

14 The Heath,  
Circular Road,  
Galway.

An Bord Pleanála (Strategic Infrastructure Division),  
64 Marlborough Street,  
Dublin 1.  
D01 V902


12<sup>th</sup> December 2018

Re: Submission on Proposed N6 Galway City Ring Road Motorway Scheme 2018

Dear Sir/Madam,

In line with your provisions for receipt of public observations on Strategic Infrastructure proposals, I now attach my submission on the above scheme, along with a cheque for €50.

Yours sincerely,

  
Prof. Gerard J. Lyons

<b>AN BORD PLEANÁLA</b>	
LDG-	<u>01071918</u>
ABP-	_____
<b>13 DEC 2018</b>	
Fee: €	<u>50</u> Type: <u>cheque</u>
Time: _____	By: <u>reg</u>

## Submission to An Bord Pleanála on Proposed N6 Galway City Ring Road Motorway Scheme 2018

<b>Name and qualifications of person making submission:</b>	<b>Professor Gerard J. Lyons</b> B.E., M.Eng.Sc. Ph.D, C.Eng., Eur.Ing., F.IEI, F.BCS, CITP Emeritus Professor of Information Technology, and retired Dean of Engineering & Informatics , NUI Galway
<b>Address of person making submission:</b>	14 The Heath, Circular Road, Galway. H91 TN5P
<b>Relevant planning interest(s) of person making submission:</b>	<ul style="list-style-type: none"> <li>Galway resident with professional and personal interest in ensuring sustainable and appropriate development of the Galway City region.</li> <li>Property owner impacted by proposed development.</li> </ul>
<b>Date of submission:</b>	12 <sup>th</sup> December 2018
<b>Application fee enclosed:</b>	€50 cheque enclosed

This submission is divided into 2 sections in order to clearly articulate the observations and objections of the author at two different levels of concern:

- Section 1 presents observations on a strategic planning level; and
- Section 2 presents observations & objections relating directly to individual impacts on the author's own property.

**AN BORD PLEANÁLA**

**13 DEC 2018**

### Section 1. Policy, Planning and Regional Development Observations

LTR DATED \_\_\_\_\_ FROM \_\_\_\_\_  
LDG- \_\_\_\_\_  
ABP- \_\_\_\_\_

#### 1. Sustainable development policy context

Galway County Council (GCC) has anchored its motivation for the proposed project in terms of sustainable development of the Galway City region. The foundational planning principles presented in the proposal cite European, National and Regional policies for sustainable development, and include:

- Decoupling economic growth from transport demand with respect to sustainability and environmental impact;
- Achieving sustainable levels of transport energy use and reducing transport greenhouse gas emissions;
- Achieving a balanced shift towards environmentally friendly transport modes; and
- Reducing transport noise.

At the most basic level, the proposed scheme violates all of the declared principles of sustainable regional planning. The proposed scheme fails to meet National and Regional objectives for sustainable development.

**This proposed project is by far the most significant urban infrastructure development in the recent history of Galway city.** Should it proceed, it will have a profound and permanent impact on the very shape, fabric and culture of Galway city. As such, it needs to be

considered carefully within the broad context and objectives for the longer-term sustainable development of this region and the population that lives here. But rather than presenting a clear vision for the future development of Galway, the proposed N6 Ring Road Motorway Scheme has been developed solely as a bounded, highway infrastructure project. As a highway engineering exercise, the consultants have developed a thorough and professional proposal. However, this is no substitute for balanced and sustainable regional development, and is instead a violation of all sound regional planning principles; that is, by priority ranking road infrastructure as the main spatial planning driver for urban environments. A more rational planning approach would be to subsume transport strategy within a comprehensive long-term (20+ years) vision for the sustainable development of the region, including: socio-economic, cultural, environmental, mobility, and healthy-living considerations.

At a time when Ireland is faced with overwhelming challenges to meet environmental and climate change commitments, **GCC has ignored the global and national imperatives for sustainable development**, and is missing an opportunity to plan this region for the future, instead relying on outmoded planning ideas about automotive-centric urban/regional development. Cities throughout the developed world are urgently adapting to the new realities of looming environmental and climate change catastrophes, by restricting automotive access and investing in sustainable public transport solutions, accompanied by higher-density urban living and working spaces.

The proposed development would **fundamentally define Galway as an automotive-centric city** with permanent implications for more cars & trucks, much greater CO<sub>2</sub>, NO<sub>x</sub> and particulate emissions, poorer air quality, higher noise pollution and still no improvement in the urban traffic congestion problems. The specific lack of commitment to transport modal switching, contained in the proposed scheme, represents a gross and irresponsible failure of urban and transport planning. At just 3.9% in the Base Year (2012), public transport (PT) modal share in Galway is at a depressingly low baseline, but the real failure of public planning is revealed in the forecast share of PT contained in the N6 Scheme proposal, at only 5% modal share by 2039 -- hardly an ambitious target for sustainable development. This is further compounded by forecasts of declining modal shares for both Walking and Cycling.

There is an unavoidable **Cause-Effect relationship between long-term urban planning and transport demand by modal type**. The proposed N6 development would compound the negative inherited impacts of decades of poor urban/regional planning of the Galway area, rather than supporting the evolution of a sustainable city and local region.

**Poor planning is at the root of Galway's current traffic congestion** and specifically includes:

- Concentration of housing development to the West of the City (and West of the River Corrib) while almost all industrial employment has been allowed to develop in industrial parks to the East of the city;
- No planning for high-density peak-hour road access to the business parks in Ballybrit, Parkmore, Briar Hill and Mervue, resulting in major congestion within these parks and on the axial approach roads;
- Ribbon development of housing along the sensitive coastal route through Salthill, Bearna, Spiddal and Connemara;

- Concentration of schooling (primary and secondary) in the city centre, requiring an inward commute by car, without any provision for public transport serving educational centres;
- Concentration of major shopping centres (3) and drive-through fast food outlets (2) opening directly onto the busiest road intersection in the City (Terryland junction);
- Development of commuter towns in Bearna, Moycullen, Headford, Athenry, Claeregalway, Oranmore & Clarinbridge without provision for any public transport access (or indeed adequate access roads) to Galway city, and its main employment centres;
- Development of the main hospital (GUH regional) and GAA sports stadium to the West of the city, while most users commute from the Eastern side of the city;
- Recognising the very limited road capacity for traffic in the city centre, a persistent failure to develop any plans for local access and movement (other than by car), that could include: strategically located multi-storey car parks on main access routes, light-rail or trolley-bus services, and meaningful (road separated) cycle routes;
- Failure to provide any meaningful public transport options, so that commuters have no alternative to private car usage (less than 4% public transport). In particular, the limited bus services available are routed through the city centre, and there is no East-West (i.e. Quincentennial Bridge) direct service for cross-city commuters to the industrial parks.
- Poor use of surface capacity on existing routes and poor design of major intersections, with a total absence of grade-separated junctions to support through-traffic flow, and no separation of cycle/walking corridors from traffic routes.

Rather than addressing such inherited problems, the proposed N6 Motorway scheme will serve to further **reinforce these planning mistakes**, by opening-up further land to the West of the City (and along the coastal route) for new housing development, rather than concentrating housing growth centres to the East, where the CSO forecasts the main population growth. Furthermore, the N6 Scheme takes no account of the planned imminent development of the Galway Docklands and its requirement for city centre access, rather than provision of a disconnected city orbital route.

The proposed N6 scheme is based upon an outmoded concept of **industrial formation patterns**, where employment growth was focused on factories and business parks located on the periphery of urban centres. The business parks to the East of Galway city are a classic example of this 1970's-1990's style of industrial development. The new information-intensive industries, which are the cornerstone of growth in this country and region (e.g. ICT, Software, Product Development, Media, Internationally Traded Services) have a completely different settlement behaviour. These are "urban centre" industries, where availability of in-city office accommodation and high-density residential property is the main attractor for foreign direct investment. The demand will be for high quality urban space, such as Grand Canal Docks in Dublin (home to Google, Accenture and others), rather than for factory premises in Ballybrit. The planning of Galway (and its transport infrastructure) needs to urgently address this radically different view of industrial development.

By Irish urban infrastructure standards, the proposed N6 Scheme is a very large-scale development and comes close to the level of investment envisaged for Dublin Metro North. But the scale is difficult to justify in terms of expressed needs and traffic management objectives, particularly when considered in the context of **demographic developments** in the

region. Using the National Transport Authority's own forecasts and CSO demographic projections quoted in the N6 Scheme documents, Galway city and county will experience a very modest level of growth in the next 30 years. In the 15 year "post-completion" period 2024-2039 (that is after completion of the proposed N6 scheme), the overall population of Galway City & County will grow by 2.4% (less than 6,500 persons in total), or less than 0.2% per annum growth. The CSO forecasts indicate that most of this growth will be outside of the city in County Galway, particularly in East Galway. This slow, incremental pattern of rural demographic development to the East of Galway city provides little economic justification for the development of a Galway Ring Road, the main purpose of which is to facilitate access to the West of the city.

The **Cost-Benefit analysis** of the scheme suggests a value of 3.29 at its most optimistic. However, this ratio significantly understates total development costs (by up to 40%) for the scheme, relative to figures quoted by GCC during public consultation exercises, and is based upon a notional target cost budget. Furthermore, this also suggests that the scheme can only become viable if no significant modal shift occurs away from automotive. Perhaps this is the reason for planning on the basis of limited modal shift.

## **2. Appropriateness of scheme to Galway's transportation problems – is it fit for purpose?**

Anyone who lives in Galway city and suburbs would admit that we currently have a traffic congestion problem, particularly during peak work and school-run commuter periods. These problems arise in every urban area. But, these have been exacerbated in Galway by inherited poor spatial planning and a failure to develop appropriate transportation solutions for a small city as it expanded over the past 30 years. In determining the appropriateness of the proposed N6 Ring Road Motorway Scheme, we need to judge whether it would meet: (i) sustainable planning and development objectives for the region (as discussed in the previous section); and (ii) the transport and mobility objectives associated with access, journey times and delays.

Galway County Council (GCC) has highlighted a number of high-priority objectives for the proposed scheme, including:

- Segregation of by-passable traffic from urban traffic;
- Implement sustainable transport policies for shorter commutes;
- Improve accessibility to Galway City and city-based services.

According to the Scheme documents, these objectives arise from a set of identified transport problems in the city:

- Congestion throughout city road network;
- Over capacity junctions;
- Peak hour delays;
- Strategic traffic in conflict with local traffic;
- Journey time unreliability;
- Lack of accessibility to the West;
- Impact of traffic congestion on city's reputation for FDI.

<b>AN BORD PLEANÁLA</b>	
13 DEC 2018	
LTR DATED _____	FROM _____
LDG- _____	
ABP- _____	

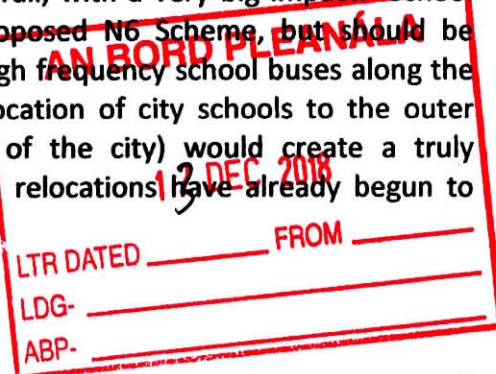
While these lists are fairly generic and could apply to any city, it is clear that GCC has set its sights on the development of a large-scale Ring Road as the silver-bullet to address the city's mobility and transport needs, regardless of whether this is **appropriate for the actual needs**. Indeed, the project itself has changed names a number of times during the planning phase, having originally been titled "Galway City Outer Bypass" (GCOB) -- an acronym still retained on many of the scheme drawings. The GCC conceptualization of the transport needs of the City is for an **orbital distributor road**, which would:

- Cater for by-pass traffic and remove this element from local urban traffic;
- Provide greater access to the city; and
- Provide improved access to the West.

**Radial or Axial traffic pattern:** The fundamental error in the N6 Scheme proposal is that the source of current traffic problems are assumed to be **radial** in nature (that is, needing distribution *around* the city) *versus* **axial** (that is, traffic problems are caused by congestion on in-out access routes centered on the city). If the problem were radial, then it would make sense to build an orbital distributor route. But if the traffic congestion is not radial in nature, then an orbital distributor will not solve the problems. If the source of the problem is axial, then the only alternatives are to increase the effective carrying capacity and/or throughflow of the principal access routes, or to significantly reduce traffic loading on these by developing modal shift alternatives (e.g. public transport).

**Traffic patterns and problem definition:** Analysis of the traffic pattern information presented in the N6 Scheme documents, and further study of GCC traffic count data, confirms that **the underlying nature of Galway's traffic loading is indeed axial**, and certainly not radial. The TOTAL traffic loading for the entire city is about 140k vehicles per day (Average Annual Daily Traffic [AADT]), of which 2/3<sup>rd</sup>s is from the East and South East of the city. By-pass traffic accounts for only about 3% of total traffic loading (or about 4k trips in total). Over 65% of all journeys do not cross the River Corrib, and 40% of all journeys originate within the city zone on the same side of the river as where they started.

A particular source of peak-hour congestion in Galway is **school commuter traffic**, caused by a concentration of school locations in the Western side of the city and in the city centre. Galway has a primary and secondary school population of approx 7k students of which about 2/3<sup>rd</sup>s are concentrated in the West/Centre zone (about 4.5k). About 50% of these students commute to school by car (somewhat less than 50% for secondary students and higher for primary). So for the West/Centre zone, school commuting adds about 2-2.5k passenger car unit (PCU) trips per day to the morning and evening traffic loading in the city zone. Removal of this loading during school mid-term breaks has a dramatic effect on Galway's traffic flow, with the near elimination of peak-hour congestion. So, the removal of just 2k city trips can transform our traffic situation – a tiny adjustment overall, with a very big impact. School commuter traffic would not be mitigated by the proposed N6 Scheme, but should be significantly improved by the provision of peak-hour high frequency school buses along the main access routes. In the longer planning term, relocation of city schools to the outer suburbs (and development of schools on the East of the city) would create a truly sustainable solution. During the past 2-3 years, such relocations have already begun to happen.



So, we can conclude that the source of Galway's traffic congestion problem is primarily:

- Axial (traffic attempting to get into or leave the city along access "spoke" routes);
- Urban local (to the city zone)
- Predominantly short journeys
- Predictable, in terms of daily and seasonal loading - as in the case of school commuters.

Given this *problem definition*, transport planning for Galway should be sharply focused on addressing the underlying sources of congestion, and appropriate transport infrastructure provided in a balanced sustainable development scheme. This would likely include a significant investment in modal shift towards public transport for in-city mobility, as well as improvement in road junctions, park and ride facilities, multi-storey car parks on main access routes, public transport and other measures to address the axial travel patterns of commuter town dwellers.

However, the N6 Scheme fails to address the basic problem defined and instead interprets the congestion as a radial issue, requiring an outer orbital distributor road. Provision of a high-quality 4-lane highway (2-lanes either direction), as envisaged in the N6 Scheme is likely to support an additional traffic capacity of 86k AADT, or a 60% increase in overall road carrying capacity. But, this additional capacity is wrongly purposed and is designed to solve a radial distribution (and by-pass) issue that does not exist, while simultaneously failing to solve the real congestion problems. **In summary, there is no evidence to suggest that the proposed N6 road investment will have a positive impact on: (i) the sustainable development of Galway city or (ii) its current traffic congestion problems.**

One of the stated objectives is to enable improved access to the West, especially Connemara. While the Galway city traffic loading from this source is small, there is a much cheaper and sustainable alternative to the construction of a Galway ring road. **Development of the N59 Western access road through Connemara (and Clifden) is an urgent priority, given the notoriously poor and dangerous condition of the road surface and foundations.**

**The problem analysis described above suggests a requirement for:** (i) a very different approach to urban transport development in Galway; (ii) a limited need to accommodate increased traffic volumes "around" the city; (iii) a pattern of urban settlement and usage that requires greater development of in-city public transport and cycling/walking travel; (iv) development of direct access "spoke" routes into the city (for Dockland traffic) and to the outer business parks (from Tuam/Claregalway, Headford, Oranmore/Clarinbridge). These could all be accommodated without the need for ring-road motorway development and would require the GCC to develop appropriately scaled and sustainable transportation solutions.

**AN BORD PLEANÁLA**

**13 DEC 2018**

LTR DATED \_\_\_\_\_ FROM \_\_\_\_\_  
LDG- \_\_\_\_\_  
ABP- \_\_\_\_\_

## Section 2. Specific impacts and objections directly relevant to the observer's property

1. Specific situation: I am the property owner and resident of No. 14 The Heath, Circular Road, Galway, located adjacent to a section of the proposed N6 Ring Road Motorway Scheme, between the Letteragh Interchange – and – Corrib River Bridge Crossing. This is referred to on Arup Drawing Numbers: GCOB-D-LB-511-401 and N6-SM-511.1. The Heath is a small low-density development of 20 houses, with approx. 1 dwelling per acre, bounded by agricultural/amenity land on the West and The Circular Road on the East.
2. Failure to notify persons referred to: A number of my neighbours have received statutory notices under Section 48(b) of the The Roads Act 1993 (inserted by Section 9(1)(b) of The Roads Act 2007), relating to the extinguishment of rights of way and the compulsory acquisition of road access through our housing development. I have NOT received any such notice, in spite of the fact that my property is serviced by these rights of way & access roads, and is immediately adjacent to the proposed construction of a new access road, as shown on Drawing No. GCOB-D-LB-511-401.
3. Inappropriate development of access road through housing development: Based upon the latest N6 Scheme Maps (made available for public consultation) and interpreting the notices received by my neighbours, it appears that the proposed scheme includes a provision to extend the local narrow service road through The Heath housing development, in order to open-up access to additional land to the West of this development.

This is an entirely inappropriate use and re-purposing of a local housing development service road. This service road was developed solely to provide access to individual dwellings within The Heath housing development, (over 25 years ago) under the restricted provisions of the 1982 County Borough Development Plan. It was approved and designed only for light traffic loading for a small number of dwellings, with a narrow road pavement and no pedestrian footpaths. Any change or extension of this purpose, resulting in further intensification of usage, would be in breach of the authorized approval and would create a serious hazard for residents of The Heath.

Should the proposed extension of this service road be allowed by An Bord Pleanála, for access to agricultural land ONLY, a specific undertaking should be attached that would prevent its future usage for any other purpose (such as further housing development serviced by this road) which would result in intensification of usage.

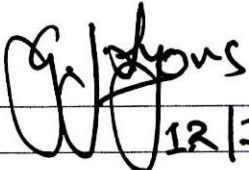
4. Height of proposed Letteragh junction – visual, noise and amenity impacts: The proposed Letteragh interchange represents the destruction of an area regarded in Galway County & City Councils Development Plans as an amenity area of scenic and touristic value ("Views & Prospects" along Moycullen Road, Circular Road and Letteragh Road). This would create an unsightly blot on top of "Knocknabrona" hill, which is one of the highest points in the Galway city/suburban area. This hill-land region is a very sensitive geological, edaphic, water table and natural habitat ecosystem. For many years, housing development has been specifically height restricted in this area due to the potential for visual impact (on N59 Connemara tourist route) for anything above about

55m elevation. The proposed development represents a gross infringement of the Councils' own planning in this respect, as the Letteragh Interchange would be constructed at an elevation of 65-69m, and would cast a significant visual and noise impact on the surrounding natural touristic landscape.

5. Noise impact: The proposed development would create an unacceptable noise impact, both:
- a) During course of construction, given proximity to the main carriageway, on/off ramps and the Letteragh Interchange. Plans for excavation include blasting and rock breaking.
  - b) During course of operation, given proximity to the main carriageway, on/off ramps and the Letteragh Interchange. Over the adjacent section of the proposed roadway vehicle noise levels will be higher than normal as the route steeply inclines from the river to the Letteragh Interchange at this point. The Letteragh Interchange itself would be a high-density junction in close proximity to domestic dwellings.
6. Loss of amenity – NUI Galway lands adjacent to River Corrib: The publicly accessible lands (owned by NUI Galway) along the River Corrib represent the main natural amenity for residents of the Newcastle, Dangan, Circular Road, and adjacent areas. These provide walking tracks, playing fields and sports facilities in an idyllic setting along the riverbank, and have a very high utilization by local residents. The proposed location of the N6 Corrib River Bridge Crossing will directly bisect this amenity, rendering it entirely unusable during the course of construction and significantly degraded (in terms of noise levels, air quality and visual impact) once the development is completed.
7. Impact on Bushy Park National School: The proposed development involves the construction of an elevated highway section (rising from the River Corrib bridge crossing) immediately adjacent to Bushy Park NS and overlooking its newly developed outdoor sports facilities (Ref. Drawing No. GCOB-SKD-762; Issue D3). This poses a very significant health and safety risk to children at the school, with impacts on air quality, noise levels, vibration and potential for catastrophic road traffic accidents "spilling-over" onto school grounds.

Signed:

Date:

  
12/Dec/18

