

Town & Country Planning Act 1990 Section 77 Anglesey County Council Planning Application by Anglesey Boat Company Ltd.

Gallows Point Marina Report L6805/
X/00/513782

8. Effect on Highways

Contents

Impact on Economy, Jobs & Tourism

8.1 Case for the Applicants

- 8.1.1 The applicants' assessment of traffic and transport issues is set out in Section 16 of the Environmental Statement (Doc CD9). This looks at likely changes in traffic flows on the A545 during the construction and operation phases of the marina development, changes in alignment of the road and access to the site, and the potential for accidents to occur.
- 8.1.2 The A545 along the frontage to the site is a single carriageway road, about 7m wide and ordered by grass verges. The national speed limit of 60 mph applies and the road is unlit. County Council traffic data shows that the traffic flows on this section of the A545 are around 4,500 vehicles per day (vpd), two way, during weekdays and Saturdays, dropping to around 3,500 vpd on Sundays. Peak hour flows are towards Menai Bridge in the morning and towards Beaumaris in the evening.
- 8.1.3 The accident records for the last 3 years show that one slight personal injury accident occurred on the A545 at the entrance into the Gallows Point petrol filling station in August 1998.
- 8.1.4 Traffic speed data for this section of the A545 indicates an 85 percentile speed of about 45 mph for traffic heading west to Menai Bridge and around 40 mph for traffic heading towards Beaumaris.

- 8.1.5 The likely impact of construction traffic would be minimised by the use of marine craft for bulk delivery of rock materials and the removal of dredgings. Almost all of the other construction traffic would be to and from the west of the site, passing through Menai Bridge from the mainland. This construction traffic is forecast to peak during 2 months towards the end of the construction period, when between 32 and 34 vehicle movements per day are anticipated. This would be less than 10% of the daily flow on the A545, and it would amount to less than 3 movements per hour when spread over the 12 hour day. If about a third of all vehicle movements were to take place within the morning peak hour, this could give rise to an additional 12 movements between 0700 and 0800 hrs, about 6% of the background traffic flow of about 200 vehicles in the same period. This would have a negligible impact on traffic speeds and journey times.
- 8.1.6 Highway improvements are proposed for the A545 as part of the development to allow safe ingress and egress from the site. This would include road widening to install a rightturning lane, improved sight-line visibility and the introduction of a 40 mph speed limit. It is recommended that this work should be carried out early in the contract in order to allow slow-moving laden goods vehicles to enter the site safely. Other safeguards include prescribed routes for HGVs to avoid environmentally sensitive areas, and wheel-washing facilities for all vehicles before leaving the site. With road access improvements and other safeguards in place, the construction traffic would have a negligible impact on road safety.
- 8.1.7 The traffic related impact of the proposed marina in operation has been assessed using data from the TRICS trip generation database. This shows that on average, one trip per berth inbound and outbound per day would occur, so that 800 trips or 400 round trips per day would be generated by the size of development proposed. Some 30% of these trips would be made in the peak period between 1600 and 1900 hrs, whilst at weekends the traffic would be spread over the day from 1000 to 1900 hrs at about 10% per hour.
- 8.1.8 The 800 trips generated per day would increase the flow on the A545 by around 20%. The design capacity of the single carriageway link is up to 13,000 vpd, but the poor alignment of the A545 reduces the capacity to around 10,000. Therefore, with the additional traffic generated by the development, the A545 would be operating at about 50% of its design capacity. Therefore these modest levels of flow during the operational phase of the marina development would have a negligible impact on traffic speeds or journey times.

- 8.1.9 The proposed widening of the A545 and the provision of a ghost island right turn lane is designed in accordance with the Welsh Office design standard TD 42/95, for right turns made by more than 500 vpd. The visibility requirements for this junction would be 215m in each direction from a point 4.5m back along the centreline of the access. This requirement could be reduced to 120m splays if a 40 mph speed limit were to be introduced, and in this case the 85 percentile speeds indicate that the lower standard of sightline splay would be appropriate.
- 8.1.10 The adequacy of the junction design has been tested using the PICADY program. Assuming that all the traffic would arrive from and depart to the west, analysis shows that during the weekday peak period between 1700 to 1800 hrs and the weekend peak between 1500 to 1600 hrs queues and delays at the site access junction would be negligible. The proposed development would generate turning movements and potential hazards on the highway, but the provision of a right-turn facility would minimise the accident risks through traffic management. Discussions have taken place with the County Highways about the possibility of providing an extended right turn lane to the east of the site to serve the existing petrol filling station, in conjunction with a reduced speed limit of 40 mph from the existing 30 mph limit in Beaumaris to a point west of the site.

8.2 Case for the Local Planning Authority

- 8.2.1 The Council's figures for traffic generation, parking, trip generation and traffic data update those given in the ES, following further research and analysis. The generation of traffic from the operation of the marina from the TRICS trip generation, has been based on 450 berths rather than 400 as quoted in the ES. The proposed car parking provision of 424 spaces for about 450 berths would be reasonable, assuming that not all boat owners would use the marina at the same time.
- 8.2.2 The applicants' figures for the number of lorry movements during the construction phase indicate an acceptable level of construction-related traffic. It would be imperative however, before construction works commenced, for the improvements to the site access to be implemented, and for the routes of construction vehicles to be discussed and agreed with the Highway Authority.
- 8.2.3 The average daily trip generation rate (TRICS) of 0.6 trips per berth inbound and outbound, is applied to the maximum of 450 berths, rather than the 400 quoted in the ES. This would result in 540 vehicle trips per day. As 10% of the day's trips would be leaving or arriving during the peak hours, this figure would average 54 trips each hour, or just under 1 trip per minute.

8.2.4 The existing average daily traffic flow for this section of the A545, as measured in 1999, is 4,933 vpd, and therefore the additional marina traffic generation of 540 vpd would be an 11 % increase in flow on this section of the highway. The applicants have made a reasonable assessment of the design capacity of the A545 at 10,000 vpd and therefore, on average, the likely increased total flow including the development would be only about 55% of the total capacity of the road.

8.2.5 As surveyed (Doc YMCC2.1 figs 6.1-6.3), traffic flows between Gallows Point and Beaumaris vary according to weekends or weekdays. Saturday and Sunday flows tend to be lower than weekday flows. In 1999, the 24 hour flows for Sundays averaged 4,375 vpd. The weekday 12 hour combined traffic counts are as follows:

06/10/84 - 2941 vpd

15/10/90 - 3410 vpd

26/09/94 - 3988 vpd

06/10/99 - 3736 vpd

8.2.6 Traffic counts taken on the A545 Bridge Street in Menai Bridge gave the following 12 hour combined traffic counts:

26/04/89 - 5029 vpd

16/06/94 - 5661 vpd

8.2.7 During the five year period from 1995 to 1999 there have been 51 recorded accidents on the A545 between Menai Bridge and Beaumaris. Five of these occurred at Gallows Point, of which four involved slight injury whilst making right turns into the site, and the fifth was a damage-only accident. The provision of a right turn lane facility and a 40 mph speed restriction would greatly enhance road safety for all users.

- 8.2.8 Notwithstanding the current A5 Trunk road improvements from Britannia Bridge to Holyhead, which is an important Trans-European Road Network route into and out of Anglesey, all traffic from the mainland to Beaumaris would continue to be signed along the A545. Traffic would therefore continue to travel through Menai Bridge town centre. This centre has double yellow lines to restrict parking to 2 sections of the main road, which restricts the flow of traffic and causes congestion. The capacity of this section of the A545 could be improved through Menai Bridge by the removal of on-street parking.
- 8.2.9 The capacity of the A545 is sufficient to cater for all the increased traffic that would result from the proposed development, so that traffic speeds and journey times would hardly be affected.
- 8.2.10 The provision of a right-turning lane to accommodate traffic gaining access to the site would be essential. The provision of 215m sight lines for a 60 mph speed limit, as existing, or 120m sight line splays for a new 40 mph limit would both be acceptable, but the 40 mph scheme is preferred for highway safety reasons, and for the safety of the greater pedestrian movement likely between the site and Beaumaris town centre. The extension of the right-turning lane to provide access into the petrol filling station as well as the marina site would help to prevent or reduce queuing to the site and improve road safety for all road users.
- 8.2.11 The existing narrow footway between the town and Gallows Point would require improvement to cater for the greater number of pedestrians, boat owners and visitors, that would be attracted by the development.
- 8.2.12 Several conditions are suggested, covering such matters as the highway improvements, routes for construction traffic, wheel washing, delivery of rock material and removal of dredgings by sea, and closing the existing vehicular access.

8.3 Case for Menai Bridge and District Civic Society

- 8.3.1 Menai Bridge High Street carries the majority of Beaumaris-bound traffic, and it is also the main commercial and shopping centre for the surrounding area. There are shops, hotels, pubs, banks and a post office along the road, which is narrow, with on-street parking in two places. These parking areas narrow the road to one-way and cause long hold-ups for traffic, and this is made worse from Easter to autumn by large numbers of coaches passing through to Beaumaris and regular bus services.

- 8.3.2 Whilst car movements generated by the marina are likely to be one each way per boat per day, it is also likely that large boats would be arriving at the marina by low-loaders and trailers in the spring and leaving in the autumn. The buying and selling of boats would also generate further towing traffic. Therefore "turn up and launch boats" would be a significant part of the increases in traffic through Menai Bridge. This increase in traffic on top of predicted national increases and the present congestion would create enormous problems for Menai Bridge.
- 8.3.3 There are no proposed solutions to these traffic problems, because there is no prospect of a road by-pass for Menai Bridge, or of re-routing traffic to Beaumaris. The removal of onstreet parking in the High Street is not an acceptable solution as local businesses would object strongly due to the effect on their trade.
- 8.3.4 During the construction phase of the proposed marina, the ES points out that construction traffic would arrive from the west and pass through Menai Bridge. Whilst this would be temporary, considerable chaos would be caused by heavy plant machinery and other construction traffic passing through the town over a lengthy period.
- 8.3.5 On the A545 between Menai Bridge and Beaumaris, the Civic Society is aware of several accidents since May 1988, resulting in one death and a number of serious injuries.

8.4 Case for Friends of the Earth

- 8.4.1 The A545 between Menai Bridge and Beaumaris is narrow, twisting and dangerous. There have been 2 fatal accidents and several serious injury accidents in recent years. The link capacity of this road, estimated as 10,000 vpd, is a considerable overestimate in the ES, and the "turn up and launch" traffic would increase the traffic flows. Traffic of this kind would cause more danger on bends and exacerbate congestion in Menai Bridge. In addition the hazards posed by 32-34 daily movements of construction vehicles would be considerable. It is unrealistic to expect HGVs to avoid environmentally sensitive areas by using prescribed routes, because all alternative routes are of equally high conservation value. Therefore it is not agreed, as stated in the ES, that the impacts of constructional and operational traffic on road safety would be negligible.
- 8.4.2 As Beaumaris town centre is some 1km away from the marina site, the development would generate additional traffic entering the town, even if the proposed footway were constructed. This would cause even more congestion in Beaumaris at peak periods.

- 8.4.3 The A545 can be compared with a very similar road in terms of character and design features that has already been under scrutiny at Public Inquiry. The A470 (T) through the Lledr Valley is similar to the road between Menai Bridge and Beaumaris in that it is 4.3 miles long, it has very 'substandard' alignments, verges and widths, and it is set on a steep wooded hillside.
- 8.4.4 With regard to the effect on traffic flows on the A545 Menai Bridge - Beaumaris, the existing 1999 flow is 4,930 vpd (4,375 weekends), and the average 24 hr flows in 1999 were: January 3,880 vpd, July 5,972 vpd, August 6,689 vpd, and December 4,189 vpd.
- 8.4.5 The national forecast of traffic levels by the Commission for Integrated Transport for 1996-2010 is that A road traffic will increase by 44%. This category would include the A545, so that a 44% rise over 15 years could be linearly interpreted to represent about 30% between 2000-2010. Hence in 2010 the A545 would be likely to carry 6,409 vpd (4,930 x 130%). In this light, it is therefore considered that the A545 has reached its 'capacity' in terms of reasonable safety and congestion levels, even though 4,930 vpd is well below the 13,000 vpd design standard.
- 8.4.6 The marina traffic is estimated at 540 vpd. This represents an 11 % rise in annual 1999 flow and an 8% rise in August flow, the busiest month, excluding forecast overall traffic increases. Such increases in the traffic levels would be noticeable and would have a detrimental effect on safety. The frequency of sporadic traffic blockages on the narrow widths would also increase as traffic increased.
- 8.4.7 Traffic conditions and amenity in Menai Bridge would also deteriorate further. Prohibiting parking along the shop fronts may resolve little. Indeed, it may well result in faster speeds (by 20 to 30mph), leading to greater pedestrian danger and loss of amenity and probably retailing in Menai Bridge.
- 8.4.8 There does not appear to be an easy solution to the capacity constraints on the A545. Upgrading is highly unlikely as no 'new' road proposals are to be considered in the foreseeable future. The A545 is a very 'substandard' road design, due to the very frequent private and side road accesses, and also the possibility of future boat-trailer traffic.

- 8.4.9 The A545 could be said to be of high accident potential comparable to the similarly substandard A470 Lledr Valley road. As improving safety was a principal reason for the programmed £14million A470 Lledr Valley upgrading, and the A545 is carrying nearly double the traffic of the Lledr Valley road, it is considered that the extra loading of the marina traffic, particularly a near 10% increase in existing summer levels, would be noticeably detrimental to road safety and congestion. Alarming, traffic increases approaching 30% in the next ten years are also forecast.
- 8.4.10 Such high, dangerous and congesting summer flows may well deter non-marina-related tourism from the Beaumaris area and this corner of Anglesey. Furthermore, the likelihood of the road being upgraded is very low and Menai Bridge would still be a bottleneck.
- 8.4.11 For these reasons, it is considered that the limited capacity of the A545 road represents a significant factor against any large traffic generating development with access along that road. Whether sited west of Gallows Point or in Beaumaris Bay, a large 450-berth marina would be such a traffic-generating development. Either way, a smaller marina would be more acceptable for traffic reasons.

8.5 Written Representations on Traffic Issues

- 8.5.1 **Mr T William**, a local resident, is concerned that the road leading west out of Beaumaris is narrow with continuous bends with heavy traffic, being used by commuters from Beaumaris, Llangoed, Llanfaes and Llanddona, plus summer tourist traffic. The proposed marina car park for 400 craft alongside the main road would pose a real safety risk for vehicle approaching Beaumaris and cars leaving the car park. Menai Bridge centre is already congested and could not cope with extra traffic and car parking. These concerns are shared by **Dr H Wilson, Mr D F Evans and Mr P Steele** of Llangoed.

8.6 Conclusions (The bracketed numbers refer to source material in the parties' cases and documents)

- 8.6.1 It is not disputed that the use of marine craft for the removal of dredgings and the delivery of construction materials would substantially reduce the amount of heavy traffic using the A545 during these phases of the development (4.5, 4.6, 8.1.5). There would however be some use of the main road through Menai Bridge during the construction period, limited to about 32-34 vehicle movements per day (Doc CD9, 8.1.5). At a rate of about 3 vehicles per hour spread over the 12 hour day up to a maximum of 12 vehicles during the morning peak hour, I find that this would not significantly affect traffic flows. Moreover it would only subsist for a relatively short period of 2 months during the peak construction period.

- 8.6.2 As has been pointed out by Friends of the Earth (8.4.1), it is unrealistic for the applicants to suggest that HGVs could use prescribed routes in order to avoid environmentally sensitive areas (8.1.6). The only practicable route is the A545, which passes through the centre of Menai Bridge and the narrow twisting coast road east towards Gallows Point and Beaumaris. Although it is tortuous and passes through the village shopping centre, this route has the capacity to carry the estimated construction traffic.
- 8.6.3 Based on 450 marina berths (8.2.1), but with a lower average daily trip generation figure of 0.6 per berth, the County Council calculates that, when operational, the proposed marina development would be likely to generate some 540 vehicles per day (vpd) on the adjoining section of the A545. As this road already carried some 4,933 vpd in 1999, the development would generate a 10% increase in traffic flows (8.2.4). On the existing survey figures, the total including the marina traffic, would still amount to only some 55% of the design capacity of the A545, which is estimated to be 10,000 vpd for this section of highway.
- 8.6.4 Traffic congestion in Menai Bridge is an existing problem, particularly during the tourist season, which the additional traffic would exacerbate (8.3.1-8.3.3). It is clearly the case however, that the main road has the same traffic flow design capacity throughout, but the 30 mph urban situation, with on-street car parking in the centre, so restricts the width of the carriageway that 2-way traffic often cannot proceed. The congestion and delays which are said to occur in Menai Bridge (8.3.1) would undoubtedly continue, whether or not 10% extra traffic would be added by the marina development. Clearly this marginal increase in congestion could be alleviated by the removal of lateral parking areas on the A545 in the future, should it prove necessary.
- 8.6.5 I do not accept the assertions by Friends of the Earth that the 10% increase in tourism-related traffic and the additional short term construction vehicles would exceed the capacity of the main road access or cause a significantly more dangerous traffic flow or congestion in the centre of Beaumaris at various times (8.4.2, 8.4.6, 8.4.9-10). I conclude that the A545 has sufficient capacity to accommodate the traffic likely to be generated during different phases of the proposed marina at Gallows Point.

- 8.6.6 Details of a new vehicle access into the development off the A545 have not been finalised at this application stage. The design of the junction would also depend on the speed of traffic using the main road (8.1.9). The preferred solution of the applicants and the highway authority is to provide an extended right turn lane from the east of the entrance to serve both the application site and the existing petrol filling station, within a new 40 mph speed restriction leading into the existing 30 mph area of Beaumaris town (8.1.10, 8.2.10).
- 8.6.7 A 40 mph restriction would require a junction with a visibility splay of 4.5m by 120m in each direction, which could be achieved at this location. However, the improvements necessary for the new junction would be likely to impinge on the landscape of the AONB. As the carriageway is confined by the stone retaining wall of the private estate on the north side, the widening improvements for the central turning lane and visibility splay would be likely to have a significant visual impact on the local landscape through the loss of land, trees and walls on the southern side of the A545. The environmental impact of the proposed junction would be much greater if the 60 mph limit is retained, because sight-lines of 215m in both directions would be necessary.
- 8.6.8 In conclusion, I consider that the A545 road has the capacity to cater for both the construction and operational traffic likely to be generated by the proposed marina. However, the additional traffic flow would increase the existing congestion problems in Menai Bridge village centre. If the development were to proceed, a traffic management scheme to remove on-street parking on the A545 would need to be introduced in the future. A satisfactory junction layout could be achieved for the application site and the existing petrol filling station.