

MTRU

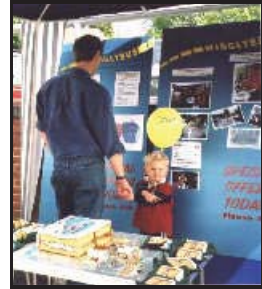
Development of land at West
Durrington

Transport planning assessment
by The Metropolitan Transport
Research Unit

Submitted by The Titnore Wood
Consortium as part of their
comments on:

WB/09/0146/ARM
Tesco Stores

WB/04/00040/OUT
West Durrington Development



June 2009

Summary

This report considers the transport planning impact of new developments at West Durrington. It concludes that:

- the major superstore and district centre development have not been integrated and this has resulted in designs which do not fulfil sustainable transport objectives
- the traffic implications of the superstore and its much expanded dot com distribution centre have not been fully reflected in the superstore transport assessment, no additional traffic is predicted in the am peak
- the new superstore design is less bus friendly than the current layout, involving longer walks to stops through the car park
- this design also means that walking accessibility from the existing residential areas to the West has been reduced significantly
- as a result of the lack of integration, the current housing proposals are poorly related to the store and district centre, with a lack of permeability along all of the Southern boundary
- there is a Western extension of the housing which
 - creates serious environmental problems,
 - is used to justify a new, damaging access to Titnore Lane and
 - is the least sustainable in terms of walk and bus access
- the placing of the school and recreational areas in the proposal would create a barrier to walking and cycling between the housing and the superstore/District Centre
- such green barriers should be placed so that they form a buffer with the sensitive nature conservation sites such as the Lag and the wood itself

For these reasons, the current applications should both be paused to allow an integrated design approach to be jointly developed which is more sensitive to the environmental problems and the need for more sustainable patterns of travel.

1 Introduction

MTRU has been commissioned by a consortium of environmental groups and civic societies to consider the transport impacts of new development at West Durrington. The land is to the West of the existing settlement on a greenfield site and is shown in Appendix 1. It extends towards the ancient Titnore woodland and would have a new vehicle access onto Titnore Lane, as well as into the existing village. The new South Downs National Park¹ is undergoing consultation on the proposal to include Castle Goring and its park, immediately adjacent to the proposed development. This is shown in Appendix 2. The National Park proposal is in its final stages and should be confirmed later in 2009.

Contact has been made with the local authority, site visits have been undertaken, as well as a meeting to clarify technical issues with the transport consultants (Peter Brett Associates - PBA) working for the residential developer.

The residential development is for 875 new homes as well as community and recreational facilities. These include Local and Neighbourhood Equipped Areas of Play (LEAPs and NEAPs).

The planning position is complicated by major redevelopment on a similar timescale of the existing Tesco supermarket and the associated shops and community centre. All forms of access to the site, car, bus and walking, would be significantly altered.

Although the Tesco development is adjacent to the residential site, it has been pursued as a separate application with a separate transport assessment. In turn this has led to some confusion over the effects of both in combination. The assumptions on traffic flows have not been jointly agreed, the Tesco consultant's traffic generation estimates have been used unaltered for the residential development transport assessment.

In addition, there is a possible extension to the residential development of 350 homes. This has transport implications and may have influenced the layout and access arrangements for the initial phase.

As well as the overall impact of the current proposal, there is a specific design issue in relation to the Western extension across the Nature Conservation site known as the Lag. This has its own specific environmental impacts and also different transport implications, since it is the furthest from local facilities and connected to Titnore Lane with full access for motorised vehicles.

This report clarifies some of the planning and transport issues associated with all the above, starting with the overall context.

¹ The Park should be confirmed later this year (2009), see: <http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/new/southdowns/default.aspx>

2 Context

There are two contextual matters which need to be addressed before the transport planning implications and details of the traffic generated by the developments are considered.

The first is the environmental concerns about Titnore Wood and the area around it. The second is the position and function of Titnore Lane, which runs North South through the area.

Environmental issues

A key environmental concern locally is the ancient woodland known as Titnore Wood. The new South Downs National Park may include the parkland South of Castle Goring (Prospective New Addition 5) as well as the wood itself. This is shown in Appendix 2 and if agreed would mean that the proposed development would extend to the boundary of the Park. The current design shows a narrow strip of shrub planting between the housing and the Park (see Appendix 1).

Whether or not the formal addition is confirmed, the environmental reasoning behind it is still relevant.

The ecology of the existing open space and wooded areas is complicated by the area known as the Lag, which runs North/South. The development seeks to create a new vehicle access across this natural corridor, with houses on both sides and connecting to a new junction with Titnore Lane.

This report focuses on transport and does not analyse the potential environmental disbenefits in great detail. However, they are clearly worse the closer the development comes to what is an essentially undomesticated ecology. Housing not only disturbs the environment directly through interrupting pathways, noise or pollution, it influences the natural pattern of life for both plants and animals. Domestic plants will be grown in gardens, food may become available either through waste or pet food and domestic pets themselves may act as predators. Effects such as these are well known and are the subject of separate, more detailed assessment and debate.

For the purposes of this report, the key finding is that some parts of the proposed development are likely to be more damaging than others, given the very close proximity to sensitive areas and the fact that a new access road and their internal road network cuts through the centre of one in particular (the Lag). This is part of a Site of Nature Conservation Importance (SNCI) and is shown in Figure 2.1 of the development Environmental Statement², attached as Appendix 3.

² As revised July 2008, <http://www.worthing.gov.uk/worthings-services/planningandbuildingcontrol/proposedlargedevelopments/westdurringtonwb04000400ut/pdf/55645.en.pdf>

Titnore Lane

Linked to this environmental sensitivity has been an ongoing debate about the design and capacity of Titnore Lane itself. There now seems to be a consensus that the Lane should be altered as little as possible, in particular to avoid damaging trees. This is combined with the assessment by the consultants that the speed needs to be managed on safety and environmental grounds³. It could then resume its “C” classification.

From the site visit it is clear that for most of its length the Lane needs traffic to be calmed. The potential damage to the surrounding environment is equally obvious.

Since there seems to be general agreement on this subject, this is not explored in further detail here. The speed and safety management plan for the Lane is assumed to be the agreed way forward. The issue of the proposed new access road is dealt with later in this report. However, it is not considered to be necessary even if the developments go ahead to their full extent. This has been shown in the testing undertaken by the consultants.

In this case the potential damage to the Lane, and to the area through which the linking road would pass, would be avoided. The management and speed reduction plan could and should be implemented in any event.

³ For example see PBA proposals, <http://www.worthing.gov.uk/worthing-services/planningandbuildingcontrol/proposedlargedevelopments/westdurringtonwb04000400ut/pdf/55729.en.pdf>

3 Transport and planning impacts

It is clear that the two major developments taken together represent both challenges and opportunities both in terms of land use and transport planning. There are aspirations to making both these sustainable in the documentation which supports both applications. Unfortunately there appears to have been poor co-ordination between the two and it is far from clear that the aspirations to sustainability have been reflected in practical proposals.

In this regard, the residential development has had greater attention placed on this aspect, particularly in relation to access planning, and travel planning. The residential consultants have made some positive proposals in this regard, but these are undermined by the lack of relationship with the major shopping centre development. This serves to emphasise the need for an integrated approach to be developed. There is still time for this to be done.

The two elements are considered in relation to each other, before considering the key issue of the Western end of the proposed residential development and its access to Titnore Lane.

Tesco and District Centre site

There is an existing Tesco in place, however its size and nature are changing, with more floor area, a wider range of goods and a new “dot com” distribution area at the Western end of the site. This latest proposal will be very different in nature to the current store. It appears that it will act as a local distribution centre for internet orders. If these grow to the predicted extent, its location in the District Centre would become a traffic and possibly noise problem. Delivery rounds are likely to start early in the morning and continue all day.

The dot com area appears to be over twice as large as the area in the original Transport Assessment (TA Appendix A). It appears to be additional to the material submitted for outline permission and thus not specifically included in the TA. For example, no additional traffic at all is estimated to occur in the am peak (8-9 am).

The traffic from the dot com delivery vehicles is difficult to assess but may be less than 200 movements a day. However, all of them would be crossing or entering the general car flow to the main car park. The dot com growth would increase turnover and thus bulk deliveries in maximum sized HGVs. The latter also have to cross or enter the car flow. The entrance for HGV deliveries and dot com vehicles is about 35metres (the length of two articulated vehicles) from the Fulbeck Avenue roundabout and could interfere with the exit for the Superstore/District Centre car park.

It is not clear what the bus arrangements are at this point, either for stopping points or pedestrian crossing points. The Tesco TA Figure 3.4 includes a possible bus diversion along the same route to the car park, but this does not seem practical due to lack of turning space. It is not part of the planned bus service changes for the residential development.

At present, buses stop very close to the store, encouraging their use by shoppers. This was clearly visible during the site visits. The current plans will mean that, from either end of the site, shoppers using the bus would have to walk at least 3 times further than at present (about an extra 300 yards). This is shown on the latest plans from the Tesco application section of the Worthing website: Plans ASP4 (a) and (b).

It must be remembered that people are likely to be carrying heavy shopping and may have children accompanying them. The new route to the Romany Road bus stops will be through the car park and involves crossing the car park roadway four times. This is a major detriment to bus users and it is surprising this has not been discussed in the assessment or tackled in the site layout. The layout should be integrated with both public transport plans and other modes of sustainable transport.

The new access at the Western end of the site also raises concerns about “rat running” Eastwards from Fulbeck Avenue to the Northern part of Romany Road and Columbia Drive. Despite a diversion around part of the car park the journey time would still be significantly shorter (probably less than half) than using Fulbeck Avenue, the Southern section of Romany Road and Whitebeam Road.

What is required is a reconsideration of the site layout. The objectives should be that:

- 1 access for bus passengers, pedestrians and cyclists is improved over that currently provided,
- 2 no East – West through route is provided,
- 3 access from the new residential development by sustainable modes has a clear advantage over car use.

It can be seen that in the current proposal:

- 1 the access for bus users deteriorates significantly,
- 2 the pedestrian catchment area in the existing settlement of West Durrington will be reduced,
- 3 the East-West route through the car park is still potentially attractive as a rat run,
- 4 the new Western car access from the Fulbeck Road roundabout means that using the car from the new development will be faster than walking and comparable to cycle times. The opposite is needed if these modes are to thrive.

Possible solutions would be:

- 1 redesigning the site layout so that buses can get very close to the store exit and other shopfronts and that pedestrian routes in particular are as short as possible,
- 2 replacing the access road from the Fulbeck Avenue roundabout at a point East of the delivery and dot com service access with a cycle and walking route only,
- 3 ensuring a permeable boundary between the new housing and the site, with direct and continuous walking access.

In this context it is worth noting that the access mapping provided for the Tesco site on the web is in fact the work done for the residential development. No comparative access mapping has been provided for the old store and the new proposal. The widely accepted “Accession” programme has been used by the residential developers for this purpose and is readily available for assessing the Tesco site.

The change in the nature of the retail part of the Tesco store will affect its catchment area, since these differ for different products. This is in addition to the new dot com pattern of deliveries. No assessment of the potentially longer journeys to and from the expanded store has been included.

Overall the individual development will not promote sustainable means of access compared to the existing site. The site access to the West is not required and removing it for general use would separate out service and customer flows and encourage more walking and cycling from the new residential site (and the existing housing immediately to the North of the existing store). This still leaves a serious problem for bus users.

The recommendation therefore is to take an integrated approach to the two developments and to aim to “design in” sustainable means of access. The issue of evening use of the district centre also needs to be addressed as part of this revised plan.

Residential development

There are several inter-related aspects to the transport impacts of the proposed development. The first is its relationship to the newly located and substantially expanded District Centre (DC). The separation between the planning of the Tesco redevelopment and the new development has been explored in the previous section. It is clear that some of the aspirations in terms of sustainability for the latter cannot be achieved without an integrated approach involving both. The consultants for the residential development are Peter Brett Associates (PBA), who have provided useful additional information for the purpose of this study.

The second issue is the extension Westwards across the Lag and its connection to Titnore Lane (fields 5 and 6 on plan in Appendix 1). This extension has significant additional environmental effects over and above those of the rest of the site. The new road access directly facilitates the use of car travel rather than more sustainable modes. Walking and cycling facilities between this new access and the proposed cycle and footways further South have been investigated by PBA and are not planned for reason which include practical implementation and environmental problems⁴.

⁴ See “consideration of feasibility of a cycleway or footway between the site western access and Titnore Way”, PBA and Waterman Environmental, April 2009, Summary Table

The third is the issue of the scale of development overall and its position in terms of transport services. The three are considered in turn in the following sections.

Residential development and the District Centre (DC)

In order to maximise pedestrian access to the DC the site should be designed to group housing as close as possible to it, and to create frequent points of access to minimise walking distances. A similar approach is recommended for cycling. This is often referred to as walk and cycle “permeability”. In order to make bus use an attractive and practical option, both the development and the DC need to be designed to prioritise bus access and keep walk distances to stops as low as possible. The North East element of the planned housing also has the alternative small centre in Salvington Road Durrington to be considered.

The transport consultants have built in several positive design features in the sense of a stand alone development. This includes a bus gate within the site in the Tasman Way area to allow bus access while limiting the potential increase in car traffic on that access route. The avoidance of cul de sac patterns is also in line with maximising the idea of walk and cycle permeability. This will have to be monitored closely in the final street layouts.

The problem with the current design is that the boundaries of the site are not very permeable and this is the key to whether the sustainable modes of travel will be attractive for journeys which travel outside the development. This is probably the result of having to work separately from the Tesco plans.

For example, even within the existing site, the location of the housing and open spaces creates a barrier between the DC and the housing, and not a buffer between the housing and the environmentally sensitive areas. If the principle of permeability is followed in a wider context, the housing should share a border with the DC with frequent, car free access across it. It would be possible to link this to the established pedestrian route from the South. Instead of this in the current plans, there is a large grass sports area and the main car access road separating the two.

Even if the superstore redevelopment were to go ahead, such integration would be easy to arrange if the Western car site access were removed as recommended in the previous section.

Assuming that the Western extension is removed (see recommendation below) housing from areas 2a, 2b, 4 and 7a⁵ could be brought closer to the district centre, replacing the community area and school. The sites are virtually identical in size. The latter could simply replace the housing, but be located so that only green space abuts the Site of Nature Conservation Interest (SNCI)⁶. This would avoid some of the worst problems of intrusion into the SNCI and provide more direct linkages to the South by foot and cycle.

⁵ See Appendix 1

⁶ See the Environmental Statement, July 2008, Figure 2.1

Western extension (fields 5 and 6)

It is clear that the Western extremity of the proposed development is the most disturbing in terms of the natural environment. If the new access to Titnore Lane is built, it would have the easiest and quickest car or van route to the A27 or anywhere in that area.

It also has the greatest walking and cycling distances to the DC. The PBA Accession data shows that walk and cycle timings are about double those from the centre of the site as a whole⁷. Not even the proposed school within the development is within a 5 minute walk.

The omission of new Titnore Lane road access has been tested by PBA and this is shown in Section 3 of the Access Strategy⁸. This was based on 1,225 houses and included Tesco figures as supplied by their consultant. It also allowed a small amount of additional traffic out of the Tasman Way access point. In current plans, car access onto Tasman Way from the development has been limited to about 100 homes only.

The impacts are in fact marginal, with some small increases and some small decreases, probably because the Titnore Lane traffic will mostly divert to Fulbeck Avenue. The results show that no additional roads move into a “stressed” condition (demand is 80% of capacity). The most stressed section, at 99%, is Littlehampton Road West at the Titnore Lane junction (Goring Crossways). This would be particularly sensitive to any increase in Tesco traffic.

The test was of course run with the full Western extension in place. Without it, the overall picture would clearly improve slightly. There seems very little reason to remove the limit on Tasman Way. It should also be noted that the most stressed route would only be relieved if the development’s generated traffic is reduced. Removing the Western extension from the 1225 housing total would reduce the stress by up to 7%, based on the diagrams⁹ but this would need to be confirmed by a new run from PBA.

This combination of environmental damage and least sustainable access suggests that this part of the housing should be omitted. This would also reduce overall traffic from the development both to the North and South.

⁷ PBA Technical Note: Accession Modelling, March 2009

⁸ See PBA Access Strategy Note, Transport Assessment Appendix 6.1, July 2008, on: <http://www.worthing.gov.uk/worthings-services/planningandbuildingcontrol/proposedlargedevelopments/westdurringtonwb04000400ut/pdf/55727.en.pdf>

⁹ See Figures 6.21 to the PBA Transport Assessment on: <http://www.worthing.gov.uk/worthings-services/planningandbuildingcontrol/proposedlargedevelopments/westdurringtonwb04000400ut/pdf/55722.en.pdf>

Overall scale

The demand for new housing allocations has created significant pressures on greenfield sites across the whole of the South East. There are always issues of local environment and traffic concerns to be considered, as well as local community issues such as economic, social and personal health.

In this instance, there will be significant increased traffic pressures. For example, in the morning peak there would be an overall increase in car trips starting in West Durrington of 20% if the 875 new dwellings are built.

However, this should be partly ameliorated by a plan to encourage more sustainable travel during the morning peak. There is both an overall travel plan¹⁰ for the site itself, and a commitment to undertake a one off, house to house travel awareness campaign, across the wider area of West Durrington¹¹ at a cost of £100,000. PBA refer to this as the Travel Behaviour Change (TBC) plan¹². Such campaigns have recently achieved some success in changing travel behaviour so that car use is reduced, but depend on promoting existing alternatives. The proposed would include the 875 proposed new dwellings, plus 4,350 existing households. It is predicted to reduce traffic growth by 6%.

This would therefore leave an increase of car trips in the am peak of 13% from 875 houses. With 1225 houses the increase would be 21% (after allowing for the 6% reduction). Since this is the am peak they do not include Tesco traffic increases.

No site based or home interview based travel plan will succeed unless there are attractive alternatives in place. Support for an extension of the Pulse bus service into the residential development is worthwhile, but the current proposal has a major design problem.

The current service has a short turn around loop using Romany Road and Carisbrooke Drive. This is one way but the loop is very small (around 0.5 of a kilometre). The new plan has a much larger loop, extending all the way from Columbia Drive, along Romany Road, Fulbeck Avenue, into the new development and out along Tasman Way. This is shown in Appendix 4, which is Figure 7.1 from the PBA Transport Assessment. This does **not** show the one way working which in fact starts at Columbia Drive and replaces the current two way bus service.

Some of the existing users from the residential area who currently enjoy a two way service would see a significant increase in their journey times to the new store because they would have to travel via the new development. New users would have a shorter journey to the new store and beyond, but a much longer

¹⁰ PBA Transport Assessment Appendix 6.5, West Durrington Travel Plan

¹¹ PBA Transport Assessment Appendix 6.4, Sustainable Transport Strategy

¹² Such plans are also often called “personalised travel planning”, “individualised marketing” or “Travel Smart”.

journey back. This is a low cost option but the length of the loop is considerable, over 3 kilometres for the completed 875 houses.

This really is too big to offer a realistic alternative to a short drive. It needs to be redesigned to provide two way working and to fully integrate the new services with the destinations which people want to access.

The site based travel plan needs to be given more detail, and in particular it does not include a reduction in the required amount of parking. Some car free streets with separated parking and car club based options would be expected if the plan is to have a significant effect. It is understood that this is still being negotiated and the inclusion of such features will be essential if any development is to proceed. Issues such as the full funding of the local school and other facilities to serve the development and avoid the need to travel by car will also need to be settled.

Even after the travel plan, there would be some significant traffic changes, particularly on the main access to the site through Fulbeck Avenue. In the am peak this flow is predicted to increase from 78 vehicles to 307, with the 875 dwellings and no Tesco traffic. The flows then divide between Titnore Way and Romany Road. The latter traffic can access the A2032 via Yeoman Road or travel to the North East via Romany Road and Columbia Drive¹³.

In conclusion, the commitment to managing car demand by the housing developer is welcome but will not succeed unless there are real alternatives in place. To provide these, an integrated approach with the new store and DC is required, leading to genuine site permeability, plus an improved bus plan compared to the current offer.

Indeed, there could be a deterioration for bus users and some pedestrians if the current plans go ahead.

If an integrated approach were adopted, the DC would be a much stronger focal point, and the greener recreational areas would be positioned on the Western periphery of the development. If the least sustainable and most damaging part of the development, the Western section, were omitted, this green area would provide an additional buffer for the ecologically sensitive Lag. This would also reduce the traffic impact overall. A revised plan needs to be produced and this would allow a proper assessment of whether the developments should proceed, proceed in part, or be modified.

¹³ PBA Transport Assessment, Table 6.3.

New Housing Development Plan 875 Dwellings



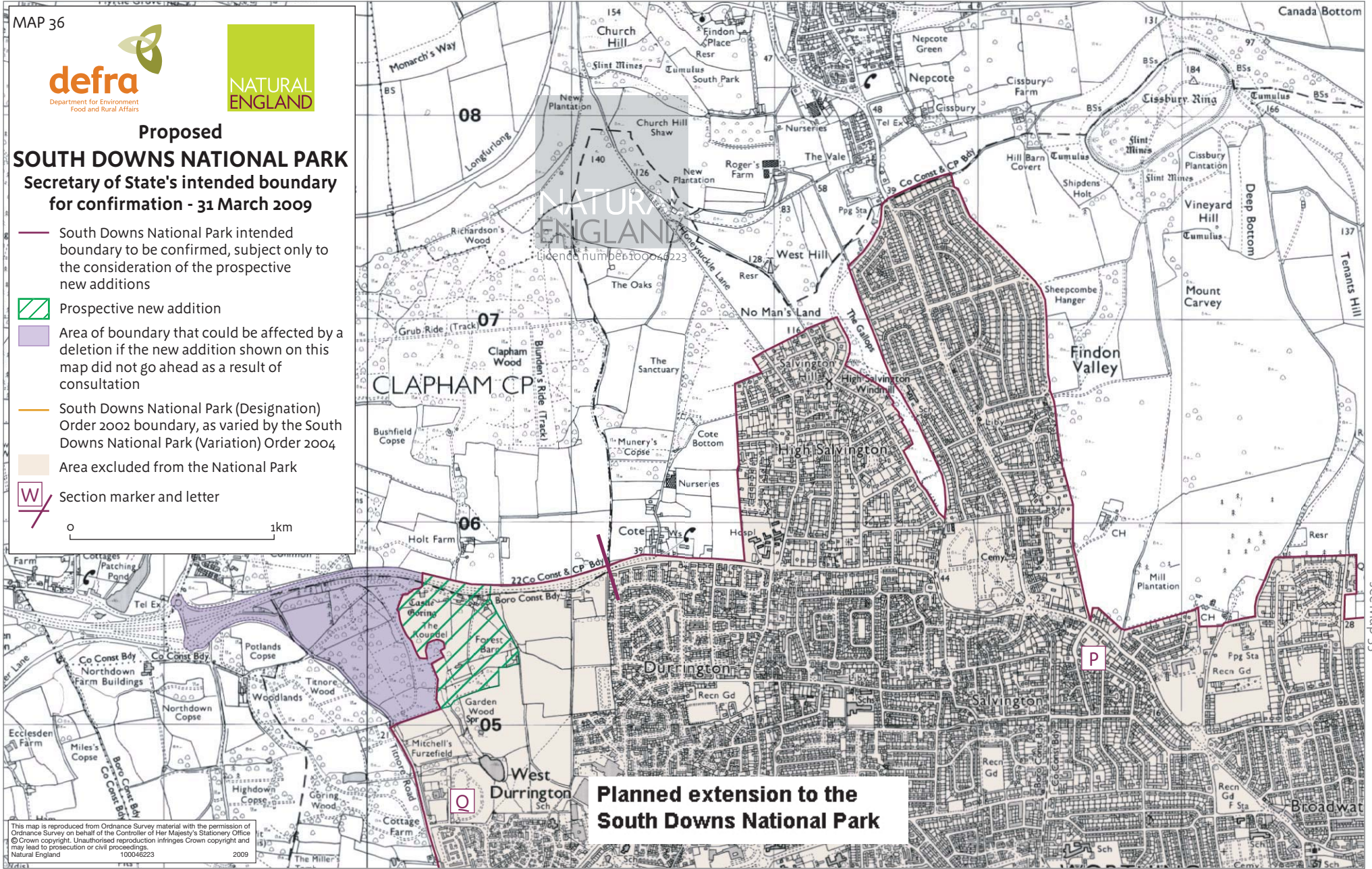
MAP 36



Proposed SOUTH DOWNS NATIONAL PARK Secretary of State's intended boundary for confirmation - 31 March 2009

- South Downs National Park intended boundary to be confirmed, subject only to the consideration of the prospective new additions
- Prospective new addition
- Area of boundary that could be affected by a deletion if the new addition shown on this map did not go ahead as a result of consultation
- South Downs National Park (Designation) Order 2002 boundary, as varied by the South Downs National Park (Variation) Order 2004
- Area excluded from the National Park
- Section marker and letter

0 1km



Planned extension to the South Downs National Park

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see Map 37

Appendix 2

see Map 35

Site and Immediate Environs

Figure 2.1 from the Environmental Statement

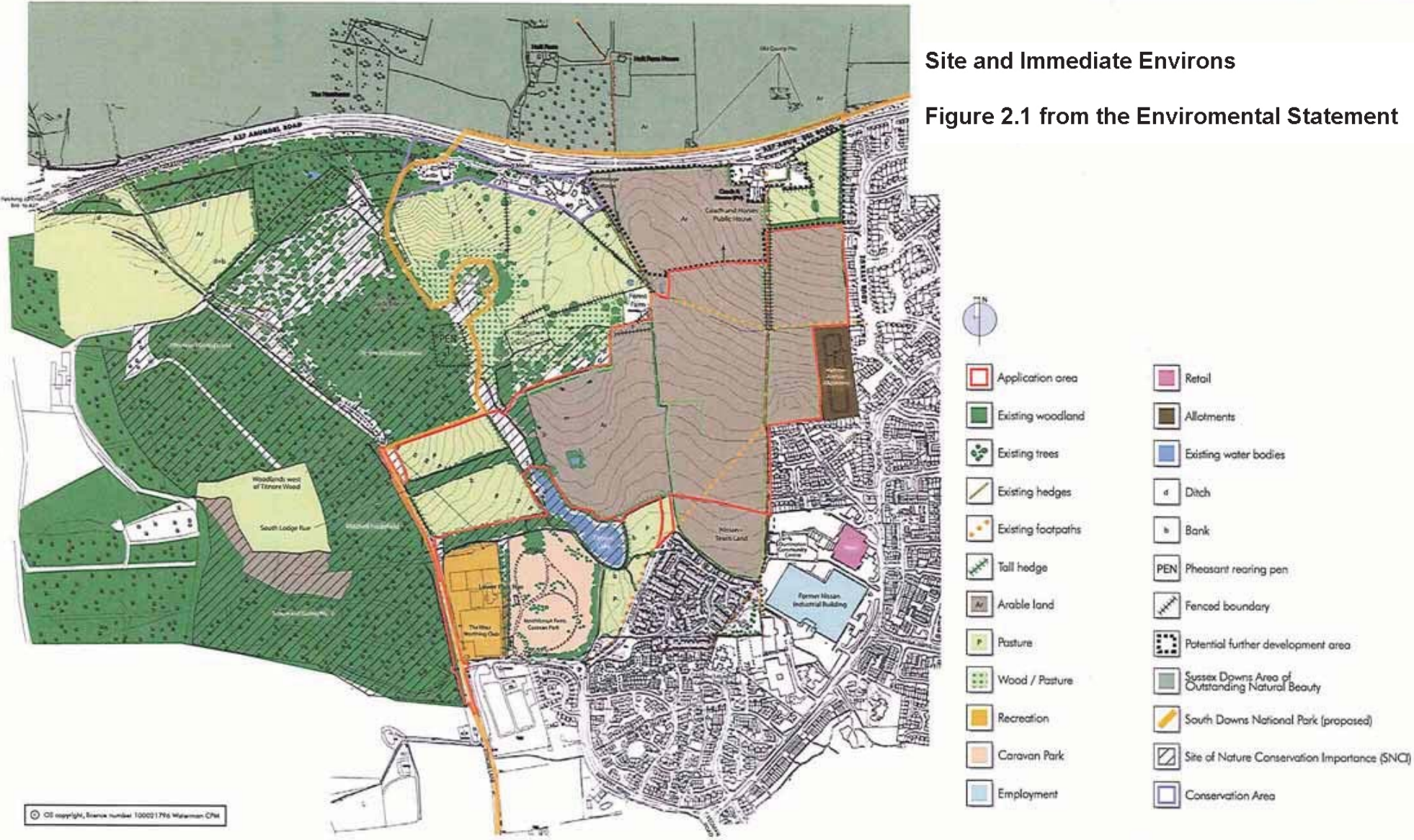
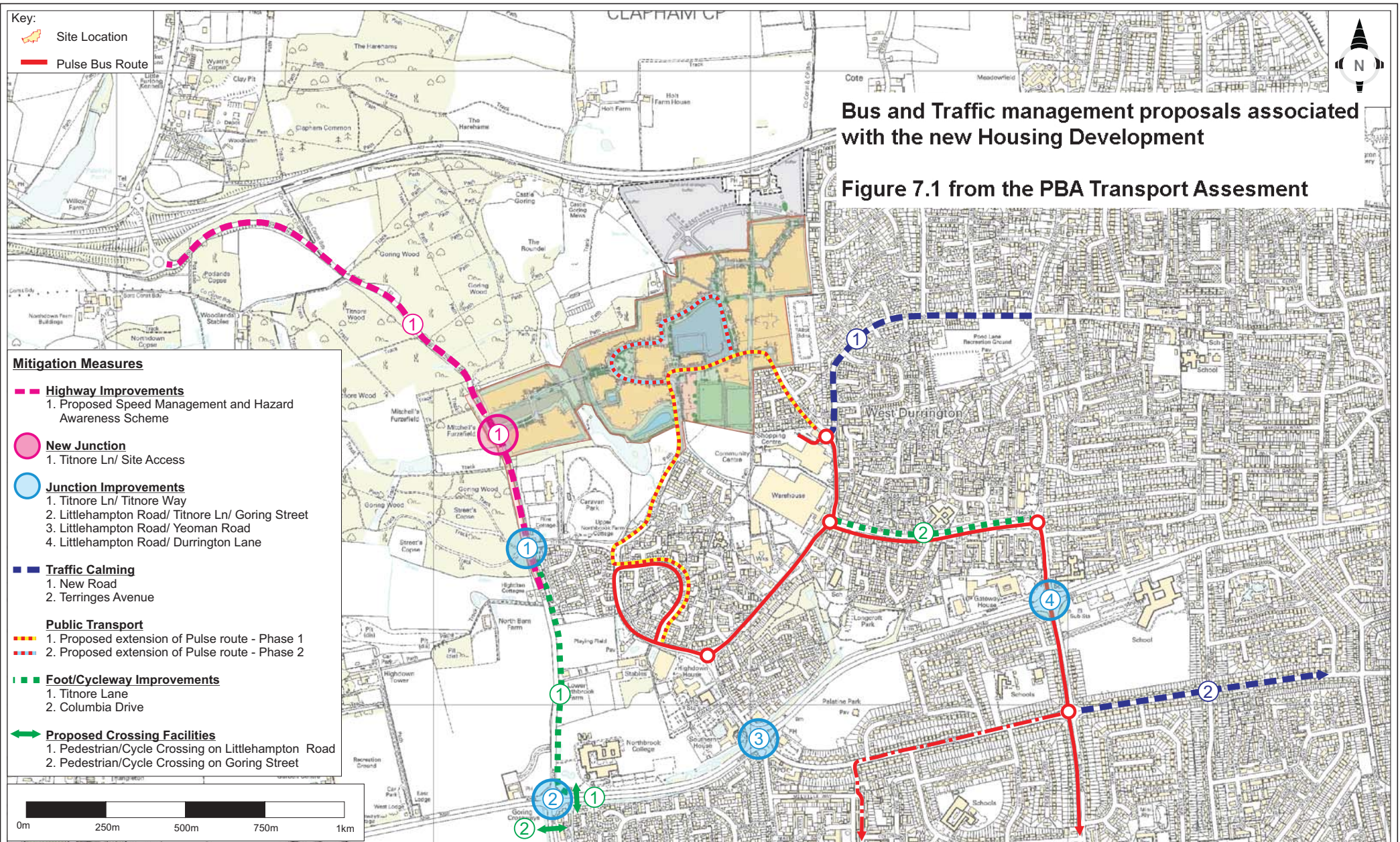


Figure 2.1: The Site and its Immediate Environs



Bus and Traffic management proposals associated with the new Housing Development

Figure 7.1 from the PBA Transport Assessment



Client
 Taylor Wimpey
 Heron Land Development
 Persimmon Homes

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LAND AT WEST DURRINGTON
 POTENTIAL MITIGATION MEASURES

Date	10/06/2008
Scale	NTS
Drawn by	GW
Checked by	
Revision	

FIGURE 7.1