Te Aroturukitanga o te
Mahere ā-Wae ki Tāmaki Makaurau

Auckland Unitary Plan Section 35 Monitoring

B2.3 A Quality Built Environment

Summary Report

July 2022

Contents

Auckland Council (2022). Auckland Unitary Plan. Resource Management Act 1991, section 35 monitoring: B2.3 A quality built environment. Auckland Council technical report, TR2022/11 summary.

Plans and Places Department.

Overview

Auckland's growing population increases demand for housing, employment, business, infrastructure, social facilities and services. Growth needs to be provided for in a way that enhances the quality of life for Aucklanders and their communities.

The regional policy statement B2.3 A Quality Built Environment, incorporates the expectations of The Auckland Plan and the Auckland Unitary Plan (AUP) for quality development across all types and scales of development, be it site, street, block, neighbourhood or city. It provides a framework for the role of the built environment to support people's lives, their health, safety, well-being, choices, accessibility and travel. The policy statement also recognises the need to innovate, maximise resources, provide efficient infrastructure and adapt to climate change. These are particularly important considerations for residential development which is the predominant form of development in Auckland. As new residential developments increase in number, scale and density, they have a greater influence on the city's built environment.

Residential development is where the highest proportion of constructed developments are occurring and is creating rapid and visible changes to Auckland's built environment. The speed of new residential development from council consenting through to the completed development enabled a broad housing sample from across suburban and urban areas to be selected within the three-year monitoring period – 2018 to 2020.

The monitoring for the B2.3 a quality built environment topic focuses on the quality of residential developments in the more intensive residential zones: Mixed Housing Suburban (MHS), Mixed Housing Urban (MHU) and Terrace Housing and Apartment (THAB) zones. It also looks at the quality of residential developments in Business – Mixed Use zones.

The monitoring evaluated other aspects of the regional policy statements – B2.1 Urban Growth and Form and B2.4 Residential Growth. This included the extent of intensification to achieve a quality compact urban form as well as attractive, healthy and safe housing with a range of choices to meet the diversity of Aucklanders needs.

Development with a variety of dwelling types and sizes overlook the children's playground.

The residential sample selected from the three residential zones looked at 130 developments comprising at least four dwellings on a site (and some with over 100 dwellings on a site). This produced a combined sample total of 2,339 new dwellings from across the Auckland urban region. In order to qualify for the residential zone monitoring sample, these developments were either completed or in the construction phase.

There were 33 residential developments in the Business – Mixed Use sample which could produce 1,665 dwellings when built. Unlike the residential sample, the majority of these developments had not been completed during the monitoring phase. Development in business zones (which includes our centres) tend to be larger-scaled and have longer timeframes between design, consenting and construction.

The research findings from monitoring help determine whether the AUP has enabled quality outcomes for residential development across the city. The analysis takes an aggregated approach because assessing residential developments is complex. To do this, the analysis looked at over 50 aspects of each housing development as no one measure can conclusively determine whether quality has been achieved. The monitoring evaluates quality by quantifying terms such as 'attractive' used by the AUP into assessment of design elements such as 'variation in roof forms and 'modulation of building façades'. Site visits to completed developments also focused on design elements which contribute to well-designed housing rather than the style of a development. This enabled the monitoring to determine the AUP's effectiveness in delivering well-designed residential developments as well as identify trends, opportunities and issues across different housing types, densities and zones.

The effects from recent Government legislation – the National Policy Statement – Urban Development 2020 and the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 are not considered in the monitoring analysis. These were issued after the monitoring began and the purpose of the monitoring is to evaluate the effectiveness and efficiency of the Auckland Unitary Plan over the 2018 to 2020 period. However, the Government's new requirements have a significant influence on the validity, scope and timeframes of some recommendations in the monitoring report. This includes the national Medium Density Residential Standards which limit the scope of potential changes to address AUP issues identified through the monitoring. Those recommendations that are affected, may be investigated as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded from further changes because they are superseded or limited by legislation. The recommendations are included in the full monitoring technical report.

Six themes with twelve performance indicators were developed to evaluate the AUP's effectiveness and efficiency. For each indicator, a series of measures were used to determine whether the developments were achieving quality outcomes anticipated by the plan's objectives, polices and standards. Site visits to nearly 50 residential developments provided further opportunities to consider the quality of housing at the site, street and neighbourhood scale. This summary presents some of the key findings from the B2.3 A quality built environment monitoring technical report.

Theme 1:

The quality of site development, built form, appearance and setting.

Theme 1 analyses site development, built form, appearance and relationship to the street and adjacent sites. The B2.3 A quality built environment objectives and policies for this theme seek to ensure development responds to its site and surrounds. The B2.4 Residential Growth objective seeks residential areas that are 'attractive' with 'quality development that is in keeping with the planned built character of the area'.

Indicator 1:

The extent that developments respond to the physical characteristics of sites.

What can the indicator tell us?

This indicator focusses on the B2.3 objective concerned with how developments manage the intrinsic qualities and physical characteristics of the site, area and setting. The analysis looks at how earthworks alter the topography of the site and how the site had been adapted to accommodate new development. One of the implications of earthworks can be the requirement for retaining walls to stabilise cut faces where earth is removed or to support terraces where new flat areas are created.

Findings

The monitoring showed that most sites were already modified when they were developed for previous buildings, although not necessarily to the extent required by new intensive development. Responses to the physical characteristics of the site are often driven by a range of factors and can affect other outcomes of the development, both positive and negative. Some large-scale developments were able to retain intrinsic landscape features such as streams or vegetation.

Earthworks enable flat or slightly contoured building platforms to provide for different housing types. This sometimes improves privacy, outlook and reduces the visual dominance of a development within the site or on adjacent sites. Conversely, deep cuts, and significant retaining walls in some cases, can negatively affect on-site amenity by reducing natural light into dwellings and shading outdoor living space.

Observations from site visits to developments in the residential zones showed some sites also had high fences atop retaining walls, particularly on side or rear boundaries. Excavation on some sites, had resulted in developments sunk well below the natural ground level to enable an additional storey on the house while remaining within the zone height limit. This can produce 'below ground' living environments with limited daylight, sunlight, sense of space and privacy.

A high retaining wall combined with a fence can reduce daylight and cause shading to indoor and outdoor living spaces.

Indicator 2

The extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings.

What can the indicator tell us?

In addition to delivering on the B2.3 A quality built environment objectives, this indicator addresses regional policy statement Issues B2.1. chapter where growth seeks to enhance the quality of life for individuals and communities, and maintain and enhance the quality of the built and natural environment. It also evaluates aspects of the B2.4 Residential growth topic including the provision of attractive, healthy and safe housing.

The analysis provides an insight into the built form, including the design, form and scale of development in the residential zones. It also considers the appearance of development. To minimise subjectivity in the analysis of appearance, the measures focus on elements of design that contribute to well-designed housing. This includes the appearance of building form when viewed from the street and how a development responds to adjoining sites. Consideration was given to the privacy, dominance and shading effects on existing dwelling as well as the redevelopment potential for future higher density housing on adjoining sites. Site observations were also valuable for assessing quality in the completed development.

Findings

The findings showed that the AUP is variable in terms of managing the form and appearance of more intensive residential development. Development responses to the unlimited density provisions and standards that manage the building envelope (such as height and height in relation to boundary) had a significant influence on outcomes.

The generic set of residential standards that apply to standalone houses as well as terraces and apartments are inadequate for complex medium to large scale developments. This can be compounded by Auckland's existing subdivision pattern of long narrow sites which were initially developed for standalone houses and not high-density housing.

Accommodating greater building lengths and heights on narrow sites can limit the ability for apartments and terrace housing to achieve appropriate building forms and scale for their site or location. A summary of the key findings are as follows.

- There is general compliance with the building height limit.
- The Height in Relation to Boundary (HIRB) standard was challenging for many developments and shows the tension between achieving the height limit within narrow sites.
- The AUP's core standards (i.e. height, HIRB, and yard controls which are subject to public or limited notification tests) are not always effectively managing the shading, daylight and privacy effects on adjoining sites. Approximately half of developments had some or all their dwellings with primary living areas facing adjoining sites. Many complied with the AUP standard and the majority were designed to avoid direct views from principal living area windows into adjacent sites. However, privacy, shading and dominance effects were often unavoidable due to the scale and orientation of these developments.
- Most developments demonstrated a good standard of appearance, particularly when viewed from the street. Many included architectural elements, such as façade modulation, roofline variation, and avoided the dominance of car parking when viewed from the street.
- About a quarter of developments had a continuous building length greater than 40m, increasing the building scale. This can affect shading and potentially privacy and dominance effects on adjoining sites.
- Approximately a quarter of developments infringed the building coverage standard by between one and 10 per cent in the residential zone sample. This can leave inadequate space on site to provide for landscaping and permeable surfaces. The spaciousness of sites and streets progressively changes as the building scale of development increases and becomes more dominant in the urban landscape. This highlights the tensions between existing qualities of an area with changing neighbourhood character.

This apartment development shows good variation in façade design, roof modulation and landscaping.

Theme 2:

Building Auckland's planned built form with more intensive housing.

This theme investigates the range of housing types and the amount of residential development to accommodate the city's growing and diverse population. It also looks at land use efficiency and the implications of higher density development to address the RPS B2.1. growth issues.

Indicator 3:

Building the planned built form with intensification to support centres and corridors.

The AUP planned built form with terraces and apartments in the MHU zone.

What can the indicator tell us?

This indicator looks at whether the AUP is meeting the RPS B2.1 expectation for growth that supports integrated planning of land use, infrastructure and development. It also responds to the objectives seeking to optimise the efficient use of the existing urban area and maximise resource and infrastructure efficiency.

The measures assess the types and density of multi-unit developments with four or more dwellings being built in the more intensive residential zones. These influence the planned suburban and urban built character of the street and neighbourhood.

Findings

The findings showed that there was a generally even split across housing types in the sample from MHS, MHU and THAB zones. The types identified were standalone houses, duplex/townhouses, terraces, apartments, and developments with a mixture of all of types. The AUP residential zone descriptions and provisions have been effective in promoting the types of housing to support the intensification anticipated for each zone. The amount of new residential development in some areas is starting to produce street environments that allude to the future planned form of Auckland.

The AUP has been effective in achieving intensification at levels promoted through the zoning principles and standards to reinforce the hierarchy of centres and corridors. The analysis showed a broad transition of density through the MHS, MHU, THAB and Business – Mixed zones. There is a clear transition of increasing building bulk as a consequence of the amount of building coverage rather than height. Some sites were underdeveloped, usually with less height than the zone enabled due to site constraints or other factors. While the zone standards broadly achieve the intensification enabled by the zone objectives in terms of housing type, they are less effective in achieving the planned character through height and site spaciousness.

Indicator 4

Maximising land and building resources and infrastructure efficiency.

What can the indicator tell us?

This indicator expands on the findings in Indicator 3, with measures that evaluate the AUP effectiveness in encouraging efficient use of land and resources. The measures looked at the number of dwellings per site facilitated through the land use led subdivision consent that enables unlimited density. It also looked at the size of sites in these developments after their subdivision.

Findings

The findings showed that 130 developments in the residential zone sample produced 2,339 new dwellings. Collectively, the new developments replaced approximately 275 existing dwellings across the sample. Seventy per cent of developments were for between 4-15 dwellings per site, 20 per cent were for 16-40 dwellings per site and 10 per cent were for developments with 40-150 or more dwellings. This shows that the unlimited density provisions in the AUP have been very effective. In the Business – Mixed Use zone, consents for 33 developments – primarily apartments, would produce a theoretical number of 1,655 dwellings.

Zone provisions, unlimited density and increasing height and building coverage is enabling higher density development with smaller site sizes. However, site functionality and quality can be compromised if sites become too small. This includes the quality of outdoor living spaces, solar access, privacy, landscaping, provision for rubbish bins, clotheslines and so on. Higher density developments do not inherently produce poor outcomes. Issues can arise from not appropriately addressing the unique interrelationship of housing types, amount of housing and site conditions.

High density apartments within landscaped site minimises adverse dominance and privacy effects on adjacent site.

Theme 3:

Supporting the health, safety and wellbeing of residents.

Aspects of residential developments that influence people's health, safety and wellbeing was the focus for this theme. It also addresses the B2.1 issue that seeks growth that enhances the quality of life for individuals and communities. The analysis looked at how the AUP residential provisions support housing that is safe, has sunlight, functions well and is pleasant to live in. The monitoring looked at specific standards in the residential zone provisions that contribute to the regional policy statement objectives focusing on the health and safety of people and communities.

Indicator 5

The extent that the health and wellbeing of residents is supported by living spaces with quality outlook spaces, privacy and sunlight.

What can the indicator tell us?

This indicator looks at whether the AUP requirement for outlook spaces from primary living areas and to a lesser degree, other habitable rooms in dwellings in the residential zones were achieving quality outcomes. The focus on primary living area outlook reflects an assumption that residents will spend longer periods of time in this space which will have a greater effect on the quality of their day-to-day lives, including their health and wellbeing.

The following factors were used to evaluate a 'quality outlook' from the principal living area:

- the amount and dimensions of outlook spaces
- the location of the outlook space and what it overlooked
- privacy for the occupants of the dwelling
- orientation for sunlight.

Findings

The outlook space requirement for principal living areas and habitable rooms in the AUP is an effective and efficient method for ensuring daylight, pleasant outlook and a degree of privacy. Seventy per cent of developments in both the residential zones and the Business – Mixed Use zone samples complied with the AUP standards for size and dimensions. Those developments that did not fully comply, often infringed the standard for just a small number of their dwellings.

Analysis showed that compliance with the AUP standards can still result in potential issues with the outlook spaces from principal living areas. Those with outlook spaces facing the street were sometimes interrupted by fences that reduced the sense of spaciousness. In some cases, structures such as sheds, utilities, or shading from high retaining walls reduced the quality and functionality of outlook spaces. Other issues arise from principal living area outlooks facing towards adjoining sites (this applied to approximately one third of the sample in the residential zones) and could compromise privacy for both properties. This was most evident when principal living area outlooks were above ground level, especially if there were balconies. Primary living areas with outlook spaces over driveways or car parking areas also produced poorer quality outlooks for residents. The location of the outlook is not as effectively managed by the AUP as it could be.

While the AUP does not control the outlook orientation to receive sunlight, monitoring showed that most developments in the residential zones minimised south-facing dwellings. Many developments benefitted from linking the location of the principal living area outlook space with the outdoor living area, which the AUP requires sunlight into.

The principal living outlook space and the 20m^2 outdoor living space orientated for sunlight are located together to create a spacious and healthy living area.

Indicator 6

The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces.

What can the indicator tell us?

This indicator focuses on the performance of the AUP outdoor living spaces to support the health, safety and wellbeing of residents. The purpose of the outdoor living area is to provide spaces for people to enjoy the outdoor environment within their properties.

The AUP requires residential developments in the MHS, MHU and THAB zones to provide a primary outdoor living space in the form of a 20m^2 minimum ground floor area and/or a minimum 8m^2 balcony at higher levels. The space also has to be a functional size and dimension with access to sunlight and is accessible from the dwelling. It must be separated from vehicle access, parking and manoeuvring areas.

Findings

The findings showed that most developments complied with the outdoor living space requirements. These were predominately provided in the form of ground level outdoor living space. However, outdoor living spaces in many developments were cluttered with rubbish bins, sheds, hot water cylinders, rainwater tanks, external heat pump units, and other housing infrastructure which affected the quality and functionality of the space. Many items were added by owners or tenants after construction so could not be influenced through the consenting process. The amount of outdoor living space required by the AUP standard is not adequate to accommodate additional household infrastructure such as rainwater tanks.

The analysis shows an increase in the number of outdoor living spaces being accessed from garages, bedrooms or laundries rather than the principal living area. This presents a lost opportunity to provide quality linked indoor and outdoor living spaces with sunlight, larger spaces and better opportunities for healthy living.

Primary outdoor living spaces in the form of balconies were prevalent in higher density THAB and Business – Mixed Use zones where there were more apartments. Balcony sizes were assessed for functionality based on the number of bedrooms to gauge the number of likely users. The majority of balconies in the residential zones complied with the standard. In the Business – Mixed Use zone, where the AUP does not require any outdoor living space, 95 per cent of residential developments did provide outdoor living spaces for the majority of dwellings. The analysis showed 15 per cent of balconies in the residential zones were inadequate sizes that would compromise their functionality. Approximately 30 per cent were inadequate in the Business – Mixed Use zone.

The AUP requires sunlight to outdoor living spaces at the equinox but not in mid-winter when residents most need sunlight for their health and wellbeing. Up to a quarter of primary outdoor living areas in the residential sample could have sunlight compromised during mid-winter. This could be caused by high retaining walls and fences, shadowing by other buildings or a south facing orientation.

Observations from site visits also highlighted potential privacy issues (visual and acoustic) arising from the configuration and location of outdoor living spaces facing towards adjacent sites. Privacy was a more significant issue when balconies at upper levels faced towards and overlooked adjacent sites.

The monitoring indicates that the AUP is not as effective as it could be to ensure outdoor living spaces are providing for the quality spaces to support the health and wellbeing of residents. There was inadequate space to accommodate the additional household infrastructure such as rainwater tanks, exterior heat pump units, rubbish bins etc without compromising the quality of the outdoor living space for residents.

The useable space of the ground floor outdoor living area is reduced by the presence of a heat pump, shed and water tank. In this site, the items are screened.

The useable space on the balcony in the apartment building is reduced by the external heat pump unit.

Theme 4:

Providing choice through a diversity of housing.

Theme 4 focuses on whether developments provide choice for Aucklanders to meet their housing needs. A range of housing sizes and types are critical to a well-functioning city with a diverse population and urban fabric that allow communities to change in place. This theme responds to the B2.1 issue seeking growth that enhances the quality of life for individuals and communities. It also addresses both B2.3 and B2.4 objectives that seek choice for Aucklanders.

Indicator 7

Diverse mix of housing choice for people and a range of built form to suit changing needs.

What can the indicator tell us?

The analysis considered the types and variety of houses that are being built in developments. This includes standalone houses, duplex/townhouses, terraces and apartments to meet the needs of a diverse population. Many developments had a mix of different house types and sizes which for larger developments, contribute to a sense of community.

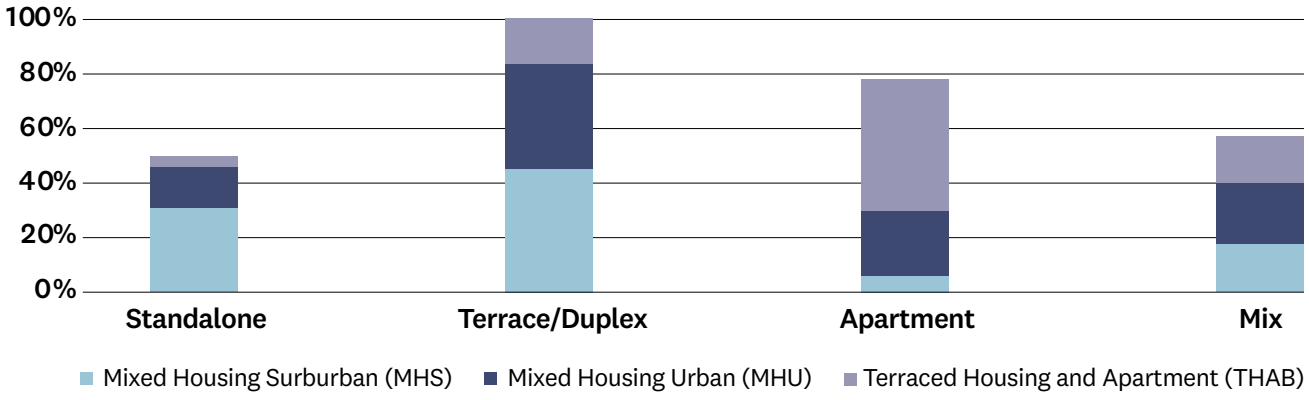
Another aspect of the analysis was the ability of housing to meet changing needs of residents. An important consideration is whether people can access and live in their house if they experienced a temporary mobility impairment through an illness or accident for example. Residential intensification is producing more dwellings that are two or more storeys high which can exacerbate this situation. Enabling people to live in their homes on the ground level (or an accessible level such as lift-accessed apartments) during a period of limited mobility rather than needing to find alternative accommodation can improve recovery and wellbeing. Each dwelling was assessed for its ability to provide a habitable room (that fits a bed) and toilet and handbasin, on the ground floor or a fully accessible level.

Findings

The monitoring shows that the AUP is effective and efficient in delivering a diversity of housing for Aucklanders. The plan provisions enable a wide range of housing types and dwelling sizes. The findings show an even split across all developments between housing types of standalone houses, duplexes/terrace houses, apartments, and a mixture of these in the sample. The zone influenced the predominance of a particular housing type – there were more apartments in the THAB zone.

Housing type in different residential zones

The graph shows housing types in residential zones – these become more intensive in the MHU and THAB zones with progressively more apartments.



Some developments provide a variety of housing types and sizes to meet the diversity of housing needs.

There was a broad range of dwelling sizes and numbers of bedrooms, often with a mix of different sized dwellings in a development to provide more choice. Across the monitoring sample, there was a good spread of dwelling sizes from one to five bedrooms. In most developments, the dwelling sizes well exceed the AUP's minimum standards.

The findings also show that new dwellings are generally adaptable to the changing needs of residents despite the AUP not requiring this. Most developments could provide for temporary changes in residents' mobility needs by avoiding steps between the street and dwelling front door, and with a minimal step over the entry threshold. Eighty per cent of dwellings in the sample had a habitable room, toilet and hand basin at ground level or an accessible floor (such as a lift accessed apartment).

The findings show that the B2.3 objectives, and B2.1 issue which seeks growth that enhances the quality of life for individuals and communities, is being successfully addressed through the range of housing being consented. This enables residents to stay in their neighbourhoods and access appropriate housing to cater for their personal circumstances.

Theme 5:

Responding to climate change and environmental sustainability.

This theme focuses on aspects of residential development that may help reduce the effects of climate change and contribute to environmental sustainability. Limiting the amount of impervious surfaces, managing stormwater better, providing quality landscaping and managing waste in residential developments can reduce the impact of residential intensification on the environment.

Indicator 8

Managing stormwater to mitigate adverse environmental effects.

What can the indicator tell us?

This indicator explores how development minimises environmental effects caused by stormwater in the residential zones. This includes the management of stormwater runoff and supporting water quality where it enters natural environments such as coasts and streams. Collecting on-site rainwater is another way that stormwater run-off can be reduced and has the added benefit of providing water for gardens or other outdoor uses.

Findings

The findings showed that approximately a third of the sample in the residential zones did not comply with the maximum impervious area standards. In many cases this enabled a site-specific response be pursued to satisfy the purpose of the standard. This was more prevalent in the higher density zones of MHU and THAB. Providing rainwater collection tanks is one method for reducing the impact of stormwater run-off. Nearly half the developments had rainwater tanks to provide for exterior household use or as detention devices to manage on-site stormwater. Without clear evidence of the cumulative effects of more intensive residential development, it is not possible in this monitoring analysis to evaluate whether the plan is effective or efficient.

A good example of a narrow rainwater tank integrated with the building and permeable quality landscaping.

Indicator 9

Quality of landscaping to address the effects of increased density and climate change.

What can the indicator tell us?

This indicator looks at how effective the AUP landscape area standard is in the residential zones. Quality landscaping supports biodiversity and provides privacy, shade, shelter, food sources and improves amenity. It is important for reducing stormwater run-off, reducing contaminants (air and water), carbon absorption and reducing the urban heat effect to support climate resilience.

This well-designed landscaping has low maintenance native trees and shrubs to enhance the outdoor living spaces and street frontage.

Findings

The monitoring showed the AUP is not sufficiently effective or efficient in achieving quality landscape areas in residential developments. Approximately 35 per cent of the residential zone developments in the sample did not comply with the landscaping requirement, the majority of which infringed it by up to five per cent. The extent of non-compliance with the landscape area standard reflects a similar level of infringement for the maximum impervious surface standard. In many cases, alternative solutions may have been proposed to meet the purpose of the standard but it is unclear whether this could cumulatively undermine the anticipated landscape outcomes. This could be an issue in terms of managing stormwater and in the MHS zone where landscape is considered an attribute to the site and neighbourhood character. The amount of landscape area and the quality of landscaping is also fundamental for achieving biodiversity and climate resilience in the urban environment.

Site observations showed many sites were poorly landscaped and lacked the amount of planting shown in the consented landscape plans. This suggests shortcomings in monitoring and compliance in ensuring approved landscape plans are properly implemented. There were also issues around the types of landscaping (particularly lack of trees or planting for future mature trees). It was evident from site visits that there was often a lack of thought for the ongoing maintenance of sites by occupants, especially terrace housing.

Indicator 10

Location and appearance of on-site waste management.

What can the indicator tell us?

Effective waste management is an essential part of well-functioning sites and urban environments. This indicator focuses on two aspects of domestic waste. Firstly, the provision of waste storage and its visibility within the site. Secondly, in terms of how on-site waste management and provision of waste-collection and recycling facilities impact the functions of the site and surrounding urban environment. These are linked to council's wider outcomes, including amenity (on-site hygiene and visual effects), waste reduction (encouraging appropriate behaviour), and traffic effects and pedestrian safety (on-site and on-street during collection days).

Findings

The monitoring suggests that the AUP is not sufficiently effective in providing standards needed to address the management of on-site waste or collections. This mainly relates to the need for provisions ensuring appropriate management of on-site waste relative to the type, scale and location of more intensive residential development.

The analysis showed that 70 per cent of residential zone developments had a designated area for rubbish shown on plans – ranging from next to dwellings, designated area for groups of bins or a combined bin for multiple dwellings. Of these, 65 per cent were also screened from view. In the Business – Mixed Use zone, 80 per cent of developments provided for communal waste and recycling collection in a manner that was well screened from the street and functional for residents. While the majority of developments showed some consideration for on-site waste management, site observations in the residential zones and the analysis demonstrated that these often weren't sufficient to address effects on the functionality of outdoor living spaces, site access and on-street amenity and pedestrian safety.

Allocated spaces for waste bins that are visibly screened from front entrances and street will prevent pedestrian walkways and gardens from becoming cluttered (as shown in this image) and contribute to a quality urban environment.

Theme 6:

Supporting safe access and travel choice.

Theme 6 analyses the safety and functionality of site access and circulation for pedestrians and vehicles. It also looks at the safety issues and opportunities of new developments on public streets and places. The AUP recognises that growth needs to be provided in a way that enhances the quality of life for people and their communities. It must also support integrated planning of land use, infrastructure (transport, water, utilities etc) and development.

The B2.3 A quality built environment policies focus on the way developments promote walking, cycling and public transport, and minimise vehicle movements. This theme assesses whether developments have achieved the balance between safe sites and streets for pedestrians and manage the functional requirements of vehicles. The monitoring looked at the MHS, MHU and THAB zones for Indicators 11 and 12; and partially looked at the Business – Mixed Use zone for Indicator 12.

Indicator 11

Pedestrian safety within residential developments.

What can the indicator tell us?

This indicator explores the safety of pedestrian access between the dwelling and the street in the residential zones. Pedestrian safety is a particular concern given the high incidence of driveway accidents involving pedestrians (particularly children).

The analysis looked at whether footpaths were provided as well as their quality and safety. This included footpath width and whether separation was visually separated (same surface and level as the driveway but differentiated by colours or materials) or physically separated (separated by a kerb or by landscaping).

Findings

The monitoring suggests that the AUP is not managing on-site pedestrian safety effectively or efficiently. This is with respect to pedestrian access and circulation within the site.

The AUP does not require a separate footpath for driveways serving less than 10 parking spaces. For developments with 10 or more spaces, driveways in the residential zones must provide a one metre wide pedestrian access (which can be within the formed driveway), and in the Business – Mixed Use zone this increases to 1.5 metres wide.

A development with front doors opening directly onto a communal parking area and vehicle manoeuvring space. The designated footpath area (dark grey paving adjacent to the dwelling on left), directs pedestrians into the reversing space of cars en-route to the front doors of dwellings. These are all pedestrian safety concerns – especially for children.

The findings showed that 65 per cent of developments in the residential zone sample provided a separated footpath. For context, approximately half of developments in the residential zone sample had less than 10 parking spaces.

Only a quarter of those developments that had footpaths were separated from the driveway by a kerb or other physical barriers. Most chose to use an alternative material or colour on a level flush with the driveway.
Site observations showed that footpaths with a kerb (like a typical public street footpath) or a landscaped buffer offered the best safety for pedestrians.

The findings also showed that only half the footpaths (of those developments that had them) were designed to avoid the reversing space of cars. The majority (approximately 80 per cent) of developments avoided having front doors opening directly onto a driveway. Some forms of parking such as centralised communal parking areas are not adequately designed for pedestrian safety within the site. These often fell below the AUP threshold (based on the number of car parks) requiring a footpath.

Indicator 12

Pedestrian safety in the movement network.

What can the indicator tell us?

This indicator looks at the effects of developments on pedestrian safety in the public street environment. This includes providing passive surveillance from dwellings with windows, balconies or outdoor living areas that overlook the street to benefit the safety of pedestrians.

The number of dwellings served by a driveway and types of parking provided information on the potential volume and type of vehicle movements on a private way (such as owner access as well as visitors, couriers etc.). The presence of front doors or visibility of their access via a path was a measure used to evaluate the legibility of dwellings for a visitor. This is another aspect of residential design that enhances a development's connection to the street environment and community.

Findings

The findings for the residential zone sample showed that, for 90 per cent of developments, the level of residential intensification did not increase the number of vehicle crossings. Most sites had one vehicle crossing over the public footpath regardless of how many houses were accessed (although more vehicles may be using the crossing). This shows that the AUP is effective at minimising the number of vehicle crossings across a public footpath.

Most developments fronting streets optimised passive surveillance with windows or/and balconies overlooking the street. Seventy per cent of developments in the residential sample had up to half their dwellings overlooking the street. Most front doors for street facing dwellings were visible or partially visible from the street. This demonstrates that the AUP is effective and efficient in ensuring that dwellings in residential zones are well-designed to provide passive surveillance of the street to make neighbourhoods safer.

In the Business - Mixed Use zone, the AUP acknowledges that the building street interface is different given that both commercial and residential activities are possible. The findings showed that 60 per cent of developments in this sample had residential uses on the ground floor (the remainder being commercial uses), and all development had at least a quarter of the ground floor façade glazed. The amount of glazing at ground level reflected the activity - more glazing for commercial uses and less glazing for residential activity due to privacy concerns. This suggests that the plan is effective for passive surveillance from ground level commercial development but relies on passive surveillance in residential development from upper levels in this zone.

Driveway crossings are minimized in this development which prioritises pedestrian access directly from the public footpath. All the apartments overlook the street making it safer.

Summary of main findings

The broad scope and complexity of the monitoring for the B2.3 A quality built environment topic has meant it is challenging to draw a single conclusion on the performance of the AUP in achieving the B2.3 A quality built environment objectives and policies. Notwithstanding this, the monitoring has provided some overall trends and observations.

Where is the plan performing well?

Analysis has shown that the AUP is both effective and efficient in many aspects of development in the residential and the Business – Mixed Use zones. These mainly relate to:

- residential intensification at levels promoted through the zoning principles and zone standards support AUP and The Auckland Plan growth objectives
- residential developments and zones progressively intensify towards centres and transport corridors, reinforcing the AUP hierarchy of centres and corridors
- enabling sites to maximise housing yield with unlimited density provisions enabled through the land use-led subdivision consenting process
- enabling a wide range of housing types and sizes to meet the diverse needs of Aucklanders
- achieving good form, design and function in many developments across all suburban and urban residential areas of Auckland, regardless of location, socio-economic group, market or other external factors
- achieving good quality street frontage appearance for most developments in the residential zones.

Where is the plan underperforming?

The analysis also revealed potential issues and emerging trends where the AUP is less effective or efficient. These mainly relate to:

- managing the effects (e.g. shading, privacy, dominance) of new development on adjacent sites which could affect the existing and future re-development potential of these sites
- the pressure of high-density residential developments compromising site amenity and functionality
- recognising complexities and uniqueness of housing types, where currently a single generic set of standards is applied to all housing types whether it's a standalone house or an apartment building
- issues with building form, scale and bulk relative to site conditions (e.g. size, dimensions) to accommodate more intensive terrace housing and apartment developments
- type and scale of earthworks producing poor site amenity and functionality in some developments
- insufficient standards to address climate change at a site-specific level, particularly the need for better stormwater management and quality landscaping
- inadequate waste management within the site and street environment
- managing the safety of pedestrians within sites and the street.

The conclusions should be considered in conjunction with the indicator specific findings outlined above. The full B2.3 A quality built environment monitoring technical report contains specific conclusions and recommendations for each indicator.

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