

27 Nov 2019  
19-031/ER

An Bord Pleanála  
64 Marlborough Street  
Dublin  
D01 V902

**AN BORD PLEANÁLA**  
LDG- \_\_\_\_\_  
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28 NOV 2019  
Fee: € \_\_\_\_\_ Type: \_\_\_\_\_  
Time: \_\_\_\_\_ By: *Reg. Post*



**BY REGISTERED POST**

Dear Sirs,

**PROPOSED DEVELOPMENT AT TRINITY WHARF, TRINITY STREET, WEXFORD**  
**Ref PL303726 - FURTHER COMMENT TO AN BORD PLEANÁLA (ABP)**

**Submission Made by & On Behalf Of**

Following on from our initial submission on the original Application, this further submission is made by Mr. Eoin Reynolds of NRB Consulting Engineers Limited, on behalf of Mr Eamon McMahon of McMahon Building Supplies, Trinity Street, Wexford. All correspondence on this matter should be addressed to NRB Consulting Engineers at the above address.

**Subject Matter of The Submission or Observation**

This further submission relates specifically and solely to the location and design of the proposed vehicular access from Trinity Street, and in particular to established Rights of Way, Operational, Loss of Parking and Traffic Safety issues. It addresses the content of the Further Information Response submitted by Wexford County Council dated October 2019.

**Reasons, Considerations & Arguments Upon Which Submission is Based**

These are set out in the main body of this Report and Associated Images and Drawings below and attached, and are based on our long-experience in road junction design and in the assessment of commercial developments of the nature proposed.



*We are quite simply astounded at the content of the Wexford County Council RFI Response to our client's concerns, as specifically set out on Pages 41 to 43 of the WCC document, and ROD Addendum. Given the Town Centre Location (where Junction Traffic Capacity Matters are of lesser concern to ABP in our experience), we believe that the more important Traffic Safety and Operational Concerns highlighted in our original Submission remain wholly unresolved. Furthermore, the proposal as revised, will have devastating consequences on our clients long established business with the effect on accessibility, on street parking and loading/deliveries.*

*The WCC Response DOES NOT address the primary & legitimate Operational, parking, servicing & Traffic Safety Concerns raised, and our reasons are further set out below. The vast majority of the Traffic Safety, Design and Traffic Progression issues set out in our submission of 29 March 2019 remain unresolved and unaddressed by the Applicant AND they can easily be addressed through sensible simple design changes.*

We set out below the Relevant Traffic Safety/Operational Extracts from the WCC Response and our comments are set out following. using the text of the WCC Response for ease of Reference; -

**Item 5.7(a) Page 41 of WCC Response, states...**

Access to the store's vehicular entrance has been reviewed and the amendments are presented in the Traffic Addendum. A loading bay will be provided for essential loading activities to McMahons. Please refer to the Traffic Addendum (**Appendix B1**) which has demonstrated that access to the vehicular entrance of the Building Supply premises is largely uninterrupted.

Figure 1 - Extract WCC Response, Item 5.7(a)



**NRB Response to Item 5.7(a)**

This WCC Statement is **TOTALLY AT VARIANCE** with the Submission by ROD, Wexford County Councils own Consultants, which states (Page 12 of the ROD addendum); -

The AutoTrack in Plate 5.18 demonstrates that McMahons access is still accessible by a 7.5t panel van. It is envisaged that the vehicle will pull up parallel to the kerbside, turn on its hazard lights and wait until the driver is satisfied that there is a large enough gap in passing vehicles and pedestrians to complete the reversing manoeuvre safely. Access for a vehicle from the southern approach will be prohibited by the solid white centre line. Vehicles approaching the premises from the south will be expected to circle the block to approach from the north.

Figure 2 - Extract ROD Submission Page 12

We highlight to ABP that there are therefore very clear and significant changes to the established business, with ROD clearly contradicting the WCC Statement, and these are highlighted in the ROD submission. In this regard we make the following comments;

- Currently the McMahons Business premises benefits from complete and unfettered access for all vehicle types, with long established Rights of Way from North and South along Trinity Street.
- The majority of deliveries of building products are by way of 16.5m Articulated Lorry coming from the Dublin Direction, as illustrated in **Figure 3** below;

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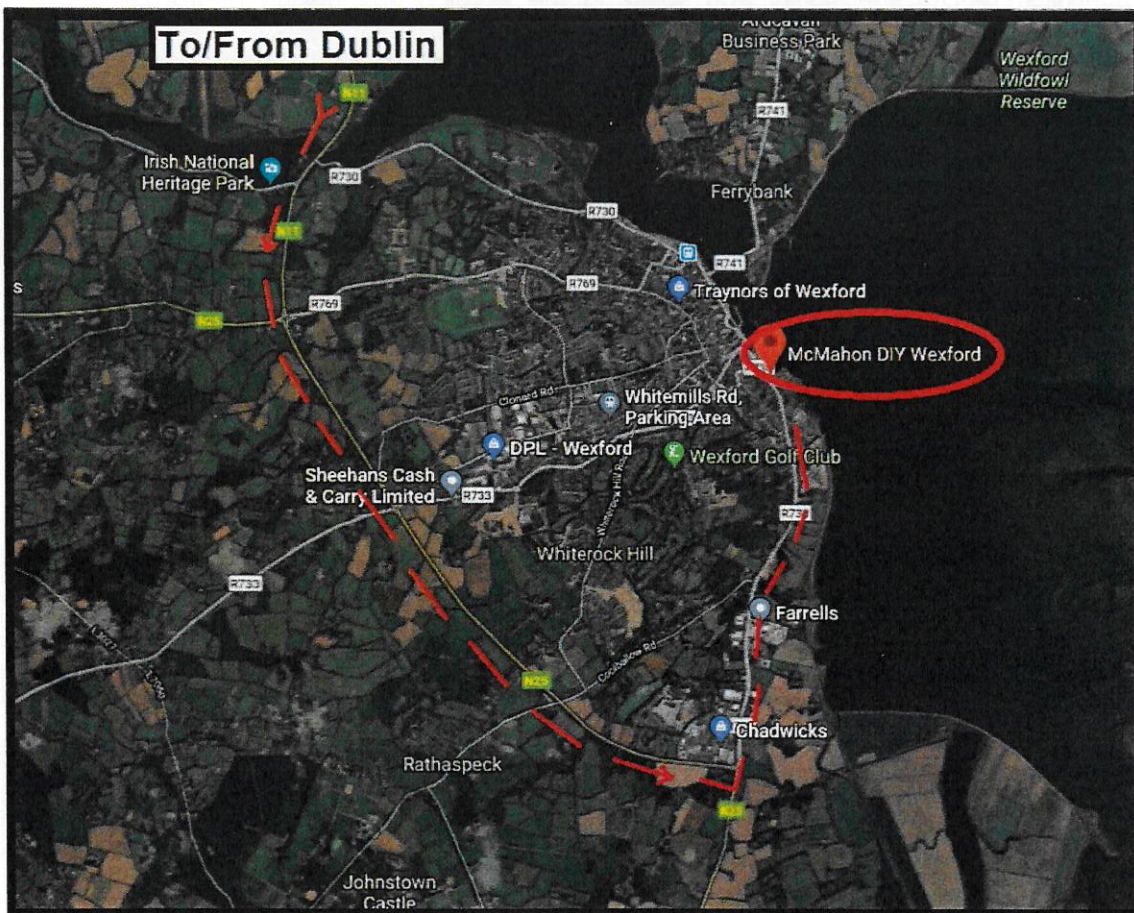


Figure 3 - Current Access for Vast Majority of Deliveries (Defined by Red Dash)

So, it is clear from the above that Deliveries by 16.5m HGV, and all vehicle types, have established access and routes around the N25 Wexford Ring Road, approaching along the Rosslare Road from the south along Trinity Street. We would be concerned how these Delivery Vehicles would be expected to "Circle the Block", as suggested by ROD, and the implications for same. We would query how vehicles of the size and scale of that illustrated in **Figure 4** below can be expected to "circle the block" in a built



up urban environment? A simple statement by ROD - not so simple in reality! Which 'block' of the local built up narrow Wexford Streets can a 16.5m Lorry 'circle' and negotiate safely?



Figure 4 - Typical 16.5m Articulated Delivery Vehicle

- McMahons business benefits from a long established multi directional public Right of Way in terms of vehicular access from the North and South along Trinity Street. Whilst NRB are not qualified in terms of Legal Matters, and we do not claim to be, we have nonetheless been involved in projects of this nature for many years. Based on similar experience elsewhere, we believe that an established public right-of-way cannot simply be abandoned at common law: "Once a highway always a highway; for the public cannot release their rights, and there is no extinctive presumption or prescription."<sup>1</sup> Per O'Hanlon, J. in *Carroll .v. Sheridan and Sheehan*, [1984] ILRM 451

Whilst we do appreciate that ABP does not adjudicate on matters of Law, nonetheless we believe that this is a relevant issue in this case, particularly in circumstances where we believe that there is a much safer and acceptable alternative access available that will have significantly reduced implications for our client. We believe that ABP should therefore have due consideration of this issue in their determination of the Application, and the resulting potential for future expensive legal challenge or compensatory costs (and also the likely loss of employment at McMahons), in circumstances where public money is being expended on an expensive planning application by Wexford County Council, when a safe acceptable alternative access solution is clearly available.



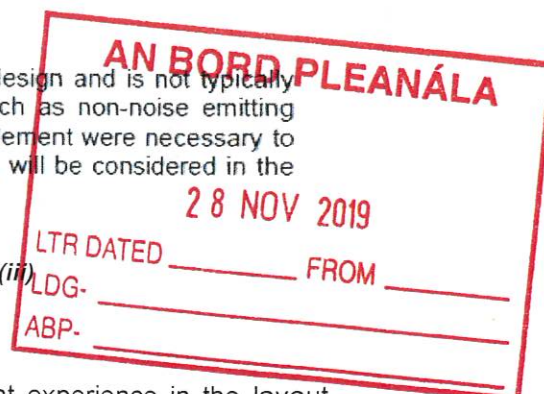
**Item 5.7(b)(iii) Page 41 of WCC Response, states...**

The details of the traffic signal equipment is considered detailed design and is not typically provided at the planning stage of a development. Measures such as non-noise emitting pedestrian push buttons and hooded traffic signal lights will be implemented where necessary to ensure they are not creating a nuisance to nearby residents. This will be considered in the detail design stage of the development.

Figure 5 - Extract WCC Response, Item 5.7(b)(iii)

**NRB Response to Item 5.7(b)(iii)**

Notwithstanding the statement by WCC, NRB have very significant experience in the layout and design of Traffic Signal Controlled Junctions and in addressing the key issues to ensure safe operation. We **are generally required to** submit drawings clearly illustrating the location for Traffic Signal equipment. It is simply facile to dismiss this as 'detailed designs', as WCC and ROD have done particularly in restricted Urban Environments in circumstances where



<sup>1</sup> Per O'Hanlon, J. in *Carroll .v. Sheridan and Sheehan*, [1984] ILRM 451.



there are clearly Traffic Safety concerns expressed by their own Safety Auditors, and more identified by NRB and others, including affected residents.

It is not as if the depiction/design of the Traffic Signal Equipment clearly and unequivocally is a difficult thing to do, and the methodology is clearly set out within the Traffic Signs Manual. An extract from the relevant Guidance Document, the Department of Transport's Traffic Signs Manual is included below as **Figure 6**. In terms of the use of this Standard the oft-referenced **Design Guidance DMURS states** (Para 4.2.4 Page 74); -

**"The Principal source for Guidance on Signage and line markings is the Department of Transport Traffic Signs Manual (TSM)....."**

We would highlight that in terms of Signal Equipment the TSM categorically states; -

**"Use of these symbols provides a consistent method of annotation and prevents misinterpretation at any stage of the design and build process"**

We highlight the Key Words **..."at any stage of the design and build process"**. We would also draw An Bord Pleanála's attention to **Chapter 9** of the TSM which specifically & entirely relates to Traffic Signals.

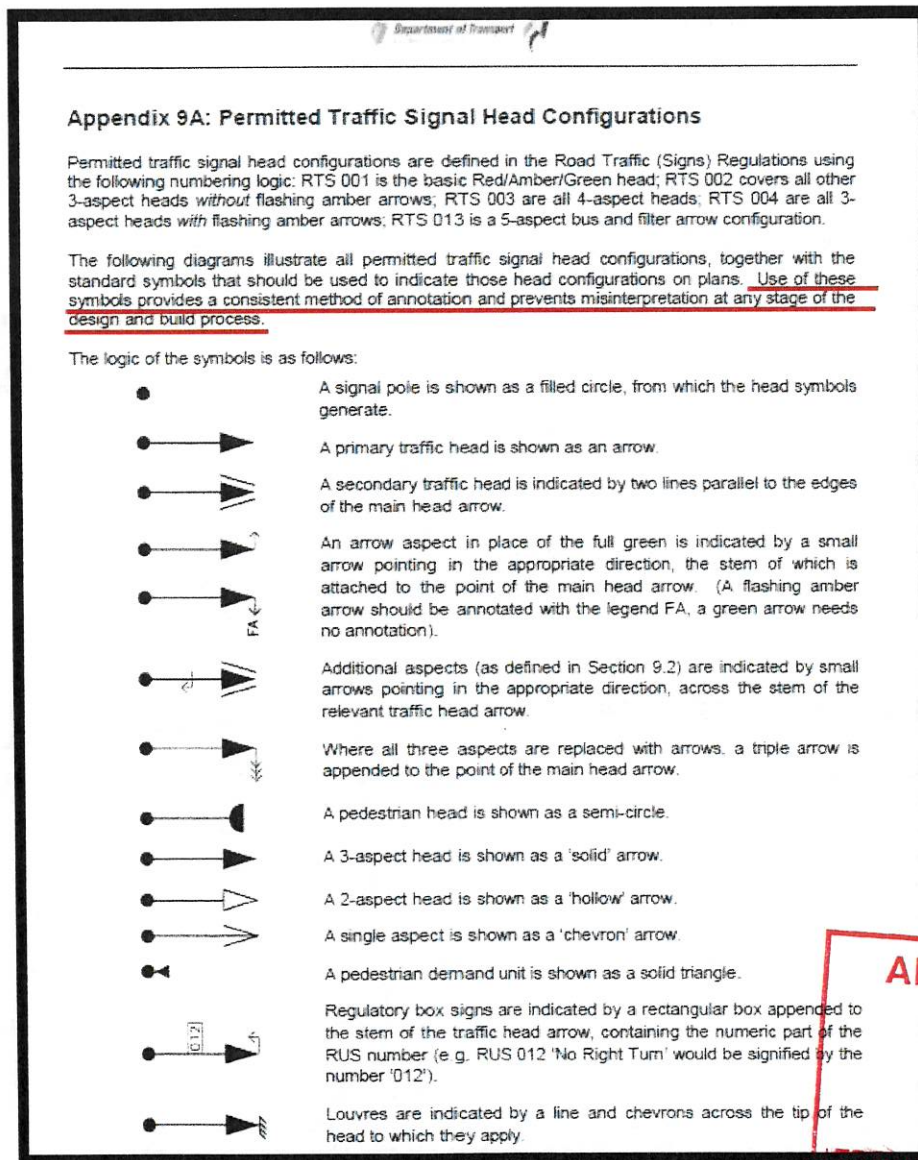
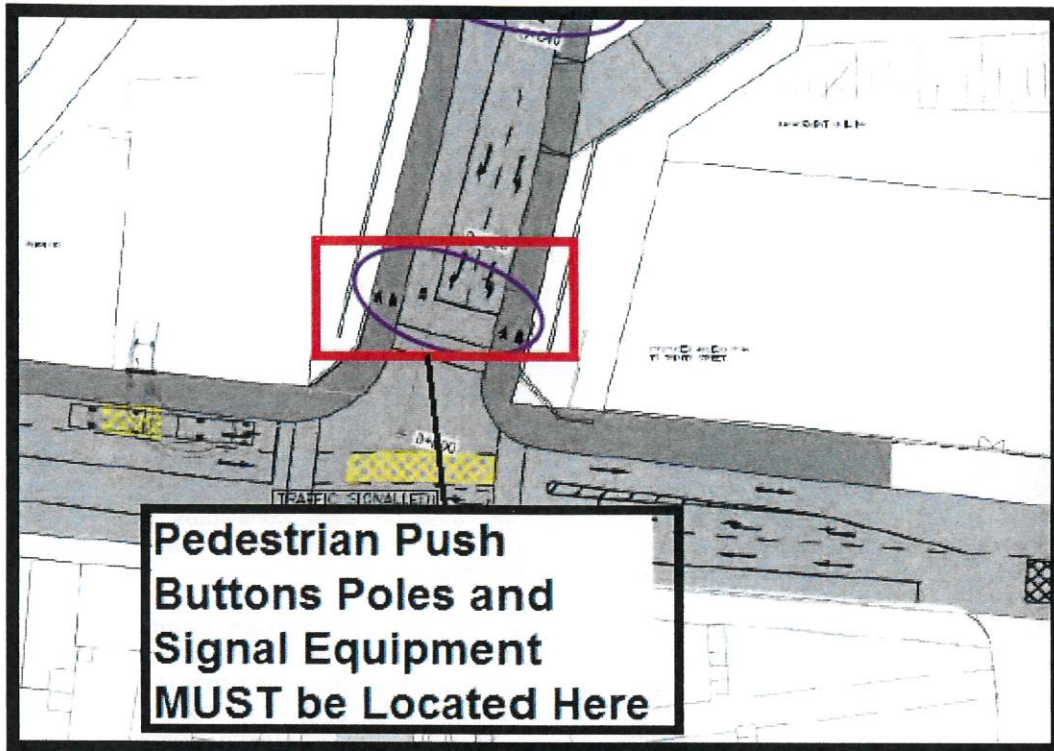


Figure 6 - Direct Extract Page 9, DoT Traffic Signs Manual

In this regard, we are surprised that WCC & ROD have not illustrated the signal equipment on the resubmitted drawings and plans as the equipment is a de-facto critical element of a Traffic Signal Controlled Junctions. We do not believe it is actually possible to design a safe Traffic Signal Controlled junction in any built up Urban Environment without having due-regard for the associated signal equipment (hardware and software).

We highlighted this in our original submission AND it remains unaddressed and of concern - Correctly and safely locating signal equipment is particularly important for example where Traffic Signal Equipment and Poles will of course have to be located on an intended Shared Pedestrian/Cycle Track, as illustrated in **Figure 7** below; -



**Figure 7 - Traffic Signal Equipment will interfere with Ped/Cyclist Shared Surface**

In the case of the subject junction, we believe that the addition of signal equipment will have the effect of confirming the safety deficiencies of the junction in the current location - this opinion remains valid today, and is generally as set out in our original submission.

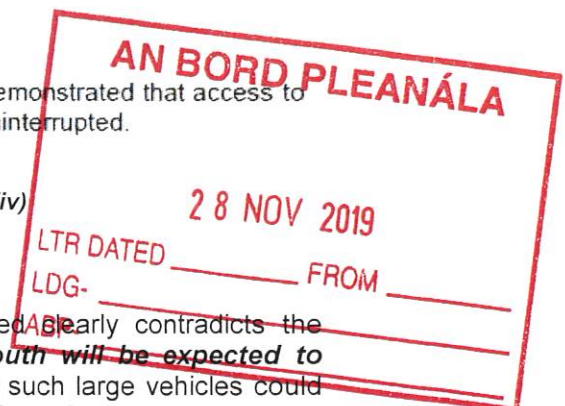
**Item 5.7(b)(iv) Page 41 of WCC Response, states...**

Please refer to the Traffic addendum (**Appendix B1**) which has demonstrated that access to the vehicular entrance of the Building Supply premises is largely uninterrupted.

*Figure 8 - Extract WCC Response, Item 5.7(b)(iv)*

**NRB Response to Item 5.7(b)(iv)**

As already demonstrated above, the Traffic Addendum referenced ~~clearly contradicts~~ the statement by WCC, stating "**Vehicles approaching from the south will be expected to circle the block to approach from the North**". It is unclear how such large vehicles could reasonably and safely negotiate the old historic and narrow streets of Wexford in doing so.



**Item 5.7(c)(i) Page 41 of WCC Response, states...**

Please refer to the Traffic Addendum (**Appendix B1**) **Appendix A5** which includes a signed copy of the Road Safety Audit and the actions taken by the design team which are appropriate for planning stage of development.

*Figure 9 - Extract WCC Response, Item 5.7(c)(i)*



**NRB Response to Item 5.7(c)(i)**

We note that ABP have correctly identified this in the Request for Further Information with states; -

**(e) Road Safety Audit**

It is stated in the documentation, Section 6.4.1.7 Environmental Impact Assessment Report and Section 11 of the Traffic and Transportation Report, that all issues raised in the RSA have been addressed/accepted so the proposed development will be satisfactory in terms of traffic operations. It is noted that the Road Safety Audit identifies 13 problems. Please provide a report or appendix to the Traffic and Transportation Report which outlines the measures undertaken to address each of the identified problems.

Figure 10 - Extract from ABP RFI

We note that the Design Team have supplied a 2 page document at the rear of the now-signed RSA Feedback form, and we have reproduced extracts from same below as **Table 1** for ease of Reference, with our comments on each.; -

Table 1 - Comments on RSA Applicant Design Team Response

RSA Item	Verbatim Design Team Response Submitted	NRB Comment
3.1	"Design have been developed to include a hammerhead facility on Seaview avenue which will allow vehicles up to a standard size vans to undertake 3 point turns"	<p>We would ask the question what constitutes a "standard size van", as it is not a phrase we have encountered as Designers?</p> <p>In any event the Applicant Design Team clearly states that it cannot accommodate a refuse lorry for the established residences or even a large panel van such as that used for day to day furniture removal or deliveries for houses or a standard Tesco Home Delivery Box Van.</p>
3.2	"Design has been reviewed at the access junction. The Design Vehicle used on the Autotrack Drawings is a 10m rigid coach which overhangs occasionally to manoeuvre at turns. This is acceptable as outlined in DMURS because of the very infrequent nature of this size of vehicle on site"	<p><b><u>It is simply incredible to us as Road Junction and Traffic Specialists that the Applicant design team have selected a 10m long bus to prove design adequacy.</u></b></p> <p>As a competitive example to ABP; -</p> <ul style="list-style-type: none"> <li>• A standard 52-seater bus is 12-13m long, &amp;</li> <li>• A 10m bus has a different swept path to even a standard refuse lorry or a Fire Tender</li> </ul> <p>Furthermore, in our experience the Design Vehicle for busy Public Road Junctions, in all circumstances, even in Town Centres is a 16.5m Articulated Lorry - irrespective of their low frequency, <b>they are inevitable and their swept path needs to be accommodated.</b> For example EVERY Major convenience retail store such as uses 16.5m HGVs for deliveries.</p> <p><i>Page 94 of DMURS sets out the Design Requirements for Vehicle Swept Paths at junctions. To our knowledge, there is NO Section in the oft-Quoted DMURS that allows Designers to under-design Junctions preventing access to frequent vehicle-types. As we have clearly stated, we believe that safely-designing for the swept path of the correct Design Vehicle will in fact require a completely relocated junction.</i></p>



**AN BORD PLEANÁLA**

**28 NOV 2019**

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RSA Item	Verbatim Design Team	NRB Comment
3.3	"The Audit Teams recommendation is accepted. These changes are included in the latest site layout drawing which indicates the location of on-site bicycle parking. The provision of bicycle parking has been guided by the National Cycle Manual "	No Comment. Other than observing that there are NO DEDICATED FACILITIES provided whatsoever in the WCC/ROD junction design for cyclists at the signals, and their safety is likely further compromised by the inadequate design of the lanes & the poor alignment as set out above (and as identified by their own Road Safety Auditor).
3.4	"The Designers will ensure proposed tress do not reduce or impact visibility requirements at junctions and pedestrian crossings as part of the design development"	Again - it reinforces the view that ALL of these issues together should be shown on a Drawing AND then re-audited in accordance with best practice.
3.5	"A 3m footpath has been provided on the western side of the access road between the multi storey car park and the level crossing for pedestrians and novice cyclists. The footpath links to the shared surface where pedestrians and cyclists will have priority over one way vehicular traffic. The shared surface will be distinguished from the access road with a different surface type and entry treatments. The anticipated traffic flows on the access road are predicted to be in the region of 3,000 AADT which is suitable for on road cycling as outlined in the national cycle manual. Speed conditions are anticipated to be 40kph max which is suitable for on road cycling "	There would appear to be a certain level of 'Cherry-Picking' of References to Design Guidance such as DMURS AND to The National Cycle Manual by the Applicant. <b>For example</b> , in terms of Shared Surfaces, the National Cycle Manual States (Section 1.9.3); - " <b>Shared Facilities are disliked by both pedestrians and cyclists and result in reduced quality of Service for both modes. With the exception of purpose designed shared streets, shared facilities should be avoided in urban areas as far as possible</b> ". The Guidance could not be clearer - in this case there is the opportunity to design a proper junction and internal network with the National Guidance-recommended on-road cycle facilities incorporated in a safe manner - and there has been no obvious attempt by the applicant to do so, notwithstanding their references to the Guidance.
3.6	"Echelon Parking will be considered in further development of the design"	Again - it reinforces the view that ALL of these issues together should be shown on a Drawing AND then re-audited in accordance with best practice.
3.7	"Wheel stops will be considered in further development of the design. The designers will assess whether the introduction of wheel stops will constitute a trip hazard"	As above - it reinforces the view that ALL of these issues together should be shown on a Drawing AND then re-audited in accordance with best practice
3.8	"The detail design of the junction will include a full street lighting design which will ensure the alignment of the through movement is clear and easily understood "	We would highlight that their own Auditor states alarmingly " <b>Southbound drivers travelling straight ahead may sight into the opposing right turn lane leading to head-on collisions</b> ". The Auditor then recommends; - " <b>Provide measures that safely direct drivers through the junction and into the appropriate straight ahead lane</b> " This was highlighted on our Drawing AP-001 which was submitted originally, and we include below an extract illustrating the concern as <b>Figure 11 Somewhat incredibly, the applicant proposes to address this issue at Detailed Design stage through Designing Street Lighting. Street lighting does not remedy poor lane alignment issues</b> - We would suggest that ABP may wish to question what street lighting does to aid poor alignment. Actually, as specialist designers, what needs to be done is to alter the junction geometry and provide a right turn shelter on the southbound approach - However there may be inadequate land in the junction location chosen by WCC/ROD to provide same. As per above - it reinforces the view that ALL of these issues together should be shown on a Drawing AND & re-audited in accordance with best practice



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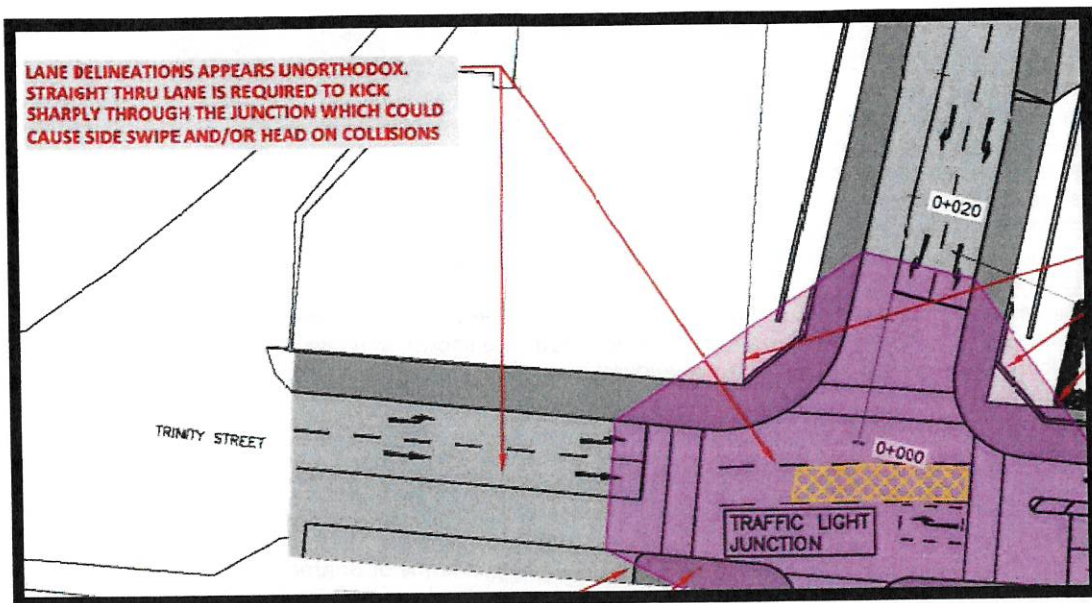


Figure 11 - Extract from NRB Drawing NRB-AP001 illustrating Problem Alignment issues

Table 1 (Continued...) - Comments on RSA Applicant Design Team Response

RSA Item	Verbatim Design Team Response Submitted	NRB Comment
3.9	"The 3m footpath in front of the boom gate will be kept clear of the level crossing furniture and equipment to ensure visibility across the yellow box"	As above - it reinforces the view that ALL of these issues together should be shown on a Drawing AND then re-audited in accordance with best practice.
3.10	"The Forward Sight distance approaching the junction from the proposed access road was found to comply with DMURS based on 30kph speed limit and a drivers eye level height of between 1.05m and 2.0m and an object height between 0.26m and 2.0m"	<p>We note that in this instance the Applicant Design Team has been very specific in terms of the adherence to DMURS - <b>AND YET</b> a basic fundamental issue in traffic signal design such as Location of Primary And Secondary Signal Heads, Push Buttons, Audible and Tactile Facilities AND <b>MOST CRITICALLY Signal inter-Visibility</b> have all been totally ignored by the Applicant Design Team and the Auditor - and we are curious as to why these remain outstanding details in the face of our observations. In addition, the ROD Design Team also suggest that the poor lane alignment can be miraculously fixed through street lighting.</p> <p><i>(The key safety issue "Signal Inter-visibility" is as shown above in Figure 11 shaded purple, extracted from Drawing NRB-AP-001).</i></p> <p><b><u>There is NO WHERE IN DMURS or ANY OTHER DESIGN STANDARD THAT ALLOWS Signal Inter-visibility requirements to be relaxed. It is a vital traffic safety design component</u></b></p> <p>WE REITERATE that you simply cannot design and accommodate a safe Traffic Signal Controlled Junction in the absence of these details and a clear specification of the equipment location.</p> <p>As a <b>simple example</b>, a normal 3-aspect Traffic Signal 'Head' is 300mm in plan width, and it requires a minimum 450mm horizontal clearance from kerb edge - so the location of the supporting poles will clearly have an impact on effective footpath widths.</p>



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Table 1 (Continued...) - Comments on RSA Applicant Design Team Response

RSA Item	Verbatim Design Team Response Submitted	NRB Comment
3.11	"The Parking Areas have been rearranged to ease parking of vehicles into the end spaces"	As above - it reinforces the view that ALL of these issues together should be shown on a Drawing AND then re-audited in accordance with best practice
3.12	"The Proposed Develop will not include a boat launch eliminating the risks associated vehicles towing boats. Vehicles will be prohibited from the marina area with exception to maintenance vehicles"	We note the Applicants comment that the Marina will not facilitate the launch of boats, which is odd.  We also note the Applicants comments in relation to maintenance vehicles, and we would (perhaps cynically) suggest that this may be acceptable to ABP as long as these maintenance vehicles are less onerous in swept path terms, than that of a long mini-bus seeing as the junction has been designed by the Applicant using the 10m Bus "design vehicle".  As above - it reinforces the view that ALL of these issues together should be shown on a Drawing AND then re-audited in accordance with best practice
3.13	"The Corridor shown must provide fire tender and maintenance vehicle access to the pedestrian/ Cyclist promenade. However, the audit teams recommendation is accepted in that the track must restrict access to general vehicle traffic. The details will be included with further development of the design "	As above - it reinforces the view that ALL of these issues together should be shown on a Drawing AND then re-audited in accordance with best practice



In terms of the Above, in our view the most critical Safety And operational issues highlighted above are; -

- The Very Poor Junction Alignment,
- The Correct Location and Design of Traffic Signal Equipment,
- The Lack of Signal Inter-Visibility which is a critical component in Signal Design,
- The use of the incorrect Design Vehicle. *(Examination of the Applicants own recent Traffic Survey confirms that there are currently 36 HGVs on Trinity Street in the AM Peak Hour and 19 in the PM Peak Hour (P162 of Applicant Submission Office Survey "Site #6"). The presence of significant numbers of HGVs reinforces our view that the incorrect design vehicle has been used).*



**Item 5.7(c)(ii) Page 42 of WCC Response, states...**

The kerb build-out has been extended to the stop line in the refined general arrangement of the proposed junction. The indented parking is adjacent to the carriageway and will be marked as parking and is therefore considered exempted from the cited regulations.

Figure 12 - Extract WCC Response, Item 5.7(c)(ii)

**NRB Response to Item 5.7(c)(ii)**

We included the Reference from the Road Traffic Regulations (ie "The Law") as part of our Drawing originally submitted, and an extract from same is again reproduced below as **Figure 13**. The Legal Regulations are clear and we remain of the view that the Parking in this location needs to be removed consistent with the Law, and in the interests of Traffic Safety.

It is interesting that the Applicant Design Team also seem to have been unaware of this basic Traffic Regulatory Legal Requirement.



**PARKING RESTRICTIONS AT JUNCTIONS - S.I. NO. 182/1997 - ROAD TRAFFIC (TRAFFIC AND PARKING) REGULATIONS, 1997:**

**A VEHICLE SHALL NOT BE PARKED:**

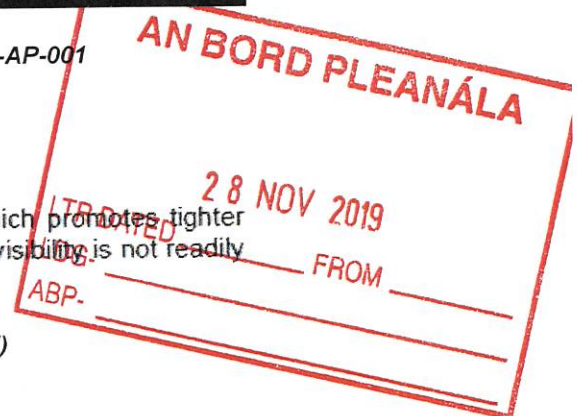
- (h) within 15 metres (on the approach side) or 5 metres (on the side other than the approach side) of a section of roadway where any of the following traffic signs have been provided,
- (i) traffic sign number RPC 001 [Pedestrian Crossing],
- (ii) traffic sign number RPC 002 [Pedestrian Crossing Complex]; or
- (iii) traffic sign numbers RTS 001, RTS 002, RTS 003 or RTS 004 [traffic lights].

Figure 13 - Extract from Traffic Regulations as Per NRB-AP-001

**Item 5.7(c)(ii) Page 42 of WCC Response, also states...**

The junction has been designed in accordance with DMURS which promotes tighter corner radii and the set back of stop lines which means that inter visibility is not readily achievable. This is a common occurrence in built up areas.

Figure 14 - Extract WCC Response, Item 5.7(c)(ii)



**NRB Response to Item 5.7(c)(ii)**

Notwithstanding the statement by WCC, DMURS DOES NOT allow basic and fundamental Normal Traffic Safety Issues to be Disregarded, and it requires best practice in terms of Traffic safety. Junction Inter-visibility and lane alignment are Basic Normal Traffic Safety elements of any traffic signal junction design.



For ease of Reference we reiterate what we stated in our original submission; -

*Design Standards/Guidelines for Roads, such as the TII "Design Manual for Roads & Bridges" (DMRB) are not there to allow sections to be 'cherry picked' by Professionals, applying some sections, and ignoring others. Similarly, Designers of course need to have due regard for Statutory Roads Legislation. The Correct Application of these procedures has proven successful in contributing to minimising the frequency and severity of road traffic accidents in Ireland over the past number of years*

So, whilst Local Authorities may themselves in the past have retrofitted Traffic Signals to constrained urban junctions, without due regard or awareness of modern Best Practice Safety Design Guidance, that is not a sound reason to ignore modern best practice Traffic Safety Guidelines in this case. Poor Design in the past should not be used as a reason to permit poor design into the future.

**Item 5.7(c)(ii) Page 42 of WCC Response, also states...**

The junction has been designed in accordance with DMURS.

Figure 15 - Extract WCC Response, Item 5.7(c)(ii)

**NRB Response to Above Item 5.7(c)(ii)**

This WCC Statement was made in relation to Lane Widths and Lane Designation & Lining. It has become very common for Designers to simply state "in compliance with DMURS", as a covering statement in an attempt to allay any concerns. However, DMURS clearly and unequivocally references the DoT Traffic Signs Manual (TSM) and requires designers to have



cognisance of same (Refer *DMURS Para 4.2.4 Page 74*). In the case of the WCC Design the Junction is NOT in compliance with the TSM, as it is required to be.

**Item 5.7(c)(ii) Page 42 of WCC Response, also states...**

Seaview Avenue will be provided with primary and secondary traffic signals in the design development to ensure visibility is achieved.

*Figure 15 - Extract WCC Response, Item 5.7(c)(ii)*

**NRB Response to Above Item 5.7(c)(ii)**

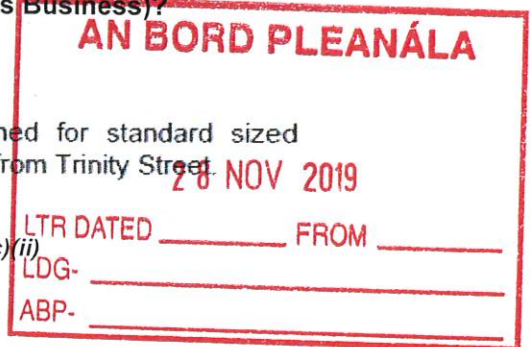
We have made it very clear above that we have significant concerns regarding the location or Signal Equipment AND Inter-visibility. The junction cannot be made to meet Inter-Visibility Requirements in the current proposed location without completely knocking down 3rd party walls.

In light of the amount of effort expended in the Design by WCC to Date, we would simply ask why such a basic issue cannot be dealt with at this stage given that it has such implications for Local Traffic Safety (notwithstanding our clients Business)?

**Item 5.7(c)(ii) Page 42 of WCC Response, also states...**

The proposed hammerhead on Seaview Avenue is designed for standard sized vehicles. Refuse trucks will have to make garbage collections from Trinity Street

*Figure 16 - Extract WCC Response, Item 5.7(c)(ii)*

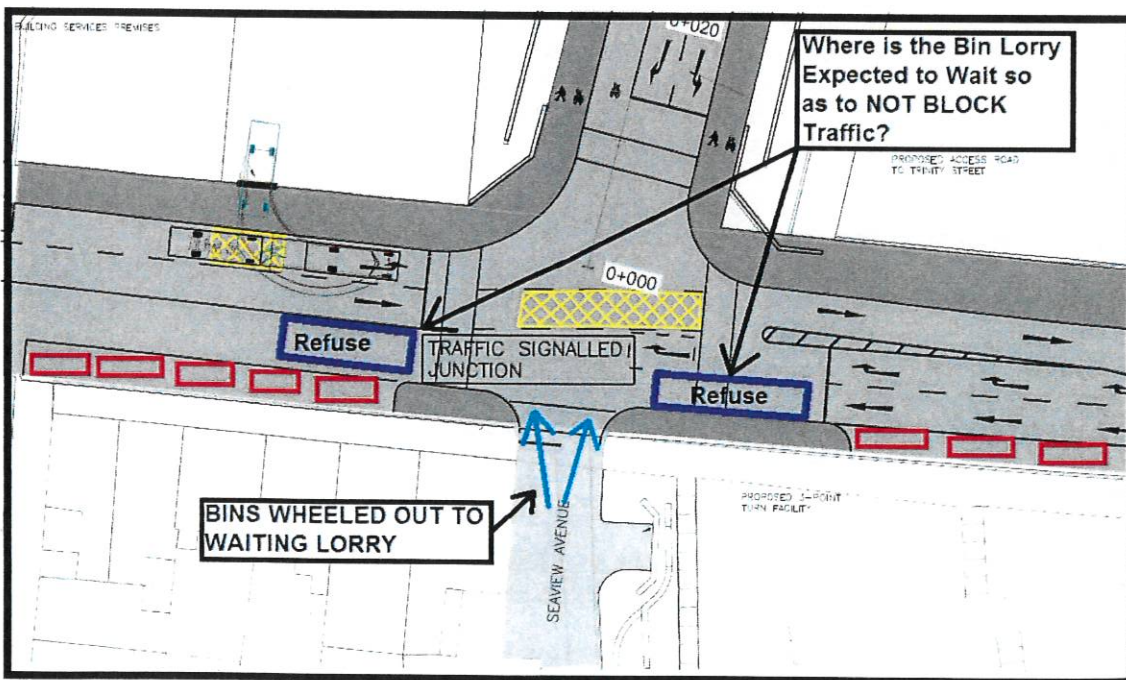


**NRB Response to Above Item 5.7(c)(ii)**

This is addressed above in Table 1, Item 3.1 of the RSA Response. In addition we have used an annotated Extract from the ROD Drawing below as *Figure 17* to illustrate the problem this presents, and again this is an important issue that has been almost entirely overlooked/ignored by the Applicant Design Team and RSA.



The waiting Bin Lorry will have a very significant *adverse impact upon safe Traffic Progression and/or the forward visibility of the Traffic Signals for Northbound drivers on Trinity Street - in addition it will adversely affect the safety of the Bin Lorry Operatives.*



*Figure 17 - Extract WCC Response, Item 5.7(c)(ii)*



As a visual representation as to how this appears and the Forward-Visibility Blocking Nature of same we include below as **Figure 18** an image of a Bin Lorry and it's imposing nature.



**Figure 18 - Typical Refuse Lorry From Reat (Without Human Operatives!)**

In our experience of planning applications, if this WCC/ROD solution were being promoted by a Private Sector Applicant to appropriately serve a Housing Development/Street there is (correctly) No Hope whatsoever of such a solution being acceptable to the Local Authority. It is therefore a surprise to us that it is being promoted as a solution by a Local Authority such as Wexford County Council.



Furthermore, the failure of the design team to accommodate a standard sized turning head in Seaview Avenue means that Any vehicle larger than a "Standard Van" (ROD/WCC Definition - whatever that means) will either be required to stop and reverse into Seaview Avenue from the middle of the Traffic Signals **OR** worse, will have to blind-reverse out into the middle of the proposed signals. Notwithstanding the serious Traffic Safety implications, we are surprised at a Local Authority promoting such a solution as being satisfactory.

So, to set this in context this turning area as-provided is inadequate to allow the following vehicles to Turn within the existing Seaview Avenue Cul-De-Sac; -

- A standard Grocery Home Delivery Van ("E-Shopping"),
- A small Transit-type delivery vehicle,
- An ambulance,
- A Furniture Van or Delivery Lorry,
- A Plumber or Electrician Service Vehicle (usually a Transit Van),
- A small car towing a very small trailer,
- A Fire Engine

**We would ask The Inspector and ABP to themselves consider the impact of this day-to-day restriction, if they themselves were residing in Seaview Avenue.**

**Provision of the Turning Bay in Seaview Avenue, as proposed by ROD/WCC is, frankly, only slightly better than useless.**



The required minimum sizes for Residential Turning Bays are very clearly set out in the Guidance "Recommendations for Site Development Works for Housing Areas", and we include below as **Figure 19** the illustration from same which sets out a range of sizes and dimensions for acceptable turning bays. We would invite ABP to compare these recommended dimensions with the inadequate facility currently proposed for the residents of Seaview Terrace.

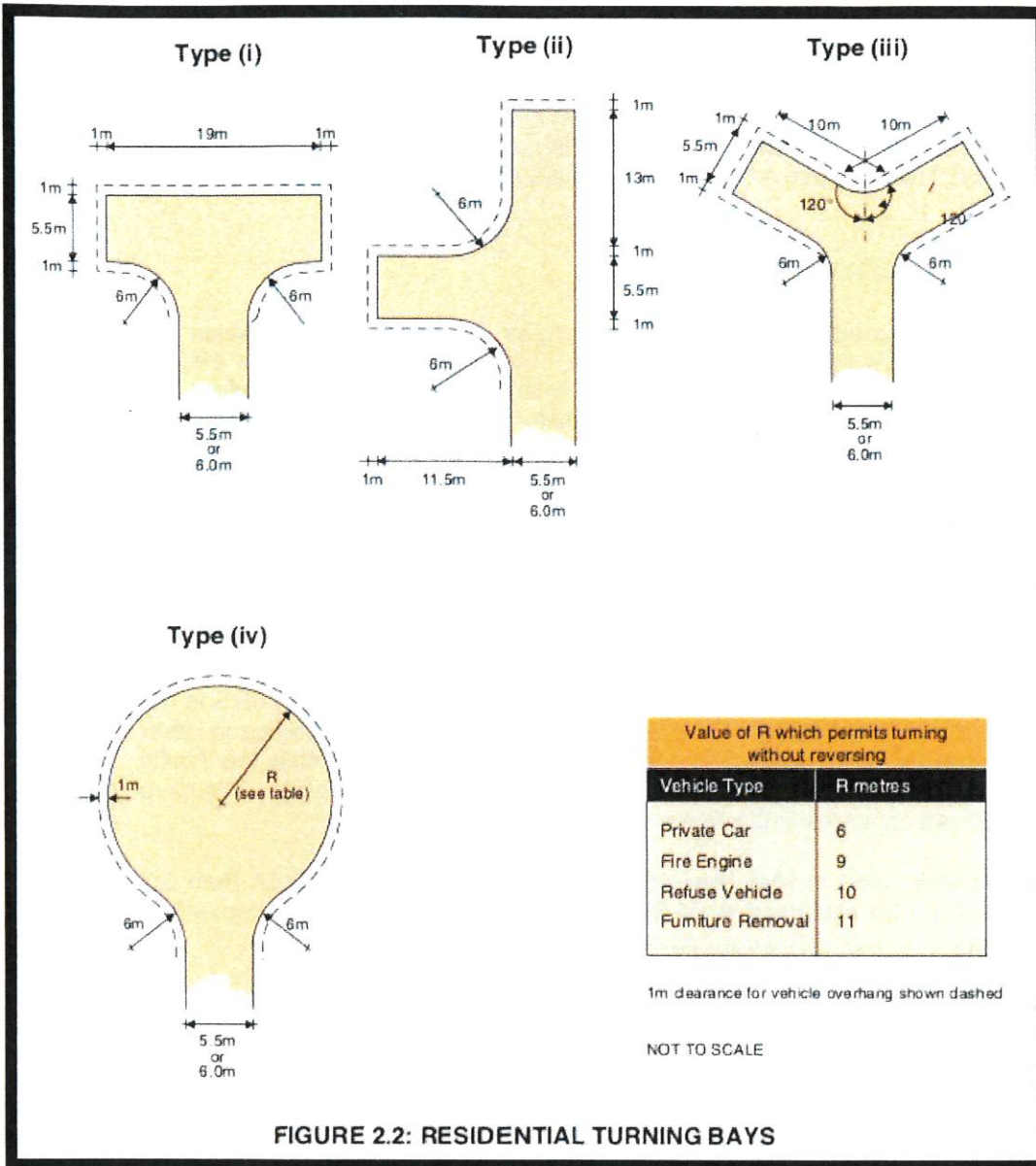


Figure 19 - Extract - Recommendations for Site Development works for Housing Areas

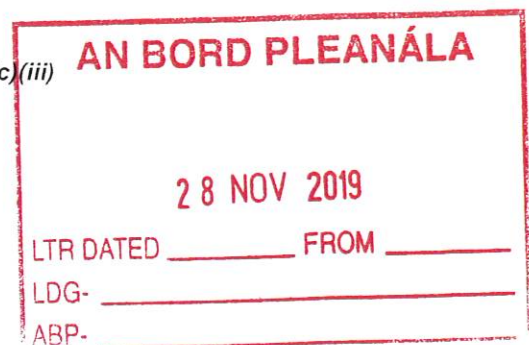
Item 5.7(c)(iii) Page 43 of WCC Response, also states...

A summary of the design refinements following the RSA has been recorded in the RSA summary sheet which is available to be viewed in Appendix A5 of the Traffic Addendum (Appendix B1).

Figure 20 - Extract WCC Response, Item 5.7(c)(iii)

NRB Response to Above Item 5.7(c)(iii)

This is dealt with by NRB within Table 1 above.





**Item 5.7(c)(iii) Page 43 of WCC Response, also states...**

All of the issues raised have been addressed above.

*Figure 21 - Extract WCC Response, Item 5.7(c)(iii)*

**NRB Response to Above Item 5.7(c)(iii)**

We disagree entirely and unequivocally with this statement by WCC, and this is evidenced by the content of this submission, and we believe we have demonstrated that the majority of the important Operational and Traffic Safety issues have been disregarded.

**Item 5.7(d)(i) Page 43 of WCC Response, also states...**

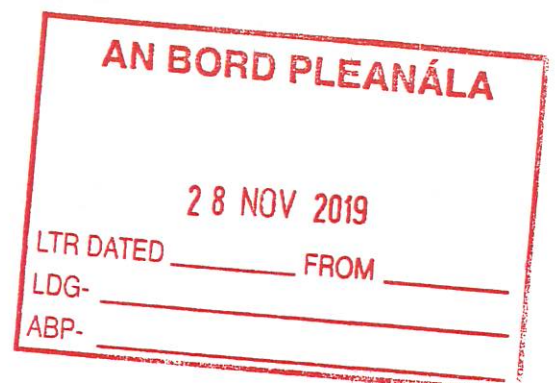
The junction has been designed in accordance with DMURS which promotes pedestrian friendly environments with the tightening of corner radii. The design vehicle used in the junction design was a 12.0m standard rigid bus which is larger than a typical 8m refuse vehicle or 8.6m fire tender. This type of vehicle can navigate the left turn in and out of the access link while remaining lane correct.

*Figure 22 - Extract WCC Response, Item 5.7(d)(i)*

**NRB Response to Above Item 5.7(d)(i)**

In response to the WCC Statement we **restate** the following; -

- The phrase "Designed in accordance with DMURS" is much maligned. DMURS is not a straightforward traditional Design Guidance and it makes specific reference to other sources of information which should be addressed - in this case specifically the Traffic Signs Manual AND Best Practices in terms of Traffic Signal Junction Design. We have clearly set out these concerns in the foregoing.
- ROD state that they **used a 10m long Bus** (Under their response to RSA Item 3.2 above, and **NOT a 12m standard rigid Bus as stated by WCC**). The statement by WCC is therefore misleading and contradictory.
- Notwithstanding, all vehicles, irrespective of total length, have differing over-hangs and associated swept path due to differing manufacturer dimensions and axle locations. Because a TRACK may work for a 10m Mini Bus is insufficient evidence that it will be adequate for a Refuse Lorry that is 2.4m wide. This is particularly the case here where the applicant have themselves shown that the lanes cannot accommodate a 10m mini bus swept path!
- In terms of remaining "Lane Correct" we would question the validity of this WCC statement when the **Applicants own RSA contradicts this**, reproduced below as **Figure 23**. In the central image below, the left-turning 10m long mini bus entering the site is clearly shown having to 'sweep' out into the offside lane to make the left turn manoeuvre. This was highlighted as a concern by the independent Auditor.

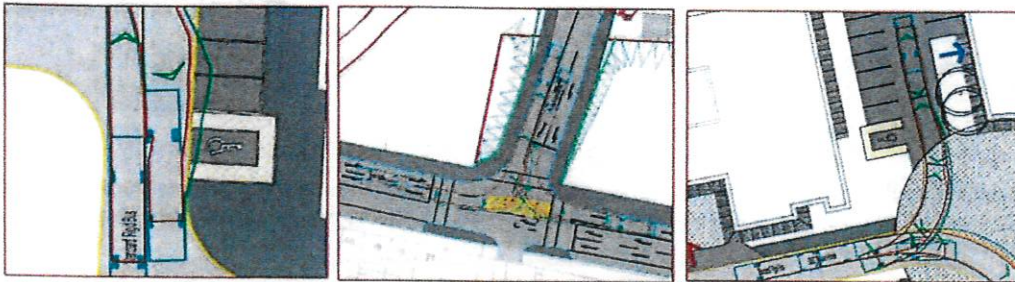




### 3.2 Problem

Location: General Problem

Summary: Insufficient swept paths



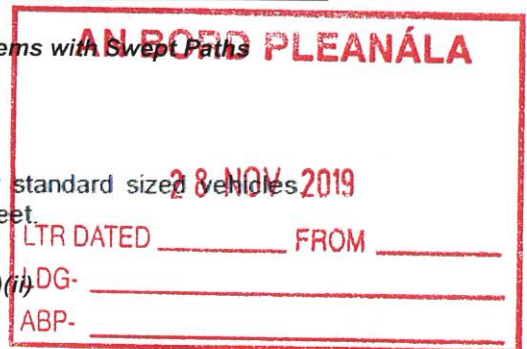
Vehicle swept path analysis appears to highlight a number of vehicle movements over-running the proposed footway and parking spaces. If insufficient space is provided, this may lead to vehicles mounting the inside kerb when undertaking turning manoeuvres, resulting in pedestrian/vehicle collisions.

Figure 23 - Extract From Applicants own RSA Highlighting Problems with Swept Paths

#### Item 5.7(d)(ii) Page 43 of WCC Response, also states...

The proposed hammerhead on Seaview Avenue is designed for standard sized vehicles. Refuse trucks will have to make garbage collections from Trinity Street.

Figure 24 - Extract WCC Response, Item 5.7(d)(ii)



#### NRB Response to Above Item 5.7(d)(i)

This is addressed above by NRB on **Page 12 and 13**.



#### OTHER RELEVANT MATTERS FOR ABP CONSIDERATION

##### Traffic Signal Controlled Junctions and Commercial Development

We note that ROD have presented Images of Traffic Signal Controlled Junctions, primarily within residential areas of Dublin, with Access to Private Development directly from the middle of the junctions in an uncontrolled manner (Reference ROD Figures 5.15, 5.16 and 5.17). In terms of these images of operating signal controlled junctions, which are historic aged junctions we would make the following observations.

- Accesses to single residential dwellings (that generate c 8 x 2-way car movements in total per day) are fundamentally very different indeed to large scale commercial development such as the subject Builders Providers operated by our client' McMahons - in these terms the comparison with these other junctions is not entirely relevant.
- We would suggest that the majority of such Traffic Signal Controlled junctions, had the signals "Retro-Fitted" or were constructed after Modern Design Principles, Design Guidance and Practices were adopted.
- Responsible roads design is achieved through the rigid application of modern design guidance principles and through the commissioning of follow-on independent Road Safety Audits of said-design, **with the Designer reacting and redesigning to address the content of the RSA before a Determination of the Application**. The RSA can highlight issues that require additional lands out-with the area of the Red Line and we believe that this may indeed be the case here.
- The strict application of these relatively modern procedures has proven successful in contributing to minimising the likelihood and severity of road traffic accidents in Ireland. In these terms, references to dis-similar & historic junctions that were undoubtedly built in advance of modern Guidance is considered inappropriate and completely irrelevant.

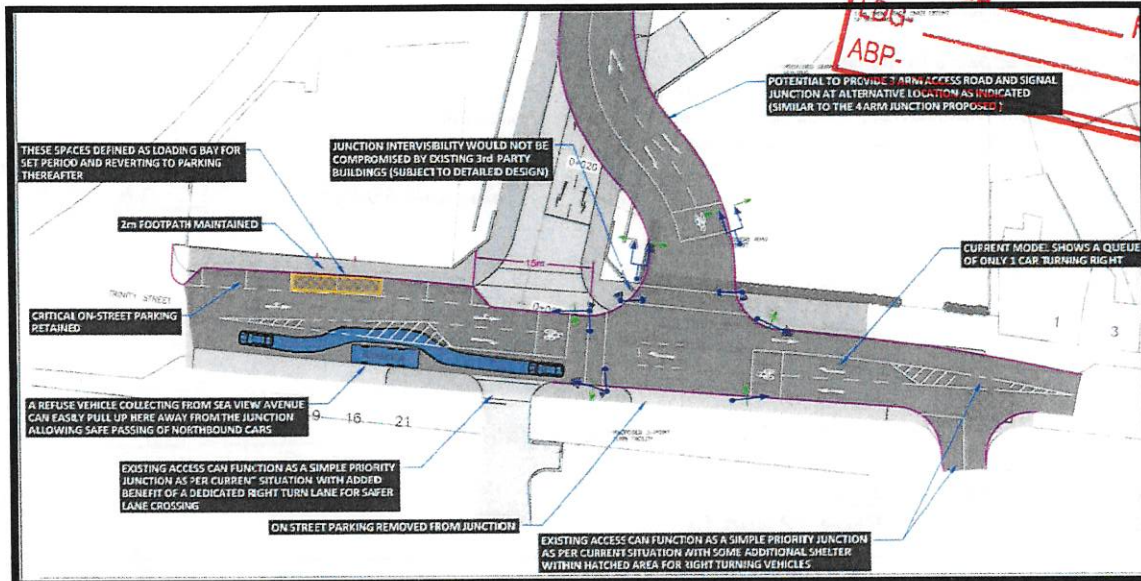


**Alternative Safe Junction Arrangement**

We believe that there is a Simple Safe alternative available to WCC and ABP that will provide a Safe and Acceptable Solution to the site vehicular access **for all Parties** AND which addresses the Myriad of Traffic Progression and Traffic Safety issues associated with the current design.

Importantly, this solution maintains multi directional service vehicle access for our client McMahons, and also maintains the on-street parking along the frontage of McMahons, which is a critical aspect of the McMahons business continued viability and success.

We have illustrated this solution of the attached Drawing NRB-OB-001A, and extract of which is reproduced below as **Figure 25**.



**Figure 25 - Extract From Attached NRB Drawing NRB-OB-001A**



Please Note that we have drawn this based on Scaled Images and if we had access to Topographical Survey/CAD details (consistent with the Applicant's available resources) we would be better placed to provide more comprehensive details. However we are in no doubt that this solution has very significant benefits and these are set out overleaf.

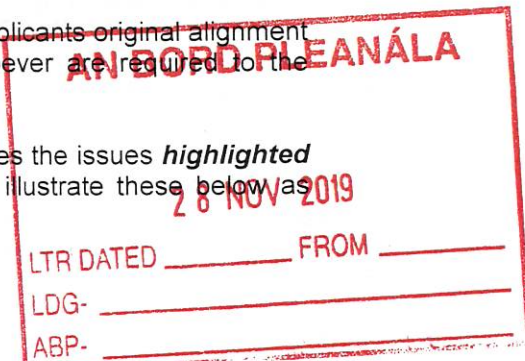
**We would also highlight that we were able to undertake this preliminary design relatively easily over a couple of days, and given the energy already expended by WCC we would request that ABP direct WCC to consider the merits of this proposal as a solution to the vehicular access for the site.**

The principle features of this suggested alternative access solution involve the movement of the currently-proposed Traffic Signal Controlled Junction some 20-25m North along Trinity Street to the location illustrated. **(Of course it could also be moved significantly further north along Trinity Street, with no or limited interaction with Seaview Avenue or McMahons further easing all concerns).**

In addition, it is noteworthy that Seaview Avenue does NOT need to be signal controlled under this arrangement, as vehicles are exiting to the rear of the Signal Stop-line.

The site access road into the development then ties back in to the Applicant's original alignment relatively quickly within the site, so no significant changes whatsoever are required to the Applicant's current Development Plans.

In terms of the Merits of this Suggested Solution, and how it addresses the issues **highlighted by the WCC/ROD Road Safety Auditor** and herein by NRB, we illustrate these below as **Table 2**; -





**Table 2 - Merits of NRB Suggested Alternative as Per Attached Drawing**

<b>Issue</b>	<b>Addressed With the NRB Now-Suggested Layout?</b>
<i>Unfettered/Improved Access/Egress to Seaview Ave</i>	✓
<i>Access/Egress to McMahons Accommodated*</i>	✓
<i>On-Street Parking at McMahons maintained*</i>	✓
<i>Traffic Signal Equipment &amp; Location Clearly illustrated</i>	✓
<i>Traffic Signal Junction Inter-Visibility Achieved</i>	✓
<i>Refuse Collection at Seaview Avenue Accommodated</i>	✓
<i>Safe Advance Stop-Line Cycle Facilities Accommodated</i>	✓
<i>Unsafe Alignment for Northbound Vehicles Addressed</i>	✓
<i>Swept Path of anticipated Design Vehicle</i>	✓
<i>Layout Consistent with Road Traffic &amp; Parking Regs</i>	✓



\* Albeit with Consequential Impact Upon On-Street Parking which can be Discussed with WCC

**(7) Conclusion**

We would invite both ABP and WCC to review the content of this submission in detail. We request ABP require WCC to explore the Option of the suggested revision to the access to accommodate both our client's concerns and moreover to address outstanding inadequate Design and Traffic Safety Concerns.

We believe we have presented an alternative Access Design Solution that has very significant merits for all parties, which addresses our clients concerns, and which addresses the very significant Design Deficiencies and Public Road Safety Concerns in the WCC Design.

**If Wexford County Council, as Applicant, are now unwilling or unable to accommodate the vehicular access amendment as set out herein, we believe the development should be refused by ABP on the grounds of Traffic Safety. The traffic signal junction as currently planned has very significant adverse Operational, Design and Traffic Safety implications for Road Users and is demonstrably unsafe, with the Applicant having failed to incorporate Design Changes to address the issues raised by their own Road Safety Auditors and the issues highlighted by NRB.**

Yours sincerely,

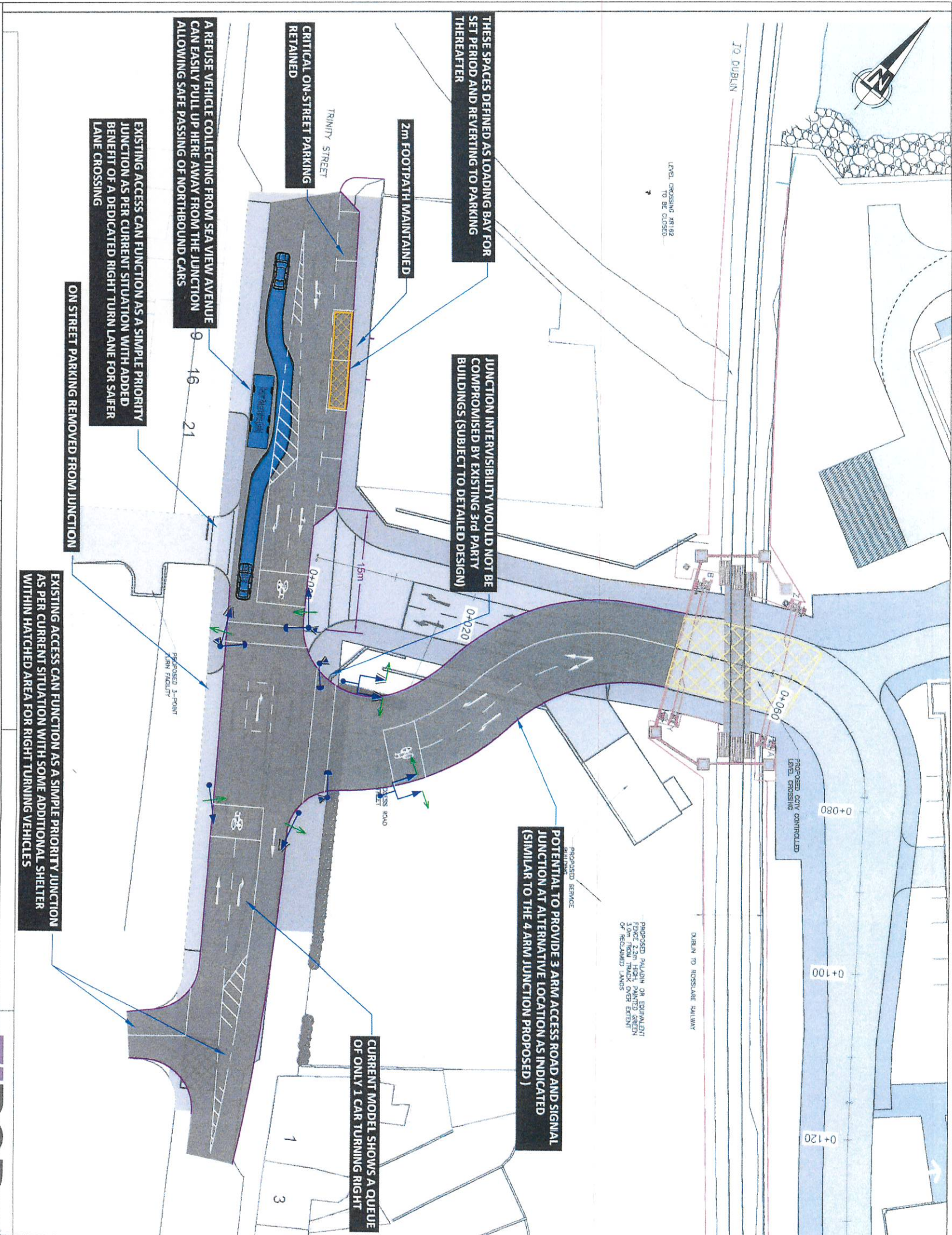
**Eoin Reynolds**  
 Chartered Engineer,  
 Director  
 cc Mr Eamon McMahon (McMahons Building Supplies)  
 Enclosure - A3 Drawing NRB-OB-001A











- LEGEND:**
- Primary 5 Aspect Signal fitted with Green Right Turn Arrow Lense
  - Secondary 5 Aspect Signal fitted with Green Right Turn Arrow Lense
  - Primary 6 Aspect Signal fitted with Green Right and Left Turn Arrow Lenses
  - Secondary 6 Aspect Signal fitted with Green Right and Left Turn Arrow Lenses
  - 3 Aspect Pedestrian Signal Head
  - Audio Tactile Push Burton Unit

**AN BORD PLEANÁLA**

2 8 NOV 2019

LTR DATED \_\_\_\_\_ FROM \_\_\_\_\_

LDG- \_\_\_\_\_

ABP- \_\_\_\_\_

NRB Consulting Engineers Ltd recommend that Road and land ownership boundaries are verified through Legal & Land searches by the Client.

This drawing is based upon a scanned copy of Roughan O'Donovan drawing 4004.9. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

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 Registered in Ireland No. 491679



Client  
 Project  
 Title

Trinity Street  
 Wexford

Illustration of Possible Alternative Junction  
 Location and Layout

Project No.	19-031	Drawing No.	NRB-OB-001
Drawn	PB	Checked	ER
Date	26-Nov-19	Scale @ A3	1:500
Purpose of Issue	<input type="checkbox"/> Draft <input type="checkbox"/> As Built	Information	<input type="checkbox"/> Tender <input type="checkbox"/> Approval <input type="checkbox"/> Construction
Rev	A	Rev	ER

REV	DATE	AMENDMENTS	DRAWN	CHK	APP
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