



Midland Metro

(Wednesbury to Brierley Hill and Miscellaneous Amendments) Order

TRANSPORT AND WORKS ACT 1992

Environmental Statement Non-Technical Summary



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THE WEDNESBURY TO BRIERLEY HILL SCHEME

Centro, the West Midlands Passenger Transport Executive (WMPTE), is promoting an extension to the existing Line 1 of the Midland Metro light rail system, which runs from Snow Hill to Wolverhampton. The extension will run for approximately 11 km from Line 1 at Wednesbury to Great Bridge, Horseley Heath, Dudley Port, Dudley town centre and Merry Hill, before terminating at Brierley Hill town centre. The alignment follows a combination of a mothballed heavy rail corridor, development land and existing highway. The scheme has been designed to share the existing South Staffordshire Railway line, enabling the construction, operation and maintenance of the light rail system and also, accommodating the re-introduction of freight services by the Strategic Rail Authority (SRA) and Network Rail sometime in the future.

However, the reintroduction of any future heavy rail services do not form part of the proposed Wednesbury to Brierley Hill scheme, and are not assessed in the Environmental Statement for the scheme, or in this Non-Technical Summary.

The route of the proposed Wednesbury to Brierley Hill scheme is illustrated in Figure 1.

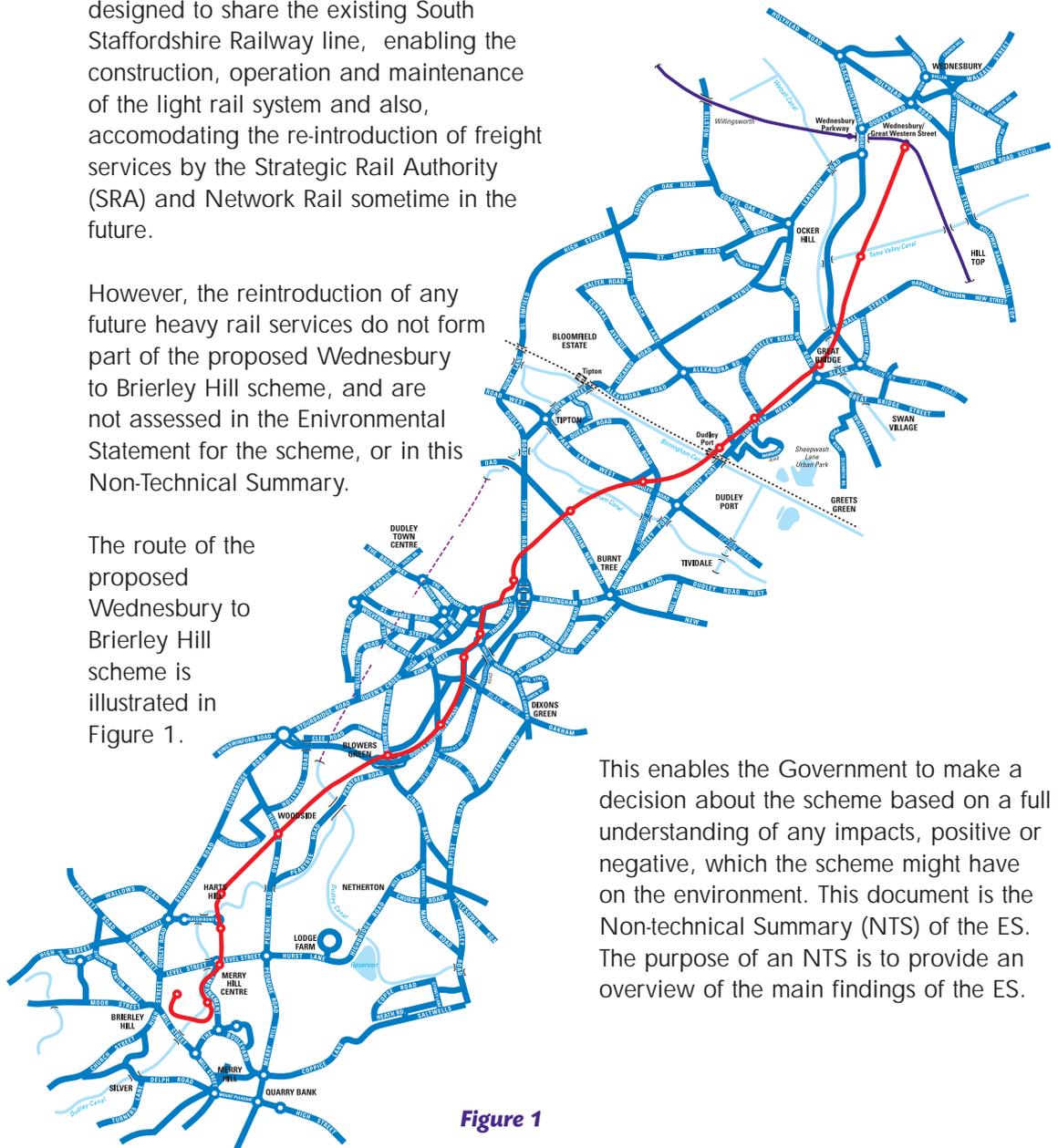


Figure 1

ABOUT THIS DOCUMENT

In order to obtain the necessary powers for the scheme to be constructed, Centro is applying to the First Secretary of State for a Transport and Works (TW) Order. As part of this application process, Centro is required to provide the Secretary of State with an Environmental Statement (ES) setting out the environmental effects of the scheme.

This enables the Government to make a decision about the scheme based on a full understanding of any impacts, positive or negative, which the scheme might have on the environment. This document is the Non-technical Summary (NTS) of the ES. The purpose of an NTS is to provide an overview of the main findings of the ES.

THE NEED FOR THE EXTENSION SCHEME

In the West Midlands, Midland Metro is seen as a positive solution to existing and future transportation problems and forms an integral part of West Midlands Passenger Transport Authority (WMPTA) and Centro's 20 Year Public Transport Strategy for the West Midlands.

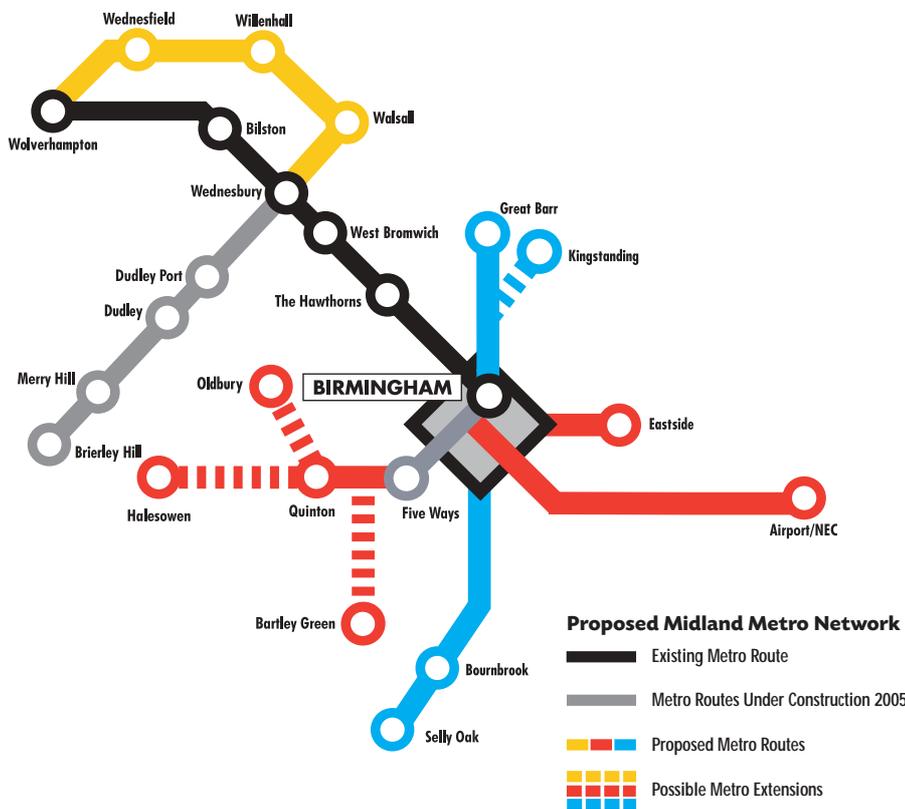
The proposed Wednesbury to Brierley Hill scheme is part of the Midland Metro Network development and will provide a clean, quick and high frequency public transport system to Birmingham city centre, Wolverhampton city centre via the existing Line 1, Dudley town centre, The Waterfront, Merry Hill and Brierley Hill town centre. The scheme will also provide interchange with rail services at Dudley Port Station and bus services along the route including Dudley Bus Station.

The Wednesbury to Brierley Hill scheme is one of two proposed extensions to the existing Line 1 network currently being promoted. The Midland Metro Birmingham City Centre Extension is being promoted under a separate Transport and Works Order application, and the proposed route runs from the north west of Snow Hill Station (where line 1 currently terminates) at St Chad's Circus, through the city centre terminating on Hagley Road, Edgbaston

In addition, future extensions to Wolverhampton via Walsall, Great Barr or Kingstanding, Birmingham International Airport via the A45 (Coventry Road) and Halesowen or Quinton via Selly Oak, with possible spurs to Bartley Green, Oldbury and Birmingham Eastside, are currently under consideration.

The Midland Metro network, which includes the existing Line 1 and proposed future route is illustrated below in Figure 2.

Figure 2



The need to improve public transport accessibility to help foster economic growth and employment opportunities in the area is also an important driver for the scheme. It is envisaged that the scheme will support and stimulate regeneration promoted by Advantage West Midlands, Sandwell Metropolitan Borough Council and Dudley Metropolitan Borough Council. In particular, the scheme will support and assist the ongoing programme of regeneration initiatives for Golds Hill, Dudley town centre and the wider Brierley Hill area.

CHOOSING A ROUTE FOR THE EXTENSION SCHEME

Overview

Parliamentary Powers for a scheme were secured for the majority of the route previously in the Midland Metro (No. 2) Act 1992, which authorised a route from Wolverhampton via Walsall and Wednesbury to Brierley Hill. Powers for the section of the line from Wolverhampton via Walsall were, however, relinquished in 1999. Powers for the remainder of the route, between Wednesbury and Brierley Hill, were retained but expired in March 2002.

In developing the scheme, alternatives were considered for both transport mode and route alignment.

Transport Mode

Two alternatives to light rail were considered, wire-guided trolley buses/conventional buses, and a heavy rail scheme.

Bus schemes were discounted because they would require an interchange with the existing Line 1 of the Midland Metro and more complicated ticketing arrangements. In addition, it was considered that the lower levels of comfort would attract fewer motorists. Buses also have a lower passenger capacity and their journey time is affected by congestion on the roads. Bus schemes were also considered to be less attractive in terms of accessibility for disabled people.

Heavy rail schemes were discounted because they would require an interchange with the existing Line 1 of the Midland Metro and more complicated ticketing arrangements. In addition, it was considered that they would reduce options for future expansion of the Midland Metro Network, and not be able to penetrate Dudley and Brierley Hill town centres.



Midland Metro Line 1 vehicle in operation

It was also considered that they would attract less motorists due to the lower frequency of service and be less attractive in terms of accessibility for disabled people.

In summary, the study of modal alternatives concluded that the proposed light rail scheme was more sustainable than bus or heavy rail alternatives because it would attract more car users. The preferred scheme was also considered to be a more effective catalyst for future development and urban regeneration in the corridor.

Route Selection

Route options have been considered for the following sections:

- *in the Wednesbury area (providing the connection to the existing Line 1);*
- *the existing rail corridor (Wednesbury to Dudley);*
- *Tipton Road to Castle Hill, Dudley;*
- *Dudley town centre;*
- *the existing rail corridor (Dudley to Round Oak Rail site);*
- *Round Oak Rail site to the Waterfront development site; and*
- *Merry Hill to Brierley Hill.*



The Preferred Route

The preferred route corridor for the Wednesbury to Brierley Hill scheme was selected as it offered a number of significant advantages:

- *The corridor utilises a mothballed rail alignment (the South Staffordshire Junction Line and the Oxford, Worcester and Wolverhampton Line) for the majority of its length.*
- *Compared with a new corridor, the use of an existing rail alignment reduces the landtake necessary for the construction and operation of the scheme and also minimises impacts on other modes of transport.*
- *The corridor is well integrated into both current and future land uses, minimising impacts on existing residential and commercial areas.*
- *The scheme provides a high quality, fast and frequent public transport system to a number of areas where there is currently limited public transport accessibility and services.*
- *It is also well located to provide improved public transport facilities to existing town centres and future development sites.*

A DESCRIPTION OF THE EXTENSION SCHEME AND ITS OPERATION

The Route

Where the existing rail corridor is utilised, it is proposed that the alignment be comprised of two tracks for Midland Metro and a combination of single and double track for future heavy rail services. In two areas, however, the corridor width only allows for a single Midland Metro track and single heavy rail track. This occurs where the alignment passes under the West Coast Main Line/Birmingham Canal at Dudley Port and along the Parkhead Viaduct. In addition, it will be necessary in some locations to widen the existing railway formation to accommodate Midland Metro and the heavy rail alignment. Similarly, where the alignment passes under or over an existing bridge structure, works may be required to ensure that that structure is sufficient to accommodate both the heavy rail alignment and the Wednesbury to Brierley Hill scheme.

Where it is necessary to widen the existing railway formation on an embankment, new retaining walls will be constructed.

Where the alignment is located within a cutting, retaining structures using gabions will be constructed. Similarly, where the alignment passes under or over an existing bridge structure, works may be required to ensure that that structure is sufficient to accommodate both the heavy rail alignment and the Wednesbury to Brierley Hill scheme.

A security fence will be erected to separate the Midland Metro alignment and tram tracks from any future heavy rail alignment. In addition, measures will be put in place at stops to deter pedestrians from gaining access to the heavy rail alignment for health and safety purposes.



A description of the route of the scheme is provided below, dividing the route into four main sections:

- Existing rail corridor – Wednesbury to Tipton Road;
- Dudley town centre – Tipton Road to Blowers Green Road;
- existing rail corridor – Blowers Green Road to Pensnett Canal; and
- Merry Hill – Pensnett Canal to Brierley Hill.

Existing Rail Corridor - Wednesbury to Tipton Road

The route of the proposed extension scheme leaves Midland Metro Line 1 at the existing depot at Wednesbury. A new structure will be required to carry the proposed extension from Line 1 down to the level of existing railway corridor and over the depot access road. The alignment then crosses the River Tame and the Tame Valley Canal. A provisional stop is located adjacent to the Tame Valley Canal at Gold’s Hill crossing. The construction of this stop will be dependent on developer contributions, although the powers to build it will be included in the TW Order.



The existing Midland Metro Line 1 Depot at Wednesbury

The alignment then runs parallel to the River Tame, before crossing under The Black Country New Road, over the Walsall Canal and under New Road. The proposed Great Bridge stop, which is accessed via lifts and stairs to New Road, is located to the east of New Road.

Further west, the route crosses under Horseley Road with the stop located west of Horseley Road. A proposed park and ride site is situated between Horseley Road and Railway Street .

The alignment then crosses under Lower Church Lane and Park Lane East and under the West Coast Main Line and Birmingham Canal aqueduct. The Dudley Port stop will be served by a park and ride site located to the north west of the alignment, accessed via Park Lane East.

The alignment then continues west, crossing over Coneygre Road and Sedgley Road. Sedgley Road East stop is located in this area, adjacent to the junction between Sedgley Road East and Mayfair Gardens. The stop will be accessed via lifts and stairs onto Sedgley Road East and via stairs and a ramped access to Binfield Street. The alignment then crosses the Birmingham Canal.

A stop is located north east of Birmingham New Road. The alignment then crosses Birmingham New Road.

Dudley Town Centre - Tipton Road to Blowers Green Road

This section of the alignment is generally located at ground level within the public highway boundary through Dudley town centre. The alignment leaves the railway corridor on an embankment at Tipton Road: Tipton Road stop is located in this area. The scheme crosses Tipton Road at grade and continues on an embankment through the site of the former Dudley Freightliner Depot, joining Castle Hill at the junction with Station Drive and Trindle Road. A provisional stop is located adjacent to Station Drive which is dependent on the development of the site.



The alignment then follows Castle Hill at grade, before turning south onto Birmingham Street (North). The route then continues into the existing Dudley Bus Station, where works will be required creating interchange between Metro and bus services. From this location, the scheme joins Birmingham Street (South) and proceeds onto King Street.



Photomontage of the proposed Wednesbury - Brierley Hill Scheme running along Castle Hill

The alignment continues south, on Flood Street. A provisional stop is located in this area which is dependent on the redevelopment of land at Flood Street. The alignment then crosses New Mill Street then runs parallel with the Dudley Southern Bypass along an existing purpose built corridor, with a stop located east of New Road. A park and ride site, which also forms part of the scheme, is located to the north west, adjacent to New Road.

Adjacent to Shaw Road, the scheme leaves the Dudley Southern Bypass on an embankment, and crosses under Blowers Green Road before rejoining the existing rail corridor. A stop is located at Cinder Bank east of Blowers Green Road, which will be served by a park and ride site.



Photomontage of the proposed scheme running alongside Dudley Southern By-Pass

Existing Rail Corridor - Blowers Green Road to Pensnett Canal

After rejoining the existing mothballed rail corridor, the scheme continues west, adjacent to Thornleigh Trading Estate where it rises onto an existing embankment before crossing over Dudley Canal and Parkhead Locks on the existing Parkhead Viaduct. Substantial works will be required to refurbish the viaduct.



Photomontage of the proposed scheme at Parkhead Viaduct

The alignment then continues south west, adjacent to Peartree Industrial Estate, before crossing under Pedmore Road. A stop is located to the east of Pedmore Road. A new underbridge crossing Pensnett Canal will be constructed in this area.

Merry Hill - Pensnett Canal to Brierley Hill

The scheme then leaves the existing rail corridor crossing Canal Street.

A provisional tram stop, for which powers will be sought as part of the TW Order, is located south west of the Pensnett Canal crossing, adjacent to Canal Street and will be dependent on the redevelopment of the land at Canal Street.

The route then turns east on an embankment through the former Hill and Smith site east of Round Oak Rail, before crossing the Dudley Canal on a new bridge structure.

An existing vacant engineering property east of the canal, known as the Victoria Works, will be demolished. The route then turns west and continues adjacent to Waterfront Way, before turning south between the Waterfront development and the car park that serves the site.



Photomontage of the proposed Waterfront stop

A stop is located adjacent to the main entrance to the Waterfront development. The alignment then continues south, parallel with the realigned Waterfront Way on an embankment.

The route then leaves Waterfront Way on an embankment, crossing Level Street roundabout. The alignment then continues south west between The Embankment and Dudley Canal, to the north west of Merry Hill. A stop is located in this area adjacent to the canal.

The route continues on an embankment, before crossing the Dudley Canal on a new bridge structure.

The alignment then turns west before crossing the Leisure Centre access road. The terminus stop at Brierley Hill is located on Cottage Street.

Tram Infrastructure and Stops

Tram vehicles will be similar to those operated on Line 1. Power will be transmitted to vehicles via an overhead line system from four substations.

Five possible sites have been identified:

- *Horseley Road park and ride site;*
- *adjacent to the Tipton Road stop;*
- *east of Thornleigh Trading Estate;*
- *adjacent to the Pedmore Road stop;*
- *and*
- *adjacent to Level Street, Merry Hill.*

Overhead line equipment (OHLE) will be erected. This would include suspending wires between poles or shared lighting columns located between the tracks or along the edge of the track and/or suspended from buildings.

Up to 17 tram stops will be constructed along the proposed route. Four of the stops are provisional and subject to developer contributions, although they are included in the TW Order application. Up to four park and ride sites have also been proposed for certain stops along the route at: Horseley Road, Dudley Port, New Road and Cinder Bank.

All infrastructure will be designed to comply with the Disability Discrimination Act 1995 and high quality materials and finishes will be used.

Stops will be restricted to a length of around 30 m and will be approximately 350 mm above carriageway level. Low level boarding to the platforms will allow easy access and facilitate integration into the existing streetscape.



A typical Midland Metro Line 1 Stop

Stops will consist of either a single island platform with a double canopy or two side platforms each with its own canopy.

The shelters are likely to be of a similar design to those used on Line 1, incorporating passenger information systems and Metro travel information. Stops may also contain a ticket machine, lighting and seating. Closed circuit television (CCTV) will be provided.

Depot Facility

The proposed Wednesbury to Brierley Hill scheme (and the proposed Birmingham City Centre Extension scheme) will utilise the existing depot facilities at Wednesbury, which currently serve Midland Metro Line 1. However, in order to accommodate the stabling, cleaning and maintenance of the additional vehicles associated with both extensions, it will be necessary to carry out works to the existing depot.

Service Levels

The Extension scheme is expected to operate over seven days a week, between 0600 and 2400 as detailed below:

- every six minutes between 0700 and 1900, Monday to Saturday; and
- every 10 minutes between 0600 and 0700 and 1900 to 2400, Monday to Saturday and at all times on Sunday.

The estimated journey time from Wednesbury to the terminus in Brierley Hill is 24 minutes, with 11 minutes for the Wednesbury to Dudley town centre section and 13 minutes for the Dudley to Brierley Hill section.

CONSTRUCTION OF THE EXTENSION SCHEME

Construction Activities

Once all the necessary powers and approvals have been obtained for the scheme, Centro will select a Concessionaire to design, build, maintain and/or operate the scheme. The construction activities due to take place over a period of approximately 30 months between 2005/2006 and 2008 are listed in below.

Construction Activities

-
- diversion of utilities throughout the route;
 - demolition of four existing buildings adjacent to the scheme;
 - demolition, replacement and extension of a number of bridges;
 - corridor widening;
 - piling works associated with the strengthening of existing retaining walls;
 - earthworks;
 - provision of track formation and track drainage;
 - track laying along the route;
 - landscaping;
 - construction, realignment and reinstatement of highways, footpaths and cycleways;
 - modifications to highway signalling;
 - accommodation works (eg works required to boundary walls or frontages to accommodate the tram alignment);
 - construction of over-head line electrification (OHLE) poles and building fixings and possible relocation of existing street-lighting;
 - installation of tram signalling and electrical equipment;
 - construction of substations and track paralleling huts;
 - installation of stops and park and ride sites;
 - construction of the depot extension; and commissioning.
-



Example of construction activity for tram system in Nottingham City Centre

Working Hours

Normal working hours during construction will be from 0700 to 1900, Monday to Friday, 0700 to 1300 on Saturday, with no working on Sundays or on Bank Holidays. Quiet work (eg plant maintenance) may take place outside these hours. In addition, certain works may be required outside of the normal working hours. For example, where works to the highway are required, these may be carried out outside of 0700 to 1900, or on Sundays, in order to avoid peak traffic and to minimise the effects of the works on road users. Night-time working may also be required in some areas and this will be agreed with Dudley MBC and/or Sandwell MBC as appropriate, prior to works taking place. All works will be subject to the noise control measures outlined in the Draft Code of Construction Practice (CoCP) for the project.

The requirement for night-time working has been identified in a number of areas: Birmingham New Road, King Street, Dudley Canal (North) and Dudley Canal (South).

Phasing

The construction of the scheme is expected to commence in 2005/2006 with the first service operating in 2008. The route has been split into 'work areas' in order to minimise traffic disruption during construction.

All park and ride sites have been identified as temporary work sites, and they will be in use until the construction of the scheme has been completed. The reinstatement of the works sites to form park and ride sites will include re-surfacing and access improvements, and the provision of lighting, CCTV and landscaping. This will take place upon completion of the main works. It is envisaged that these works will take around three months to complete at each site.

Temporary Land Requirements

Temporary worksites will be required during the construction of the scheme for the storage of plant and materials, and to accommodate the site offices. In selecting work sites, the following issues have been considered:

- *the extent of coverage provided for the entire alignment, so that extended haul distances are avoided;*
- *the availability of areas, including vacant or derelict sites;*
- *connection to the main alignment corridor; and*
- *access to the public highway.*

Spoil Generation

During construction of the scheme, significant quantities of spoil will be generated from construction activities. In total, approximately 144 000 m³ of spoil will be generated during the construction of the scheme, which equates to around 19 000 HGV loads.

Due to the historical use of parts of the alignment corridor as an operational railway, and as a result of neighbouring industrial activities, there is the potential for contaminated land to exist on the proposed route. Consequently, there is also the potential for some of the spoil generated by the works to be contaminated. The Concessionaire will determine whether a site is likely to contain contaminated material prior to any works commencing. Where land is identified as being contaminated, the Concessionaire will be required to dispose of any contaminated spoil at a suitably licensed waste disposal site in accordance with the Waste Management Licensing Regulations 1994. Wherever possible, non-contaminated spoil will be reused during the construction of the scheme, used for other construction projects, or as a last resort, disposed of at a licensed waste disposal facility.

Construction Workforce

It is estimated that the combined workforce for all work sites will peak at about 1000 people. However, the average workforce over the construction period is expected to be in the region of 250 people. It is not known at this stage how the workforce will be spread across the 14 work areas. The period of peak activity is expected to last from month 12 to month 24 of the construction programme.

Construction Traffic

Traffic will be generated by construction personnel accessing and egressing worksites and by HGVs transporting plant, materials and waste.

Some construction personnel are likely to access the site using public transport, although most are expected to use private vehicles. Since much of the alignment is located within an existing railway corridor, access will be limited to the work sites. Parking for private vehicles will be provided at each of these sites. On-street parking is not expected to occur as each work site is of sufficient size to accommodate the car parking requirements of the estimated peak workforce.

Although the levels of HGV traffic will vary throughout the construction period, relatively low levels of construction traffic generation are expected.

ASSESSING THE ENVIRONMENTAL EFFECTS OF THE EXTENSION SCHEME

Technical Scope

The issues that have been considered during the Environmental Impact Assessment (EIA) of the scheme are as follows:

- *planning policy;*
- *land use;*
- *socio-economics;*
- *traffic and transport;*
- *noise and vibration;*
- *air quality and dust;*
- *landscape/townscape and visual effects;*
- *ecology and nature conservation;*
- *aquatic environment;*
- *archaeology and cultural heritage;*
- *contaminated land and land quality;*
- *non-hazardous waste;*
- *climate change; and*
- *electromagnetic effects and stray current.*

A scoping exercise was carried out an early stage in the project in consultation with a range of key consultees, for example, Dudley and Sandwell Metropolitan Borough Councils, British Waterways, English Heritage and the Environment Agency.



The scoping exercise showed that the issues in the table below should form the technical scope of the EIA. This is the technical scope that has been addressed in the EIA, reported in the ES and summarised in this NTS.

Environmental Issues included in the Scope of the EIA

Environmental Issue	Phase	
	Temporary Construction	Permanent/ Long-term
Planning	✓	✓+
Land Use	✓-	✓+
Socio-Economic Effects	✓+	✓+
Traffic & Transport	✓-	✓+/-
Noise & Vibration	✓-	✓+/-
Air Quality & Dust	✓-	✓+/-
Climate Change	✗	✓+/-
Landscape & Visual	✓-	✓+/-
Ecology	✓-	✓-
Water Resources	✓-	✗
Archaeology/ Cultural Heritage	✓-	✓-
Contaminated Land/ Land Quality	✓-	✗
Non-Hazardous Waste	✓-	✗
Electromagnetic Effects & Stray Current	✗	✗

✓ Significant effect possible + positive impact
 ✗ Significant effect not anticipated - negative impact

Issues associated with stray current and electromagnetic effects were 'scoped out' of the EIA. In addition, potential impacts with respect to aquatic resources, contaminated land and non-hazardous waste were scoped out for the operational phase of the scheme only. Impacts relating to climate change have been scoped out for the construction phase.

HOW WE PROPOSE TO DEAL WITH THE POTENTIAL IMPACT OF CONSTRUCTING THE EXTENSION SCHEME

Draft Code of Construction Practice

In order to minimise the impacts of construction, a draft Code of Construction Practice (CoCP) has been developed for the Midland Metro Network. The draft CoCP will be advanced through discussion with Dudley and Sandwell MBCs.

The CoCP sets out the measures which will be undertaken by the Concessionaire to ensure site safety and good site practice with regard to the environment during construction works. The CoCP contains relevant statutory codes, standards and legislation applicable to the regulation of construction practice and its effects on health and safety and the environment. It sets out a variety of good practice procedures to control noise, dust, site discharges and works traffic and measures to protect groundwater and aquifers during works.

The CoCP will be included in the contractual arrangements between Centro and its selected Concessionaire. Adherence to the CoCP will therefore be compulsory. The CoCP also requires the Concessionaire to provide a telephone information and complaints 'hotline' which is staffed at all times during working hours. The number for this hotline will be displayed prominently at all work sites.

Specific Measures

Some temporary road closures, footway and cycle path diversions are inevitable during the construction phase. To mitigate against traffic disruption on closed roads, diversionary routes will be put in place alongside temporary traffic management measures which will be agreed with the highway authority in advance of works. Construction traffic will be routed to main roads; specific HGV routes will be agreed with the highway authority, aiming to avoid sensitive residential areas and unsuitable parts of the network wherever possible. Siting, design and layout etc of accesses for construction traffic will be agreed with the highway authority prior to works to ensure highway safety.

Various on-site noise management measures, such as, the use of mobile barriers and inherently quiet plant, will be used to minimise construction noise impacts at source. Hours of working will be controlled and noise and vibration will be controlled by implementation of Best Practicable Means.



During bored and sheet piling works, it may be necessary to temporarily relocate residents from a small number of properties located directly adjacent to the works. This will be subject to further investigation during the detailed design phase of the project.

The construction of the scheme will involve a number of key activities which have the potential to generate dust. It is not possible to completely eliminate emissions of dust from construction activities. However, various on-site measures will be put in place to reduce the emission of dust. Such measures will include provision of easily-cleaned hard standing for vehicles, enclosed material stockpiles and dampening of dusty materials using water sprays and/or sheeted during dry weather, sheeting the sides and tops of all vehicles carrying spoil and other dusty material and limiting vehicle speeds on unpaved surfaces to 20 kph.

Construction of the tram infrastructure and the associated road works will give rise to some negative visual impacts. In order to minimise these visual impacts, the Concessionaire will ensure that hoarding is erected around site compounds. Plant and machinery will be stored in a tidy manner and lighting of compounds will take account of neighbouring properties. Roads and works areas will be kept free from dust and dirt.

Construction activities will be confined to the minimum areas required for the works. Implementation of best practice will ensure that the risk of disturbance or damage to adjacent habitats is minimised.

A range of measures to mitigate potential impacts on water resources (surface and ground waters) have been developed and will be implemented via the CoCP for the scheme. These measures include the use of appropriate sediment traps and settlement tanks, and secondary containment for storage tanks. No discharges to surface water courses will take place without the prior consent of the Environment Agency (EA).

HOW WE PROPOSE TO DEAL WITH POTENTIAL LONG TERM IMPACTS AND THE IMPACTS OF OPERATING THE SCHEME

In order to mitigate against potential impacts on traffic conditions, a number of changes to road and public transport infrastructure have been identified:

- *in Dudley Town Centre, alterations to the road infrastructure at Flood Street with the realigned New Mill Street, and signalisation of Castlegate Roundabout; and*
- *in Brierley Hill, junction alterations at Waterfront Way, Waterfront Way/Level Street, and The Embankment.*

In addition, there are recommendations to alter public transport arrangements in two locations: at the junction of Hall Street with Trindle Road, and at Birmingham Street.

There is the potential for noise levels to increase at residential and other noise sensitive properties during the operation of the scheme. Mitigation measures will be considered during the detailed design of the scheme, to minimise noise impacts. This may include use of noise barriers, where appropriate. Experience of similar projects has shown that maintenance of the vehicles and the track is vital to minimising noise levels throughout the lifetime of the system. Centro is committed to a maintenance regime aimed at ensuring that unnecessary increases in noise levels are avoided across the network.

Stops and their audible announcement systems will be designed to minimise noise impacts. The use of screens at the rear of platforms in addition to directional speakers and signal limiting devices will help to minimise noise impacts from audible announcements. Volumes will also be lowered in sensitive locations.



The scheme will introduce a new kind of infrastructure to the areas through which it will run, but high quality sensitive designs will be used to minimise the visual impact and impacts on townscapes. These will include the stops, the overhead line equipment, high quality pedestrian surfacing, and the use of downlighters positioned to minimise light spillage. Wherever possible, there will be replacement planting on the railway corridor and amenity planting at stops. Where appropriate, a screening fence or wall will be provided at the rear of stops where these are located on the railway corridor to screen stops from adjacent properties

Habitat loss will be minimised wherever possible, and all sites will be checked for the presence of protected species prior to work commencing. Mitigation measures relating to protected species will be agreed with English Nature as necessary. Wherever possible, habitat will be removed outside the breeding bird season. Where vegetation is lost, replanting will be undertaken with appropriate species, and the opportunity taken for the enhancement of existing nature conservation areas during landscaping works. Areas of grassland supporting orchids will be translocated. 'Bat bricks' will be incorporated into the design of any bridge works, where appropriate. Best site management practices, including the use of appropriate drainage techniques, will be adopted to minimise the risk of secondary impacts to adjacent habitats.

Impacts on archaeological resources and cultural heritage will be minimised by further studies, and by the adoption of appropriate mitigation measures, dependent on the results of those studies. Prior to works taking place, an archaeological desk-based assessment will be undertaken, followed by an archaeological evaluation, to a specification agreed with Sandwell and Dudley MBCs and also, English Heritage.

Where features of archaeological interest are identified, fieldwork will be undertaken. In addition, there will be an archaeological watching brief during earthworks.

THE ENVIRONMENTAL IMPACTS OF THE EXTENSION SCHEME AFTER MITIGATION MEASURES HAVE BEEN APPLIED

During Construction

The construction phase of the scheme is expected to promote positive economic benefits through the creation of jobs in an area of relatively high unemployment.

Relatively low levels of construction traffic generation are expected. This is unlikely to have any significant effect on the capacity of the road network, congestion, parking capacity, pedestrians, cyclists and public transport services. In order to carry out construction works, it will be necessary to close roads temporarily and to put in place temporary footway and cycleway diversions. This will inevitably give rise to a certain degree of disruption. However, through a combination of route diversions and traffic management measures, potential impacts will be minimised although some residual temporary disruption will take place.

The construction of the scheme has the potential to give rise to substantial and moderate noise impacts in a number of areas. The noisiest phases of construction are associated with sheet piling, bored piling, bridge works and enabling works. Mitigation measures will be adopted to minimise these impacts. Whilst Best Practicable Means will be adopted to minimise noise, the proximity of some of the receptors is such that slight noise impacts are likely even with the implementation of mitigation measures. These are however, likely to be temporary as the necessary works progress along the route.



It is not possible to eliminate emissions of dust from the construction activities completely. However, with the adoption of the measures described in the draft CoCP, emissions of dust, and consequential nuisance impact (including soiling of buildings) will be kept to a minimum and no significant effects are predicted.

Despite the mitigation measures described above, it is inevitable that there will be some impacts on townscape and landscape resources and visual impacts during construction. However, most impacts on townscape and landscape resources will be slight; the most significant impacts will be on the Castle Hill Conservation Area and the impact of viaduct reconstruction on Parkhead Locks Conservation Area. Residents will have views of construction activities along the alignment of the scheme, to varying degrees and from varying distances. The most significantly affected will be those in the Horseley Heath, Dudley Port/Burnt Tree and Parkhead areas who will experience views of major construction works, albeit for a short period of time. In addition, recreational users of the Dudley Canal path and park will have views of major construction works associated with the Parkhead viaduct for around 18 months.

No statutorily designated sites of nature conservation interest will be affected during construction. Eight sites of local nature conservation value will be affected by proposed bridge works and temporary works areas, and the resultant permanent impacts are described below. It is likely that disturbance will result to some species of fauna in close proximity to construction activities. A number of protected species have been recorded in the area, including bats and water vole. Although such species may be disturbed indirectly by construction activities, it is unlikely to be a long-term or significant impact.

It is considered that with the adoption of appropriate mitigation, and liaison with the EA throughout the construction programme, no significant impacts are expected to occur to water resources.

No short term impacts on archaeological resources are expected to occur as a result of the scheme. Short term impacts on the setting of listed buildings and conservation areas are expected to occur during construction, although these are not expected to be significant. A range of mitigation measures associated with long term and permanent impacts on archaeology and cultural heritage have been established and are described above.

Site investigations, the preparation of a management plan where appropriate, and compliance with the plan, will ensure that no residual effects arise from the excavation and handling of any contaminated land.

Long Term Impacts and Impacts During Operation

The Wednesbury to Brierley Hill scheme is fully consistent with transportation and planning policies at national, regional and local levels. The Scheme is an energy efficient, high quality transport system which produces low levels of pollution, is capable of coping with an increase in demand for travel and is accessible to all. The importance of, and requirement for, improved public transport services is recognised at the European, national and the regional level due to the opportunities offered for greater integration within, and between, different types of transport.

Land uses adjacent to the proposed alignment are mixed, and include areas of industrial and residential use, with smaller areas of amenity space, in addition to retail centres at Dudley town centre, Merry Hill and Brierley Hill town centre.



The alignment also passes adjacent to a number of regeneration areas, which are in the process of being developed or at planning stages. The location of the route in relation to these sites will offer significant benefits to the future users of those developments.

Although the scheme occupies a mothballed rail corridor for much of its length, some land take will be required, consisting mainly of the partial loss of industrial land, car parking and one residential property.

There are a number of potential socio-economic benefits arising from the proposed development of the scheme. Among the principal benefits to users is improved accessibility and ease of movement, which in turn is expected to have positive impacts on employment levels for local residents.

The positive impact will take place by improving the ability of non-car owning residents to access new job opportunities in a wider variety of locations - including Birmingham City Centre, the central employment zone in Dudley and the areas of development opportunity in Sandwell.

The scheme will also facilitate travel for those people living within the vicinity of a stop, giving them better access to shopping, cultural and historic, educational and health care facilities. The scheme will also improve the level of provision of transport suitable for disabled passengers. On a wider level, the scheme will aid urban regeneration in the area it serves, by encouraging investment, raising the image of the area and boosting civic pride.

The Wednesbury to Brierley Hill scheme, including the park and ride sites, is not expected to generate significant levels of traffic. In addition, no impacts on pedestrians and cyclists, or on traffic-related noise and air quality are expected to result from the alterations in traffic flow. However, the assessment identified a number of locations where there may be increases in congestion. These locations are assessed further in a separate Transport Assessment.

Noise impacts have been assessed against the most stringent noise impact threshold criteria, taking into account changes in ambient noise expected to result from the proposed scheme. Noise levels do not exceed in any part of the route the Statutory Noise levels. However, as no trains currently operate along the rail corridor existing background noise levels are relatively low. Therefore, in the absence of any heavy rail vehicles, the operation of Midland Metro will increase existing noise levels along sections of the route.

As a result, potential noise impacts have been predicted in four areas (Lindley Avenue, Cochrane Road, Tudor Court and Harrowby Drive) Mitigation measures will be considered for each of these properties, although there is no statutory requirement to provide them as they do not exceed the statutory noise levels.

The assessment has identified locations where noise barriers may be required. The precise location and specification for noise barriers will ultimately be determined during the detailed design phase. The final decision as to where to erect noise barriers will be made in consultation with the local authority and local residents.

Assuming that noise barriers are considered appropriate in most of these cases, it is anticipated that the majority of potentially significant noise impacts will be mitigated.



Ground vibration is expected to be perceptible at some receptors but not at levels that are likely to give rise to adverse comment or structural damage, provided that a high quality resilient track-mounting system is adopted into the design of the street running sections, as proposed. The assessment of impacts associated with vibration will also be subject to further investigation during the detailed design phase.

The operation of the Wednesbury to Brierley Hill scheme is predicted to have a negligible impact on local air quality in the Brierley Hill area. In terms of regional and global air quality, there is a predicted slight reduction in carbon dioxide emissions from the vehicle fleet travelling within the study area.

The operation and the long term presence of the scheme is predicted, in the main, to have only slight impacts on townscape and landscape resources. At Castle Hill in Dudley town centre, impacts will however be more significant, though both positive and negative. Although tram movement and infrastructure will have a negative impact on Castle Hill, there will be significant streetscape improvements and tree planting in the area which will have a positive effect. In the Merry Hill area, the steel piled retaining structure will affect townscape character.

The scheme will be visible to residents along the alignment, to varying degrees and from varying distances. In most cases, the impact will be related to the removal of existing vegetation and the introduction of light rail infrastructure.

However, as the planting matures, the significance of the visual impacts on residents will reduce.

No statutorily designated sites of nature conservation interest will be affected by the proposals. Around 0.12 ha of land will be permanently lost from the Ocker Hill Balancing Pond Site of Local Importance for Nature Conservation (SLINC). The nature conservation value of the site will be retained both during and on completion of construction. Landscaping proposals will enhance the habitat at the edge of the pools and go some way to mitigate the area lost. No significant or long-term impacts are predicted.

Habitat loss will be limited to the minimum needed for safe implementation of the works and mature trees will be retained wherever possible. However, there will be impacts on the value of the railway as a wildlife corridor through the removal of vegetation along the route. The orchid-rich grassland close to Tipton Road over-bridge will be lost, although relocation options have been identified.

The proposed scheme passes through a region rich in industrial archaeology from the 18th and 19th centuries, such as architectural and technological features associated with railways and canals. Although industrial archaeology has been a neglected resource in the past, its importance is increasingly being recognised in the planning process, and the need to protect and record the industrial heritage will be of great importance during the detailed design of the alignment.

There is the potential for in situ archaeological deposits to occur on the proposed alignment in a number of areas. A number of listed structures and conservation areas may also be affected by the scheme. Consequently, the scheme has the potential to give rise to permanent impacts on archaeological deposits, listed buildings and conservation areas. However, a range of mitigation measures have been developed and all works will be carried out in full consultation with the regional English Heritage officer for the West Midlands in addition to officers from Sandwell MBC and Dudley MBC.

THE ENVIRONMENTAL STATEMENT

The Environmental Statement and this Non-technical Summary have been prepared by Environmental Resources Management (ERM), on behalf of Centro. ERM is an independent environmental consultancy with extensive experience of undertaking Environmental Impact Assessments of transport infrastructure schemes. A copy of the application and of all plans and other documents submitted with it, may be inspected free of charge at the following places and times from 16 April until 3 June 2003:-

BRIERLEY HILL LIBRARY High Street,
Brierley Hill DY5 3ET
Mondays 09:30 -19:00
Tuesdays & Thursdays 09:00 - 19:00
Fridays & Saturdays 09:00 - 17:00
(closed Wednesdays).
(Closed 18 - 23 April, 5 May & 26 - 28 May).

CENTRO Centro Reception, 4th Floor,
Centro House, 16 Summer Lane,
Birmingham B19 3SD
Monday - Thursday 08:45 -17:15
Fridays 08:45 - 16:45
(Closed 18 - 21 April, 5 May & 26 May).

DUDLEY LIBRARY St James's Road,
Dudley DY1 1HR
Mondays, Thursdays & Fridays;
09:00 - 19:00 Tuesdays 09:30 - 19:00
Wednesdays & Saturdays. 09:00 - 17:00
(Closed 18 - 22 April, 5 May & 26- 27 May).

DUDLEY MBC Planning Department,
Directorate of the Urban Environment,
3 St James's Road, Dudley DY11HZ
Mondays - Fridays 08:45 - 17:00
(Closed 18 - 23 April, 5 May & 26 - 28 May).

GREAT BRIDGE LIBRARY Sheepwash
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Wednesdays 10:30 -13:00, 14:00 - 18:00
Saturdays 09:00 - 13:00
(closed Tuesdays and Thursdays).
(Closed 17 - 22 April, 5 to 6 May & 26 -27 May).

SANDWELL MBC Transportation Planning,
Development House, Lombard Street,
West Bromwich B70 8RU
Mondays - Thursdays 08:30 - 17:30
Fridays 08:30 - 17:00
(Closed 18 - 21 April, 5 May & 26 May).

WEDNESBURY LIBRARY & LEARNING CENTRE Walsall Street, Wednesbury
WS10 9EH
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WEST BROMWICH LIBRARY
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1st Floor, High Street, West Bromwich
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(Closed 18 - 21 April, 5 May & 26 May).