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ENVIRONMENT & LANDSCAPE
Environmental Statement

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**A40 WITNEY – CASSINGTON DUALLING/ WEST
OF EYNHAM TO EYNHAM JCT. DETRUNKING
– ENVIRONMENTAL STATEMENT 20/10/94**



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THE DEPARTMENT
OF TRANSPORT

A40 DUALLING WITNEY BYPASS TO CASSINGTON

ENVIRONMENTAL STATEMENT

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1. INTRODUCTION

- 1.1. The Department of Transport proposes to improve the section of the A40 trunk road passing Barnard Gate, Eynsham and Cassington from the existing 2 lane highway to dual 2 lane carriageway standard.
- 1.2. The A40 trunk road between Oxford and Witney is part of the main east-west component of Oxfordshire's network of major routes and carries both through and commuter traffic. The existing carriageway has sections of substandard visibility with limited opportunities for safe overtaking. Current traffic flows are approaching twice the design capacity for a new single two lane carriageway and long delays are occurring at peak hours at the junction of the A40 and Eynsham Bypass/Hanborough Road.
- 1.3. This Environmental Statement is issued in accordance with E.C. Directive 85/337 as applied by section 105A of the Highways Act 1980.
- 1.4. The document is divided into four sections giving descriptions of: the scheme, the landscape setting, the environmental impacts associated with the published route and the proposed mitigation measures.
- 1.5. The appendices to this document include a framework, comparing the effects of the proposed route with the existing A40 trunk road, and a non-technical summary. Copies of this summary may be obtained, free of charge, from the Department of Transport South East Construction Programme Division, Federated House, London Road, Dorking, Surrey RH4 1SZ.

2. DESCRIPTION OF THE SCHEME

2.1. GENERAL

2.1.1. The scheme comprises a dualling of the existing A40 Trunk Road from the Witney Bypass to east of Cassington, a distance of 8.5 kilometres (see Figs 1 and 2).

2.1.2. The dualling would be achieved by a combination of on-line and off-line improvements. Each carriageway would be 9.3 metres wide consisting of two 3.65 metre traffic lanes and two 1 metre hard strips at each side of the carriageway.

2.1.3. Each carriageway would be separated by a central reserve of minimum 2.5 metre width and would be bordered by grass verges generally 2.5 metres wide. Continuous facilities for cyclists and pedestrians would exist from the eastern end of the scheme to Cuckoo Lane at the western edge of Eynsham either by retention of the existing facilities or replacement thereof by a combined cycleway/footway 1.5 metres wide.

2.1.4. The new carriageway would be separated by safety fences and have no central reserve crossings. Right turns would be catered for by three two level junctions at Barnard Gate, Eynsham and Cassington. All existing private accesses direct to the trunk road would be closed and alternative private means of access provided via junctions and side roads.

2.1.5. Lighting would be provided over the full length of the scheme.

2.2. THE PUBLISHED ROUTE

WITNEY BYPASS TO AMBURY CLOSE FARM

2.2.1. The route starts near the existing accommodation bridge at Hill Farm at the eastern end of the dual two lane Witney Bypass and follows the line of the existing road, with a new second carriageway to be built to the south of the existing carriageway until a point 300 metres east of Ambury Close Farm.

2.2.2. In the vicinity of Whitehouse and Salutation Farms the central reserve would be widened to preserve the existing hedgerow and several mature trees.

2.2.3. A two level junction would be provided to the west of the Barnard Gate hamlet. A bridge over the A40 would connect slip roads to and from the westbound and eastbound carriageways and link Barnard Gate to the lane leading to South Leigh. The existing access into the A40 at the eastern end of Barnard Gate would be closed.

AMBURY CLOSE FARM TO THE RIVER EVENLODE

- 2.2.4. From a point 300 metres east of Ambury Close Farm, the route departs to the north of the existing road.
- 2.2.5. The road would cross farmland on a low embankment about 1 metre high for approximately 750 metres before entering a cutting 750 metres long through the ridge upon which Cuckoo Lane is situated. The side slopes of the cutting are 1 in 5 and the maximum depth is 8 metres. Cuckoo Lane would cross over the new route on a bridge constructed on the line of the existing Cuckoo Lane.
- 2.2.6. From a point 500 metres to the east of Cuckoo Lane the route again would be on embankment about 1 metre high. It would then cross the Hanborough Road to the south of its junction with Mill Lane and proceed on a 1 metre high embankment over Eynsham Mead Ditch to rejoin the existing A40 approximately 400 metres west of the River Evenlode crossing. Side slopes of 1 in 2 have been adopted for the embankments.
- 2.2.7. At the Hanborough Road a two level dumb-bell junction layout would provide access to and from Eynsham and would utilise the existing A40/B4449 roundabout as its southern roundabout and the existing A40 as its south eastern slip road. A new northern roundabout would be constructed to serve Hanborough Road and the northern slip road connections to the new road. The new roundabout would be at existing ground levels and a link road would cross over the new dual carriageway on a bridge with approximately 45° skew to connect with the existing A40/B4449 roundabout.

RIVER EVENLODE TO EAST OF CASSINGTON

- 2.2.8. The route rejoins the existing road 400 metres west of the River Evenlode.
- 2.2.9. After the route rejoins the existing road the dual carriageway follows the existing road alignment by widening on the north side as far as the existing Eynsham Road/Cassington Road junction.
- 2.2.10. At the Eynsham/Cassington Road junction, the existing vehicular connection with Eynsham Road would be closed whilst the junction with Cassington Road would remain open. A footbridge would provide a link across the new route for pedestrians and cyclists (dismounted).

- 2.2.11. East of Eynsham/Cassington Road junction, the formation of the dual carriageway requires widening of the existing road on its southern side.
- 2.2.12. Access to Cassington Village would be provided by a two level dumb-bell junction on the A40 east of Horsemere Lane. Slip roads to and from the eastbound and westbound carriageways would connect into raised roundabouts on the northern and southern sides of the new route. The two roundabouts would be joined together by a bridge over the A40. A single 7.3 metre 2 lane carriageway with 2.5 metre wide grass verges would link the junction to Yarnton Road where a roundabout would be constructed.
- 2.2.13. The existing bridge over the dismantled Witney to Oxford railway line and its approach embankments would be removed to enable the construction of the link road junction.
- 2.2.14. East of the junction the dual carriageways would taper into the existing single carriageway A40.
- 2.3. LAY-BYS AND REST AREAS
- 2.3.1. In the westbound direction the existing lay-by east of Cassington would be lost to road widening. The existing lay-by west of Eynsham, in an abandoned loop of old road, would be bypassed by the off-line section of the new carriageway and broken out. To replace these facilities a new westbound rest area containing toilets and a picnic area would be provided for cars and lorries to the west of Eynsham.
- 2.3.2. In the eastbound direction the existing layby to the east of Barnard Gate would be removed by the works and new laybys, each 100 metres long, would be provided to the east of Barnard Gate and to the west of the River Evenlode crossing.
- 2.3.3. At Barnard Gate a further rest area is planned for eastbound traffic. This would be restricted to cars only and would have toilet and picnic facilities.
- 2.4. TRAFFIC (See Fig. 11)
- 2.4.1. The scheme would divert substantial flows of traffic away from the north of Eynsham Village providing significant benefits to the properties in this area. Traffic flows on the existing A40 at Eynsham are expected to be in the region of 30,000 vehicles per day just prior to opening the new route reducing to 4,000 vehicles per day when this section of road is bypassed in 1996.

- 2.4.2. The existing roundabout at Eynsham has insufficient capacity to cope with existing peak hour flows, thus presently causing delays for through and local traffic. A consequence of this is that local traffic to Oxford, in the mornings, tends to detour through Eynsham onto the Eynsham to Cumnor and Botley road to enter Oxford on the A420 and avoid the queues at the A40 roundabout. The proposed scheme, with a two level junction to the north of Eynsham, would remove traffic from the village during the morning peak.
- 2.4.3. The proposed Cassington Link road would remove through traffic from the village of Cassington.
- 2.5. LIGHTING
- 2.5.1. Lighting is proposed for the full length of the dualling to reduce the number of night time personal injury accidents.
- 2.5.2. The existing roundabout at the north east of Eynsham, forming the southern roundabout of the dumb-bell junction, is presently lit and would remain so. The northern roundabout of the dumb-bell junction at Eynsham and the approaches to it would be lit for safety reasons.
- 2.5.3. The two roundabouts and the slip roads at the proposed two level junction at Cassington and the roundabout at the northern end of the Cassington Link road would be lit for safety reasons.
- 2.5.4. It is not proposed to light the approaches to Barnard Gate junction.

3. DESCRIPTION OF THE SITE AND ITS SURROUNDINGS

3.1. SETTLEMENTS

3.1.1. Barnard Gate is a hamlet at the western end of the scheme. It consists of several farms and private dwellings and was bypassed by an A40 road improvement scheme in the mid 1960's.

3.1.2. Eynsham is a large village situated mid-way along the scheme. It has a population of 5,500 and has experienced a great deal of house building since the 1950's. To the north and east of the old village centre, now a conservation area, housing has spread up to the southern boundary of the existing A40 and the new eastern bypass. Several commercial enterprises including a petrol filling station and a motor repair business exist on the north side of the A40.

3.1.3. Cassington is a village with a population of some 650; situated within the Oxford Green Belt land it retains a village character.

3.2. LANDSCAPE CHARACTER

3.2.1. The site encompasses gently undulating countryside rising from 60 metres Above Ordnance Datum (AOD) near the Thames floodplain to 100 metres AOD at the highest point of the route.

3.2.2. The area is an attractive and generally well maintained agricultural landscape. The mixed farming regime and many land ownerships have created irregular field patterns, with properties bounded by distinctive clipped hedgerows, copses and larger areas of woodland.

3.2.3. Land to the east of the Eynsham Junction and Hanborough Road is part of the Oxford City Green Belt while a West Oxfordshire District Council designated Area of High Landscape Value has a boundary contiguous with the southern and eastern edges of the existing A40 south of Cassington, the Cassington Road and the Eynsham Road.

3.2.4. The Evenlode and Thames floodplains are rich in sand and gravel deposits. Water filled pits now mark the areas where extraction has ceased. To the east of the proposed Cassington Link road a major new quarry is beginning to dominate the area north of the A40.

3.2.5. For details of land use, agricultural land classification and designated areas see Figures 3, 4 and 5.

4. ENVIRONMENTAL IMPACT

4.1. INTRODUCTION

4.1.1. The environmental impact of the proposal is presented in accordance with the Department of Transport Manual of Environmental Appraisal (M.E.A.) The manual describes techniques for environmental assessment and compilation of appraisal frameworks. Two options are presented in the framework (Appendix A):

- i) The Published Scheme as described in this document.
- ii) The "Do Minimum" Scheme which would be limited to a junction improvement at the Eynsham roundabout.

4.2. LANDSCAPE (See figs 3 & 4)

4.2.1. Road construction would require landtake and result in some disruption to the field patterns along the off-line section north of Eynsham. The on-line sections would require landtake to accommodate the additional carriageway.

4.2.2. Construction of the road would require some landtake to the east and south east of the existing Eynsham roundabout on land designated as Green Belt and an Area of High Landscape Value.

4.2.3. The Published Route would not involve any demolition of buildings.

4.2.4. The three two level junctions would introduce new features into the landscape although the Cassington junction would replace the existing bridge over the dismantled Oxford-Witney railway line.

4.2.5. Other significant features would include the 8 metre deep (max) 750 metre long cutting at Cuckoo Lane and a 4.5 metre deep (max) 300 metre long cutting west of Ambury Close Farm. The Cassington Link road would be on a metre high embankment as would the off-line section of the road both to the east and west of the Cuckoo Lane cutting (see Fig 2).

4.3. FOOTPATHS AND BRIDLEWAYS (See Fig 4)

4.3.1. The proposed route crosses the line of footpaths and bridleways, from the west of the scheme through to the east of Cassington and the effects are as follows:

- * Footpath FP22. This path stops at the existing southern highway boundary and would be shortened to accommodate construction and a stile be provided in the fence.
- * Bridleway BW13. This track stops at the existing northern highway boundary and would be shortened and new access provided onto the proposed road.
- * Bridleways BW11 and BW12. These would be diverted along the southern highway fenceline westwards, over Cuckoo Lane Bridge then eastwards on the north side of the A40 to rejoin the existing BW11 at its junction with BW12.
- * Footpath FP (unnumbered). This path links into BW11 and BW12 and would join the diverted section of the two bridleways.
- * Footpath FP10. FP10 would be diverted along BW9, across the overbridge at Eynsham junction to the northern dumb-bell roundabout. The footpath would then cross the north west slip road and head west to rejoin the existing line of FP10.
- * Bridleway BW9. This would be diverted along the side of the south west slip road embankment, cross the slip road and join the public highway at Eynsham junction overbridge.
- * Footpath FP5. It is proposed to divert the footpath along the north side of the A40 over the Cassington footbridge and along Cassington Road.
- * Footpath FP4. FP4 follows Horsemere Lane, classified as a carriage road used as Footpath (CPF4) which ends at the existing northern highway boundary. Access would be retained to the north of the A40 along the proposed cycleway and footway, although the road would be stopped up to prevent vehicular access to the proposed road.
- * Footpath FP2. This footpath would be diverted over the bridge at Cassington junction, along the south side of the A40 to rejoin the existing line of FP2.
- * Footpath FP1. This footpath would be severed by the Cassington Link but the provision of stiles at the highway boundaries would retain the existing line of this footpath.

4.4. AGRICULTURE (See fig 3)

4.4.1. To the east and west of Eynsham the land acquisition on the on-line section of the Published route would not cause any new field severance.

4.4.2. North of Eynsham the off-line section crosses agricultural land. Wherever practicable the alignment would follow farm boundaries but would cause some severance to individual holdings.

4.4.3. The agricultural land along the line of both the existing and proposed route is classified by MAFF as either grades 3 or 4. North of Eynsham the route would cross an area of Grade 2 quality.

4.5. ECOLOGY AND NATURE CONSERVATION

4.5.1. The proposed route would not directly affect any scheduled National Nature Reserves (NNR) or Sites of Special Scientific Interest (SSSI) as defined by English Nature (EN). However, the final half kilometre of the east end of the route would pass within 30 metres of the Yarnton Mead SSSI.

4.5.2. Habitats for flora and fauna along the line of the proposed route are generally a product of farming practices which traditionally have formed the dominant land use. The area still retains a rich legacy of hedgerows and wooded copses containing a diverse range of native plant species and forming either a permanent or temporary home for wildlife. Agricultural fields possess little or no ecological merit because of rotational grazing and cropping. English Nature have identified two 'meadows rich in flora' (unimproved pasture) within the route corridor (see fig 5) but only one would be slightly affected by the proposals.

4.5.3. Some hedgerows would be removed in road construction along the length of the route. Assymetrical dualling of the on-line sections would limit hedgerow removal to one boundary of the existing A40 allowing the retention of mature vegetation along the north boundary at Barnard Gate and Cassington and along the southern boundary between Eynsham and Cassington.

4.5.4. The Published Route would not affect any trees which are the subject of Tree Preservation Orders.

4.5.5. Waterbodies, both natural and man-made are a significant feature in the area and attract a different range of animal and plant species. The River Evenlode, a tributary of the Thames, is a significant watercourse and an important area of local nature conservation interest.

The Chil Brook and field ditches also provide refuge for a limited number of plants and wildlife. Derelict sand and gravel workings have created a number of sizeable pools and small ponds, either through neglect or limited management, several of these areas are now recognised for their nature conservation interest (see Fig 5).

4.5.6.

The proposed route would affect the following sites of interest to English Nature (EN) and local conservation groups:

(i) Marlborough Pool: (Area A: See Fig 5)

The site is recognised by the Berkshire, Buckinghamshire and Oxfordshire National Trust (BBONT) and designated an Oxford County Museum site for flora and fauna interest. This area is also recognised by the British Trust for Ornithology (BTO) for ornithological interest. Earthworks required to accommodate the new west bound carriageway would affect the northern edge of the pool resulting in the loss of existing vegetation and associated wildlife habitats.

(ii) The Willows: (Area B: See Fig 5)

The site is recognised by (BBONT) for varied habitats including ponds, wetland and an unimproved grassland. The construction of the proposed footbridge connecting Cassington Road and Eynsham Road would result in the loss of existing vegetation to the south of the old sandpit ponds.

(iii) Agricultural Field: (Area C: See Fig 5)

The site is recognised in a Nature Conservancy Council (NCC) Meadow Survey (1978) for having an undisturbed ridge and furrow field system with associated flora. The proposed private means of access along the northside of the two level junction at Cassington would mean the loss of existing hedgerow planting on the field boundary.

(iv) Oxford County Museum Site: (Area D: See Fig 5)

Located to the north east of Cassington: this area has been designated by Oxfordshire County Council for flora and fauna of interest. The link road has been located to the north east edge of the site away from ponds and waterside vegetation where flora and fauna of interest have been identified.

(v) River Evenlode Bridge: (Area E: See Fig 5)

The corridor of the River Evenlode has been designated an Oxford County Museum site by Oxfordshire County Council for flora and fauna of interest to the local area. The proposed dualling will result in the loss of some mature vegetation on the river bank where the existing A40 is bridged over the River Evenlode.

4.6. CONSERVATION AREAS AND LISTED BUILDINGS (See Fig 4)

4.6.1. The route does not directly affect any conservation areas or any individual buildings of architectural or historic importance.

4.7. ARCHAEOLOGY

4.7.1. There are no scheduled ancient monuments affected by the scheme. However, the route is in an area that has featured some of the most important archaeological finds in the upper Thames Valley. Other occasional finds and cropmarks support the archaeological potential of this area.

4.7.2. The proposed route affects the following sites of archaeological interest which feature in the Oxfordshire Sites and Monuments Record.

(i) Northeast Cassington (Area A: see Fig 4)

The proposed Cassington link is aligned through an area of cropmarks east of Mead Ditch which were identified from aerial photographs. The period of the cropmarks is uncertain, however, Roman roof tiles have been found adjacent to the site. The majority of this link road is planned to be constructed on shallow embankment.

(ii) East of Cassington Junction (Area B: see Fig 4)

The site contains cropmarks of uncertain period. The new carriageway south of the existing A40 would encroach into this site.

(iii) East of Marlborough Pool (Area C: see Fig 4)

There have been no recorded archaeological finds in this area. The site has been recognised for its archaeological potential by Oxfordshire County Council because of its proximity to Marlborough Pool where a beaker cemetery from the early bronze age period (1500 BC) was discovered during excavations for gravel. The new carriageway on the south side of the existing A40 would encroach into this area.

(iv) Disused gravel pits west of Marlborough pool (Area D: see Fig 4)

There have been a number of iron age finds to the north and south of the existing A40. The proposed new carriageway would extend into these areas. As these sites have already been excavated for gravel extraction it is unlikely that any major finds would be made during road construction.

(v) North of Acre Hill House (Area E: see Fig 4)

There have been a number of archaeological finds in this area. Where the route is off-line it would pass through cropmarks dating back to pre-Valentinian period (400 AD). The road is planned to be constructed on shallow embankment through this area.

4.8. VISUAL EFFECTS

- 4.8.1. The route would affect individual rural properties as well as properties located at Barnard Gate, Eynsham and Cassington. The greatest concentration of properties affected by visual intrusion are located in the north east part of Eynsham near to the Hanborough Road Junction.
- 4.8.2. The three two level junctions at Barnard Gate, Eynsham and Cassington would introduce new bridges into the landscape. Each of the new bridges and their approach roads would rise to approximately 7 metres above present ground levels causing varying degrees of visual intrusion to occupiers in the surrounding area.
- 4.8.3. The siting of the two level junctions away from areas of settlement would limit the number of properties affected by visual obstruction to one dwelling, 'The Willows', close to the Cassington footbridge.
- 4.8.4. A significant proportion of the off-line section of road would be in cutting which would keep to a minimum the levels of visual intrusion for residents on the northern fringes of Eynsham. Where the proposed new sections of road are on low embankment the new road would be a visible though distant feature in the landscape for properties in Eynsham.
- 4.8.5. The gentle reverse curve alignment of the cutting would restrict long views of the earthworks through the ridge at Cuckoo Lane. The proposed overbridge at this point would follow the line of the existing ridge top maintaining a visual link across the skyline.
- 4.8.6. Proposed lighting along the route would increase levels of intrusion during night viewing. A number of residential properties located to the north of Eynsham and south of Cassington would not have direct views onto the proposed route, but lamp posts would be visible in the distance. These properties would have insignificant levels of intrusion during daylight but, would incur low levels of intrusion after dark.

- 4.8.7. A summary of predicted visual intrusion levels which would be experienced by adjacent residents is included in the appraisal framework (see Appendix A).
- 4.9. NOISE
- 4.9.1. Noise levels at properties along the sections of the A40 to be dualled on-line would be marginally increased.
- 4.9.2. All properties along the north side of Eynsham would experience a significant reduction in noise due to the diversion of the A40 from the present route and due to its construction in cutting. Many other dwellings in the villages of Eynsham and Cassington would also benefit from a reduction in traffic noise due to re-routing of traffic via the existing Eynsham Bypass and proposed Cassington Link road respectively.
- 4.10. AIR POLLUTION
- 4.10.1. Motor Vehicles emit a wide variety of gaseous and particulate materials of which a small proportion are potentially harmful to people. Vehicle movements also give rise to dust and dirt. The concentration of polluting materials and their deposition falls off rapidly with the distance from the source as the emission disperses into the atmosphere or is deposited on the ground.
- 4.10.2. The level of carbon monoxide in the air is taken as a general indicator of air quality and an air pollution problem from traffic may occur if the peak hour concentration of carbon monoxide exceeds 4 parts per million.
- 4.10.3. The scheme will not create or aggravate a pollution problem having regard to the forecast traffic for the first fifteen years after opening. It will not significantly increase or decrease the overall pollution of air or ground by vehicle emissions or movements. The off-line section will have the effect of transferring some pollution from the present route to the new but the total amount of pollution will be virtually unchanged.
- 4.10.4. An air quality survey has not been carried out for this dualling scheme as the scheme is not considered to have a significant effect on air quality.
- 4.11. DISRUPTION TO LOCAL RESIDENTS DURING CONSTRUCTION
- 4.11.1. The disruption caused to people living in the area would be minimal because the route is off-line where it passes by the main centre of population at Eynsham.

- 4.11.2. Levels of acceptable noise would be discussed with the local Environmental Health Officer and stipulated in the contract for construction.
- 4.11.3. The movement of bulk materials by earthmoving plant and trucks normally constitutes the main source of disruption to residents during road construction. On this scheme disruption will be minimal because the major earthmoving operations are on the off-line section to the north of Eynsham away from residential areas. Lesser earthmoving operations are associated with the construction of the other two level junctions and are limited to the approach embankments to the bridges and associated works.

5. MITIGATION MEASURES

5.1. HIGHWAY DESIGN

5.1.1. The design of the road line and level minimises the impact on the landscape, areas of environmental interest and residential areas.

5.1.2. Approximately 5.5 km of the 8.5km route would be on-line minimising landtake. The off-line section of road would minimise the impact on the northern fringes of Eynsham.

5.1.3. To reduce the impact of the Eynsham junction the existing roundabout and existing A40 have been utilised as the southern roundabout and south eastern slip road of the two level dumb-bell junction. The northern roundabout has been designed at ground level to reduce its visual impact and that of the connecting slip roads. The approach embankments to the bridge linking the two roundabouts have been designed to minimum standards and some additional land has been taken for landscape purposes on the south west side of the junction to reduce the impact on north east Eynsham.

5.1.4. The Barnard Gate and Cassington junctions are located away from residential areas. The Cassington junction would be constructed on the site of the embankments for the existing A40 bridge over the disused railway. Both junction arrangements and associated earthworks are designed to minimise visual impact.

5.1.5. Assymetrical dualling along the on-line section allows the retention of hedgerows on one side of the road to retain important mature screen vegetation.

5.1.6. Between Whitehouse and Salutation Farms the westbound carriageway alignment would allow the retention of a hedgerow containing a number of prominent trees within a widened central reservation.

5.2. LANDSCAPE TREATMENT

5.2.1. The earthworks and planting treatments are designed to reduce the visual impact and assist the integration of the proposed road into the landscape.

5.2.2. Planting treatments have been designed to recreate the existing distinctive character of the west Oxfordshire landscape. Native tree and shrub species, indigenous to the area, would be used to recreate existing local conditions and maintain the value of adjacent wildlife habitats.

- 5.2.3. Hedgerow planting beside the road is proposed for the entire length of the corridor to replace hedgerows removed during construction and to link severed hedgerows where the road passes through open agricultural fields. (The proposed planting treatments are shown on Figures 6 to 10).
- 5.2.4. Land acquisition and dense copse planting is proposed in small pockets of severed land adjacent to the highway boundary to strengthen hedgerow treatments and retain severed hedgerows.
- 5.2.5. It is proposed that, with the agreement of the landowners, hedgerow planting would be carried out along new private means of access.
- 5.2.6. The alignment of the Cassington Link to the east of an existing line of trees minimises the level of visual intrusion of the link road from the properties on the east side of Cassington as well as reducing the impact on sites of nature conservation and heritage interest.

5.3. NATURE CONSERVATION

- 5.3.1. The proposed route would minimise the impact on recognised nature conservation sites. Where construction affects areas of known wildlife interest discussions would be held with the landowners and other interested parties about the potential impact caused by landtake and the subsequent treatment of land retained within the highway boundary. Selection of plant material and grass seed mixes would aim to recreate or reinforce adjacent vegetation and establish new habitats appropriate to the area.
- 5.3.2. Restoration of the northern edge of Marlborough Pool and other areas affected by construction operations located outside the proposed highway boundary would be subject to agreement with the land owners.

5.4. ARCHAEOLOGY

- 5.4.1. The route of the proposed scheme is the subject of an archaeological field evaluation designed to establish the location, extent, condition, character, quality, and date of any archaeological deposits. This will enable the archaeological implications of the scheme to be more fully understood and appropriate mitigating action to be taken in consultation with English Heritage and the County Archaeological Officer.

- 5.4.2. Depending on the results of the field evaluation and engineering considerations, mitigation may take the form of founding embankments upon undisturbed ground and of raising the Cassington Link Road wholly onto shallow embankment.
- 5.4.3. If physical preservation of archaeological deposits is not feasible or warranted, archaeological recording action will be arranged prior to the commencement of road works. DTp currently allocates £500,000 to English Heritage as a contribution towards the cost of archaeological recording works necessitated by the Department's road schemes in England.
- 5.4.4. DTp will keep English Heritage and the County Archaeological Officer informed on the scheme programme to allow appropriate arrangements for field evaluation and archaeological recording works to be made in advance of the road works.
- 5.4.5. DTp will permit access by a suitable archaeological organisation in order to observe the site during the course of road construction. In the event that unexpected archaeological remains are encountered, decisions on any further action would be taken in consultation with the archaeological organisation and, where appropriate, English Heritage and the County Archaeological Officer.
- 5.5. NOISE
- 5.5.1. The alignment of the published route has been designed to minimise the effects of noise on residential properties. This has been achieved in part by widening on the side away from residential properties.
- 5.5.2. Noise insulation treatment would be offered where traffic noise at the facade of dwellings meets the criteria given in the Noise Insulation Regulations 1975. Alternative means of reducing the effect of road traffic noise on residents are being investigated including the use of noise barriers.

6. ALTERNATIVE SCHEMES

(See Fig. 12)

6.1. GENERAL

6.1.1. During 1987 two alternative schemes for dualling the A40 between Witney and Cassington were presented at a public exhibition. These were referred to as the Blue and Red Routes. Both schemes started at the eastern end of the Witney Bypass and ended to the east of Cassington close to the bridge over the disused Witney-Oxford railway line. To the east of Cassington a new link, common to both schemes, would connect with Yarnton Road to the north of the village.

6.2. THE RED ROUTE

6.2.1. The Red Route was an entirely on-line improvement from the eastern end of the Witney Bypass to the east of Cassington Village.

6.2.2. The on-line option was least favoured by Oxfordshire County Council, West Oxfordshire District Council and local parish councils and was least popular at Public Consultation.

6.2.3. This route was rejected for several reasons which are outlined below:

- i The Red Route would cause a significant increase in traffic noise to properties at the north of Eynsham.
- ii Statutory Undertakers apparatus in the A40 verges north of Eynsham would be disturbed.
- iii Severe visual intrusion would be experienced by houses in the north east of Eynsham due to the close proximity of the two level junction.
- iv Houses in the north of Eynsham would be subject to a high level of construction disturbance.
- v The route exhibits less economic benefits than the off-line route.

6.3. THE BLUE ROUTE

6.3.1. The Blue Route was a partially off-line improvement. The existing A40 would be dualled from the eastern end of the Witney Bypass and would be dualled to the east of Barnard Gate. The route then passed across agricultural land north of the existing A40 and Evenlode Farm to rejoin the existing road about 800 metres west of Cassington, from where it would have been dualled to the east of the village.

6.3.2. Following Public Consultation the line of the Blue Route was originally adopted as the Preferred Route.

6.3.3. After the publication of the Preferred Route representations were received from land owners affected by the off-line section of the route to the north of Eynsham. The off-line route passed through Evenlode Farm in a deep cutting which severed the land holding and also bisected land used for a Pick-Your-Own enterprise west of Hanborough Road. Various alternative alignments for this section of the route were investigated and an alternative was chosen that follows, as far as practicable, the boundaries between farms causing less severance to Evenlode Farm and the Pick-Your-Own holding. This is now the Published Route.

6.4. THE CASSINGTON LINK

6.4.1. At Public Consultation the Cassington Link ran north from the A40, between the village and an existing tree-lined ditch. It was amended to run to the east of the trees in order that the trees might provide a screen to the village and to avoid a meadow of ecological interest. This became the Preferred Route.

6.4.2. The Preferred Route was later modified at its north end to achieve a better junction arrangement with the Yarnton Road and avoid demolition of prominent trees in front of Jericho Farm House. This is now the Published Route.

APPENDIX A

FRAMEWORK ASSESSMENT

Group 1: Travellers

Group 2: Occupiers

Group 3: Users of Facilities

Group 4: Policies for Conserving and Enhancing the Area

Group 5: Transport, Development and Economic Policies

Group 6: Financial Effects

ASSESSMENT FRAMEWORK

GROUP 1: TRAVELLERS

Sub-Group	Effect	Units		Preferred Scheme		Do Minimum*	Comments
		High Traffic Growth	Low Traffic Growth	High Traffic Growth	Low Traffic Growth		
Car Users	Time Savings	£M(PVB)	33.191	17.305	0	<p>Notes: A, B and C apply to first nine lines only:</p> <p>A. Each column shows improvements over 'do-minimum' option. Hence 'do-minimum' entries are zero.</p> <p>B. Present Value of benefits (PVB) are for 30 year periods from expected date of opening and discounted to 1988 prices at 8% per annum.</p> <p>C. National average figures for vehicle occupancy have been assumed.</p>	
	Vehicle Operating Cost Savings	£M(PVB)	-3.647	-4.115	0		
	Users of Light Goods Vehicles	Time Savings	£M(PVB)	9.124	4.224		0
Vehicle Operating Cost Savings	£M(PVB)	-0.844	-0.862	0			
Users of Other Goods Vehicles	Time Savings	£M(PVB)	3.426	1.525	0		
	Vehicle Operating Cost Savings	£M(PVB)	-1.535	-1.567	0		
	Bus Operators and Passengers	Time Savings	£M(PVB)	1.584	0.872		0
Vehicle Operating Cost Savings	£M(PVB)	-0.130	-0.153	0			
All Vehicle Travellers	Value of Accident Savings	£M(PVB)	7.010	4.935	0		

* The 'Do Minimum' option represents a small scale scheme to improve traffic conditions at low cost. In this case it comprises geometric improvements to the existing roundabout on the A40 at Bynsham.

ASSESSMENT FRAMEWORK

GROUP 1: TRAVELLERS (continued)

Sub-Group	Effect	Units	Preferred Scheme	Do Minimum	Comments	
All Vehicle Travellers (continued)	Reduction in Casualties:		High Traffic Growth		The figures indicate probable total reductions in casualties over the whole 30 year assessment period. They take no account of the safety implications of the detailed design of the preferred scheme.	
		Fatal	number	23		20
		Serious	number	239		207
	Slight	number	709	607	0	
	Driver Stress		Low	High	Driver stress likely to increase on do minimum route as two way traffic flows increase and overtaking becomes increasingly difficult and hazardous.	
	View from Road		Distant views agricultural with some residential near Eynsham	Similar but more strongly residential near Eynsham		
	Traffic Delays During Construction		Slight (for 2 year period)	Slight (for 3 month period)	Traffic would make maximum use of present carriageways until completion of second carriageway in Preferred Scheme.	

ASSESSMENT FRAMEWORK

GROUP 1: TRAVELLERS (continued)

Sub-Group	Effect	Units	Preferred Scheme	Do Minimum	Comments
Pedestrians	Change in Amenity		Reduction of traffic through Eynsham, diversion of A40 away from Eynsham, grade-separation at junctions, bridges on Cuckoo Lane and at Cassington and a central reserve with safety fence will reduce pedestrian/vehicle conflict	Increasing 2-way traffic will reduce amenity	
Safety					
			Reduction of traffic through Eynsham and provision of footbridge at Cassington will improve safety.	Increasing 2-way traffic flows will increase pedestrian/traffic conflicts	
Severance					
			4 Footpaths 3 Bridleways In addition 1 Footpaths and 1 Bridleway terminate at the existing A40.	None	Diversions are proposed to maintain links with severed sections. Appropriate arrangements would be made to maintain access to the proposed route.

ASSESSMENT FRAMEWORK

GROUP 1: TRAVELLERS (continued)

Sub-Group	Effect	Units	Preferred Scheme	Do Minimum	Comments
Cyclists	Change in Amenity		Reduction of through traffic in Eynsham, the reconstruction of cycleways eastwards from Cuckoo Lane, grade-separated junctions on the A40 and the provision of Cuckoo Lane bridge and Cassington footbridge will improve the existing amenity.	Increasing 2-way traffic will reduce the quality of the existing amenity.	
Safety					
			Provision of dual carriageway and cyclists facilities will improve safety	Increasing 2-way flows will increase cyclist/traffic conflicts.	
Severance					
			Reduced by provision of bridges over A40 at grade-separated junctions, Cuckoo Lane and Cassington.	None	

ASSESSMENT FRAMEWORK

GROUP 2: OCCUPIERS

Sub-Group	Effect	Units	Preferred Scheme	Do Minimum	Comments
Residential	Properties Demolished	Number	0	0	
	Noise*	Houses experiencing increase of: More than 15 dB(A)L10 10 - 15 dB(A)L10 5 - 10 dB(A)L10 3 - 5 dB(A)L10	28 0 0 103	0 0 0 0	Due to higher speeds on dual carriageway noise levels at properties adjacent to A40 would be marginally increased. 20 properties may be entitled to noise insulation treatment. 28 houses on the east of Cassington would be affected by noise from traffic on the new link road. The maximum predicted noise level would be 55dB(A).
	Visual Obstruction	No. of Properties	1	NO Change	The Cassington Footbridge will cause some obstruction to views from the 'Willows'.
		Number of houses experiencing decrease of: More than 15 dB(A)L10 10 - 15 dB(A)L10 5 - 10 dB(A)L10 3 - 5 dB(A)L10	0 0 97 49	0 0 0 0	Substantial number of houses in Eynsham will experience a reduction in noise levels due to diversion of A40 away from present route and re-routing of through traffic.

* The noise predictions have been calculated in accordance with 'Calculation of Road Traffic Noise' 1988 and compare the predicted noise level 15 years after opening (2011) with the noise level predicted for the period immediately prior to construction (1994).

ASSESSMENT FRAMEWORK

GROUP 2: OCCUPIERS (continued)

Sub-Group	Effect	Units	Preferred Scheme	Do Minimum	Comments
Residential (continued)	Visual Intrusion	No. of Properties	High Moderate Slight 10 39 70	No Change	Properties along the route suffer various levels of intrusion. Greatest impact will be on properties at Eynsham and Cassington which front the existing A40. 93 additional properties would experience slight intrusion at nighttime.

Severance					
a) Relief to existing severance			slight	None	Provision of footbridge at Cassington
b) Imposition of new severance			slight	Increasing two way traffic flows will increase the difficulty of access.	Central Reserve barriers continuous. Accesses onto trunk road closed. Private means of access are proposed to connect properties to junctions.
Disruption during construction			slight	None	Construction activities will cause disruption to 9 houses

ASSESSMENT FRAMEWORK

GROUP 2: OCCUPIERS (continued)

Sub-Group	Effect	Units	Preferred Scheme	DO Minimum	Comments
Industrial Premises:					
Concrete Works at Cassington	Severance		Slight	No change	Works will be severed from eastbound carriageway of A40.

Commercial Premises:

a) Office Buildings

None affected

b) Shops

None affected

c) Public Houses Restaurants

Noise Reduction

Number of premises experiencing a decrease of:

- i) The Evenlode
- ii) Acre Hill Little Chef
- iii) Eynsham Roundabout Little Chef

More than 15 dB(A)L10 0
 10 - 15 dB(A)L10 0
 5 - 10 dB(A)L10 1
 3 - 5 dB(A)L10 2

No change

Visual Obstruction

Number of premises

None

ASSESSMENT FRAMEWORK

GROUP 2: OCCUPIERS (continued)

Sub-Group	Effect	Units	Preferred Scheme	Do Minimum	Comments
c) Public Houses Restaurants (continued)	Severance	Number of Premises affected	3 premises would lose direct access to the trunk road	No change	The Preferred Route's off-line alignment would cause a reduction in passing trade to premises located on the existing A40 at Eynsham.

	Disruption during Construction		slight	None	Little Chef at Eynsham Roundabout only.

d) Garage Services	Noise	Number of premises experiencing an increase in noise of :		No change	
i) Wasties Garage		More than 15 dB(A)L10	0		
ii) Evenlode Truck Centre		10 - 15 dB(A)L10	0		
iii) Eynsham Roundabout Filling Station		5 - 10 dB(A)L10	0		Evenlode Truck Centre
		3 - 5 dB(A)L10	1		

		Number of premises experiencing a reduction in noise levels of :		No change	
		More than 15 dB(A)L10	0		
		10 - 15 dB(A)L10	0		
		5 - 10 dB(A)L10	0		
		3 - 5 dB(A)L10	2		

	Visual Obstruction			No change	

ASSESSMENT FRAMEWORK

GROUP 2: OCCUPIERS (continued)

Sub-Group	Effect	Units	Preferred Scheme	Do Minimum	Comments
d) Garage Services (continued)	Severance	Number of Properties	Severe to Wasties garage as direct access to trunk road removed. Slight to Evenlode Truck Centre as no gap provided in central reserve. Slight to Eynsham Roundabout Filling Station as location would be off trunk road but but at Bynsham Junction.	No change	
	Disruption during construction		Slight	None	Access to Eynsham Roundabout Filling Station would require amendment during construction.
Schools and Hospitals					No schools or Hospitals directly affected
Farming	Numbers of Agricultural Land Holdings affected by land take		23	0	
	Land take	Hectares of land:			
		Grade 2	1.8	0	Based on MAFF land classification
		Grade 3	26.9	0	Compensation included in Group 5.
		Grade 4	9.7	0	
	Severance		Slight	None	The non-provision of centre reserve crossings would affect the operation of some farm units. Field accesses onto the trunk road would be closed. Private means of access from junctions are proposed to replace existing field accesses.

ASSESSMENT FRAMEWORK

GROUP 2: OCCUPIERS (continued)

Sub-Group	Effect	Units	Preferred Scheme	Do Minimum	Comments
Farming (continued)	Visual Obstruction	No. Properties	None	None	
Open Space					No open space directly affected.

ASSESSMENT FRAMEWORK

GROUP 3: USERS OF FACILITIES

Sub-Group	Effect	Preferred Scheme	Do Minimum	Comments
(a) Oxford Angling and Preservation Society	Reduction in amenity due to land take.	A strip at least 9 metres wide is required from northern roadside boundary of Marlborough Pool.	No effect	Screening trees lost through land take for second carriageway. Slope works would require further land and affect the water's edge.
(b) Little Chef Restaurant and Filling Station Customers				
i) Acre Hill	Access from the A40	From the redundant section of the A40 via Eynsham Junction.	No effect	Future Trunk Road traffic would bypass the Acre Hill Little Chef.
ii) Eynsham Roundabout	Access from the A40	From the junction slip road and from Eynsham Bypass	No effect	Trunk Road traffic can access the Eynsham Junction Little Chef by using the slip roads and the overbridge
(c) The Evenlode Restaurant Customers	Access from the A40	From the redundant section of the A40 via Eynsham Junction	No effect	The Evenlode Restaurant would be on the bypassed section of the existing A40.

ASSESSMENT FRAMEWORK

GROUP 3: USERS OF FACILITIES (continued)

Sub-Group	Effect	Preferred Scheme	Do Minimum	Comments
(d) Cassington residents	Access to Eynsham facilities for non-vehicular traffic	Provision of foot/cycle overbridge will improve safety. Retention of foot and cycleway facilities between Eynsham and Cassington	No effect	At-grade crossing of the existing A40 is hazardous because of high traffic flows.
(e) Freeland residents	Access to facilities at Eynsham	No effect as bridge is provided on Cuckoo Lane	No effect	Access to Eynsham would be easier than at present due to a reduction in traffic on the bypassed section of A40.

ASSESSMENT FRAMEWORK

GROUP 4: POLICIES FOR CONSERVING AND ENHANCING AREA
(Views expressed are those of relevant authority unless otherwise stated)

Policy	Authority	Interest	Preferred Scheme	Do Minimum	Comments
(a) To protect the historic architectural interest of an Area	West Oxfordshire District Council	Eynsham Conservation Area Maintenance and improvement of the special character of the village.	Reduces through traffic in the village.	Through traffic is not restricted.	DOE list 35 buildings of Architectural or Historic Interest and 10 Grade III listed buildings
(b) To conserve the special landscape character of an area	West Oxfordshire District Council	Area of High Landscape Value. Area to the south east of Eynsham roundabout.	Marginal intrusion eastwards from Cassington Road Junction but with additional land take at grade separated junction East of Cassington	No effect	This AMLV alongside River Thames was defined in 1954 County Development Plan
(c) To preserve the special character of Oxford and its landscape setting	Oxfordshire County Council Policy EN5	Oxford Green Belt. Area to the east of Eynsham roundabout.	Some intrusion by off line carriageway and grade separated junctions	No effect	The area to the east of Eynsham is Oxford Green Belt

ASSESSMENT FRAMEWORK

GROUP 4: POLICIES FOR CONSERVING AND ENHANCING AREA (continued)
 (Views expressed are those of relevant authority unless otherwise stated)

Policy	Authority	Interest	Preferred Scheme	Do Minimum	Comments
(d) To resist potentially harmful development and protect agricultural land	Oxfordshire County Council Policies EN1 & 2	Effect on high grade agricultural land	Land take of Grade 2 land restricted to 1.8 hectares.	No effect	Based on MAFF land classification
(e) To minimise environmental intrusion in the location of road schemes	Department of Transport Report 'Trunk Roads, England into the 1990s' (February 1990) Paragraph 1.2	Benefits to the Environment	A comprehensive landscaping scheme is planned to include replacement hedges and dense and intermittent tree planting.	None	
(f) To keep heavy vehicles away from where people live	Department of Transport White Paper Cmnd 8439 Lorries people and the environment	Reduction of noise and pollution to Occupiers	Bypasses properties on northern outskirts of Eynsham which are alongside the existing A40 trunk road.	None	

ASSESSMENT FRAMEWORK

GROUP 4: POLICIES FOR CONSERVING AND ENHANCING AREA (continued)
 (Views expressed are those of relevant authority unless otherwise stated)

Policy	Authority	Interest	Preferred Scheme	Do Minimum	Comments
(g) To protect site of special scientific interest of national importance	English Nature	Pixie & Yarnton Mead SSSI. Internationally renowned unimproved floodplain meadow flora.	None directly	None directly	At its nearest point the northern boundary ditch lies within 30 metres of the highway. Drainage from the road would run into the ditch.
(h) Non statutory sites of local conservation groups (5 total)	BBONT BTO OCC	Marlborough Pool Flora, fauna and ornithological interest around old gravel pit.	Significant landtake and earthworks	None	Earthworks and planting associated with the route would restore wildlife habitats and roadside screen.
	BBONT	The Willows Wetland habitats and unimproved pasture.	Slight landtake and earthworks	None	Landscape treatments to restore wildlife habitats and roadside screen
	EN	Agricultural field to south east of Cassington. Undisturbed ridge and furrow field system and associated flora.	Slight landtake	None	Planting to restore roadside hedgerow

ASSESSMENT FRAMEWORK

GROUP 4: POLICIES FOR CONSERVING AND ENHANCING AREA (continued)
 (Views expressed are those of relevant authority unless otherwise stated)

Policy	Authority	Interest	Preferred Scheme	Do Minimum	Comments
	OCC	Oxford County Museum Site to north east of Cassington. Derelict gravel pit of interest for flora and fauna.	Significant landtake and earthworks	None	Cassington Link would sever a small section of the north east corner of the site but would not affect the pools or waterside area.
	OCC	River Evenlode. The river and banks are of flora and fauna interest.	Slight landtake	None	Landscape treatments would replace lost vegetation.
(i) Non statutory sites of Archaeological Interest recognised by Oxfordshire Sites and Monument Record Office (3 total).	OCC	North east Cassington (Area A). Cropmarks and roman finds	Significant landtake and severance	None	Highway construction would avoid disturbance of the potential interest.
	OCC	East of Cassington (Area B). Cropmarks	Additional landtake	Severs existing site	Landtake only to south.
	OCC	East of Marlborough Pool (Area C). Known site of Beaker Cemetery.	Additional landtake	Severs existing	Landtake only to south.

ASSESSMENT FRAMEWORK

GROUP 4: POLICIES FOR CONSERVING AND ENHANCING AREA (continued)
 (Views expressed are those of relevant authority unless otherwise stated)

Policy	Authority	Interest	Preferred Scheme	Do Minimum	Comments
(1) Continued					
	OCC	Disused gravel pits to west of Marlborough Pool (Area D). Iron age finds.	Additional landtake	Severs existing site	Landtake only to south.
	OCC	North of Acre Hill House (Area E). Finds of late Roman origin	Additional landtake	None	Highway construction would avoid disturbance of the potential interest.

ASSESSMENT FRAMEWORK

GROUP 5: TRANSPORT, DEVELOPMENT AND ECONOMIC POLICIES

(Views expressed are those of relevant authority unless otherwise stated)

Policy	Authority	Interest	Preferred Scheme	Do Minimum	Comments
(a) To develop the Trunk Road network.	Department of Transport Report 'Trunk Roads, England into the 1990s' (February 1990) Paragraph 1.2	To improve the free flow and safety of trunk road traffic.	Significant Improvement - no delays on A40	Enlarged Roundabout at Eynsham will reduce delays on A40 but queues would still occur in peak periods.	
(b) To promote the need to secure improved safety for all road users.	Department of Transport Report 'Trunk Roads, England into the 1990s' (February 1990) Paragraph 1.2	Pedestrian and vehicles conflicts.	Segregation of pedestrians and cyclists and vehicles at Cassington plus two-level junctions at Baynard Gate, Eynsham and Cassington.	Enlarged roundabout will not significantly reduce accidents.	Two-level junctions significantly improve safety.
(c) Removes through traffic from residential areas.	Department of Transport Report 'Trunk Roads, England into the 1990s' (February 1990) Paragraph 1.2	Removal of traffic from Eynsham and Cassington.	Removal of through traffic to and from Oxford through Eynsham. Removal of through traffic from Cassington. A40 traffic further away from Eynsham.	No effect	A heavy vehicle ban is in force in Eynsham except for deliveries.

ASSESSMENT FRAMEWORK

GROUP 5: TRANSPORT, DEVELOPMENT AND ECONOMIC POLICIES (continued)
 (Views expressed are those of relevant authority unless otherwise stated)

Policy	Authority	Interest	Preferred Scheme	Do Minimum	Comments
(d) Provision of an improved highway network.	Oxfordshire County Council Policies T1, T4	To cater for all through traffic and to aid development in Witney.	Significant improvement - no delays on A40.	Delays at peak times would still occur on A40.	Oxfordshire County Council are the Highway Authority.
(e) To exclude through traffic within Eynsham Village.	West Oxfordshire District Council	Improving the environment of Eynsham.	Will remove most of the through traffic within the village.	No improvement at peak hours.	No option is guaranteed to remove all through traffic from within the village.
(f) To give priority to the provision of public transport between villages and local towns where there is a demand.	Oxfordshire County Council	Maintain and improve service reliability.	Eliminates peak hour delays. Longer distance for buses travelling eastwards on A40 to call at Eynsham.	No improvement at peak hours.	County Structure Plan policy.

ASSESSMENT FRAMEWORK

GROUP 5: TRANSPORT, DEVELOPMENT AND ECONOMIC POLICIES (continued)
 (Views expressed are those of relevant authority unless otherwise stated)

Policy	Authority	Interest	Preferred Scheme	Do Minimum	Comments
Development & Economic (a)					
To encourage industrial and commercial development in the country town of Witney.	Oxfordshire County Council and West Oxfordshire District Policy GI	To provide improved highway links.	Marked reduction in Oxford to Witney journey times at peak periods.	Increase in Oxford to Witney journey times as traffic increases.	County Structure Plan Policy is to restrain growth in Oxford City and direct growth to Country Towns e.g. Witney.

ASSESSMENT FRAMEWORK

GROUP 6: FINANCIAL EFFECTS

Sub-Group	Interest	Units	Preferred Scheme	Do Minimum	Comments
Department of Transport	Construction costs	£m(PVC)	13.963	0.032	Costs are discounted from years of expected expenditure to 1988 prices at 8% pa. PVC - present value of costs. PVB - present value of benefits. NPV - net present value.
	Land costs	£m(PVC)	0.365	0	
	Compensation costs	£m(PVC)	0.629	0	
	Maintenance costs	£m(PVC)	0.545	0.334	
Total Costs		£m(PVC)	15.502	0.366	
Total quantified monetary benefits		£m(PVB)	High 48.177	Low 22.168	Includes savings in time, vehicle operating costs and accidents. Taken from Group 1.
Net present value compared to do minimum		£m(NPV)	33.041	7.032	0

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APPENDIX B

NON TECHNICAL SUMMARY

APPENDIX B.

A40 WITNEY TO CASSINGTON DUALLING NON TECHNICAL SUMMARY

B.1. NEED FOR THE SCHEME

The A40 trunk road between Oxford and Witney is part of Britain's Trunk Road network. The carriageway has sections of substandard visibility with limited opportunities for safe overtaking. Current traffic flows are approaching twice the design capacity for a single two lane carriageway and long delays are occurring at peak hours at the junction of the A40 Eynsham Bypass/Hanborough Road.

B.2. THE PROPOSAL

It is proposed to construct a new dual two lane carriageway from the eastern end of the Witney Bypass to a point on the present A40 to the east of the disused railway bridge south east of Cassington Village. The new route follows the line of the existing carriageway until a point approximately 300 metres east of Ambury Close Farm where it curves to the north of the existing road. The route crosses farmland on low embankment before going into cutting through the ridge at Cuckoo Lane. The dual carriageway crosses the Hanborough Road to the south of its junction with Mill Lane and proceeds on a low embankment to rejoin the existing A40 approximately 400 metres west of the River Evenlode crossing. After rejoining the existing road the dual carriageway follows the alignment of the existing A40.

The new road would not have any central reserve crossings and right turns would be catered for by three two level junctions at Barnard Gate, Eynsham and Cassington: the Barnard Gate junction would provide connections into Barnard Gate and South Leigh, the Eynsham junction on the B4449 would provide access to and from Eynsham and the Cassington junction would provide access to Cassington via a new connecting link to Yarnton Road.

The Cuckoo Lane overbridge would maintain the present link between Eynsham and the village of Freeland to the north. The scheme would be lit over its full length.

B.3. DESCRIPTION OF THE EXISTING CONDITIONS

The area is an attractive and generally well maintained agricultural landscape set within gently undulating countryside and crosses the Evenlode floodplain. There are three areas of settlement along the route, the hamlet of Barnard Gate to the west and the villages of Eynsham and Cassington to the east.

B.4.

THE IMPACT

- * The alignment east of Eynsham junction would have a minor impact on the Oxford Green Belt and the Area of High Landscape Value.
- * Twenty three agricultural holdings would be affected. Landtake would be mainly Grade 3 with some Grade 4 and small areas of Grade 2 (MAFF land classification).
- * Loss of trees and mature hedgerows along the existing A40.
- * Five archaeological sites and five nature conservation sites of local interest would be partially affected by road construction.
- * Varying levels of visual intrusion would be experienced by properties to the north of Eynsham and properties fronting the on-line sections of the route.
- * Due to higher speeds on the dual carriageway noise levels at properties adjacent to the on-line improvement sections of the A40 would be marginally increased.

B.5.

MITIGATION MEASURES

- * All two level junction layouts and earthworks have been designed to minimise landtake and visual intrusion at each location.
- * The dual carriageway would be in cutting north of Eynsham which would reduce visual intrusion on properties at the north of Eynsham village.
- * The layout of the Eynsham junction utilises the existing roundabout and existing A40 as the south east slip road to minimise the visual intrusion to the properties in north east Eynsham.
- * The Cassington Link road has been located to the east of an existing line of trees to reduce visual intrusion on the houses at the east of Cassington and to avoid encroachment into ponds where flora and fauna of local interest have been identified.
- * Landscape treatment would assist the integration of the road into the existing landform and ameliorate the visual impact of the engineering works.
- * Planting would be used to recreate the character of the existing landscape and re-establish wildlife habitats.
- * Areas of archaeological interest would be evaluated in conjunction with English Heritage to enable appropriate mitigation measures to be taken before the start of road construction.

B.6.

THE BENEFITS

- * The scheme would improve the free flow and safety of trunk road traffic on the A40.
- * Provision of a two level junction at Eynsham would remove the disruption caused by queuing at the Eynsham roundabout during peak hours and remove through traffic from the village.
- * Traffic noise and visual intrusion levels for housing to the north of Eynsham would be substantially reduced.
- * The two level junction at Cassington would remove through traffic from the village of Cassington improving conditions for properties fronting Eynsham Road.
- * The delays which at present occur at the junction of the A40 and Eynsham Bypass would be reduced significantly.

B.7

THE ALTERNATIVES

During 1987 two alternative schemes for dualling the A40 between Witney and Cassington were presented at Public Consultation. Both schemes started at the eastern end of the Witney Bypass and ended east of Cassington close to the bridge over the disused Witney - Oxford railway line. The off-line route was chosen as the preferred route for the reasons outlined below:

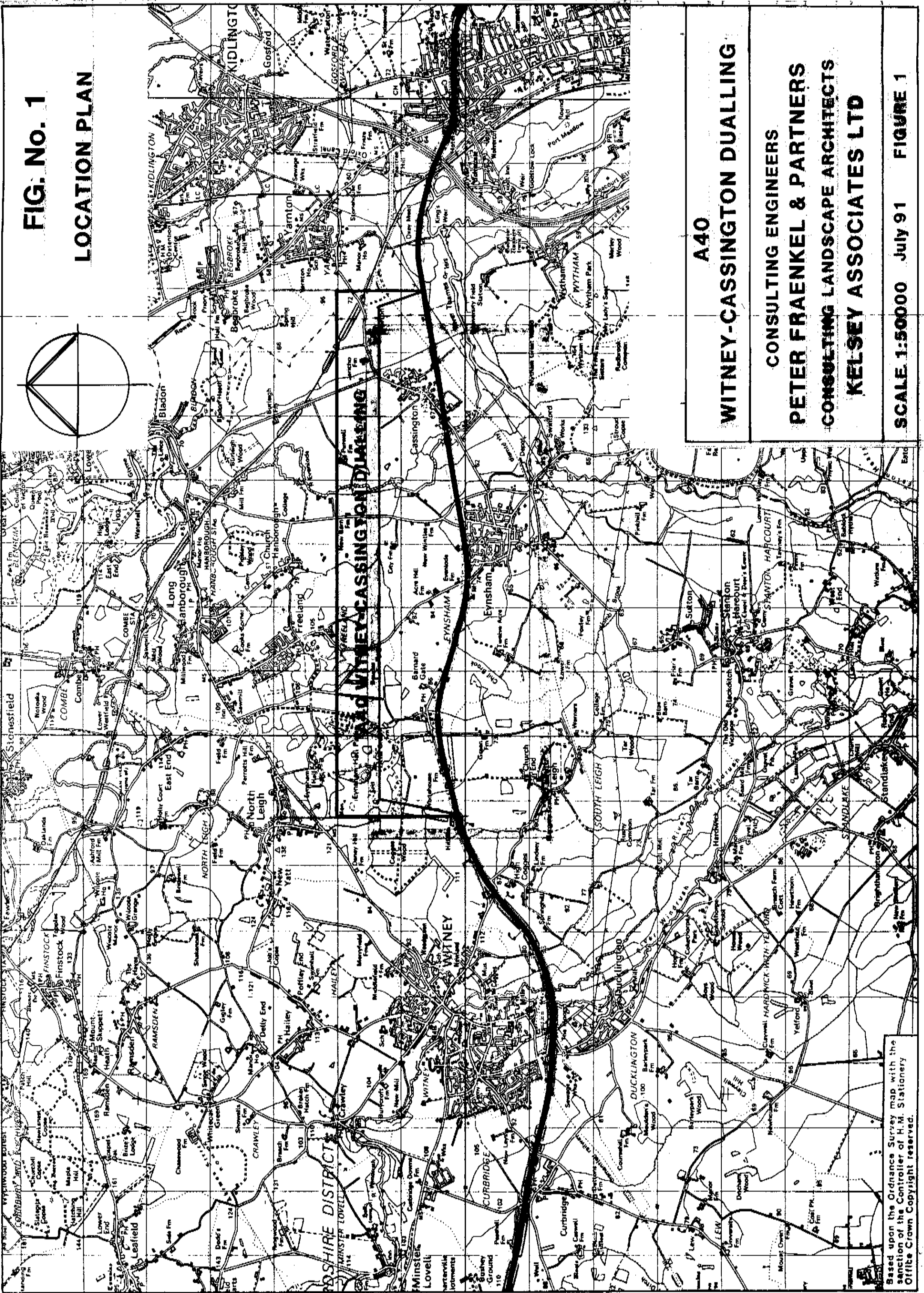
- * It would lead to the least amount of visual intrusion to residential properties located to the north of Eynsham Village.
- * It would lead to an appreciable reduction in the noise levels in the north of Eynsham. This route achieves the Government's policy of keeping lorries away from where people live.
- * There was a clear 2 to 1 support in favour of the off-line route over the on-line route from the Public Consultation.
- * It was most favoured by Oxfordshire County Council, West Oxfordshire District Council and local parish councils.

FIGURES

1. LOCATION PLAN
2. THE PUBLISHED ROUTE
3. AGRICULTURAL CLASSIFICATION
4. PLANNING FACTORS 1
5. PLANNING FACTORS 2
6. PUBLISHED SCHEME - LANDSCAPE PROPOSALS
7. PUBLISHED SCHEME - LANDSCAPE PROPOSALS
8. PUBLISHED SCHEME - LANDSCAPE PROPOSALS
9. PUBLISHED SCHEME - LANDSCAPE PROPOSALS
10. PUBLISHED SCHEME - LANDSCAPE PROPOSALS
11. TRAFFIC FLOWS
12. ALTERNATIVE SCHEMES

FIG. No. 1

LOCATION PLAN



A40

WITNEY-CASSINGTON DUALLING

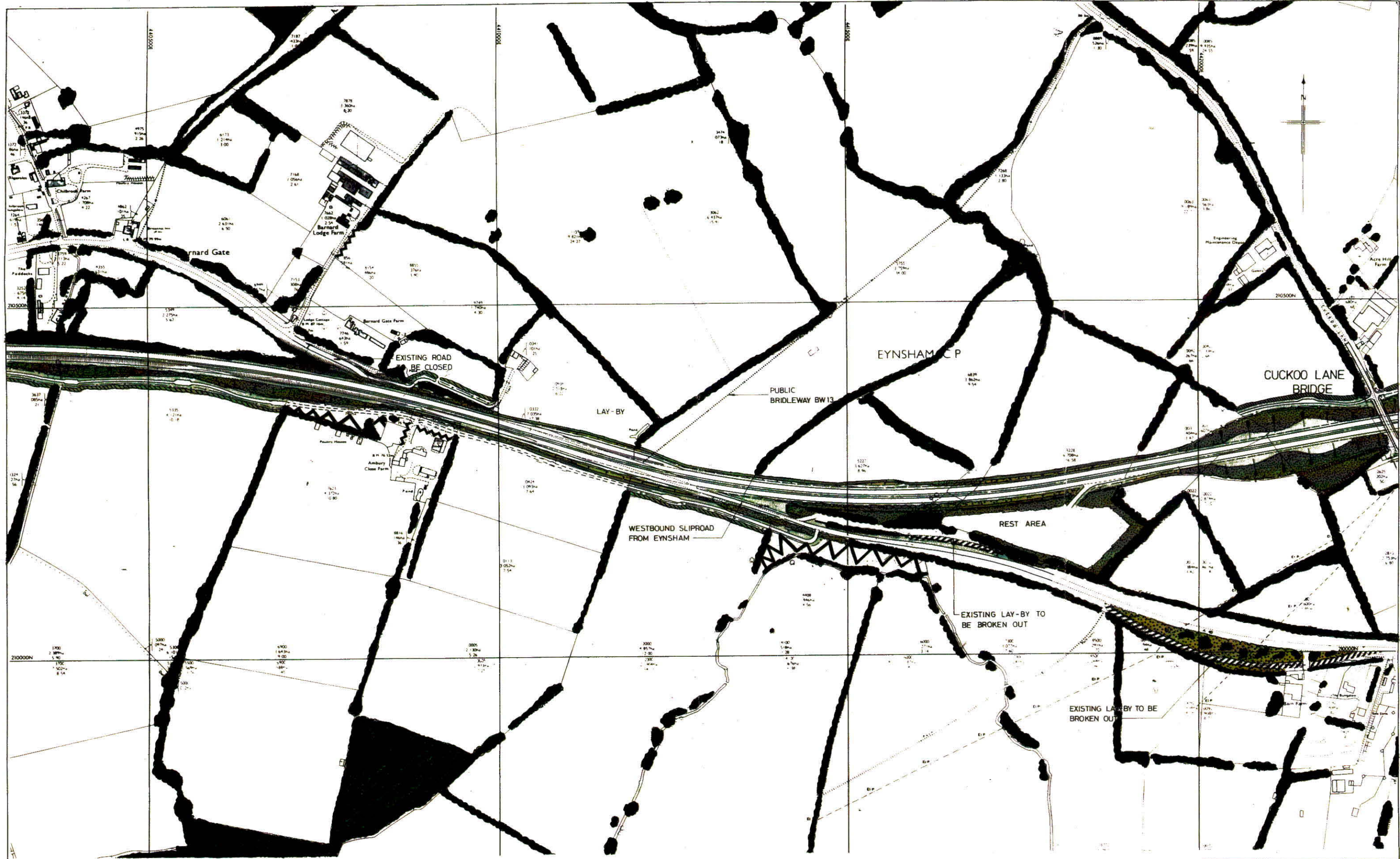
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KEY			
	Existing tree/woodland/hedgerow/scrub		Accommodation work hedges
	Proposed dense planting		Proposed grass
	Proposed intermittent planting		Acquired land by C.P.O. for landscape works
	Proposed hedges		Proposed off site planting
	Additional contouring		Break-out existing road
	Footpaths		Brideways

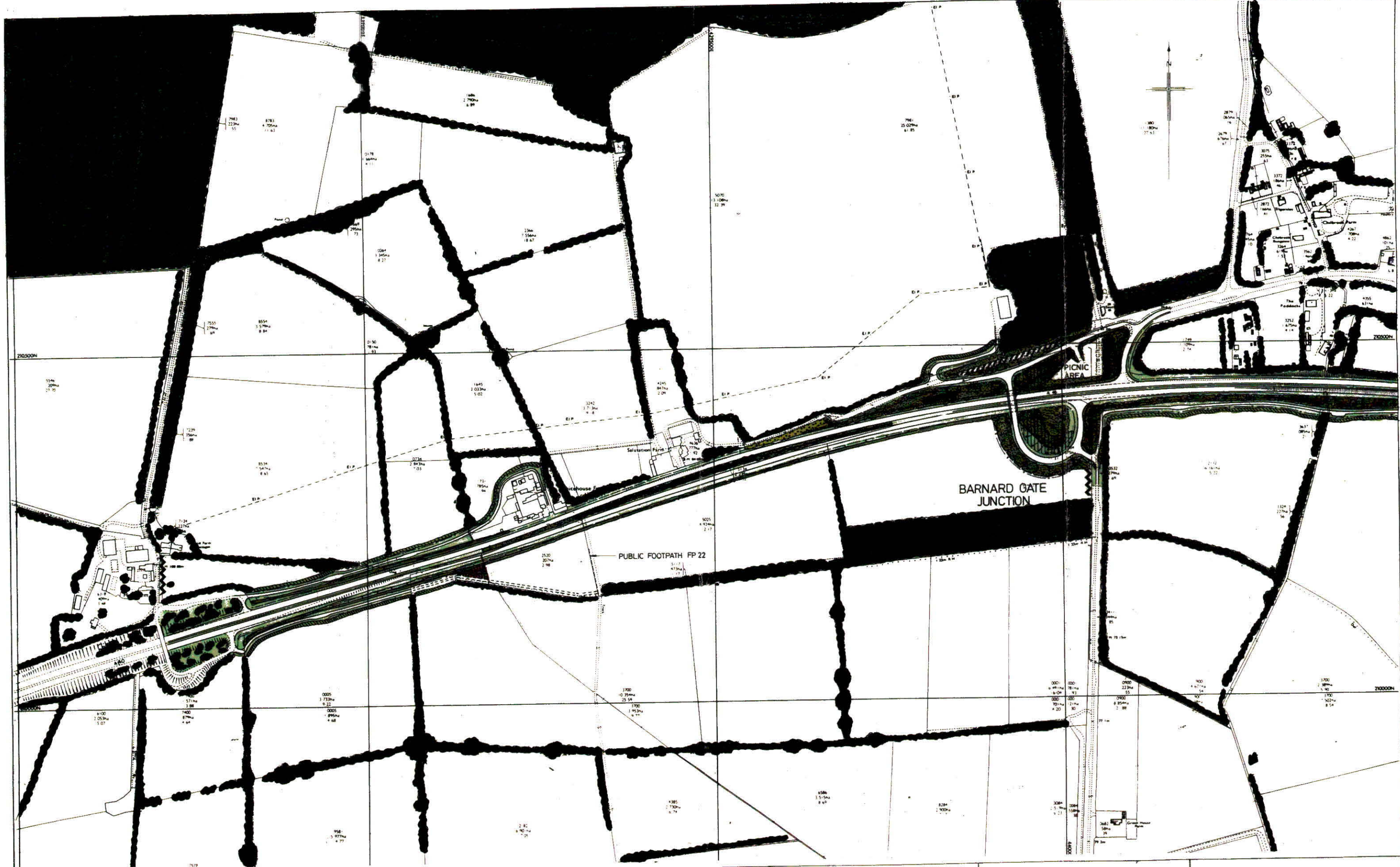
Note
 Dense planting refers to either woodland or shrubs with cover aimed at between 80-100%
 Intermittent planting refers to either trees or shrubs with cover aimed at no more than 20%

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A40
WITNEY-CASSINGTON DUALLING
 LANDSCAPE PROPOSALS

FIG.No. 7 **SCALE 1:5000**

DATE July 91	K.A.DWG. No. 333 / 7	REV. C
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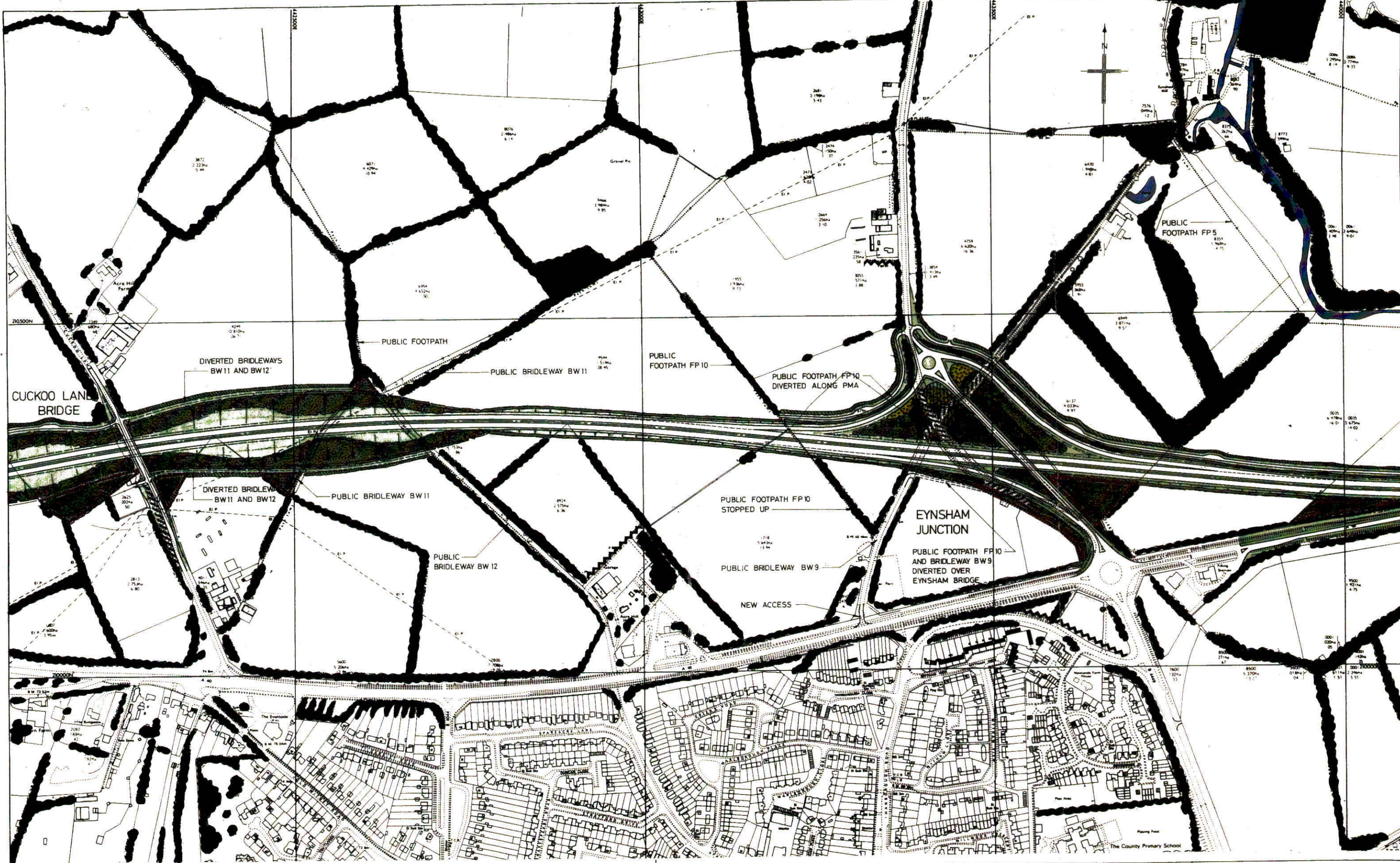
KEY			
	Existing tree/woodland/hedgerow/scrub		Accommodation work hedges
	Proposed dense planting		Proposed grass
	Proposed intermittent planting		Acquired land by C.P.O. for landscape works
	Proposed hedges		Proposed off site planting
	Additional contouring		Break-out existing road
	Footpaths		Brideways

Note
 Dense planting refers to either woodland or shrubs with cover aimed at between 80-100%
 Intermittent planting refers to either trees or shrubs with cover aimed at no more than 20%

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A40
WITNEY-CASSINGTON DUALLING
LANDSCAPE PROPOSALS

FIG.No. 6		SCALE 1:5000
DATE July 91	K.A.DWG. No. 333/ 6	REV.C



KEY			
	Existing tree/woodland/hedgerow/scrub		Accommodation work hedges
	Proposed dense planting		Proposed grass
	Proposed intermittent planting		Acquired land by C.P.O. for landscape works
	Proposed hedges		Proposed off site planting
			Additional contouring
			Break-out existing road
			Existing footpath
			Existing bridle path

Note
 Dense planting refers to either woodland or shrubs with cover aimed at between 80-100%
 Intermittent planting refers to either trees or shrubs with cover aimed at no more than 20%

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WITNEY-CASSINGTON DUALLING
LANDSCAPE PROPOSALS

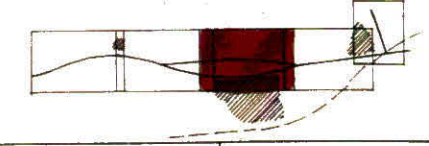


FIG.No. 8		SCALE 1:5000
DATE July 91	K.A.DWG. No. 333/8	REV. C



KEY			
	Existing tree/woodland hedgerow/scrub		Accommodation work hedges
	Proposed dense planting		Proposed grass
	Proposed intermittent planting		Landscape treatments by agreement
	Proposed hedges		Acquired land by C.P.O. for landscape works
	Proposed off site planting by agreement		Existing footpath
	Existing footpath		Existing bridle path
	Existing bridle path		Break-out existing road

Note
 Dense planting refers to either woodland or shrubs with cover aimed at between 80-100%
 Intermittent planting refers to either trees or shrubs with cover aimed at no more than 20%

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LANDSCAPE PROPOSALS

FIG.No. 9	SCALE 1:5000
DATE July 91	K.A.DWG. No. 333/9
	REV. C



KEY

- | | | | | | |
|--|---------------------------------------|--|---|--|-------------------------|
| | Existing tree/woodland hedgerow/scrub | | Accommodation work hedges | | Additional contouring |
| | Proposed dense planting | | Proposed grass | | Break-out existing road |
| | Proposed intermittent planting | | Acquired land by C.P.O. for landscape works | | Footpaths |
| | Proposed hedges | | Proposed off site planting | | Bridlepaths |

Note

Dense planting refers to either woodland or shrubs with cover aimed at between 80-100%

Intermittent planting refers to either trees or shrubs with cover aimed at no more than 20%

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LANDSCAPE PROPOSALS

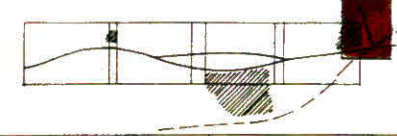
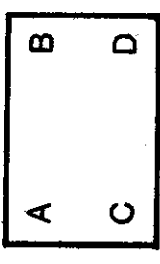


FIG.No. 10 **SCALE 1:5000**

DATE July 91 K.A.DWG. No. 333/10 REV. C

KEY



TWO-WAY, ANNUAL AVERAGE
DAILY TRAFFIC FLOW

A - 1996 LOW GROWTH B - 1996 HIGH GROWTH
C - 2011 LOW GROWTH D - 2011 HIGH GROWTH

NOTE: OPENING YEAR 1996
 DESIGN YEAR 2011
 FLOWS SHOWN TO NEAREST 100 VEHICLES

A40

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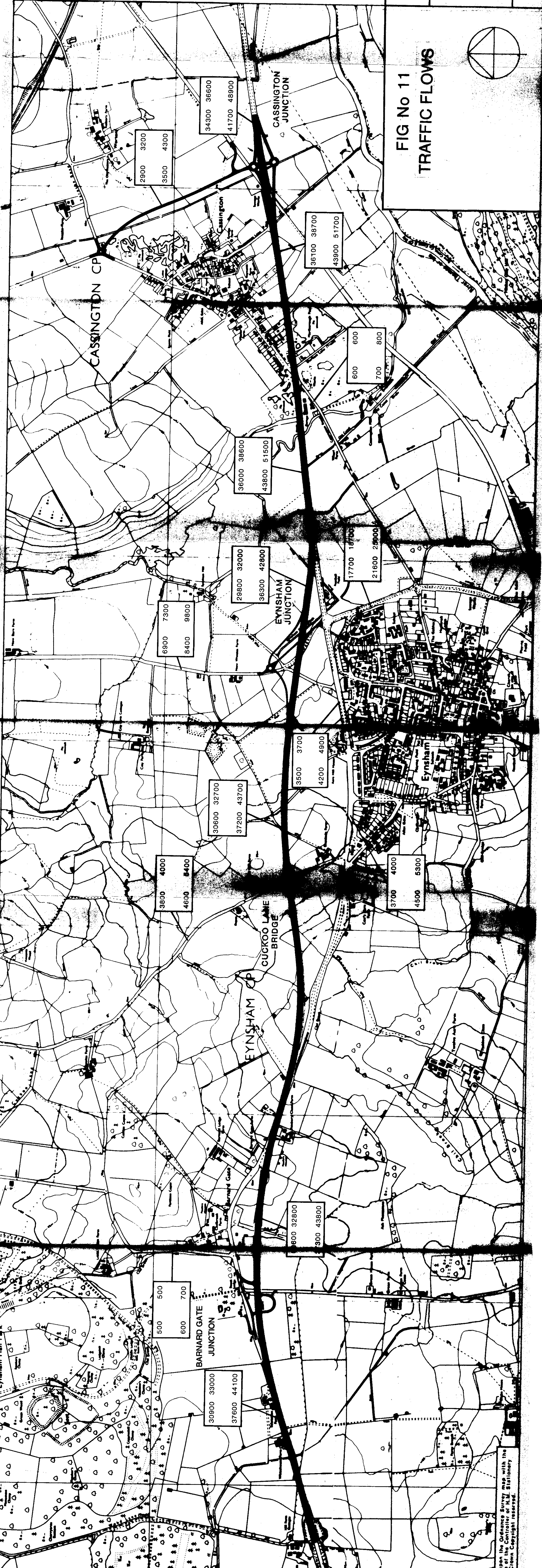
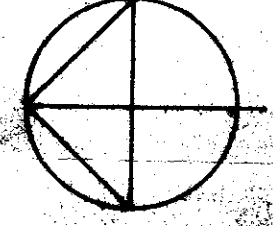
SCALE 1:10000

FIGURE 11

REV.

MAY 1991

FIG No 11
TRAFFIC FLOWS



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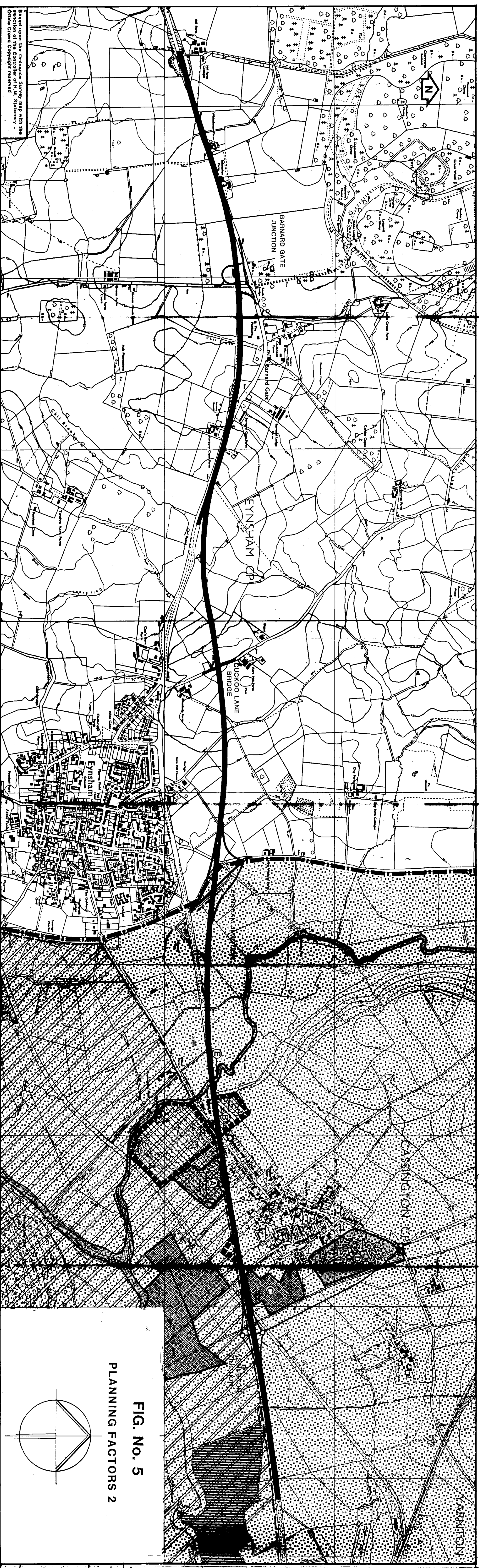


FIG. NO. 5
PLANNING FACTORS 2

KEY

- OXFORD GREEN BELT
- AREA OF HIGH LANDSCAPE VALUE DESIGNATED BY WEST OXFORDSHIRE DISTRICT COUNCIL
- SITES OF NATURE CONSERVATION INTEREST DESIGNATED BY :-
- NCC NATURE CONSERVANCY COUNCIL (MEADOWS RICH IN FLORA)
- OXFORD COUNTY MUSEUM SITE
- BONT BERKSHIRE BUCKINGHAMSHIRE & OXFORDSHIRE NATURALIST TRUST
- BTO BRITISH TRUST FOR ORNITHOLOGY
- AREAS REFERRED TO IN TEXT
- SITES OF SPECIAL SCIENTIFIC INTEREST :-
- DESIGNATED BY ENGLISH NATURE

WITNEY-CASSINGTON DUALLING
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SCALE 1:10000 July 91 **FIGURE 5**

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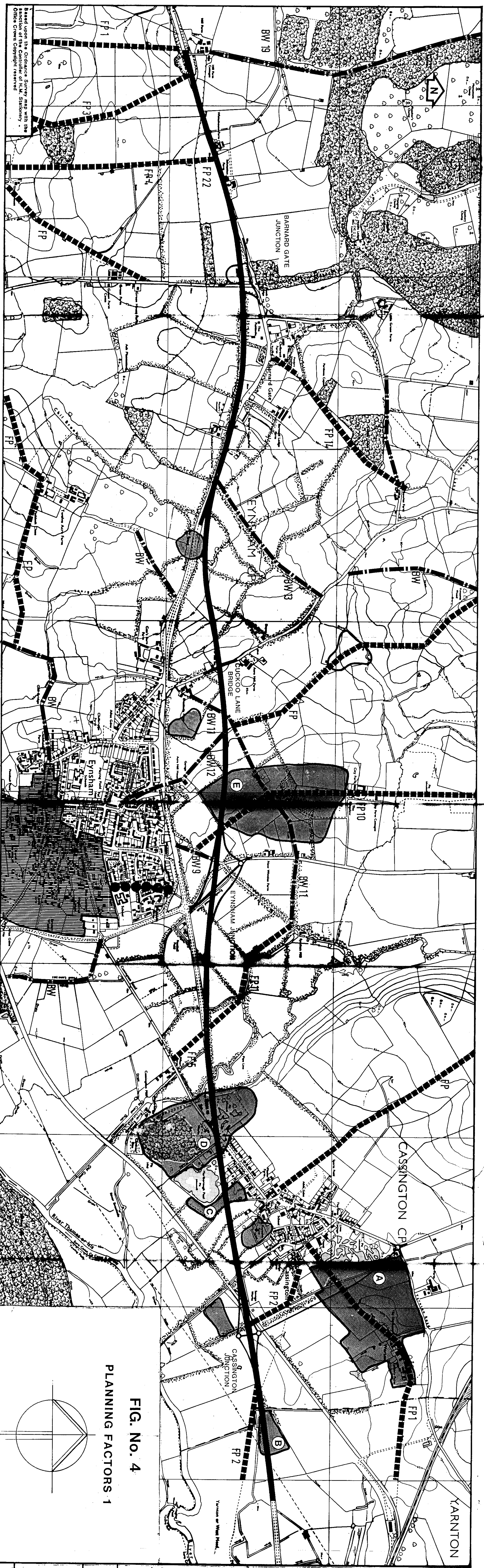
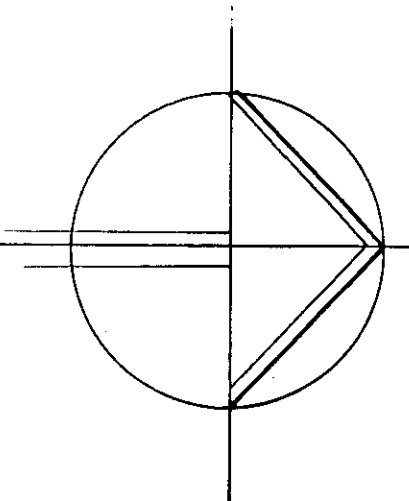


FIG. No. 4
PLANNING FACTORS 1

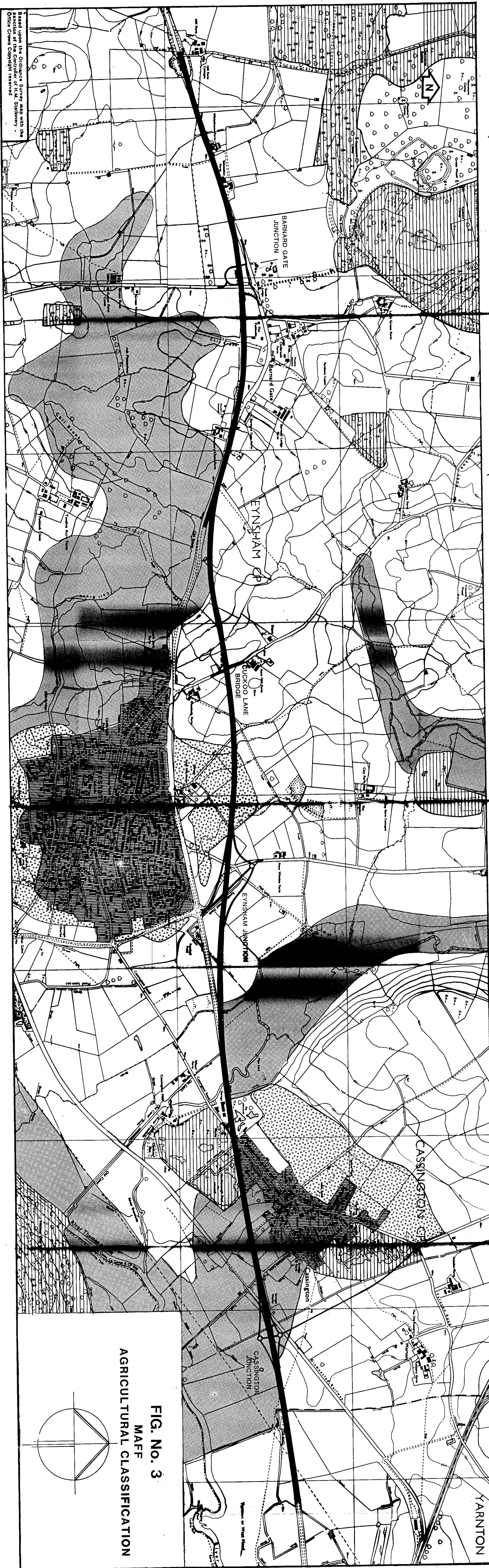


	KEY
	EXISTING WOODLAND
	EXISTING TREES & SHRUBS
	EXISTING BRIDLEWAYS
	EXISTING FOOTPATHS
	TREE PRESERVATION ORDERS
	EYNSHAM CONSERVATION AREA
	SENSITIVE ARCHAEOLOGICAL AREAS

A40
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SCALE 1:10000 July 91 FIGURE 4

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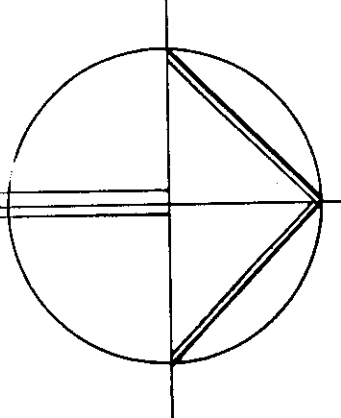


YARNTON

KEY

- GRADE 2
- GRADE 3
- GRADE 4
- NON-AGRICULTURAL USE
- URBAN AREAS

FIG. NO. 3
MAFF
AGRICULTURAL CLASSIFICATION



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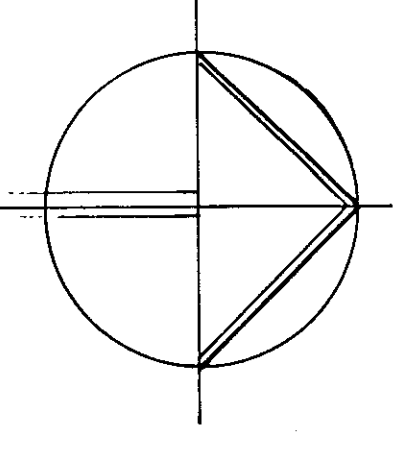
SCALE 1:10000 July 91 FIGURE 3

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FIG. NO. 2

THE PUBLISHED ROUTE



<p>PUBLISHED ROUTE</p> <p>ROAD AT GRADE</p> <p>ROAD IN CUTTING - metres</p> <p>ROAD ON EMBANKMENT + metres</p> <p>ROAD CLOSED</p> <p>BRIDGE OVER A40</p> <p>FOOTBRIDGE OVER A40</p>	<p>A40</p> <p>WITNEY-CASSINGTON DUALLING</p> <p>CONSULTING ENGINEERS</p> <p>PETER FRAENKEL & PARTNERS</p> <p>CONSULTING LANDSCAPE ARCHITECTS</p> <p>KELSEY ASSOCIATES LTD</p>	<p>SCALE 1:10000</p> <p>July 91</p> <p>FIGURE 2</p>
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