

Section 4: Summary and Quality assurance

Quality assurance

1. The Climate implications of Policy Assessment (CIPA) team has been consulted and confirms that the CIPA requirements apply to this proposal as one of the objectives of the LGWM Transformational Programme is to reduce carbon emissions. Each of the mass rapid transit options proposed are likely to have a significant impact on mode shift away from private vehicles and support urban intensification which would result in a significant impact on emissions.
2. At this stage in the project design there is a high degree of uncertainty as there are still unspecified design elements that will substantially affect the expected emissions impact of the options. Therefore, any quantified estimates at this stage should be considered indicative only. The estimates available can be used to indicate the likely scale of impact and provide some indication of the potential relative emissions impacts between options.
3. It is expected that each of the options will require large amounts of carbon-intensive materials and therefore have a relatively high level of embodied emissions associated with construction and materials used.
4. In the long term, every mass rapid transit option is expected to result in substantial net emissions reductions relative to a 'Do Minimum' scenario. Option 1 and 2 have been estimated to be able to result in enabled transport emissions reductions of around 0.09 to 0.50 million tonnes CO₂-e by 2050. This range was produced under different land use scenarios, with the modelling indicating that higher levels of urban intensification would result in substantially higher emissions savings. At this stage, option 3 has not been explicitly modelled, and option 4 has not been modelled under the intensified land use scenario because Option 4 was not considered to be able to support this level of intensification. Option 4 has been estimated to result in enabled transport emissions reductions of 0.08 million tonnes CO₂-e by 2050 under the core land use scenario.
5. Overall, the analysis undertaken indicates that the degree of urban intensification achieved, followed by the level of mode shift enabled, is the key differentiator between programme options.
6. The degree to which each option will be able to support and drive greater intensification has not been explicitly modelled, rather, different land use scenarios have been applied where appropriate. There are also some expected emissions reductions associated with urban intensification and high-quality mass rapid transit networks that have not been quantified, such as increased energy efficiency of denser housing and more efficient use of infrastructure.
7. The CIPA team has undertaken a limited review of the emissions estimates and considers the results at this stage to be reasonable for the purpose of providing a high-level indication of the likely emissions impacts of the options. The Ministry of Transport will work with the CIPA team to assess and disclose emissions when final decisions are required following further emissions analysis as the Detailed Business Case is developed.

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