Submission by Malcolm Hunt

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Submitter Type: Individual
Source: Web Form
Overall Position: Support

Clause Will the proposed NPS improve decisions made about urban development under the RMA?
Notes Yes

Clause Will the proposed NPS support greater understanding of the demand and supply of development capacity?
Notes Yes

Clause • a better understanding of how planning interacts with the market?
Notes Doubtful

Clause • the ability for councils to plan for and respond to changing demand?
Notes Yes

Clause Would the policies in the proposed NPS support better coordination in regard to land use planning and infrastructure provision?
Notes Yes

Clause The NPS proposes timeframes and frequencies for assessments, targets and monitoring. Are these reasonable? Are they appropriate?
Notes No comment.

Clause What will assist councils to implement the proposed NPS?

Notes We have an existing problem which is causing inefficiencies and confusing decision-makers regarding decisions being made around use of noise-affected land for sensitive uses such as new residential sites. District Plan methods for specifying acoustic insulation against outdoor noise need to be easy to understand, reliable and simple for Council, building designers and users to understand and use. Acoustic standards for habitable buildings are controlled by the NZ Building Code, however insulation against outdoor sounds is not included. Below it is argued the specification and design of acoustic insulation against outdoor noise (where this is reasonably necessary) should reasonably follow the Building Code model, which is based on an “ISO method” that rates the ability of building envelope to resist outdoor sound.

The approach promoted by NZTA , KiwiRail, and NZ Airports termed the “Indoor decibel method” has at its heart a performance standard based on the decibel levels received (measured) within bedrooms and other habitable rooms. The actual decibel levels employed in the NZTA approach are consistent with international guidelines and standards that protect health and well-being and are an appropriate target to achieve, however achieving this target should not involve unnecessary complexity in terms of design assumptions, and uncertainty associated with making noise forecasts without adequate knowledge. In drafting noise insulation standards there is an obvious attraction of simply adopting the indoor design decibel sound level as the performance standard, however this should be resisted by Council's for the following reasons;

1) The Building Code adopts minimum acoustic performance standards for indoor noise based on acoustic performance of building elements, tested according to international standards with materials suppliers (and others) quoting the sound transmission qualities for every type of wall cladding, roofing, glazing, etc.. Rather than ask building designers to meet a specified indoor level of sounds from adjacent occupancies, the Building Code requires the walls, floors, etc to meet a minimum transmission loss standard. In this way design noise levels do not have to be estimated by each and eveyr user of the rule and field testing (if required) can be simply undertaken using international standards specifically designed to assist in field testing.

2) We believe Council's have a special duty to consider the "workability" and enforcement matters associated with District Plan rules. This factor does not seem to feature in the arguments of proponents of acoustic insulation based around achieving an indoor decibel level. The recommended method for Council's to follow are those based on ISO 717:2013 Acoustics - Rating of sound insulation in buildings and of building elements. The units are either Dtw + Ctr or Dtr,2m,NTw + ctr. The performance standard is usally 30 or 35 dB – signalling an approximate 30 dB (or 35 dB) reduction from the outside of the building, compared to the indoor level.

3) Under the NZTA proposal acoustic insulation design must allow indoor noise to reach but not exceed the specified sound level "indoors" from outdoor sources, for habitable rooms within noise sensitive buildings. For example, a limit of no more than 35 dB LAeq(1 hour) in bedrooms and 40 dB LAeq(1 hour) in other habitable rooms.

4) While the "target" indoor decibel levels stated are indeed worthy and commendable design aims, such rules are not recommended for District Plans as they require traffic forecasting, require extra work and assumptions by designers and are adpt to be applied inconsistently, with uncertain outcomes. The method makes compliance difficult to be certain of, especially as there are no specific NZ or international standards governing how to test conformance with an indoor performance standard based on sound levels measured indoors. Thus, these types of rules do not work well for Council's which need District Plan acoustic performance standards that are clear with straight forward field testing using applicable international Standards. This is how the sound transmission requirements of the NZ Building Code are administered, a process Council's are fully familiar with.

Experience has shown the disadvantages of the "indoor decibel" method are ;

· External sound level against which the building must act has to be predicted each time a new dwelling is designed.

· No design guidance is provided to the rule user in undertaking this noise prediction. This means the user of the rule may conduct noise predictions using uncertain inputs and make assumptions (e.g. regarding road surface) that may not hold true in the future.

· Imposes unnecessary costs and risks for the building designer and owner. Any risks associated with conducting an erroneous noise prediction or under-estimating future traffic flows are borne by the owner or developer whereas the Agency responsible for roading corridor (and its effects) bears no risks in this regard.

· This "indoor decibel" method has particular disadvantages for council's regarding field testing, if required. There are no NZ standards or international standards specifically designed to assist with such testing. For example, traffic noise testing would require 24 hr testing – on which day should the test be conducted, and how to exclude non-traffic sounds found in the local environment?

· Leads to inconsistent design approaches to deal with outdoor noise with the result new insulated buildings (a) may achieve different required indoor sound levels in areas with the same outdoor noise environment, and (b) due to inadequate design, buildings housing noise sensitive activities may perform poorly in the long run.

The advantages of the ISO method are;

· The designer is fully informed of the acoustic performance requirements the building must achieve (in a similar way to dealing with inter-tenancy noise within NZ Building Code procedures).

· The design is easy to check from plans. No traffic noise or rail noise calculations are required.

· Field testing (if necessary) is straight forward using existing international Standards designed for this purpose.

· There is an element of risk sharing as the design target for acoustic performance of the building facade has already been calculated and included in the insulation rule. There are consequently lower risks for the rule user and a greater expectation that the required insulation standard will be achieved compared to the above "indoor decibel" method.

Clause	Do you have any further comments on the Government’s proposal?
Notes	Please can we all agree that acoustic insulation for noise-sensitive buildings should be based on the ISO Method. The degree of insulation MUST BE stipulated when the acoustic insulation provisions are inserted into the District Plan or via resource consent. The "indoor decibel" Method is too imprecise and can never be properly checked in the field and is difficult for developers, designers, and architects to use.