



**A**berdeen **W**estern **P**eripheral **R**oute

**Consideration Paper of the report:  
Aberdeen Western Peripheral Route  
Fit For Purpose  
Submitted by Dr Douglas L Stewart**

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## **1. Introduction**

The Aberdeen Western Peripheral Route (AWPR) developing design has been on going since late 2003 following the appointment of, through a tendering process, the Design Services Consultant, Jacobs Babbie. The Design Services Consultant along with the Managing Agent have considered the scheme design, firstly for the Murtle Route, and following the Ministerial announcement in December 2005, are continuing this work for the Milltimber Brae option combined with a Stonehaven Fastlink.

Historically, the preferred route inherited by the Scottish Executive was the Murtle Route and it was on this route that most of the developing design was carried out in 2004/2005. However as the developing design progressed it was clear from discussions with statutory consultees and the general public, that the crossing area of the River Dee was a sensitive issue. This preference for the Murtle Route had been made by Grampian Regional Council in 1996, and subsequently endorsed by the successor Local Authorities, Aberdeen City Council and Aberdeenshire Council.

However, recognising the sensitivity of the crossing area, the Minister for Transport at that time, Mr Nicol Stephen MSP, instructed in 2004 that the work undertaken in the 1990's should be reviewed and the decision at that time by the Local Authorities to proceed with the Murtle Route be reviewed.

An informal public consultation was held in Spring 2005 to gather the public's views on alternative corridor options. Following that consultation, pending a final decision, the Managing Agent, in conjunction with the Design Services Consultant, continued to take forward the design of the Murtle Route. This work was progressed in conjunction with consultation with statutory bodies, landowners and nearby property owners who submitted a view.

In early December 2005, the new Minister for Transport, Mr Tavish Scott MSP, following consideration of the consultation and other scheme related information announced his preferred route as the Milltimber Brae option combined with a Stonehaven Fastlink. The developing design of this option was taken forward from that date and is the current option being developed.

## **2. Purpose of the AWPR**

Prior to commenting on the purpose of this report it is important to be aware of and understand the key objectives that the AWPR is trying to address. These are:

- Improve access to and around Aberdeen to improve transport efficiency and support the industrial areas in the City and the area to the north and west of Aberdeen (Economy and Employment);
- Provide traffic relief (including the removal of long distance heavy goods vehicle traffic) on the existing congested A90 route through and to the south of Aberdeen (Environment and Accessibility);

- Reduce traffic on urban radial routes reducing noise and air pollution and creating opportunities for pedestrianisation in the City Centre (Environment and Accessibility);
- Provide access to existing and planned park and ride and rail facilities around the outskirts of the City encouraging modal shift (Integration);
- Increase opportunities to maximise bus lanes and other public transport priority measures (Integration);
- Improve road safety over a wide area through the reduction of traffic on local roads (Safety)

### **3. Purpose of this paper**

For the Murtle, Pitfodels and Milltimber Brae Route Options, the preferred location where the AWPR would link with the existing A90 Trunk Road, to the south of the city, is at Charleston. This was decided after traffic engineering consideration of a number of alternative locations and grade separated junction forms between Charleston and the north of Portlethen, in the Schoolhill / Marywell area.

As the design work progressed one of the criticisms directed at the Managing Agent and his Design Services Consultant was that Charleston was not the best location for the new A90 T(south) junction.

During 2004, it is understood that Dr Douglas Stewart, was approached by some residents of the Charleston area to advise them whether Charleston was, or was not, the best location. On their behalf, leading up to the Spring 2005 consultation, Dr Stewart put forward a number of alternative junction options to the south of Charleston linking in with a re-aligned Murtle Route. These were considered and rejected.

It is understood that Dr Stewart no longer represents the Charleston residents and lately he is promoting a new junction to the north of Charleston, which would be required to link into the old Pitfodels Option. The Minister of Transport rejected the old Pitfodels option when he announced his preferred route in December 2005.

The purpose of this paper is to answer the points raised by Dr Stewart in his 'Aberdeen Western Peripheral Route, Fit For Purpose?' report submitted to Transport Scotland. The report refers to alternative options for both the Murtle Route and the Milltimber Brae Route and Stonehaven Fastlink. The report states that the alternative options presented are better and that the project team are making 'a fundamental design error'. The following paragraphs will deal initially with comments related to the Charleston Junction for the Murtle Route and latterly they will conclude with comments related to the latter option, for an alternative A90 junction, located at Craighill, linking into an 'improved Pitfodels option'.

#### 4. Murtle Option

Much of the report deals with the claim that the project team could not get the Charleston Junction to operate to an acceptable standard. As intimated earlier, prior to any contact with Dr Stewart the project team carried out traffic engineering testing on alternative options for the junction location with the A90T(south). Charleston was deemed to be the best location and the project team concentrated their resources on developing a junction at that location.

Dr Stewart submitted a sketch proposal for consideration of an alternative grade separated roundabout junction located at Marywell (south of Charleston). This sketch was further developed by the project team and tested on the projects paramics simulation for the A90 Trunk Road corridor. Paramics is a software tool that simulates the individual components of traffic flow and congestion, and represents its output as a real-time visual display for traffic management and road network design. Paramics is one of the most widely used micro simulation systems in the UK.

The problem at the Marywell location, was the new junction, as well as dealing with the AWPR traffic, would also have to cope with future local development traffic from future developments at both Schoolhill to the west of the A90, and Cairnrobin to the east of the A90. These future developments are referred to in both Local Authority Local Plans. The likely traffic conflict issues were highlighted prior to testing. The paramics test failed and the alternative option as presented was rejected.

At a site meeting on 26 October 2004, held with a local resident (Mr Neil McAllan) that Dr Stewart represents, another sketched proposal was given to the Managing Agent. This depicted a trumpet arrangement with the A90 Trunk Road at Marywell with associated drift roads. Dr Stewart phoned the Managing Agent on 28 October 2004 and told him not to test this option as he had a better one to put forward.

On 1 November 2004, Dr Stewart put forward another option that depicted a trumpet arrangement with the A90 Trunk Road at Marywell and an additional grade separated junction, depicting a diamond arrangement on the local road commonly known as the 'Portlethen to Aberdeen - Causiemounth Road'.

This option was considered and rejected without testing on the paramics simulation traffic model. The reasoning for this decision was as follows:

1. The proposal depicted a full grade separated diamond junction with the local road known as the Portlethen to Aberdeen - Causiemounth Road. This local road is approximately 4m wide. This would not be acceptable without very significant improvements to this road which would be outwith the scope of the AWPR and which would not be sensible given that other options are available.
2. The proposal did not cater for future 'Cairnrobin' traffic from the east-side of the A90.

3. Weaving distances on the AWPR, between the two new junctions would have been an issue.

The testing and observations made in relation to the alternatives put forward by Dr Stewart have not satisfied him that Charleston is the best option to locate the New A90 Trunk Road junction.

Dr Stewart has alleged in the report, and many times since, in the local press, that the AWPR Project Team do not have an acceptable working junction at Charleston, for the Murtle Route. The report states in the summary section, the following;

*“A much better alternative is available if a fundamental design error at Charlestown junction on the A90 south of Aberdeen is corrected. This would facilitate major improvement of the Pitfodells route, making it the best choice. That is the central proposal of this report.”*

In order to resolve this issue, on Friday 23 June 2006, at the instruction of Transport Scotland, the proposed ‘working’ junction (as designed for the Murtle Route) at Charleston was presented to Mr Neil McAllan (a Charleston resident) and Dr Douglas Stewart in the form of a paramics presentation. The presentation depicted the new junction operating with the design year 2025 traffic flows for the AM and PM peaks.

## **5. Ministerial Announcement in December 2005**

In early December 2005, the Minister for Transport, Mr Tavish Scott, having considered the information put before him announced his preferred route for the AWPR. This was a combination of the Milltimber Brae option with a Stonehaven Fastlink.

Referring to the report, the paragraph related to ‘The purpose of the AWPR’ states “relief of Anderson Drive is the main purpose of the Aberdeen Western Peripheral Road”. Clearly section 2 above explains that there is much more to the scheme than simply relieving congestion on Anderson Drive. There is also intimation in the report, that since the Grampian Regional Council recommendation, existing constraints have now changed making the Pitfodells option more attractive. It states;

*“The original Pitfodells route would have had a severe impact, however, on Woodlands Hospital - a prime reason for shifting the route to Murtle in 1996. The hospital closed in 2003, and is the subject of a planning application for Housing.”*

As part of the developing design work for the Murtle Route and recognising the sensitivity of the crossing area, referred to in section 1, RSK ENSR (the firm which carried out the original Environmental Assessment study carried out on behalf of Grampian Regional Council in 1993), were asked to revisit their original 1994 environmental work to determine if, despite changes to the baseline environment, policy and legislative framework in the intervening years, the conclusions were still valid.

They recommended that their original 1993 recommendation was still valid, which was, though finely balanced, in environmental impact terms, the Pitfodels option was not as good as the Murtle Option.

## **6. Milltimber Brae and Stonehaven Fastlink Option (Charleston Junction)**

The preferred route, announced by the Minister on 1 December 2005, links the AWPR with the A90T (south) at Charleston, and this is being taken forward in the design development. Referring to the report, the paragraph related to 'Current Situation' states that;

*"His decision has been taken before the Milltimber/Netherley route and its junctions have been designed, or even surveyed. Nor does he yet have reliable costs, cost-benefit, or environmental assessment."*

The junction design at Charleston is still under development. One of the grade-separated junction proposals is a new single 6 lane wide bridge with traffic signal controlled priority at the slip roads. As the AWPR approaches the new junction it is located in a 500m long cutting at an average depth of approximately 5 to 6 metres deep, with a maximum depth of approximately 8m, and not 15m as intimated in the section 'Involvement with the AWPR'.

The work carried out to date has shown that the 6 lane wide bridge option works in traffic terms and the design team are giving due consideration to its buildability, and implications of access to and from the city, during its construction. The two bridge roundabout arrangement, (making use of the existing bridge, which from our traffic test results for the Murtle Route, operates effectively), has not been ruled out at this stage.

## **7. Twin Trumpet interchange for the Pitfodels option**

Bearing in mind all of the above Dr Stewart has submitted a further option that is a twin trumpet interchange that links to the Pitfodels option. As stated above the Pitfodels option was given due consideration at the appropriate time, by the Minister for Transport, and rejected as his choice of preferred route.

The older Pitfodels option and new 'Improved Pitfodels Route' advocated in the report have a common length of 28 km. The only difference between the two options being where their alternative alignments cross the area of land between the River Dee and the existing A90 Trunk Road (south). This equates to 3km for the older route and approx 2.2 km for the new 'improved route'. The Minister of Transport, when making his decision, was aware of the benefits/dis-benefits that were related to the Pitfodels option. Therefore, as approximately 90% of the length of the route is the same it is a requisite to identify new major benefits that the route would bring, compared to the older Pitfodels Route. These new benefits must be attributable to the section between the River Dee and the existing A90 Trunk Road (south).

After a desk study consideration and site visit, it is feasible to make the following comments which relate to the report's section headed 'Improved Pitfodels Route':

The report states that the 'Improved Pitfodels Route' would require "*much less disruption of traffic*".

1. There would still be similar traffic disruption, as his option requires both a new interchange bridge to be constructed over live traffic using the A90 and widening works along both sides of the A90 towards Charleston.
2. An examination indicates that the existing trumpet interchange at Charleston would not comply with current design standards, (TD 22/06) 'For loops, in addition to the general stopping sight distance requirements, there must also be no obstruction to sightlines across the full extent of loops of low radius'.

It is therefore very likely that Dr Stewart's proposal would necessitate earthworks (rock excavation) within the existing loop at Charleston.

This operation would also require traffic management involving disruption to traffic.

The report states that the 'Improved Pitfodels Route' would "*have the huge advantage over Marywell of avoiding conflict with housing developments and their roads*".

3. Instead of a rock cutting, the AWPR as it approached the A90 would be on an embankment, with greater visual and noise impacts.
4. The location of the junction would impact on the access to Redcraigs Farm and the Craighill Caravan Park.

The report states that the 'Improved Pitfodels Route' would "*shorten the AWPR*".

5. This is of course true as intimated above in section 8, paragraph 2, but only with regard to where the AWPR links with the A90T (south). The large percentage of traffic using the AWPR will wish to travel to/from either the A90T (to/from the south) or the A956 (local industrial/residential traffic) wishing to access the industrial areas to the south of the city, such as Altens.

For example, compare distances from the existing Charleston junction to the River Dee:-

#### Old Pitfodels

Charleston to River Dee = 3.0km

#### New Pitfodels Route

Charleston to new A90 junction, = approx. 1km

A90 to River Dee = 2.2km,

Total Charleston to River Dee = 1.0 + 2.2 =3.2km.

Therefore for the heavier traffic flows, the distance travelled will increase for the new Pitfodels Route as suggested by Dr Stewart.

The report states that the 'Improved Pitfodells Route' "seems to be remarkably free from property or other complications". It is worth noting that property demolitions, whilst being very sensitive, they are not the sole determinant of route choice.

6. There are no alignment drawings supplied within the report and a site visit was carried out to best determine a likely alignment for the route. It is difficult to determine if there would be no properties lost, unless full detailed alignment design was carried out, but it was evident that there would still be property impacts in the area south / south-west of Tollohill Wood.
7. The new route would be more beneficial to the Banchory Devenick School, but it would move closer to the Special Needs Camphill Community at Beannachar.

The report states that the 'Improved Pitfodells Route' would have a list of benefits when compared to the preferred route. The Minister was already aware of these issues when he made his decision. However, the following comments may be made with regard to the 'Improved Pitfodells Route'.

8. Traffic using the 'improved option' travelling to Charleston would have to pass through a convoluted arrangement of junction manoeuvres, thereby increasing safety concerns.
9. The AWPR is expected to take 3 years to construct irrespective of
  1. which route is built.
10. The Stonehaven spur is not being built to relieve Charleston.
11. The route provides no relief to the existing congested A90 Trunk Road to the south of the City of Aberdeen from Stonehaven.
12. The Minister of Transport has already considered the older Pitfodells option and rejected it.

## **8. Summary**

A large part of the submitted report is built upon the assumption that the project team could not get the Charleston junction for the Murtle option to work. A working traffic simulation option has been demonstrated in a paramics presentation.

Consideration of the new 'Improved Pitfodells Route' has shown that it does not have all the benefits claimed when compared with the Old Pitfodells Route option, nor does it satisfy some of the strategic Trunk Road objectives. The Minister for Transport has already rejected the Old Pitfodells Route.