

# Basin Reserve Flyover - ENGR401 - Assignment 2

David Barnett - 300313764

## Abstract

This is a proposal for a case study into the failure of the Basin Flyover project.

The Basin Flyover project was a sub-project that intended to improve the major roads in Wellington. It was canceled as it failed to get the go ahead from the Environmental Protection Agency on grounds that the total costs of the project did not outweigh the benefits.

This case study will focus on how communication, heritage and amenity impacts of the project were handled. It will draw recommendations on how to improve of future projects of a similar nature as well as provide understanding as why such projects fail.

## Background

The New Zealand Transport Agency (NZTA) has a long term project to improve the state highway 1 (SH1) from Wellington Airport to Levin called the Wellington Northern Corridor (WNC) [1]. There are multiple sub-projects within this project which intend to improve sections of Wellington region's SH1 roads, the total budget for the entire project is \$2.5 billion [2].

One of these projects was to improve Airport to Mt. Victoria which included expanding or constructing a second tunnel through Mt. Victoria to improve the traffic flow [1]. In addition to this is that they will need to also upgrade the roads leading to and from the tunnel(s) via Kilbirnie and the Basin Reserve [3].

In 2011 NZTA initially put forward six options to improve the Basin Reserve's access to Mt. Victoria Tunnel [4]. From these options there were three distinct methods to solve the engineering problem. These were to constructing a flyover, tunnel or changing the road layout [4] so that the traffic coming out of Mt. Victoria Tunnel leads straight to tunnel under the War Memorial Park. Each of these themes had two variations, keeping the new construction close to the Basin Reserve or positioning further away. Each option was compared on how well they met the four objectives of the project:

Sounds  
a bit  
awkward.

- To provide greater resilience, efficiency and reliability to SH1
- To support regional economic growth & productivity
- To support mobility and modal choices within Wellington City
- To improve the efficiency of the road transport network by separating SH1 from inner-city travel

*Try rewording this, it is wordy*

There is also the implicit objective of the total benefits of the project to outweigh the costs. In 2012 NZTA and stakeholders selected the flyover was the best fit to their objectives and chose it as the design-to-move forward with [5].

*for a proposal submitted*

The Basin flyover plan was developed and put to the Environment Protection Agency (EPA) for resource consent. The EPA did not allow the project to go forward. As they believed NZTA had not handled the impact the project would have on the heritage and amenity of the Basin Reserve area to a satisfactory level.

*What? Why dull stuff?*

*Alternatives to the EPA? Was the voting for NZTA?*

In EPA's report they provide a balanced view by including an alternate view to their own [6]. The alternate view was provided by David McMahon who had the role of challenging the EPA findings. David reported that the EPA overstated the importance of the heritage and amenity impacts. He argued that this over importance tipped the scales so that the project failed. He concluded that the Basin Flyover project should be given the green light because the benefits outweighed the costs.

*which are?*

The EPA's final decision was to deny the Basin Flyover. This ruling was tested in the High Court and was upheld. With this ruling none of the objectives of the Basin Flyover were achieved so the project concluded as a failure.

*Reword - try to make clearer points. Feels like I'm missing some information*

*tested or contested or --*

## Problem

*Is this a catastrophic failure?*

When engineering projects have catastrophic failures a case study into the failure are common [7]. The Basin Flyover project failed during the planning phase without harming anyone but the tax payer's pockets [8]. However, an investigation into this failure is still warranted to learn from the process.

*Perhaps it was a good thing?*

The final EPA report identified a range of issues with the project. It was found that the plan for the Basin Flyover plan did not achieve a net benefit in terms of visual landscape, the projected transport benefit, handling of heritage sites and more.

*do not do this.*

Local residents had submitted their concerns about the impacts of the project [9]. Their concerns were in two main aspects, environmental impact and amenity. First was the environmental and impacts primarily increased air pollution. The expert opinion on the matter was that there would be likely no increased degradation of air quality in the long term compared to not having the Flyover [6]. However, they did agree that the concern of the noise during construction was justified. The second concern of the amenity of the Basin Reserve would

*how do you handle a heritage site  
- perhaps you could give some more explanation*

*2 what do you mean by this?*

*How did this affect the environment?  
Are there any other problems?*

severely be impacted by building a fly over. The EPA agreed with this sentiment but David McMahon did not. ~~Ref~~ be consistent

The EPA also question the method of how the final options for the project was chosen. They commented on the how flyover-based options were given some easier requirements to meet when comparing the cost to tunnel-based options but they did not give the same comparison against changing the road layout [6].

A failed project of this scale always has consequences. The result of the Basin Flyover failing is that the parent project, Wellington Northern Corridor, was delayed. These delays were compounded by NZTA moving staff from these projects in Wellington to other regions [2].

You need to integrate  
this better - it  
comes out of  
context.

## Proposed Investigation

The proposed investigation will follow a case study format. This format will be informed by University of New South Wales (UNSW) advise to its Engineering faculty [10]. The focus of the case study will be focusing on the failure of the Basin Flyover plan and if the engineering responsibility to ensure legal compliance was managed properly.

The primary sources of information is the final report that details the decision made by the EPA [6], official releases from NZTA about the Basin Flyover [5] [4]. Other sources will be used to corroborate the findings from EPA.

The case study will focus on where NZTA excelled, and not. These aspects will be viewed primarily from the perspective of the legal responsibilities of NZTA and their impacts. A key area where NZTA excelled is the community engagement of the project and clear communications to the public and stakeholders. This is made very clear with the amount of information they released with: the options outlines ; option selection ; and, videos of simulations of the final product. EPA comments on that they cannot reproduce the same selection of the options presented. Their report also shows that NZTA attempted to manage the impacts of the development but was not enough. The impact not handled well enough was the detrimental impact on the heritage of the area, Basin Reserve and Government House.

With the findings from the above aspects a recommendation will be formed. This recommendation has the goal of improving the likelihood for similar projects to succeed.

Hello David,

Make sure you look at another case study before the final work. The information is good here but it is repetitive and the writing often does not make sense.

Info 12/20

Lit Rev 14/20

Pop 14/20

Units 12/20

Written 14/20

B - 66%

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