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## Rail Crossing at Ballyhea

Commentary on proposals

22/09/2022

# Introduction



Big Hill Associates Ltd. were commissioned by local stakeholders with an interest in the proposed rail-crossing development at Ballyhea to provide a brief commentary on the scheme.

The primary purpose of this commentary is to aid local stakeholders in their understanding of the scheme and the rationale behind it. It is used to highlight the various alternative solutions that would have been expected to have formed part of the assessment by those leading the design proposals as part of the initial project feasibility studies.

In addition it highlights key considerations that would be expected to have an impact on local stakeholders to help all parties understand how these have been addressed in the scheme to the benefit of the local residents, businesses, educational establishments and users of the road and rail network.

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# Current Proposals



When deciding on the current solution, how have adjacent residents / school been considered?

## **Impact of the construction process:**

- How long is construction expected to take & what construction traffic movements are anticipated?
- What are the proposals for noise and dust mitigation during construction?
- What are the proposals for maintaining access for residents during works?
- What are proposals for maintaining road / crossing use during works?
- What proposals have been considered for traffic and pedestrian diversion during bridge construction, and what safety measures are needed for this?
- How has construction of foundations considered adjacent property?
  - What ground condition is design predicated & what solutions proposed?
  - How has undermining adjacent property been assessed?
  - What assessment has been made on vibration impact on property
- Are service diversions needed? How is this likely to affect properties during works?
- What assessment is made for the area needed for compounds / work space? Have landowners been involved in this?
- What considerations have been given to the visual impact of works on residents during construction?

# Current Proposals

## Impact of the final solution process:

- How has the visual impact on residents of the structure been considered?
  - Impact of a large structure in full view
  - Loss of natural light to property
  - Overlooking property / privacy issues from bridge users
  - Streetlights on the bridge in an elevated position close to property
- How have the impact of fumes / emissions from vehicles using the bridge, with vehicles being at an elevated position close to property, been assessed?
- How has the impact of noise from vehicles using the bridge, with vehicles being at an elevated position close to property, been assessed?
- How has the impact on property value been assessed?
- What assessments are made on how the structure will affect natural air movement i.e. wind tunnel affect on property?



# Current Proposals



## Accessibility

- How has use of the structure by less ambulant users been considered:
  - How have disabled regulations been incorporated into the design, such as slop gradient or level stopping points along the length of the bridge for those less ambulant needing to rest?

## User Safety

- How has safety been considered for users?
  - What consideration has been give to those with mental health issues and risk of self harm with a heightened opportunity to jump onto tracks?
  - Have proposals for seeking help such as emergency phone points for those wishing to self harm been considered?
  - What assessment has been made for stopping vehicles and pedestrians interacting, particularly with no escape route for pedestrians?
  - Have there been assessments of how Road Traffic Incidents on the bridge will be managed, and how emergency vehicles access or pass for other incidents?

# Current Proposals



## Ecological / Environmental Impact

- What assessment has been made for loss of natural assets:
  - Is there any expected tree loss or loss of planting, flora or fauna?
  - Has an impact assessment been made on natural habitats?
  - What surveys have been commissioned?
- Have underlying aquifers been assessed for any impact by foundations (i.e. if piling is used)
- What assessment has been made with regards wildlife
  - Do proposals considered works to suit seasonal constraints (i.e. bird nesting)
  - Are there any other natural wildlife that must be considered such as badgers, newts, foraging bats and the like?
  - What surveys have been commissioned?
- How has water run-off from the structure been considered:
  - Vehicle pollutants entering watercourses or ground water
  - Flooding risk at ends of structure
- Have any archaeological surveys been undertaken and what are the findings of these?



# Current Proposals



What criteria has been used to reach the current solution?

- What ground investigation surveys have been carried out and on what is the design predicated?
- What traffic volume surveys have been carried out to determine need for the structure?
- What population surveys have been carried out to assess suitability for pedestrians use?
- How have public transport bodies been consulted over the solution and what has been their feedback?:
- Have emergency services authorities been consulted over the solution and what has been their feedback
- What frequency of rail movements has been considered when developing the solutions?
- What feasibility studies have been undertaken on possible alternative crossing solutions?

**SOME SUGGESTIONS FOLLOW FOR ALTERNATIVE SOLUTIONS TO RAIL CROSSINGS. HOW HAVE THESE BEEN ASSESSED AS PART OF THE FEASIBILITY STAGE DESIGN WHEN SELECTING THE CURRENT SOLUTION?**

# Alternative Solutions



## OPTION 1: THE EXISTING SOLUTION

- Why, fundamentally, has it been determined a change is needed?
- Who has been involved in the consultation process over the need for this change?

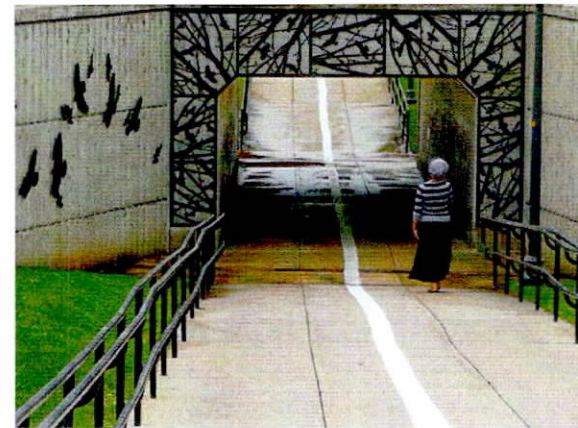


# Alternative Solutions



## OPTION 2: AUTOMATE THE EXISTING SOLUTION

- Track sensors at determined location to automatically trigger barriers
- Remove the need for manual operation of gates
- Automatic lights to warn drivers and pedestrians
- This is a typical approach to level crossings industry wide.
- If concerns over pedestrians bypassing barriers then could you introduce a simple pedestrian underpass – this could also include an external platform lift at either end for less ambulant users



# Alternative Solutions

## OPTION 3: SEGREGATED SINGLE LANE UNDERPASS

- Single lane traffic with traffic light controls
  - Reduces tunnelling / excavation width
  - Segregated pedestrians
  - Ground water / flooding can be controlled through drainage solutions, attenuation or pumping solutions
- There are an array of trenchless techniques that could be used including micro tunnelling (up to 4m diameter) or standard tunnelling with TBM, in collaboration with track monitoring and works to rail network standards



# Alternative Solutions



## OPTION 4: SEGREGATED DUAL LANE UNDERPASS OR COMBINED UNDERPASS

- Could be segregated for pedestrians or combined
- Maintains traffic flow in both directions simultaneously
- Ground water / flooding can be controlled through drainage solutions, attenuation or pumping solutions
- Can be installed with standard tunnelling with TBM, in collaboration with track monitoring and works to rail network standards



# Alternative Solutions



## OPTION 5: REDESIGN THE CURRENT PROPOSALS

- Bridge moved further away from property and realign the road to suit
- Pedestrians use a separate underpass to reduce the size of the structure
- Bridge designed as single direction with traffic light control to reduce size and width



# Conclusion



The obligation to outline, consider and explain the ruling in or out of alternatives has been hopelessly inadequate in respect of this section of the route.

Given the legal obligation on the developer to address alternatives, it is apparent that they have been either ignored, addressed inadequately or not at all.

This failure to address alternatives, and thereby resultant breach of the environmental assessment test required for such a proposal, ought to result in this proposal being rejected.