

An Bord Pleanála Oral Hearing

Irish Water

Greater Dublin Drainage

Brief of Evidence

Traffic and Transport

Tom Cannon

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Traffic and Transport**

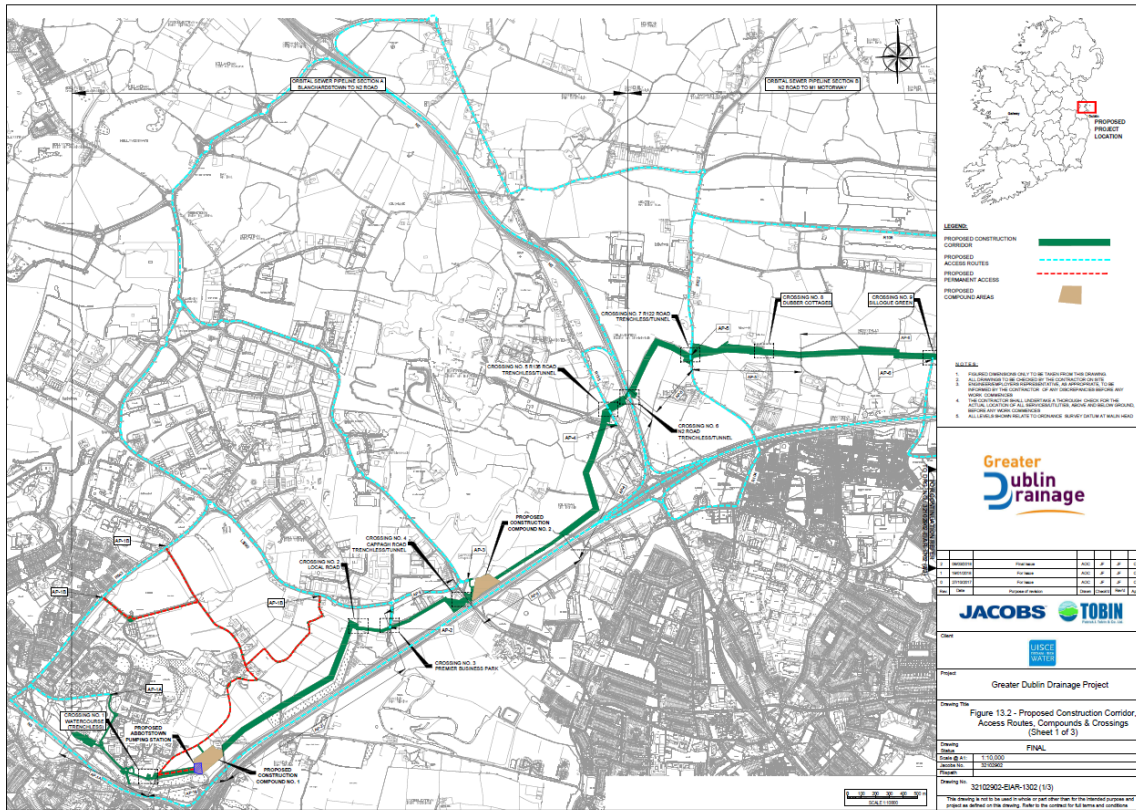
Qualifications and Role on the Proposed Project

- 1 My name is Tom Cannon. I am a Chartered Engineer and I hold a Bachelor of Engineering honours degree in Civil Engineering from Coventry University, England (1992). In 2011, I attained a professional certificate in Road Safety Audits from University College Dublin. I joined TOBIN Consulting Engineers as a Roads Engineer in 2003 and currently fill the role of Associate Director for Roads and Transportation.
- 2 I have over 26 years Civil Engineering experience throughout Ireland and the UK. My experience to date has largely been in the field of roads and transportation from planning, through to design and construction.
- 3 I am currently managing the detailed design stage for the N52 Ardee Bypass and I have managed the Design Build Tender Process for the N18 Oranmore to Gort Scheme and the Stage 1 Tender Process for the N17/N18 Gort to Tuam PPP Scheme. In addition to road schemes, I have managed the planning applications for several electrical transmission Uprate / Upgrade schemes.
- 4 I have also prepared and managed a wide range of transportation impact analysis studies and road safety audits to support an extensive variety of development projects promoted by both the public and private sectors. These include construction projects having the potential to create disruption to road users because of construction activities and related road haulage. I have been the roads and traffic expert witness for the Galway Harbour Extension and the North South 400kV Interconnector Development as well as a team member for the Corrib Onshore Gas Pipeline.
- 5 As Associate Director for Roads and Transportation in TOBIN, I am responsible for Chapter 13 Traffic and Transport in Volume 3 Part A of the EIAR and the traffic related information in Irish Water's Response to Submissions January 2019 document.

Summary of Likely Significant Impacts & Mitigation Measures

- 6 The Proposed Project involves the construction of a pipeline between Blanchardstown and Baldoyle that requires the crossing of a number of roads. The proposed pipeline crossings at all motorway, national road, regional road and other busy local roads have been mitigated by design, whereby the pipeline will be installed under the road using a trenchless system.

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- 7 The trenchless system will not impose direct restrictions on the roadway that would otherwise impact on Vulnerable Road Users and traffic flows.
- 8 To give a sense of timescale to construct a tunnel under a road, a recent pipeline tunnel under the M7 was completed in approximately 3 weeks.
- 9 The impacts that Construction Traffic generated by the Proposed Project has been assessed in Chapter 13 Traffic and Transport in Volume 3 Part A of the EIAR. Ten junctions were assessed during the envisaged peak construction period in 2024. Four of the ten junctions are currently over capacity and this will remain the case during construction. One junction will reach capacity in 2024 excluding the construction traffic and this will also remain the case during construction. The remaining five junctions (two of which are proposed junctions) do not have capacity issues at present and are expected to operate within capacity during the construction of the Proposed Project.
- 10 In order to minimise the impacts that construction traffic for the Proposed Project, a number of mitigation measures will be implemented as specified in section 13.11.1 of Volume 3 Part A of the EIAR and also summarised in my Brief of Evidence presently.
- 11 The impacts of Operational Traffic generated by the Proposed Project has also been assessed in Chapter 13 Chapter 13 in Volume 3 Part A of the EIAR. This included the assessment of four junctions during the Operational Phase of the Proposed Project. The Operational Phase generated traffic is expected to consist of regular staff and fleet carrying sludge volumes to and from the proposed Wastewater Treatment Plant (WwTP). The expected year of opening is 2025 and the junctions / accesses have been assessed for the opening year of 2025, 5 years after opening at 2030 and 15 years after opening at 2040, as required by the Transport Infrastructure Ireland Traffic and Transport Assessment Guidelines. One of the four junctions is observed to be over capacity, and this will remain the case during the Operational Phase. The remaining three (two of which are proposed junctions) do not have capacity issues at present and are expected to operate within capacity during the Operational Phase.

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17 A Construction Traffic Management Plan has been submitted with the application documentation. In the event that development consent is granted, the CTMP will be finalised to include any additional requirements imposed by relevant planning conditions. This process will include liaison with the Roads Authority(s) to confirm the effectiveness of the measures proposed. The mitigation measures that will be included and implemented as part of the Construction Traffic Management Plan are as specified in section 13.11.1 of Volume 3 Part A of the EIAR and include:

- All motorway, national road, regional road and other busy local roads will involve trenchless road crossings, thus eliminating the need to apply restrictions on the roadway that would otherwise impact on Vulnerable Road Users and traffic flows;
- Deliveries to site will be scheduled outside of the AM and PM peak traffic hours;
- In the vicinity of schools, restrictions on construction haulage during the drop off and peak collection times will be implemented;
- All site compound accesses will be managed such that HGVs do not queue on the public road network;
- All site compound accesses will be signposted appropriately in accordance with Chapter 8 'Temporary Traffic Measures and Signs for Roadworks' of the DTTAS Traffic Signs Manual (or any subsequent update of the standards that will be in place at the time of construction).
- Road sweepers will be used to remove debris from construction haul routes when required.

18 The submission from Dublin City Council also stated that construction and operation related Heavy Goods Vehicle trips must comply with Dublin City Council's Heavy Goods Vehicles Management Strategy and that no Heavy Goods Vehicle will use local roads.

19 I can confirm that during the construction and operation phases, all HGVs generated by the Proposed Project will comply with Dublin City Council's Heavy Goods Vehicles Management Strategy.

20 The access routes included on Figure 13.2 in Volume 5 Part A of the EIAR show the access routes proposed to the various site compounds and wayleave corridor and are the only access routes that will be utilised during the construction phase.

21 Dublin City Council also stated that where abnormal load units arise, an abnormal load permit will be required (and should be restricted to evening or night-time).

It is not envisaged that abnormal loads will be required for the Proposed Project. The maximum vehicle length to be delivered to site is envisaged to be standard articulated lorries or mobile cranes.

22 The submission from Dublin City Council stated that all costs incurred by Dublin City Council e.g. repairs of public road and services necessary to the Proposed Project, shall be at the expense of the developer.

We do not envisage that there will be any damage to the road network as a result of the construction of the Proposed Project. Nonetheless, Irish Water will undertake pre-construction and post-construction visual pavement surveys on the haul routes. Where the surveys conclude that damage on the roadway is attributable to the construction of the Proposed Project, Irish Water will fund the appropriate reinstatement works to bring the road back to pre-construction condition; details for which will be agreed with the Roads Authority.

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- 23 Dublin City Council also raised issues regarding the strain to the existing road network during construction and operation.
- 24 The implementation of the mitigation measures included in section 13.11.1 of Volume 3 Part A of the EIAR and also summarised earlier will ensure that any construction traffic impacts on Vulnerable Road Users and traffic flows are minimised.
- 25 During the operational phase of the WwTP, the traffic generated by the Proposed Project will have a small (imperceptible) impact on the traffic congestion that is already experienced at the R139 /Clonshaugh Road Roundabout.

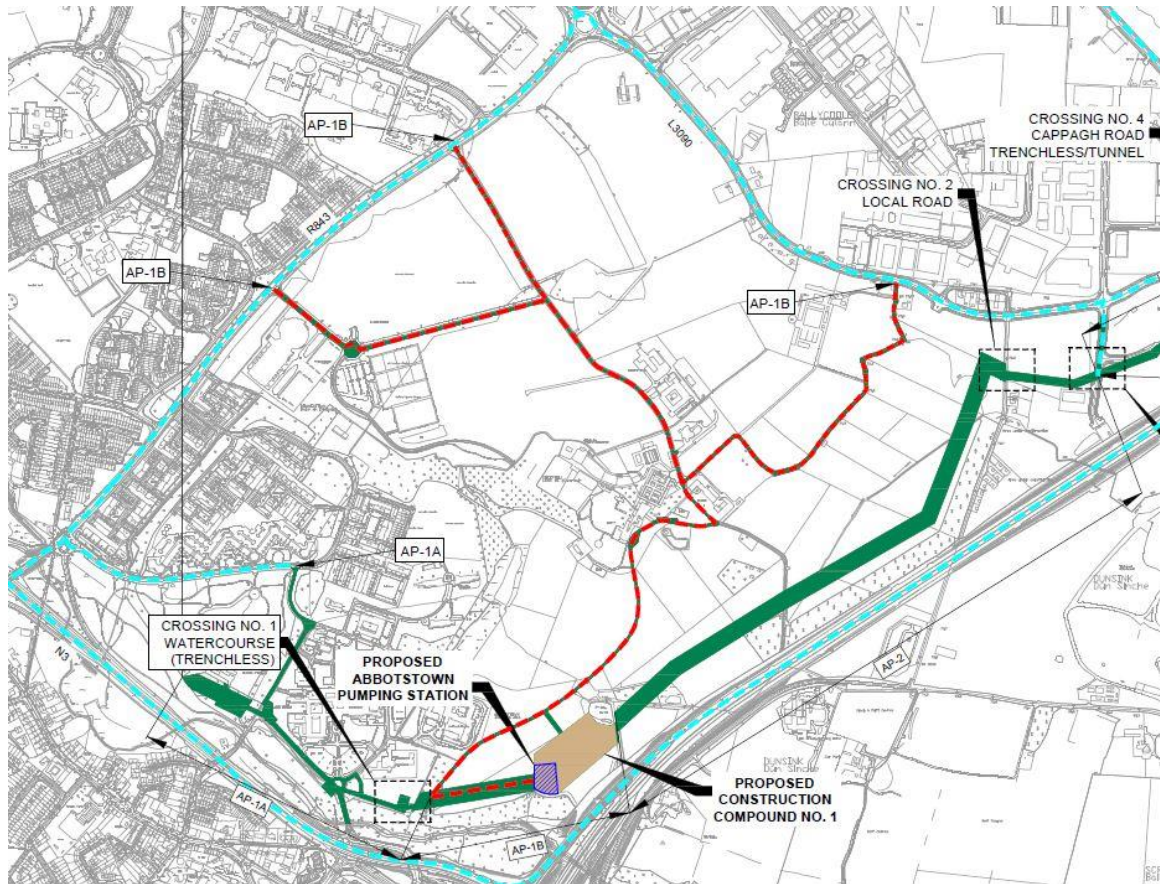
[Teachta Dála and Councillors](#)

- 26 The following Teachta Dála and Councillors outlined the following issues:
- Darragh O'Brien TD - Increased traffic from lorry movements.
 - Denise Mitchell TD & Others - Significant disruption during construction including traffic problems and truck movements.
 - Finian McGrath TD - Traffic disruption associated with construction, minor roads in the area (Baskin Lane, Clonshaugh road) which are unsuitable for construction traffic. Construction of outflow pipe will bring major traffic disruptions to Malahide Road. Proposal falls short of dealing with this issue. Operation traffic will also impact the area.
 - Sean Haughey TD - Construction traffic should not be allowed to use Baskin Lane or Clonshaugh Road which are only minor country roads. Traffic disruption at Malahide Road/ Baskin Lane would be a major issue. Numerous lorry movements when the plant is operational will diminish quality of life for locals. Traffic levels here are already at saturation point.
 - Clare Daly TD - Residents faced with sludge traffic and disruption from construction.
 - Alison Gilliland (Cllr) - Impact from construction, servicing, delivery and worker traffic will impact local transport routes.
 - John Lyons (Cllr) - Negative impact to locals adding traffic to a number of junctions that are already over capacity. There will also be disturbance due to road closures / diversions during construction.
 - Tom Brabazon (Cllr) - Any difficulties with the plant would impact on the major N32/R139 arterial route and cause traffic mayhem.
- 27 The impacts that Construction Traffic generated by the Proposed Project has been assessed in Chapter 13 Traffic and Transport in Volume 3 Part A of the EIAR which includes the above-mentioned surrounding roads. The mitigation measures that will be included and implemented as part of the Construction Traffic Management Plan are as specified in section 13.11.1 of Volume 3 Part A of the EIAR, and also summarised earlier, will reduce the impact on the surrounding road network. Clarification in relation to the issues raised in relation to Baskin Lane, Clonshaugh Road and Malahide Road are clarified later in my Brief of Evidence.

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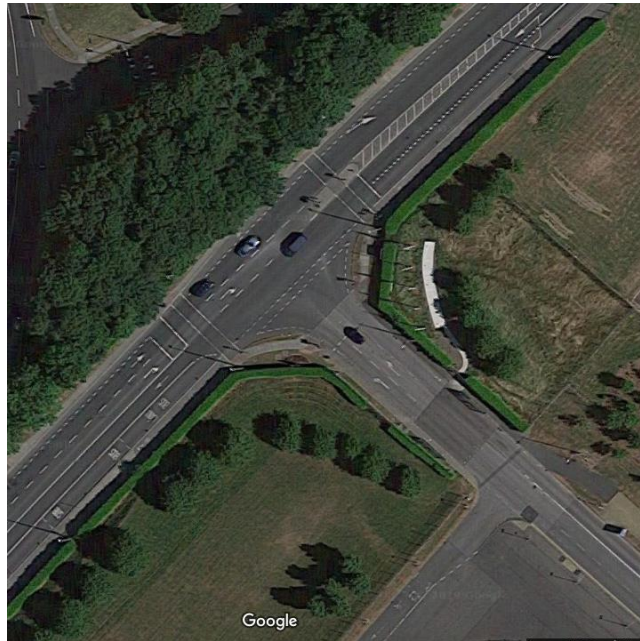
Fáilte Ireland

- 28 Fáilte Ireland raised issues in relation to the increase in traffic on Snugborough and Waterville Roads and the impact at the access to the National Sports Campus.
- 29 Chapter 13 in Volume 3 Part A of the EIA assessed two junctions on the Snugborough Road in the Waterville area; Junction 11 (access to Aquatic Centre) and Junction 12 (gateway access).



- 30 Junction 12 and the Junction off the L3090.- There are no anticipated capacity issues at this junction with or without the Proposed Project.
- 31 Junction 11 is currently over capacity in the AM and PM peak hours on the Snugborough Road. The capacity issues at this junction are associated with the existing straight through traffic movements.

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- 32 Operational Access to the Proposed Pumping Station is via main Aquatic Centre / National Sports Campus junction and using the dedicated right and left turn lanes. The additional operational traffic generated during the AM and PM peak period will have only a small (imperceptible) impact on the existing and future traffic congestion.
- 33 Construction Access to the Proposed Pumping Station will be via existing priority access junction off the L3090, The additional construction traffic generated during the AM and PM peak period will have only a small (imperceptible) impact on the traffic congestion. In addition, the Construction Traffic Management measures that will be put in place, as specified in the EIAR, will ensure that any construction traffic impacts on Vulnerable Road Users and traffic flows are minimised.
- 34 Fáilte Ireland also noted the construction traffic impact to/from proposed WwTP. However, the assessment in Chapter 13 in Volume 3 Part A of the EIAR (specifically Section 13.12.1) outlines that there are no capacity issues at the proposed access or egress at the proposed WwTP.

Response to General Issues Raised

Traffic Volume

- 35 A number of submissions raised the following traffic related issues:
- Impact from construction, servicing, delivery and worker traffic will impact local transport routes;
 - Traffic related to construction and the extra volume will decimate the already struggling road system;
 - Distress due to traffic caused by the scale of the plant;
 - Heavy Goods Vehicles in proximity to school and residential areas;
 - Scale of WwTP is distressing in terms of traffic; and
- 36 The assessment of traffic has been undertaken with respect to the requirements of the Traffic and Transportation Assessment Guidelines, and in accordance with the assessment requirements of Fingal

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County Council and Dublin City Council, as detailed in Section 13.2 in Chapter 13 in Volume 3 Part A of the EIAR.

- 37 It should also be noted that Chapter 13 in Volume 3 Part A of the EIAR is based on the maximum adverse scenario which assessed the peak Construction Phase of the Proposed Project, whereby a number of the construction elements of the Proposed Project occur concurrently. The temporary construction traffic will be managed in accordance with the Construction Traffic Management Plan.

This process will include liaison with the Roads Authority(s) to confirm the effectiveness of the measures proposed. The mitigation measures that will be included and implemented as part of the Construction Traffic Management Plan are as specified in section 13.11.1 of Volume 3 Part A of the EIAR

- 38 The mitigation measures that will be included and implemented as part of the Construction Traffic Management Plan are as specified in section 13.11.1 of Volume 3 Part A of the EIAR and include:

- All motorway, national road, regional road and other busy local roads will involve trenchless road crossings, thus eliminating the need to apply restrictions on the roadway that would otherwise impact on Vulnerable Road Users and traffic flows;
- Deliveries to site will be scheduled outside of the peak traffic hours;
- In the vicinity of schools, restrictions on construction haulage during the drop off and peak collection times will be implemented;
- All site compound accesses will be managed such that HGVs do not queue on the public road network;
- All site compound accesses will be signposted appropriately in accordance with Chapter 8 'Temporary Traffic Measures and Signs for Roadworks' of the DTTAS Traffic Signs Manual (or any subsequent update of the standards that will be in place at the time of construction).
- Road sweepers will be used to remove debris from construction haul routes when required.

- 39 These mitigation measures will ensure that any construction traffic impacts on Vulnerable Road Users and traffic flows are minimised.

[Traffic Management](#)

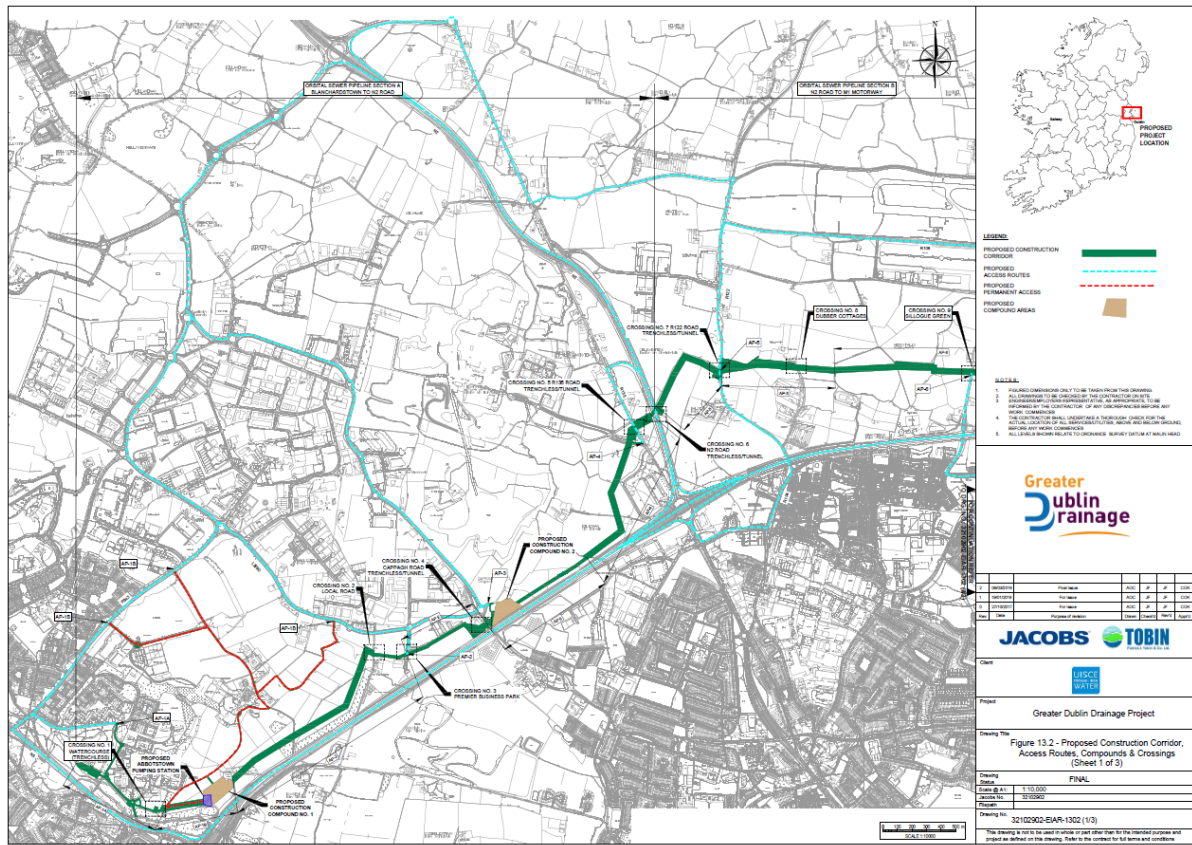
- 40 The submission from Meakstown Community Council outlines residents' issues in relation to microtunnelling, the construction of the Odour Control Unit (OCU), the Meakstown Traffic Management Plan and minimising the health and safety risks.

- 41 As referenced earlier, the proposed pipeline crossings at all motorway, national road, regional road and other busy local roads have been mitigated by design, whereby the pipeline will be installed under the road using a trenchless system. A trenchless crossing of the R122 is proposed.

- 42 The trenchless system will not impose direct restrictions on the roadway that would otherwise impact on Vulnerable Road Users and traffic flows.

- 43 The access routes to the proposed pipeline corridor in the Meakstown area will be in accordance with the routing included on Figures 13.2 of the EIAR, and specifically Figure 13.2 (sheet 1).

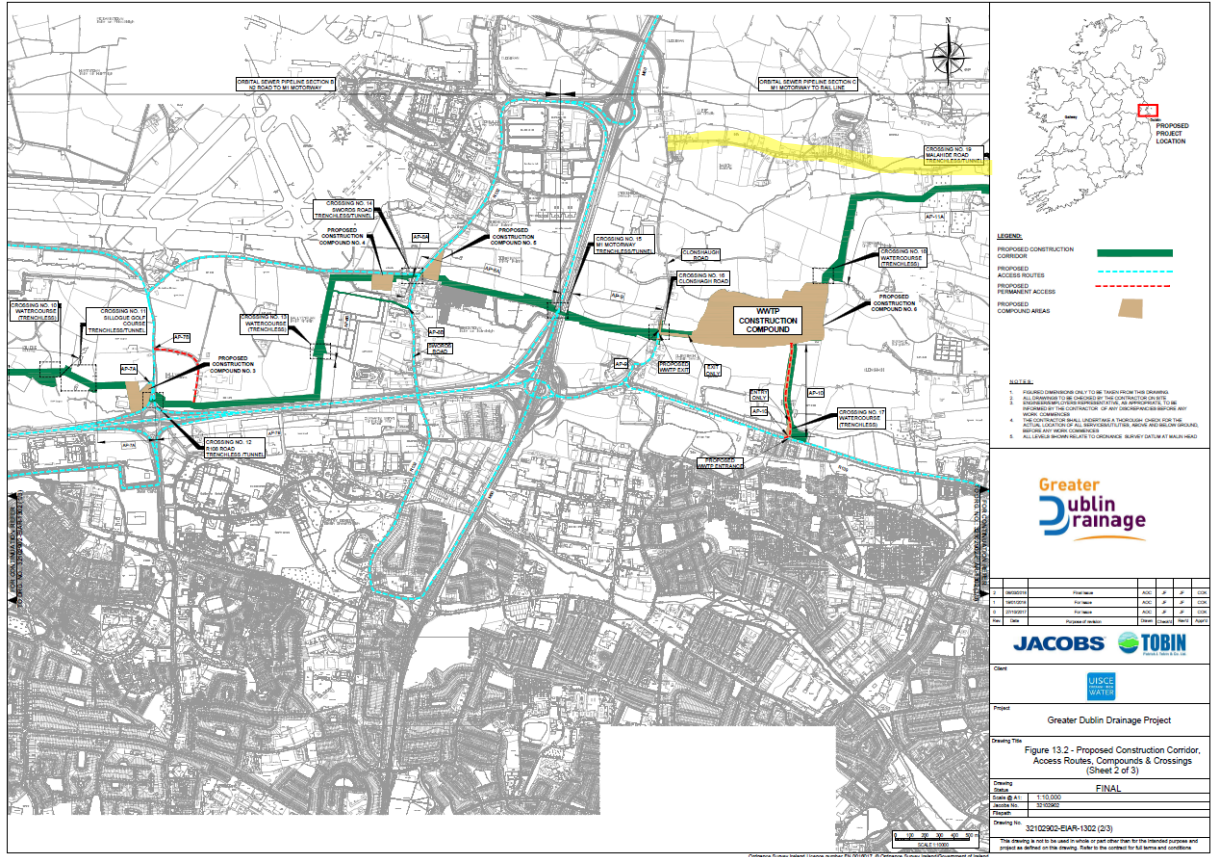
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44 The mitigation measures that will be included and implement as part of the Construction Traffic Management Plan are as specified in section 13.11.1 of Volume 3 Part A of the EIAR and summarised in my PoE earlier

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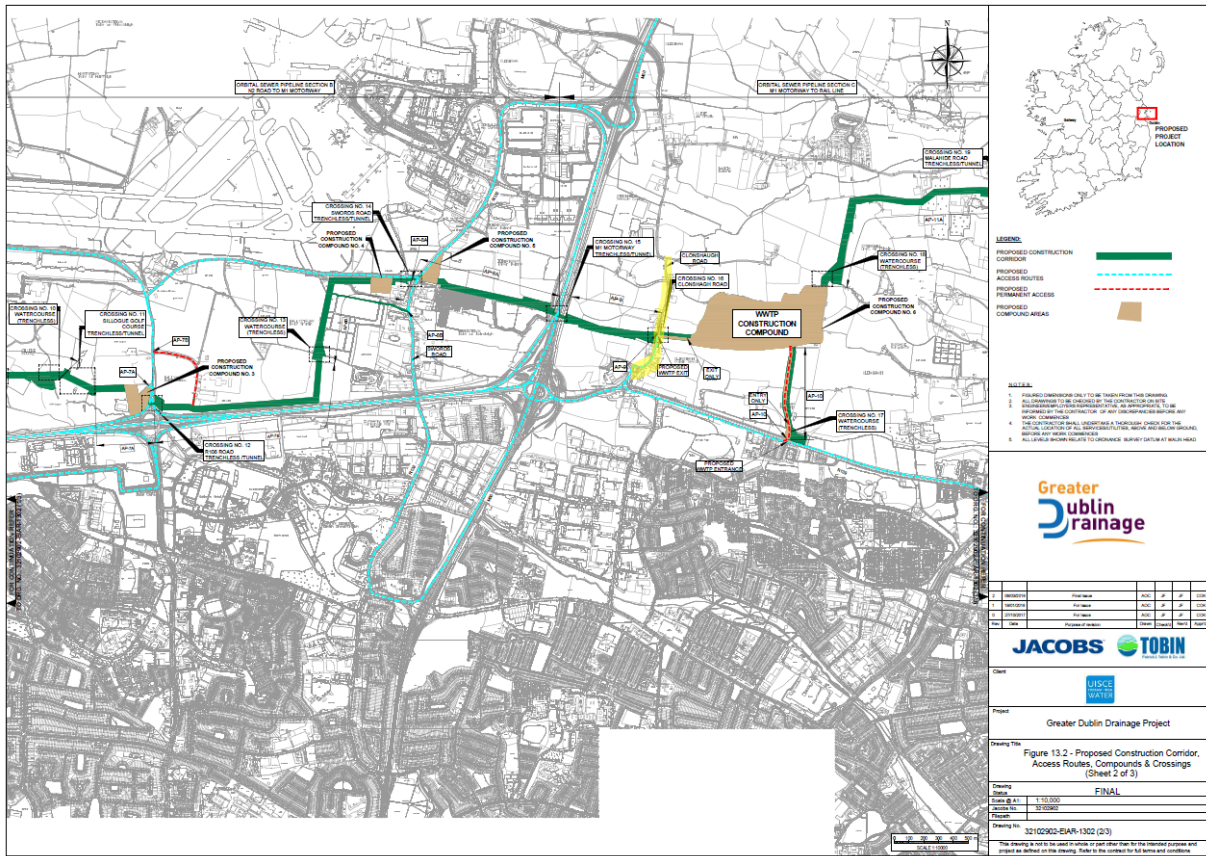
Baskin Lane



- 45 A submission outlined that Baskin Lane is not viable for the volume of traffic generated by the Proposed Project.
- 46 Baskin Lane has not been identified as a potential haul route and will not be used by haulage vehicles during construction or operation.

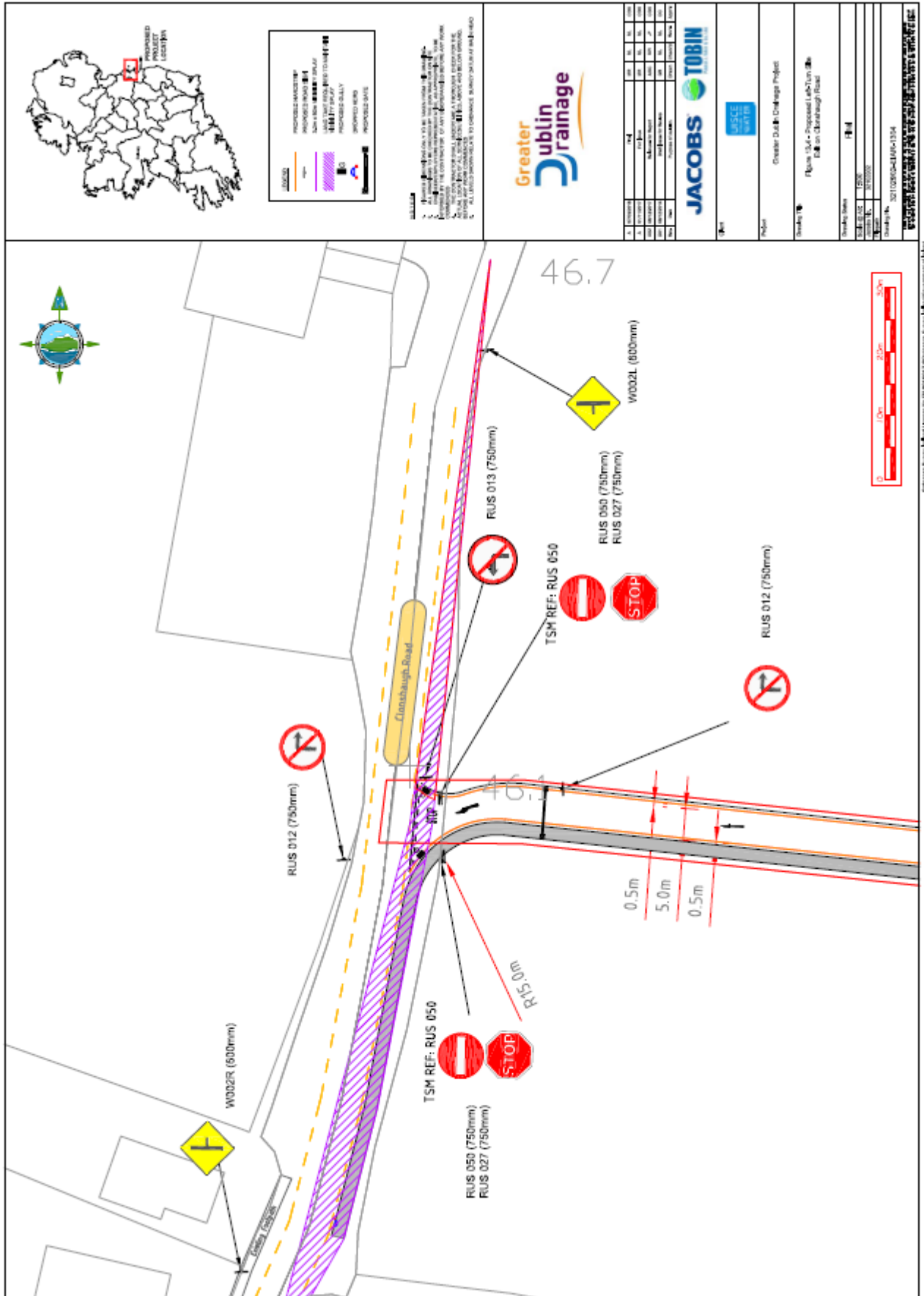
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Clonshaugh Road



47 A submission queried the impact that the Proposed Project will have on the Clonshaugh Road. The only section of the Clonshaugh Road that will be utilised during construction and operation of the Proposed Project is shown in Figure 13.2 (Sheet 2 of 3) in Volume 5 Part A of the EIAR. The relevant section of Clonshaugh Road is located north of the R139 Regional Road and is approximately 600m in length, extending from the proposed exit only road (Junction A) to the R139 Regional Road. The design of the exit only road from the proposed WwTP includes a layout with traffic restrictions that will ensure traffic does not turn right from the junction.

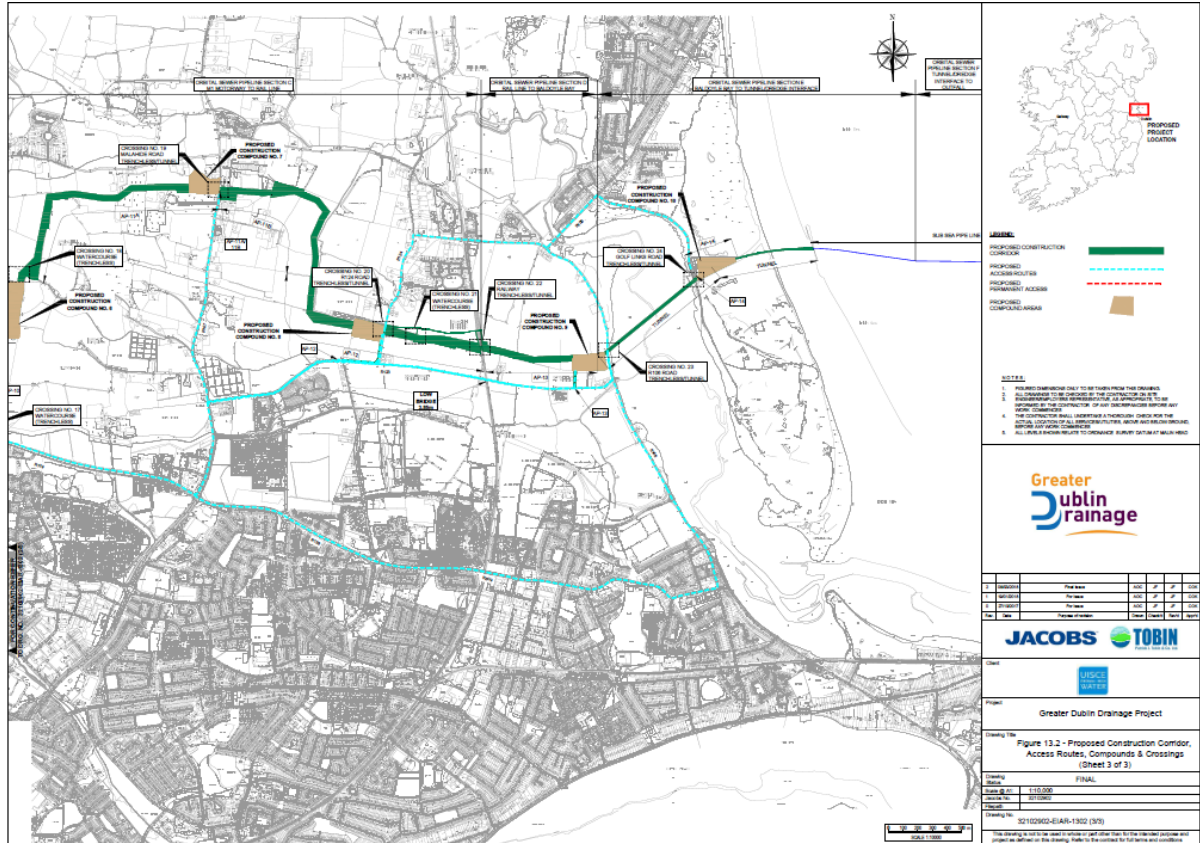
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Malahide Road

48 A submission was received whereby the Malahide Road was identified as a road which may become congested during the construction and operation of the Proposed Project.



49 An approximate 2km section of the Malahide Road is included in the proposed haul routes, which extends from the R139 Regional Road to proposed temporary construction compound no.7.

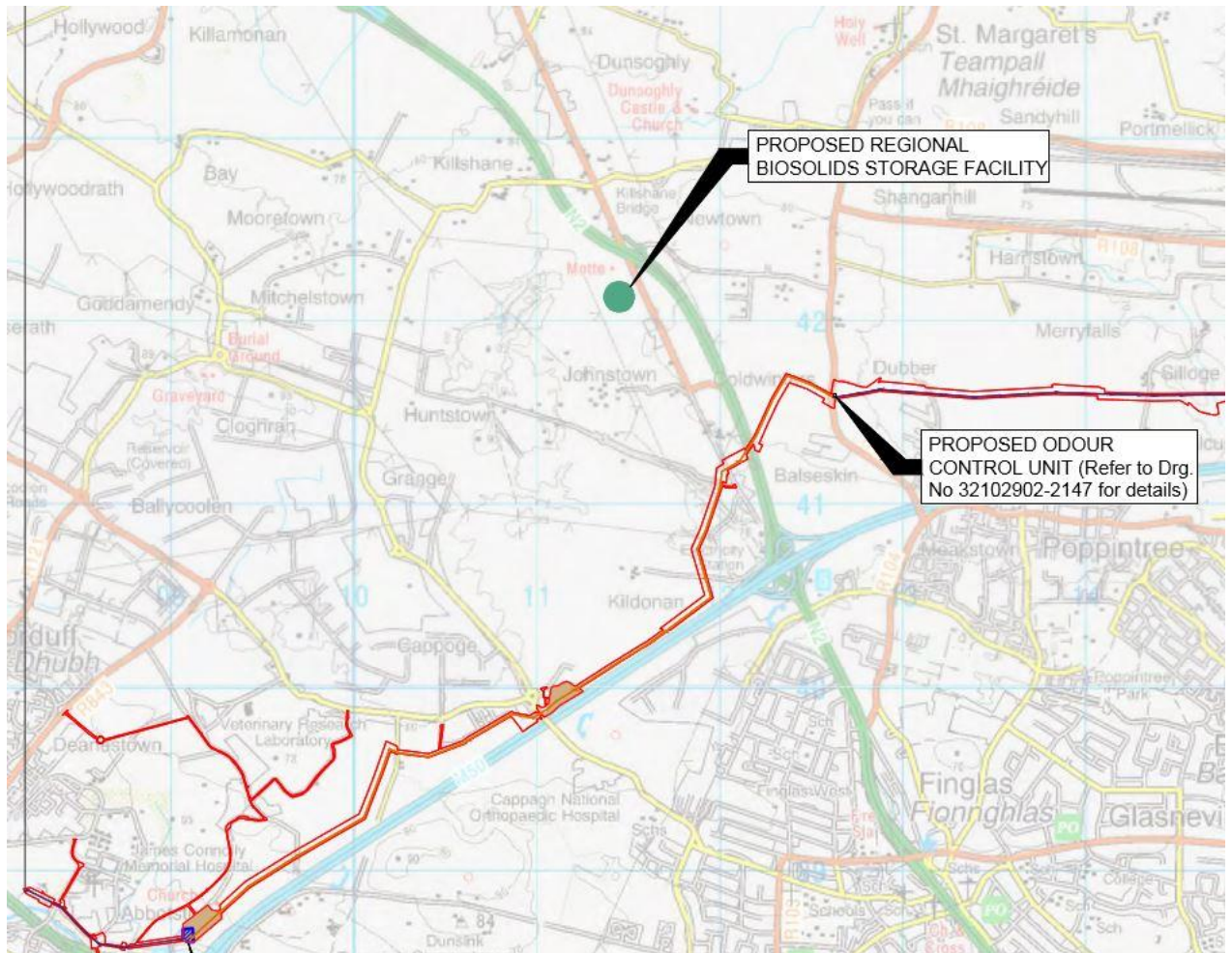
50 The assessment of Junction 5, i.e. the traffic signal controlled junction of the R107 Malahide Road and R139, included in Chapter 13 of Volume 3 Part A of the EIAR notes that the existing junction operates close to capacity throughout the AM peak hour with and without the construction traffic. Although the impact that the proposed construction traffic will have on this junction is envisaged to be small (imperceptible), the mitigation measures to be implemented as part of the Construction traffic management plan will ensure that any construction traffic impacts on Vulnerable Road Users and traffic flows are minimised. The Mitigation measures will include:

- Trenchless road crossing of the R107 Malahide Road;
- Deliveries to site will be scheduled outside of the peak traffic hours;
- In the vicinity of schools, restrictions on construction haulage during the drop off and peak collection times will be implemented.

51 It is not envisaged that the Malahide Road will be utilised during operation. The Heavy Goods Vehicles traffic transporting the sludge from the proposed WwTP will utilise the proposed exit on Clonsaugh Road and travel onto the R139 Road to gain access to the motorway and national road network to travel to the

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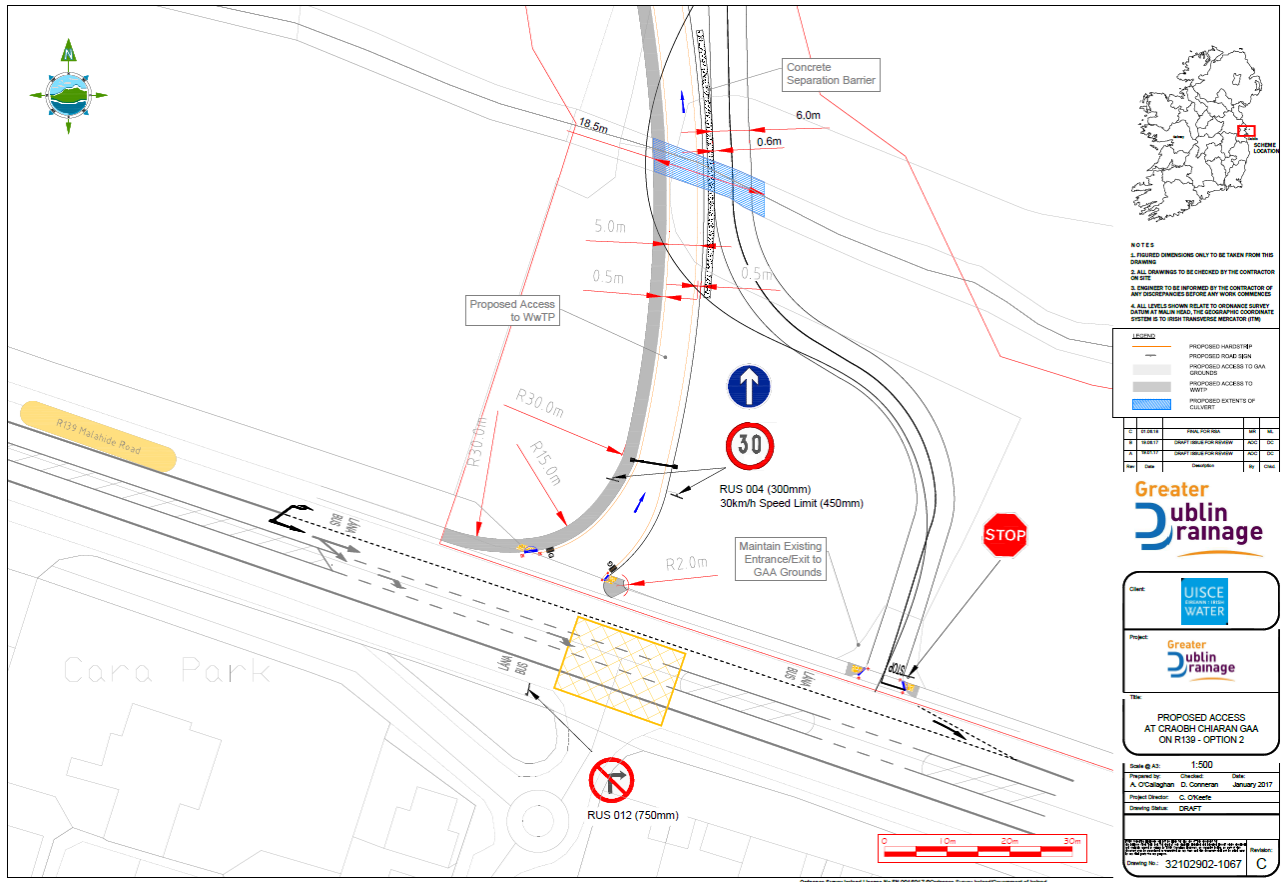
proposed Regional Biosolids Storage Facility. The proposed Regional Biosolids Storage Facility is to be located at Newtown/Kilshane in Fingal.



[Craobh Chiaráin GAA club](#)

- 52 A submission was received querying the impact that the Proposed Project will have on the Craobh Chiaráin GAA club.
- 53 Irish Water and their consultants have responded to Craobh Chiaráin GAA club to alleviate the issues raised. Irish Water has agreed to undertake junction works as part of the Proposed Project. These proposals are included in the EIAR in Appendix 2, Appendix A Part 2 of the Construction Environmental Management Plan. The proposals formalise the access junction from the R139 and will remove the damaged and uneven footways across the access.

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Major/Emergency Event

54 A query was raised whether the traffic impact on the N32 National Road/R139 Regional Road arterial route had been considered in the event of any difficulties occurring within the proposed WwTP.

Chapter 13 in Volume 3 Part A of the EIAR outlined that in the event of an unforeseen incident at the proposed WwTP, the proposed haul routes will be amended in order to provide an emergency diversion route coordinated by An Garda Síochána. A Preliminary Health and Safety Risk Assessment is also included in Chapter 13 in Volume 3 Part A of the EIAR highlighting any hazards and risks, the personnel at risk and the responsible persons.

Conclusion

55 The proposed pipeline crossings at all motorway, national road, regional road and other busy local roads have been mitigated by design, whereby the pipeline will be installed under the road using a trenchless system and will not impose direct restrictions on the roadway that would otherwise impact on Vulnerable Road Users and traffic flows.

56 During the Construction Phase, the mitigation measures that will be included and implement with the Construction Traffic Management Plan, as specified in section 13.11.1 of Volume 3 Part A of the EIAR, will ensure that any construction traffic impacts on Vulnerable Road Users and traffic flows are minimised.

57 As construction traffic will be temporary in nature, traffic volumes will return to their existing condition, with only an associated increase as a result of the normal traffic growths and changes in traffic pattern that occur on road networks.

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- 58 Operational traffic associated with routine maintenance of the proposed pipeline routes, and the operations of the proposed Abbotstown pumping station, will add small volumes of traffic to the road network. However, the volumes of traffic associated with maintenance will be small (imperceptible) and of short duration.
- 59 Operational traffic associated with the proposed WwTP was assessed for four junctions, with three of the four junctions (i.e. the proposed site entrance junction off the R139 and the proposed WwTP exit Junction onto the Clonshaugh Road will operate with no associated capacity impacts on the public road network. Junction 1 (Clonshaugh Road / Hotel Roundabout) will operate within capacity. Although Junction 2 (R139 / Clonshaugh Road Roundabout) is currently over capacity in the base year and will continue to operate over capacity, the increase in traffic flow associated with the operation of the proposed WwTP represents a 1% increase in the overall traffic flow through the junction.
- 60 In my opinion, it is understood the matters raised in the submissions have been dealt with adequately in the EIAR. During Construction, the construction traffic management measures specified in the EIAR will be implemented and effective and there will be no significant impacts on traffic and transport as a result of the works. During Operation, the proposed permanent access and egress junctions from the WwTP will ensure that there will be no significant impacts on traffic and transport.