THE DEPARTMENT OF TRANSPORT

# Batheaston / Swainswick Bypass and A36 Link

# Environmental Statement



BATHEASTON / SWAINSWICK BYPASS AND A36 LINK

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LIST OF CONTENTS

## INTRODUCTION

Within the areas of Batheaston and Swainswick traffic congestion has become an all too familiar sight and with the predicted growth in traffic it will continue to be a problem. Congestion is caused through Batheaston by traffic travelling along the A4 into and out of Bath. Along the A46 the congestion is exacerbated by the steep gradient of the road, poor alignment and the lack of overtaking opportunities. In addition, there is no direct trunk road link between the A46 north of Swainswick and the A36 south of Bathampton and at present most through traffic has to make a detour into the city of Bath, crossing the River Avon on Cleveland Bridge and adding to the congestion. Light vehicles can, however, cross the river at the Old Toll Bridge below Batheaston.

The effect of the mounting congestion is noise, pollution, an increasing risk of accidents and an overall reduction in the quality of life. It is for these reasons that a Batheaston/Swainswick Bypass and the A36 Link is proposed.

The draft Orders for the proposed scheme are now published and to accompany the published proposals this Environmental Statement and Non-Technical Summary (Annex 1) has been prepared, summarising the assessment of the environmental effects of the scheme in accordance with Sub Section 105A(2) of the Highways Act 1980.

## 1. THE GENERAL AREA

1.1 The Published Scheme passes through an area just to the east of Bath. The distinctive feature of the area is the River Avon which, as it turns west out of the Limpley Stoke Valley, approaches the City along a broad flood plain. From here, the ground rises towards Bathampton Down in the south and to Lansdown Hill and the Ancient Fort of Little Solsbury Hill in the north. The Lam Brook Valley passes between these two hills as it descends to join the River Avon at Lambridge.

1.2 There are a number of villages in the general area. Batheaston and Bathford are to the east. Across the Avon to the south lies Bathampton and to the north are Upper Swainswick and Lower Swainswick. Most of the area lies within Wansdyke District except Lower Swainswick which is within the Bath City boundary.

1.3 The village centres of Upper Swainswick, Bathampton, Batheaston and Bathford are designated Conservation Areas. In addition, the eastern boundary of the City, which encompasses Lower Swainswick and the settlements of Bailbrook and Lambridge, delineates the City's own Conservation Area.

1.4 The land beyond the settlement boundaries has been designated as Statutory Green Belt and forms part of the Proposed Extension to the Cotswold Area of Outstanding Natural Beauty.

1.5 Vegetation in the area varies quite significantly, often as a result of topography. The hill tops of Bathampton Down and Little Solsbury Hill are noticeably lacking in tree cover and are predominantly grassland. In contrast, the hill top and upper slopes of Bathford Hill, together with the upper slopes of Bathampton Down are covered by good quality mixed woodland. The lower slopes of the Limpley Stoke and Lam Brook Valleys are predominantly pasture, criss-crossed with hedgerows. Along these slopes there are small areas of woodland and isolated trees within the field hedgerows.

The floor of the Avon Valley is of a different character to the valleys of the Lam Brook and Limpley Stoke. In the east the broad valley floor is largely devoid of tree cover and hedgerows are mainly thin and neglected. To the west of Mill Lane, however, the valley floor begins to narrow and tree cover increases. A distinctive feature of the Avon Valley is the age of its trees, many of which are mature with very little natural regeneration taking place. If new trees are not planted tree cover will continue to diminish, resulting in the landscape becoming more open in character.

1.6 Much of the agricultural land in the area is classified as Grade 3 by the Ministry of Agriculture and is used mainly as pasture.

1.7 The area is also used for recreation. The Ancient Monument of Little Solsbury Hill, owned by the National Trust, is a popular place for visitors. Informal recreation takes place along both the River Avon and the Kennet and Avon Canal. A number of sports pitches are located within the river valley which is designated a Recreation and Leisure Area by Avon County Council.

1.8 The Avon, Lam Brook and Limpley Stoke Valleys have over the years become important lines of communication and between them now accommodate the Canal, rail links from Bristol to London and Bristol to Southampton, the A36, A4 and A46 Trunk Roads. High level overhead electricity transmission lines also follow the floor of the Avon Valley.

1.9 There is little industry in the area. The most noticeable is the timber yard at the end of Tyning Road. Its presence is a significant visual intrusion which is further emphasised by the line of Lombardy poplar trees around the boundary. The area around the timber yard has been designated an Area of Landscape Improvement within the Wansdyke District Local Plan.

## 2. THE PUBLISHED SCHEME (SEE ANNEX 2)

### 2.1 Swainswick Bypass

2.1.1 The bypass would be a dual, two lane carriageway, designed to urban standards with 7.3 metre (24 feet) wide carriageways, a central reserve of 2.5 metres (8 feet) minimum width and verges of 1 metre (3 feet) minimum width. The Bypass would leave the existing A46 Gloucester Road just north of Upper Swainswick and end at a new junction with the existing A4 London Road.

2.1.2 As the Bypass extends south from its connection with the existing A46 Gloucester road, a priority type junction would connect the old road with the new northbound carriageway. The Bypass would then bridge over a link road which would connect Gloucester Road and the realigned section of Swainswick Lane to the southbound carriageway of the Bypass via another priority type junction. The road would then pass over two areas of unstable ground. The most northerly of these areas is adjacent to Bay Tree Cottage Kennels and is known as the Swainswick Slip. The engineering solution here is to stabilise the ground by a system of vertical drains extending up the hillside, and contained within the new highway boundary. In this locality the road would be on embankment and pass close to four properties lying directly to the west of the new highway embankment. The other area of instability lies between Swainswick Lane and Gloucester Road and is known as The Old House Slip. Here the road would be carried over the unstable ground on a low viaduct. The Bypass would then pass into a 12 metre (40 feet) deep cutting reducing to 8 metres (26 feet) as the road approaches Bailbrook. Retaining walls would then commence on both sides of the road, the eastern one at about 210 metres (700 feet) north of Bailbrook Lane bridge and the western one approximately 60 metres (200 feet) north of the bridge. These walls would reduce the width of the cutting as the Bypass descends at an 8% gradient to the junction at London Road.

2.1.3 The Bypass would pass directly east of the Conservation Area of Upper Swainswick and 500 metres (1/3 mile) to the west of and below the Ancient Monument of Little Solsbury Hill. The Hill and the surrounding area, which is designated as being of Nature Conservation Importance, would not be directly affected.

From north of Upper Swainswick to the Bath City boundary, north of Bailbrook, the Bypass would be within Statutory Green Belt and the Proposed Extension to the Cotswold Area of Outstanding Natural Beauty. After crossing the City boundary it would enter the City of Bath Conservation Area, which extends as far south as the River Avon.

2.2 Batheaston Bypass

2.2.1 This Bypass has the same layout as the Swainswick Bypass. It would start with a two level roundabout which would connect the A4 London Road with the Bypass and allow for all turning movements. The roundabout and its immediate approaches would be lit. The Bypass would terminate at a new roundabout near Bathford which would also be lit.

2.2.2 After leaving the new junction with the existing A4 London Road, the Bypass would extend south into the Avon Valley on embankment, crossing the River Avon and its flood plain on a 6 metre (20 feet) high, 150 metre (500 feet) long viaduct. It would then be on embankment again before turning east to run parallel with the Bristol to London railway line and descend into shallow cutting some 2-3 metres (10 feet) in depth. The Bypass would pass beneath Mill Lane and the new A36 Link before passing back again onto embankment some 5 metres (16 feet) high. The road would then continue immediately adjacent to the railway line at a level approximately 2-3 metres (10 feet) lower than the railway embankment. The road would recross the River Avon on a low single span bridge to terminate at an enlarged roundabout on the existing A4.

2.2.3 Between the London Road junction and the River Avon viaduct the Bypass would lie within the Bath Conservation Area. Beyond the viaduct the road would enter Statutory Green Belt and would also pass close to the Conservation Area of Bathampton.

2.3 A36 Link

2.3.1 The Link would be a 10 metre (33 feet) wide single carriageway with crawler lane and 1 metre (3 feet) hard strips on either side. The road would start at the new flyover junction with the Batheaston Bypass east of Mill Lane. Slip roads from the Bypass would loop tightly around to the north rising on a natural knoll of land to cross over the Batheaston Bypass. Slip roads adjacent to the main railway line would descend on embankment from the A36 Link to join the Batheaston Bypass below. The A36 Link would terminate at a new junction on the existing A36 at Dry Arch Nursery. The junction would be lit.

2.3.2 Leaving the flyover junction with the Batheaston Bypass, the A36 Link would cross the Bristol to London and Bristol to Southampton railway lines on separate bridges linked by embankment. Beyond the railway lines the Link would descend to ground level for a short distance. It would pass some 70 metres (230 feet) east of the Kennet and Avon Canal, before rising on embankment to cross the Canal.

To achieve the minimum height clearance of approximately 3 metres (10 feet) above the Canal towpath the southern embankment would need to be approximately 8 metres (26 feet) above ground level. The Link would then ascend the valley side, on an 8% gradient, along a natural ridge forming the boundary between the Limpley Stoke and Avon Valleys. It would bridge over Holcombe Lane before terminating at a new junction with the A36 at Dry Arch.

2.3.3 The A36 Link would be entirely within the Statutory Green Belt. Where it bridges over the Bristol to London railway line, it would enter the Proposed Extension to the Cotswold Area of Outstanding Natural Beauty. At the point where the Link bridges over the southern cutting slope of the Bristol to Southampton railway, it would pass directly over the Hampton Rock Cutting which has been proposed as a Site of Special Scientific Interest (SSSI), because of its geological significance.

## 3. EFFECT ON TRAFFIC (SEE ANNEX 3)

3.1 It is anticipated that the Published Scheme would substantially reduce traffic flows along the A46 south of Upper Swainswick, the A4 east of the new London Road junction and Mill Lane.

3.2 Annex 3 is a diagrammatic representation of the existing roads in the area showing these changes in traffic flows if the Published Scheme is constructed. It can be seen that compared with 1988 flows, A46 traffic on opening will reduce by about 67%, A4 traffic east of the new London Road junction by about 75% and Mill Lane by about 64%.

3.3. However, the A4 west of the London Road junction, the A36 Warminster Road, the A363 Bradford Road, the A46 Box Road, Bathford Hill and Bannerdown Road would all experience an increase in traffic flows. This is not due to the construction of the Published Scheme but to the general growth of traffic volumes in the Bath area. Recent traffic growth in the area follows closely the higher national road traffic forecasts. The increase in traffic flows on the A36 through Bathampton is due partly to local growth and partly to the Published Scheme.

## 4. MITIGATION MEASURES

### 4.1 General principles

The impact of the proposals on the environment has been a major consideration throughout the design process. Landscape Architects have been involved to advise on route selection, alignment of routes and in the preparation of landscape proposals for the Published Scheme.

The following measures have been adopted.

(a) The layout of the proposed road has been designed to ensure the best possible integration with the surrounding landscape and its existing features. This has included adjusting the alignment and geometry of the road to mitigate such effects as land severance and visual impact.

(b) Selected embankments have been extended and shaped to blend them in with the surrounding land shape. Some of these areas are to be returned to agriculture.

(c) Tree and shrub planting schemes have been devised which will link with and strengthen existing areas of local vegetation, including woodlands, tree groups and hedgerows. The desired effect would be to soften the appearance of the roads and bridges and to blend the scheme into the surrounding landscape.

(d) The views of the Royal Fine Art Commission have been sought on the Bailbrook retaining walls and most of the bridges. Specialist architectural advise on the Bailbrook wall finishes is also being obtained.

4.2 Specific Proposals (See Annex 4)

4.2.1 Swainswick Bypass

4.2.1.1 Point A

The Bypass would be on embankment and structure as it approaches and crosses the new road connecting the southbound carriageway with the realigned section of Swainswick Lane and the A46 Gloucester Road. The intrusion in this area would be minimised by the provision of substantial areas of tree and shrub planting around the roads and the new junctions. The new planting would reduce the visual intrusion by containing the area within a maturing woodland setting.

4.2.1.2 Point B

The Bypass would cross an area of unstable ground known as the Swainswick Slip which would be stabilised by a system of vertical drains. This area to the east of the new road would remain within the highway boundary and if left uncut or ungrazed would quickly revert to rough grassland. When viewed from across the valley, it would be noticeably different in colour to that of the surrounding grazed pasture. It is therefore proposed to plant this area with trees and shrubs, taking care to avoid an unnatural block of woodland. The proposals are to plant densely towards the base of the slope and gradually fade out the planting towards the top, creating an irregular and natural looking edge.

4.2.1.3 Point C

The Bypass would enter a 12 metre deep (40 feet) cutting, the eastern side of which would extend well above the height of the western slope and therefore would be visible from across the Lam Brook Valley. To reduce the visual intrusion, trees and shrubs would be planted on the slope and extended beyond the top of the cutting to link with existing vegetation. As the planting matures, the harsh line of the cutting would be disguised, thus helping fit the road proposals into the existing hillside as well as create a new valuable area of woodland.

4.2.1.4 Point D

As the Bypass descends the valley from Bailbrook to the new London Road junction it would pass between vertical retaining walls which would reduce the land take requirements and provide an urban feel to this section of the Bypass. With the road cutting up to 10 metres deep, any intrusion to the neighbouring residential areas would thus be minimised, both in visual terms and by the reduction in noise levels. It is anticipated that there would be distant views of this cutting from across the valley to the south.

### 4.2.2 Batheaston Bypass

#### 4.2.2.1 Point E

After leaving the new junction with the existing A4 London Road, the Bypass would extend south into the Avon Valley on embankment rising to a maximum height of 8 metres (26 feet). If the embankment were to be constructed with normal side slopes it would extend uncomfortably out from the valley side. In order to blend it into the surrounding land shape, extensive ground shaping and tree and shrub planting is proposed. Inevitably, the ground shaping would remove some existing vegetation, but this would be replaced by tree and shrub planting. It is proposed to return some of the land to pasture after construction as, in the longer term, this would ensure the successful integration of this section of the proposed Bypass into the valley side.

#### 4.2.2.2 Point F

The Bypass would cross the River Avon and its flood plain, on a 150 metre (500 feet) long, 5 span viaduct which, as well as carrying two carriageways would accommodate the two slip roads connecting with the London Road junction. Although the viaduct and embankments have been designed to be as low as possible they, and the traffic on the road, would be readily visible as the Bypass crosses the river valley. To further mitigate the effects of the viaduct and overhead traffic it is proposed to "interrupt" views of the viaduct by the provision of "off site" planting, which would be subject to the land owners agreement. The planting would consist of stands of trees in keeping with the character of this part of the valley floor.

4.2.2.3 Point G

South of the viaduct, the Bypass would be on embankment before turning east to run parallel with the Bristol to London railway line. This embankment would be a maximum height of 6 metres (20 feet) and it is proposed to disguise the viaduct abutments and the embankment with tree and shrub planting; this planting would extend beyond the embankments onto the valley floor, although it would be contained within the highway boundary.

4.2.2.4 Point H

As the Bypass turns to run parallel with the railway line it would descend into shallow cutting some 2-3 metres (10 feet) deep and would continue in cutting until it emerged onto embankment east of the new flyover junction with the proposed A36 Link. This cutting would reduce the impact of traffic in the area. Dense tree and shrub planting is proposed on the land between the Bypass and railway and this would further reduce the impact of the Bypass for residents of Bathampton. The northern side of the Bypass would receive a different treatment. The cut slope would be left largely unplanted, although a new hedgerow is proposed along the highway boundary with the occasional stand of trees. Subject to the land owners agreement, additional "off site" planting would further integrate the road into the landscape and interrupt any views of the road from across the valley in Batheaston, yet maintaining the essential character of the valley.

4.2.2.5 Point I

As the Bypass passes beneath the A36 Link road, it would be raised on 5 metre (16 feet) high embankment until the River Avon is crossed on a low bridge at Bathford. When viewed from the south and south east, the Bypass would be screened from view by the Bristol to London railway line embankment which is some 2-3 metres (10 feet) higher than the proposed road. From across the Avon Valley to the north, the Bypass, although seen in the distance and against the backdrop of the railway, would be visible on 5 metre (16 feet) high embankment. It is therefore proposed to regrade the lower part of the embankment below the line of the new highway boundary and return the land to agricultural use. Only the top part of the original embankment would then be evident and this would eventually be hidden by the new hedgerow along the highway boundary. In addition, stands of trees and shrubs would be planted to interrupt the strong horizontal lines of the railway and proposed road as it crosses the valley floor. Existing hedgerows would be reinforced, by "off site" planting, by agreement with the land owner. This treatment would reduce the impact of the railway as well as the proposed Bypass and therefore achieve an overall improvement to the landscape in this part of the valley.

4.2.3 A36 Link

4.2.3.1 Point J

From the Batheaston Bypass, the A36 Link would loop tightly around onto a knoll of land, but would still rise on embankment to an approximate height of 4 metres (13 feet) to cross the Bypass. Major earth shaping would be carried out around the loop of the A36 flyover to disguise the effect of the engineering embankments on the knoll. The embankments would be regraded, extending the knoll further out onto the valley floor in a natural shape. The regraded land would, by agreement, be returned to the landowner and the existing field pattern recreated with new hedgerows. Existing hedgerows north of the regraded knoll would be reinforced, subject to landowners agreement. The overall aim is to ensure that views from across the valley would be of a gentle rise in the land form similar to that which previously existed and over which a typical rural scene would develop, helping to blend the junction and moving traffic into the valley landscape.

4.2.3.2 Point K

As the A36 Link crosses over the Batheaston Bypass, slip roads would extend from either side of the Link to connect with the Bypass. Continuing on 8 metre high (26 feet) embankment or structure as it approaches and crosses two railway lines, the Link would be prominent in the Avon Valley. From the north, any views of the Link would be mitigated by the proposals mentioned under point J. In addition, planting on the slip road embankments would further assist the Link to fit into the landscape. From the south, this section of Link would also be potentially intrusive, especially when viewed from the parts of Bathampton, and the towpath of the Kennet and Avon Canal in the vicinity of Tyning Road. To mitigate the intrusion the existing hedgerow along Tyning Road would be strengthened by an additional 3 metre (9 feet) wide band of trees and shrubs. Detailed planting proposals, however, are yet to be determined since the land directly north of the hedgerow is designated for a picnic site by Wansdyke District Council. The planting would therefore be designed to fit in with the Council's picnic site scheme.

4.2.3.3 Point L

Having crossed the Bristol to Southampton railway line the Link would descend from embankment down to existing ground level. In this locality it would pass some 70 metres (230 feet) east of the Kennet and Avon Canal, before rising on embankment to cross the canal. In this area a potential conflict would exist between the traffic on the A36 Link and the relative tranquility of the canal setting. To mitigate the visual intrusion and the noise effects resulting from the Link the land between the Link and the canal would be landscaped. Earth mounding would ensure an immediate reduction in intrusion and as tree and shrub planting matured the impact would be further reduced. It is not the intention however to create a dense area of woodland, for this would be alien to the open character of the valley floor. The proposals would allow views through the area to the valley landscape beyond and consequently sections of the new road would also be unavoidably visible.

4.2.3.4 Point M

As the Link rises to cross the Kennet and Avon Canal the embankments would be potentially intrusive, especially when viewed from the northern part of the Limpley Stoke valley, areas of Bathampton and the Canal. It is proposed to extend the embankments to the south of the canal, shaping them into the existing contours and recreating a natural looking ridge similar to the existing. Much of this reshaped land would be returned to pasture with the agreement of the landowner. Additionally, trees and shrubs would be planted adjacent to the bridge abutments to mask the junction between the bridge and earth works.

4.2.3.5 Point N

As the Link ascends the valley side, it would occupy a prominent position on the existing ridge. To ensure the Link does not visually intrude into the Limpley Stoke Valley, trees and shrubs would be planted to the east of the Link Road to join with the existing hedgerow. From the Limpley Stoke Valley and the Bathford area, the Link would disappear from view into an area of maturing woodland, which would be seen as a natural extension of Bathampton Wood above the existing A36.

## 5. ENVIRONMENTAL DATA (SEE ANNEX 5)

5.1 The Environmental Data for the Published Scheme is included as an appraisal framework in Annex 5. The appraisal framework is a tabular presentation of the main direct and indirect effects of the proposed scheme.

## 6. ALTERNATIVE ROUTES (SEE ANNEX 6)

6.1 General

6.1.1 During the Public Consultation stage a number of alternative routes were considered. For the Batheaston and Swainswick Bypasses, the Orange, Yellow, Red, Purple and Blue route options were presented. For the length of Batheaston Bypass between the A36 Link junction and Bathford Roundabout only one route option, the Black, was presented. For the A36 Link Road, the Green and Brown route options were presented. The preferred route chosen for further development was a combination of the Red, Brown and Black options, which now form the basis of the Published Proposals.

6.1.2 Overall, each route option had similar effects on the environment as the Published Scheme. However there were a number of different environmental effects created by the route options and these, together with a brief description of the rejected option are outlined below.

## 6.2 Batheaston and Swainswick Bypass - The Orange Route

6.2.1 This route started from the southern end of the three lane section of the existing A46 at Upper Swainswick and was located to the east of the existing Trunk Road, Swainswick Lane and Bay Tree Cottage Kennels. Between the north end of the lane and The Kennels the route crossed unstable ground which required it to be carried on viaduct where it was above ground and between retaining walls where it was below ground. Southwards the route was in deep cutting as it ran along the hillside above Swainswick Lane and descended steeply, in cutting, to the east of Bailbrook Farm and under Bailbrook Lane. South of Bailbrook Lane it was carried on a long, high viaduct which crossed the existing A4 London Road, the River Avon and its flood plain to join the Batheaston Bypass at a roundabout to the east of Meadow Farm. Westwards, the route curved back over the valley floor, crossing the River Avon on a lower and shorter viaduct to join the existing A4 London Road at a new roundabout. Eastwards from the roundabout near Meadow Farm the route ran parallel with the railway, in cutting, to join the Published Route as far as Bathford.

6.2.2 The main environmental impact resulted from two roads having to cross the Avon Valley, one on a large viaduct, 31 metres (100 feet) high and the other on a lower viaduct 8 metres (26 feet) high, together with an extra roundabout in the Avon Valley. There was also a large cutting into Little Solsbury Hill. In its favour the Orange route affected the least number of properties with two being demolished and caused little impact in Swainswick and Bailbrook.

6.3 The Yellow Route

6.3.1 The route followed the same line as the Orange route to the north end of Swainswick Lane. From here it was located a little downslope of the Orange route as it crossed unstable ground extending to Bay Tree Cottage Kennels. Over this length the route would have been carried on viaduct where it was above ground and within retaining walls where it was below ground level. The route passed behind The Kennels and ran along the hillside in deep cutting, east of Swainswick Lane and downslope of the Orange route. It passed beneath Swainswick Lane and curved to the west, passing under Bailbrook lane and skirting the western edge of the grounds of Bailbrook House. It crossed the existing A4 London Road to join a new roundabout located to the south of the existing road. From here the route curved to the east, crossing the Avon and its flood plain on viaduct and passing between Meadow Farm and its farm buildings. It continued curving, first on embankment and then in cutting, until it reached the railway embankment where it straightened and ran parallel with the railway, in cutting, to join the Published Route.

6.3.2 The main environmental impact was due to the single crossing of the Avon Valley by a route carried on embankment and on bridges some 16 metres (53 feet) high, coupled with a raised roundabout south of London Road. There was a cutting into the sloping ground below Little Solsbury Hill. In the route's favour, few properties were adversely affected with three having to be demolished. There was little impact on Swainswick and Bailbrook.

6.4 The Purple Route

6.4.1 This route was the same as the Published route southwards to Bailbrook. It was taken under Bailbrook Lane, to the east of the Published Route, before curving to the west in cutting and passing through Alice Park to join the existing A4 London Road at a new roundabout near Lam Bridge. Eastwards of Lambridge it was identical to the Orange route but did not require a roundabout near Meadow Farm.

6.4.2 The main environmental impact was the severing of Alice Park. Since the route was located lower down the hillside than the other options, more properties were affected with thirteen being demolished. The route was particularly damaging to both Swainswick and Bailbrook.

6.5 The Blue Route

6.5.1 From Upper Swainswick, the route left the line of the other routes and curved to the west, crossing the existing A46 at ground level near the filling station. The route then descended on the west side of the A46 before crossing it on a bridge south of Ashcombe House. This bridge was to be an integral part of a viaduct carrying the route over unstable ground. The route ran along the lower slope of the hillside in cutting before rejoining either the Purple or Published Route to pass under Bailbrook Lane. Southwards of here the route was as either the Published or the Purple Route.

6.5.2 This option had the lowest profile for the Swainswick Bypass section. Four properties were to be demolished but little disturbance resulted at Swainswick.

6.6 The A36 Link Road - The Green Route

6.6.1 The route was similar to the Published Route, but curved further to the west. After leaving the new roundabout with the Black Route near Bathampton Farm, the route descended below ground level to pass beneath the two railway lines and the new Tyning Road bridge. The route emerged out of deep cutting, onto embankment, and ran alongside the Kennet and Avon Canal, before bridging over it near the bend adjacent to the playing fields. The route ascended the valley side, passing further to the west of Holcombe Farm at ground level, before terminating at the new junction with the existing A36 at Dry Arch Nursery.

6.6.2 With the route running on embankment close to the Canal, noise and visual intrusion would have been greater than for the Published Route.

6.7 Choice of Published Scheme

6.7.1 In determining the choice of the route, economic and engineering factors were considered along with environmental factors. In addition the choice also took account of the views expressed by members of the public, Local Authorities, environmental bodies and other interested organisations, both during and following the Public Consultation period.

The routes considered to have the least environmental effects were combinations of both the Red and Purple routes for the Swainswick, Batheaston Bypass sections, and a combination of the Green and Brown Routes for the A36 Link Road. The Black route was common to all route options. Comparing the Red and Purple routes, it was clear that the low level of the Purple route in the Avon Valley considerably reduced any visual impact. However it had a serious effect on property and effectively destroyed Alice Park. The Red route had a reduced effect on property, but was more intrusive in the Valley. Whilst the Brown route for the A36 Link Road resulted in greater tree loss it was located further away from the Canal. Conversely the Green route, although nearer the Canal, resulted in less tree loss. Therefore a compromise alignment based on the Brown route was developed which successfully pulled the road further away from the Canal than the Green route, yet maintained more trees than the original Brown route. A combination based on the Red, Black and Brown routes provided the overall scheme with the best value for money. This combination was also considered to have the least environmental impact on the surrounding areas and was generally well thought of during Public Consultation stage. It was finally selected as the Preferred Route to be developed further. Continuing design work on this route has resulted in its profile being lowered considerably and therefore intrusion in the Valley has been successfully reduced.

6.7.2 During the period following Consultation a reconsideration of traffic flows indicated the need for increased capacity on the single carriageway Swainswick Bypass. This section of the scheme has now been designed to be a dual carriageway. In addition the roundabouts originally proposed for the A4 London Road junction and the A36 Link Road junction east of Mill Lane have been changed to grade separated junctions.

# ANNEX 1

# NON TECHNICAL SUMMARY OF THE ENVIRONMENTAL STATEMENT

**NON TECHNICAL SUMMARY OF THE ENVIRONMENTAL STATEMENT**

## Introduction

The scheme for which statutory Orders are published is divided into three distinct sections, the Swainswick Bypass, the Batheaston Bypass and the A36 Link Road. The Swainswick Bypass would start on the A46 Gloucester Road north of Upper Swainswick and descend towards the Avon valley and the new London Road underpass junction. The Batheaston Bypass would start from the new London Road Junction and cross the River Avon and its valley to terminate at an improved roundabout at Bathford. The A36 Link Road would start at a new flyover junction with the Batheaston Bypass crossing the railway and canal to terminate at Dry Arch Nursery on the A36 Warminster Road.

## Effects of the Published Scheme

### Swainswick Bypass

The dual carriageway Bypass would leave the A46 Gloucester Road just north of Upper Swainswick and extend south, bridging over a link road connecting Gloucester Road with the new bypass and Swainswick Lane. On crossing the Bath City boundary the road would descend between retaining walls, passing beneath the new bridge carrying Bailbrook Lane. The bypass would continue south to a new underpass junction with London Road which would cross on a roundabout.

The main effects of this length of new road are:-

- It would pass to the east and clear of the Upper Swainswick conservation Area and 500 metres to the west of the Ancient Monument of Little Solsbury Hill. The Hill and the surrounding area, which is designated as being of Nature Conservation Importance, would not therefore be directly affected. From north of Upper Swainswick to where it crosses the Bath City boundary, north of Bailbrook, the Bypass would be within the Statutory Green Belt around Bath and the

proposed extension to the Cotswold Area of Outstanding Natural Beauty. After crossing the City boundary the Bypass would enter the City of Bath Conservation Area, which extends as far south as the River Avon.

- North of Bailbrook, the cutting would be seen from across the Lam Brook Valley. South of Bailbrook to the London Road underpass the road would be in deep cutting, supported by retaining walls. This would reduce the visual impact of the road and effect of traffic noise from nearby houses.

- There would be a substantial reduction in traffic flows on the A46 Gloucester Road south of Upper Swainswick which would make it safer and more pleasant for those who live along it.

- Eight habitable properties, a Nursery and various outbuildings would have to be demolished to make way for the road and there would be some severance of land holdings. All side roads and public rights of way would be reconnected although some diversions would be necessary.

<u>Batheaston Bypass</u>

After leaving the new London Road junction, the Batheaston Bypass would immediately cross the River Avon and its flood plain on a viaduct 150 metres long and on embankments on each side. The embankment would reduce to ground level as the road turns eastwards, entering shallow cutting alongside the main railway line to London. Continuing east, the Bypass would pass beneath Mill Lane bridge and the new A36 Link Road, after which it would be on embankment close to the railway to cross the River Avon again before terminating at the roundabout at Bathford which would have to be improved.

The Bypass would have the following effects:-

- The Bypass would be within the Bath Conservation Area between London Road and the River Avon. South of the River it would be within the Statutory Green Belt and pass quite close to the Conservation Area of Bathampton on the far side of the railway.

- The Bypass crosses the River Avon on a 6 metre high, 150 metre long viaduct. As well as the dual carriageway this would also carry two slip roads forming part of the London Road junction. Although the viaduct and embankments have been designed to be as low as possible they, and the traffic on the road, would be readily visible as the Bypass crosses the river valley. At the London Road junction and the A36 Link junction the fields would be reshaped with added soil so as to reduce the impact of the flyover approach embankment. The Bypass would be on embankment between the A36 junction and the Bathford Roundabout but this would be relatively unobstrusive since it has been kept close to and below the level of the railway line.

- There would be a substantial reduction in traffic flow along the A4 London Road through Batheaston making this very busy street safer for residents and shoppers.

<u>The A36 Link</u>

The A36 Link would start at a flyover junction with the Batheaston Bypass just east of Mill Lane. The road would bridge over the Batheaston Bypass, the railway lines to London and Southampton and the Kennet and Avon Canal before climbing the valley side to terminate at the existing A36 Warminster Road at Dry Arch Nursery.

The A36 Link Road would have the following effects:-

- The A36 Link would be within the Green Belt and after crossing the railway line, the road would pass again into the proposed extension to the Cotswold Area of Outstanding Natural Beauty.

- Where the Link bridges over the Bristol to Southampton railway line it would pass directly over a slope, cut as part of the railway works, which is an interesting geological feature proposed as a Site of Special Scientific Interest (SSSI). Whilst some of the cutting would be lost beneath the highway embankments, a significant length would remain undisturbed.

- The A36 Link would cut off the access to Holcombe Farm but this would be replaced by a new underpass. The buildings and glasshouses of the Dry Arch Nursery would be demolished.

- The road embankment and the structures would be visible where the Canal and railway lines are crossed. This effect would be reduced as far as possible by careful land shaping and planting of trees and shrubs.

- At Dry Arch junction, there would be no provision for southbound traffic on the Link Road to turn right towards Bathampton. There would be a slight increase in traffic along the existing A36 through Bathampton, but there would be fewer heavy goods vehicles. Traffic along Tyning Road would be reduced since vehicles to and from the timber yard at the end of the road would use the new A36 Link Road. The A36 Link Road completes a connection between the A46 and the A36 Trunk Roads which removes the need for through traffic to pass through Bath on north/south journeys.

Environmental Impact

The impact of the road proposals on the environment has been a major consideration throughout the design process. The proposals have been designed to minimise environmental impacts such as visual intrusion, land severance and the effects of noise. The measures adopted are as follows:-

- The alignment and levels of the proposed road have been designed to ensure the best possible fit with the surrounding landscape and existing features.

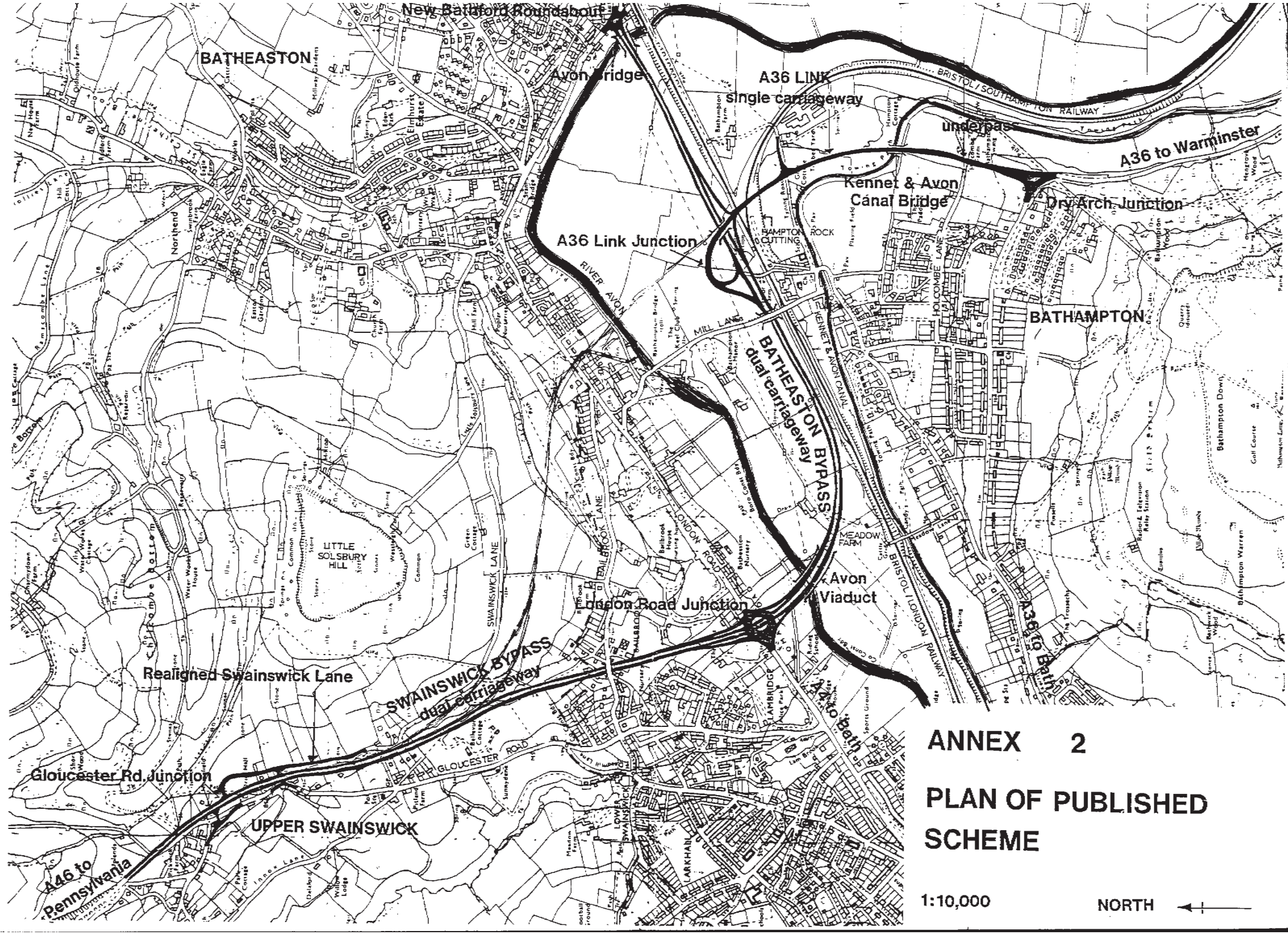
- Some embankments have been extended and shaped in order to blend them into the natural shape of the land. It is proposed to restore some of these areas back to agricultural use.

- Tree and shrub planting proposals have been introduced to link with existing areas of woodlands, tree groups and hedgerows and in places to provide screening.

- The Royal Fine Art Commission has been consulted on the appearance of most of the bridges and specialist advice is to be sought on the appearance of the Bailbrook retaining walls.

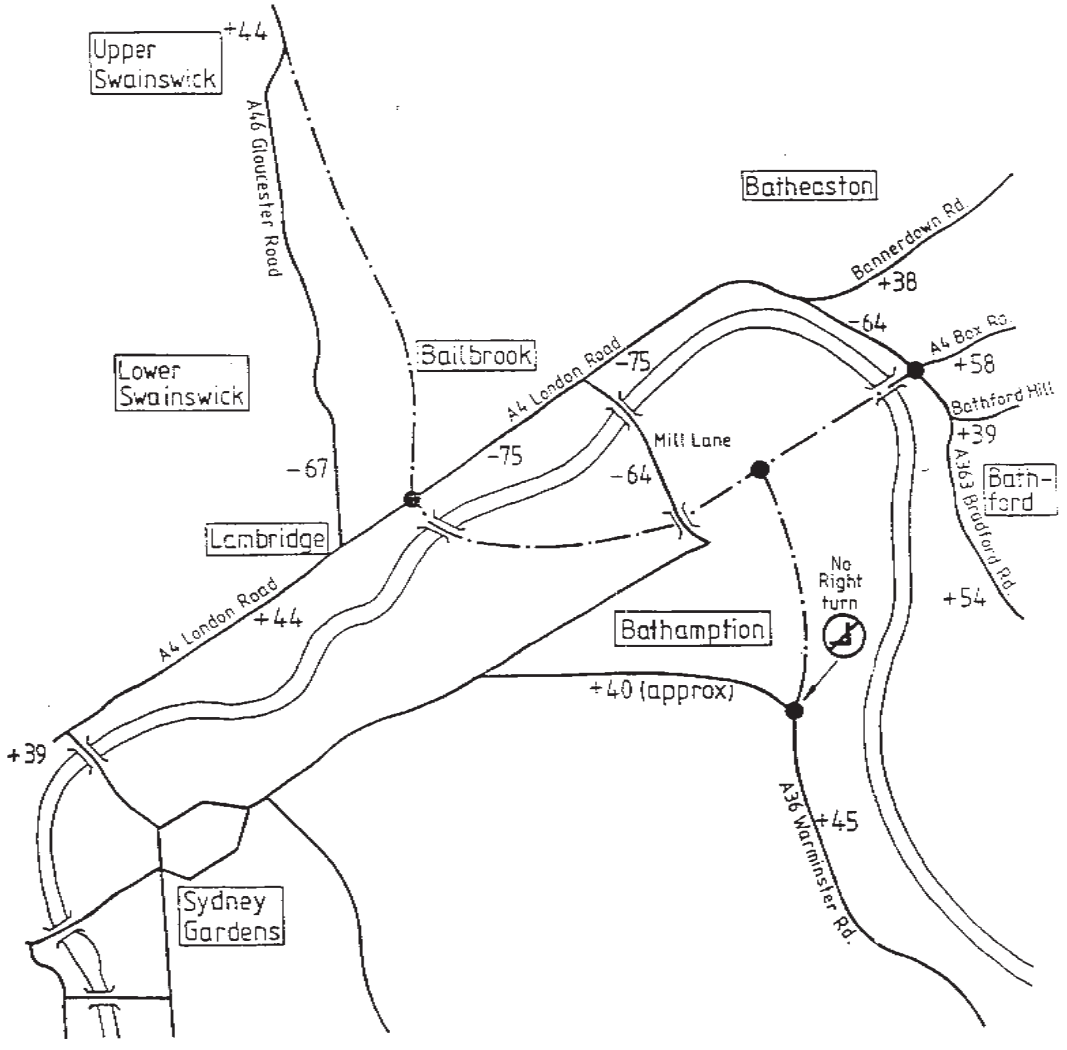
**Alternative Routes**

A number of alternative bypass routes were offered to the public for comment at a Public Consultation in 1986. For the Swainswick and Batheaston Bypasses, five alternatives were considered, the Orange, Yellow, Red, Blue and Purple routes. For the A36 Link Road two routes were considered, the Brown and Green routes and the main factors of cost and environmental effects were outlined for each route. After the public responses had been considered the Red and Brown routes were eventually chosen as the preferred route and they now form the basis of the Published Scheme.


New Bathford Roundabout
BATHEASTON
Avon Bridge
A36 LINK
single carriageway
BRISTOL / SOUTHAMPTON RAILWAY
underpass
A36 to Warminster
Kennet & Avon
Canal Bridge
Dry Arch Junction
A36 Link Junction
BATHAMPTON
BATHEASTON BYPASS
dual carriageway
Avon
Viaduct
London Road Junction
Realigned Swainswick Lane
SWAINSWICK BYPASS
dual carriageway
Gloucester Rd. Junction
UPPER SWAINSWICK
A46 to
Pennsylvania
A36 to Bath
ANNEX 2
PLAN OF PUBLISHED
SCHEME
1:10,000
NORTH

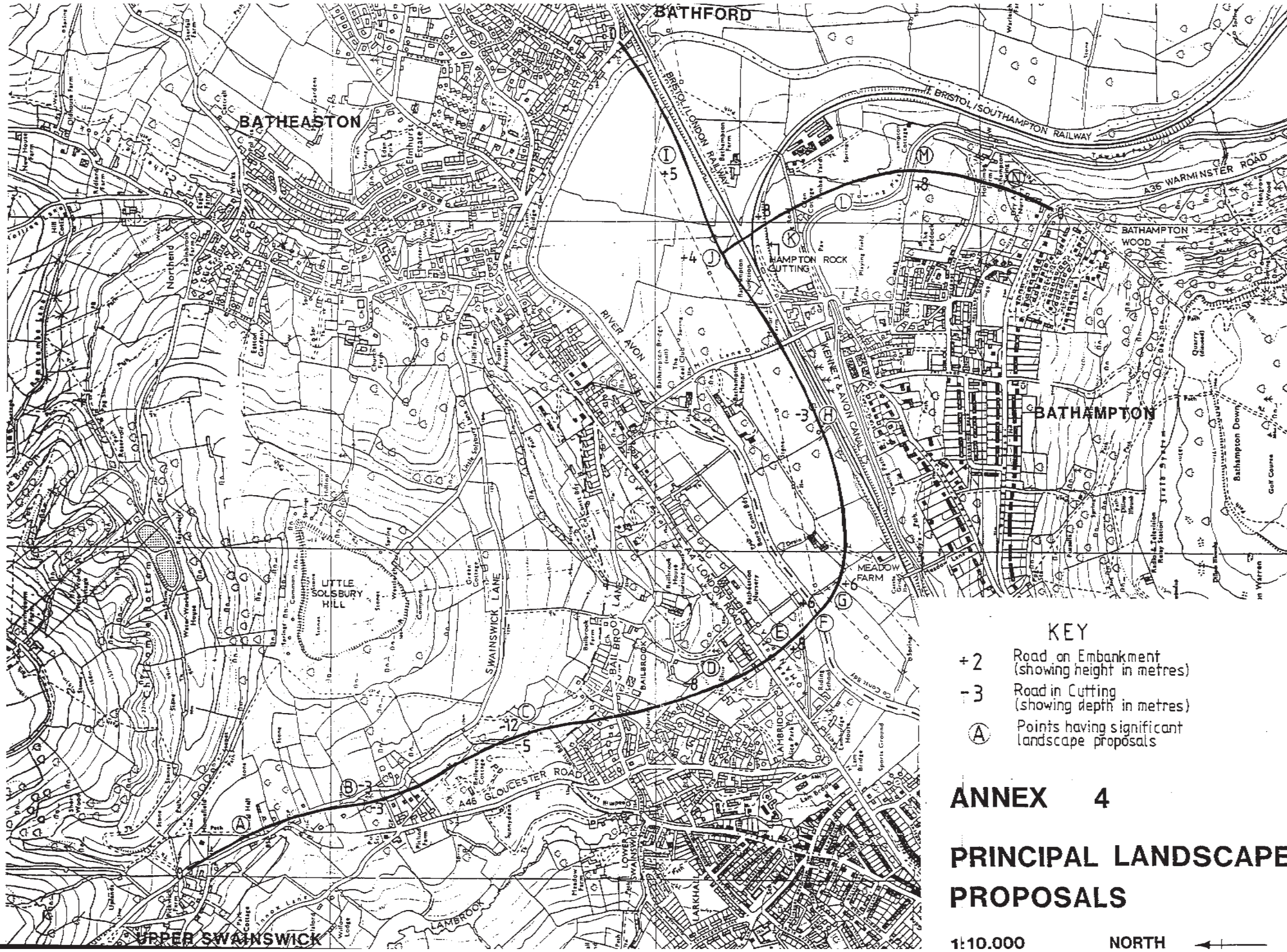
The figures show substantial changes (more than 30%) in the expected year of opening (1995) compared with 1988 flows.

– 67 represents a percentage decrease.
+ 44 represents a percentage increase.




## ANNEX 3

## CHANGES IN TRAFFIC FLOW




KEY

+2 Road on Embankment (showing height in metres)

-3 Road in Cutting (showing depth in metres)

(A) Points having significant landscape proposals

# ANNEX 4

# PRINCIPAL LANDSCAPE PROPOSALS

1:10,000

NORTH

# ANNEX 5

# ENVIRONMENTAL DATA

## A4/A46 BATHEASTON/SWAINSWICK BYPASS & A36 LINK FRAMEWORK

Group 1:- Travellers

| SUB GROUP | EFFECT | UNITS | PREFERRED ROUTE High | PREFERRED ROUTE Low | DO-NOTHING | COMMENTS |
|---|---|---|---|---|---|---|
| Car Users | Time savings | £M(PVB) | 14.85 | 8.46 | 0 | A) Each column shows the improvements of the preferred route over the "Do-Nothing. Hence the "Do-Nothing entries are zero. B) Present value of benefits (PVB) are for 30 year period from the expected date of opening and discouted to 1979 prices at 7% pa. C) National average figures for vehicle occupancy and for accident rates costs from COBA 9 have been used. |
| | Vehicle operating cost savings | £M(PVB) | 0.38 | 0.33 | 0 | |
| Users of light Goods vehicles | Time savings | £M(PVB) | 2.21 | 1.21 | 0 | |
| | Vehicle operating cost savings | £M(PVB) | 0.07 | 0.05 | 0 | |
| Users of other Goods vehicles | Time savings | £M(PVB) | 1.36 | 0.80 | 0 | |
| | Vehicle operating cost savings | £M(PVB) | 0.08 | 0.07 | 0 | |
| Bus Operators and passengers | Time savings | £M(PVB) | 1.11 | 0.73 | 0 | |
| | Vehicle operating cost savings | £M(PVB) | 0.04 | 0.04 | 0 | |
| All vehicle travellers | Value of accident savings | £M(PVB) | 0.73 | 0.50 | 0 | |
| | Reduction in casulties:- | | | | | The figures indicate the probable reduction in casualties over the whole of the 30 year assessment period based on national average accident rates. |
| | Fatal | Number | 6 | 5 | 0 | |
| | Serious | Number | 97 | 82 | 0 | |
| | Slight | Number | 242 | 210 | 0 | |
| | Driver stress | Moderate | | | High | |
| | View from road | Scenic from A46 and A36. Agricultural from A4 | | | Residential through Bathampton and Batheaston. Scenic from A46 | |

(1)

Group 1:- Travellers (Cont)

| SUB GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| All vehicle travellers. (Cont.) | Traffic delays during construction | Delays on all existing roads where they are crossed or joined by the new road. Particular point of delay will be on the London Road at the A4/A46 grade separated roundabout. | No effect | |
| Pedestrians | Change in amenity | The reduction of traffic on existing roads in built up areas will greatly reduce the vehicle/pedestrian conflict. | Pedestrian/traffic conflict will increase with traffic growth. Effects will be greatest along the A4, particularly in Batheaston and along the A46 through Swainswick. | |
| | Safety | Reduced traffic on existing roads will improve safety.<br><br>Crossing points are provided at all connections with existing roads and footpaths. | As traffic increases with growth the danger of accidents to pedestrians will increase. | |

Group 1:- Travellers (Cont)

| SUB GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Pedestrians (Cont.) | Severance | Severance induced by existing roads will reduce. All footpaths crossing new road are provided with alternative diversions and this causes a slight increase in severance. | Severance will increase as traffic increases through growth. | |
| Cyclists | Change in amenity | Cyclists can remain on existing roads which have significant traffic relief. | The conflict of cyclists and traffic will increase with traffic growth. | |
| | Safety | Reduced traffic flows on existing roads will improve safety. Cycle tracks to be provided at A4 London road junctions. | The danger of accidents will increase as traffic increases with growth. | |

Group 2: Occupiers

| SUB GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Residential | Demolition: Number of properties likely to be demolished | 9 | None | The cost of property acquisition and development is included in group 6 |
| | Noise effects adjacent to the new road: | | | 'Do nothing' shows the number of houses fronting the existing A4, A46 and A36 within the limits of the scheme |
| | Number of houses within following distance of centre line | | | |
| | 0-50 m | 39 | - | |
| | 50-100 m | 76 | | |
| | 100-200 m | 197 | | |
| | 200-300 m | 281 | | |
| | Noise effects adjacent to the existing road: | | | A halving or doubling of traffic flow is approximately equal to a 3 dB(A) L10 reduction/ increase in noise levels respectively |
| | Number of houses experiencing at least a halving of traffic flows during the 15 year period after opening the new road. | 405 (On A46 and on A4 between Lambridge and Bathford roundabout). | - | |
| | No of houses experiencing at least a doubling of traffic flows during the above 15 year period if the road is not built. | | 285 (On A4 between Lambridge and Bathford roundabout.) | For the purpose of comparison, 'high' traffic growth has been assumed and only properties within 50 m of the existing roads have been counted. |

(AT)

Group 2: Occupiers (Cont)

| SUB-GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Residential (Cont.) | Pollution from vehicle emissions: Number of houses experiencing more than 4 ppm concentration of carbon monoxide. | | | The scheme significantly reduces pollution on the existing A4 and A46 without creating new pollution for residents adjacent to the scheme. The calculations are based on the 2010 high traffic forcasts. |
| | Existing roads | 370 | 577 | |
| | New road | 0 | 0 | |
| | Visual obstruction. Number of houses experiencing the following effect | | | |
| | High | 5 | No change | |
| | Moderate | 25 | No change | |
| | Slight | 72 | No change | |
| | Visual intrusion | Moderate intrusion in the Lambrook Valley and in the Avon valley where the road is raised to cross the railway and canal. Slight intrusion in the Avon Valley between the A36 Link junction and Bathford. | No change | Landscaping will reduce the visual intrusion. |

Group 2: Occupiers (Cont)

| SUB-GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Residential (Cont.) | Severance | | There will be a deteriorating situation for pedestrians when crossing the existing roads, particularly through Batheaston and Upper Swainswick, due to the increase in traffic. | |
| | (a) Relief from existing severance | The reduction of traffic flows on the A4 through Batheaston and the A46 through Swainswick will have a significant beneficial effect. | | |
| | (b) Imposition of new severance | Slight. The movements of only a relatively small number of people will be affected. | None. | |
| | Disruption during construction | Disruption will be severe along Swainswick Lane and Bailbrook Lane. Moderate disruption would occur at all connections to existing roads. | No effect | |
| Commercial and amenity premises i.e. Industrial premises, Offices, Shops, | Demolition: Number of premises required for construction of scheme | Two (Bailbrook Nursery and Dry Arch Nursery) | None | The cost of property acquisition is included in group 6. |
| Hotels, Pubs, Cafes, | Noise effects adjacent to new road: | | | 'Do nothing' shows the number of premises fronting the existing A4, A46 and A36 within the limits of the scheme. |
| | Number of premises within 300 m of the centre line | 29 | 90 | |

(VI)

Group 2: Occupiers (Cont)

| SUB-GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Commercial (Cont.) | Visual obstruction: Number of premises experiencing the following effect | | | |
| | High | 0 | No change | |
| | Moderate | 0 | No change | |
| | Slight | 4 | No change | |
| | Severance | The reduction of traffic flows on existing roads will have a significant beneficial effect on the A4 through Batheaston and the A46 through Swainswick. | There will be a deteriorating situation for pedestrians when crossing the existing road at Upper Swainswick due to the increase in traffic. | |
| | Disruption during construction | Slight disruption to commercial and amenity premises. | No effect | |

Group 2: Occupiers (Cont)

| SUB GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Schools, Hospitals and Residential Homes | | | | |
| a) Grosvenor High School | Noise effects | No significant change. | No significant change. | |
| | Visual impact | None | No change | |
| | Severance | Slight relief due to reduced traffic flow on A4. | Severance increases with the increase in traffic on the A4. | |
| | Disruption during construction | Slight disruption during the construction of the new London Road junction. | No effect | |
| b) Bathampton Primary School | Noise effects | Slight increase | No change | |
| | Visual impact | Slight visual intrusion and slight visual obstruction from road on embankment. | No change | |

Group 2: Occupiers (Cont)

| SUB GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Bathampton Primary School (Cont.) | Severance | Moderate relief due to reduced traffic flow along Mill Lane. | No change | |
| | Disruption during construction | No effect | No change | |
| c) Bathampton Manor (Residential Home) | Noise effects | Slight increase | No change | |
| | Visual impact | Moderate visual intrusion due to new road crossing previously unobstructed valley floor. | No change | |
| | Severance | Moderate relief due to reduced traffic flow along Mill Lane. | No change | |

| SUB GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Bathampton Manor (Cont.) | Disruption during construction | Moderate disruption particularly during construction of Mill Lane overbridge. | None | |
| d) Oriel Lodge (Residential Home) | Noise effects | Slight increase on east side of property. Significant reduction on west side. | Will increase on west side as traffic flows increase. | |
| | Visual impact | None | No change | |
| | Severance | Significant relief due to reduced flow of traffic on existing A46. | Severance increases ie. safety and accessibility reduce as traffic on the A46 increases. | |

(x)

| SUB GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Oriel Lodge (Cont.) | Disruption during construction | Moderate disruption during the construction of the Swainswick Bypass. | No effect | |
| f) Bailbrook House (Training College) | Noise effects | Slight increase on west side of property. Reduction on south side. | Slight increase on south side of property as traffic flows increase. | |
| | Visual impact | Slight | No change | |
| | Severance | Significant improvement in access off old A4 due to reduced traffic flow. | Severance from the A4 would increase with traffic growth. | |
| | Disruption during construction | Moderate disruption during construction of Swainswick Bypass. | No effect | |

| SUB GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Farming | Numbers of farms affected by land take | 8 | None | 4 of these farms are currently owned by the Department of Transport. |
| | Area of land taken | | | |
| | Grade II | 1.8 hectares | Nil | Land is graded on the MAFF classifications. Figures do not include for land taken for desirable landscaping outside fence line. |
| | Grade III | 34.8 " | Nil | |
| | Grade IV | 1.4 " | Nil | |
| Public Buildings | Area of land taken | Complete grounds of Oriel Hall 800 sqm. | None | Oriel Hall, Swainswick, demolished. |
| Open Space | Area of land taken | Complete burial ground 256 sqm. | None | Quaker burial ground, Batheaston, for which exchange land will be provided. |

(xii)

Group 3: Users of Facilities

| SUB-GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Batheaston High St. Shopping (13 shops) | Change in amenity | Significant reduction in pedestrian/ vehicle conflict due to substantial reduction in traffic on the A4. The reduced flow will ease servicing problems. | Pedestrian/vehicle conflict and servicing problems would increase along the A4. | Batheaston is the most important local centre in the Wansdyke Environs of Bath District Plan (WEBDP) area. |
| London Road Shopping Centre | Change in amenity | Slight reduction in pedestrian/ vehicle conflict and in noise pollution, due to small reduction in traffic flows along present A4. This is particularly beneficial on account of the high proportion of HGVs in traffic mix. | Pedestrian/vehicle conflict increases as the traffic flows increase along the A4. | |
| Congregational Church, Batheaston. Community Centre | Change in amenity | Significant reduction in noise and pollution with safer access due to substantial reduction in traffic along the present A4. | Noise, pollution and difficulties of access increase with traffic. | |
| Oriel Hall Upper Swainswick Community Centre | Change in amenity | For demolition | Noise, pollution and difficulties of access increase with traffic. | |
| Public Footpaths | Change in amenity | Several footpaths are severed by the new routes and although new crossings are proposed, all require additional travel length. | No change | |
| River Avon | Change in amenity | The peaceful river setting is significantly disturbed with 2 major bridges crossing the river. | No change | Landscape measures will reduce the impact. |

Group 5: Users (Cont)

| SUB-GROUP | EFFECT | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Little Solsbury Hill | Change in amenity | There is slight visual and noise intrusion. | No change | Little Solsbury Hill is the site of an ancient hill fort and is an ancient monument owned by the National Trust. |
| Alice Park | Change in amenity | Easier access from the existing A46. Slightly more difficult access from the A4 due to additional traffic. Noise is likely to increase as the park is situated between the new and old A46. | Access would deteriorate as traffic increases with growth. | Alice Park is an important public recreational area. |
| Kennet and Avon Canal | Change in amenity | Significant increase in noise and moderate visual intrusion from the new road for canal and towpath users. | No change | Landscape planting will reduce the visual impact. |
| Playing fields King Edward School | Change in amenity | There is slight visual, noise and air pollution intrusion on the King Edward School playing fields. However there will be a reduction in traffic flow along Tyning road which will improve safety by reducing vehicle/ pedestrian conflict. | No change | |

Group 4: Policies for Conserving and enhancing the area

| POLICIES | AUTHORITY | INTEREST | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|---|
| Bath Conservation Area | DOE<br>Bath CC | Improvement of the environmental quality of the conservation area, including a reduction in pedestrian/ vehicle conflict, noise and pollution. | There will be a slight improvement along the London Road through Grosvenor and Walcot due to a small reduction in traffic flow. This will be particularly beneficial on account of the high proportion of HGV's in traffic mix. | The environment deteriorates as flows increase with time. | Bath Conservation Area was designated in 1979. Bath City Council hopes that Grosvenor Place will be eligible for a conservation grant. It also hopes to widen pavements along Bathwick St. and landscape along London Road |
| Batheaston Conservation Area | DOE<br>Wansdyke DC | Improvement and preservation of the conservation area. | There will be a significant improvement in the environment along Batheaston High St. due to a substantial reduction in traffic. | The environment deteriorates as traffic flows increase. | Batheaston Conservation Area was designated in 1979. |
| Bathampton Conservation Area | DOE<br>Wansdyke DC | Preservation of environmental quality of the conservation area. | Moderate noise and visual intrusion caused by the new routes.<br><br>(Continued over page). | No change | Bathampton Conservation Area was designated in 1984. |

Group 4: Policies for Conserving and enhancing the area (Cont)

| POLICIES | AUTHORITY | INTEREST | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|---|
| Bathampton Conservation Area (cont.) | | | There will be a reduction in traffic flow along Mill Lane and Tyning Road. This will improve safety by reducing vehicle/ pedestrian conflict and also improve the environment. | | |
| Upper Swainswick Conservation Area | DOE<br>Wansdyke DC | Preservation of environmental qualities of conservation area. | There is substantial traffic relief on the existing A46 Gloucester Rd at the eastern edge of the conservation area. | The environment deteriorates as traffic flows increase. | Upper Swainswick Conservation Area was designated in 1983. |
| Listed Structures | DOE<br>Avon CC<br>Wansdyke DC | a) Likely to be demolished<br><br>b) Number of buildings within distance of centre line<br>0 - 50 m<br>grade 1<br>grade 2B<br>grade 2<br>50 - 100 m<br>grade 1<br>grade 2B<br>grade 2<br>100 - 200 m<br>grade 1<br>grade 2B<br>grade 2 | None to be demolished<br><br><br><br><br>0<br>0<br>4<br><br>0<br>0<br>5<br><br>0<br>1<br>22 | The natural increase in traffic will bring increased levels of pollution and vibration to buildings along the existing roads. | Protection, maintenance and enhancement of buildings of special architectural or historic interest. |

Group 4: Policies for Conserving and enhancing the area (Cont)

| POLICIES | AUTHORITY | INTEREST | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|---|
| Listed Structures (Cont.) | | c) Buildings relieved by the reduction in traffic. | Many listed structures on the existing roads will be relieved by the reduction in traffic. | | |
| Little Solsbury Hill Ancient Monument. County Conservation Site | DOE<br>Avon CC<br>Wansdyke DC | Preservation of conditions. | The monument is within 500m of the route and would suffer a slight increase in noise and visual intrusion. | No change | |
| Priority Landscape Conservation Area ie. The Kennet & Avon Canal east of Bath and the Avon Valley running south between Bathampton and Bathford | DOE<br>Avon CC<br>Wansdyke DC | Preservation of the Landscape Area. | The route is bridged over the Kennet and Avon Canal. The alignment of the Bypass between Bathampton ....<br><br>(Continued over page). | No change | |

Group 4: Policies for Conserving and enhancing the area (Cont)

| POLICIES | AUTHORITY | INTEREST | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|---|
| Priority Landscape Conservation Area (Cont.) | | | and Bathford has been kept as low as possible in order to reduce the visual impact and with landscaping the new route will have a moderate visual impact. | | |
| Proposed extention to the Cotswold AONB | Countryside Commission Avon CC | Preservation of the natural beauty of the countryside. | Most of the scheme lies within the proposed extention to the Cotswold AONB with the consequent impact of visual intrusion, noise, and air pollution. | No change | |
| Statutory Green Belt | DOE Avon DC Wansdyke DC | Preservation of Green Belt. | Most of the scheme lies within the statutory Green Belt with consequent impact of visual intrusion, noise and air pollution. | No change | Development is not encouraged in the Avon Structure Plan. |

Group 4: Policies for Conserving and enhancing the area (Cont)

| POLICIES | AUTHORITY | INTEREST | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|---|
| Kennet & Avon Canal | British Waterways Board | Preservation of the quality of waterways. | The scheme is bridged over the Kennet and Avon Canal, preserving the water-way and towpath. | No change | |
| Trees and Woodland | Avon CC<br>Wansdyke DC<br>Bath CC | Preservation of woodlands, trees and hedgerows | Loss of numerous mature trees, especially within the valley floor. However substantial replanting to be undertaken. | No change | No trees covered by TPO affected. |
| Definitive Footpaths | Avon CC | Preservation of definitive footpaths. | The route crosses several definitive footpaths and all would be provided with alternative routes although these would be longer. | No change | |

Group 4: Policies for Conserving and enhancing the area (Cont)

| POLICIES | AUTHORITY | INTEREST | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|---|
| Priority Landscape Improvement Area | Bath CC Wansdyke DC | Enhancement of the local environment. | Landscaping will reduce the adverse effect of the visual intrusion made by this route. | Bath CC and Wansdyke DC plan to carry out landscape improvements in due course. | The new road scheme will incorporate landscaping and planting. |

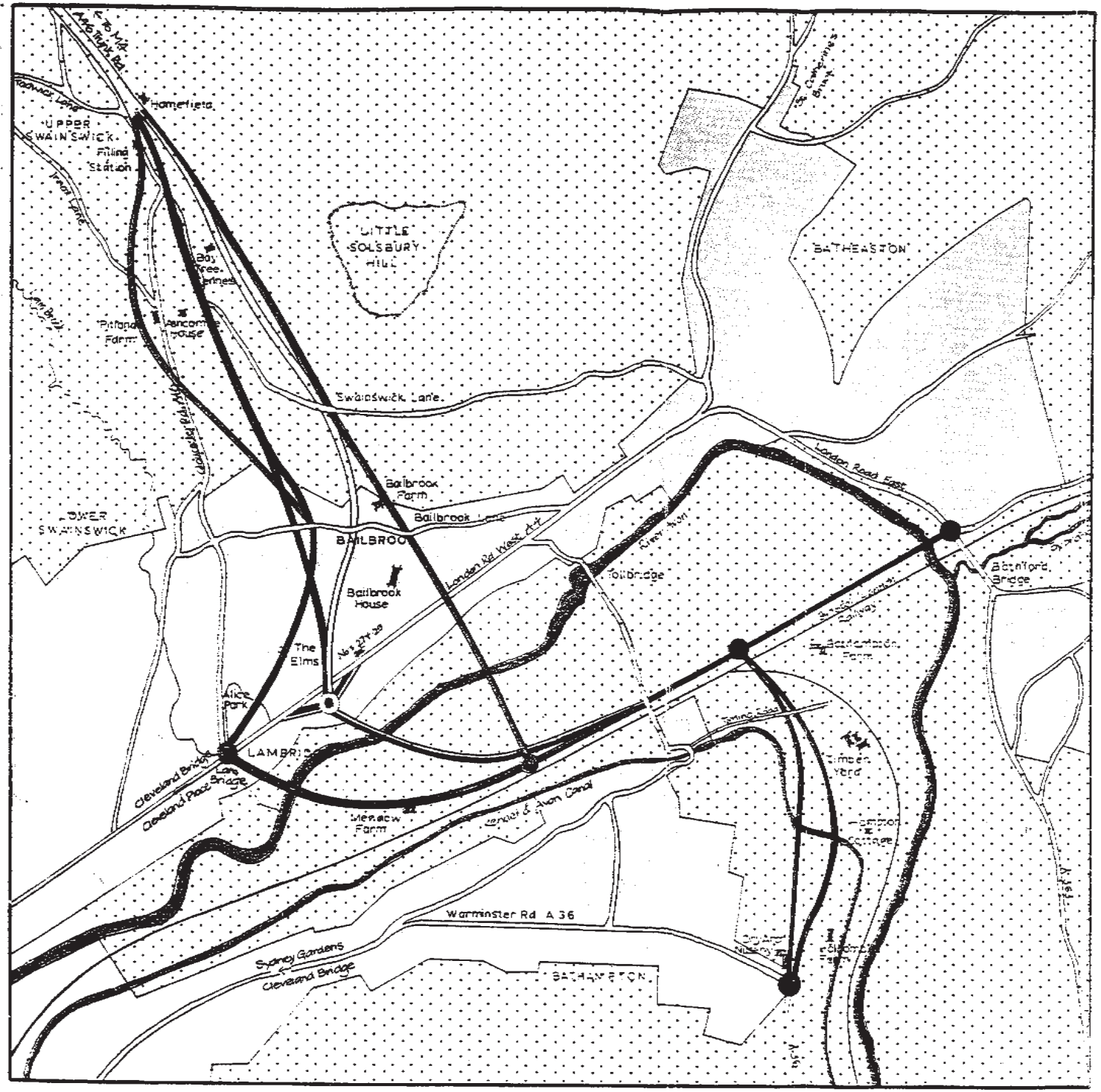
| POLICIES | AUTHORITY | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| To assist economic growth by reducing transport costs. | DTp | This route will reduce delays and assist ecomomic growth by lower transport costs. | Increased delays as traffic increases with growth. Hence costs would increase and reduce economic growth. | |
| To maintain a balanced citywide transportation system. | Avon CC<br>Bath DC | Traffic flows on existing roads within the central area of the City. will generally change only slightly. There will be slight reduction on the A4 and there will be a moderate reduction at Cleveland Bridge due to the rerouting of north south through traffic. | Increased traffic delays particularly at Cleveland Place and Lambridge | Avon CC as the Highway Authority is principally responsible for traffic management in Bath. |
| To remove unecessary through traffic from Bath particularly 'HGV's | DTp<br>Bath CC<br>Wansdyke DC<br>Avon CC | The north-south through traffic is removed from Bath. This is particularly beneficial on account of the high proportion of HGV's in the traffic mix. | Increased traffic congestion and delays | Through traffic forms approximately 25% of all traffic. |
| To remove traffic from residential and environmentally sensitive areas. | DTp<br>Bath CC<br>Wansdyke DC<br>Avon CC | Residential areas of Swainswick and Batheaston will benefit significantly from a sub-stantial reduction in traffic flow. The environmentally sensitive area of Grosvenor Place on the London Road within Bath will have a small decrease in traffic. This is particularly beneficial on account of the high proportion of HGV's in the traffic mix. Traffic through Bathampton on the existing A36 will increase however. | Traffic will increase with natural growth causing greater congestion and an increase in noise pollution in these areas. | |

Group 5: Transport, Development and economic policies (Cont)

| POLICIES | AUTHORITY | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|
| Safeguard the "Park and Ride" scheme for Bath especially the Lambridge Site. | Avon CC<br>Bath CC | The new route passes well to the east of the site and would not conflict with "Park and Ride" scheme. | No effect | Bath City Council have considered the site for parking but will review the situation. |
| To remove Batheaston High Street (A4) and the Gloucester Road (A46) from the national primary road network. | Wansdyke DC | Considerable environmental benefits in the Batheaston Conservation Area as the traffic reduces and the present A4 and A46 lose their primary road classification. | Further deterioriation as the existing trunk roads carry increasing traffic. | |
| Policy to allocate land for housing development in the Bailbrook Area. | Bath CC | The route cuts through the proposed housing site, limiting the scope for new housing. | The housing schemes will proceed and more traffic will be generated on the Gloucester Road (A46) | |
| To promote Bath as a regional shopping centre and centre of tourism | Bath CC | Traffic conditions in the centre of Bath are improved as through traffic is rerouted. | Congestion and delays will increase as traffic volume increases with time, making the trip increasingly unattractive. | |

Group 6 : Financial Effects

| SUB GROUP | INTERESTS | UNITS | PREFERRED ROUTE | DO-NOTHING | COMMENTS |
|---|---|---|---|---|---|
| Department of Transport | Construction Costs | £M (PVC) | 11.42 | 0 | Costs are discounted from year of expected expenditure to 1979 at 1979 prices. PVC = Present value of costs PVB = Present value of benefits NPV = Net present value |
| | Land Costs | £M (PVC) | 2.30 | 0 | |
| | Maintenance Cost | £M (PVC) | 0.08 | 0 | Excess maintenance cost due to additional length of road |
| | Total Costs | £M (PVC) | 13.80 | 0 | |
| | | | HIGH LOW | | |
| Total quantified monetary benefit | | £M (PVB) | 20.75 12.14 | 0 | Includes savings in time, vehicle operating costs and accidents. Taken from Group 1. |
| Net present value | | £M (NPV) | 6.95 -1.66 | 0 | |




ROUTE FOR WHICH THERE IS NO ALTERNATIVE

BATHEASTON/SWAINSWICK BYPASS OPTIONS

ALTERNATIVE TO RED OR PURPLE ROUTES NORTH OF BAILBROOK LANE

A36 ALTERNATIVE

PROPOSED MAJOR JUNCTION

BUILT UP AND OTHER NON GREEN BELT AREAS

STATUTORY GREEN BELT

# ANNEX 6

# ALTERNATIVE ROUTES CONSIDERED DURING PUBLIC CONSULTATION

not to scale

NORTH