document is issued. This requirement for a regional approach to transport planning reflects the need for cross-boundary issues to be managed in a regional way.

**8.10** The RTP has also been developed within the context of the Wales Transport Strategy (WTS) outcomes and themes, and the five over-arching priorities that provide additional strategic direction for work towards the long term outcomes, which are:

- Reducing greenhouse gas emissions and other environmental impacts;
- Integrating local transport;
- Improving access between key settlements and sites;
- Enhancing international connectivity; and
- Increasing safety and security.

**8.11** The RTP vision is to provide a modern, integrated and sustainable transport system for South East Wales that increases opportunity, promotes prosperity and protects the environment; where public transport, walking, cycling and sustainable freight provide real travel alternatives.

**8.12** Sewta's priorities build on the vision of the plan. They tackle main problems within the Sewta group, of which Rhondda Cynon Taf County Borough Council (RCT) is a member, and they set the general direction of the RTP, as follows:

- To improve access to services, facilities and employment, particularly by public transport, walking and cycling;
- To provide a transport system that increases the use of sustainable modes of travel;
- To reduce the demand for travel;
- To develop an efficient and reliable transport system with reduced levels of congestion and improved transport links within the Sewta region and to the rest of Wales, the UK and Europe;
- To provide a transport system that encourages healthy and active lifestyles, is safer and supports local communities;
- To reduce significantly the emission of greenhouse gases and air pollution from transport;
- To ensure that land use development in South East Wales is supported by sustainable transport measures;
- To make better use of the existing transport system; and
- To play a full role in regenerating South East Wales.

**8.13** The preferred strategy requires a balanced programme of investment and support for all modes of travel. Three 'Strategic Opportunity Areas' (SOAs) have also been identified offering potential regional benefits from their sustainable development. These include the development linked to the dualling of the Heads of the Valleys Road (A465) and in being identified as a SOA greater coherence can be brought to the development.

**8.14** Key Sewta policies identified in the RTP which could impact on or be impacted by the proposed Enviroparks development are as follows:



**8.15 Policy PL1:** Sewta will improve public transport links between the WSP key settlements and Cardiff and Newport, and to other WSP key settlements and equivalent towns and cities outside the Sewta area.

**8.16 Policy PL2:** Sewta will improve public transport connections between the key settlements and their hinterlands.

**8.17 Policy PL4:** Sewta will seek, through the Local Development Plans, supplementary transport planning guidance and development control processes, to establish a pattern of land use that reduces the need to travel, and maximises the potential for sustainable transport infrastructure and services. Sewta will seek the refusal of schemes which will adversely affect transport networks, or which will conflict with the objectives, policies and proposals of the RTP.

**8.18 Policy WC1:** Sewta will promote infrastructure to encourage walking and cycling.

**8.19 Policy SC2:** Sewta will promote a reduction in the number of unnecessary journeys via prompting trip linking, encouraging home- working and teleconferencing, and promoting car sharing activities and clubs.

**8.20 Policy SC4:** Travel Plans: Sewta will target business and other organisations to deliver travel plans, and to encourage use of public transport and a reduction in car travel (particularly single occupancy car travel).

**8.21 Policy SC5:** Sewta will prepare and promote regional travel planning best practice advice and guidance.

**8.22 Policy SC6:** Personalised Travel Plans: Sewta will improve marketing of personal travel choices, through PTI Cymru and personalised travel planning.

**8.23 Policy SC7:** Sewta will seek to ensure, through Local Development Plans, Supplementary Planning Guidance, and development control processes, that all significant development proposals are accompanied by travel plans that meet best practice standards. It will seek to ensure that all associated planning permissions are subject to conditions or agreements that will ensure that effective processes are in place for approval, implementation and monitoring.

**8.24** Sewta intends to invest heavily in alternative modes of travel but car traffic (and lorry freight) will continue to dominate the transport scene. Sewta accepts that some new highway investment may be necessary but the thrust of Sewta's highways policy is to protect what we already have and make best use of it.

**8.25 Policy RA2:** Sewta will plan to further extend the rail system through selected line and station reopening.

**8.26 Policy BU5:** Sewta will work with operators to develop a bus network and an infrastructure operated to common standards.

**8.27 Policy RU1:** Sewta will seek, through a regional road user charging scheme, to reduce the demand for travel by car and to avoid increases in traffic that might otherwise occur.



**8.28** The RCT Local Development Plan Preferred Strategy<sup>(3)</sup> (LDP) published in January 2007 notes that among the objectives of the LDP, RCT aim to reduce the need to travel and promote more sustainable modes of transport. Strategic Policy SP 3 identifies that the development and use of land will be determined on the needs of the area, coupled with the protection and enhancement of the environment, '*environmental capacity, prudent use of resources, transportation and infrastructure considerations*,' a mixture of uses, high design standards and the minimisation of energy consumption.

**8.29** SP 9 considers transportation specifically and states that:

*'The Council will seek to implement transportation schemes and initiatives which will achieve sustainable regeneration, enhance the public realm, improve the economy, reduce congestion, and improve road safety by:-'*

- a) Reducing the need to travel by private car;*
- b) Maintaining and improving accessibility for all sections of the community;*
- c) Supporting transportation schemes which benefit the economy of the County Borough whilst seeking to minimise impact on the environment;*
- d) Supporting and enhancing public transport; walking and cycling provision; and achieving integration of all modes of transportation;*
- e) Minimising adverse effects of traffic and parking on local amenities and the environment as a whole.'*

**8.30** SP 9 is supported by targets to promote sustainable forms of transport and to reduce the need to travel, indicators of which are cited as the number of new developments with travel plans and the percentage of people living and working within RCT. The Hirwaun area is seen as a strategic location due to its good links to the M4, and good access via the A4059 and the A465. It is also noted that the bus network runs through the Hirwaun area, and although there is currently no railway station in Hirwaun, the infrastructure is in place.

**8.31** The Brecon Beacons National Park Authority (BBNPA) also supports sustainable development and transport opportunities, although the largest impact and hence concern of the Authority is the impact of tourism travel.

**8.32** Planning Policy Wales Technical Advice Note 18<sup>(4)</sup> identifies that the land use planning system can impact on travel patterns by guiding the location, scale, density and mix of new development and controlling changes of land use. In this way, transport and land use interact and can have an effect on the emission of greenhouse gases, the health of the local population, social inclusion and the costs of congestion. Changes in travel patterns brought about by land use change can ultimately significantly reduce the need to travel and ensure that effective use is made of public transport options, walking and cycling. As a result, planning authorities should ensure that their development plan strategy is compatible with the aim of reducing the need to travel and provides greater choice of means of transport other than the private car.

**8.33** Maximum car parking standards should be used at regional and local level as a form of demand management. Evidence based on the likely effects of different parking levels for each land use should be considered, including consideration of the relative locations of land uses and their consequent accessibility. Required parking for those with disabilities should be fully specified in any adopted parking strategy in terms of space dimensions and proportions of the total number of spaces.

**8.34** In determining maximum car parking standards for new development, regard should be given to:

- public transport accessibility and opportunities or proposals for enhancement;



- targets and opportunities for walking and cycling;
- objectives for economic development including tourism;
- the availability in the general area of safe public on- and off-street parking provision; and
- potential for neighbouring or mixed use developments sharing parking spaces, for example at different times of the day or week.

## METHODOLOGY

**8.35** The assessment of transport and access issues for the proposed development has been prepared with consideration to the Institution of Highways and Transportation Guidelines for Traffic Impact Assessment; and the Institute of Environmental Assessment Guidelines for the Environmental Assessment of Road Traffic.

**8.36** Additional guidance has been drawn from the CSS Parking Guidelines, which are due to be adopted.

**8.37** A comprehensive Transport Assessment (TA) has been produced and considers the current and committed transport infrastructure, its availability and use (Appendix 2). The requirements of the development are then detailed prior to an assessment of the impact that these needs will have on the current facilities. Finally, an assessment of the likely environmental effects of the proposal is presented.

**8.38** An integral part of the TA is the provision of a Transport Plan, which identifies a strategy to promote sustainable transportation options for the development. Details of committed and proposed programmes, and infrastructure at the development are provided. The Transport Plan is presented in Appendix 6 of the TA.

**8.39** Prior to undertaking the TA, detailed scoping was undertaken with RCT. Meetings were held with both RCT and the BBNPA, with additional scoping and discussion subsequently undertaken with RCT. Capita Glamorgan Consultancy (CGC) has also been involved with discussions, as RCT's representative for TA auditing. The completed TA scoping document, and an initial response from CGC on behalf of RCT is provided in Transport Appendix 1 (ES volume 2).

**8.40** RCT raised the following points in relation to the requirements of the TA:

- Peak period surveys are to be undertaken at five roundabouts in Hirwaun, and automatic traffic count (ATC) data to be obtained from Fifth Avenue in order to inform a Stage 1 road safety assessment;
- Trip generation to be calculated for the a.m. and p.m. weekday peak hours;
- The TA should include full details of trip generation and distribution and provide information on how this is assessed;
- Consideration of the modal split of traffic should be included with information on any impact this may have;
- A statement should be included in the TA noting that the Visitors Centre will be accessed outside of the peak hours and therefore is not included in the peak hour traffic flows;
- A percentage increase assessment should be undertaken to confirm the scope of the study and identify the impact at junctions at the arm most affected;



- Allowance will be made for HGV's as diverted traffic where they already exist on the network;
- Staff and servicing vehicles will be calculated as new traffic;
- Plans to be provided showing a.m. and p.m. peak hour traffic flows for the Opening Year and Design Year, with and without the development traffic;
- Junction assessments (ARCADY) are required at the five roundabouts to be surveyed;
- The proposed site access junction on Fifth Avenue in the current Master Plan, which forms a staggered priority junction will not be acceptable to RCT and is to be reviewed by the Developer;
- The principals of a Travel Plan are to be included;
- WAG to be informed of the proposals by the Developer and RCT.

**8.41** Concerns raised by the Highways Development Control and Adoptions Manager of RCT were as follows:

- Some routes on the network are already suffering congestion, and thus any proposal to contribute to traffic flows along these networks would need to be investigated and may require mitigation;
- Link data may already be available, however RCT would expect counts to be facilitated at key junctions;
- A proposed site access junction on Fifth Avenue (as shown on the site plan at the time of consultation) forms a staggered priority junction and will not be acceptable to RCT.

**8.42** In addition, public exhibition events have been held in the area local to the proposed development, in order to fully inform interested parties and to receive comments on the proposals. During the public engagement events, the following transport and access concerns were raised:

- How many vehicles will be attending site;
- Which route will they take – specific concern that HGVs would use Rhigos Road to travel west from the site;
- What will the resultant levels of air pollution and / or nuisance be?

## BASELINE ANALYSIS

### The current situation

**8.43** The proposed Enviroparks development will be located off Fifth Avenue on the Hirwaun Industrial Estate, Hirwaun, Aberdare. The Hirwaun Industrial Estate has seen the closure of the Tower Colliery during 2008, and generally appears to be under utilised at present. The nearest neighbour of the site is Eden Industries located to the east with Dwr Cymru Welsh Water located to the west across Fifth Avenue. Other units on Fifth Avenue largely appear vacant or are currently in minimal use.

**8.44** The transport network in the area largely consists of the highway linkages, although other facilities are available. The local road network is good, with the A465 Heads of the Valleys road and the A470 providing routes for national through traffic across Wales.

**8.45** The nearest railway station to Hirwaun is at Aberdare, approximately 9 km from the proposed development, although other stations are available at Treherbert and Merthyr Tydfil. Each of these lines originates in Cardiff. The Aberdare railway station is served by a



bus to Rhigos which passes the Hirwaun Industrial Estate. Trains run to and from Cardiff and Aberdare or Treherbert half hourly during week days, and hourly to Merthyr Tydfil.

**8.46** Limited buses pass through the industrial estate, and those which do would not currently be available to the proposed shift workers, with changes of the 12 hour shifts being at 06:00 hours and 18:00 hours.

**8.47** Pedestrian footpaths and streetlights are available within the estate and out towards Rhigos, however these do not extend up Rhigos road towards Hirwaun. Sustrans are working towards extending the Valleys Network, and the proposed route will include a section from Aberdare and through Hirwaun, onto Rhigos and beyond. This route should be in place within 5 years.

### The development

**8.48** The proposed development will accept waste materials for recycling and processing, the material becoming a feedstock for the site energy producing processes. All of the incoming material and any out-going products or residual waste will be transported along the road network. This is due to:

- The requirement for the material to be collected and transported in suitable containers, e.g. skips, lorries or refuse vehicles;
- The availability of good highway links for deliveries, avoiding the requirement to use smaller roads on the network;
- The lack of other suitable freight facilities in the area.

**8.49** Depending on the nature of the waste, the vehicle trips created by the movement of feedstock to the site will be diverted from other facilities, however for the purpose of the TA, all trips are assumed to be new to the network. This ensures that the TA provides a robust assessment of the worst case traffic impacts from the development.

**8.50** The development will result in a total number of daily traffic movements of 428, for both the Enviroparks energy producer and the high energy user. These are two way vehicle movements and account for all deliveries and staff. Consideration has been given to the likely distribution across the highway network, based on information provided by Enviroparks. Although some vehicles will travel from the west of the site along the A465 towards Neath, it is anticipated that most will originate from, and return to, the east.

**8.51** Staffing distribution is currently unknown, although an estimated split has been provided for the purpose of the TA. This suggests that staff will come from areas such as Neath, Rhigos, Penderyn, Pen-y-Waun and Hirwaun, as well as from slightly further afield, from areas such as Merthyr Tydfil and Aberdare. Local staff are expected to use local routes to and from their place of work, however all delivery and collection vehicles will be strictly instructed to enter and exit the industrial estate via the nearest A465 junction. The one exception to this will be local refuse collection vehicles which currently use alternative routes and would continue to do so.

**8.52** Facilities are expected to operate on a 24 hour, 7 day week basis, although vehicle movements are expected to occur between 05:00 and 19:00 hours. The earliest and latest movements between these hours will be associated with staffing only, material deliveries and product / waste removals only taking place between 08:00 and 18:00 Monday to Friday.

**8.53** Assuming the site is operating at full capacity, a maximum of 214 vehicles will visit the Enviroparks site daily. These will consist of a total of 105 staff trips and 109 refuse



collection vehicles (RCVs) or HGVs. As noted above, this equates to a total of 428 movements.

**8.54** Weekend movements will be greatly reduced, consisting of two shifts (up to 64 staff and therefore 128 vehicle movements), and 13 deliveries (26 movements). The trip rates and distribution created by the development are detailed within the TA and assumes that all movements are by road.

**8.55** All vehicles will have to enter the site via the estate roads. The estate roads are in relatively good condition and are currently under utilised, ensuring that the additional flows created by the development can be easily accommodated. The junctions have been designed for full and easy access by staff directly into the car park, and deliveries into the waiting area. A cycle lane is also provided at the main entrance to the site.

**8.56** The estate has pedestrian footpaths and street lighting, and thus there is the ability for some staff to walk to work, although it must be noted that there is no full footpath out towards Hirwaun, with the path stopping at the entrance to / exit from the Industrial Estate. The nearest bus stops to the proposed development site are located on Rhigos Road, approximately 700 m from the site.

**8.57** The only proposed modifications to the public highway comprise the provision of three new site access points, two from Ninth Avenue and one from Fifth Avenue. As an operational site, the proposed development will not generally be open to the public, and the site will be fenced and, as required, gated. Security facilities will be provided and the site will be a 24 hour, 7 day week process, thus staff are always on site.

**8.58** The site does include a Visitors Centre which will be used for educational purposes, with groups from schools, colleges and other interested parties welcome to visit the site by arrangement, for tours and information on the processes. It is anticipated that these visits may occur up to once per fortnight, and suitable parking facilities for a coach or minibus is available directly at the Visitors Centre entrance.

**8.59** The site layout provides suitable and sufficient parking for staff and visitors, and the calculation for this is presented in the TA. Adequate provision of disabled parking spaces has been made available to accommodate staff or visitors who may require additional room to access or leave their vehicle, and these are located at the nearest point to the building they serve. Disabled parking spaces are available by the Visitors Centre / Offices, the Biomax plant and the high energy users building. All parking is in the immediate vicinity of a key building, predominantly the Visitors Centre / offices, although the Gatehouse and Biomax pants have dedicated parking. The high energy user also has dedicated parking.

**8.60** The reception area will be clearly signed from the parking areas. Dropped kerbs are available along the walkways of the site, and consideration will be given to the internal layout of buildings to facilitate access to all areas by all who may require it, with a lift to access the first floor of the Visitors Centre / Office building. A disabled toilet and shower room is also available.

**8.61** In the event of an emergency, access to and egress from the site will be strictly controlled, and the site emergency plan will be implemented. Access to the site by the emergency services will be facilitated quickly through any one of the three junctions which adjoin the public highway. A maintenance / emergency lane is also located along the southern edge of the anaerobic digestion tank farm, and this can be used by the emergency services as required. A full fire and evacuation alarm system will be in place and special



consideration will be given to any disabled staff or visitors which may require assistance to vacate the premises.

### PREDICTION OF POTENTIAL IMPACTS

**8.62** The operation of the Enviroparks site is expected to require 214 vehicle trips per week day, which equates to 428 vehicle movements. The precise nature of the high energy user has not yet been finalised and therefore a reasonable judgement has been made on the likely staffing and transport requirements of the unit. Although there is some uncertainty associated with this, the assessment has been undertaken on the basis that the energy production of the Enviropark is working at maximum capacity, and therefore can be considered robust.

**8.63** The TA has considered the likely impact on the network based on the proposed vehicle movements, with all materials and staff movements considered as additional trips. Although all staff have been assumed to travel in single occupancy cars, the promotion of a travel plan by Enviroparks will promote alternative travel options, and thus this should present a worst case assessment.

**8.64** Count data was obtained from 2007 for key link routes, and new counts were undertaken at 5 strategic junctions in 2008. Junctions were identified through discussion with RCT, and represent those in the immediate vicinity of the development and some which, although not major routes for the development and will likely carry staff only, are already known to be suffering from congestion. Count data was therefore obtained from:

- A The Estate Roads; Junction with Fifth Avenue and Main Avenue;
- B A4061 and Hirwaun Industrial Estate Junction;
- C A465 and A4061 Junction;
- D A465 and A4059 Junction; and
- E A4059 and B4275 Junction.

**8.65** Discussion regarding committed development which may require consideration identified that although the land to the south of Hirwaun and Pen-y-Waun has been highlighted for development, there is no firm committed plan for the land at this stage. Therefore the growth rates applied as a matter of course to the count data should be adequate to consider any potential development of this area. There were other committed developments identified that upon investigation, were either already in place, or were in a location where the proposed development was unlikely to have any significant impact, or would likely add most vehicles to the roads outside of the peak development movement periods.

**8.66** The trip rates of the development were modelled against count data from key junctions, which had been identified where the percentage increase in movements created by the development over the baseline was 5% or more. The ARCADY model was used to predict the impact on the flow of traffic at the junctions. All of the junctions were shown to have sufficient capacity and traffic queues were predicted to consist of a maximum of 2 vehicles at peak times. Modelling considered the base year (2008), opening year (2010) and an operational year in the future (2025).

**8.67** Once the sufficiency of the network had been proven, an assessment of the likely environmental impacts of the transportation from the proposed development was considered. From the checklist of environmental effects requiring consideration in a transport



assessment, those of significance for this development were considered to be noise and vibration, driver and pedestrian delay and safety, and air pollution.

**8.68** A noise assessment follows in ES Chapter 10, and an assessment of the predicted effects on local air quality is presented in ES chapter 11.

**8.69** Driver and pedestrian delay, as demonstrated by the modelling, are considered insignificant. The slight increase of queuing at the A465 junction in future years (to a maximum of 2 vehicles) may assist in pedestrian crossing of the junction, as vehicles are required to slow more or stop at the junction.

**8.70** ARCADY modelling has identified that the junctions have sufficient spare capacity and thus the increase in traffic loading should not place un-due stress on drivers or the infrastructure.

**8.71** The proposed development will result in an increased traffic loading on the local highway network, and the majority of the movements will be undertaken during the day. The potential does exist for an increase in collisions, based purely on the additional volume of traffic. However, there is no proposed change to the highway layout apart from the creation of three access points to the site. These will be subject to a road safety audit, and all requirements for safe access and egress will be met

**8.72** As there is no proposed change to the highway layout, the impact on pedestrian safety will be minimised. However not all areas are served with pedestrian walkways to and from the proposed development, and the increase in vehicle movement close to the development site, may mean that pedestrians have to take additional care to consider vehicles on the roadways. The modal split of traffic is insignificant and thus there is unlikely to be an increase in pedestrian fear or intimidation. The impact on pedestrian safety can therefore be considered negative but minimal.

## MITIGATION

**8.73** Enviroparks intended that all RCV and HGV movements would use the main A465 to the junction with the A4059 and A4061 (unless as part of their route, an RCV travels along the A4061 from the Rhondda Valley). However, public consultation revealed local residents' concerns that vehicles may travel towards Rhigos and on to the A465 in the west. In response, Enviroparks will offer a commitment that neither RCV or HGV will travel along that route for the purpose of accessing or leaving the site. Whilst the traffic generation of the proposed development is relatively small when considering the available highway links and capacity in the area, mitigation measures will control vehicle access routes into the industrial estate in order to minimise the chance of nuisance to local residents.

**8.74** Although within the TA it has been assumed that all staff will travel by in single occupancy cars, the promotion of more sustainable transport options through the Transport Plan should reduce the impact on the highways and the site junctions.

**8.75** The Transport Plan identifies that once operational, the Enviroparks site will promote car sharing, alternatives to car use and walking / cycling buddies. With staff facilities including 40 cycle stores and showers with changing facilities, this will encourage alternative methods of travel. It is notable that provision of a Sustrans cycle route running directly into the Hirwaun Industrial Estate is projected.



**8.76** In addition, consideration will be given to the extension of the current bus service so that it can be used by shift workers, or the provision of a staff shuttle bus. Further investigation into these options will be necessary once the site is operational, and an assessment can be made of the needs of staff, specifically their home location, and the available facilities at the time.

### EVALUATION OF RESIDUAL EFFECTS

**8.77** The residual effects of the proposed development have been defined using the following significance matrix:

**Table 8.1 Significance matrix for the assessment of transport**

<i>Significance of effect</i>	<i>Description of impact</i>
Significant	Significant negative impact on the highway or local environment
Moderate	Moderate negative impact on the highway or local environment
Minimal	Small negative impact on the highway or local environment
Neutral / Negligible	Impact barely perceptible

**8.78** Although increases in the traffic flows will occur, these have largely been calculated as less than 5% of the current or future flows on the network. Where an increase of more than 5% was calculated, modelling work has identified that the capacity of the junctions is still suitable and sufficient. Thus the overall effect on the road network can be considered **Minimal**.

**8.79** Driver and pedestrian delay have been considered and the effect is assessed as **Negligible**.

**8.80** Whilst improvements to the local infrastructure (A465 dualling) should lead to long-term improvements in road safety, increases in traffic movements may slightly increase the risk of accidents associated with traffic, involving either drivers or pedestrians. A **Minimal** effect on road safety through increased vehicle movements associated with the development thus remains. It is important to note that for the purpose of achieving a robust assessment, the modelling added all of the proposal's predicted vehicle movements to the network, without allowing for existing trips that would be diverted. Road safety audits will ensure that the design of the site access is suitably safe.



## REFERENCES

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